

M.L. 2016 Environment and Natural Resources Trust Fund (ENRTF) Recommendations (FY 2017)

For the FY 2016 and FY 2017 biennium (July 1, 2015 - June 30, 2017), approximately \$46.3 million is available each year (total = \$92,674,000) for funding from the Environment and Natural Resources Trust Fund. As of 12/02/15, the Legislative-Citizen Commission on Minnesota Resources (LCCMR) has selected 89 projects totaling \$46.3 million to recommend to the 2016 Minnesota Legislature for funding from the Environment and Natural Resources Trust Fund (ENRTF). The recommendations are the result of the LCCMR's 2016 Request for Proposal (RFP) process, in which 186 proposals requesting a total of approximately \$131 million were received and considered through a competitive, multi-stage evaluation. The recommendations range from full funding for the full proposal and dollar amount requested to partial funding for specific proposal elements and partial dollar amounts requested.

Topic Area	\$ Recommended (\$46,337,000)	Percentage of Total Recommendation
Subd. 03 Foundational Natural Resource Data and Information 18 Appropriations	\$8,328,000	17.97%
Subd. 04 Water Resources 25 Appropriations	\$8,349,000	18.02%
Subd. 05 Environmental Education 11 Appropriations	\$2,562,000	5.53%
Subd. 06 Aquatic and Terrestrial Invasive Species 7 Appropriations	\$5,860,000	12.65%
Subd. 07 Air Quality, Climate Change, and Renewable Energy 8 Appropriations	\$3,889,000	8.39%
Subd. 08 Methods to Protect, Restore, & Enhance Land, Water, & Habitat 9 Appropriations	\$4,515,000	9.74%
Subd. 09 Land Acquisition, Habitat, and Recreation 9 Appropriations	\$12,624,000	27.24%
Subd. 10 Administration 2 Appropriations	\$210,000	0.45%
TOTAL \$ RECOMMENDATION	\$46,337,000	100.00%

Fund Source	\$ Recommended	\$ Remaining for Recommendation
FY 2017 - Environment and Natural Resources Trust Fund (ENRTF)	\$46,337,000	\$0
Total \$ Available =	\$46,337,000	

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Subd.	ENRTF Proposal ID	Title	Total LCCMR \$ Recommended	Organization	Program Manager	Region of Impact*
			ENRTF: FY2017			
Subd. 03 Foundational Natural Resource Data and Information (18 Recommendations - Subtotal = \$8,328,000)						
03a	003-A	Data-Driven Pollinator Conservation Strategies	\$520,000	U of MN	Daniel Cariveau	Central, NW, SW
03b	005-A	Native Bee Surveys in Minnesota Prairie and Forest Habitats	\$600,000	MN DNR	Crystal Boyd	Central, Metro, NW, SE, SW
03c	009-A	Prairie Butterfly Conservation, Research, and Breeding - Phase II	\$421,000 \$329,000	Minnesota Zoological Garden / MN DNR	Erik Runquist / Robert Dana	NW, SW
03d	004-A	Statewide Monitoring Network for Changing Habitats in Minnesota	\$500,000	MN DNR	Bruce Carlson	Statewide
03e	001-A	Completing National Wetland Inventory Update for Minnesota	\$1,500,000	MN DNR	Steve Kloiber	NW
03f	002-A	Minnesota Vegetative Buffer Assessment and Prioritization to Protect Water Quality	\$170,000	U of MN	David Mulla	Statewide
03g	011-A	Assessment Tool for Understanding Vegetation Growth Impacts on Groundwater Recharge	\$212,000	U of MN	Gene-Hua (Crystal) Ng	Statewide
03h	006-A	Sentinel Lakes Monitoring and Data Synthesis – Phase III	\$401,000	MN DNR	Melissa Trembl	NE, NW, SE, SW
03i	012-A	State Spring Inventory for Resource Management and Protection - Phase II	\$370,000	MN DNR	Jim Berg	Statewide
03j	020-A	Enhancing Understanding of Minnesota River Aquatic Ecosystem	\$500,000	MN DNR	Tony Sindt	Central, Metro, SE, SW
03k	016-A	Improving Brook Trout Stream Habitat Through Beaver Management	\$225,000	Minnesota State University - Bemidji	Andrew Hafs	NE
03l	023-A	Evaluate Temperature, Streamflow, and Hydrogeology Impact on Brook Trout Habitat	\$115,000	Minnesota Geological Survey	Bob Tipping	SE
03m	007-A	Restoration of Elk to Northeastern Minnesota	\$300,000	U of MN	James Forester	NE
03n	008-A	Game and Nongame Bird Pesticide Exposure	\$349,000	U of MN	Julia Ponder	Statewide

