2011-2012 Environment and Natural Resources Trust Fund Proposals

In response to the 2011-2012 Request for Proposal (RFP), due April 9, 2010, 241 proposals requesting a total of approximately $162 million were received. This RFP process is for the biennium (2 years) beginning July 1, 2011. For that period, approximately $52 million from the Environment and Natural Resources Trust Fund is expected to be available to recommend for project funding. The LCCMR will be reviewing, evaluating, and ranking all proposals received. In early June, the LCCMR will select a subset of proposals to receive further consideration and to invite in to present before the Commission. Proposal presentations for those invited will occur in late June.

Note About Proposal Listings

Proposals are currently listed in alphabetical order by proposer last name under the category in which they were submitted. Following LCCMR staff review of proposals, some adjustments to listings may occur to ensure that proposals are under the category in which they best fit and that information presented is accurate and complies with proposal requirements outlined in the RFP.

Last Name	First Name	Project Title	Summary	Organization	$ Requested
A. Natural Resource Data and Information (31 proposals/subtotal = $19,481,803)					
Arbeit	David	Common Ground: The Minnesota Environmental Mapping Commons	Implements a "public commons" for finding and downloading environmental data, along with an interactive mapping and modeling system (ECOView) that uses "real-time" data feeds from state, local and federal agencies.	Department of Administration - Minnesota Geospatial Information Office	$675,000
Baker	Fred	Recognizing Black Spruce Disease: Can Prevention Increase Harvest?	Dwarf mistletoe kills black spruce, and incidence data are inaccurate. We will develop and apply a statistical tool to improve DNR inventory information, potentially increasing the volume available for harvest.	Utah State University	$232,434
Bauer	Marvin	Mapping and Monitoring Minnesota Landscapes	We will produce a current statewide digital land cover-use map, analyze changes and trends in land use over the past 40 years, and model scenarios of alternative future land use.	U of MN	$395,000
Benson	Steve	WMA-AMA Work Planning Information System	Develop a DNR WMA-AMA Enterprise Information System to facilitate protection, enhancement and restoration of wildlife and fish habitat and facilities, and facilitate work planning, budgeting and reporting.	DNR	$582,000
Butler	Erika	Determining Causes of Death in Declining Moose Populations	Determining why Minnesota's moose are dying, and if nutritional stress is playing a fundamental role, will provide guidance for specific management actions to prevent further population decline.	DNR	$717,250
Converse	Carmen	Minnesota County Biological Survey (continuation)	Minnesota County Biological Survey systematically collects, interprets, and delivers data on the distribution and ecology of plants, animals, native plant communities and functional landscapes to guide and monitor conservation actions.	DNR	$3,300,000
Damon	Susan	Conservation Easement Stewardship and Enforcement Program, Phase II	Accelerated implementation of Phase I Conservation Easement Stewardship Plan for existing easements through monitoring, Baseline data collection and report completion, corrective surveys, researching current fee ownership and enforcement protocol development.	DNR	$750,000

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Dessecker	Daniel	Enhancing Future Forest Conservation Using Gullion's Historic Research	Enhance wildlife conservation in Minnesota by securing the knowledge generated during Gordon Gullion's 30+ years of landmark research in an electronic format for use by tomorrows natural resource professionals.	Ruffed Grouse Society	$220,271
Drewes	Annette	Wild Rice Conservation Through Citizen Science and Engagement	Develop monitoring network and protocol for a database on wild rice abundance, through citizen involvement, that protects wild rice waters, water quality and wildlife habitat. Increase citizen harvest/education opportunities.	Bemidji State University	$214,200
Everett	Leslie	Strengthening Natural Resource Management with LiDAR Training	Natural resource managers will be provided workshops and web-based training and information to enable them to effectively use LiDAR elevation data in planning and management of natural resources.	U of MN	$184,870
Falteisek	Jan	County Geologic Atlases Part B for Seven Counties	Produce seven County Geologic Atlases Part B for groundwater protection, wise use, and long-term resource management: Anoka, Blue Earth, Clay, Nicollet, Renville, Sibley, and Wright counties.	DNR	$903,000
Fritz	Charles	Improving Natural Resource Conservation with Value-Added LiDAR	Value added LiDAR products and tools will be created and integrated into a web portal to accelerate LiDAR use for targeting and planning land and water conservation practices and projects.	International Water Institute	$398,300
Henschel	Andy	Improving Habitat/Surface Water Quality through Precision Conservation	Precision Conservation Planning will accelerate improved habitat, water quality, and flood control in a cost effective way by utilizing LiDAR data and other state of the art tools.	Shell Rock River Watershed District	$454,000
Johnson	Gregory	Quantifying Streambed Sediment to Improve Aquatic Habitat	Streambed sediment assessment and quantification will help define the impacts of sediment on fish and other aquatic life and guide stream restoration efforts in Minnesota's rivers and streams.	Minnesota Pollution Control Agency	$450,000
Kean	Allan	Drainage Records Modernization and Shared GIS Database	Develop shared GIS database for key characteristics of Minnesota Statutes Chapter 103E publicly administered drainage systems, update Drainage Records Modernization Guidelines, and make available cost-share for drainage records modernization.	Board of Water and Soil Resources	$715,000
Kloiber	Steve	Updating the National Wetland Inventory for Minnesota: Phase3	This is the third phase of a multi-phase project to update and enhance the National Wetland Inventory for Minnesota. This phase will update wetland maps for southern and northeastern Minnesota.	DNR	$2,645,000
Lemm	Les	Wetland Assessment Web-Tool Using Historic Aerial Imagery	Improve wetland inventories, restorations, and protection by providing statewide coverage and instant access to a time series of remotely sensed digital photography and contextual climate data essential for wetland delineation.	Board of Water and Soil Resources	$285,000
Lennon	Megan	The completion of a Statewide Digital Soil Survey	This is the last proposal to map and digitize Minnesota soils. Three project areas are emphasized, and gaps in seamless data coverage are addressed.	Board of Water and Soil Resources	$500,000

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Lennon	Megan	Measuring Conservation Outcomes with New and Revised Estimators	A 3-tiered approach to improve measurement of the environmental benefits of conservation practices: improve existing and develop new pollution estimators, verify field estimators, and local government unit training and education.	Board of Water and Soil Resources	$340,000
Levenson-Falk	Annie	Water Quality Smartphone Application	Enhance and maintain a smartphone application that allows citizens to (1) access and (2) contribute to water quality-related information while they are at Minnesota's lakes and rivers.	Citizens League	$52,500
Martell	Mark	Final Phase of the Minnesota Breeding Bird Atlas	This will complete the Minnesota Breeding Bird Atlas, a statewide, comprehensive bird survey, with a final year of data collection and two years to analyze and present the information.	Audubon Minnesota	$664,000
Mehus	Scott	Golden Eagle Research Project	The Golden Eagle Research Project aims to increase understanding of golden eagles in Minnesota by conducting surveys, tracking winter resident golden eagles and educating the public about golden eagles.	National Eagle Center	$93,050
Pierce	Ann	Increased Forest Monitoring to Address Escalating Stressors	This project will design and test an efficient and effective monitoring framework for three priority landscapes on state managed properties, while developing tools and frameworks to facilitate monitoring by others.	DNR	$400,000
Polasky	Stephen	InVEST in Minnesota	InVEST (Integrated Valuation of Ecosystem Services and Tradeoffs) for applications in Minnesota will be developed and made available to state agencies, local government and the public.	U of MN	$424,928
Setterholm	Dale	MGS County Geologic Atlases for Sustainable Water Management	Geologic atlases provide information essential to sustainable management of ground water resources. They define aquifer boundaries and the connection of aquifers to the land surface and surface water resources.	U of MN - Minnesota Geological Survey	$1,200,000
St. Mane	Ted	Interactive Outreach for Statewide Conservation and Preservation Plan	Position LCCMR's Statewide Conservation and Preservation Plan as the authoritative guide for natural resources investments by creating a searchable, multimedia online solution that promotes understanding and implementation of the plan.	MLT Group LLC	$265,000
Stiras	Joel	Paddlefish and Sturgeon Monitoring	Evaluate sensitive shovelnose sturgeon, lake sturgeon and paddlefish populations in the St. Croix River and Mississippi River (Pool 2) prior to Asian carp expansion.	DNR	$125,000
Valentas	Kenneth	Strategically using Minnesota's Biomass for Heat and Electricity	This project connects sources of biomass with statewide needs for heat and electricity. Learning where to utilize both will promote economic markets for biomass while supporting environmental conservation throughout Minnesota.	U of MN	$291,000
Vanderbosch	Neil	Aquaculture Reduction in Natural Wetlands	Evaluate intensive aquaculture techniques to determine if fish production can be increased which will reduce the number of ponds needed meet fish production goals.	DNR	$250,000

