

Line #	Subd.	Proposal ID	Title	Organization	Project Manager	FY2019 Trust Fund \$	FY2020 Trust Fund \$	State Classified Staff	Fee Title Acquisition	Easement	Capital Expenditures over \$5,000	Research: Peer-reviewed	Specific work plan approval, notes and contingencies	DNR: Direct or Pass-Thru	Approved by LCCMR?
1	A. Consent Agenda - work plans with no significant changes from LCCMR recommendation														
2	03a	001-A	Minnesota Biological Survey	MN DNR	Bruce Carlson		\$ 1,500,000	Yes					-DNR direct and necessary expenses \$90,724 (6% of appropriation)	Direct	6/5/2019
3	03b	003-A	Restoring Native Mussels in Streams and Lakes	MN DNR	Mike Davis		\$ 500,000	Yes					-DNR direct and necessary expenses \$41,533 (8.3% of appropriation) - use of classified staff - justified	Direct	6/5/2019
4	03c	005-A	Quantifying Exposure of Minnesota's Raptors to Mercury and PFAS	Hawk Ridge Bird Observatory	Matthew Etterson		\$ 250,000					Yes		Pass-Thru	6/5/2019
5	03d	014-A	Minnesota Trumpeter Swan Migration Ecology and Conservation	U of MN	David Andersen		\$ 300,000					Yes			6/5/2019
6	03e	016-A	Spruce Grouse as Indicators for Boreal Forest Connectivity	U of MN - Raptor Center	Julia Ponder		\$ 350,000					Yes			6/5/2019
7	03f	018-A	Understanding Brainworm Transmission to Find Solutions for Minnesota Moose Decline	U of MN	Tiffany Wolf		\$ 400,000					Yes	-Out of state travel expenses		6/5/2019
8	03g	025-A	Mapping Habitat Use and Disease of Urban Carnivores	U of MN	Nicholas McCann		\$ 500,000					Yes			6/5/2019
9	03h	027-A	Accelerated Aggregate Resource Mapping	MN DNR	Heather Arends		\$ 700,000	Yes					-DNR direct and necessary expenses \$33,000 (6.8% of appropriation)	Direct	6/5/2019
10	03i	032-AH	Den Boxes for Fishers and Other Nesting Wildlife	U of MN - Duluth NRI	Michael Joyce		\$ 190,000					Yes			6/5/2019
11	03j	034-AH	Red-headed Woodpeckers as Indicators of Oak Savanna Health	U of MN	David Andersen		\$ 171,000					Yes			6/5/2019
12	03k	035-AH	Implementing Conservation Plans for Avian Species of Concern	Audubon Minnesota	Nathaniel Miller		\$ 124,000							Pass-Thru	6/5/2019
13	03l	038-AH	Mapping Aquatic Habitats for Moose	U of MN	Joseph Bump		\$ 199,000				Yes	Yes	-Capital equipment: Sonde \$17k		6/5/2019
14	03m	046-AH	Improving Statewide GIS Data by Restoring the Public Land Survey	Minnesota Association of County Surveyors	Patrick Veraguth		\$ 135,000							Pass-Thru	6/5/2019
15	03n	002-A	County Geologic Atlases - Part A, Mapping Geology	U of MN - MN Geological Survey	Barbara Lusardi		\$ 2,000,000								6/5/2019
16	03o	275-J	County Geologic Atlases - Part B, Mapping Aquifer Hydrology	MN DNR	Paul Putzier		\$ 2,400,000	Yes					-DNR Direct and necessary expenses \$115,174 (4.7% of appropriation) - use of classified staff - justified	Direct	6/5/2019
17	03p	274-J	Unlocking the Science of Minnesota's Moose Decline	Minnesota Zoological Garden	Nicole Mattson		\$ 199,000	Yes					-use of classified staff - justified		6/5/2019
18	04a	048-B	Determining the Influence of Insecticides on Algal Blooms	U of MN	William Arnold		\$ 350,000					Yes			6/5/2019
19	04b	049-B	Benign Design: Environmental Studies Leading to Sustainable Pharmaceuticals	U of MN	William Arnold		\$ 415,000					Yes			6/5/2019
