

2014 Environment and Natural Resources Trust Fund Proposals

In response to the 2014 Request for Proposal (RFP), due June 7, 2013, 192 proposals requesting a total of approximately \$111 million were received. This RFP process is for funding available beginning July 1, 2014. For that period, approximately \$29 million from the Environment and Natural Resources Trust Fund is currently expected to be available to recommend for project funding.

ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
A. Foundational Natural Resource Data and Information (29 Proposals / \$13,246,433)						
001-A	Knight	Joseph	Mapping Landscapes for Better Land and Water Management	Critically important land cover information for Minnesota is outdated. We propose to update the states land cover data at moderate spatial resolution statewide and high resolution for selected areas.	U of MN	\$378,718
002-A	DAmato	Anthony	Assess and Improve Ecological Health of Trust Lands	Project evaluates strategies for improving ecological health of forests on State Trust Lands. Results will quantify long-term ecological impacts of increased forest management on State Trust Lands and other areas.	U of MN	\$514,395
003-A	Barker	Keith	Online Access to Minnesota's Biodiversity for Environmental Management	Online access to specimen records of plants and animals will help control invasive species by tracking their spread and enable conservation of native species by predicting responses to environmental change.	U of MN	\$342,428
004-A	Kozarek	Jessica	Conserving Minnesotas Freshwater Mussel Legacy: Quantifying Habitat Interactions	Healthy native mussel populations improve water clarity and provide habitat for other aquatic organisms. We will define environmental conditions necessary to conserve Minnesota's mussels, engaging local organizations and the public.	U of MN	\$356,843
005-A	Henderson	Carrol	Contaminants in Minnesotas Loons and Pelicans: Phase 2	This project is designed to assess the potential impact of petroleum, dispersant, and heavy metal contaminants on Minnesotas common loons and white pelicans through radiotelemetry, geolocators, and contaminant analysis.	MN DNR	\$259,936
006-A	Nordquist	Gerda	Wild Bee Surveys in Prairie-Grassland Habitats	Wild bees are important for pollination of many prairie plant species. Proposed surveys will assess the current status and distribution of bees in prairie-grassland habitats of Minnesota.	MN DNR	\$370,736
007-A	Polasky	Steve	Clean Water Benefits Tool for Smarter Resource Investments	Outcomes of the proposed work are new spatial data on the economic benefits of clean water (surface and groundwater) and a decision tool to inform more strategic investments in conservation.	U of MN	\$347,253
008-A	Martell	Mark	Analyzing and sharing the Minnesota Breeding Bird Atlas	Analysis, preparation and distribution of information collected in the past 5 years on every breeding bird across Minnesota through the publication of 7,000 books and an upgraded website.	Audubon Minnesota	\$386,831
009-A	Falteisek	Jan	State Spring Inventory for Resource Management and Protection	Springs are natural points of groundwater discharge. This project will systematically inventory springs statewide to provide the fundamental data needed to maintain spring flows and protect groundwater-dependent resources.	MN DNR	\$875,746

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010-A	Kean	Allan	Drainage Records Modernization and Statewide GIS Database	This project will develop a web-based GIS database for Chapter 103E public drainage records modernization, update Drainage Records Modernization Guidelines, and provide grants to drainage authorities requiring minimum 1:1 match.	BWSR	\$730,000
011-A	Larson	Diane	Impact of Grazing on Native Plants and Pollinators	We will evaluate effects of grazing versus other management actions on native prairie plant communities, exotic grasses, and pollinator richness to help managers select appropriate tools to achieve their goals.	U.S. Geological Survey	\$465,457
012-A	Nielsen	Kirsten	Emerging Threats to Minnesotas Wildlife	Many emerging threats to wildlife are acquired from the environment, yet little is known about environmental source or spread. Identifying hot spots and risk factors for exposure will improve protection.	U of MN	\$874,447
013-A	Nelson	Jon	Redesigned Updating of State and County Forest Inventories	Pilot forest inventory redesign updating 350,000 acres of DNR and County lands with a multi-pronged approach including: targeted data collection; modeling for imputation and projections; and new tools and technologies.	MN DNR	\$1,794,640
014-A	Forester	James	Impacts of Forest Quality on Declining Minnesota Moose	Link regional patterns of moose abundance through time to the distribution of food and cover. Determine if this distribution affects the diet and survival of individual moose.	U of MN	\$394,496
015-A	Moen	Ron	Improving Stream Trout Habitat by Beaver Management	We will analyze aerial photographs and measure habitat in designated trout streams to improve stream management practices and meet objectives for trout while retaining broader ecological benefits provided by beaver	U of MN - NRRI	\$219,755
016-A	Larson	Mike	Moose Decline and Air Temperatures in Northeastern Minnesota	Studying physiology and behavior of adult moose and effects of female condition on calf production and survival to determine the impact of air temperature on moose population performance and decline.	MN DNR	\$743,648
017-A	Runquist	Erik	Prairie Butterfly Conservation, Research and Breeding Program	The Zoo and DNR will work to prevent the extirpation and possible extinction of imperiled native Minnesota butterfly species through breeding, genetics and mortality research, inventory, monitoring and public education.	Minnesota Zoological Garden	\$638,439
018-A	Venturelli	Paul	A Smartphone Application to Benefit Anglers and Fish	Develop a free smartphone application that benefits anglers (information access, instant diary, peer interaction) and fish (informed and objective management via long-term, state-wide data on angler movement, effort, and harvest).	U of MN	\$138,229

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019-A	Andersen	David	Sandhill Crane Populations and Management in Minnesota	Obtain information essential to managing Minnesotas 2 populations of sandhill cranes, using GPS-cellular transmitters to delineate population boundaries, habitat use relative to crop depredation, and migration patterns and survival.	U of MN	\$306,904
020-A	Chayka	Katy	Expand the Minnesota Wildflowers Online Botanical Reference	It's hard to protect what you can't identify. Field work to expand technical image library and accelerate publication of species accounts to increase website utility/usage by public and land managers.	MN Wildflowers Information	\$222,450
021-A	Wilson	Bruce	Evaluating Clean Water Legacy: Has the Water Improved?	Mining existing and building new foundational data to determine whether Legacy funding is improving water resources and developing restoration BMP effectiveness protocols for WRAPS	U of MN	\$388,500
022-A	Moen	Ron	Improving Wildlife Habitat Analysis with Value-Added LiDAR	We will process LiDAR with high resolution aerial photography in northeast Minnesota to provide current landscape-scale habitat measurements. The product will fundamentally improve habitat management for all forest wildlife species	U of MN - NRRI	\$230,428
023-A	Ek	Alan	Restoring Long-Lost Forest Data and Extending Ecological Monitoring	Long-term forest data; focus on restoration of long-lost statewide forest inventories of 1935, 1953 and 1966 to link with more recent data; to extend long-term ecological monitoring.	U of MN	\$196,000
024-A	Huseby	Jay	Wolf Research Red Lake Reservation (5,500 square miles)	Red Lake is a unique Reservation, having complete jurisdiction over lands within 5,500 square miles of Minnesotas wolf range. This project will facilitate effective management of wolves in northern Minnesota.	Red Lake Department of Natural Resources	\$404,535
025-A	Lehman	Clarence	New Data Directions for Understanding Our Natural Systems	We will develop new levels for natural resource data through very-low-altitude self-guided model aircraft equipped for sensing and imaging. We have acquired these aircraft and are ready to apply them.	U of MN	\$253,000
026-A	D'Angelo	Gino	Movements and Seasonal Habitat Use of Minnesota Elk	The proposed project would provide some of the first biological data collected about Minnesota elk, including movements and habitat use. This information is essential to their long-term, sustainable management.	MN DNR	\$257,473
027-A	Enzler	Sherry	The Human Dimensions of Wolf Management	Healthy wolf populations contribute to healthy ecosystems. Controversy decreases human tolerance threatening wolf viability. Understanding human attitudes and encouraging structured discourse around management strategies can increase tolerance and wolf viability.	U of MN	\$144,099