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Weiblen	George	Online Guides to Minnesota Plants, Fungi, & Lichens	>150,000 Minnesota plant, fungal, and lichen records (geographic information and digital imagery) will be served on the web as maps and field guides for resource managers, educators, and the public.	U of MN	$373,000
Wolff	Jan	Working Together With Nature to Pilot Watershed Management	This project will create online guides and tools to manage healthy watersheds across Minnesota. Efforts support local decision makers to address complex management challenges with sustainable solutions.	DNR	$1,382,000
B. Water Resources (42 proposals/subtotal = $17,126,778)					
Austin	David	Pure Oxygen Injection Demonstration for Water Quality Improvement	Injecting pure oxygen above deep lake sediments prevents release of phosphorus and methylmercury. This novel application of proven big-reservoir technology will provide a new method of delisting impaired suburban/urban lakes.	Riley Purgatory Bluff Creek Watershed District	$230,000
Barten	John	Elm Creek Stream Bank Stabilization Project	This project will stabilize an eroding reach of Elm Creek by grading the channel cross section, rip-rapping the bank toe, and vegetating eroded banks to improve stream ecological habitat.	Three Rivers Park District	$200,000
Bistodeau	Lucas	Targeted Land Management Strategies to Improve Water Quality	This project will identify, implement, and evaluate effectiveness of best management practices on upland and shoreland priority areas within Shields Lake sub-watershed with a goal of improving water quality conditions.	Cannon River Watershed Partnership	$134,000
Brooks	Ken	Linking Rural Land Treatment Systems to Healthy Biota	This project increases understanding of the linkage between multiple rural land treatment systems and healthy biota through the development of tools [InVEST] that effectively measure response for decision makers.	U of MN	$948,000
Brotzler	Andy	City of Rosemount Groundwater Observation Project	Rosemount proposes to construct two groundwater observation wells and procure equipment for long term groundwater monitoring to ensure water supply sustainability.	City of Rosemount	$65,600
Brown	Timothy	MPRB Loring Pond Management Plan	Loring Pond is beset with poor habitat characteristics. This project will create a management plan solution. The plan will develop a vision and goals and incorporate sustainable steps toward them.	Minneapolis Park & Recreation Board	$50,000
Chang	Fu-Hsian	Use of Biofilm Reactors for Water Purification	Biofilm reactors having strong bioremediation potentials will be developed and tested for purification of persistent organics and removal of inorganic nutrients from dairy farm and wastewater treatment plant effluents.	Bemidji State University	$375,000
Colman	Steven	Ecosystem Transects to Monitor Lake Superior's Health	Integrated and repeated measurements of environmental components along transects in Lake Superior will assess ecosystem health in response to environmental stresses, such as climate change, invasive species, and water quality	U of MN	$504,639

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Convery	Michael	Arsenic Occurrence in Private Well Water	Private wells must be tested for arsenic, a human carcinogen, at the time of construction. This project will retest selected wells to determine whether arsenic levels change over time.	Department of Health	$86,540
Dahl	Linda	Nitrate Removal Capacity of Minnesota's Groundwater-Fed Wetlands	This regional project will generate detailed location maps and characterize nitrate removal capacity of Southeast Minnesota's Groundwater-Fed Wetlands; providing tools needed to better focus water management resources.	Southeast Minnesota Water Resources Board	$902,428
Eadens	Lisa	Prioritizing Critical Restoration Sites in the Zumbro Watershed	Comprehensive identification of critical sources of erosion and runoff in the Zumbro Watershed using LiDAR and other precision conservation tools to prioritize restoration and protection projects with the highest cost-benefit.	Zumbro Watershed Partnership	$163,500
Engstrom	Daniel	Unprecedented Recent Changes in Minnesota's Wilderness Lakes	Minnesota's remote wilderness lakes are experiencing unexpected ecological change, including blooms of noxious blue-green algae. We will explore the root causes and determine which lakes are most at risk.	Science Museum of Minnesota	$321,700
Fisher	Shannon	Crop Residue Status and Soil Loss Outcomes Model	The Soil Loss Outcomes Model Project will work with 67 Soil and Water Conservation Districts to complete Crop Residue Management Surveys for three years and calculate soil loss using RUSLE2.	MN State University, Mankato - Water Resources Center	$628,966
Green	Jeff	Innovative Trout Stream Springshed Mapping in Southeast Minnesota-Continuation	Innovative identification and delineation of supply areas (springsheds) for springs serving as coldwater sources for modern and historic trout streams and assessing impacts on them from land and water development.	DNR	$676,765
Gulliver	John	Phosphorus- Curlyleaf Pondweed Control by Sediment Iron Augmentation	Investigate impact of iron filings added to sediment on curlyleaf pondweed growth and sediment phosphorus release to the water. We will also investigate the impact on Eurasian watermilfoil growth.	U of MN	$647,000
Gustafson	Jim	Sensitive Lakeshore Identification in Itasca County	To aid in the protection of high-value lake ecosystems in Minnesota, surveys to identify sensitive lakeshore and restorable shoreline will be conducted in collaboration with state and local partners.	Itasca County Soil and Water Conservation District	$190,000
Hruska	Jim	Improving Woodchip Bioreactors for Nitrate Management	We want to install a woodchip bioreactor on a 17.6 acre tile-drained agricultural field to demonstrate a cost-effective way for agricultural producers to reduce nitrate levels in tile discharge water.	Dodge County Soil & Water Conservation District	$28,040
Hubmer	Todd	Preservation of Natural Resources, Ecology, and Stormwater Reuse	First of its kind design, combining "Complete Streets" with preservation of natural resources, ecology, and reuse of stormwater, exceeding regulation and setting new standards for future improvements in communities.	City of Afton	$350,000
Hubmer	Todd	Groundwater Recharge: Nicols Fen, Kennealy/Harnack Trout Streams	Pilot project infiltrating groundwater beneath perched wetlands to recharge groundwater sources of calcareous fen, trout streams, and groundwater aquifers. Pilot project can be expanded to regional scale for regional benefits.	Gun Club Lake Watershed Management Organization	$37,540

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Kean	Allan	Update 20-year-old Minnesota Public Drainage Manual	Update Minnesota Public Drainage Manual (1991) and Minnesota Public Drainage Law Overview for Decision-makers (2002) to enhance drainage water management statewide for flow control and improved water quality.	Board of Water and Soil Resources	$228,000
Kennedy	Jay	City of Hugo Groundwater Observation	Hugo proposes to construct four groundwater observation wells and procure equipment for long term groundwater monitoring to ensure water supply sustainability.	City of Hugo	$118,700
Kovarik	Holly	Sauk River Watershed Strategic Modeling and Analysis	Different landuse practices, development pressures, and water quality issues are indicative of the need for a hydraulic model and report of the existing conditions within the watershed for future management.	Sauk River Watershed District	$440,000
Kranz-McGuire	Megan	Nutrient Retention by Vegetation in Southeast Minnesota Streams	Reduce nutrient and sediment contamination through the natural functions of stream aquatic vegetation by: assessing contaminant removal capacity, determining habitat requirements of aquatic vegetation, and identifying management and restoration strategies.	Whitewater Joint Powers Board	$436,000
Leete	Jeanette	Capture and Use of Groundwater Sustainability Data Pilot	Water supply systems typically collect but do not store groundwater level and flow-rate data. We will demonstrate feasibility and cost savings of automated data capture for groundwater sustainability investigations.	DNR	$601,800
Lehr	Randy	Using Gene Expression to Assess Water Resource Health	This project will implement a pilot program to use gene expression analysis in fish (using a technology called cDNA microarrays) to assess water resource health throughout Minnesota.	Three Rivers Park District	$350,000
Lemm	Les	Decision Support Tools for Assessing Drainage Impacts	Improve wetland protection and landowner certainty by providing standardized drainage lateral effect calculation methods and improving the capabilities of local government staff to evaluate drainage projects for wetland impacts.	Board of Water and Soil Resources	$115,000
Lindgren	John	Knowlton Creek Peak Flow and Erosion Alleviation	A water retention, infiltration, and diversion system will be engineered to reduce runoff quantity to natural levels, eliminate sediment, and cool water that flows into Knowlton Creek.	DNR	$2,200,000
Mohring	Eric	Potential Benefits of Perpetual Easements on Phosphorus Reduction	Most studies are not long enough to evaluate reductions in phosphorus. This study will examine limited-duration and perpetual easements and their effectiveness at reducing phosphorus transport to streams.	Board of Water and Soil Resources	$126,506
Nordby	Bev	Comprehensive Hydrologic Analysis of the Cedar River Watershed	The proposed regional analysis will provide the CRWD/TCWD with a key, essential tool to reduce peak flows, improve water quality, and manage development throughout the watershed.	Cedar River Watershed District	$182,000
Page	Jamie	Schmidt Lake Restoration	Restore Schmidt Lake (Impaired water) Install treatment ponds/chambers on stormwater pipes draining into the lake, excavate sediment to pre-development depths, monitor water quality. Get off impaired waters list.	Schmidt Lake Association	$425,000

