

## 2010 Environment and Natural Resources Trust Fund Proposals Selected to Present to LCCMR

In response to the 2010 Request for Proposal (RFP) due May 1, 2009, 238 proposals requesting a total of approximately \$163 million were received. \$25.6 million is available to recommend for projects beginning July 1, 2010, so this represents a ratio of more than 6:1 on dollars requested versus dollars available. On 07/28/09, the LCCMR selected 86 proposals to receive further consideration and be invited in to present before the Commission. Selected proposals are listed below.

LCCMR ID	Last Name	First Name	PROJECT TITLE	SUMMARY	Organization	\$ Requested
<b>A. Water Resources (21 proposals/subtotal = \$11,747,158)</b>						
<b>A1. Groundwater Sustainability (4 proposals/subtotal = \$2,898,002)</b>						
001-A1	Elvrum	Chris	Measuring Groundwater Flow Using High-Precision River-Flow	Demonstration of accurate measurement of the groundwater available for sustained human and aquatic-habitat use employing new, innovative techniques for measuring Mississippi River flows in the Minneapolis river gorge.	Metropolitan Council	\$176,050
003-A1	Setterholm	Dale	MGS County Geologic Atlases and Related Hydrogeologic Research	1) produce Part A county geologic atlases 2) establish hydrologic properties necessary to apply atlas mapping to water management 3) investigate the use of geochemical data in water management.	MN Geological Survey	\$1,130,452
004-A1	Reeves	Laurel	Next Generation in Water Supply Management-Pilot Studies	This proposal seeks to develop and test a framework that will guide sustainable water management across governmental jurisdictions and natural hydrologic units.	DNR	\$945,500
005-A1	Nieber	John	Quantifying Flows -The Missing Link in Managing Water	Atlases quantifying the statewide temporal and geographical distribution of hydrologic flows will be developed and a network for monitoring the dynamic nature of hydrologic flows will be designed.	U of MN	\$646,000
<b>A2. Estrogenic and Pharmaceutical Contaminants in Surface and Ground Waters (5 proposals/subtotal = \$2,388,932)</b>						
009-A2	Arnold	William	Dioxins Derived from Antibacterials in Minnesota Lakes	The antibacterial in liquid soaps (triclosan) represents an unrecognized, substantial source of toxic, carcinogenic, and endocrine disrupting dioxins to Minnesota waters. Sediment cores will be analyzed to quantify the threat.	U of MN	\$287,000
010-A2	Kiesling	Richard	Estrogenic and Pharmaceutical Septic System Discharge to Lakes	Minnesota Lakes are vulnerable to septic-system discharge of estrogenic and pharmaceutical compounds. Proposed work assesses septic and watershed influences on levels of contamination and biological responses.	U.S. Geological Survey	\$594,500
011-A2	Novak	Paige	Fate and Ecological Impacts of Industrial Phytoestrogens	Hormone mimics are present in some industrial effluents (e.g., biodiesel) and may damage human/ecological health. We must understand the fate and effect of these compounds to protect Minnesota waters.	U of MN	\$340,000
012-A2	Swackhamer	Deborah	Understanding Sources of Aquatic Contaminants of Emerging Concern	This project develops a suite of chemical markers to characterize sources of endocrine disruptors and pharmaceuticals to surface waters. We will develop recommendations to policymakers for source reduction strategies.	U of MN	\$917,432

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014-A2	Goeden	Helen	New Risk Assessments for Endocrine Disruptors and Pharmaceuticals.	Evaluation and comparison of alternative risk assessment methods for assessing potential human health risks from exposure to low levels of pharmaceuticals and hormonally-active	MN Department of Health	\$250,000
<b>A3. Aquatic Habitat Protection (12 proposals/subtotal = \$6,460,224)</b>						
019-A3	Kloiber	Steve	Updating the Minnesota Wetlands Inventory: Phase 2	The overall goal of this ongoing project is to update wetland inventory maps for all of Minnesota. This phase will update wetland maps for the Northeast and Metro regions.	DNR	\$2,222,820
