

**2016 Environment and Natural Resources Trust Fund Proposals
Additional Information Received**

ENRTF ID #	Last Name	First Name	Proposal Title	Organization	\$ Requested
A. Foundational Natural Resource Data and Information					
003-A	Cariveau	Daniel	Data Driven Pollinator Conservation	U of MN	\$558,611
006-A	Treml	Melissa	Sentinel Lakes Monitoring and Data Synthesis	MN DNR	\$401,623
B. Water Resources					
042-B	McLennan	Helen	Morrison County Performance Drainage and Hydrology Management	Morrison SWCD	\$209,600
088-B	Corcoran	Brian	Surface Water Bacterial Treatment System Pilot Project	Vadnais Lake Area Water Management	\$991,600
C. Environmental Education					
093-C	Ponder	Julia	Hunters Choice: Alternative Ammunition	U of MN	\$133,054
120-C	Conrad	Jennifer	Connecting Every 4th Grader in State Parks	MN DNR	\$508,740
E. Air Quality, Climate Change, and Renewable Energy					
151-E	Kortshagen	Uwe	Waste Heat Recovery with Efficient Thermoelectric Energy Generators	U of MN	\$404,427
G. Land Acquisition for Habitat and Recreation					
175-G	Booth	Margaret (Peggy)	SNA Acquisition, Restoration, Enhancement & Public Engagement	MN DNR	\$9,248,141
179-G	Werner	Tom	Minnesota Point Pine Forest SNA Addition Project	Duluth Airport Authority	\$500,000
180-G	Otey Wold	Hilary	Wilder Forest Acquisition for Conservation, Preservation and Education	Minnesota Food Association	\$6,320,000
182-G	Hydukovich	Gordon	Otter Tail River Protection and Recreation Trail Acquisition	City of Fergus Falls	\$500,000
183-G	Keith	Linda	Tower Historic Harbor Nature Trail/Kayak Route	City of Tower	\$1,430,000
H. Other					
186-H	Van Offelen	Henry	Roseau Lake Watershed: Targeted Water Quality Improvement	MN DNR	\$135,250

ENRTF ID: 003-A / Data Driven Pollinator Conservation

The funds from the proposal “Data Driven Pollinator Conservation” 003-A will result in a number of outreach deliverables. First, I will create well-documented native plant lists based on the results of bee-plant surveys. These lists will be useful to both the general public and land managers (\$2,000). These plant lists will be distributed throughout Minnesota and posted online. I will also conduct a workshop for land managers and invite staff from the DNR, BWSR, the USFWS and other organizations (\$2000). I will give presentations for the general public. I will also present at professional meetings that are attended by land managers such as the annual meeting of the Minnesota chapter of The Wildlife Society (\$2,000 for travel and meals for presentations).

These outreach activities will be done in close collaboration with a number of partners. Crystal Boyd of the DNR and I will co-organize bee identification workshops. These workshops will also leverage funds and staff from ENTRF-ML14-6a: “Enhancing Pollinator Landscapes”. We will also collaborate closely on workshops and coordinate speaking events. In addition, I will work with a number of established outreach programs and personnel at the University of Minnesota. Elaine Evans (PhD student at the University of Minnesota) conducts the Minnesota Bumble Bee Survey and is conducting outreach activities for ENTRF-ML-15-3g: “Minnesota Native Bee Atlas”. She will share the plant lists and results of this study during outreach events. Finally, I will work with the University of Minnesota’s Bee Squad to disseminate these results.

Diana Griffith

Subject: FW: PRINTED - FW: follow-up response to questions on LCCMR Proposal 006-A
Attachments: Dear Commissioner Young.docx; Dear Rep Wagenius.docx

From: Trembl, Melissa (DNR) [<mailto:melissa.treml@state.mn.us>]
Sent: Tuesday, October 13, 2015 1:55 PM
To: Susan Thornton <susan.thornton@lccmr.leg.mn>
Cc: Sroka, Amanda (DNR) <amanda.sroka@state.mn.us>
Subject: follow-up response to questions on LCCMR Proposal 006-A

Susan,

I presented LCCMR Proposal 006-A at the Environment and Natural Resources Trust Fund 2016 Proposal Presentations last Wednesday, October 7. I would like to follow up and present some additional information to questions asked by two of the committee members. The attached letters contain the additional information. Could you please forward these to Commissioner Young and Representative Wagenius.

Thank you.

Melissa Trembl
Fisheries Research & Policy Manager
Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155
651-259-5231
melissa.treml@state.mn.us



Dear Commissioner Young,

I would like to take this opportunity to thank you for questions during our hearing for LCCMR funding for Sentinel Lakes (Proposal 006-A Sentinel Lakes Monitoring and Data Synthesis). I would also like to provide some supplemental information to your questions.