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028-A	Hills	Cheryal	Region Five Development Commissions Sustainable Communities Initiative	Five counties (Wadena, Todd, Cass, Beltrami, and Hubbard) request aggregate mapping and natural resource data compilation to conserve and protect critical habitat. Project is led by Region Five Development Commission.	Region Five Development Commission	\$971,080
029-A	Wilmot	Neil	Economic Impact of Frac Sand Mining on Minnesota	Investigation of socio-economic impacts from frac sand mining in Minnesota, with particular interest in examining the effects of mining on property values, as well as short-term and long-term employment levels.	Labovitz School of Business and Economics	\$39,967
B. Water Resources (36 Proposals / \$16,093,519)						
030-B	Arnold	William	Antibiotics and Antibiotic Resistance Genes in Minnesota Lakes	The historical relationship between antibiotics and antibiotic resistant bacteria in Minnesota lakes will be explored to determine if improved wastewater treatment is necessary to protect human and aquatic health.	U of MN	\$338,000
031-B	Novak	Paige	Wastewater Estrogen: Removal Options, Fish Abundance, and Cost	Estrogen in wastewater impacts fish but is unregulated. Nitrogen is increasingly regulated and treatment can also remove estrogen. Our research will improve nitrogen removal while reducing estrogen and safeguarding fish.	U of MN	\$516,000
032-B	LaPara	Timothy	Does Triclosan Create Super Bugs During Wastewater Treatment	This research project will assess the ability of triclosan, the widely used antibacterial agent, to create bacteria resistant to multiple antibiotics (a.k.a 'super bugs') during the municipal wastewater treatment process.	U of MN	\$382,000
033-B	Novak	Paige	Protecting Bacteria from Contaminants to Preserve Water Quality	Treatment plants use bacteria to degrade pollutants. Man-made chemicals including perfluorinated chemicals that enter treatment plants harm bacteria. If we can protect bacteria, we can better protect water quality.	U of MN	\$279,000
034-B	Lorenz	David	Watershed Water Budgets for Managing Minnesota's Water	This pilot study will calculate complete water budgets for two counties in Minnesota. Those water budgets can be used for proactive groundwater management in areas considered for mining development.	U.S. Geological Survey	\$129,300
035-B	Stark	James	Protecting the State's Confined Drinking-Water Aquifers	Confined aquifers are critical because they provide reliable drinking water to many State residents. Some critical information is needed to manage these aquifers to ensure clean and sustainable water.	U. S. Geological Survey	\$394,000
036-B	Arnold	William	Water: Solar Driven Destruction of Pesticides, Pharmaceuticals, Contaminants	Solar-driven destruction of contaminants via reaction with dissolved organic matter will be quantified to optimize water treatment and reuse to achieve improved water quality for the benefit of aquatic health.	U of MN	\$291,000

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037-B	Valentas	Kenneth	Removing Phosphorous and Endocrine Disruptors from our Waterways	Phosphorous and Endocrine Disruptive Chemicals enter and threaten our waterways in the effluent from 500 Minnesota waste treatment plants. Pressurized heating of these effluents to 200C removes the harmful chemicals.	U of MN	\$493,000
038-B	Alexander	Scott	Rain Water Reuse and Valuation Investigation	Reusing rainwater can significantly reduce demands on Minnesotas groundwater resources while reducing stormwater runoff. Evaporative chillers can efficiently utilize naturally distilled rainwater creating value from a current waste product.	U of MN	\$310,000
039-B	Martinovic	Dalma	Pharmaceuticals and Nitrogen Interact to Harm MN Fish/Ecosystems?	Determine whether pharmaceuticals (alone/combined with environmental stressor nitrogen-nitrate) widespread in Minnesotas waters impact fish health and microbial processes that regulate nutrient cycling and water quality in rivers and lakes.	St. Thomas University	\$269,000
040-B	Cowdery	Tim	Measuring hydrologic benefits from Glacial Ridge habitat restoration	This project will enhance work to measure and extend flooding and water-quality benefits of wetland and prairie restorations at Glacial Ridge NWR by leveraging an existing comprehensive hydrologic characterization.	Red Lake Watershed District	\$168,500
041-B	Sadowsky	Michael	Sources of Microbial Pollution in the Upper Mississippi River	In this project we will develop a DNA-sequence-based method to determine sources of fecal bacteria in the Mississippi River to assess water quality, mitigate health risks, and develop effective control strategies.	U of MN	\$690,972
042-B	Finlay	Jacques	Remote Sensing Characterization to Improve Water Quality Monitoring	Provide new remote sensing tools for comprehensive measurement of surface water quality in Minnesota, improving efficiency and effectiveness of monitoring and management under changing climate and land use conditions.	U of MN	\$207,000
043-B	Garono	Ralph	Will Superior Sediment Plumes Produce Harmful Algal Blooms?	Floods and changing lake conditions may trigger harmful algal blooms along Superior's shorelines. We will produce a tool to better protect Minnesotans by understanding conditions leading to nearshore algal blooms.	U of MN Duluth - Large Lakes Observatory	\$413,443
044-B	Hanson	Mark	Shallow Lakes: Assessing Quality and Predicting Future Change	We propose a 3 part approach to improve management of Minnesota's shallow lakes: data gathering, identification of lake quality drivers, and a comprehensive modeling strategy for predicting future lake conditions.	MN DNR	\$433,223
045-B	Monson	Bruce	Identifying Causes of Exceptionally High Mercury in Fish	Quantify the probable causes of high mercury levels in fish from five impaired Minnesota rivers, providing the scientific basis to guide further mercury reductions.	MN Pollution Control Agency	\$2,700,869