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Reeves	Laurel	New Generation in Water Supply Management-Pilot Studies	This proposal will develop a new approach for sustainable water management planning across governmental jurisdictions and link users and citizens in water management decisions that are unique to their area.	DNR	$986,500
Sadowsky	Michael	Mississippi Water Quality – Deeper Look, Broader Impacts	New DNA sequencing approaches and chemical analyses will be used to assess water quality in the Mississippi River, producing searchable databases that will be incorporated into classrooms and public exhibits.	U of MN	$623,445
Sanocki	Christopher	Harmonized DNR and Canadian Watersheds Enhance Streamstats	This project will provide on-line access to very detailed DNR Lake watersheds through the Minnesota USGS StreamStats application.	United States Geological Survey	$213,650
Schuler	Kathleen	Community-Based Approach to Reducing Estrogenic Water Contaminants	We will reduce estrogenic chemical water pollution by helping local governments identify and implement green practices to reduce their and their citizens' pollution from cleaning products, pesticides and pharmaceuticals.	Institute for Agriculture and Trade Policy	$299,700
Sleeper	Faye	Adaptive Watershed Planning Tools for the North Shore	This research and outreach project will enhance North Shore adaptive, inter-jurisdictional watershed planning through identification and communication of hydrological impacts based on various development and climate trends scenarios.	U of MN - Water Resources Center	$595,531
Toner	Brandy	Minnesota Drinking Water: Reducing Arsenic in Private Wells	Private wells with arsenic exceeding drinking water standards are found statewide, but sources are poorly understood. Our goal is to develop and test prototype sub-surface maps for groundwater arsenic risk.	U of MN	$527,132
VanBuren Hanson	Princesa	Understanding Groundwater Sustainability in the I-94 Growth Corridor	This project builds understanding of how the corridors groundwater responds to land and water use, and helps communities understand their part in the broader community of corridor water interests.	Environmental Quality Board	$594,000
Wammer	Kristine	Minnesota River: Occurrence and Potential Significance of Antibiotics	We will examine the potential threat of antibiotics in the Minnesota River. We will measure antibiotic concentrations and antibiotic resistance and assess the contributions of farm runoff and wastewater treatment.	University of St. Thomas	$193,840
Weiss	Bret	City of Rogers Groundwater Observation and Geological Investigation	Rogers proposes to conduct a geological investigation, including construction of four groundwater observation wells and procuring monitoring equipment, for long term groundwater monitoring to ensure water supply sustainability.	City of Rogers	$162,200
Willenbring	Peter	Lake Minnetonka Water Quality Treatment System	This replicative project takes water from Lake Minnetonka and Six Mile Marsh, improves its quality through a flocculation phosphorus removal treatment system, and returns clean water back to Halstead Bay.	City of Minnetrista	$800,000
Zanko	Larry	Waste Water Phosphorous Filtration Using Recycled By-Products	Evaluate the use of recycled iron by-products or waste products to create a waste water filtration method that will remove phosphorous to state acceptable surface water levels.	U of MN - NRRI	$185,056

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Ziemer	Jason	Pioneer Creek Tributary Restoration	The restoration of the Pioneer Creek tributary will reduce phosphorous by 36 pounds and total suspended solids by 32 tons per year; stop stream bank erosion; and improve water quality.	City of Maple Plain	$183,000
C. Methods to Protect, Restore, and Enhance Land and Habitat (35 proposals/subtotal = $19,114,859)					
Biesboer	David D.	Genetic Diversity, Conservation and Threats to Wild Rice	Wild rice is an important and threatened species in Minnesota. This project seeks to understand its genetic diversity and conserve it for future generations in the state.	U of MN	$195,000
Braun	Lois	Bush-Type Hazelnuts as an Alternative Perennial Crop	Planting native and bush-type hazelnuts on marginal lands would protect soil and water and provide wildlife habitat. We propose to select elite germplasm, propagate it, and develop best management practices.	U of MN	$316,010
Brown	Timothy	MPRB Comprehensive Vegetation Management Plan	We manage natural areas and landscapes with no cohesive plan. Help us integrate stakeholders, sustainability, and existing site plans, providing priorities and methods for efficient and cost effective conservation system-wide.	Minneapolis Park & Recreation Board	$190,000
Chapman	Kim	Sustainable Land-use & Infrastructure Planning	Demonstrate using community planning tools--ordinances, best practices, economic impact analysis--to protect, improve and carefully use natural resources (land, water, wildlife) on the North Shore and associated inland watersheds.	Applied Ecological Services, Inc.	$385,000
Dirkswager	Anna	Woody Biomass Harvesting for the Management of Brushlands	Harvesting woody biomass to manage brushlands for open-land habitat will provide an additional renewable energy resource to local MN economies and reduce management costs currently needed to manage brushlands.	DNR	$207,250
Forester	Jeff	Preserving Public Values on Private Land	This study will identify privately owned riparian habitat and discern an incentive type and level sufficient to alter owner behavior to protect this habitat into the future.	Minnesota Seasonal Recreational Property Owners Coalition	$65,000
Fuchs	Dennis	Protecting the "Orphan Stretch" of the Mississippi River	Empowering 11 local jurisdictions to adopt river protection strategies in their communities through intensive technical support, and applying conservation measures to high biodiversity riparian properties through customized landowner interactions.	Stearns County Soil and Water Conservation District	$343,900
Haroldson	Kurt	Controlling Encroachment of Woody Vegetation in Grasslands.	Expansion of woody vegetation has become one of the greatest threats to prairies and grasslands. We will evaluate treatments and identify the most effective methods for controlling woody vegetation.	DNR	$240,680
Hastings	Jeff	Phase II Southeast Minnesota Showcase Stream Restoration Projects	This project will restore 4.2 miles of riparian corridor for trout and nongame species in Southeast Minnesota and increase the capacity of professional conservationists to implement integrated stream restoration projects.	Trout Unlimited, Inc.	$250,000

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Henderson	Carrol	Lakescaping for Wildlife and Water Quality Demonstration Sites	Degraded and eroded shorelines on fourteen private sites will be selected, designed, and installed as demonstration sites to improve habitat and water quality. Four workshops will promote the lakescaping model.	DNR	$200,000
Hoek	Tabor	MN Conservation Assistance Project	A conservation partnership to employ 24 field technicians to secure enrollment and retention of 60,000ac. of critical grasslands, wetlands, and forest on private land in MN.	Board of Water and Soil Resources	$1,500,000
Jambor-Delgado	Jennifer	Farmland and Resource Conservation: Making "Green Acres" Work	This project will promote conservation, and preserve Minnesota's farmland and adjacent forest and wetlands, through an accessible publication advancing effective and uniform implementation of the newly revised "Green Acres" law.	Farmers Legal Action Group, Inc. (FLAG)	$125,125
Johnson	Richard	Minnesota's Critical Lands - Acquisition, Restoration & Research	Acquire critical habitat, 480 acres; restore prairie, 400 acres; native habitat enhancement, 10,000 acres; initiate/inventory invasives management, 375,000 acres; research prairie management effects on diversity, carbon sequestration, water storage.	The Nature Conservancy	$2,650,000
Jones	Alan	Community Grants to Suppress EAB on Private Lands	Slowing the spread of emerald ash borer (EAB) by removing infested ash trees is critical but costly. Homeowners would receive community loans through DNR grants for timely removal and disposal.	DNR	$1,000,000
Kortebein	Paul	Big Woods Heritage Forest Assessment and Restoration	Three Rivers Park District will assess and restore a Big Woods Heritage Forest through invasive species control, native plantings, soil stabilization, and will promote results to landowners and public audiences.	Three Rivers Park District	$300,200
Kovarik	Holly	Crooked Lake Aquatic Habitat Re-establishment	Re-establishing the Crooked Lake bed will permanently preserve habitat for waterfowl and other aquatic wildlife through a perpetual conservation easement. Flood reduction will occur through reduced peak flows.	Sauk River Watershed District	$512,000
Krystosek	Dale	Northeast Minnesota White Cedar Plant Community Restoration Project	This project will address the decline of northern white cedar plant communities in northeast Minnesota. Project will prioritize cedar sites for restoration, train LGU staff on cedar restoration and protection.	Board of Water and Soil Resources	$258,750
Larson	Kris	Minnesota Conservation Training Network	This project will increase the pace, quality and permanency of land and water protection by developing a comprehensive training curriculum and networking platform for 400-500 land acquisition professionals.	Minnesota Land Trust	$425,000
Lauer	Jack	Monitoring Minnesota River Fish Populations and Recreational Use	Conduct nongame and game fish population monitoring and recreational use survey on the Minnesota River. Connect landscape changes to fish populations and communities, develop educational products, and enhance recreational use.	DNR	$649,075