First, regarding the work of our partners, such as MPCA, as was mentioned during the hearing MPCA has taken the lead in collecting water samples from all the Sentinel Lakes as well as conducting the sampling for zooplankton in those lakes. Our other partners, including the DNR's Division of Ecological and Water Resources have also played a large role in Sentinel Lakes sampling, including zooplankton processing, benthic invertebrate sampling and processing, water-level monitoring, as well as submerged and emergent plant surveys. Virtually all of the DNR EWR sampling has been in-kind and of little or no cost to either the Section of Fisheries or Sentinel Lakes (LCCMR). Other partnerships such as those with U.S.G.S. and the St. Croix Watershed Research Station demonstrate how we have been able to draw in expertise that is beyond that within DNR to address specific, high-level, management-based research questions. In that regard U.S.G.S., using DNR data has developed and refined models that have allowed managers to identify lakes with critical habitat for Cisco. This knowledge will allow us to focus protection and mitigation efforts towards the lakes and watersheds with the highest potential for successfully protecting these important prey species. Finally, paleolimnological work completed by the St. Croix Watershed Research Station has allowed us to understand pre-settlement conditions in the Sentinel Lakes. These data are important in that they provide our managers with realistic goals for restoration efforts.

Secondly, I would like to address your very relevant question regarding how collecting and synthesizing more data is making management of fisheries and lakes better. As we mentioned, the underlying philosophy behind the Sentinel Lakes is to intensely study these lakes, at all trophic levels, so that we can understand the mechanisms that cause or are created by a changing environment. The value in doing so comes from establishing long-term data sets derived from frequent sampling that will clearly point to ongoing trends. Nonetheless we can point to a number of management issues that we have been able to address since the inception of the Sentinel Lakes program. For example, our development and refinement of sampling methods for Cisco in Sentinel Lakes has produced tools that will allow our fisheries managers to adequately sample a species that was not sampled during our standard assessments. This development should lead to a better understanding of the status of this species throughout the State. Additionally, our work with DNR's Division of Ecological and Water Resources has provided the Section of Fisheries with the tools to measure aquatic plant (both emergent and submerged) abundance. These tools and data they produce will ultimately assist managers in developing aquatic plant management plans and assist with the mitigation of vegetation lost from shoreline development. Finally, the frequent sampling of zooplankton populations in the Sentinel Lakes has provided researchers and managers insight into some of the mechanisms that affect the recruitment of some of our most important fish species. Furthermore, the monitoring efforts in lakes with Aquatic Invasive Species such as Zebra Mussels and Spiny Water fleas has provided us with data that shows just how devastating these species are to the native zooplankton populations. In turn, we are able to begin to develop strategies that will help fisheries managers account for the loss of this critical level of productivity and yet ensure the continued presence of important fish species in our lakes. Without the insight into the mechanisms behind these changes, much of this would be guess work.

ENRTF ID: 006-A / Sentinel Lakes Monitoring and Data Synthesis

It is my hope that these examples will supplement our responses provided at the hearing. Should you have any questions or further concerns please don't hesitate to contact me or either of the research scientists involved with the project.

Best Regards,

Melissa K. Trembl
Minnesota Department of Natural Resources
Division of Fisheries and Wildlife
Fisheries Research & Policy Manager
Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155
651-259-5231
melissa.trembl@state.mn.us

Dear Representative Wagenius,

I would like to take this opportunity to thank you for questions during our hearing for LCCMR funding for Sentinel Lakes (Proposal 006-A Sentinel Lakes Monitoring and Data Synthesis). I would also like to provide some supplemental information to your questions.

First, I would like to address your very relevant question regarding how collecting and synthesizing more data is making management of fisheries and lakes better. As we mentioned, the underlying philosophy behind the Sentinel Lakes is to intensely study these lakes, at all trophic levels, so that we can understand the mechanisms that cause or are created by a changing environment. The value in doing so comes from establishing long-term data sets derived from frequent sampling that will clearly point to ongoing trends. Nonetheless we can point to a number of management issues that we have been able to address since the inception of the Sentinel Lakes program. For example, our development and refinement of sampling methods for Cisco in Sentinel Lakes has produced tools that will allow our fisheries managers to adequately sample a species that was not sampled during our standard assessments. This development should lead to a better understanding of the status of this species throughout the State. Additionally, our work with DNR's Division of Ecological and Water Resources has provided the Section of Fisheries with the tools to measure aquatic plant (both emergent and submerged) abundance. These tools and data they produce will ultimately assist managers in developing aquatic plant management plans and assist with the mitigation of vegetation lost from shoreline development. Finally, the frequent sampling of zooplankton populations in the Sentinel Lakes has provided researchers and managers insight into some of the mechanisms that affect the recruitment of some of our most important fish species. Furthermore, the monitoring efforts in lakes with Aquatic Invasive Species such as Zebra Mussels and Spiny Water fleas has provided us with data that shows just how devastating these species are to the native zooplankton populations. In turn, we are able to begin to develop strategies that will help fisheries managers account for the loss of this critical level of productivity and yet ensure the continued presence of important fish species in our lakes. Without the insight into the mechanisms behind these changes, much of this would be guess work.