020-A3	Hanson	Mark	Sustainable, Cost-Effective Approaches to Management of Shallow Lakes	We propose studies of 160 shallow lakes in Minnesota. Results will clarify major causes for deterioration and evaluate results of current management efforts. Goals are cost-effective future lake management.	DNR	\$262,880
021-A3	Colman	Steven	Physics to Fish: Lake Superior Ecosystem Health Transects	Repeated measurements of lake components (physics to fish) along a transect in Lake Superior will assess ecosystem health in response to environmental stresses, e.g. climate change, invasive species, water quality.	UMD, Large Lakes Observatory	\$512,480
022-A3	Henderson	Carrol	Lakescaping: Buffer Zones and Technology Transfer	"Lakescaping" promotes improved stewardship of lakeshore property by creating 16 demonstration buffer zones using native plants, partnering with SWCDs, evaluation of lakescaping techniques, and four workshops for landowners and LUGs.	DNR	\$497,000
024-A3	Vondracek	Bruce	Assessing the Cumulative Impacts to Near-Shore, In-Water Habitat	Research for future efforts for near-shore, in-water restoration and model development that predict outcomes of human activities to guide lake managers toward sustainable lake-shore development.	U of MN	\$402,876
025-A3	Wheeler	Phil	Identify and Protect Southeastern Minnesotas Rare Groundwater-Fed Wetlands	The project will inventory, assess nitrate reduction, and develop conservation tools to protect groundwater-fed wetlands. These wetlands support unique habitats and remove nitrates from waters supplying streams and aquifers.	Olmsted County	\$479,992
026-A3	Ferrington	Leonard	Predicting and Mitigating Vulnerability of Trout Streams	Cold-water trout streams are vulnerable to warming climates. GIS and land-use analyses will identify vulnerable SE Minnesota streams. Quantify trout feeding, growth and cold-adapted aquatic insects that are essential food.	U of MN	\$434,238
028-A3	Berndt	Michael	Mineland Sulfate Release in Saint Louis River Basin	Mineland sulfate releases evaluated for potential to increase Mercury in fish in the St. Louis River Basin. Management recommendations will be made to help the state manage this emerging issue.	DNR	\$270,000

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LCCMR ID	Last Name	First Name	PROJECT TITLE	SUMMARY	Organization	\$ Requested
029-A3	Peterson	Joel	Optimizing Side Inlet Design to Improve Water Quality	This project will optimize design, estimate cumulative benefits, develop technical guidance, develop a LiDAR-based method for identification, and provide demonstration and outreach of side inlet controls at geographically diverse locations.	Board of Water and Soil Resources	\$465,000
031-A3	Herb	William	Protection of Trout Streams from Adverse Land-use Impacts	This study will quantify the state-wide impact of urban and agricultural land use practices on trout stream temperatures. Costs and effectiveness of thermal impact mitigation strategies will be summarized.	U of MN - St. Anthony Falls Lab	\$370,438
035-A3	Austinson	Craig	Mapleton Area Agricultural/Urban Runoff Water Quality Treatment Analysis	The project will improve water quality, enhance ecological value, and provide a model/tool for agricultural drainage improvements. The results will be beneficial to producers and the environment on future projects.	Blue Earth County Drainage Authority	\$485,000
044-A3	Otto	Ronald	Sibley County Filter Strips and Tile Alternatives	The Sibley County Filter Strip and Tile Alternatives Project will decrease soil loss, sediment and phosphorus entering the Minnesota River. Pollutants can be reduced by nearly 50% when installed.	Sibley SWCD	\$57,500
<b>B. Renewable Energy Related to Climate Change (14 proposals/subtotal = \$13,086,332)</b>						
<b>B1. Evaluate Applicability and Effective Implementation (6 proposals/subtotal = \$1,836,975)</b>						
046-B1	DAmato	Anthony	Evaluating Impacts of Biomass Harvests on Minnesota Forests	The project assesses impacts of biomass harvests for energy on Minnesota's forests. Results will quantify the impacts on native forest vegetation, invasive species spread, forest soils, and long-term site productivity.	U of MN	\$397,352