20	04c	050-B	Wastewater Nutrient Reduction through Industrial Source Reduction Assistance	U of MN	Laura Babcock		\$ 200,000								6/5/2019
21	04d	051-B	Quantifying Microplastics in Minnesota's Inland Lakes	U of MN - Duluth	Kathryn Schreiner		\$ 200,000					Yes			6/5/2019
22	04e	052-B	Improving Nitrogen Removal in Greater Minnesota Wastewater Treatment Ponds	U of MN	Paige Novak		\$ 325,000					Yes			6/5/2019
23	04f	054-B	Improving Drinking Water for Minnesotans through Pollution Prevention	U of MN	Raymond Hozalski		\$ 345,000					Yes			6/5/2019
24	04g	055-B	Protecting Minnesota Waters by Removing Contaminants from Wastewater	U of MN	Matt Simcik		\$ 250,000					Yes			6/5/2019

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25	04h	058-B	Reducing Municipal Wastewater Mercury Pollution to Lake Superior	Minnesota Pollution Control Agency	Scott Kyser		\$ 250,000					Yes			6/5/2019
26	04i	062-B	Extracting Deicing Salt from Roadside Soils with Plants	U of MN	Bo Hu		\$ 360,000					Yes			6/5/2019
27	04j	064-B	Transformation of Plastic Waste into a Valued Resource	U of MN	Brett Barney		\$ 225,000					Yes			6/5/2019
28	04k	072-B	Accelerating Perennial Crop Production to Prevent Nitrate Leaching	Stearns County Soil and Water Conservation District	Dennis Fuchs		\$ 440,000							Pass-Thru	6/5/2019
29	04l	076-B	Farm-Ready Cover Crops for Protecting Water Quality	Central Lakes College - Ag and Energy Ctr	Keith Olander		\$ 741,000					Yes	-land rental fee \$27,000		6/5/2019
30	04m	077-B	Setting Realistic Nitrate Reduction Goals in Southeast Minnesota	U of MN	John Nieber		\$ 350,000					Yes			6/5/2019
31	04n	100-BH	Mapping Unprofitable Cropland for Water and Wildlife	Science Museum of Minnesota - St. Croix Research Station	Jason Ulrich		\$ 100,000					Yes			6/5/2019
32	04o	101-BH	Evaluating Locally-Sourced Materials for Road Salt Reduction	U of MN - Duluth NRRI	Chanlan Chun		\$ 162,000					Yes			6/5/2019
33	04p	102-BH	Minnesota Spring Inventory Final Phase	MN DNR	Paul Putzier		\$ 71,000	Yes					-DNR direct and necessary expenses \$6,724 (9.5% of appropriation)	Direct	6/5/2019
34	04q	106-BH	Restoring Impaired Lakes through Citizen-Aided Carp Management	Carver County Water Management Organization	Andrew Dickhart		\$ 106,000							Pass-Thru	6/5/2019
35	04r	116-BH	Spring Biological Nitrate Removal to Protect Drinking Water	City of Fairmont	Troy Nemmers		\$ 175,000						-Capital expenditures: \$58,000 bioreactor - City staff paid using ENRTF funds	Pass-Thru	6/5/2019
36	04s*	053-B	Degrading Chlorinated Industrial Contaminants with Bacteria	U of MN	Paige Novak		\$ 1,000					Yes	-Includes reallocation of FY16 appropriation of \$149,000 for a total appropriation of \$150,000		6/5/2019
37	05a	122-C	Expanding Camp Sunrise Environmental Program	YouthCARE MN	Lori Arnold		\$ 237,000							Pass-Thru	6/5/2019
38	05b	124-C	Connecting Students to Boundary Waters	Friends of the Boundary Waters Wilderness	Chris Knopf		\$ 450,000							Pass-Thru	6/5/2019
39	05c	143-CH	Mississippi National River and Recreation Area Forest Restoration	Mississippi Park Connection	Mary Hammes		\$ 199,000							Pass-Thru	6/5/2019
40	06b	173-DH	Oak Wilt Suppression at its Northern Edge	Morrison Soil and Water Conservation District	Shannon Wettstein		\$ 100,000							Pass-Thru	6/5/2019
