

Line #	Subd. #	Title	Program Manager	Affiliation	Total Appropriated Trust Fund \$	FY17 Trust Fund \$ (\$8,428,000)	FY18 Trust Fund \$ (\$50,728,000)	FY19 Trust Fund \$ (\$5,089,000)	State Classified Staff	Fee Title Acquisition	Easement	Capital Expenditures over \$5,000	Research: Peer-reviewed	Specific work plan approval, notes and contingencies
1	A. Appropriations with no changes from LCCMR recommendation - Appropriations With No Changes													
2	03b	Assessment of Public Benefits of Protecting Source Water	Bonnie Keeler	U of MN	\$ 320,000	\$ -	\$ 320,000							
3	03c	Preserving Minnesota Prairie Plant Diversity – Phase II	Ruth Shaw	U of MN	\$ 900,000	\$ -	\$ 900,000						Yes	
4	03d	Minnesota Biological Survey - Continuation	Bruce Carlson	MN DNR	\$ 2,900,000	\$ -	\$ 2,900,000		Yes					- DNR proposed direct and necessary expenses: \$177,414(6% of appropriation) - Approved - Use of classified staff - Needs Approval
5	03e	Minnesota Wildflowers Online Botanical Reference – Phase II	Katy Chayka	MN Wildflowers Information	\$ 270,000	\$ -	\$ 270,000							
6	03f	Assessment of Microbes for Improving Wild Rice Restoration	Chanlan Chun	U of MN - NRRI	\$ 334,000	\$ -	\$ 334,000						Yes	
7	03g	Drainage Records Modernization Cost Share - Phase II	Tim Gillette	Board of Water and Soil Resources	\$ 540,000	\$ -	\$ 540,000		Yes					MnGEO GIS Specialist - Use of classified staff - Needs Approval
8	03h	Groundwater Contamination Mapping	Hans Neve	Minnesota Pollution Control Agency	\$ 400,000	\$ -	\$ 400,000							
9	03i	Landslide Susceptibility, Mapping, and Management Tools	Karen Gran	U of MN	\$ 500,000	\$ -	\$ 500,000							\$50,903 North Dakota State university and \$6,674 University of Wisconsin-Superior for Personnel
10	03j	Moose Calf Surveys and Monitoring	Mark Ditmer	U of MN	\$ 348,000	\$ -	\$ 348,000					Yes		- Capital expenditures over \$5,000: \$13,870 for 1 fixed wing UAV w/flight training; and \$13,892 for computer supplies and ground materials for engineering work
11	03k	Cedar Creek Natural Area Wolf Recolonization Assessment	Forest Isbell	U of MN	\$ 398,000	\$ -	\$ 398,000						Yes	
12	03l	Effects of Wolf Predation on Beaver, Moose, and Deer	Steve Windels	Voyageurs National Park	\$ 293,000	\$ -	\$ 293,000						Yes	
13	03m	Mapping Taxonomy and Environmental Toxicology of Minnesota Freshwater Sponges	Venugopal Mukku	U of MN	\$ 258,000	\$ -	\$ 258,000					Yes	Yes	- Capital expenditures over \$5,000: \$10,000 for Lyophilizer (Freeze dryer from Fisher Scientific-Labconco-7752040) needed to remove water from sponges in order to analyze tissue matter
14	04a	Assessment of Household Chemicals and Herbicides in Rivers and Lakes	William Arnold	U of MN	\$ 236,000	\$ -	\$ 236,000						Yes	
15	04b	Wastewater Nitrogen Removal Technology to Protect Water Quality	Paige Novak	U of MN	\$ 450,000	\$ -	\$ 450,000						Yes	
16	04c	Rearing Native Mussels for Reintroduction and Expanding Water Quality Awareness	Allan Maguire	Minnesota Zoological Garden	\$ 591,000	\$ -	\$ 591,000		Yes			Yes		- Capital expenditures over \$5,000: \$130,000 for Mussel research and rearing facility - Use of classified staff - Needs Approval
17	04d	Water Quality Monitoring in Southeastern Minnesota Trout Streams	Neal Mundahl	Winona State University	\$ 500,000	\$ -	\$ 500,000					Yes		- Capital expenditures over \$5,000: \$120,000 for water quality/weather monitoring/sampling stations (6 stations @ \$20,000 each - competitive bid to select vendor); and \$9,780 for backpack electrofishing combo
18	04e	Reassessing Toxicity of Petroleum Spills on Groundwater and Surface Water	Dalma Martinovic-Weigelt	St. Thomas University	\$ 300,000	\$ -	\$ 300,000						Yes	
19	04f	Assessment of Water Quality for Reuse	Satoshi Ishii	U of MN	\$ 148,000	\$ -	\$ 148,000							

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20	04g	Identification of Chemicals of Emerging Concern in Minnesota Fish	Seth Moore	Grand Portage Band of Lake Superior Chippewa	\$ 400,000	\$ -	\$ 400,000						Yes	
21	04h	Techniques for Water Storage Estimates in Central Minnesota	John Nieber	U of MN	\$ 250,000	\$ -	\$ 250,000							
22	04i	Assessing Release of Mercury and Sulfur on Aquatic Communities	Ed Nater	U of MN	\$ 300,000	\$ -	\$ 300,000							Travel to Synchrotron Beamline in Saskatoon, Saskatchewan to analyze solid samples. 3 trips \$3,000 each totaling \$12,000. There are no synchrotron labs in MN.