048-B1	Tilman	David	Sustainable Biofuels: Impacts of Climate Change and Management	Determine how climate change, fertilization and irrigation impact yields of grass monoculture and high-diversity prairie biofuel crops, their storage of soil carbon, and susceptibility to invasion by exotic species.	U of MN - Cedar Creek Ecosystem Science Reserve	\$264,000
049-B1	Bowyer	Jim	An Analysis of Biofuel Alternatives for Minnesota	Research and evaluation of the life-cycle costs, economic and environmental impacts, responsible production practices, and climate change implications of biofuels and the various renewable energy options available in Minnesota.	Dovetail Partners, Inc.	\$150,000
051-B1	Kittelsohn	David	Dimethyl Ether A Renewable Biofuel Meeting Minnesota Needs	Dimethyl ether, a second generation biofuel, has the highest well-to-wheel energy efficiency and lowest greenhouse gas emissions of any biomass-based fuel. Combustion-related engineering	U of MN	\$230,000

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LCCMR ID	Last Name	First Name	PROJECT TITLE	SUMMARY	Organization	\$ Requested
053-B1	Wyse	Donald	Year-round Produce Production: Using Waste Heat and CO2	Evaluate use of waste heat and CO2 from power and processing facilities to support local year-round production of fresh fruits and vegetables in Minnesota to enhance efficiency and CO2 capture.	U of MN	\$416,506
054-B1	Tschirner	Ulrike	Non-Food Based Biofuels to Augment Corn Ethanol	To provide an economic non-food based raw material source for existing or new ethanol plants we propose to recover hemicellulose(currently burned) and waste fiber (currently landfilled) from papermills.	U of MN	\$379,117
<b>B2. Encourage Adoption of Community-Based, Locally-Produced, Renewable and Innovative Clean Energy (5 proposals/subtotal = \$5,443,900)</b>						
059-B2	Hamerlinck	John	Colleges Partner with Cities to Cut Greenhouse Emissions	Higher education institutions statewide will assist 40 cities to implement multiple best practices to cut carbon emissions, achieve sustainability outcomes and to provide evaluation of GreenStep Cities projects.	MN Campus Compact	\$350,000
061-B2	Beckius	Pete	Acquire/Develop Native Grasslands for Energy and Environmental Services	The project will produce an integrative approach that maximizes both the economic and environmental benefits of a perennial grassland bioenergy system in the Lower Minnesota River Valley watershed.	Scott SWCD	\$881,000
064-B2	Spears	Barb	Linking Habitat Restoration to Bioenergy and Local Economies	This project restores high quality native habitats by removing ecologically inappropriate woody vegetation while stimulating local economies and providing bioenergy through strategic utilization of the biomass material.	DNR	\$1,508,000
066-B2	Postiglione	James	Urban Anaerobic Digester and Community Greenhouse	An anaerobic digester to manage waste, reduce GHGs and create renewable energy and organic fertilizer. Co-located with a greenhouse to produce organic food and training opportunities/jobs for youth. Replicable statewide.	Linden Hills Power & Light	\$1,950,000
068-B2	Blackmer	John	Alternative Energy: Implementing and Educating	Shattuck and five Faribault public institutions will develop distributed generation capacity (wind, solar, geothermal), then educate/train Minnesota community leaders and officials, school children and others on alternative energy assessment and implementation.	Shattuck-St. Mary's School	\$754,900
<b>B3. Develop Innovative Pilot or Demonstration to Reduce Carbon Emissions (3 proposals/subtotal = \$5,805,457)</b>						
074-B3	Ruan	Roger	Algae for Fuels Pilot Project	Te demonstrate an innovative microalgae production system utilizing and treating wastewater. Algae are harvested and converted to biofuels. Multiple ecological benefits including improving water quality, minimizing freshwater and land use.	U of MN	\$1,833,425

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075-B3	Deden	Joe	Residential Environmental Learning Centers (RELCs) Sustainable Energy Project	Six RELCs (Audubon Center, Deep Portage, Eagle Bluff, Laurentian, Long Lake, Wolf Ridge) will reduce their carbon footprints and disseminate energy education through renewable energy, energy efficiency, and conservation demonstrations.	The MN Coalition of RELCs	\$2,975,032
