



## LEGISLATIVE-CITIZEN COMMISSION ON MINNESOTA RESOURCES

100 REV. DR. MARTIN LUTHER KING JR. BLVD.

ROOM 65 STATE OFFICE BUILDING

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Michael McDonough, Interim Director

### MINUTES

**Tuesday, September 26, 2017**

**8:30 a.m. – 4:00 p.m.**

**State Office Building, Room 5**

**St. Paul, MN 55155**

**Members Present:** Jeff Broberg, Sen. Gary Dahms, Sen. Kari Dziedzic, William, Faber, Nancy Gibson, Rep. Josh Heintzeman, Sen. Bill Ingebrigtsen, Nicole Kessler, Gary Lamppa, Rep. Jim Newberger, Sen. David Tomassoni, Rep. Jean Wagenius, Sen. Torrey Westrom, Della Young

**Staff Present:** M. McDonough, M. Varien, D. Griffith

**Members Excused:** Rep. Rob Ecklund, Rep. Joe Hoppe, Norman Moody

**Co-Chair: Sen. Bill Ingebrigtsen**

Co-Chair Ingebrigtsen convened the meeting at 8:36 a.m.

**1. Approve the minutes for September 13, 2017**

MOTION: Commissioner Gibson moved to approve the minutes for September 13, 2017 – motion prevailed.

**2. Members report potential conflicts of interest regarding today's business**

MS 116P.09 Subd 6 Conflict of interest. A commission member, technical advisory committee member, a peer review panelist, or an employee of the commission may not participate in or vote on a decision of the commission, technical advisory committee, or peer review panel relating to an organization in which the member, panelist, or employee has either a direct or indirect personal financial interest. While serving on the commission, technical advisory committee, or peer review panel, or being an employee of the commission, a person shall avoid any potential conflict of interest.

Members reported no conflict of interests for today's meeting.

**3. LCCMR Business Meeting/Process and Issue Discussion**

Michael McDonough explained the email handed out from Celi Haga (BWSR) in response to member's questions from the LCCMR meeting on September 13, 2017 regarding Minnesota Conservation Reserve Enhancement Program (CREP). (See Attachment #1)

Staff handed out the spreadsheet titled "LCCMR Presentation Schedule – 2018 Proposals". (See Attachment #2)

**4. Environment and Natural Resources Trust Fund 2018 Proposal Presentations (FY19) – see attached schedule (subject to change)**

See Attachment #3 for Presentation Schedule for September 26, 2017.

Members recessed at 12:20 p.m. and reconvened at 1:15 p.m.

Jeff Broberg, Sen. Gary Dahms, Sen. Kari Dziedzic, Rep. Rob Ecklund, William Faber, Nancy Gibson, Rep. Josh Heintzeman, Rep. Joe Hoppe, Sen. Bill Ingebrigtsen, Nicole Kessler, Gary Lamppa, Norman Moody, Rep. Jim Newberger, Sen. David Tomassoni, Rep. Jean Wagenius, Sen. Torrey Westrom, Della Young

## **LEGISLATIVE-CITIZEN COMMISSION ON MINNESOTA RESOURCES**

5. **Continue Environment and Natural Resources Trust Fund 2018 Proposal Presentations (FY19) – see attached schedule (subject to change)**

See Attachment #3 for Presentation Schedule for September 26, 2017.

6. **Other business (as needed)**

- Next steps in the process

7. **Adjourn**

Meeting adjourned at 3:00 p.m.

**Diana Griffith**

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**From:** Haga, Celi (BWSR) <celi.haga@state.mn.us>  
**Sent:** Monday, September 25, 2017 3:38 PM  
**To:** Michael McDonough  
**Cc:** Michael Varien; Diana Griffith; Jaschke, John (BWSR); BeckerKudelka, Angie (BWSR); Rickert, Dave (BWSR); Penning, Bill (BWSR)  
**Subject:** BWSR LCCMR follow-up

Michael:

Following up on the last LCCMR meeting and questions about the MN CREP, here are answers:

**CREP Sign-up**

- Sign-up began in late May and through August 15, BWSR has received 60 applications representing 1,500 acres of permanently protected environmentally sensitive land. BWSR staff are pleased with progress to date and look forward to increasing landowner outreach thanks to support from the LCCMR.

**CREP Comparisons**

- The focus of the MN CREP is water quality and habitat on the 54-county area in Southern and Western Minnesota. Each CREP is unrelated to previous ones, as each one requires a stand-alone and detailed proposal and negotiation process with the federal government. The previous CREPs also were stand-alone efforts and those focused on habitat.

**CREP funding**

- BWSR currently has \$116.291 million in appropriated funding for MN CREP, from the Clean Water Fund, Outdoor Heritage Fund, LCCMR, and bonding. Given the uncertainty of federal funding, and that federal funds aren't allocated without matching state funds, the state match remains an important appropriations goal.

**Wellhead easements**

- The MN CREP will protect 60,000 acres of environmentally sensitive land, 3,000 – 5,000 of which are estimated to be wellhead protection acres. There is flexibility built into the agreement in terms of acres per practice, so BWSR will continue to reassess and if demand for wellhead easement increases those numbers can be adjusted upward.
- Wellhead easements have identical restrictions to other conservation easements we acquire. In general, the State's easements for this program do not allow structures to be placed on an easement area (which would include solar panels, wind turbines, cabins, etc.).
- BWSR is currently evaluating the wellhead easement program to determine if changes can be made to increase interest in and demand for these easements.

Best,  
Celi

**Celi Haga | Legislative Coordinator**

Minnesota Board of Water and Soil Resources (BWSR)  
123 520 Lafayette Road North  
Saint Paul, MN 55155  
C: 651-315-5082

[Web](#) | [Twitter](#) | [Facebook](#)

LCCMR Presentation Schedule - 2018 Proposals - DAY 1 Tuesday, September 26, 2017 - Co-chair: Sen. Bill Ingebrigtsen Room 5, State Office Building, St. Paul, MN 8:30 AM - 4:00 PM													Day 1					
Time	LCCMR ID	Title / Description	Requested \$	Affiliation Project Manager	Member Notes	Staff Notes	Notes	Ranking										
								+	H	-	+	M	-	+	L	-	No	
								9	8	7	6	5	4	3	2	1	0	
8:30 AM	LCCMR Business Meeting/Process and Issue Discussion																	
9:00 AM	001-A	Minnesota Geological Survey Geologic Atlases for Water Resource Management Part-A	\$4,121,625	U of MN - MN Geological Survey Setterholm, Dale	Continue base line effort with goal of accelerating and completing mapping within 15-20 years	- Continuation - Minnesota Geological Survey - M.L. 2017, Subd. 03a "County Geologic Atlases - Continuation", \$2,000,000, thru 6/30/2019 reduced from \$4,729,000 in 2017 legislative session - M.L. 2015, Subd. 03a "County Geologic Atlases - Part A", \$2,040,000, thru 6/30/2018 - M.L. 2013, Subd. 03b "County Geologic Atlases - Part A", \$1,200,000, completed 6/30/2016 - M.L. 2011, Subd. 03b "County Geologic Atlases for Sustainable Water Management", \$1,200,000, completed 6/30/2015 - M.L. 2010, Subd. 03a "County Geologic Atlases and Related Hydrogeologic Research", \$1,130,000, completed 6/30/2014												
9:25 AM	002-A	County Geologic Atlas for Water Resource Sustainability Part-B	\$2,400,000	MN DNR Putzier, Paul	- I'm interested in how many Part A's are done but Part B maps are not started - Need examples as to where this has been applied for sustainable resources	- Continuation - Budget includes \$125,159 proposed for DNR Direct & Necessary expenses - M.L. 2015, Subd. 03b "County Geologic Atlases - Part B", \$2,000,000, thru 6/30/2018 - M.L. 2013, Subd. 03b "County Geologic Atlases - Part B", \$1,200,000, thru 6/30/2017 - M.L. 2011, Subd. 03b "County Geologic Atlases for Sustainable Water Management", \$1,200,000, completed 6/30/2015 - M.L. 2010, Subd. 03a "County Geologic Atlases and Related Hydrogeologic Research", \$1,130,000, completed 6/30/2014												