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046-B	Engstrom	Daniel	Sedimental Journey: Watershed-scale monitoring of BMP effectiveness	This project uses lake-sediment records to evaluate the effectiveness of best management practices in reducing sediment and nutrient loads at watershed scales over longer time periods than conventional monitoring.	Science Museum of Minnesota - St. Croix Watershed Research Station	\$972,000
047-B	Meschke	Linda	Demonstrating Farmer Led Conservation in Elm Creek Watershed	Reduction of water quality and quantity impacts from agricultural systems using an innovative treatment train approach that treats water traveling through the drainage system starting at field to shore.	Rural Advantage	\$460,360
048-B	Illig	Kurt	Estrogen exposure analyses in Minnesotas Shallow Lake Wildlife	Using biological samples already gathered from shallow lakes across Minnesota, we will determine whether environmental estrogen exposure impacts aquatic wildlife, and make recommendations about land and lake management.	St. Thomas University	\$136,000
049-B	Pereira	Donald	Structured Decision Making for Mille Lacs Fisheries Management	This project will use Structured Decision Making to incorporate both biological and social dimensions into a revised Mille Lacs management process to address issues related primarily to fisheries conversation.	MN DNR	\$299,000
050-B	Maciej	Gerry	Restoring Groundwater and Trout Habitat Through Irrigation Efficiencies	Restoring Little Rock Creek trout stream flow by reducing irrigation groundwater demand. Multiple benefits achieved using proven and innovative technologies and involving producers in designing solutions. Outcomes are transferable statewide.	Benton County Soil and Water Conservation District	\$490,649
051-B	Strack	Otto	Small-scale Groundwater sustainability assessment	We propose the development of a simple tool for assessment of groundwater sustainability. The proposal includes and educational component. The tool is intended for local use in rural Minnesota.	U of MN	\$118,214
052-B	Baker	Lawrence	Enhanced Street Sweeping to Restore Nutrient-Impaired Lakes	We propose developing tools for Metro cities that could be used to evaluate the potential effectiveness and cost of using enhanced street sweeping to restore their nutrient-impaired lakes.	U of MN	\$474,536
053-B	Shen	Lian	Simulating Surface Flows to Inform Water Resources Management	We will use computer simulations to obtain high-fidelity data of surface water flows. The simulation will be a cost-effective tool for gathering information for water resources management and ecosystem preservation.	U of MN - St. Anthony Falls Laboratory	\$336,000
054-B	Enzler	Sherry	Achieving Clarity: Impacts of Agricultural Tiling and BMPs	Supporting agriculture while minimizing environmental impacts is a 21st century grand challenge. By linking stakeholder needs to a hydrologic model, we can target agricultural tiling and BMPs for water quality.	U of MN	\$849,877

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055-B	McGuire	Jennifer	Does Water Contaminated with Oil Affect Your Hormones?	We will test Minnesota waters contaminated with oil for potential estrogenic and androgenic activity to evaluate the risk of these chemicals in drinking water to aid in water remediation strategies	St. Thomas University	\$233,089
056-B	Timm	Anne	Chemical Removal from Minnesota Lakes by Aquatic Plants	This study investigates aquatic plants ability to remove personal care chemicals and contaminants from Minnesota lakes to improve water quality and habitat for fish and other aquatic species.	USDA Forest Service, Northern Research Station	\$346,334
057-B	Lewandowski	Ann	Protecting Water Quality in Northeast Minnesota Mining Areas	Prevent resource degradation by defining the threshold at which mining-related watershed changes will alter fisheries and recreational economies. Results will inform effective approaches to mining and resource protection.	U of MN	\$406,000
058-B	Lewis	Jeff	Nutrient Capture Through Water Management and Biomass Harvesting	Evaluate potential capture of nutrients by utilizing cattails grown and harvested within shallow flood reservoirs. Treatment cells will be constructed within existing flood reservoirs. Harvested vegetation utilized for bioenergy.	Red River Basin Commission	\$478,500
059-B	Ryun	Deb	St. Croix Priorities and Conservation Action Plans	Identify and target critical areas within the St. Croix River Basin to achieve maximum results for water quality, habitat and recreational benefits through thoughtful planning and action.	St. Croix River Association	\$230,000
060-B	Fritz	Charles	WQExPertApp	The WQExPertApp is an online tool that bridges the gap between Clean Water Funded TMDL/WRPP strategies by delivering prioritized, targeted and measurable on-the-ground BMP and CP projects.	International Water Institute	\$882,500
061-B	Schoff	Patrick	Predicting Smallmouth Bass Exposure to Endocrine Active Compounds	We will develop a model that will predict the exposure of native fish to endocrine active compounds and identify lakes and rivers where these compounds are likely to be found.	U of MN - NRRRI	\$241,073
062-B	Sparlin	Scott	Minnesota River Community Clean-Ups for Water Quality	The Minnesota River Community Clean-Ups for Water Quality is a stormwater pollution abatement project designed to address excess nutrient pollution in the form of phosphorus and nitrogen in the Minnesota River Watershed.	Friends of the Minnesota Valley	\$85,100
063-B	Gantzer	Charles	Quantifying Acrylamide Detoxification in Frac Sand Washwater	The ability of a laboratory protocol to quantify the site-specific rates of acrylamide detoxification will be demonstrated. Use of the protocol will improve the environmental review of frac sand facilities.	Barr Engineering Company	\$174,560

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064-B	Bartell	Stephen	Triclosan Occurrence and Bacterial Resistance in Minnesota Wastewater	Triclosan and triclosan-containing products are being phased out by State agencies. This project aims to produce a snapshot of triclosan in wastewater; and bacterial resistance at this point in time.	Normandale Community College	\$51,992
065-B	Wackett	Lawrence	Environmentally-Friendly Frac Sand Water Cleanup	We will develop environmentally-friendly procedures for the frac-sand mining industry in Minnesota. Our technology detects and destroys the potentially hazardous chemicals used. Water is cleaned and less land used.	U of MN	\$812,428
C. Environmental Education (31 Proposals / \$11,906,429)						
066-C	Gieseke	Jenny	Minnesota Conservation Apprenticeship Academy	This program builds upon previous success, placing 30 students as interns in SWCD offices state-wide each year for two years, facilitating knowledge sharing between experienced professionals and students.	BWSR	\$392,000
067-C	Hamilton	Patrick	River Lab: Engaging Minnesotans in Water Quality Issues	An exhibit with educational scientific laboratory experiences that measurably increases the awareness of Minnesotans to common river water pollutants and the implications of these contaminants to their daily lives.	Science Museum of Minnesota	\$730,747
068-C	Sierks	William	GreenStep Schools Program: School-based Environmental Education and Stewardship	Develop and pilot a best-practices program for students and community to learn how to save energy and water, reduce waste, and provide natural habitat at their school building and grounds.	MN Pollution Control Agency	\$900,000
069-C	Poppleton	Kristen	Minnesota Stories in a Changing Climate	Minnesota Stories in a Changing Climate utilizes media tools and local experts to share stories, provide personal contact, and highlight resources to increase climate literacy and encourage positive behavior change.	Will Steger Foundation	\$413,860
070-C	Winkelman	Jenny	Reducing Salt Pollution Through Winter Maintenance Training	Training thousands of winter maintenance personnel will reduce road salt (chloride) use by 30%, protecting Minnesota's infrastructure and surface and groundwater. Research and collaborative, longterm planning will recommend future reductions.	Mississippi Watershed Management Organization	\$415,900
071-C	Pederson	Dave	Youth-led Sustainability Initiatives in 40 Greater MN Communities	40 Youth Energy Summit (YES!) teams will complete over 100 youth-led sustainability action projects in 40 communities in SW SE, Central and NE Minnesota, providing valuable service and gaining valuable experience.	Prairie Woods Environmental Learning Center	\$397,000