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Lehman	Clarence	Prairie Management for Wildlife and Bioenergy: Final Phase	This project will complete the monitoring of wildlife and other ecological responses to harvesting prairies for bioenergy, and will evaluate innovative management techniques for maintaining Minnesota's conservation lands.	U of MN	$1,416,000
Liedl	Mark	Brainerd Lakes Community-Based Conservation Planning Project	Enhance inter-governmental cooperation to protect the area's natural resources through community-based planning, regional technical standards, cross-governance, and inter-jurisdictional recreation planning.	Crow Wing County	$540,000
Meschke	Linda	3rd Crop Transition Management for Increased Ecological Value	Leveraging native perennial and cover crop plantings through strategic landscape placement to increase ecological value, build soil health and reduce agricultural nonpoint pollution from cropping systems through demonstration and outreach.	Rural Advantage	$312,751
Meyer	Dr. Mary	Property Acquisition to Complete Arboretum's Boundary Protection Plan	The Minnesota Landscape Arboretum proposes to purchase the final section identified on the Arboretum's Boundary Protection Plan and place the entire area of Lake Tamarack in public ownership.	U of MN - Minnesota Landscape Arboretum	$1,750,000
Neu	Dave	Mississippi Bluffland Restoration	Restore up to 180 acres of bluffland habitat by removing red cedar and other invasive species, benefiting wild turkeys and timber rattlesnakes.	National Wild Turkey Federation	$200,000
Perrine	Rich	Declining, At-Risk Native Species: A Recovery Project	Martin SWCD will collect, propagate, and plant declining, at-risk native species on protected habitat. Provide a commercially feasible path for seed growers to market source identified local ecotype native seed.	Martin County Soil and Water Conservation District	$147,800
Pfeifer	Sharon	Conservation Options for Urbanizing Communities	This project provides local officials and staff of growing communities with natural resource-based workshops and matching grants to obtain needed land cover information, land use assessment tools, and conservation ordinances.	DNR	$824,600
Pitt	David	Training for Collaborative Local Conservation and Development Planning	Land-use decision makers and stakeholders in 20 high-growth, environmentally diverse communities will conserve natural and cultural resources through a collaborative resource management planning and ordinance development process.	U of MN	$414,658
Rivers	Erika	Shoreland Incentives II: Natural Filters on Private Lands	Phase II of the Shoreland Incentives program will 1) pilot incentives programs in agricultural, urban and suburban contexts; 2) develop LGU tools for implementing effective incentives, and 3) deliver trainings.	DNR	$841,000
Shaw	Ruth	Conserving Prairie Plant Diversity and Evaluating Local Adaptation	We will conserve the genetic diversity of plants of the MN tallgrass prairie and develop a scientific basis for identifying adapted seed sources for restoring prairie ecosystems.	U of MN	$787,000

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Thompson	Molly	Restoring the North Shore Lost Forest	Provide forest stewardship plans, training and tree planting assistance for Lake Superior coastal landowners with property sizes less than 20 acres, which are not eligible for other state stewardship programs.	Sugarloaf: The North Shore Stewardship Association	$63,000
Ukena	Bryan	Municipal Organics: Assessing Economic, Social and Environmental Impacts.	Nobody knows the best way (composting, digestion etc.) to manage organic wastes in Minnesota, yet we are nearing huge investments that cement the path. This project provides best practices.	Eureka Recycling	$501,356
Walker	Michele	Restoration Strategies; Ditched Peatland Scientific and Natural Areas	Evaluate hydrology and habitat of the Winter Road Lake peatland watershed protection area to determine the effects of ditch abandonment and potential restoration on this and other patterned peatlands.	DNR	$248,712
Wyse	Donald	Developing Perennial Grain Crop for Working Agricultural Landscapes	Support development of four new perennial crops for Minnesota, to increase water quality, enhance wildlife habitat, and conserve natural resources while simultaneously ensuring abundant agricultural productivity from working agricultural lands.	U of MN	$674,242
Zanko	Lawrence	Recycling Sediments to Enhance and Restore Marginal Lands	How to enhance/restore about 50 acres of non-productive mine and non-mining lands every year using clean recycled sediments removed from the St. Louis River estuary: a demonstration and evaluation project.	U of MN - NRRI	$499,750
Zins	Molly	Score Your Shore: Citizens Assessing and Protecting Shoreland	Trained lake associations will use the Score Your Shore tool to identify priority shoreland restoration sites, increase knowledge of natural shoreline benefits, encourage good stewardship practices, and take restoration action.	Minnesota Waters	$81,000
D. Land Acquisition for Habitat and Recreation (36 proposals/subtotal = $48,028,220)					
Bednarz	Courtney	Phase II Andover Rum River Open Space Preservation	Acquire and manage 31 acres and nearly 2,000 feet of shoreline along an oxbow meander of the Wild and Scenic Rum River across from Rum River Central Regional Park.	City of Andover	$219,000
Booth	Margaret (Peggy)	SNA Acquisition, Restoration, Enhancement & Citizen Engagement	Bio-diverse native plant communities and rare species habitat would be acquired as Scientific and Natural Areas and their quality sustained and improved through restoration, enhancement, monitoring, and volunteer-student involvement.	DNR	$3,280,000
Cobb	Brad	Minnesota River Valley Green Corridor Project Phase II	Protect the most ecologically sensitive available lands identified by MCBS, DNR Ecological Resources, and Green Corridor Conservation Plan from destruction/degradation/fragmentation in cooperation with the Minnesota DNR.	Green Corridor Inc.	$2,699,620
Garms	Jason	Native Prairie Stewardship and Native Prairie Bank Acquisition	Protection of native prairie through Native Prairie Bank easements and stewardship services to private landowners.	DNR	$1,020,000

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Hark	Peter	State Parks and Trails Land Acquisition	Acquire land from willing sellers within the statutory boundaries of State Parks, State Recreation Areas and authorized State Trails. State land acquisitions provide ecological and recreational benefits to the public	DNR	$7,000,000
Henschel	Andy	Restoring Native Habitat/Water Quality to Shell Rock River	Acquire fee title to 257 acres that encompasses the Shell Rock River Headwaters; the District will own and manage this property to improve habitat, water quality and public recreation.	Shell Rock River Watershed District	$2,576,500
Konewko	DuWayne	Protecting Fish Creek Greenway in Ramsey County	Acquire 20 acres in Fish Creek Greenway in Ramsey County, to protect Fish Creek, Mississippi River bluffs, and woodlands and grasslands, while enhancing access to new and existing public lands.	City of Maplewood	$300,000
Pavelko	Joel	HCP 7 - Overall Habitat Conservation Partnership Summary [INCLUDES 12 ROWS BELOW]	Nine partners within the Habitat Conservation Partnership will restore, enhance, and protect 2,332 acres of priority habitat within delineated focus areas of the state.	Pheasants Forever, Inc.(Overall Coordinator); DNR; Ducks Unlimited; Friends of the Detroit Lakes Wetland Management Division; Leech Lake Band of Ojibwe; Minnesota Land Trust; MN Valley National Wildlife Refuge Trust, Inc.; The Trust for Public Land	$7,592,000
	Pavelko, Joe	*HCP 7 - 1a - Coordination, Mapping & Data Management*	*Project coordinator Pheasants Forever will coordinate all aspects of the Habitat Conservation Partnership, including mapping, data management and reporting to LCCMR.*	*Pheasants Forever, Inc.*	*$72,000*
	Mortensen, Steve	*HCP 7 - 2e - Wild Rice/Waterfowl Habitat: Enhancement and Long-term Monitoring*	*To enhance/monitor 15,000 acres of wild rice/waterfowl habitat on Leech Lake Reservation, we will regulate water levels; reseed restored habitat; and digitize a 19-year-long set of aerial imagery.*	*Leech Lake Band of Ojibwe*	*$50,000*
	Willhite, Suzann	*HCP 7 - 2g - Restoration & Management - Wildlife Management Areas*	*Habitat restoration and infrastructure development of new Wildlife Management Areas (WMA) needs to be included with the proposed 400 acre land acquisition efforts of the Habitat Conservation Partnership (HCP).*	*DNR*	*$30,000*
	Erickson-Eastwood, Linda	*HCP 7 - 2h - Restoration & Management - DNR Fisheries*	*To ensure quality fishing, improvements in water quality and aquatic communities will be addressed in SW through habitat work on shores and through technical assistance.*	*DNR*	*$200,000*
	Hoch, Greg	*HCP 7 - 2o - Prairie Pothole Restoration on Waterfowl Areas*	*This project restores wetlands in Clay and Becker Counties for the benefit of migratory and endangered species. Restorations will also benefit flood water storage and carbon sequestration.*	*Friends of the Detroit Lakes Wetland Management Division*	*$75,000*