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9:50 AM	003-A	Providing Critical Water Quality Information for Lake Management	\$477,000	U of MN Peterson, Jeffrey	- Great opportunity to utilize the most modern data sophisticated satellite data - Great tool if it can really be done in a timely manner - Did other LCCMR past or current projects take satellite data? How did that inform people, groups or agencies? - Innovative - To assist with real - time natural resource management decisions. Also glad to see the PI already collaborating with the agencies who will use this data in decision making and planning processes. This also appears to have a citizen science element built into the project, but wasn't discussed in detail. I would like to know more about that aspect of the project.	- UMN Water Resources Center													
10:15 AM	004-A	Minnesota Biodiversity Atlas: Phase II Expansion	\$496,000	U of MN Weiblen, George	- This continues to bring important historical observations into the digital age where it now belongs. These searchable tools are revolutionizing ecosystem sciences - How has this been applied?	- Continuation - UMN Bell Museum of Natural History - M.L. 2015, Subd. 03d "Minnesota Biodiversity Atlas for Enhanced Natural Resource Management", \$340,000, thru 6/30/2018													
10:40 AM	006-A	Maximizing Wildlife, Water, and Productivity in Peatland Forests	\$698,000	U of MN Windmuller-Campione, Marcella	- A broad area of importance to the northern counties. critical data - Will this help allow some harvest of peat moss for the industry too?														
11:05 AM	008-A	Safeguarding Red Pine Forest Health and Productivity	\$420,000	U of MN Montgomery, Rebecca	Does DNR have guidelines to maintain and maximize forests?														
11:30 AM	009-A	Minnesota Trumpeter Swan Migration Ecology and Conservation	\$389,988	U of MN Andersen, David	Species recovery has made these magnificent birds much more visible and in public eye	- Wildlife Research: Trumpeter Swans													
11:55 AM	016-A	Conservation of Minnesota’s Forest Birds of Management Concern	\$613,998	U of MN - Duluth NRRI Grinde, Alexis		- Wildlife Research: a Warbler, Veery and a Woodcock species - Budget includes \$20,000 for VHF Radio receivers (4 at \$5,000 each) - Budget includes \$24,000 for drones (4 at \$6,000 each)													

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Break for Lunch																		
1:05 PM	007-A	Deer Movement Related to Potential CWD Prion Transmission	\$552,456	MN DNR Jennelle, Chris	- Covered already for 2017-18 season. - How is this different or is it a continuation of emerging issues project? - DNR should be doing this with hunting fees	- Wildlife Research: Deer - LCCMR Emerging Issues Account award \$350,000 on 6/21/2017 thru 6/30/2018 - Budget includes \$72,000 for helicopter capture - Budget includes \$150,000 for Iridium satellite data acquisition - Budget includes \$218,206 for collars and monitoring equipment - Budget includes \$20,000 for spotter plane - Budget includes DNR Direct and Necessary expenses \$7,250												
1:30 PM	042-B	Rapid Detection of Algal Toxins in Minnesota Lakes	\$686,013	U of MN - Duluth NRRI Bramburger, Andrew	How does this relate or how is it different to current LCCMR projects on toxic algae blooms?	- Budget includes \$19,560 for a YSI EX02 Water Quality Sonde												
1:55 PM	011-A	Conserving Minnesota’s Turtles through Research and Education	\$364,000	Minnesota Zoological Garden Stapleton, Seth	I love turtles!	- Wildlife Research: Turtles - Budget includes \$20,500 for predator exclusion fencing and cameras - Budget includes \$14,000 for GPS Transmitters												
2:20 PM	072-B	Increasing Contaminants and Temperature Eliminate Minnesota Turtles	\$248,632	St. Cloud State University Kohno, Satomi		- Wildlife Research: Turtles - Budget includes \$13,417 for Environmental chamber for egg incubation												
2:45 PM	074-B	Minnesota’s Coldwater Fish Decline: Causes and Solutions	\$789,021	U of MN - Duluth NRRI Reavie, Euan		- Wildlife Habitat Research: Coldwater fish - Budget includes \$3,184 for Minnesota Water Resources Conference												
3:10 PM	028-A	Cover Crops for Wildlife Phase I	\$346,720	Pheasants Forever Inc Bruse, Tanner	Cover crop research can help with buffer and more options for farmers													
3:35 PM	030-A	Data Acquisition to Develop Native Mussel Habitat Suitability	\$309,778	National Park Service Duncan, Nancy		-Wildlife Research: Mussels -High-Resolution Sonar Data acquisition -Budget not broken down very well												

LCCMR Presentation Schedule - 2018 Proposals - DAY 2 Wednesday September 27, 2017 - Co-chair: Rep. Josh Heintzeman Room 5, State Office Building, St. Paul, MN 8:30 AM - 4:00 PM													Day 2				
Time	LCCMR ID	Title / Description	Requested \$	Affiliation Project Manager	Member Notes	Staff Notes	Notes	Ranking									
								+	H	-	+	M	-	+	L	-	No
								9	8	7	6	5	4	3	2	1	0
8:30 AM	017-A	Minnesota Soil Microbiomes: Foundational Database for Environmental Health	\$924,000	U of MN Kinkel, Linda Co-PI, Schilling, Jonathan is Presenting	A very ambitious project. Do we actually have established categories for pathogenic, invasive and beneficial soil microbes?	- Budget includes \$12,316 for 20 cubic ft. chest freezer - Budget includes purchase and maintenance of database server for \$34,000											
9:00 AM	022-A	Variable Winter Thermal Regimes and Managing Trout Streams	\$499,935	U of MN Ferrington, Leonard	Winter rains and warming are the biggest threat to trout spawning	- Fisheries Research: Trout - Budget includes publication costs \$2,000											
9:25 AM	035-B	Wastewater Treatment Plant Optimization Pilot Program	\$236,360	Minnesota Pollution Control Agency Peck, Joel	We need more focus on community sewer options, improvements and assistance.												
9:50 AM	038-B	Biological Sulfate Removal for Wastewater Treatment in Minnesota	\$494,000	U of MN Behrens, Sebastian		- Budget includes equipment for 6 bioreactors \$35,000 - Budget includes in-state conference and travel \$2,000											
10:15 AM	037-B	Investigation of Road Salt Alternatives and Pavement Innovations	\$521,999	U of MN Gulliver, John	A very ambitious project. Do we actually have established categories for pathogenic, invasive and beneficial soil microbes?	- Budget includes \$12,316 for 20 cubic ft. chest freezer - Budget includes purchase and maintenance of database server for \$34,000											
10:40 AM	041-B	Contaminant Removal Efficiency of Urban Stormwater Treatment Ponds	\$377,588	St. Cloud State University Schoenfuss, Heiko		- Budget includes \$230,000 subcontract to USGS											
11:05 AM	094-B	ShellRock River Watershed Stormwater Quality Trading Pilot Program	\$350,000	Shell Rock River Watershed District Christensen, Courtney	Need more budget info. Did Shell Rock River Watershed District get funding in the past from LCCMR or legislature and how does this project relate.	- Budget includes potentially ineligible expenses - Unclear what pollutants or how much they would be reduced											
11:30 AM	036-B	Phosphorus Accumulating Fungi to Control Agricultural Runoff Pollution	\$361,000	U of MN Bushley, Kathryn	Interesting project	- Wildlife Research: Mycorrhizal fungi											
11:55 AM	086-B	Optimal Configuration of Windbreaks for Agricultural Water Conservation	\$368,614	U of MN Ebtehaj, Ardeshir		- Budget includes \$20,000 for H2O Open-path Gas Analyzer and 3-D Sonic Anemometer											
Break for Lunch																	
1:05 PM	055-B	Working Farmlands: Targeting Alfalfa Production for Water Protection	\$752,913	U of MN Jordan, Nicholas	What is status of pending funds? My budget no. for activity 3 is not readable.	- Budget includes \$15,000 for Process Equipment - Budget includes \$36,353 for travel - Budget includes \$3,500 for hosting forum speakers											