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072-C	Holland	Matt	Minnesota Pollinator Partnership	Forty community pollinator projects will be completed on at least 40-acres involving and educating 800 youth and 200 adults on the value of pollinating species and their habitat.	Pheasants Forever	\$104,600
073-C	Moe	Peter	Bee Discovery Center at the Minnesota Landscape Arboretum	The Minnesota Landscape Arboretum's new Bee Discovery Center will offer hands-on learning experiences for everyday people and communities to learn how they can protect bees and bee habitat.	U of MN, Landscape Arboretum	\$615,279
074-C	Lais	Gregory	Urban Environmental Education Engaging Students in Local Resources	A collaborative metro-wide system for environmental educational using existing, but underutilized, environmental resources serving 15,600 underserved middle and high school students in high quality, place-based environmental education programs.	Wilderness Inquiry	\$1,093,000
075-C	Stevenson	Anne	Engaging Youth With Nature Through Mobile Technology	Recruit and train 1,200 adults statewide to engage 30,000 youth in 4-H/ other non-formal learning programs, using mobile technology to explore nature, enhance youth's skills, and build a conservation ethic.	U of MN	\$362,000
076-C	Ponder	Julia	Raptor Lab: Online and Outdoors!	The Raptor Lab will create an environmental education curriculum for middle schools that integrates authentic outdoor experiences with technology and scientific investigation to empower students to explore their local environment.	U of MN	\$186,676
077-C	Hanson	Michele	Building Bridges to a Diverse Natural Resources Community	Increase participation of under-represented communities in outdoor recreation and in the natural resource professions by means of targeted urban outreach and stronger linkages between DNR programs and academic offerings.	MN DNR	\$1,100,000
078-C	Corney	Jeffrey	Making a Splash in Water Resources Education	Improve our students' appreciation for and understanding of Minnesota's water resources, and inspire their interest in pursuing science toward a potential career in natural resources.	U of MN	\$160,000
079-C	Liu	Donald	Integrating Environmental Education in Grade 3-12 Economics Curriculum	The project will enhance the abilities of up to 10,000 students in grades 3-12 to analyze trade-offs between environmental protection and economic development and make choices to achieve sustainable balances.	Minnesota Council on Economic Education	\$96,816
080-C	Henehan	Brendan	TV Documentary: The Great Mille Lacs Walleye Mystery	Overfishing? Invasive species? Rising Temperatures? Our hour-long statewide PBS documentary explains to average Minnesotans the science and history behind why the Mille Lacs walleye fishery is struggling.	Twin Cities Public Television	\$102,372

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081-C	Griffin	Elise	Eco Educations Environmental Service-Learning Program	Eco Education will train, support and mentor teachers to implement an environmental service-learning curriculum that will allow students to complete action projects and address environmental issues to improve their communities.	Eco Education	\$90,000
082-C	Leguizamon Grant	Zea	Urban Youth-Led Ecological Regeneration Partnership	This initiative organizes and engages 8000 participants from diverse communities in improving the community environmental health while preparing their youth for future career possibilities in environmental services and sciences.	Ce Tempoxcalli	\$208,200
083-C	Gehrig	Alex	Reducing Lake Quality Impairments through Citizen Action	Train lake associations and other key stakeholder groups to develop lake management plans and to implement science-based, citizen-led water quality improvement projects on eight impaired lakes in west central Minnesota.	Freshwater Society	\$59,375
084-C	Musser	Kimberly	Minnesota River Basin Water Quality Success Stories	Lessons learned from eight successful subwatershed-scale conservation efforts will be summarized and disseminated to help inform and influence future watershed protection efforts. Products include videos, website, booklet and outreach.	Minnesota State University, Mankato - Water Resources Center	\$135,871
085-C	Fredin	Tracy	Waters to the Sea: Rivers of Minnesota	Waters to the Sea: Rivers of Minnesota is an environmental education and community outreach project that will help Minnesotans understand water issues and act to improve and maintain water quality.	Hamline University - Center for Global Environmental Education	\$451,494
086-C	Berus	Darcy	The Wolf At Our Door	This new initiative will bring an outreach specialist to metro area K-12 classrooms and nature centers to help children understand issues around wolf management in this new era of delisting.	International Wolf Center	\$123,672
087-C	Moeller	Megan	Testing Triggers for Adopting Sustainable Water Practices	Individuals adopting stormwater retention, groundwater conservation, and wastewater chloride reduction practices provide a public benefit by sustaining water resources. This project identifies the most influential factors for overcoming personal inaction.	City of Rochester	\$317,000
088-C	Backman	Robert	Red River "Living with a River" Interpretive Trail	Interpretive trail along Red River will provide environmental education to City of Moorhead and Red River Valley through interpretive trail signs, audio tour, and riparian education outreach materials.	River Keepers	\$190,185
089-C	Svien	Lawrence	Demonstration Water Quality Protection Practices on Zumbro River	To achieve increased water quality through the application of agricultural and urban BMPs in the Zumbro Watershed by increasing public understanding, connection, and engagement, to the watershed water quality issues.	Zumbro Watershed Partnership	\$413,934

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090-C	Huelskamp	Rich	CREED - Energy Education Project	To update CREED's curriculum to serve more teachers in a shorter period of time thru development of an online, interactive, teacher lead, with online meetings based curriculum package.	CREED (Center for Renewable Energy Education and Domanstration	\$148,500
091-C	Bozentko	Kyle	Citizen Input on Silica Sand Mining	The Jefferson Center aims to motivate conservation efforts in southeastern Minnesota by developing citizen-led information and education events related to silica sand mining development.	The Jefferson Center	\$99,672
092-C	Gibson	James	MN Agricultural Interpretive Center Energy Education Project	To develop an agricultural based energy education curriculum. Farmamerica is Minnesotas only agricultural environment learning center. The materials will be used at Farmamerica and be available online.	MN Ag Interpretive Center - Farmamerica	\$160,000
093-C	Hanson	Kipp	Community Green Space Mapping Project	Youth participants will explore local nature areas and create interactive, on-line maps of their community green spaces. Maps will be linked to local school, city and community organization websites.	Project Get Outdoors, Inc.	\$15,000
094-C	Sullivan	Tom	Wolf-Livestock Conflict Reduction Using Cost-Effective Non-Lethal Prevention	Educate, empower, and assist livestock producers that have experienced chronic livestock losses from wolves with non-lethal prevention techniques to minimize conflicts and foster coexistence between humans and wolves.	Howling For Wolves	\$417,250
095-C	Kindem	Cathy	Trailblazers: District 196 Students Ensure Sustainable School Environments	Over 4,000 students and staff each year will be empowered to work together on creative solutions for environmental problems and become practitioners of sustainable development on their local school campuses.	District 196 - Rosemount-Apple Valley-Eagan	\$1,876,026
096-C	Boysen	Suzy	Land Stewardship in Secondary Education	Environmental Education for 7-12 graders using an outdoor classroom setting to establish land stewardship in young adult populations and increase interest in Environmental Studies and Conservation beyond the educational setting.	River Bend Nature Center	\$130,000
D. Aquatic and Terrestrial Invasive Species (14 Proposals / \$12,797,634)						
097-D	Sorensen	Peter	Blocking Asian Carp by Optimizing Lock and Dams	Working with the Army Corps of Engineers to develop simple ways to modify two lock and dams to stop Asian carp from invading the Minnesota, St. Croix, and Mississippi Rivers	U of MN	\$463,449
098-D	Chandler	Monika	Biosurveillance and Biocontrol of EAB - Phase 2	We will continue to monitor select ash and EAB populations to inform and expand biological control implementation and test the compatibility of biological control with insecticide treatments for EAB management.	MN Department of Agriculture	\$628,100