Last Name	First Name	Project Title	Summary	Organization	$ Requested
	Strommen, Sarah	*HCP 7 - 3a - Shoreland Protection Program*	*Protect 700-1000 acres of critical riparian habitats in three regions of Minnesota by securing permanent conservation easements along lakes, wetlands, rivers, and streams and dedicating funds to support those easements.*	*Minnesota Land Trust*	*$900,000*
	Schneider, Jon	*HCP 7 - 3c - Shallow Lake Conservation Easements*	*Ducks Unlimited will secure purchased and donated permanent conservation easements on 440 acres along key shallow lakes for waterfowl, provide for annual monitoring and stewardship, and restore 200 acres where possible.*	*Ducks Unlimited*	*$1,650,000*
	Schneider, Jon	*HCP 7 - 3d - Wetlands Reserve Program*	*Ducks Unlimited will provide engineering assistance and contract with 10 wetland restoration specialists to provide technical assistance to help the USDA-NRCS promote, secure, and restore federal Wetland Reserve Program (WRP) easements.*	*Ducks Unlimited*	*$1,330,000*
	Pavelko, Joe	*HCP 7 - 4a - WMA/WPA Acquisition beyond Boundaries*	*Pheasants Forever will acquire 400 acres of priority wildlife habitat in fee-title from willing landowners for inclusion into the WMA/WPA system utilizing the acquisition beyond borders concept.*	*Pheasants Forever, Inc.*	*$1,750,000*
	McGillivray, Robert	*HCP 7 - 4c - TPLs Critical Lands Protection Program*	*The Trust for Public Land (TPL) will acquire approximately 100 acres, protecting and linking valuable, high quality habitat in Minnesota.*	*The Trust for Public Land*	*$1,000,000*
	Loon, Deborah	*HCP 7 - 4h - Priority Acquisition, MN Valley Wetland Management District*	*Acquire in fee 100 acres of priority habitat in Southern Lakes Region for Waterfowl Production Area, MN Valley Wetland Management District. Acquire another 100 acres with other, non-state funds.*	*MN Valley National Wildlife Refuge Trust, Inc.*	*$500,000*
	Halverson, Mike	*HCP 7 - 4i - Habitat Acquisition – DNR Professional Services*	*This proposal is directly tied to the land acquisition efforts of the Habitat Conservation Partners, and ensures that newly acquired lands can be transferred into the WMA system.*	*DNR*	*$35,000*
Potter	Ronald	Regional Park, Trail, and Connections Acquisition and Development	This proposal is to provide grants for acquisition and development to local units of government for regional parks, regional trails, and trail connection.	DNR	$3,075,000
Sames	Wayne	Natural and Scenic Area Acquisition	Four to twelve matching grants will be provided to local governments for acquisition of approximately 200-400 acres for new or expanded natural and scenic areas for public use.	DNR	$2,050,000
Schmidt	Susan	LaSalle Lake: Protecting Critical Mississippi River Headwaters Lands	Protecting 700-acre La Salle Lake property adjacent to the Upper Mississippi River, with biologically significant steep-sloping forestland, deep-lake shoreline and cold-water stream habitat to be managed by multiple DNR divisions.	The Trust for Public Land	$8,000,000
Schumann	Angela	Bertram Chain of Lakes Regional Park Acquisition	The City of Monticello and Wright County are submitting an LCCMR funding proposal to support a fourth phase of property acquisition at the Bertram Chain of Lakes Regional Park.	City of Monticello	$758,000
Stefferud	Arne	Metropolitan Regional Park System Land Acquisition	Award subgrants to Regional Park Agencies under the Metropolitan Council's Park Acquisition Opportunity Fund program to acquire about 210 acres for the Metropolitan Regional Park System.	Metropolitan Council	$2,250,000

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Strommen	Sarah	MeCC 6 - Overall + 1.1 & 1.2 Metropolitan Conservation Corridors (MeCC) Summary [INCLUDES 9 ROWS BELOW] ($7,035,600)	Protect and restore a connected network of critical habitat in the greater metropolitan area by acquiring fee title and conservation easements on 1,695 acres and restoring and enhancing 905 acres.	Minnesota Land Trust (Overall Coordinator); Dakota County; DNR; Friends of the Mississippi River; Great River Greening; MN Valley National Wildlife Refuge Trust, Inc.; The Trust for Public Land	
	Strommen, Sarah	*MeCC 6 - 1.1 - Coordination, Mapping & Outreach*		*Minnesota Land Trust*	$20,000
	Strommen, Sarah	*MeCC 6 - 1.2 - Mapping and Database Work*		*Minnesota Land Trust*	$30,000
	Lewanski, Tom	*MeCC 6 - 2.1 - Restore and Enhance Significant Watershed Habitat*	*Improve and increase habitat by restoring and enhancing 200 acres of prairie and woodland/forest. We will also reach out to and assist 27 landowners to expand existing projects.*	*Friends of the Mississippi River*	$232,600
	Buck, Wiley	*MeCC 6 - 2.3 - Restoring Our Lands and Waters*	*We will restore important natural communities through continued engagement in the Anoka Sandplain, St. Croix Healthy Waters Campaign, collar counties, and urban core; and Wild & Scenic Rivers.*	*Great River Greening*	$490,000
	Loon, Deborah	*MeCC 6 - 2.6/3.3 - Priority Expansion and Restoration MN Valley NW Refuge*	*Acquire 250 priority acres to expand MN Valley National Wildlife Refuge and another 250 acres with other non-state funds. Continue restoring savanna and prairie on 470 Refuge acres.*	*MN Valley National Wildlife Refuge Trust, Inc.*	$1,163,000
	Singer, Alan	*MeCC 6 - 2.7/3.7 - Dakota County Riparian and Lakeshore Protection*	*Acquire permanent, riparian easements and develop natural resource management plans on 1,034 acres within the Vermillion and Cannon river systems and along Marcott Lake and Lake Marion in Dakota County.*	*Dakota County*	$2,700,000
	Nash, Becca	*MeCC 6 - 3.1 - TPL's Critical Land Protection Program*	*Strategic acquisition of an estimated 61 acres of high quality habitat including 0.6 miles of shoreline- all within scientifically determined wildlife corridors within the greater Twin Cities Metropolitan Area*	*The Trust for Public Land*	$1,000,000
	Strommen, Sarah	*MeCC 6 - 3.2 - Protect Significant Habitat by Acquiring Conservation Easements*	*To protect 300 acres of critical habitat in the greater metropolitan area by securing permanent conservation easements and dedicating funds for the perpetual monitoring, management, and enforcement of those easements.*	*Minnesota Land Trust*	$900,000
	Halverson, Mike	*MeCC 6 - 3.5 - Aquatic Management Area Acquisition*	*Projects that face high risk of development, provide angler access, and afford environmental protection of the shoreline - securing fee or easement on approximately one mile of critical shoreline habitat.*	*DNR*	$500,000
Thill	David	Expanded Conservation Easement for Kingswood Camp in Minnetrista	This 41.2 acre easement expands an existing 65 acre permanent easement protecting identified ecologically significant natural areas and a glacial esker from further fragmentation and the threat of future development.	Hennepin County	$172,500
E. Aquatic and Terrestrial Invasive Species (12 proposals/subtotal = $3,342,525)					
Brashaw	Brian	Microwave Heating to Kill EAB in Logs/Firewood	Project will develop treatment schedules for industrial microwave heating that will kill 100% of emerald ash borer infestations so that ash logs can be transported for use in value-added products.	U of MN - NRRI	$220,078