076-B3	Saar	Martin	Combined CO2-Sequestration and Geothermal Electricity Generation in Minnesota	The proposed project will build a prototype power plant and investigate field sites in Minnesota for future implementation of combined CO2 sequestration and renewable, clean geothermal electricity production.	U of MN	\$997,000
<b>C. Habitat Restoration, Enhancement, and Acquisition (14 proposals/subtotal = \$44,347,895)</b>						
082-C	Galatowitsch	Susan	Ecological Restoration Training Cooperative	Improve ecological restoration success in Minnesota by developing and offering a training program for restoration professionals. Training opportunities will include courses and webinars covering planning, implementation and monitoring restorations.	U of MN	\$621,016
083-C	Shaw	Ruth	Conserving Prairie Plant Diversity and Evaluating Local Adaptation	To conserve the genetic diversity of plants of the MN prairie and to provide the scientific basis for identifying adapted native seed sources for restorations.	U of MN	\$572,000
084-C	Harper	Jane	Washington County St. Croix River Land Protection	Acquire land and conservation easements to protect up to 450 acres of critical shoreland habitat along the St. Croix River and its tributaries.	Washington County	\$3,000,000
086-C	Larson	Kris	The Future of Wild and Scenic River Protection	The Land Trust will address future protection needs along Minnesotas remarkable wild and scenic rivers by analyzing the gaps in current protection and securing conservation easements within these priority areas.	MN Land Trust	\$375,000
087-C	Booth	Margaret (Peggy)	SNA & Native Prairie Restoration, Enhancement & Acquisition	The DNR SNA Program targets sites of biodiversity significance to acquire about 1100 acres, restore and enhance at least 3800 acres, and provide assistance and incentives for native prairie landowners.	DNR	\$8,000,000
088-C	Steward	Daniel	RIM Leveraging Federal Funds For Migratory Flyway Conservation	Using RIM permanent easements to protect the migratory bird corridor along the Mississippi River by leveraging state funds with Department of Defense funds.	Board of Water and Soil Resources	\$1,000,000
089-C	Mattice	Marc	Bertram Chain of Lakes Regional Park Acquisition 2	Acquisition of the remaining 881 acres of natural lands, including the shoreline of four lakes. To be part of the Bertram Chain of Lakes Regional Park.	Wright County	\$7,800,000
090-C	Peterson/Linnell	Larry/Stan	State Parks and Trails Land Acquisition	Project funding will be utilized to acquire and preserve for the public critical parcels within the statutory boundaries of state parks and a priority parcel for state trail corridors.	DNR	\$5,000,000

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092-C	Chaplin	Steve	Reconnecting Minnesotas Fragmented Prairie Landscapes	This project: builds local capacity for large-scale conservation, restoration, and economic development in five prairie landscapes (~300,000 acres); guides conservation investments across 2,000,000 acres more; and creates detailed implementation plans.	The Nature Conservancy	\$983,189
095-C	Kalahar	Thomas	Protection of Granite Rock Outcrop Ecosystem	One thousand five hundred acres of rare and unique Granite Rock Outcrop Ecosystem, located in the Upper Minnesota River Valley, will be preserved and enhanced through perpetual conservation easements.	Renville SWCD	\$4,038,000
096-C	Sames	Wayne	Natural and Scenic Area Acquisition	The funding would provide two or more matching grants to cities, counties, townships or school districts for acquisition of 100-200 acres for new or expanded natural and scenic areas.	DNR	\$1,000,000
097-C	Sumption	John	Conserving Sensitive and Priority Shorelands in Cass County	Financial incentives and technical assistance for 12-14 riparian landowners willing to donate conservation easements to permanently protect 3-5 miles of sensitive or priority shorelands already identified in Cass County.	Cass County Environmental Services Department	\$570,800
101-C	Holland	Matt	Minnesotas Habitat Conservation Partnership	Minnesotas Habitat Conservation Partnership requests \$8,272,890 and commits \$7,990,040 to restoring or protecting 31,727 acres within defined project areas under funding priority C - Habitat Restoration, enhancement and acquisition.	Pheasants Forever (on behalf of all partners)	\$8,272,890