2014 Environment and Natural Resources Trust Fund Proposals

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ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
099-D	Aukema	Brian	Mountain Pine Beetle: Invasive Threat to Minnesotas Pines	Mountain pine beetle kills pines. Given a recent find and two potential arrival pathways, we survey and characterize risk to Minnesota's pine forests to inform early detection and rapid response.	U of MN	\$382,100
100-D	Abrahamson	Mark	Brown Marmorated Stink Bug Monitoring and Biocontrol Evaluation	We will monitor for brown marmorated stink bug to identify problem areas and target biocontrol efforts. We will evaluate the suitability of potential biological control agents for use in Minnesota.	MN Department of Agriculture	\$266,024
101-D	Mensingher	Allen	Bioacoustics to Detect, Deter and Eliminate Flying Carp	Develop bioacoustic (sound) technology for silver carp 1) detection and early warning systems; 2) capture and elimination methods; 3) deterrent systems	U of MN Duluth	\$262,907
102-D	Hicks	Randall	Bacterial Biodiversity for Sustainable St. Louis River Estuary	We will identify the common and rare bacteria that currently inhabit the St. Louis River Estuary to evaluate the potential ecological and economic damage caused by new invasive bacterial species.	U of MN - Duluth	\$359,849
103-D	Delong	Michael	River Management Strategy Before Asian Carp Invasion	Project will develop a management framework to address invasion of Asian carp in the Upper Mississippi River. Predictive models will identify vulnerable aquatic habitats, reducing costs for river management and mitigation.	Winona State University	\$279,868
104-D	Robinson	Stacie	Minnesota Deers Risk of Invading Epizootic Hemorrhagic Disease	Minnesota is on the edge of invasion by epizootic hemorrhagic disease; a significant threat to white-tailed deer. Research is critical to assess risk, enabling agency partners to mitigate disease impacts.	U of MN - College of Veterinary Medicine	\$135,847
105-D	Hibbard	Calder	Minnesotas Forest Invasives: Threats, Assessment and Recommendations	Assessment of threats from terrestrial invasive species to Minnesotas forests and urban trees and development of recommendations regarding optimal policy instruments, needed investments, and key information needs, better positioning Minnesota.	Minnesota Forest Resources Council	\$308,000
106-D	Pierce	Ann	Accelerated Effort to Understand and Control Zebra Mussels	This project will expand partnerships between state, tribal, and local units of government to address the spread of AIS and increase our understanding of how zebra mussels impact our lakes.	MN DNR	\$5,180,800
107-D	Winter	Brian	Invasive Species Control in Grassland Habitats	Invasive species in critical habitats identified in the Minnesota Prairie Plan will be managed on 80,000 acres through inventory, direct control (herbicide and fire treatments) and habitat reconstruction.	The Nature Conservancy	\$892,000

2014 Environment and Natural Resources Trust Fund Proposals

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ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
108-D	Lauer	Jack	Southwest Minnesota Asian Carp Watershed Deterrents	Prohibit Asian carp migration into sub-watersheds and core recreational lakes near Mankato and Willmar, Minnesota by installing physical deterrents and electric barriers at strategic sites along streams and ditches.	MN DNR	\$3,268,800
109-D	Courneya	Joe	Regional Aquatic Invasive Species Project	This project will expand AIS activities from a county based processed to a Watershed scale through a partnership with LGUs and others within a defined region in NW Minnesota	Red River Basin Commission	\$219,890
110-D	Zastrow	Russ	Anoka Rum River Dam Asian Carp Barrier Improvements	This project will study potential improvements to the Rum River Dam in Anoka to improve its effectiveness as a barrier to Asian carp to protect the Rum River watershed.	City of Anoka	\$150,000
E. Air Quality, Climate Change, and Renewable Energy (35 Proposals / \$16,771,904)						
111-E	Montgomery	Rebecca	Assessing Species Vulnerability to Climate Change Using Phenology	Historical and new observations of timing of biological events such as flowering will assess change in the ecology of species, identify vulnerable species and inform management strategies for climate change.	U of MN	\$189,845
112-E	Penn	Lee	Solar Cell Materials from Sulfur and Common Metals	We will develop solar cell materials using nontoxic and common metals combined with sulfur, a mining waste product. Success will help progress towards the 2002 MN solar energy policy standard.	U of MN	\$494,092
113-E	D'Amato	Anthony	Mitigating Drought and Windstorm Impacts on Minnesota's Forests	Project assesses strategies for mitigating impacts of drought and windstorms on Minnesota's forests. Results will quantify effectiveness of forest management at sustaining forest health and growth during extreme weather events.	U of MN	\$270,000
114-E	Moss	Paul	Building Environmental and Community Resilience to Extreme Weather	Reducing environmental damage from extreme weather through practical investments, community engagement, outreach and grants to implement green infrastructure, conservation, urban forestry, building, and other adaptive practices while building community resilience.	MN Pollution Control Agency	\$846,000
115-E	Reich	Peter	Forecasting Minnesotas Future Forests	The project will increase understanding of climate change impacts on Minnesota forests, use that information to forecast future forests, and provide managers with strategies to increase forest growth and health.	U of MN	\$642,764

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ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
116-E	Saar	Martin	Innovative Groundwater-Enhanced Geothermal Heat Pump Study	We propose to analyze and validate a novel geothermal heat pump method and technology that is expected to substantially reduce heat pump cost while improving performance and predictability.	U of MN	\$196,000
117-E	DeWahl	Karl	Wastewater Facility Energy Conservation and Air Pollution Reduction	Provide technical assistance to fifteen wastewater treatment facilities across Minnesota to identify and implement energy conservation projects that improve operational efficiency and reduce air pollution from associated energy production.	U of MN - MnTAP	\$208,616
118-E	Johnson	Lucinda	Protecting North Shore Trout Streams for the Future	Identify viable North Shore trout streams threatened by climate change using site-specific temperature and fish data; develop strategies to manage and protect trout streams.	U of MN - NRRI	\$361,758
119-E	Manolis	Jim	Building Habitat and Watershed Resilience to Climate Change	This project applies state-of-the-art "resilience clinics" and "climate-smart" management frameworks to guide resource professionals in their work to steward risk-prone habitats and watersheds through a range of future climate scenarios.	MN DNR	\$510,000
120-E	Hudak	George	Silica/Frac Sand Mining Air/Water Quality Environmental Impacts	This study will determine the environmental concentrations and compositions of airborne particulate matter generated by silica sand mining activities in Southeast Minnesota and evaluate related air and water quality impacts.	U of MN - NRRI	\$607,924
121-E	Ruan	Roger	Demonstrating Innovative Technologies to Fully Utilize Wastewater Resources	To demonstrate innovative technologies to utilize and treat wastewater streams; convert scum, sludge, and centrate to bio-fuels; improving water quality, reducing GHG emission, producing renewable energy, lowering wastewater treatment costs.	U of MN	\$2,041,626
122-E	Reese	Michael	Transitioning Minnesota Farms to Local Energy	Agricultures dependence on fossil energy carries economic and ecological risks. Clean energy strategies will be developed for Minnesota farms to significantly reduce fossil energy use while increasing local energy production.	U of MN	\$1,049,992
123-E	Nater	Edward	Determining Climate Change Effects on Mercury in Peatlands	Elevated concentrations of mercury have been observed in children living along the North Shore. Potential increases in mercury in surface waters resulting from climate change may exacerbate that situation.	U of MN	\$442,779
124-E	Tschirner	Ulrike	Greenhouse Gas Reduction through Forest Based Bio-Chemicals	We will reduce greenhouse gas emissions and enhance carbon sequestration by replacing petroleum based fuels and chemicals with forest based materials, providing additional revenue streams for paper and forest industry.	U of MN	\$199,280