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Brough	Tony	Innovative Aquatic Species Protection	Demonstrating how current engineering practices installed with proven methods to change behavior can redesign the appearance and function of a public boat access reducing the spread of aquatic invasive species.	Hennepin County	$300,000
Chandler	Monika	Development of Biological Control for Common Tansy	The project goal is to develop biological control that can restore balance in systems invaded by tansy. Our objectives are to advance tansy biological control development and evaluate tansy infestations.	Department of Agriculture	$193,600
Chandler	Monika	Research and Implementation of Emerald Ash Borer Biocontrol	Our goal is to suppress EAB with biological control. Our objectives are to assess bioagent winter survival potential, develop release and monitoring methods, and implement EAB biocontrol.	Department of Agriculture	$660,000
Eckberg	Jim	Switchgrass: A Biofuel Crop or Invasive Species?	Determine invasion risk of selectively bred native grasses for biofuel production. Develop strategies to minimize invasion potential and impacts on biodiversity. Evaluate trade-offs between biofuel production and invasion risk.	Central Lakes College	$122,178
Grant	Brad	Pulling Together to Reduce Terrestrial Invasive Plants	To address invasive plant management in native grassland and forest area with designated invasive terrestrial plants and to prevent the establishment and spread of these invasive species.	Becker County Soil and Water Conservation District	$35,000
Hicks	Randall	Improved Detection of Harmful Microbes in Ballast Water	This project will identify the potentially harmful bacteria transported to Lake Superior in ships ballast water that can cause ecological and economic damage and threaten human and aquatic animal health.	U of MN	$290,801
Johnson	Ted	Washburn Milfoil Weevil Pilot Project	Our goal is to demonstrate the potential for milfoil weevils to provide sustainable, safe, cost effective and low-maintenance control of Eurasian Watermilfoil.	Lake Washburn Association	$250,000
Koch	Robert	Risk Assessment for Proactive Response to Forest Pests	Pest risk assessment will proactively prioritize invasive species threats to Minnesota forests. An early detection network will be created to survey for high risk pests threatening to invade Minnesota.	Department of Agriculture	$566,340
Koster	Jeff	Controlling Terrestrial Invasive Plants with Grazing Animals	Develop alternative control method of terrestrial invasive plants buckthorn, wild parsnip, honeysuckle, garlic mustard and others by grazing goats/sheep, Development of BMP, Business model with documentation of results.	Hiawath Valley Resource Conservation and Development	$85,000
Krischik	Vera	Landscape Management of EAB: Nontarget Consequences	Our goals are to protect water quality and nontarget species by researching whether insecticides used for managing EAB runoff into plants and soil and affect beneficial insects and birds.	U of MN	$343,578

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Patelke	Marsha	Controlling Invasive Plant Species with Portable Microwave Technology	Evaluate the use of portable microwave technology to control the spread of five invasive plant species by terminating seed germination and root propagation.	U of MN - NRRI	$275,950
F. Climate Change, Renewable Energy, and Air Quality (42 proposals/subtotal = $27,417,242)					
Bilek	Amanda	Optimizing Biogas' Role in Meeting Minnesota's Energy Goals	Remove market, technical and policy barriers for Minnesota to benefit from biogas's full economic and environmental potential. Despite past investments in anaerobic digestion R & D projects, barriers to widespread adoption remain.	Great Plains Institute	$484,400
Blake-Bradley	Nicola	Elk River Business Recycling Assistance Program	The City of Elk River is developing a Business Recycling Assistance Program to facilitate increased recycling in the commercial and industrial sectors through events and on-site waste audits.	City of Elk River	$32,000
Carman	Bruce	WARF Greenhouse: Renewable, Sustainable Energy & Food System	Construction of a greenhouse for the integrated production of algal bio-diesel, produce and fish using local renewable energy sources, rooftop rainwater collection and nutrients from Silver Bays Water treatment facility.	City of Silver Bay	$450,000
Carmody	John	Low Environmental Impact Sustainable Neighborhoods	A groundbreaking approach to climate change, air pollution, stormwater, and energy reduction in existing neighborhoods built upon a community driven "mini-district" system to sharply curtail demand, and incorporate renewable energy.	U of MN	$800,000
Christiansen	Sara	Protecting Minnesota's Aquifers: Zero-Discharge Ethanol Plant Wastewater Reuse	The project would assist existing ethanol plants in decreasing groundwater use and decreasing their waste stream discharge by developing a replicable plant improvements model to achieve zero-discharge of waste water.	Southern Minnesota Association of Food and Ethanol	$1,892,900
DAmato	Anthony	Evaluation of Biomass Harvesting Impacts on Minnesota’s Forests	Project assesses environmental impacts of biomass harvests for energy on Minnesota’s forests. Results will quantify the impacts on soil nutrients, native forest vegetation, invasive species spread, and long-term tree productivity.	U of MN	$448,152
Deden	Jerome	Sustainable Energy Practices: Residential Environmental Learning Centers (RELCs)Phase2	Six RELCs (Audubon, Deep Portage, Eagle Bluff, Laurentian, Long Lake, and Wolf Ridge) will demonstrate energy reduction technologies and disseminate energy education through renewable energy, energy efficiency and conservation demonstrations	MN Coalition of Residential Learning Centers	$930,000
Droessler	Bill	Industry Sector and Community Emission-Reduction Program	Implement at least 36 emission-reduction projects -- each gaining approximately 40% reductions -- in targeted industry sectors in the Twin Cities, Rochester, and Duluth; where possible in higher risk communities.	Minnesota Environmental Initiative	$497,109
Dybsetter	Anne	YES!(2.0) 30 Renewable Energy and Energy Conservation Projects	Youth Energy Summit (YES!) teams mobilize West Central & Southwest Minnesota communities to complete over 30 renewable energy and energy conservation projects. Prairie Woods Environmental Learning Center and Partners.	Prairie Woods Environmental Learning Center	$246,000

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Erickson-Eastwood	Linda	Energy Cost Reduction for DNR Fish Hatcheries	Reduce DNR fish rearing costs and carbon footprint at hatcheries by 10%, by investing in clean, renewable energy and more efficient methods of rearing and stocking fish.	DNR	$400,000
Fernholz	Kathryn	Supporting Community-Driven Sustainable Bioenergy Projects	This project contributes to the sustainability of locally-produced community forest bioenergy programs in NE Minnesota and statewide through feasibility, impacts, and management case studies in Ely and Cook County.	Dovetail Partners, Inc.	$262,160
Franzen	Nathan	Olmsted County Landfill Dual Use Solar Project	Olmsted County Landfill Dual Use Solar Project is a pilot solar demonstration project that will research how closed landfills can be utilized as sites to generate solar energy.	Westwood Renewables, LLC	$2,200,000
Frelich	Lee	Climate Change and Resilience in Boreal Forests	Locate areas where boreal tree species may persist in a warmer climate, assess whether temperate species can replace boreal species and whether invasive species may interfere with climate change adaptation	U of MN	$215,414
Gillitzer	Peter	Linking Brushland Management and Bioenergy Feedstock Supply	Link brushland management with bioenergy feedstock supply through the lowering of ground pressure on brush harvester.	Stempower Resources	$79,040
Goetsch	Duane	Gasification of Cellulosic Biomass: Mitigation of Tar Formation	Project seeks to 1) develop a fundamental understanding of tar formation from biomass in high pressure gasifiers and 2) establish the benefits that torrefaction of biomass provides to gasifier performance.	SynGas Technology, LLC	$421,021
Hebert	Duane	Winona County Land Rehabilitation through Recovered Landfill Energy	Use methane gas from a closed landfill that is currently being flared/wasted, as supplemental heat for locally grown, sustainable food production, and replicable greenhouse production from renewable energy sources.	Winona County	$310,500
Hill	Jason	Understanding the Environmental Sustainability of Minnesota's Emerging Bioeconomy	This project will provide an integrated overview of how Minnesota's rapidly expanding bioeconomy will impact our soil, water, and air. Industry growth opportunities benefitting all three resources will be sought.	U of MN	$408,926
Hu	Bo	Biofuel Production and Nutrients Removal From Manure Wastewater	A fungal cultivation process is proposed to follow the anaerobic digestion of manure wastewater in order to remove all the nutrients as well as to accumulate biomass/lipid for bioenergy production.	U of MN	$154,767
Johnson-Grass	Tim	Conservation Corps Statewide Low-Income Solar Home Heating	Conservation Corps Minnesota and the Rural Renewable Energy Alliance will collaboratively install 60 Solar Heating systems on the homes of low-income families and train young corps members in green jobs.	Conservation Corps - Minnesota	$565,000