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1:30 PM	014-A	An Early Warning System for Wildlife Health Threats	\$280,000	U of MN VanderWaal, Kimberly	- Links to rehab data bring an element of citizen involvement and citizen science. Important to have feedback to the rehab centers and to the people who bring in or report wildlife health and welfare. - Long overdue -Would be more comfortable with project if using students to develop online tool.	- Wildlife health monitoring - Budget includes \$83,000 for private company to develop an online tool for surveillance and alert system											
1:55 PM	015-A	Restoring Prairie Biodiversity and Pollinator Habitat with Haying	\$458,362	Carleton College Hernández, Daniel		- Wildlife Research: Pollinators and birds											
2:20 PM	048-B	Small Cheap Purification System for Cleaner Drinking Water	\$496,788	U of MN Cui, Tianhong	What does the PI estimate prices for units can come down to? In other words, how is the PI defining 'cheap'?	- It is unclear if this is for an under the sink filter or community scale system											
2:45 PM	045-B	Developing a Map of Arsenic Risk in Groundwater	\$550,000	U of MN Ng, G.-H. Crystal	- Have a question on data collection for this risk map. Proposal states map will serve 26 arsenic prone counties , but will only select 6 drilling locations in regions of concern. What other data collection goes into the models and what is the level of uncertainty they are aiming for in the model? - Unsure	- Budget includes \$24,225 for 3 groundwater wells - Budget includes \$14,560 for sediment analysis at Lawrence Berkley National Lab (CA); instrumentation not available in-state											
3:10 PM	054-B	Emerging Pathogens in Lakes, Rivers, and Tap Water	\$355,244	U of MN LaPara, Timothy		- Budget includes \$5,000 for publication costs											
3:35 PM	039-B	Defining Minnesota’s Environmental Antibiotic and Antibiotic Resistance Footprint	\$921,584	U of MN Singer, Randall	- Does this build off previous LCCMR appropriations? - Too costly	- Budget includes \$13,000 for open-access publication charges - Budget includes \$6,500 for in-state conferences - M.L. 2014, Subd. 03e "Antibiotics and Antibiotic Resistance Genes in Minnesota lakes", \$300,00, completed 6/30/2017 - M.L. 2013, Subd. 05h "Antibiotics in Minnesota waters - Phase II Mississippi River", \$203,000, completed 6/30/2016 - M.L. 2011, Subd. 05e "Assessment of Minnesota River antibiotic concentrations", \$190,000, completed 6/30/2014											



LCCMR Presentation Schedule - 2018 Proposals - DAY 3 Thursday September 28, 2017 - Co-chair: Jeff Broberg Room 5, State Office Building, St. Paul, MN 8:30 AM - 5:30 PM														Day 3					
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8:30 AM	LCCMR Business Meeting/Process and Issue Discussion																		
9:00 AM	099-C	Increasing Diversity in Environmental Careers: Fellowships, internships, Mentorships	\$1,000,000	MN DNR Legato, Denise	- Greatly needed - We need programs that encourage/promote a more diverse workforce. Programs such as this provide support for students trying to navigate a field where they are traditionally under-represented and otherwise may not feel like they have the resources to navigate this career path. Will ongoing student assessments include follow-up with students after they graduate to see if they continued on into environmental careers? - Why does DNR feel it needs entire \$1.4M before any money on project can be expended. What is the difference between fellowships and internships? What if started with 40 students and if works - come back for more funding. Why not implementing mentors & internships until 2019 & 2020?	- Resubmitted proposal from 2017 - Budget was reduced from \$1,000,000 to \$487,000 in 2017 legislative session - Budget states "\$487,000 received in ML2017 Chp. 96; no funding will be expended until additional \$1 million is secured." from this proposal - Budget includes \$28,237 proposed for DNR Direct & Necessary expenses - M.L. 2017, Subd. 05b "Increasing Diversity in Environmental Careers", \$487,000, thru 6/30/2022													
9:25 AM	102-C	Pollinator Ambassadors for Urban Gardens	\$421,431	U of MN Evans, Elaine	Best group to do this education	- Budget includes \$111,146 for 30 Pollinator Ambassadors to train youth age 15-18 to gather data and information on urban pollinator plantings													
9:50 AM	118-C	Morris Prairie Pollinator Demonstration and Education	\$681,000	U of MN - Morris Poppe, Steven	Who owns the land and what are they contributing towards the project. Who will own and maintain the kiosks, shelters, signs and benches? Does the City of Morris support and have the done a resolution? Are they providing any in kind support.	- UMM Morris West Central Research and Outreach Center - Wildlife Restoration- Pollinators - Budget includes \$236,000 for shelters/kiosks/signs/benches and solar powered lights for roughly 1/2 mile trail - Budget includes \$5,000 for conference													
10:15 AM	111-C	Youth Convening Minnesota	\$300,000	Climate Generation: A Will Steger Legacy Poppleton, Kristin		- Resubmitted proposal from 2017													

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10:40 AM	106-C	YES! Students Take on Minnesota Water Quality Challenge	\$213,700	Prairie Woods Environmental Learning Center Foster, Shelli-Kae		- Budget includes \$10,000 for Project Seed Funds which allows for teams to purchase materials and services necessary to initiate projects for water quality and conservation related projects, events, monitoring, testing and reporting. \$500/team x 10 teams = \$5,000 x 2 years = \$10,000 - M.L. 2016, Subd. 05c "Youth-Led Sustainability Projects in 50 Minnesota Communities - Phase III", \$400,000, thru 6/30/2018 - M.L. 2014, Subd. 09b "Youth-led Sustainability Initiatives in 40 Greater Minnesota Communities", \$350,000, completed 6/30/2016 - M.L. 2011, Subd. 08a "Youth-Led Renewable Energy and Energy Conservation in West and Southwest Minnesota", \$246,000, completed 6/30/2014											
11:05 AM	109-C	Phase 2 Prairie Sportsman Statewide Environmental Education Project	\$300,000	Pioneer Public Television Bakken, Timothy	- What is viewership? - What is their viewership? - What is status of current project? Are shows being well received & watched?	- Continuation - M.L. 2016, Subd. 05d " New Prairie Sportsman Statewide Broadcast Video Project", \$300,000, thru 6/30/2019											
11:30 AM	157-E	Agricultural Weed Control Using Robots	\$600,000	University of Minnesota - Morris Reese, Michael		- Resubmitted 2017 Proposal											

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11:55 AM	159-E	Community-Scale Energy Storage Guide for Renewable Energy	\$625,478	U of MN Anderson, Ellen	- Perhaps the biggest emerging issue that could change the power industry - The electric grid is changing/modernizing. Lots of folks have their minds on renewables and the next step will be storage - a guide will be necessary to navigate this emerging field. ETL does an excellent job of bringing together stakeholders from throughout the field. - Has failed multiple times-time to move on to other project priorities.	- Resubmitted 2017 proposal - Budget includes \$300,000 for Energy Storage Systems as demonstration projects (3) - Budget includes \$3,040 for ineligible office supplies													
Break for Lunch																			
1:05 PM	121-C	River Watch on the Minnesota River	\$103,000	Friends of the Minnesota Valley Suss, Ted		- See 113-C "Minnesota River Education Model: Connecting Students to Watersheds" and 119-C "Minnesota River Water Quality Education" for similar proposal - Budget includes \$13,000 for 2 YSI Sonde Multi Function Water Monitoring Probes - Budget includes \$20,000 for 2 Minnesota River Basin Wide forums													
1:30 PM	110-C	Unlocking the Science of Minnesota's Moose Decline	\$300,000	Minnesota Zoological Garden Mattson, Nicole	Should ask for arts & cultural dollars for sculpture	- Budget includes \$70,500 for audio system - Budget includes \$12,000 for touchable artifacts - Budget includes \$40,000 for bronze moose calf sculpture													
1:55 PM	120-C	Expanding Nature Knowledge and Experience in North Minneapolis	\$865,000	Minneapolis Park & Recreation Board Pulscher, MaryLynn	- Is this an all or nothing project? If for some reason project didn't receive all of desired funding, could they still move forward updating some exhibits? - Need correct budget info. What is status of pending funds. Is this just for North Mpls residents or is North in the title because North Mississippi Regional Park is located in M Mpls - misleading title. How many visitors currently use this park and how many from North Mpls vs rest of Mpls vs Brooklyns?	- Budget includes \$15,000 for outdoor equipment - Proposal budget is Inconsistent with proposal sheet budget Activity 1 Proposal Budget is \$1,077,000 Activity 1 includes the in-kind funds so should be \$865,000													
2:20 PM	112-C	Get Outdoors After School!	\$30,000	Project Get Outdoors, Inc. Holger, Sara Sullivan, Bill Presenting		- Project time line is not correct (appears to begin July 2018 and ends June 2018) - Budget includes \$26,000 for Activity Backpacks & Outdoor Equipment Kits - M.L. 2010, Subd. 08h "Project Get Outdoors", \$15,000, completed 11/16/2010													