102-C	Sames	Wayne	Metropolitan Conservation Corridors Phase 5 Supplemental	Accelerated acquisition of 949 acres fee and conservation easements, and accelerated restoration of 135 acres, to protect and enhance critical habitats or major landscape connections within scientifically determined metropolitan corridors	DNR	\$3,115,000
<b>D. Invasive Species (6 proposals/subtotal = \$1,352,017)</b>						
111-D	Skinner	Luke	Biological Control of European Buckthorn and Garlic Mustard	This project continues the development and implementation of biological control for European buckthorn and garlic mustard. This includes screening of buckthorn insects and introduction and assessment of garlic mustard insects.	DNR	\$300,000
112-D	Reich	Peter	Healthy Forests to Resist Invasion	Our project tests whether promoting forest health in order to resist colonization by invasive plants represents an effective management strategy to limit invasion, and widely disseminate findings and management guidelines.	U of MN	\$359,584
113-D	Mensingher	Allen	Bioacoustic Traps for Management of the Round Goby	We propose to develop a fish trap for the invasive round goby using novel bioacoustic technology, to provide early detection of its expansion, stop its spread, and reduce its population	U of MN - Duluth	\$175,500

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115-D	Kowalczak	Courtney	Strengthening the Frontline to Prevent Aquatic Invasive Species	Minnesota Waters will mobilize, train and equip citizens and lake/river service professionals to: detect and report aquatic invasives for rapid response, to raise awareness, and promote actions that prevent further spread.	MN Waters	\$199,290
122-D	Krischik	Vera	Reducing Spread of Japanese Beetle and Emerald Ashborer	Reducing the spread of landscape invasives through low risk insecticides and biocontrol (nematodes and protozoans) for Japanese beetle and proper use of systemic insecticides for emerald ash borer.	U of MN	\$317,643
239	TBD	TBD	An addition of a research proposal on Emerald Ash Borer and its impacts to the Black Ash Forest Community has been requested.	TBD	TBD	TBD
<b>E. Natural Resource Conservation Planning and Implementation (10 proposals/subtotal = \$4,081,606)</b>						
<b>E1. Community-Based Planning and Implementation (5 proposals/subtotal = \$2,374,627)</b>						
125-E1	Pfeifer	Sharon	Community Conservation Assistance: Strengthening Local Governments Conservation Capacity	Community Conservation Assistance is a multidisciplinary, interagency effort to expand and accelerate local efforts to incorporate natural resources information/analysis into land use plans and actions to protect land and water.	DNR	\$827,000
126-E1	Fuchs	Dennis	Central Minnesota Mississippi River Regional Implementation and Planning	Create Mississippi River corridor plan along 25 miles of river through nine communities. Collaborative regional natural resource protection that demonstrates conservation design resulting in locally supported natural resource protection strategies.	Stearns Cty SWCD	\$313,000
131-E1	Eckman	Karlyn	Building Local Partnerships to Enhance Shoreland Conservation	We will build the capacities of environmental professionals and local communities to work together on shoreland conservation. Outputs include workshops and toolkits for community partnering,	U of MN	\$269,677
133-E1	Stokes	Susan E.	"Green Acres" and Farmland Conservation in Minnesota	This proposal will preserve farmland and forest land through the state's "Green Acres" law; and develop statewide policy and zoning tools to preserve agricultural lands, especially in the metro region.	Farmers Legal Action Group, Inc. (FLAG)	\$224,950
137-E1	Ronnenberg	Jennifer	Lower Mississippi River Habitat Restoration Program	Habitat and hydraulic reconnection of the Zumbro and Root River floodplain corridors to the Mississippi River through private lands outreach and partner coordination.	Zumbro Watershed Partnership, Inc.	\$740,000

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<b>E2. Natural Resource Inventory and Assessment for Planning and Implementation (5 proposals/subtotal = \$1,706,979)</b>						