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Kittelson	David	Liquid Biofuel With Economic And Environmental Benefits	The research will demonstrate that dimethyl ether, produced from renewable biomass is a value added, second generation liquid biofuel for home heating and cooking applications.	U of MN	$151,963
Klein	Peter	Midway Organic Power Project	An anaerobic digestion/electric generation facility will be constructed in an industrial area of Saint Paul to process 50,000 tons/year of organic waste and generate 11.9 million kWh/year.	Port Authority of the City of Saint Paul	$5,000,000
Landenberger	Eddie	Urban Waste to Energy Pilot Program	Redesign proposes to engineer anaerobic digestion technology to suit our redevelopment site, to navigate the zoning and permitting hurdles and engage community support and participation throughout the process.	Seward Redesign, Inc.	$329,000
LaPara	Timothy	Energy Conservation at Municipal Wastewater Treatment Facilities	Municipal wastewater treatment is a major faction of the energy needs for municipalities. We propose to analyze existing treatment operations to identify opportunities for energy conservation and cost reduction.	U of MN	$163,376
Lindquist	Mark	Establish Scientific Foundation for Peatland Carbon Sequestration Projects	Measure carbon uptake and methane release in healthy and altered peatlands. Develop a road map for landscape level peatland restoration and carbon sequestration project implementation with carbon offset financing.	DNR	$493,371
Manolis	Jim	Building Species and Habitat Resilience to Climate Change	This project will develop "resilience clinics," "climate proofing" planning exercises, and webinars to help natural resource managers develop resilient management strategies for a range of possible future climate scenarios.	DNR	$370,000
Marshall	Julian	Addressing Ozone Pollution in Minnesota: Equity and Efficiency	This project combines satellite measurements, monitoring data, and air quality modeling to study ozone pollution and exposure in Minnesota, and examines the effectiveness and environmental equity of potential control options.	U of MN	$266,999
Moeger	Cathy	Wind Meteorological Assessment of Closed Landfills	Meteorological towers installed over a two year period and a natural resource assessment performed at 12 high potential closed landfills provides data necessary for private investment in distributed renewable energy.	Minnesota Pollution Control Agency	$405,000
Morrison	Robert	Mitigating Climate Change through Biochar, a Biomass Byproduct	compare the ability of three selected biomass byproducts to mitigate climate change and improve soil fertility, with an emphasis on Minnesota’s regional industries, soil types and ecosystems	U of MN	$729,000
Naplin	Charles	Establishing a Grass-Based Bioenergy Economy in Northwest Minnesota	Growing a grass-based bioenergy economy in Northwestern Minnesota: A new conservation and business collaboration to facilitate technology transfer, test best production practices, and maximize environmental and conservation benefits.	Pembina Trail Resource Conservation and Development Council	$770,600

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Ouska	Kath	Research and Pilot Innovative Renewable Energy Installations	Our goal is to reduce the overall energy usage from non-renewable energy sources. This project will develop Minnesota's renewable energy resources and will engage and inform the public.	DNR	$1,350,000
Pawlisch	Lissa	Statewide Lodging Facilities: Energy & Water Conservation Expansion	Help 50% of lodging facilities statewide (roughly 1200) adopt energy efficiency and water conservation practices and save over 2.5 million kilowatt-hours, 4.5 million gallons of water, and 765,000 therms.	U of MN	$470,000
Pierce	Ann	Climate Vulnerability Assessment for Minnesota Habitats and Species	This project will conduct a comprehensive assessment of the effects of climate variability on Minnesota's plant communities and wildlife species. This assessment is a key step in climate adaptation planning.	DNR	$487,500
Reich	Peter	Northwoods Warming Experiment to Inform Adaptive Management	We will measure seedling growth and survival of 11 tree species in a forest warming experiment to evaluate whether adaptive management should favor temperate over boreal species in Minnesota's Northwoods	U of MN	$696,799
Schafer	Robert G.	Alternative Biofuel Crops to Conserve Water and Soil	Determine life-cycle impacts of alternative biofuel crops relative to corn ethanol. Alternative crops use less water and fertilizers, provide better cover to erodible agricultural land, and could be more profitable	Central Lakes College	$344,180
Schafer	Robert G.	Bio-char: An Under-utilized Resource to Enhance Biofuel Crops	Leverages under-utilized sources of bio-char in the central sand plains to enhance biofuel crop yields, improve sandy soils, increase soil water retention and quality, and sequester carbon.	Central Lakes College	$324,860
Sierks	William	Minnesota Schools Cutting Carbon-Conserving Energy and Water	We will empower 120 student-led high school teams to integrate long term energy and water conservation savings into daily school operations, create model school-utility partnerships, and develop student leadership.	Minnesota Pollution Control Agency	$1,370,000
Stefan	Heinz	Sustaining Lake Trout, Walleye Habitat in Minnesota Lakes	Changes in lake fish habitat for lake trout, bass and walleye in response to changes in climate and land cover/use will be projected for MNDNR Fisheries	U of MN	$307,000
Strack	Otto	Cost-Effective, Efficient Geothermal Heat Pump Systems	Development and testing of a cost-effective, high-efficiency, self-regulating geothermal energy system that can be used for heating and cooling of dwellings on either a district scale or as standalone.	U of MN	$850,895
Svedarsky	Dan	Aspen Parkland Ecosystem Conservation and Biomass Use	Integrated resource management planning for Aspen Parkland Region of northwest Minnesota. Use of native vegetation for woody biomass energy to manage brushland habitats and promote sustainable development of local communities.	U of MN - Crookston	$220,000

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Tallaksen	Joel	Identifying Marginal Lands For Energy And Environmental Services	This project identifies features of marginal lands that make them available for certain uses. It then estimates statewide acreage of these lands available for bioenergy crop and environmental service use.	U of MN	$370,810
Thurstin	Lisa	Building Minnesota's Electric Vehicle Future	Building a plug-in charging infrastructure and a fleet of zero-emission electric vehicles. Protecting our natural resources and human health through direct greenhouse gas and air pollution reduction.	American Lung Association in Minnesota	$1,108,500
Treat	Jessica	Promoting Transportation Choices to Achieve Reduced Emissions	Reduce single occupant vehicle (SOV) trips and climate warming emissions by promoting transportation choices to residents in Thomas/Dale and employees at Travelers through newsletters, events and mode specific kits.	St. Paul Smart Trips	$40,000
G. Environmental Education (30 proposals/subtotal = $7,490,928)					
Berkenkamp	JoAnne	State-wide Adoption of School Garden Environmental Education	Increase the adoption of school garden-based ecology programs across Minnesota K-12 schools. We will scale-up these programs through training, pilot projects and developing a network of advocates.	Institute for Agriculture and Trade Policy	$305,097
Blair	Robert	Minnesota Junior Master Naturalist: An After-School Program	Pairs trained adult Master Naturalist Volunteers with staff in after-school programs throughout Minnesota to offer outdoor, science-based, activities for youth to learn about the ecology of their schoolyards and neighborhoods.	U of MN	$365,459
Blake-Bradley	Nicola	Central Minnesota Audubon Society Environmental Education Outreach Activities	Central Minnesota Audubon Society volunteers will approach schools within its service area with a variety of environmental education opportunities which include on-site demonstration projects or guided field trip activities.	Audubon Society - Central Minnesota	$11,410
Boyd-Smith	Steve	Minnesota Zoo Black Bear Interpretation and Outreach	Interpretive exhibitory, zoo class integration, distance learning development and implementation, and program evaluation and remediation to take full advantage of the educational potential inherent in the addition of black bears.	Minnesota Zoo	$188,600
Burkett	Eleanor	Minnesota Citizen Leadership Training Institute for Sustainable Waters	The leadership training will equip 75 citizens with skills and capacity to be effective in community and state leadership roles to protect, improve and sustain Minnesota's waters.	U of MN	$247,282
Corney	Jeffrey	Ecology of Climate Change School and Community Partnership	Improve environmental literacy among students and citizens through an innovative educators' training program, using a unique integration of science with art, and establishing partnerships among school teachers and community educators.	U of MN	$235,000
Eadens	Lisa	Zumbro Watershed Comprehensive Water Literacy for Change	Improve water protection choices by presenting local water data to decision-makers and giving citizens access to a 3-D exhibit and digital display at "Cascade Meadow Wetlands & Environmental Science Center."	Zumbro Watershed Partnership	$229,500

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Engstrom	Gretchen	RELC "Gardenology" Project	Eagle Bluff's RELC “Gardenology” Project seeks introduce scientific and environmental concepts through the creation of a teaching garden and educational program for K-12 students and adults.	Eagle Bluff Environmental Learning Center	$34,300
Ferrington Jr.	Leonard C.	Educating Under-represented Groups About Careers in ESPM	Produce 12 web-based educational modules for high school students, outlining careers in environmental resources management, and provide information for parents of under-represented groups of students about careers in environmental management	U of MN	$49,966
Fredin	Tracy	Waters to the Sea: Rivers of Minnesota	Waters to the Sea: Rivers of Minnesota is an environmental education project that will create awareness, and educate students and communities to think about, use, and manage water resources responsibly.	Hamline University	$451,494
Griffith	Sam	Sandstone Preserve and Gardens	Build seven different native fully handicap/child accessible interpretive gardens on 20 acres at Sandstone Preserve serving 94 schools and 70 programs from the Audubon Center plus regional residents and visitors	City of Sandstone	$624,200
Grose	Matt	Northern Minnesota Site-Based Watershed Education	This project would enable teachers across districts in Itasca County to develop and deliver rigorous place-based, watershed science lessons to elementary students in the Mississippi River-Grand Rapids watershed.	Itasca Area Schools Collaborative	$540,698
Groth	Jamie	Expanding the Energy Resource Advisor Program in Minnesota	We propose to expand the existing Energy Resource Advisor Certificate program to statewide scale. This will train 900 Minnesota citizens to affect positive change in their neighborhoods, organizations, and communities.	Winona - State University	$563,748
Johnson	Erika	Community Clean Water Stewardship Collaborative	Water stewardship will be improved through implementing a community-based approach in a pilot watershed that engages citizens, identifies barriers, and uses innovative practices and policies applicable statewide.	Pelican River Watershed District	$232,235
Karius	Mary	UrbanWatch: Environmental Education for Urban Youth	Hennepin County will partner with The City, Inc. to initiate new Environmental Education programs targeting inner city youth. These programs will provide hands-on, experiential outdoor learning opportunities.	Hennepin County	$790,450
Kleist	Christopher	RSPT: Reaching Out to Engage & Affect Change	The RSPT plans to launch a community-based social marketing campaign that will create awareness, educate specific audiences, and motivate positive behavior changes to improve the health of area streams.	City of Duluth	$150,000
Kohn	Janine	Minnesota Outdoor Classrooms: Professional Development	Pheasants Forever's Leopold Education Project will provide training and materials to formal/non-formal educators statewide on new curriculum and activities to teach environmental education and stewardship in outdoor classrooms.	Pheasants Forever, Inc.	$48,000