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ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
125-E	Zhu	Jun	Clean Water/Renewable Energy from Beet Waste/Manure	Sugar beet processing wastewater and pig manure, the two major pollutants to Minnesota water, can be used together to produce bioenergy (\$9.72 million) and a crop fertilizer (\$5 million) annually.	U of MN	\$403,685
126-E	Tallaksen	Joel	Life Cycle Energy of Renewably Produced Nitrogen Fertilizers	Fossil energy savings and greenhouse gas reductions of using local renewable energy technologies for fertilizer production are calculated using Life cycle assessment. Technological and economic feasibility are also examined.	U of MN	\$512,732
127-E	Zarling	Darrick	Biomass Gasification to Produce Electricity for CO2 Reduction	This project will provide a platform for distributed renewable electrical generation, allow us to rethink energy distribution, use renewable resources to manage carbon, create local bioenergy ecosystems and sustainable communities.	U of MN	\$175,000
128-E	Cina	Laura	Creating a Statewide Solar Resource Inventory and Map	Create a statewide solar resource inventory map and website, enabling Minnesotans and local government planners to understand and manage the opportunities and risks associated with developing solar energy resources.	Minnesota Renewable Energy Society	\$287,000
129-E	Fisher	Hank	Reducing Dioxin Emissions Grant Program	Reduce dioxin emissions and their negative health consequences from household garbage burning by improving access to rural garbage collection and recycling sites through grants to townships and counties in Minnesota.	MN Pollution Control Agency	\$620,000
130-E	Hemmingssen	Richard	Developing Minnesotas Clean Energy Carbon Neutral BioEconomy	The project will identify opportunities for advanced energy technologies and biochemicals from agricultural and forest based resources and deliver a consensus framework for establishing a green energy, carbon neutral BioEconomy	U of MN, Dept. of Bioproducts and Biosystems Engineering	\$195,950
131-E	Bergh	Rob	Minnesota EV Trail: Solar Chargers for Electric Vehicles	Install a chain of solar powered electric vehicle charging stations across Minnesota. This Minnesota EV Trail will ultimately reach from Iowa to Canada, greatly accelerating adoption of EVs in Minnesota.	MN DNR	\$261,000
132-E	Gupta	Shalini	Human Health, High Risk Populations and Climate Change	Improve health of low-income and communities of color as Minnesota's climate changes. Conduct GIS mapping outlining high-risk human populations, develop recommendations for adaptation planning and conduct culturally appropriate community outreach.	Center for Earth, Energy and Democracy	\$225,000
133-E	Hu	Bo	Next Generation Septic TankSystems	This project aims to developing next generation septic tank systems focusing on nutrient recuperation, bioenergy generation and environmental protection by the implementation of a bio-electrochemical system.	U of MN	\$258,810

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ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
134-E	Anderson	Mark	District Heating With Renewable Biomass at Camp Ripley	Decrease dependence on natural gas by replacing 14,100 mcf and a reduction in CO2 emissions by 740 metric tonnes annually through district heating with renewable biomass at Camp Ripley.	Minnesota Department of Military Affairs/Minnesota National Guard	\$1,970,000
135-E	Davenport	Mae	Climate Readiness in Tourism-Dependent North Shore Communities	Recreation and tourism systems are sensitive to climate change. We propose research and outreach to assess and build climate readiness in Lake Superior north shore communities dependent on nature-based tourism.	U of MN	\$279,185
136-E	Millet	Dylan	Minnesotas Methane Emissions: Potential Energy and Climate Benefits	This project quantifies Minnesota's methane emissions. Results will indicate where reductions can be effective, evaluate the importance of natural and human-driven sources, and identify energy savings and climate mitigation opportunities.	U of MN	\$362,680
137-E	Yerger	Dale	Solar PV at Minnesotas Residential Environmental Learning Centers	5 kw institutional solar arrays will be installed at each of six residential environmental learning centers. Online monitoring, site demonstration and recently developed solar curriculum will reach thousands annually.	Eagle Bluff, Wolf Ridge, Deep Portage , Long Lake , Audubon Center of the Northwoods, Laurentian ELC	\$150,000
138-E	Griffis	Timothy	Wind Energy from Gravity Waves and Nocturnal Jetstreams	This project examines gravity waves and nocturnal jetstreams for wind turbine energy generation. Results will help Minnesota meet the 25% renewable energy requirement by 2025 and will improve air quality.	U of MN	\$191,779
139-E	Hennessy	Kevin	Eliminating Sulfur from On-Farm Anaerobic Digester Emissions	On-farm anaerobic digestion diverts feedlot water from groundwater and mitigates greenhouse gas emissions. Reducing sulfur emissions will further improve environmental and cash-flow benefits allowing for more acceptance of the technology.	MN Department of Agriculture	\$300,000
140-E	Johnson	Bart	Itasca Boiler/Woody Biomass Utilization Project	Itasca Community College is developing a national demonstration site for the effective use of woody biomass for heating, and creating training opportunities for the woody biomass energy conversion industry.	Itasca Community College	\$1,035,100
141-E	Host	George	Quality of Life under Climate Change in Minnesota	Develop Quality of Life indices sensitive to climate change in communities founded on timber, tourism, mining, and agriculture; work with city and natural resource managers to validate this tool statewide.	U of MN - NRRI	\$493,784
142-E	McAlpine	Jake	Reduction of Carbon Emissions in Residential Buildings	The goal of this proposed project is to quantify the reduction in green house gas emissions from 40 homes by implementing comprehensive energy saving retrofits in each home.	Sustainable Resources Center, Inc.	\$500,000