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03o	013-A	Evaluating Insecticide Exposure Risk for Grassland Wildlife on Public Lands	\$250,000	MN DNR	Nicole Davros	Central, SE, SW
03p	014-A	Development of Innovative Cost-Saving Methodology for Forest Inventory	\$1,000,000	MN DNR	Dennis Kepler	Statewide
03q	026-A	Evaluation of Tree Retention Guidelines Pertaining to Wildlife	\$232,000	U of MN - NRRI	Gerald Niemi	Statewide
03r	015-A	Determine Impacts on Wildlife From Emerald Ash Borer Infection of Black Ash Forests	\$334,000	U of MN - NRRI	Gerald Niemi	Statewide
Foundational Natural Resource Data and Information Subtotal =			\$8,328,000			
Subd. 04 Water Resources (25 Recommendations - Subtotal = \$8,349,000)						
04a	037-B	Tracking and Preventing Algal Blooms	\$500,000	Science Museum of Minnesota	Daniel Engstrom	Statewide
04b	038-B	Assessing the Increasing Harmful Algal Blooms in Minnesota Lakes	\$270,000	U of MN - St. Anthony Falls Laboratory	Miki Hondzo	Statewide
04c	036-B	Restoring Native Mussels in Streams and Lakes	\$600,000	MN DNR	Mike Davis	Statewide
04d	053-B	Assessing Techniques for Eliminating Contaminants to Protect Native Fish and Mussels	\$287,000	University of St Thomas	Kristine Wammer	Statewide
04e	035-B	Assessing Neonicotinoid Insecticide Effects on Aquatic and Soil Communities	\$400,000	U of MN	William Arnold	Statewide
04f	039-B	Bacterial Assessment of Groundwater Supplies Used for Drinking Water	\$299,000	U of MN	Raymond Hozalski	Statewide
04g	049-B	Understanding Bedrock Fracture Flow to Improve Groundwater Quality	\$183,000	U of MN - MN Geological Survey	Anthony Runkel	Metro, SE
04h	050-B	Protection of State's Confined Drinking Water Aquifers - Phase II	\$433,000	US Geological Survey	Jared Trost	Statewide
04i	018-A	Techniques for Water Storage Estimates in Central Minnesota	\$250,000	U of MN	John Nieber	Statewide
04j	047-B	Assessment of Surface Water Quality With Satellite Sensors	\$345,000	U of MN	Jacques Finlay	Statewide

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04k	051-B	Development of Innovative Sensor Technologies for Water Monitoring	\$509,000	U of MN	Tianhong Cui	Statewide
04l	040-B	Wastewater Treatment Process Improvements	\$398,000	U of MN	Timothy LaPara	Statewide
04m	043-B	Membrane-Based Process for Decentralized Drinking Water Production	\$191,000	U of MN	Santiago Romero-Vargas Castrillón	Statewide
04n	060-B	Analyzing Alternative for Muncipal Wastewater Treatment	\$180,000	Minnesota Pollution Control	Scott Kyser	Metro
04o	044-B	Understanding Impacts of Salt Usage on Minnesota Lakes, Rivers, and Groundwater	\$497,000	U of MN	John Gulliver	Statewide
04p	046-B	Microbes for Salt and Metal Removal	\$596,000	U of MN	Daniel Bond	Statewide
04q	054-B	Engineered Biofilter for Sulfate and Metal Removal from Mine Waters	\$440,000	U of MN	Sebastian Behrens	NE
04r	073-B	Developing Biosponge Technology for Removal of Nitrates from Minnesota Waters	\$198,000	U of MN	Lawrence Wackett	Statewide
04s	042-B	Morrison County Performance Drainage and Hydrology Management	\$209,000	Morrison SWCD	Helen McLennan	Central
04t	168-F	Agricultural and Urban Runoff Water Quality Treatment Analysis - Phase II	\$110,000	Blue Earth County Drainage Authority	Craig Austinson	SW
04u	088-B	Surface Water Bacterial Treatment System Pilot Project	\$500,000	Vadnais Lake Area Water Management Organization	Brian Corcoran	Metro
04v	045-B	Assessing Effectiveness of Wetland Restorations for Improved Water Quality	\$420,000	U of MN	Jacques Finlay	Central, NW, SW
04w	070-B	Assessing Climate Change Effects on Release of Mercury and Sulfur into Aquatic Ecosystems	\$300,000	U of MN	Ed Nater	Statewide
04x	083-B	Integrating Targeted Watershed Planning Tools with Citizen Involvement	\$169,000	Minnesota State University - Mankato	Kimberly Musser	Statewide
04y	186-H	Roseau Lake Watershed Targeted Water Quality Improvement	\$65,000	MN DNR	Henry Van Offelen	NW