23	05a	Connecting Youth to Minnesota Waterways through Outdoor Classrooms	Meg Krueger	Wilderness Inquiry	\$ 1,200,000	\$ -	\$ 1,200,000							Liability Insurance \$30,000 per year totaling \$90,000
24	05c	Interactive Water Resource Programs for Planetariums in Minnesota	George Weiblen	U of MN - Bell Museum of Natural History	\$ 500,000	\$ -	\$ 500,000							
25	05d	Expanding Raptor Center Online Education	Julia Ponder	U of MN	\$ 270,000	\$ -	\$ 270,000							
26	05e	Local Planning and Implementation Efforts for Bird Habitat	Joanna Eckles	Audubon Minnesota	\$ 280,000	\$ -	\$ 280,000							
27	05f	Developing Youth Watershed Stewardship in Northwest Minnesota	Susan Joy	Headwaters Science Center	\$ 121,000	\$ -	\$ 121,000							
28	05g	Increasing Residential Environmental Learning Center Opportunities	Bryan Wood	Audubon Center of the North Woods	\$ 130,000	\$ -	\$ 130,000							
29	06b	Emerald Ash Borer Biocontrol - Phase III	Jonathan Osthus	Minnesota Department of Agriculture	\$ 729,000	\$ -	\$ 729,000							
30	06c	Invasive Bighead Carp and Silver Carp and Native Fish Evaluation – Phase II	Bradford Parsons	MN DNR	\$ 500,000	\$ -	\$ 500,000					Yes		DNR proposed direct and necessary expenses: \$25,604 (5% of appropriation) - Needs Approval
31	06d	Adapting Stream Barriers to Remove Common Carp	Przemyslaw Bajer	U of MN - AIS Center	\$ 301,000	\$ -	\$ 301,000							
32	06e	Tactical Invasive Plant Management Plan Development	Monika Chandler	Minnesota Department of Agriculture	\$ 296,000	\$ -	\$ 296,000							
33	06f	Maximize Value of Water Impoundments to Wildlife	Kristin Hall	Audubon Minnesota	\$ 195,000	\$ -	\$ 195,000							
34		Solar Cells Manufacturing Research	Tianhong Cui	U of MN	\$ -	\$ -	\$ -						Yes	
35	07a	Extraction of Solar Thermal Energy in Minnesota	Filippo Coletti	U of MN	\$ 250,000	\$ -	\$ 250,000					Yes	Yes	
36	07b	Assessment of Urban Air Pollution	Monika Vadali	Minnesota Pollution Control Agency	\$ 700,000	\$ -	\$ 700,000					Yes		- Capital expenditures over \$5,000: \$462,500 for 50x air pollution monitors with rechargeable battery or DC power supply (exact model TBD by competitive bid) (~\$9250 for each monitor)
37	07c	Generation, Storage, and Utilization of Solar Energy	Bradley Heins	U of MN - West Central Research and Outreach Center in Morris	\$ 500,000	\$ -	\$ 500,000					Yes		- Capital expenditures over \$5,000: \$130,000 for 30 kW solar photovoltaic (electric) system (\$100,000) and 100% Electric ATV (Polaris or equivalent) 48 Volt AC electric drivetrain, 2 units (\$30,000)

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38	07d	District Heating with Renewable Biomass at Camp Ripley Training Center	Josh Pennington	Department of Military Affairs	\$ 1,000,000	\$ -	\$ 1,000,000					Yes		- Capital expenditures over \$5,000: Biomass Boiler and labor estimated \$506,250 Boiler Room piping and pumps estimated \$60,000 -Match Requirement: This appropriation must be matched by at least \$900,000 of nonstate money and must be committed by December 31, 2017.