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ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
143-E	Thomas	Steve	Developing Building Deconstruction into a Sustainable Enterprise	The project will show deconstruction is a viable alternative to demolition; reducing construction waste going to landfills, conserving natural resources by promoting reuse/recycling, and increasing employment for chronically unemployed adults.	Better Futures Minnesota	\$150,000
144-E	Matsumoto	Katsumi	Characterizing Urban Metabolism to Help Manage Carbon Emissions	This proposal will help the MPCA formulate CO2 emissions reduction and climate change adaptation by quantifying the fluxes of CO2, energy, and water from urban surfaces using innovative measurements	U of MN	\$189,523
145-E	Langowski	Harold	City of Ely Joint Biomass District Heating Project	City of Ely, Ely-Bloomenson hospital, ISD696 with assistance of AETF, USFS, WERC have a viable biomass district heating project. The \$3,780,000 project needs final legal, governance, partnership structure to proceed.	City of Ely	\$150,000
F. Methods to Protect, Restore, and Enhance Land, Water, and Habitat (31 Proposals / \$12,406,378)						
146-F	Spivak	Marla	Achieving Pollinator Landscapes with the Greatest Multiple Benefits	We will identify new and reliable floral resources for bee pollinators on natural and agricultural lands for greatest multiple benefits, including bee and bird habitat, soil conservation, and water quality.	U of MN	\$1,714,040
147-F	Shaw	Ruth	Healthy Prairies: Seed Storage, Beneficial Microbes, and Adaptation	We will collect and preserve germplasm of plants throughout Minnesotas prairie region, study microbial effects on them, and discover the scale of local adaptation and rate of ongoing adaptation.	U of MN	\$695,000
148-F	Shaw	Dan	Increasing the Resiliency of Conservation Projects in Minnesota	This project will assess factors related to project resiliency on conservation lands, resulting in guidance and standards to develop resilient landscapes, protecting the publics investment in conservation projects.	BWSR	\$166,710
149-F	Wyse	Donald	Developing Forever Green Crops for Minnesotas Agricultural Landscapes	This project will accelerate development of economically viable winter annual and perennial crop options for Minnesota farmers to reduce nonpoint pollution and habitat loss currently associated with annual cropping systems.	U of MN	\$847,900
150-F	Everett	Leslie	Restoring Aquatic Habitat by Reducing Sediment from Streambanks	Restore aquatic habitat by reducing the 65-70% of river sediment now delivered from streambanks, bluffs, and ravines by developing tools and training for siting and implementing stream flow reduction practices.	U of MN - Water Resources Center	\$276,000
151-F	Krischik	Vera	Protecting Bees by Understanding Systemic Insecticides	Understand how native bee and honey bee colonies are impacted by systemic, neonicotinyl insecticides in pollen and nectar of plants growing in fields and landscapes.	U of MN	\$326,869

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ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
152-F	Krystosek	Dale	Northeast Minnesota White Cedar Restoration, Phase 2	White cedar swamps provide valuable ecological and economic functions in Minnesota. This project continues an effort to reverse the decline of white cedar by demonstrating restoration techniques in the state.	BWSR	\$335,800
153-F	Lennon	Megan	Increasing Cover Crop Adoption on Working Lands	This project increases cover crop adoption in Minnesota by partnering with farmers' knowledgeable crop advisors, removing barriers to implementation, and demonstrating on-farm feasibility.	BWSR	\$162,500
154-F	Biske	Richard	Protecting the Best of the Best in Southeast	This project will provide a framework for the protection and stewardship of unimpaired waters in Southeast Minnesota. The result will be a template for watershed protection in Minnesota.	The Nature Conservancy	\$258,500
155-F	Hoganson	Howard	Strategies For Restoring Pine in Minnesota's Forests	Identifies statewide strategies for effective and efficient management investments to restore mixed pine forest cover types. Using inter-organizational collaborations, tests multi-aged, multi-species silvicultural systems, including safe biopesticides for deer control.	U of MN	\$356,289
156-F	Tapp	Brooke	Duluth Post-Flood Trout Stream Riparian Habitat Restoration	Restore 10 miles of native riparian habitat on public land along 16 coldwater trout streams within the City of Duluth that were damaged by the unprecedented June 2012 flood.	Community Action Duluth	\$250,000
157-F	Buck	Wiley	Restoring our Lands and Waters	Great River Greening will restore/enhance 0.27 miles (0.18 Trust Fund, 0.09 match) of shoreline and 340 acres (218 Trust Fund, 122 match) of forests, wetlands, woodlands, savanna and prairie.	Great River Greening	\$414,000
158-F	Lewanski	Tom	Protect, Restore and Enhance Significant Watershed Habitat.	Within the Metro Conservation Corridors, FMR will install 2 acres of prairie, enhance 31 acres of prairie and enhance 107 acres of forest and 15 acres of oak savanna.	Friends of the Mississippi River	\$204,000
159-F	Venturelli	Paul	Better Trout Fishing Through Better Stream Restoration Planning	Groundwater inputs to SE Minnesota streams support healthy trout populations and fisheries. We will explore this link (landscape features, food production, trout diet/growth) in support of restoration activities and management.	U of MN	\$615,464
160-F	Cotner	James	Using CO2 and Drawdown to Manage Shallow Lakes	We will develop a new method for controlling rough fish and invasive species using dry ice in winter and evaluate best practices for nitrogen and phosphorus removal from shallow lakes.	U of MN	\$452,000

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ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
161-F	Zamora	Diomy	Maintaining Expiring CRP Land Benefits Using Integrative Cropping	Develop and evaluate alley cropping agroforestry systems as continuous living covers to maintain the environmental benefits gained of expiring CRP lands while providing economic opportunities for farmers and rural communities.	U of MN	\$467,000
162-F	Levar	Tom	Dredged Sediment for Forest Restoration on Unproductive Minelands	Restore up to 136 acres of unproductive mine stockpile while improving the treatment of municipal sewage and biosolids near Virginia using clean Erie Pier dredged sediment and managed forestry techniques.	U of MN - NRRI	\$495,585
163-F	Svedarsky	Daniel	Cattail Management for Wetland Wildlife and Bioenergy Potential	This project will evaluate different management techniques for the control of cattails in northwest Minnesota and their wildlife effects and potentials to use cattails as a biofuel.	U of MN	\$74,600
164-F	Wyatt	Gary	Innovative Technology to Seed Plants on Streambanks	Develop and evaluate an innovative, safe method of establishing perennial vegetation on steep bare streambanks to reduce sediment and erosion to waterways while providing sustainable, economic and environmental benefits.	U of MN	\$189,000
165-F	Kornack	Ken	Minnesota Zoo Site Restoration and Native Wildlife Study	The Zoo will integrate habitat conservation, environmental education and recreation by restoring and studying 40 acres of land, creating educational opportunities for those exploring the site along a public trail.	Minnesota Zoological Garden	\$477,200
166-F	Main	Rylee	Lake Pepin Preservation: Enhancing Local Water Management Capacity	Enhancing local capacity to address erosion problem areas by educating county boards about the benefits and feasibility of enforcing the state shoreland rule and of redetermining outdated drainage systems.	Lake Pepin Legacy Alliance	\$109,275
167-F	Slesak	Robert	Disseminating Sustainable Forest Management Guidelines for Resource Protection	Publication of revised Forest Management Guidelines in a user-friendly field guide and web application format to increase forest resource protection through enhanced understanding and implementation of sustainable forest management practices.	Minneosta Forest Resources Council	\$112,000
168-F	Sagor	Eli	Forest Wildlife and Climate Change Research and Outreach	Innovative research addressing habitat quality and distribution for two aspen-dependent bird species considering climate-driven tree species range shifts, plus coordinated outreach through a network of committed partners.	U of MN	\$308,000
169-F	Tenney	Michael	Achieve Conservation Objectives through Grazing - Monitor Response	The Minnesota Prairie Plan calls for ecological disturbance to maintain diversity. This proposal will provide for conservation grazing materials on 10,00-acres of WMAs and monitoring to develop best management practices.	MN DNR	\$1,416,480