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Water Resources Subtotal =			\$8,349,000			
Subd. 05 Environmental Education (11 Recommendations - Subtotal = \$2,562,000)						
05a	090-C	Minnesota Conservation Apprentice Academy	\$433,000	Board of Water and Soil Resources	Jenny Gieseke	Statewide
05b	091-C	School Forests Outdoor Classrooms	\$440,000	MN DNR	Amy Kay Kerber	Statewide
05c	092-C	Youth-Led Sustainability Projects in 50 Minnesota Communities – Phase III	\$400,000	Prairie Woods Environmental Learning Center	Shelli-Kae Foster	Statewide
05d	101-C	New Prairie Sportsman Statewide Broadcast Video Project	\$300,000	Pioneer Public Television	Patrick Moore	Statewide
05e	093-C	Workshops and Outreach for Nontoxic Ammunition Alternatives	\$133,000	U of MN	Julia Ponder	Statewide
05f	096-C	Wildlife and Habitat Conservation Education for Southwest Minnesota High Schools	\$147,000	Minnesota Zoo	Carol Strecker	SW
05g	094-C	Standards-Based Dakota Indian Land Stewardship Education	\$197,000	Dakota Wicohan	Darlene St. Clair	Statewide
05h	099-C	Wolf Management Education in the Classroom – Phase II	\$240,000	International Wolf Center	David Kline	Statewide
05i	112-C	Master Water Steward Program Expansion	\$116,000	Freshwater Society	Peggy Knapp	Statewide
05j	105-C	Promoting Water Quality Stewardship through Student Mentoring and River Monitoring	\$39,000	Minnesota State University - Southwest	Emily Deaver	SW
05k	111-C	Analysis of Thermally Modified Wood Nesting Boxes for Birds	\$117,000	U of MN - Duluth NRRRI	Ryan Hueffmeier	Statewide
Environmental Education Subtotal =			\$2,562,000			
Subd. 06 Aquatic and Terrestrial Invasive Species (7 Recommendations - Subtotal = \$5,860,000)						
06a	121-D	Minnesota Invasive Terrestrial Plants and Pests Center - Phase III	\$3,750,000	U of MN	Robert Venette	Statewide
06b	122-D	Developing Membrane Filtration System to Treat Lake Superior Ballast Water	\$151,000	U of MN	Santiago Romero-Vargas Castrillón	NE

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06c	123-D	Advancing Microbial Invasive Species Monitoring from Ballast Discharge	\$368,000	U of MN - Duluth	Randall Hicks	NE
06d	124-D	Biological Control of White Nose Syndrome in Bats - Phase II	\$452,000	U of MN	Christine Salomon	Statewide
06e	128-D	Elimination of Target Invasive Plant Species - Phase II	\$511,000 \$239,000	Minnesota Department of Agriculture / U of MN	Monika Chandler / Angela Gupta	Statewide
06f	131-D	Dutch Elm Disease Resistance - Phase II	\$200,000	U of MN	Robert Blanchette	Statewide
06g	134-D	Invasive Carp Management Research in Lake Nokomis Subwatershed	\$189,000	Minneapolis Park and Recreation Board	Adam Arvidson	Metro
Aquatic and Terrestrial Invasive Species Subtotal =			\$5,860,000			
Subd. 07 Air Quality, Climate Change, and Renewable Energy (8 Recommendations - Subtotal = \$3,889,000)						
07a	140-E	Solar Cells Manufacturing Research	\$388,000	U of MN	Tianhong Cui	Statewide
07b	153-E	Community Solar Garden Installation	\$490,000	Rural Renewable Energy Alliance	BJ Allen	Central
07c	135-E	High-Resolution Climate Projections to Aid Local Planning and Implementation Efforts	\$411,000	U of MN	Peter Snyder	Statewide
07d	144-E	Geotargeted Distributed Clean Energy Initiative	\$800,000	Center for Energy and Environment	Carl Nelson	Statewide
07e	151-E	Waste Heat Recovery with Efficient Thermoelectric Energy Generators	\$400,000	U of MN	Uwe Kortshagen	Metro
07f	141-E	Hydrogen Fuel from Wind-Produced Renewable Ammonia	\$400,000	U of MN	William Northrop	Metro, NW
07g	148-E	Utilization of Dairy Farm Wastewater for Sustainable Production	\$500,000	U of MN	Bradley Heins	Statewide
07h	149-E	Solar Energy Utilization for Minnesota Swine Farms – Phase II	\$500,000	U of MN - West Central Research and Outreach Center	Lee Johnston	Central, NW, SE, SW
Air Quality, Climate Change, and Renewable Energy			\$3,889,000			
Subd. 08 Methods to Protect, Restore, and Enhance Land, Water, and Habitat (9 Recommendations - Subtotal = \$4,515,000)						