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2:45 PM	103-C	Online Modules Build Local Capacity to Protect Groundwater	\$335,000	Minnesota Department of Health Raber, Carrie	What is status of pending funds?												
3:10 PM	114-C	Integrating Environmental Science Research in High School Education	\$445,000	U of MN Yakub, Mohamed	Element of getting teachers involved in research during their summers is highly attractive. Experience for teachers will expose them to resources to bring back to their classrooms - including real-life examples and professionals in the field to contact with questions in the future.	- What is the relationship with the "Providing enduring ecology experiences for all Minnesota middle-schoolers" proposal? See proposal 100-C - Budget includes \$12,000 for High school teachers @ conferences - Budget includes \$4,000 for substitute teachers - Budget incudes \$200,000 for stipends to teachers											
3:35 PM	115-C	Students Using Local Phenology Contributes to Citizen Science	\$224,000	U of MN Carlson, Stephan		- Continuation - Budget includes \$19,000 for Signage for Phenology trails - Budget includes \$2,000 for Community Festival Nature Center events - Budget includes \$1,000 for conference presentation - M.L. 2014, Subd. 05e "Assessing Species Vulnerability to Climate Change Using Phenology", \$175,000, completed 6/30/2017											
4:00 PM	116-C	Strengthening Natural Resources Management with Drone Training	\$132,000	U of MN Knight, Joseph	Making sure we have natural resource staff educated in drone use is very important as the technology has huge potential for several areas of natural resource management. Questions for PI: Several agencies that could benefit from this training were listed, but none as project partners. Have they expressed desire for this training? How many of these agencies have access to drones?												
4:25 PM	108-C	Preserve Resources by Expanding the State’s Reuse Sectors	\$363,910	ReUSE Minnesota Thomas, Steve		- Continuation - How does this relate to the proposal "Preserve Resources by Expanding the State’s Reuse Sectors"? See proposal 164-E - M.L. 2015, Subd. 07c "Building Deconstruction to reduce Greenhouse Gas Emissions and Solid Waste", \$1,000,000, extended in 2017 session thru 6/30/2018											

LCCMR Presentation Schedule - 2018 Proposals - DAY 3 Thursday September 28, 2017 - Co-chair: Jeff Broberg Room 5, State Office Building, St. Paul, MN 8:30 AM - 5:30 PM											Day 3								
Time	LCCMR ID	Title / Description	Requested \$	Affiliation Project Manager	Member Notes	Staff Notes	Notes	Ranking											
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4:50 PM	164-E	Phase II- Reduce Solid Waste and Greenhouse Gas Emissions	\$1,151,931	The NetWork for Better Futures (D/B/A) Better Futures Minnesota Swaggert, Nick	Does seem too expensive, so cut down the budget, but interesting concept they work with to save good materials for buildings.	- Continuation - How does this relate to the proposal "Preserve Resources by Expanding the State's Reuse Sectors"? See proposal 108-C - Budget includes \$200,000 to provide financial incentives for municipalities in 3 counties - M.L. 2015, Subd. 07c "Building Deconstruction to Reduce Greenhouse Gas Emissions and Solid Waste", \$1,000,000, thru 6/30/2018													

LCCMR Presentation Schedule - 2018 Proposals - DAY 4 Tuesday, October 3, 2017 - Co-chair: Sen. Bill Ingebrigtsen Room 5, State Office Building, St. Paul, MN 8:30 AM - 5:00 PM											Day 4						
Time	LCCMR ID	Title / Description	Requested \$	Affiliation Project Manager	Member Notes	Staff Notes	Notes	Ranking									
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8:30 AM	132-D	Minnesota Invasive Terrestrial Plants and Pests Center 4	\$7,000,000	U of MN Venette, Robert	What promise can they show in winning this battle? How could it truly help?	- Continuation - Terrestrial invasive species research - M.L. 2016, Subd. 06a "Minnesota Invasive Terrestrial Plants and Pests Center - Phase III", \$3,750,000, thru 2023 - M.L. 2015, Subd. 06a "Minnesota Invasive Terrestrial Plants and Pests Center", \$5,000,000, thru 6/30/2023 - M.L. 2014, Sec. 8 "Invasive Terrestrial Plants and Pests Center", \$1,460,000, thru 6/30/2022											
9:00 AM	135-D	Slow the Spread of the Emerald Ash Borer	\$14,689,500	Minnesota Department of Agriculture Abrahamson, Mark	- How does this relate to 2017 project? Did LSOHC fund? How will they decide which communities to work with? What is MDA currently doing to educate people about EAB?Is MDA currently helping communities combat EAB? Is MN Nursery & Landscape Assn involved? - Expensive and not reasonable to use this amount of trust fund money on this. May lose the battle in the end anyways and departments should already be doing this and receive funding to do this. What are they doing with those funds.	- Similar or identical to LSOHC proposal "Slow the Spread of the Emerald Ash Borer" for \$14,689,500 - Continuation - TIS: Emerald Ash Borer (EAB) - M.L. 2017, Subd. 06b "Emerald Ash Borer Biocontrol - Phase III", \$729,000, thru 6/30/2020											
9:25 AM	138-D	Monitoring and Biocontrol of Brown Marmorated Stink Bug	\$199,224	Minnesota Department of Agriculture Ambourn, Angie	How does this related to earlier projects? What did 2014 project show and status of 2015 project?	- Continuation - TIS Research: Brown marmorated stink bug - M.L. 2014, Subd. 04f, "Brown Marmorated Stinkbug Monitoring and Biological Control Evaluation", \$266,000, completed 6/30/2017 - 2015 UMN Minnesota Terrestrial Invasive Plants and Pests Center "Early Detection, Forecasting and Management of the brown marmorated stink bug, Halyomorpha halys", \$597,795											
9:50 AM	141-D	Palmer Amaranth Detection and Eradication	\$431,200	Minnesota Department of Agriculture Chandler, Monika	- We need policy changes to require seed supplier to pay the costs and/or be insured against the costs. - What did legislature appropriate to MDA for PA in 2017? How does this relate to that funding and earlier LCCMR funding? - How does this match and work with the legislative funding they also received? Don't maybe need now.	- Continuation of emerging issues allocation - LCCMR Emerging Issues Account award \$173,000 on 6/21/2017 thru 6/30/2018 - TIS-Palmer amaranth (plant) - M.L. 2016, Subd. 06e "Elimination of Target Invasive Plants - Phase 2", \$750,000, thru 6/30/2019 - M.L. 2013, Subd. 06d "Elimination of Target Invasive Plants", \$350,000, completed 6/30/2016											

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10:15 AM	147-D	Terrestrial Invasive Plant Detection Methods for Forest Lands	\$300,000	MN DNR Burks, Susan		- TIS Plant detection methods: Buckthorn													
10:40 AM	139-D	Determining Minnesota’s Risk of a Toxic Algal Invader	\$243,000	Science Museum of Minnesota Heathcote, Adam	Are there other known invasive	- St. Croix Watershed Research Station - AIS: blue-green algae - M.L. 2016, Subd. 04a "Tracking and Preventing Harmful Algal Blooms", \$500,000, thru 6/30/2019 - M.L. 2015 Emerging Issues "Tracking and Preventing Harmful Algal Blooms", \$93,000 completed													
11:05 AM	152-D	Evaluate Control Methods for Invasive Hybrid Cattails	\$131,920	Voyageurs National Park Windels, Steve	Kansas should fund Kansas State Staff & Students. Project should use MN State Staff & provide opportunities for MN Students.	- AIS: Hybrid Cattails - Budget includes \$46,460 for Kansas State Staff - Budget includes \$11,480 for Kansas State students - Budget includes \$8,000 for flight time for aerial muskrat and vegetation surveys - Budget includes \$2,000 for publication costs													
11:30 AM	133-D	Developing RNA Interference Genetic Controls for Zebra Mussels	\$716,207	U.S. Geological Survey Merkes, Christopher	Is project location in WI?	- Upper Midwest Environmental Sciences Center - USGS LaCrosse - AIS: Zebra Mussels - Mike McCarty UMN Minnesota Aquatic Invasive Species Research Center receiving \$15,000													
11:55 AM	134-D	An Effective and Practical Invasive Carp Deterrent	\$998,000	U of MN Sorensen, Peter	Is this project and 136D working together?	- Continuation - AIS: Invasive Carp - Budget includes \$340,000 for 2 yr. lease for speaker system (with option to buy) - Budget includes \$10,000 for shipping FGS speak system from UK - M.L. 2014, Subd. 04a "Blocking Bighead, Silver and Other Invasive Carp by Optimizing Lock and Dams", \$854,000, completed 6/30/2017 - M.L. 2013, Subd. 06a "Attracting carp so their presence can be accurately assessed", \$682,969, thru 6/30/2019 - M.L. 2012, Sec. 3 "Aquatic Invasive Species (AIS) Cooperative Research Center; Appropriation", \$2,000,000, thru 6/30/2018													
Break for Lunch																			
1:05 PM	LCCMR Business Meeting/Process and Issue Discussion																		
1:30 PM	012-A	Forest Regeneration – Validating Operational Seed Zones	\$796,395	U of MN - Duluth Etterson, Julie	Does DNR have guidelines for seeding? Did LCCMR have a similar project in the past - ensuring plantings are in the right place.														