141-E2	Bauer	Marvin	Monitoring and Modeling Minnesota Landscapes and Ecosystem Services	We will develop a current statewide land cover-use map, continue satellite monitoring of lake clarity, and model scenarios of the impact of changing land use on ecosystem services.	U of MN	\$390,000
142-E2	Mulla	David	Strategic Planning for Minnesota's Natural and Artificial Watersheds	Apply modern imaging technology to create a long-term strategic plan aimed at preventing pollutants from drain tiles and ditches from reaching the natural watersheds of the state.	U of MN	\$327,000
143-E2	Martell	Mark	The Minnesota Breeding Bird Atlas	Years three and four of a six-year, statewide, volunteer-conducted survey of all breeding birds in Minnesota, resulting in the first comprehensive data identifying species ranges and concentrations.	Audubon Minnesota	\$372,856
145-E2	Pfannmuller	Lee	An Integrated, Operational Bird Conservation Plan for Minnesota	An integrated bird conservation plan will be developed that builds on existing plans, targets priority species, and provides a framework for implementing coordinated, focused, and effective bird conservation throughout Minnesota.	Audubon Minnesota	\$151,440
147-E2	Brady	Valerie	Statewide Prioritization of Wetland Restorations for Water Quality	Develop GIS decision system and wetland prioritization tool so managers statewide can rank subwatersheds by the probability for wetland restoration success to improve water quality and habitat in local-scale watersheds.	UMD, NRRI	\$465,683
<b>F. Environmental Education (16 proposals/subtotal = \$6,445,879)</b>						
165-F	Lais	Greg	Urban Wilderness Canoe Adventures (UWCA)	UWCA is a new outdoor education and recreation program on the Mississippi River, complete with guided day trips, overnight camping, and environmental education activities serving 20,000 youth over 3 years.	Wilderness Inquiry	\$557,500
166-F	Woods	Steve	Minnesota Conservation Apprenticeship Academy	The Conservation Apprenticeship Program will train and mentor Minnesotas future conservationists by providing apprenticeship service to SWCDs during construction season and increase quality on-the-ground conservation projects.	Board of Water and Soil Resources	\$368,500
171-F	Rom	Nicole	Minnesota's Changing Climate: Engaging Students through Adventure Learning	Minnesotas Changing Climate investigates connections between ecosystems, resources and climate, while weaving Will Steger's adventures into curriculum and training, and providing leadership	Will Steger Foundation	\$250,000
176-F	Henderson	Carrol	Digital Photography Bridge to Nature, Teacher Training	This new interdisciplinary curriculum will use digital photography to foster an interest in nature by Minnesota youth by providing 80 workshops for 1000 school teachers over two years.	DNR	\$230,000



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178-F	Matthees	Jenifer	Youth Aquatic Environmental Education and Angling Grants Program	Providing competitive grant dollars for schools, civic and community organizations, youth programs, Scouts, 4-H, Park and Recreation, and similar groups to integrate aquatic and angling education in their settings.	DNR	\$625,000
179-F	Ganje	Don	Get Outside! Urban Woodland for City Kids	The Como Woodland Outdoor Classroom is a 17% acre woodland which provides ecological education and historical interpretation for children and adults, habitat for native wildlife, and an urban woodland oasis. [includes capital]	City of Saint Paul, Dept of Parks and Recreation	\$218,500
180-F	Duffey	Laura	Expanding and Strengthening Outdoor Classrooms at Minnesota Schools	Enhance existing outdoor classroom network throughout Minnesota, inject existing environmental education curriculum (including climate change) and teacher training into schools, and establish efficient systems to serve sites in the future.	DNR	\$400,040
181-F	Hernandez	Frank	K-12 Urban EnviroEd Fellowships: Enhancing Preservice Urban Teacher	K-12 Urban Environmental Education Certificate & Fellowship/residency preparing and sustaining highly qualified diverse undergraduate preservice urban teacher candidates to teach K-12 environmental education in up to 30 metro/urban schools	Center for Excellence in Urban Teaching at Hamline	\$1,372,000