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08a	155-F	Bee Pollinator Habitat Enhancement - Phase II	\$387,000	U of MN	Marla Spivak	Statewide
08b	162-F	Measuring Pollen and Seed Dispersal for Prairie Fragment Connectivity	\$556,000	U of MN	Lauren Sullivan	NW
08c	154-F	Establishment of Permanent Habitat Strips Within Row Crops	\$179,000	Science Museum of Minnesota	Shawn Schottler	Statewide
08d	019-A	Evaluate Prescribed Burning Techniques to Improve Habitat Management for Brushland Species	\$267,000	U of MN	Rebecca Montgomery	NE
08e	159-F	Controlling Reed Canary Grass to Regenerate Floodplain Forest	\$218,000	Minnesota State Office of National Audubon Society	Tim Schlagenhaft	SE
08f	165-F	Forest Management for Mississippi River Drinking Water Protection	\$300,000	Crow Wing SWCD	Melissa Barrick	Central
08g	166-F	Upland, Wetland, and Shoreline Restoration in Greater Metropolitan Area	\$509,000	Great River Greening	Wiley Buck	Metro
08h	169-F	Bluffland Restoration and Monitoring in Winona	\$99,000	Winona State University	Neal Mundahl	SE
08i	173-F	Champlin Mill Pond Shoreland Restoration	\$2,000,000	City of Champlin	Todd Tuominen	Metro
Methods to Protect, Restore, and Enhance Land, Water, and Habitat Subtotal =			\$4,515,000			
Subd. 09 Land Acquisition, Habitat, and Recreation (9 Recommendations - Subtotal = \$12,624,000)						
09a	174-G	State Parks and Trails Land Acquisitions	\$2,445,000	MN DNR	Jennifer Christie	Statewide
09b	175-G	Scientific and Natural Area Acquisition and Restoration	\$4,000,000	MN DNR	Peggy Booth	Statewide
09c	179-G	Minnesota Point Pine Forest Scientific and Natural Area Acquisition	\$500,000	MN DNR	Peggy Booth	NE
09d	177-G	Conservation Easements in Avon Hills - Phase III	\$1,300,000	Saint Johns Arboretum and University	Thomas Kroll	Central

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09e	180-G	Wilder Forest Acquisition	\$500,000	Washington County / Minnesota Food Association	TBD / Hilary Otey Wold	Metro
09f	181-G	Lincoln Pipestone Rural Water System Acquisition for Well Head Protection	\$1,500,000	Lincoln Pipestone Rural Water System	Jason Overby	SW
09g	178-G	Mesabi Trail Segment from Highway 135 to Town of Embarrass	\$1,200,000	St. Louis & Lake Counties Regional Railroad Authority	Bob Manzoline	NE
09h	183-G	Tower Historic Harbor Trail Connections	\$679,000	City of Tower	Linda Keith	NE
09i	182-G	Otter Tail River Recreational Trail Acquisition	\$500,000	City of Fergus Falls	Gordon Hydukovich	Central
Land Acquisition for Habitat and Recreation Subtotal =			\$12,624,000			
Subd. 10 Administration (2 Recommendations - Subtotal = \$210,000)						
10a	185-H	Contract Agreement Reimbursement	\$135,000	MN DNR	Jason Tidemann	Statewide
10b	n/a	Grants Management System	\$75,000	LCCMR	Susan Thornton	Statewide
Other Subtotal =			\$210,000			
Total \$ Recommended =			\$46,337,000			

* Region of Impact designated in the State include Statewide, Central, Metro, NE, NW, SE, SW. Metro region includes the 11 counties of Anoka, Carver, Chisago, Dakota, Hennepin, Isanti, Ramsey, Scott, Sherburne, Washington, and Wright.