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1:55 PM	018-A	Mapping Avian Movement in Minnesota	\$682,060	U of MN - Duluth NRRI Niemi, Gerald	How will this be used with the bird atlas?	- Wildlife Research: Monitoring bird migration & Common Terns - Budget includes \$244,700 for equipment (sensors, antennae's, antennae's towers, transmitters, motus registrations)											
2:20 PM	101-C	Connecting Students with Watersheds through Hands-on Learning	\$581,270	Minnesota Trout Unlimited Lenczewski, John	Has LCCMR funded bus transportation in the past (I know we discussed). National Fishing in the Schools provides matching grants if funds are available - is project requesting a match from that program?	- Continuation - Budget includes \$44,050 for Aquarium equipment and maintenance - Budget includes \$35,000 for National Fishing in the Schools program - Budget includes \$100,800 for Bus transportation - Budget includes \$45,000 for Student Summits - M.L. 2015, Subd. 05b "Connecting Students with Watersheds through Hands-On Learning", \$400,000, thru 6/30/2018											
2:45 PM	174-E	Production and Utilization of Biomass: St. Louis County	\$3,999,300	St. Louis County Land and Minerals Department Weber, Mark	We just allowed the shut-down of the Hibbing biomass energy plant. Have to cut our losses. Don't fund.	- Budget includes \$1,337,7000 for LiDAR and DEM datasets for St. Louis County - Budget includes \$1,736,500 for equipment: - \$120,000 for Seedlings - \$690,000 for insulated buildings (Cook and Ely) - \$74,000 for pellet bins (2) - \$740,000 for 5 million BTU boilers (2) - \$81,600 for 5% contingency											
3:10 PM	158-E	Clean Electricity from Solar Windows	\$458,494	U of MN Kortshagen, Uwe	Excited about the potential to see this technology on the scale of a realistic sized window. Do have questions about the expected efficiencies and lifetime of the technology. Could have huge potential when you think about the square footage of windows in our building stock.	- Nanometer-sized silicon crystals are patented by UMN - Budget includes \$40,000 for custom build equipment											
3:35 PM	160-E	Cheap Solar Energy from Roll-to-Roll Manufacturing	\$388,852	U of MN Cui, Tianhong	Time to do this. Shows promise.	- Resubmitted 2017 Proposal											
4:00 PM	127-C	Preparing Minnesotans for Changes in Wolf Management	\$1,200,000	International Wolf Center Kline, David		- Construction of a Wolf Discovery Center - Budget not broken down well - Very little information or details in the proposal so it is difficult to rank											



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4:25 PM	169-E	Bringing Geothermal Power to MN: CO2 Power-system Test	\$315,250	TerraCOH Inc. Randolph, Jimmy	- Is this a private company? - Innovative, affordable. Private company could bring royalties back to Trust Fund-Need some success stories like that.	- Continuation - How does this relate to the proposal "Field testing/demonstration of novel ground source heat pump"? See proposal 165-E - Holds patented technology already - Budget includes \$12,000 for facility rental - Budget includes \$8,000 for system installation - Budget incudes \$75,000 for power system - M.L. 2014, Subd. 08b "Innovative Groundwater-Enhanced Geothermal Heat Pump Study", \$1,000,000, thru 6/30/2017													

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8:30 AM	178-F	Nongame Wildlife Program Acceleration	\$2,000,000	MN DNR Henderson, Carrol	-This program is a Minnesota Treasure - Critically needed - Way too expensive. Better ways to use trust money.	- Budget includes \$45,622 proposed for DNR Direct & Necessary expenses													
9:00 AM	179-F	Preserving and Restoring Minnesota’s Native Orchids – Phase 2	\$468,000	U of MN Remucal, David	Too much money for such a little area benefitted.	- Continuation - MN Landscape Arboretum - M.L. 2015, Subd. 08c "Preserving and Protecting Minnesota Native Orchid Species", \$167,000, thru 6/30/2018													
9:25 AM	013-A	Assessing Ecosystem Services Provided by Lichens and Mosses	\$213,000	U of MN Stanton, Daniel	Underappreciated	- Wildlife Research: Lichens & Mosses													
9:50 AM	180-F	Show Me the Money:10 Markets for Perennials	\$347,500	Science Museum of Minnesota Schottler, Shawn	Establishing new markets with unorthodox crops is a win/win. Ongoing benefit for the state.	- St. Croix Watershed Research Station													
10:15 AM	184-F	Repurposing Unprofitable Cropland: Water and Wildlife’s Silver Bullet?	\$319,063	Science Museum of Minnesota Ulrich, Jason	Just another government funded study that may be used to sway the public against farmers.	- St. Croix Watershed Research Station													
10:40 AM	187-F	Implementing Novel Market-based Methods for Urban Habitat Restoration	\$499,900	Great River Greening Hockett, Steven	Skeptical of the “market based” claims. Don’t see the real market monetary value.	- To restore 450 acres - Budget includes \$247,000 for seed for 415 acres - Budget includes \$2,700 for Volunteer Event supplies and rentals - M.L. 2017, Subd. 08i "Community Stewardship to Restore Urban Natural Resources - Phase Ten", \$524,000, thru 6/30/2020 - M.L. 2016, Subd. 08g "Upland, Wetland, and Shoreline Restoration in Greater Metropolitan Area", \$509,000, thru 6/30/2019													
11:05 AM	194-F	MN CREP for Water Quality and Habitat	\$15,000,000	Minnesota Board of Water and Soil Resources Rickert, Dave	- Sign up stats needed, bonding - What is status of LSOHC request? What is status of pending funds? What is average for easement? Can't do full request amount. - Priority of the legislature to fund. Do we need all \$20M?	- Similar or identical to LSOHC proposal "RIM Wetlands Phase IX" for \$20,000,000 and "RIM Buffers for Wildlife and Water Phase VII" for \$8,000,000 - Acquire Conservation Easements (402 easements; 6,594 acres) - \$14,375,400 for 6,954 acres @ \$2,180 per acre - Secured USDA Funds \$39,522,200 - 5 years to complete - Budget includes Direct Support Services \$220,000, with no information as to what the \$ go to													

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11:30 AM	203-G	Private Native Prairie Conservation through Native Prairie Bank	\$4,535,000	MN DNR Schulte, Judy	- Who will do the app development? Can the project be done in phases? - DNR should fund from existing state park money and marketing dollars.	- Budget includes \$400,000 for development of mobile phone application - Budget includes \$1,835,000 for road and trail way-finding signs - Budget includes \$880,000 for Entry kiosks and electronic pay stations - Budget includes \$64,142 proposed for DNR Direct & Necessary expenses													
11:55 AM	215-G	Prioritize and Target north-central Minnesota Lakes for Protection	\$1,492,500	Crow Wing Soil and Water Conservation Districts Barrick, Melissa	Too much money.	- Conservation Easements - Crow Wing & Aitkin Soil and Water Conservation Districts - Permanently protect estimated 540 acres (\$2,407 per acre) - Budget includes \$4,300 for miscellaneous supplies - Budget includes \$117,000 for Easement Stewardship to BWSR - Budget includes BWSR Direct Support Services budget has no detailed information and generally these are ineligible expenses - M.L. 2016, Subd. 08f "Forest Management for Mississippi River Drinking Water Protection", \$300,000, thru 6/30/2019 - No accomplishments from current project to date													
1:05 PM	191-F	Are We Turning Wild Prairie Plants Into Crops?	\$555,441	U of MN - Duluth Haines, Dustin	Not a great value.														
1:30 PM	186-F	Restoring Wetland Invertebrates to Revive Wildlife Habitat	\$417,895	MN DNR Larson, Danelle		- Wildlife Research: Amphipods - Stocking of amphipods - Budget includes \$10,000 for conferences - Equipment and Tools needs better breakdown for \$10,000 and \$40,000 - Budget includes \$10,000 for paper, envelopes, post cards - Budget includes \$8,000 for publication costs in open-access journals (4 @ \$2,000) - Budget includes \$10,485 proposed for DNR Direct & Necessary expenses													
1:55 PM	190-F	Working Conservation Lands for Grazing, Harvest, and Habitat	\$315,000	Minnesota Board of Water and Soil Resources Rhees, Suzanne	Ok idea.														