39	07e	Geotargeted Distributed Clean Energy Initiative	Carl Nelson	Center for Energy and Environment	\$ 800,000	\$ -	\$ 800,000							-Match Requirement: \$200,000 is to conduct pilot programs using energy efficiency and other distributed energy resources to achieve forecasted electric energy loads in communities. The appropriation for pilot programs is contingent on a \$200,000 match of an equal or greater amount of nonstate money
40	08a	Optimizing the Nutrition of Roadside Plants for Pollinators	Emilie Snell-Rood	U of MN	\$ 815,000	\$ -	\$ 815,000						Yes	
41	08b	Promoting Conservation Biocontrol of Beneficial Insects	Vera Krischik	U of MN	\$ 400,000	\$ -	\$ 400,000						Yes	
42	08c	Evaluating the Use of Bison to Restore and Preserve Savanna Habitat	David Tilman	Cedar Creek Ecosystem Science Reserve	\$ 388,000	\$ -	\$ 388,000					?	Yes	Perimeter and Interior fencing \$86,000
43	08d	State Park Pollinator Habitat Restoration	Edward Quinn	MN DNR	\$ 672,000	\$ -	\$ 672,000		Yes					DNR proposed direct and necessary expenses: \$22,159 (3.2% of appropriation) - Needs Approval
44	08e	Enhancing Spawning Habitat Restoration in Minnesota Lakes	William Herb	U of MN - St. Anthony Falls Laboratory	\$ 294,000	\$ -	\$ 294,000						Yes	
45	08f	Prescribed Fire Management for Roadside Prairies	Ken Graeve	Minnesota Department of Transportation	\$ 345,000	\$ -	\$ 345,000							
46	08g	Minnesota Bee and Beneficial Species Habitat Restoration	Steven Burdick	Pheasants Forever Inc	\$ 732,000	\$ -	\$ 732,000							
47	08h	Mississippi and Vermillion River Restoration of Prairie, Savanna, and Forest Habitat - Phase Ten	Tom Lewanski	Friends of the Mississippi River	\$ 213,000	\$ -	\$ 213,000							- Contingent on ML 2015 appropriation expended or a plan to transition to ML 2017 appropriation is approved by LCCMR staff
48	08i	Community Stewardship to Restore Urban Natural Resources - Phase Ten	Wiley Buck	Great River Greening	\$ 524,000	\$ -	\$ 524,000							- Contingent on ML2015 and ML 2016 appropriation expended or a plan to transition to ML 2017 appropriation is approved by LCCMR staff
49	08j	Economic Assessment of Precision Conservation and Agriculture	Tanner Bruse	Pheasants Forever Inc	\$ 400,000	\$ -	\$ 400,000							
50	08k	Conservation Reserve Enhancement Program (CREP) Outreach and Implementation	Tabor Hoek	Board of Water and Soil Resources	\$ 6,000,000	\$ -	\$ 6,000,000							
51	09a	Metropolitan Regional Parks System Land Acquisition	Deborah Streets Jensen	Metropolitan Council	\$ 1,500,000	\$ -	\$ 1,500,000			Yes				-Match Requirement- Requires minimum 40% match of funds from other sources.
52	09c	Minnesota State Parks and State Trails Land Acquisition	Jennifer Christie	MN DNR	\$ 1,500,000	\$ -	\$ 1,500,000			Yes				- There are no direct and necessary expenses listed in work plan

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53	09d	Minnesota State Trails Acquisition, Development and Enhancement	Kent Skaar	MN DNR	\$ 1,038,000	\$ 999,000	\$ 39,000					Yes		DNR proposed direct and necessary expenses: \$16,723 (1.6% of appropriation) - Needs Approval
54	09f	Leech Lake Acquisition	Levi Brown	Leech Lake Division of Resource Management	\$ 1,500,000	\$ -	\$ 1,500,000			Yes				The land must be open to public use including hunting and fishing. The band must provide a commitment that land will not be put in a federal trust through the Bureau of Indian Affairs.