41	07a	176-E	Development of Clean Energy Storage Systems for Farms	U of MN - WCROC	William Northrop		\$ 650,000					Yes	-Capital expenditures: \$141k energy storage systems		6/5/2019
42	07b	186-E	White Earth Nation Community Solar for Economic Resilience	Rural Renewable Energy Alliance	Vicki O'Day		\$ 500,000						-Capital expenditures: \$327k solar array	Pass-Thru	6/5/2019
43	07c	190-EH	Sustainable Solar Energy from Agricultural Plant Byproducts	U of MN - Morris	Ted Pappenfus		\$ 185,000					Yes	Capital expenditures: \$21k ball mills (2 at \$10,590 ea)		6/5/2019
44	07d	196-EH	Morris Energy and Environment Community Resilience Plan	City of Morris	Blaine Hill		\$ 150,000							Pass-Thru	6/5/2019
45	08a	202-F	Saving Endangered Pollinators through Data-Driven Prairie Restoration	Minnesota Zoological Garden	Erik Runquist		\$ 800,000					Yes	-Includes DNR direct and necessary expenses \$11,528 (1.4% of appropriation) -Out of state travel- justified		6/5/2019
46	08b	213-F	Promoting and Restoring Oak Savanna Using Silvopasture	U of MN	Diomy Zamora		\$ 750,000								6/5/2019

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47	08d	232-FH	Conservation and Monitoring of Minnesota's Rare Arctic Plants	U of MN - Duluth	Briana Gross		\$ 135,000					Yes			6/5/2019
48	09a	247-G	Minnesota Scientific and Natural Areas	MN DNR	Judy Schulte		\$ 3,500,000		Yes				-DNR direct and necessary expenses \$113,420 (0.33% of appropriation) - Includes cons. easement stewardship expenses -FeeTitle/Easements: \$1,685,000	Direct	6/5/2019
49	09b	248-G	Grants for Local Parks, Trails, and Natural Areas	MN DNR	Audrey Mularie		\$ 3,000,000							Direct	6/5/2019
50	09c	249-G	Minnesota State Parks and State Trails In-Holdings	MN DNR	Jennifer Christie		\$ 2,000,000		Yes				-Fee Title/Easements: \$1,950,000	Direct	6/5/2019
51	09d	251-G	Minnesota State Trails Development	MN DNR	Kent Skaar		\$ 5,000,000						-DNR direct and necessary expenses \$50,590 (1.01% of appropriation)	Direct	6/5/2019
52	09f	253-G	Accessible Fishing Piers	MN DNR	Nancy Stewart		\$ 320,000				Yes		-DNR direct and necessary expenses \$11,397 (3.6% of appropriation) -Capital expenditures: \$276k fishing piers @ \$34k each	Direct	6/5/2019
53	09g	254-G	Mesabi Trail Extensions	St. Louis & Lake Counties Regional Railroad Authority	Bob Manzoline		\$ 3,000,000			Yes			-Fee Title/Easements: \$60,000 -Capitl expenditures: \$2,400,000 Trail construction	Pass-Thru	6/5/2019
54	09h	264-G	Birch Lake Recreation Area Campground	City of Babbitt	Cathy Bissonette		\$ 350,000							Pass-Thru	6/5/2019
55	09j	257-G	Preserving the Avon Hills with Reverse-Bidding Easements	Saint Johns Arboretum and University	John Geissler		\$ 1,600,000			Yes			-Includes cons. easement stewardship expenses \$168,000 -Fee Title/Easements: \$720,000	Pass-Thru	6/5/2019
56	09k	265-G	Bailey Lake Trail and Fishing Pier	City of Virginia	Britt See-Benes		\$ 550,000				Yes		-Capital Expenditures: \$457,000 dock, electrical conduit, lighting, and construction	Pass-Thru	6/5/2019
57	09l	266-G	Vergas Long Lake Trail	City of Vergas	Julie Lammers		\$ 290,000				Yes		-Capital Expenditures: \$290,000 boardwalk construction	Pass-Thru	6/5/2019