185-F	Vang	Ly	Fishing: A Cross Cultural Gateway to Environmental Education	Develop fishing as a gateway for communicating meaningful environmental information; teaching skills for lifelong outdoor participation; and instilling values of stewardship in three generations of Southeast Asian communities	Association for the Advancement of Hmong Women in MN	\$155,830
186-F	Ortiz	Mary	Minnesota WolfLink	The International Wolf Centers Minnesota WolfLink brings the wolfs world to people of all ages and needs through compelling onsite outdoor programs and live wolves inside through distance learning.	International Wolf Center	\$231,576
188-F	Meyer	Mary	Minnesota Landscape Arboretum Land Management and Environment Education	The Arboretum proposes to undertake projects on a recent property acquisition including: eradicating invasive species, developing a management plan, increasing public access, constructing an outdoor education facility, and developing curriculum. [Building]	U of MN - MN Landscape Arboretum	\$1,169,200
190-F	Bylander	C.B.	Innovative Model for Outdoor Education in Grades 7-12	Inovative approach to train and support 7-12 grade teachers so their students can achieve academic standards by using the outdoors as a context for learning and outdoor skill-building.	DNR	\$300,000
194-F	Musser	Kimberly	Minnesota River Experts: An educational field trip online	Take a virtual field trip with 20 experts who answer questions about the Minnesota River. Tours and materials available online and at 6 kiosks in schools and outreach centers.	MN State University - Mankato	\$124,721

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199-F	Drake	Jeff	Glendalough Academy: An Environmental Education & Stewardship Model	Glendalough Academy is a partnership between I.S.D. #542/Glendalough State Park utilizing environmental education as catalyst to inspire scientific reasoning, critical thinking, leadership, and stewardship among students. [Capital project]	I.S.D. #542, Battle Lake Public School	\$118,012
200-F	Grover	Sara	Project Get Outdoors Toolkit Activities	Project GO is a non-profit organization working to complete a program toolkit that will help communities throughout Minnesota develop practical out-of-school programs that connect children to local nature experiences.	Project Get Outdoors, Inc.	\$10,000
210-F	Johnson	Jay	Hunting Skills Education Grants Program	Hunting Skills Education grants will provide incentives to deliver basic hunting skills training. The program will result in a minimum of 40 skills training workshops and several thousand participants.	DNR	\$315,000
<b>G. Creative Ideas (5 proposals/subtotal = \$2,035,192)</b>						
215-G	VanDerPol	Terry	Making Ecosystem Services Pay in Agricultural Watersheds	Partners will utilize local food and perennial biofuels markets and conservation incentives to encourage farmers to diversify Chippewa River watershed fields, resulting in measureable ecosystem improvements compared to modeled benefits.	Land Stewardship Project	\$247,200
216-G	Gralnick	Jeffrey	Science and Innovation from the Soudan Iron Mine	The Soudan Iron Mine in Northern Minnesota is a unique and exciting opportunity for basic science, educational outreach and innovative applications impacting the areas of drug discovery, bioenergy and bioremediation.	U of MN	\$551,451
217-G	Moen	Ron	Identifying Critical Habitats for Moose in Northeastern Minnesota	Moose are declining in Minnesota. We will identify critical habitats and develop best management practices guidelines using GPS collars on moose. K-12 workshops and the Minnesota Zoo give statewide impact.	UMD, NRRI	\$507,078
220-G	Cotner	James	Quantifying Carbon Burial in Healthy Minnesota Wetlands	Shallow lakes can bury carbon intensively and could be used to mitigate release from fossil fuels. We will determine how managers can increase carbon burial in Minnesotas shallow lakes.	U of MN	\$432,000
221-G	Krischik	Vera	Mitigating Pollinator Decline in Minnesota	Pollinators offer valuable ecosystem services in the production of seeds and fruits. The role of insecticides and lack of quality nectar plants will be studied to mitigate pollinator decline.	U of MN	\$297,463