55	09g	Mesabi Trail Development	Bob Manzoline	St. Louis & Lake Counties Regional Railroad Authority	\$ 2,269,000	\$ -	\$ 2,269,000					Yes		\$1,929,000 Trail, Bridge, and facility construction
56	09h	Tower Trailhead Boat Landing and Habitat Improvement – Phase II	Linda Keith	City of Tower	\$ 600,000	\$ -	\$ 600,000							
57	09i	Land Acquisition for Voyageurs National Park Crane Lake Visitors Center	Jim Janssen	Town of Crane Lake	\$ 950,000	\$ -	\$ 950,000			Yes				
58	10a	Contract Agreement Reimbursement	Katherine Sherman-Hoehn	MN DNR	\$ 135,000	\$ -	\$ 135,000		Yes					- Use of classified staff - Needs Approval
59	10b	Legislative-Citizen Commission on Minnesota Resources (LCCMR) Administration	Susan Thornton	Legislative-Citizen Commission on Minnesota Resources	\$ 1,200,000	\$ -	\$ 1,200,000							
60	10c	LCC Website		Legislative Coordinating Commission	\$ 5,000		\$ 5,000							No work plan this - statutory requirement
61				Subtotal	\$ 39,888,000	\$ 999,000	\$ 38,889,000	\$ -						
62	B. Appropriations needing LCCMR review prior to approval due to various factors													
63	06a	Aquatic Invasive Species Research Center - Phase II	Nicholas Phelps	U of MN - AIS Center	\$ 2,700,000	\$ 2,700,000	\$ -					Yes		- Capital expenditures over \$5,000: estimated \$7,500 for Electrofishing backpack - Approve overall work plan contingent on MAISRC staff working with LCCMR staff to break-out individual research efforts into more detailed sub-work plans for submission and staff approval once individual efforts ready to get underway.
64				Subtotal	\$ 2,700,000	\$ 2,700,000	\$ -	\$ -						

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65	C. Appropriations needing LCCMR review due to Legislative changes from LCCMR recommendation - Appropriations Reduced By Legislature													
66	03a	County Geologic Atlases - Continuation	Dale Setterholm	U of MN - MN Geological Survey	\$ 2,000,000	\$ 2,000,000	\$ -					Yes		Reduced by \$2,729,000 from \$4,729,000 Capital Expenditures over \$5,000 -\$34,000 Dedicated transport for geophysical logging
67	05b	Increasing Diversity in Environmental Careers (NOT READY)	Denise Legato	MN DNR	\$ 487,000	\$ -	\$ 487,000		Yes					No work plan received yet Reduced by \$1,000,000 from \$1,487,000 DNR proposed direct and necessary expenses: Unknown
68	09b	Scientific and Natural Areas Acquisition, Restoration, Citizen Science and Engagement	Peggy Booth	MN DNR	\$ 2,500,000	\$ -	\$ 2,500,000		Yes	Yes				Reduced by \$2,000,000 from \$4,500,000 DNR proposed direct and necessary expenses: \$91,166 (4.5% of appropriation) - Needs Approval - Use of classified staff - Needs Approval
69	09e	Native Prairie Stewardship and Prairie Bank Easement Acquisition	Judy Schulte	MN DNR	\$ 2,675,000	\$ -	\$ 2,675,000		Yes		Yes			Reduced by \$875,000 from \$3,500,000 - DNR proposed direct and necessary expenses: \$92,935 (3.4% of appropriation) - Needs Approval - Use of classified staff - Needs Approval
70				Subtotal	\$ 7,662,000	\$ 2,000,000	\$ 5,662,000	\$ -						
71	D. Appropriations needing LCCMR review prior to approval due to being added by Legislature - No Work Plan Received													
72	03n	Pollinator Research and Outreach		U of MN	\$ 500,000		\$ 411,000	\$ 89,000						No work plan received yet
73	08l	CREP Easement and Acquisition		Board of Water and Soil Resources	\$ 13,500,000	\$ 2,729,000	\$ 5,771,000	\$ 5,000,000			Yes			No work plan received yet
74				Subtotal	\$ 14,000,000	\$ 2,729,000	\$ 6,182,000	\$ 5,089,000						
75				TOTAL	\$ 64,250,000	\$ 8,428,000	\$ 50,733,000	\$ 5,089,000						