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2:20 PM	196-F	Okabena Creek Water Quality and Flood Protection Demonstration	\$720,565	Heron Lake Watershed District Voit, Jan		- Conservation easement acquisition of 12 acres @ \$6,500 per acre - Ditch restoration - 5 acre two-stage ditch and 7-acre pond - Budget includes \$10,000 for Educational outreach materials - Budget includes \$40,000 for monitoring structures (4)														
2:45 PM	188-F	Converting Agricultural Wastes Into Energy, Polymers, and Fertilizers	\$949,000	U of MN Pagliari, Paulo	Innovative and could be tremendous future benefits to the state and environment	- Awaiting on results of phase I 2014 appropriation - Budget includes \$80,000 equipment for (4) reactors - Budget includes \$150,000 equipment for ammonia reactor - M.L. 2014, Subd. 08f "Clean Water and Renewable Energy from Beet Processing Wastewater and Manure", \$400,000, completed 6/30/2017														
3:10 PM	195-F	Replacing Plastic Cover in Vegetable Production with BioMulch	\$310,000	U of MN Pagliari, Paulo	Very good project proposal. Exciting to think of how revolutionary this could be and a new market established here in MN for the world!	- Agricultural Utilization Research Institute														
3:35 PM	183-F	Sediment Hazards to Trout in Southeast Minnesota Streams	\$337,000	U of MN Wickert, Andrew	Make sure it is focused on restoring fishing.	- St. Anthony Falls Laboratory-UMN - Wildlife Research: Trout - Budget includes \$3,000 for publication costs														
4:00 PM	185-F	Advancing Streambank Protection Systems	\$286,426	U of MN Guala, Michele	Sounds interesting to develop a new bank protection method.	- St. Anthony Falls laboratory-UMN - Secured provisional patent already - Budget includes prototype components for \$30,000														
4:25 PM	189-F	Increasing Timber Availability and Habitat With Soil Management	\$396,000	U of MN Slesak, Robert		- Budget includes \$25,000 for mobile soil pressure apparatus														
4:50 PM	182-F	Restoring Minnesota’s Forests in State Parks	\$432,240	MN DNR Quinn, Edward	- What is DNR average restoration cost? Is there an average amount for LCCMR or LSOHC projects? What is status of other pending funds? Who are services contracts with? - Maybe ok, but seems expensive for only 420 acres.	- \$1,000 per acre for restoration costs - Budget includes \$250,000 in contracts - Budget includes \$150,000 in supplies - Budget includes \$12,240 proposed for DNR Direct & Necessary expenses														

LCCMR Presentation Schedule - 2018 Proposals - DAY 6 Thursday, October 5, 2017 - Co-chair: Jeff Broberg Room 5, State Office Building, St. Paul, MN 8:30 AM - 4:30 PM											Day 6							
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8:30 AM	200-G	Minnesota State Parks and State Trails Land Acquisition	\$5,000,000	MN DNR Christie, Jennifer	This should be funded through Legacy funds and the big pot the DNR already gets for state parks funding-about 40% of the Legacy Park funds. Don't fund them hear too.	- Continuation - Fee Title Acquisition of 163 acres - Tettegouche State Park 7 acres - Sibley State Park 16 acres - Minneopa State Park 80 acres - Goodhue-Pioneer State Trail 60 acres - M.L. 2017, Subd. 09c "Minnesota State Parks and State Trails Land Acquisition", \$1,500,000, thru 6/30/2020 - M.L. 2015, Subd. 09a "State Parks and State Trails Land Acquisitions", \$1,500,000, completed 6/30/2016 - M.L. 2013, Subd. 04a "State Parks and State Trails Land Acquisition", \$1,000,000, completed 6/30/2016 - M.L. 2011, Subd. 04b "State Parks and State Trails Land Acquisition", \$3,000,000, completed 6/30/2015 - M.L. 2010, Subd. 04d "State Park Land Acquisition", \$1,750,000, completed 6/30/2013												
9:00 AM	202-G	Minnesota State Trails - Development and Enhancement	\$5,000,000	MN DNR Skaar, Kent		- Gateway State Trail – North St. Paul - Gitchi Gami State Trail – Tofte - Paul Bunyan State Trail – Bemidji - Gateway State Trail – St. Paul - Heartland State Trail – Cass County - Gitchi Gami State Trail – Silver Bay - Budget includes \$59,176 proposed for DNR Direct & Necessary expenses - M.L. 2017, Subd. 09d "Minnesota State Trails Acquisition, Development and Enhancement", \$1,038,000, thru 6/30/2020												

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9:25 AM	199-G	SNA Habitat Restoration, Public Engagement, and Strategic Acquisition	\$6,760,265	MN DNR Pierce, Ann <del>Booth, Margaret</del> (Peggy)	- What is status of LSOHC request? - Way too much cost per acre. Better priorities to fund and too big of ask.	- Similar or identical to LSOHC proposal "DNR WMA and SNA Acquisition Phase X" for \$5,934,700 includes only 25% for acquisition of SNA approximately 250 acres - Continuation - Fee Title Acquisition of 700 acres and Restoration of 1,000 acres - Budget includes \$144,265 proposed for DNR Direct & Necessary expenses - \$5857 per acre for 700 acres of fee title acquisition - M.L. 2017, Subd. 09b "Scientific and Natural Areas Acquisition, Restoration, Citizen Science and Engagement", \$2,500,000, thru 2020 reduced from \$4,500,000 in 2017 legislative session - M.L. 2016, Subd. 09a "Scientific and Natural Area Acquisition and Restoration", \$1,386,000, thru 6/30/2019 - M.L. 2015, Subd. 09c "SNA Acquisition, Restoration, Enhancement and Public Engagement", \$4,000,000, thru 6/30/2019 - M.L. 2014, Subd. 07a "Scientific and Natural Area Acquisition, Restoration, Improvement and Citizen Engagement", \$2,540,000, completed 6/30/2017											
9:50 AM	207-G	Harmony State Trail Extension Land Acquisition	\$235,000	City of Harmony Illg, Jerome	Is amount \$235 or \$250,000? Proposal uses both numbers	- State Trail Segment Extension - Fee Title Acquisition of 16 parcels totaling 25 acres											
10:15 AM	208-G	Mississippi Blufflands State Trail - Red Wing Riverfront	\$920,000	City of Red Wing Owens, Jay	Seems a bit expensive. Is there enough local match?	- State Trail Segment - Construction of 0.75 mile, 12 foot wide recreational trail segment - Secured \$1,655,667 in other funding from City of Red Wing General Fund and FHWA Scenic Byways Planning TAP funding											
10:40 AM	212-G	Swedish Immigrant Trail Segment within Interstate State Park	\$2,254,665	Chisago County Environmental Services Mork, Laird		- Concern about putting a trail through a culturally sensitive area and a State Park - Budget includes Bridge Construction \$950,000 - Budget includes Trail Construction \$852,612 - Regional Trail through Interstate Park											

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11:05 AM	201-G	Local Parks, Trails and Natural Area Grants	\$3,000,000	MN DNR Mularie, Audrey	A better use of funds compared to 200G request	- 25 Matching Grants - Budget includes \$6,907 proposed for DNR Direct & Necessary expenses - M.L. 2011, Subd. 04d "Regional Park, Trail and Connections Acquisition and Development Grants", \$2,000,000, completed 6/30/2013											
11:30 AM	205-G	Mesabi Trail, County Road 88 to Ely Segment	\$600,000	St. Louis and Lake Counties Regional Railroad Authority Manzoline, Robert	What is status of entire trail?	-Continuation -M.L. 2017, Subd. 09g "Mesabi Trail Development", \$2,269,000, thru 2020 -M.L. 2016, Subd. 09e "Mesabi Trail Segment from Highway 135 to Town of Embarrass", \$1,200,000, thru 6/30/2019 -M.L. 2015, Subd. 09i "Mesabi Trail Development Soudan to Ely - Phase II", \$1,000,000, thru 6/30/2018 -M.L. 2014, Subd. 07c "Mesabi Trail Development - Soudan to Ely Segment", \$1,000,000, completed 6/30/2017											
11:55 AM	209-G	Superior Hiking Trail Enhancement Plan	\$100,200	Superior Hiking Trail Association Caneff, Denny		- M.L. 1991, Subd. 03b "Superior Hiking Trail", \$400,000, completed - Past ENTRF Appropriation 1989 \$156,000 - Past ENTRF Appropriation 1987 \$380,000											
Break for Lunch																	
1:05 PM	213-G	A Local-State-Federal Partnership Protects multiple public benefits on the Mississippi River	\$700,000	City of Baxter Doty, Josh	Has city approved it's budget and does it include trail construction?	- 200 acres of fee title acquisition											
1:30 PM	214-G	Mississippi Riverfront Redevelopment Project	\$1,000,000	City of Brainerd Thoreen, Jim	What is the city putting into the project? How far away is this proposed bridge from other river crossings?	- Could be eligible for Local DNR Park Grant - Proposed phase 1 of the Mississippi Redevelopment Project - Planning, Design, Engineering only - no implementation - Budget includes \$70,000 for unknown allocation											
1:55 PM	057-B	Preventing Nitrate Contamination of Groundwater Using Perennial Grains	\$759,312	Minnesota Department of Agriculture Wagner, Margaret Peterson, Heidi	- Perennial is key, what about chemicals? - Are landowners participating in project being paid, if yes, what? Is the City of Chatfield or LPRW providing any in-kind services? What is plan to fund final years of project? - Seems costly for so few acres. Maybe cut back.	- Indicated to be Phase 1 (2 years) of a long-term (6-10 years) study to reduce groundwater nitrate contamination in high-risk, wellhead protection areas using intermediate wheatgrass - Budget not well broken down - Budget includes \$48,000 for land rental - Budget includes \$2,500 for publication costs											