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Kowalczak	Courtney	Students and Citizens Partnering to Protect Water	The project will increase the knowledge, skills, and sense of stewardship of students and citizens to improve and maintain water quality in the Snake River Watershed.	Minnesota Waters	$194,960
Kudelka	Scott	Minnesota River Public Outreach - Restoration Success Stories	Key Minnesota River Basin water quality restoration activities will be depicted in online video clips featuring experts and landowners accompanied by educational materials and community forums.	U of MN - Water Resources Center	$148,880
Mallman	James	Digital Bridge to Nature - Advanced Teacher Workshops	Continuation of digital photography model for outdoor education among Minnesota youth by providing thirty advanced and six introductory workshops for teachers involving science, math, art and language arts.	Watchable Wildlife, Inc.	$90,000
Measells	Jill	Minnesota Children's Museum's Exploration of the Natural World	Minnesota Children’s Museum’s Exploration of the Natural World immerses children in direct experiences with Minnesota environments and living things, nurturing a sense of commitment and stewardship for the natural environment.	Minnesota Children's Museum	$20,000
Nelson	Lori	Community Clean-Ups for Water Quality	Through the Community Clean-Ups for Water Quality, Friends of the Minnesota Valley and the Freshwater Society will train citizens statewide to measurably reduce phosphorus pollution in lakes, rivers and streams.	Friends of the Minnesota Valley	$364,480
Ous	Garrett	Protecting, Restoring, and Managing Northeastern Minnesota's Invaluable Forests	To instill a long-lasting and action-based forestry ethic, the project will fully develop an education model in Itasca County and support its expansion throughout the Laurentian Mixed Forest Complex.	Itasca County	$219,475
Ponder	Julia	Following Eagles to Link Students and Nature	Engages students in exploring science and nature through curriculum built on real-life case studies of raptors treated at The Raptor Center and eagles tracked for post-release monitoring.	U of MN	$177,500
Rieckenberg	Cara	Creating and Maintaining an Environmental Culture	The purpose of the program is to create a culture where environmental philosophies and practices are embedded into everyday occurrences. By providing knowledge and opportunities, environmental literacy will increase.	Prior Lake-Savage Area School District	$245,953
Sleeper	Faye	Environmental Education Grants for Youth	This proposal expands and integrates environmental (water) education using Fishing: get in the Habitat! curriculum by providing formal and non-formal organizations opportunities to overcome current barriers to implementation.	U of MN - Water Resources Center	$302,809
Smith	Katy	Heightened Watershed Awareness in the Red River	Establishment of an Environmental Sciences Program at the UM-Crookston with outreach activities including summer research opportunities for area teachers and a traveling workshop for teachers address watershed/water quality awareness.	U of MN - Crookston	$184,432

Last Name	First Name	Project Title	Summary	Organization	$ Requested
St. Clair	Siah	Springbrook Nature Center Natural Resource Management Education	Springbrook Nature Center requests funds to create educational materials, curricula, and a Natural Resource Management Plan that will educate hundreds of volunteers while accomplishing comprehensive natural resource management needs.	Springbrook Nature Center	$55,000
Voeltz	Ami	Local Communities Launch Native Garden Commons Education Sites	We will educate Minnesotans about native plants by creating 8-10 Native Garden Community Commons sites. Each site will reach 300 people a year through hosts, workshops, signage, and media outlets.	Do It Green! Minnesota	$33,000
Woods	Steve	Minnesota Conservation Apprentice Academy	The apprentice program trains the next generation of conservation managers by pairing experienced Soil and Water Conservation District professionals with 30 university-level MCC students during summer field season.	Board of Water and Soil Resources	$387,000
H. Creative Ideas (13 proposals/subtotal = $19,927,630)					
Cung	Josee	Integrating Hmong Hunting and Fishing Heritage into Management	To incorporate Hmong values for white bass and squirrel into natural resources management and activities. Outcomes are Hmong adoption of game ethics and their evolution as significant conservation partners.	DNR	$491,000
Eckman	Karlyn	Social Evaluation Toolkit for Water Resources Projects	Assist state agencies managing Minnesota's water resources to improve their capacity to measure project impacts on local communities, through applied research, inter-agency collaboration, and development of a social evaluation toolkit.	U of MN - Water Resources Center	$291,451
Fisher	Shannon	Conservation Marketplace of Minnesota	Conservation Marketplace of Minnesota uses a market-driven approach to advance conservation efforts and agriculture sustainability with a crediting system that provides multiple environmental benefits and measurable outcomes in participating watersheds.	Minnesota River Board	$670,392
Hugo	Gina	Diseased Tree Utilization and Disposal Pilot Program	Develop a self-funding disease and insect infested tree disposal and utilization system for Sherburne County and educate landowners and public officials on forest protection strategies.	Sherburne County Soil & Water Conservation District	$167,000
Matteson	Shanai	Creative Convergence: Art and Science for Environmental Engagement	A statewide program pairing artists with scientists on public art projects exploring environmental issues, raising awareness of creative, intellectual and natural resources and their collective potential to address environmental challenges.	U of MN - Bell Museum of Natural History	$272,999
Matthees	Jenifer	MN DNR State Fair Fish Habitat Educational Aquariums	Redevelopment of the failing 40 year old DNR fish aquarium displays at the State Fair to continue to provide educational and visual experiences for 800,000 annual visitors.	DNR	$1,000,000
Moen	Ron	Helping the Canada Lynx Population in Minnesota Recover	Canada lynx are a threatened species under ESA in Minnesota. We will develop economically and environmentally sound solutions to restore the Canada lynx population while avoiding costly litigation.	U of MN - NRRI	$75,570

Last Name	First Name	Project Title	Summary	Organization	$ Requested
Moen	Ron	Moose Foraging, Calf Survival, and Thermal Refuges	Moose status in Minnesota remains uncertain. We'll use GPS collars to measure browse quantity and quality, monitor calf survival, and identify thermal refuges for use in management decisions.	U of MN - NRRI	$134,493
Nelson	Courtland	Lake Vermilion State Park Development	Initiate Phase 1 development of Lake Vermilion State Park, providing recreation and outdoor education opportunities to the public through development of campgrounds, day use facilities, trails and public water access.	DNR	$15,000,000
Niemi	Gerald	Tree Retention Following Harvest: Benefit or Unnecessary Cost?	Determine effectiveness of tree retention on wildlife populations in Minnesota. Assess tree blowdown and economic efficiency of retention guideline. Results used to validate or modify Minnesota's Forest Management Guidelines.	U of MN - NRRI	$229,825
Peterson	Joel	Conservation-Based Approach for Assessing Public Drainage Benefits	This project will develop an alternative framework to assess drainage benefits on public systems, shifting the paradigm from a production-based approach to one that encourages and rewards water conservation.	Board of Water and Soil Resources	$189,900
Ryun	Deb	St. Croix Basin Protection: Coordinated, Innovative, Targeted	This initiative will create a coordinated, innovative and targeted system for St. Croix Basin protection and implement 20 projects that demonstrate the benefits and efficiencies possible through the new paradigm.	St. Croix River Association	$1,180,000
Vogel	Mary	Minnesota River Water Trail: Leveraging Existing Public Access	Existing Minnesota River State Water Trail facilities are documented, evaluated, and redesigned in 17 ten-mile segments to enhance recreational use, reduce negative environmental impacts, and connect to terrestrial amenities.	U of MN - Center for Changing Landscapes	$225,000