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170-F	Mesko	John	Improving St. Croix River Basin Water Quality	This project will improve water quality in the St. Croix River Basin by educating and empowering farmers to change farming practices to focus on soil health, grazing and cover crops.	Sustainable Farming Association of MN	\$304,000
171-F	Ringold	Jennifer	Ecological Management Plans - Mississippi River Watershed and Minneapolis	To improve on-the-ground operations and management of natural resources in Minneapolis and the Mississippi River watershed through the creation of ecologically based management plans for vegetation and water.	Minneapolis Park and Recreation Board	\$228,800
172-F	Jacobson	Kent	Increasing Habitat and Ecosystem Benefits through Forest management	Conduct and coordinate state forest resource assessments, prepare summary reports and communicate through outreach efforts promoting the business investment opportunities resulting in increased and sustainable environmental, social and economic benefits.	MN DNR - Div of Forestry	\$268,600
173-F	Beckwith	John	Creating Foundations for Farmer Led Conservation Planning	Develop the educational and technical materials, training for farmer and facilitator expertise, support specific local resource assessments, and demonstrate success of farmer led conservation planning councils in Minnesota.	Minnesota Association of Resource Conservation and Development Councils, Inc.	\$61,736
174-F	Fralich	Lana	Victus Farms: Expanding in New Directions	Victus Farms demonstrates an innovative approach to sustainable food and fuel production. We propose to improve our existing system and expand into waste water purification and salt-water system design	City of Silver Bay	\$356,000
175-F	Hayes	Lynn	Minnesota Farmers' and Landowners' Guide to Frac Sand Mining	Farmers' Legal Action Group (FLAG) requests \$142,230 from LCCMR to protect Minnesota's land, water, and habitat through production of "Minnesota Farmers' and Landowners' Guide to Frac Sand Mining".	Farmers' Legal Action Group	\$142,230
176-F	Johnson	Margaret	Middle Fork Crow River Sediment and Nutrient Reduction	The Middle Fork Crow River has been established as a leading sediment and nutrient exporter. Restoring its streambanks will lower concentrations of pollutants and improve the health of state waters.	Middle Fork Crow River Watershed District	\$320,800
G. Land Acquisition for Habitat and Recreation (14 Proposals / \$28,088,716)						
177-G	Booth	Peggy	SNA Acquisition, Restoration, Improvement & Citizen Engagement	Diverse native plant communities and rare species habitat would be acquired as state Scientific and Natural Areas (SNAs) and their quality increased through restoration, site improvements, monitoring, and public involvement.	MN DNR	\$3,951,870

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ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
178-G	Stefferdud	Arne	Metropolitan Regional Park System Acquisition--Phase 3	Third phase of multi-phase program to acquire 210 to 250 acres of high quality natural resource lands for regional parks and trails in the Metropolitan Regional Park System.	Metropolitan Council	\$2,250,000
179-G	Garms	Jason	Native Prairie Stewardship & Prairie Bank Easement Acquisition	This project will protect 1200-acres of native prairie with Prairie Bank easements, apply management to 910-acres of prairie, and landowner stewardship will be encouraged through workshops, technical assistance and planning.	MN DNR	\$5,153,680
180-G	Kalahar	Thomas	Protection of Granite Rock Outcrop Ecosystem	Over 700 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 County Soil & Water Conservation District	\$4,216,275
181-G	Vanderbosch	Dana	State Parks and Trails Land Acquisition	Acquire land for habitat and recreation within the statutory boundaries of state parks, state recreation areas, and state trail corridors.	MN DNR	\$2,200,000
182-G	Perrine	Rich	VanderWert Scientific and Natural Area and County Park	Purchase Martin Countys only Prairie Bush Clover prairie, protect it by designating it as a scientific and natural area, buffer it and add it to the county park system.	Fox Lake Conservation League, Inc.	\$455,000
183-G	Harper	Jane	3,500-Foot Shoreland Acquisition on St. Croix River	Purchase 15 acres and 3,500 feet of St. Croix shoreland paralleling Brown's Creek State Trail providing passive recreation to trail and river users and tourists from a wide area.	Washington County	\$2,500,000
184-G	Manzoline	Robert	Mesabi Trail Development - Soudan to Ely Segment	This project consists of the right-of-way acquisition, design and construction of an 18 mile segment of the Mesabi Trail from Soudan to Ely.	St. Louis & Lake Counties Regional Railroad Authority	\$1,000,000
185-G	Holdsworth	Andy	Precision Conservation Models - Applications to Working Forest Lands	This project applies state-of-the-art tools to inform precision conservation acquisitions of threatened forest lands in the vulnerable and rapidly changing Pineland Sands Aquifer region.	MN DNR	\$377,000
186-G	Rivers	Patrick	Accelerated Reinvest in Minnesota Critical Habitat Matching Program	Accelerate the Reinvest in Minnesota programs ability to utilize donations and protect 1,000 acres of fish and wildlife habitat by leveraging donations to secure fee title interest in the lands.	MN DNR	\$2,017,920

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ID #	Last Name	First Name	Project Title	Summary	Organization	\$ Requested
187-G	Tomlinson	Robert	Strategic Land Acquisition, Accelerating Sales and Exchanges	Strategic Land Asset Management opportunities for exchange, sale and acquisition of public lands will be planned for and implemented through comprehensive county based planning and completion of priority transactional activities.	MN DNR	\$500,000
188-G	Colwell	Carl	Connecting the Minnesota River Water Trail and Morton	Connects State Trail paddlers to significant area sites by providing the only potable water between New Ulm and Granite Falls, and provides connecting trails, amenities, interpretation, and a campground.	City of Morton	\$198,200
189-G	Damon	Susan	Long-Term Conservation Easement Stewardship Account	This project provides principal funding for a conservation easement stewardship account. Investment income from this money will provide long-term funding for stewardship of conservation easements acquired with ENRTF/MFRF appropriations.	MN DNR	\$1,186,667
190-G	Vande Linde	Aaron	Preserving Old Growth Forests on School Trust Lands	DNR administers ~20,000 acres of designated old-growth forests on school trust lands. Legislation requires DNR to compensate the school trust in order to preserve these natural resources on trust land.	MN DNR	\$2,082,104
H. Other (2 Proposals / \$135,000+)						
191-H	Graeber	Amanda	Contract Management	Provide continued contract management and customer service to ENRTF pass-through appropriation recipients. Ensure funds are expended in compliance with appropriation law, state statutes, grants policies, and approved work plans.	MN DNR	\$135,000
192-H	Hubinger	Greg	LCC - Web		LCC	\$xx