58	09m	269-G	Glacial Edge Trail and Downtown Pedestrian Bridge	City of Fergus Falls	Ryan Miller		\$ 600,000			Yes	Yes		-Capital Expenditures: \$463,900 Trail and bridge construction - Fee Title/Easements: \$20,850	Pass-Thru	6/5/2019
59	09n	271-G	Crane Lake to Vermilion Falls Trail	Voyageur Country ATV	Bruce Beste		\$ 400,000				Yes		-Capital Expenditures: \$400,000 elevated boardwalk construction	Pass-Thru	6/5/2019
60	09o	272-GH	Restoring Five Sections of the Superior Hiking Trail	Superior Hiking Trail Association	Denny Caneff		\$ 191,000				Yes		-Capital Expenditures: \$121,000 trail building	Pass-Thru	6/5/2019
61	10a	273-I	Contract Agreement Reimbursement	MN DNR	Katherine Sherman-Hoehn		\$ 135,000							Direct	6/5/2019
62	10b	---	LCCMR Administration	Legislative-Citizen Commission on Minnesota Resources	Becca Nash		\$ 1,400,000								N/A
63	10c	---	LCC Administration	Legislative Coordinating Commission	Sally Olson		\$ 3,000								N/A
64	10d	---	Grants Management System	Legislative-Citizen Commission on Minnesota Resources	Becca Nash	\$ 330,000							No work plan needed		N/A
65	B. Non Consent - work plans needing LCCMR review prior to approval due to various factors														
66	B1. Changes to proposed work plan														

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67	08c	225-F	Sauk River Dam Removal and Rock Rapids Replacement	City of Melrose	Tessa Beuning		\$ 2,768,000				Yes		Project potentially inconsistent with appropriation language	Pass-Thru	pending
68	09e	252-G	National Loon Center	National Loon Center Foundation	Leah Heggerston		\$ 4,000,000				Yes		-\$4m capital expenditures -Revenue reinvestment -Requirements: *Fiscal agent *>25-year Lease w/ USACE *\$6m match *LCCMR approval of naming rights plan for private fundraising	Pass-Thru	6/5/2019
69	B2. Legislative changes from LCCMR recommendation														
70	06a	160-D	Building Knowledge and Capacity to Solve AIS Problems	U of MN - MAISRC	Nicholas Phelps		\$ 4,000,000				Yes	LCCMR delegates per agreement with MAISRC	-Legislative increase \$1m -Activity #3 changed from \$500k to \$925k due to correction of error in initial proposal -Discussion needed with MAISRC re: operations costs once M.L. 2013 ("Develop a Center") concludes -Capital expenditures- TBD -Approve overall work plan contingent on MAISRC staff working with LCCMR staff to break-out individual research efforts for staff approval once individual efforts ready to get underway.		6/17/2019
71	09i	256-G	Britton Peak to Lutsen Mountain Bike Trail	Superior Cycling Association	Tim Kennedy		\$ 350,000						-Legislative increase \$50k	Pass-Thru	6/17/2019
72	B3. Legislative additions - defer to later date														
73	03q	---	Forest and Bioeconomy Research	U of MN - Duluth NRRI	Rolf Weberg		\$ 2,200,000					No per legis. addition	- 1 appropriation with 4 subprojects - Single Source Contract with Project Partner Syngas Technologies LLC - justified		pending
74	03r	---	Minerals and Water Research	MN DNR	Rolf Weberg		\$ 883,000					No per legis. addition	- 1 appropriation with 4 subprojects - PTS contracts (2) may require bid waiver following UMN procedure - Connection of Subproject #3 to ENRTF purpose unclear		pending
75	03s	007-A	Native Bee Survey	MN DNR	Jessica Peterson		\$ 600,000						-DNR direct and necessary expenses \$42,292 (7.0% of appropriation)	Direct	6/17/2019