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2:20 PM	064-B	Unregulated Contaminants: Addressing Gaps in Drinking Water Protection	\$2,107,920	Minnesota Department of Health Robertson, Stephen	- What is status of pending funds? Why using private labs? - Expensive. Opens a pathway to more regulations potentially on local communities.	- Proposal lacks details - Staff score reflects lack of details - Budget includes \$1,130,400 for private analytical laboratories													
2:45 PM	034-B	Removing Plastic Particle Pollution from Minnesota Water Bodies	\$388,557	U of MN Coletti, Filippo	- Needs a strong education component for prevention - With public awareness efforts will be there be education on source of microplastics and actions citizens can take in their own lives for prevention?	- St. Anthony Falls Laboratory-UMN													
3:10 PM	166-E	Life Cycle Analysis of Anaerobic Digestion and Organics	\$250,000	Minnesota Pollution Control Agency Walsh, Kayla		- Budget is \$250,000 for a RFP to conduct Life Cycle Assessment - Unclear whether project length is 2 or 3 years													
3:35 PM	027-A	Foundational Assessment of Soil Health Metrics in Minnesota	\$695,477	U of MN Jelinski, Nicolas															
4:00 PM	LCCMR Business Meeting: Discussion of LCCMR Allocations Process on Oct. 17-18 and ENRTF ID: 217-H "Contract Agreement Reimbursement"																		



**Revised 9/20/2017 - LCCMR Presentation Schedule - 2018 Proposals - DAY 1**  
**Tuesday, September 26, 2017 - Co-chair: Sen. Bill Ingebrigtsen**  
**Room 5, State Office Building, St. Paul, MN**  
**8:30 AM - 4:00 PM**

**ATTACHMENT #3**

Time	ID #	Project Title	\$ Request	Organization	Project Manager
<b>8:30 AM</b>	N/A	LCCMR Business Meeting/Process and Issue Discussion	N/A	N/A	N/A
<b>9:00 AM</b>	001-A	Minnesota Geological Survey Geologic Atlases for Water Resource Management Part-A	\$4,121,625	U of MN - MN Geological Survey	Setterholm, Dale
<b>9:25 AM</b>	002-A	County Geologic Atlas for Water Resource Sustainability Part-B	\$2,400,000	MN DNR	Putzier, Paul
<b>9:50 AM</b>	003-A	Providing Critical Water Quality Information for Lake Management	\$477,000	U of MN	Peterson, Jeffrey
<b>10:15 AM</b>	004-A	Minnesota Biodiversity Atlas: Phase II Expansion	\$496,000	U of MN	Weiblen, George
<b>10:40 AM</b>	006-A	Maximizing Wildlife, Water, and Productivity in Peatland Forests	\$698,000	U of MN	Windmuller-Campione, Marcella
<b>11:05 AM</b>	008-A	Safeguarding Red Pine Forest Health and Productivity	\$420,000	U of MN	Montgomery, Rebecca
<b>11:30 AM</b>	009-A	Minnesota Trumpeter Swan Migration Ecology and Conservation	\$389,988	U of MN	Andersen, David
<b>11:55 AM</b>	016-A	Conservation of Minnesota's Forest Birds of Management Concern	\$613,998	U of MN - Duluth NRRI	Grinde, Alexis
<b>Break for Lunch</b>					
<b>1:05 PM</b>	007-A	Deer Movement Related to Potential CWD Prion Transmission	\$552,456	MN DNR	Jennelle, Chris
<b>1:30 PM</b>	042-B	Rapid Detection of Algal Toxins in Minnesota Lakes	\$686,013	U of MN - Duluth NRRI	Bramburger, Andrew
<b>1:55 PM</b>	011-A	Conserving Minnesota's Turtles through Research and Education	\$364,000	Minnesota Zoological Garden	Stapleton, Seth
<b>2:20 PM</b>	072-B	Increasing Contaminants and Temperature Eliminate Minnesota Turtles	\$248,632	St. Cloud State University	Kohno, Satomi
<b>2:45 PM</b>	074-B	Minnesota's Coldwater Fish Decline: Causes and Solutions	\$789,021	U of MN - Duluth NRRI	Reavie, Euan
<b>3:10 PM</b>	028-A	Cover Crops for Wildlife Phase I	\$346,720	Pheasants Forever Inc	Bruse, Tanner
<b>3:35 PM</b>	030-A	Data Acquisition to Develop Native Mussel Habitat Suitability	\$309,778	National Park Service	Duncan, Nancy





## LEGISLATIVE-CITIZEN COMMISSION ON MINNESOTA RESOURCES

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Michael McDonough, Interim Director

### MINUTES

**Wednesday, September 27, 2017**

**8:30 a.m. – 4:00 p.m.**

**State Office Building, Room 5**

**St. Paul, MN 55155**

**Members Present:** Jeff Broberg, Sen. Gary Dahms, Sen. Kari Dziedzic, Nancy Gibson, Rep. Josh Heintzeman, Sen. Bill Ingebrigtsen, Nicole Kessler, Gary Lamma, Norman Moody, Rep. Jim Newberger, Sen. David Tomassoni, Rep. Jean Wagenius, Sen. Torrey Westrom, Della Young

**Staff Present:** M. McDonough, M. Varien, D. Griffith

**Members Excused:** Rep. Rob Ecklund, William, Faber, Rep. Joe Hoppe

**Co-Chair:** Rep. Josh Heintzeman

Co-Chair Heintzeman convened the meeting at 8:30 a.m.

**1. Members report potential conflicts of interest regarding today's business**

**MS 116P.09 Subd 6 Conflict of interest.** A commission member, technical advisory committee member, a peer review panelist, or an employee of the commission may not participate in or vote on a decision of the commission, technical advisory committee, or peer review panel relating to an organization in which the member, panelist, or employee has either a direct or indirect personal financial interest. While serving on the commission, technical advisory committee, or peer review panel, or being an employee of the commission, a person shall avoid any potential conflict of interest.

Members reported no conflict of interests for today's meeting.

**2. Environment and Natural Resources Trust Fund 2018 Proposal Presentations (FY19) – see attached schedule (subject to change)**

See Attachment #1 for Presentation Schedule for September 27, 2017.

Members recessed at 11:30 a.m. and reconvened at 12:15 p.m.

**3. Continue Environment and Natural Resources Trust Fund 2018 Proposal Presentations (FY19) – see attached schedule (subject to change)**

See Attachment #1 for Presentation Schedule for September 27, 2017.

**4. Other business (as needed)**

- Next steps in the process

**5. Adjourn**

Meeting adjourned at 2:45 p.m.

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Jeff Broberg, Sen. Gary Dahms, Sen. Kari Dziedzic, Rep. Rob Ecklund, William Faber, Nancy Gibson,  
Rep. Josh Heintzeman, Rep. Joe Hoppe, Sen. Bill Ingebrigtsen, Nicole Kessler, Gary Lamma, Norman Moody,  
Rep. Jim Newberger, Sen. David Tomassoni, Rep. Jean Wagenius, Sen. Torrey Westrom, Della Young

**Revised 9/20/2017 - LCCMR Presentation Schedule - 2018 Proposals - DAY 2**

**ATTACHMENT #1**

**Wednesday September 27, 2017 - Co-chair: Rep. Josh Heintzeman**

**Room 5, State Office Building, St. Paul, MN**

**8:30 AM - 4:00 PM**

Time	ID #	Project Title	\$ Request	Organization	Project Manager
<b>8:30 AM</b>	017-A	Minnesota Soil Microbiomes: Foundational Database for Environmental Health	\$924,000	U of MN	Kinkel, Linda
<b>9:00 AM</b>	022-A	Variable Winter Thermal Regimes and Managing Trout Streams	\$499,935	U of MN	Ferrington, Leonard
<b>9:25 AM</b>	035-B	Wastewater Treatment Plant Optimization Pilot Program	\$236,360	Minnesota Pollution Control Agency	Peck, Joel
<b>9:50 AM</b>	038-B	Biological Sulfate Removal for Wastewater Treatment in Minnesota	\$494,000	U of MN	Behrens, Sebastian
<b>10:15 AM</b>	037-B	Investigation of Road Salt Alternatives and Pavement Innovations	\$521,999	U of MN	Gulliver, John
<b>10:40 AM</b>	041-B	Contaminant Removal Efficiency of Urban Stormwater Treatment Ponds	\$377,588	St. Cloud State University	Schoenfuss, Heiko
<b>11:05 AM</b>	094-B	ShellRock River Watershed Stormwater Quality Trading Pilot Program	\$350,000	Shell Rock River Watershed District	Christensen, Courtney
<b>11:30 AM</b>	036-B	Phosphorus Accumulating Fungi to Control Agricultural Runoff Pollution	\$361,000	U of MN	Bushley, Kathryn
<b>11:55 AM</b>	086-B	Optimal Configuration of Windbreaks for Agricultural Water Conservation	\$368,614	U of MN	Ebtehaj, Ardeshir
<b>Break for Lunch</b>					
<b>1:05 PM</b>	055-B	Working Farmlands: Targeting Alfalfa Production for Water Protection	\$752,913	U of MN	Jordan, Nicholas
<b>1:30 PM</b>	014-A	An Early Warning System for Wildlife Health Threats	\$280,000	U of MN	VanderWaal, Kimberly
<b>1:55 PM</b>	015-A	Restoring Prairie Biodiversity and Pollinator Habitat with Haying	\$458,362	Carleton College	Hernández, Daniel
<b>2:20 PM</b>	048-B	Small Cheap Purification System for Cleaner Drinking Water	\$496,788	U of MN	Cui, Tianhong
<b>2:45 PM</b>	045-B	Developing a Map of Arsenic Risk in Groundwater	\$550,000	U of MN	Ng, G.-H. Crystal
<b>3:10 PM</b>	054-B	Emerging Pathogens in Lakes, Rivers, and Tap Water	\$355,244	U of MN	LaPara, Timothy
<b>3:35 PM</b>	039-B	Defining Minnesota's Environmental Antibiotic and Antibiotic Resistance Footprint	\$921,584	U of MN	Singer, Randall



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Michael McDonough, Interim Director

**MINUTES**

**Thursday, September 28, 2017**

**8:30 a.m. – 5:30 p.m.**

**State Office Building, Room 5**

**St. Paul, MN 55155**

**Members Present:** Jeff Broberg, Sen. Gary Dahms, Sen. Kari Dziedzic, William, Faber, Nancy Gibson, Rep. Josh Heintzeman, Sen. Bill Ingebrigtsen, Nicole Kessler, Gary Lamppa, Norman Moody, Sen. David Tomassoni, Rep. Jean Wagenius, Sen. Torrey Westrom, Della Young

**Staff Present:** M. McDonough, M. Varien, D. Griffith

**Members Excused:** Rep. Rob Ecklund, Rep. Joe Hoppe, and Rep. Jim Newberger

**Co-Chair: Jeff Broberg**

Co-Chair Jeff Broberg convened the meeting at 8:40 a.m.

MOTION: Commissioner Westrom moved to approve the agenda for today's meeting – motion prevailed.

**1. Members report potential conflicts of interest regarding today's business**

MS 116P.09 Subd 6 Conflict of interest. A commission member, technical advisory committee member, a peer review panelist, or an employee of the commission may not participate in or vote on a decision of the commission, technical advisory committee, or peer review panel relating to an organization in which the member, panelist, or employee has either a direct or indirect personal financial interest. While serving on the commission, technical advisory committee, or peer review panel, or being an employee of the commission, a person shall avoid any potential conflict of interest.

Members reported no conflict of interests for today's meeting.

**2. LCCMR Business Meeting/Process and Issue Discussion**

**3. Environment and Natural Resources Trust Fund 2018 Proposal Presentations (FY19) – see attached schedule (subject to change)**

See Attachment #1 for Presentation Schedule for September 28, 2017.

Members recessed at 11:45 a.m. and reconvened at 12:15 p.m.

**4. Continue Environment and Natural Resources Trust Fund 2018 Proposal Presentations (FY19) – see attached schedule (subject to change)**

See Attachment #1 for Presentation Schedule for September 28, 2017.

Jeff Broberg, Sen. Gary Dahms, Sen. Kari Dziedzic, Rep. Rob Ecklund, William Faber, Nancy Gibson, Rep. Josh Heintzeman, Rep. Joe Hoppe, Sen. Bill Ingebrigtsen, Nicole Kessler, Gary Lamppa, Norman Moody, Rep. Jim Newberger, Sen. David Tomassoni, Rep. Jean Wagenius, Sen. Torrey Westrom, Della Young

**LEGISLATIVE-CITIZEN COMMISSION ON MINNESOTA RESOURCES**

**5. Other business (as needed)**

- Next steps in the process

**6. Adjourn**

Meeting adjourned at 3:40 p.m.

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**Revised 9/20/2017 - LCCMR Presentation Schedule - 2018 Proposals - DAY 3**

**ATTACHMENT #1**

**Thursday September 28, 2017 - Co-chair: Jeff Broberg**

**Room 5, State Office Building, St. Paul, MN**

**8:30 AM - 5:30 PM**

Time	ID #	Project Title	\$ Request	Organization	Project Manager
<b>8:30 AM</b>	N/A	LCCMR Business Meeting/Process and Issue Discussion	N/A	N/A	N/A
<b>9:00 AM</b>	099-C	Increasing Diversity in Environmental Careers: Fellowships, internships, Mentorships	\$1,000,000	MN DNR	Legato, Denise
<b>9:25 AM</b>	102-C	Pollinator Ambassadors for Urban Gardens	\$421,431	U of MN	Evans, Elaine
<b>9:50 AM</b>	118-C	Morris Prairie Pollinator Demonstration and Education	\$681,000	U of MN - Morris	Poppe, Steven
<b>10:15 AM</b>	111-C	Youth Convening Minnesota	\$300,000	Climate Generation: A Will Steger Legacy	Poppleton, Kristin
<b>10:40 AM</b>	106-C	YES! Students Take on Minnesota Water Quality Challenge	\$213,700	Prairie Woods Environmental Learning Center	Foster, Shelli-Kae
<b>11:05 AM</b>	109-C	Phase 2 Prairie Sportsman Statewide Environmental Education Project	\$300,000	Pioneer Public Television	Bakken, Timothy
<b>11:30 AM</b>	157-E	Agricultural Weed Control Using Robots	\$600,000	University of Minnesota - Morris	Reese, Michael
<b>11:55 AM</b>	159-E	Community-Scale Energy Storage Guide for Renewable Energy	\$625,478	U of MN	Anderson, Ellen
<b>Break for Lunch</b>					
<b>1:05 PM</b>	121-C	River Watch on the Minnesota River	\$103,000	Friends of the Minnesota Valley	Suss, Ted
<b>1:30 PM</b>	110-C	Unlocking the Science of Minnesota's Moose Decline	\$300,000	Minnesota Zoological Garden	Mattson, Nicole
<b>1:55 PM</b>	120-C	Expanding Nature Knowledge and Experience in North Minneapolis	\$865,000	Minneapolis Park & Recreation Board	Pulscher, MaryLynn
<b>2:20 PM</b>	112-C	Get Outdoors After School!	\$30,000	Project Get Outdoors, Inc.	Holger, Sara
<b>2:45 PM</b>	103-C	Online Modules Build Local Capacity to Protect Groundwater	\$335,000	Minnesota Department of Health	Raber, Carrie
<b>3:10 PM</b>	114-C	Integrating Environmental Science Research in High School Education	\$445,000	U of MN	Yakub, Mohamed
<b>3:35 PM</b>	115-C	Students Using Local Phenology Contributes to Citizen Science	\$224,000	U of MN	Carlson, Stephan
<b>4:00 PM</b>	116-C	Strengthening Natural Resources Management with Drone Training	\$132,000	U of MN	Knight, Joseph
<b>4:25 PM</b>	108-C	Preserve Resources by Expanding the State's Reuse Sectors	\$363,910	ReUSE Minnesota	Thomas, Steve
<b>4:50 PM</b>	164-E	Phase II- Reduce Solid Waste and Greenhouse Gas Emissions	\$1,151,931	The NetWork for Better Futures (D/B/A) Better Futures Minnesota	Swaggert, Nick