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76	03t	---	Diagnostic Test for Chronic Wasting Disease	U of MN	Peter Larsen	\$ 1,804,000					Yes	No per legis. addition	-Capital Expenditures: -80 freezer for RNA sample storage- \$15k -80 freezer for cervid tissue storage- \$15k -BMG Labtech Omega Microplate Reader (RT-QuIC analyses; Veterinary Diagnostic Lab)- \$30k -BioRad CFX384 RT-PCR machine- \$35k -MIC qPCR instrument; field deployable- \$18k -Implen NanoPhotometer for protein quantification- \$17k -Allegra x-30R Beckman Coulter Refrigerated Centrifuge- \$20k -BioRad ChemiDoc MP Imaging System (western blot analyses and imaging)- \$38k -Agilent Bioanalyzer 2100 - \$18k		6/17/2019	
77	04t	---	Managed Aquifer Recharge	U of MN - Water Resources Center	John Bilotta	\$ -	\$ 350,000									6/17/2019
78	05d	123-C	Increasing Diversity in Environmental Careers	MN DNR	Mimi Daniel	\$ -	\$ 250,000						-Does NOT include DNR Direct and necessary	Direct	6/17/2019	
79	06c	---	Noxious Weed Detection and Eradication	Minnesota Department of Agriculture	Mark Abrahamson	\$ -	\$ 1,000,000						- Includes \$650k grants to local govt units - Single-source contract- justified		6/17/2019	
80	06d	---	Emerald Ash Borer Response Grants	MN DNR	Valerie McClannahan	\$ -	\$ 300,000						- Includes \$300k grants to local govt units -Does NOT include DNR Direct and necessary	Direct	6/17/2019	
81	08e	178-F	Nongame Wildlife Program Acceleration	MN DNR	Cynthia Osmundson	\$ -	\$ 513,000						-DNR Direct and necessary expense \$27,200 (5.3% of ENRTF request)	Direct	6/17/2019	
82	08f	---	Lawns to Legumes	BWSR	Dan Shaw	\$ 806,000	\$ 94,000						-Requesting one-year legislative extension		pending	
83	08g		Agricultural Weed Control Using Autonomous Mowers	U of MN - Morris	Eric Buchanan	\$ -	\$ 900,000				Yes		-Capital Expenditures: Weed hunter robot platform vehicle- \$130k, Rover robotics 4WD package- \$13,380 -Computer services fee- justified		6/17/2019	
84	09p	262-G	Rainy Lake Recreational Access and Boat Wash Station	City of Ranier	Sherril Gautreaux	\$ -	\$ 200,000				Yes		-Capital expenditures: \$119,325 parking lot, \$31,175 AIS boat wash station, \$10,500 kiosk, utilities, and landscaping	Pass-Thru	6/17/2019	
85	09q	---	Historic Bruce Mine Park and Mesabi Trailhead	St. Louis & Lake Counties Regional Railroad Authority	Bob Manzoline	\$ -	\$ 1,000,000				Yes		-Requires an environmental assessment to evaluate negative environmental impacts and potential cultural disturbance. -Capital expenditures: \$615k demo and grading, \$50k buildings and structures; \$90k electrical systems	Pass-Thru	6/17/2019	
86	11a	---	Water Infrastructure Loans	Public Facilities Authority	Jeff Freeman	\$ -	\$ -						No work plan needed		N/A	
87	B4. Work plan not ready for approval - defer to later date															
88	11b	---	Optimization Local Mechanical and Pond Wastewater-Treatment Plants	Minnesota Pollution Control Agency	Joel Peck		\$ 500,000				Yes		-Capital Expenditures: \$50k vehicle for Minnesota Rural Waters Association provided this is demonstrated by MPCA to be cost effective compared to other options and repayment commitment is added to work plan.		6/17/2019	
* Subd. 4s has a reallocation of \$149,000 from FY2016 appropriation																