Secondly, I would like to address your concern over native mussels in our lakes. Other than lakes that have been affected by Zebra Mussels, the health and status of our native mussel populations in our lakes is rather good. As you pointed out, that is not the case in many of our rivers and streams and as a consequence that is where most restoration efforts are occurring. At this point, without any true control or treatment methods to eliminate Zebra Mussels on the horizon, attempts at restoring native mussels in lakes affected by Zebra Mussels would likely be futile. Therefore, efforts to understand the life-history and the overall ecosystem effects of Zebra Mussels, such as we are doing on Lake Carlos, will enable us to develop management strategies which will enable us to best adapt to the presence of these species and/or ultimately eliminate them from our lakes. The establishment of long-term data sets allows us to best determine which trends are natural fluctuations in populations and which are caused by factors such as Zebra Mussels or other invasive species.

It is my hope that these examples will supplement our responses provided at the hearing. Should you have any questions or further concerns please don't hesitate to contact me or either of the research scientists involved with the project.

Best Regards,

Melissa K. Trembl
Minnesota Department of Natural Resources
Division of Fisheries and Wildlife
Fisheries Research & Policy Manager
Minnesota Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155
651-259-5231
melissa.trembl@state.mn.us

Diana Griffith

From: Susan Thornton
Sent: Thursday, October 15, 2015 11:36 AM
To: Diana Griffith; Michael McDonough; Mike Banker; Susan Thornton
Subject: PRINTED - FW: revisions of project budget for Morrison Co Performance Drainage and Hydrology Mgt
Attachments: 2016_main-proposal revision final revision Oct 2015.docx; LCCMR Budget revision Oct 2015.xlsx

See revised budget and reduction in budget

Susan Thornton
Director, LCCMR
651-296-6264
Rm. 65 State Office Building
100 Rev. Dr. Martin Luther King Jr. Blvd
St. Paul, Mn 55155

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Facebook: <http://www.facebook.com/MNENRTF>

Twitter: <http://twitter.com/mnenrtf>

From: McLennan, Helen - NRCS-CD, Little Falls, MN [mailto:helen.mclennan@mn.nacdnet.net]
Sent: Thursday, October 15, 2015 11:28 AM
To: Susan Thornton <susan.thornton@lccmr.leg.mn>; Mike Banker <mike.banker@lccmr.leg.mn>
Subject: revisions of project budget for Morrison Co Performance Drainage and Hydrology Mgt

Susan,
Please look at this and see if it is what you need me to do. I'm not here tomorrow so I need to get these to you today if possible. Thank you both for all the help you have been

For some reason, when you open the budget, you have to scroll up. I don't see why, but please don't think I sent you a blank page!

*Helen McLennan
Morrison SWCD
1676 Heron Road
Little Falls, MN 56345
320-616-2479*



PROJECT TITLE: Morrison County Performance Drainage and Hydrology Management

PROJECT STATEMENT: Morrison County like other agricultural counties has experienced a vast increase in drainage. Thousands of acres are being tiled with no approval or oversight, and the water moving across the landscape has altered drainage capacity of county and township roads, as well as creating major conflict between neighbors, road authorities, with the impacts of standing water on agricultural fields and topping public roads. The land conversion from perennial cover and proliferation of pattern tile drainage systems have impacted the local hydrology in Morrison Co. faster and often more negatively than local units of government can address.

The county board has expressed a willingness to approve an ordinance making land use conversions and tiling a permitted activity. Township boards have expressed their support for such an ordinance.

This issue is compounded with producers farming into road right of ways. There are no records for private drainage elevations and townships make road decisions on culverts without having the expertise to deal with the hydrology necessary to move water efficiently. An end result is chaos. The SWCD does not have adequate staff and or information to assist in these conflicts. We want to take the lead in managing drainage, county wide. First we would inventory every ditch that can be found, find the elevations of every culvert and build a data base. A drainage technician with hydrology background would be hired to collect all of the information and then we would analyze with the road authorities where the problems exist and prioritize the workload. From that analysis, the hydrology technician would help design control structures on drainage systems, (both tiling and ditches), assist road authorities with drainage designs, and also oversee tiling designs to assure tile systems are more efficient and do not negatively impact roads, neighboring properties, or impact surface waters with nutrient loads.

To meet this capacity, involves the hiring of qualified staff and provide the person with transportation and the essential equipment needed. While stationed with the SWCD, the staff would work with County and Township road authorities.

Tile set for installation



Two-stage ditch hydrology/nutrient mitigation



ENRTF ID: 042-B / Morrison County Performance Drainage and Hydrology Management



Environment and Natural Resources Trust Fund (ENRTF)

2016 Main Proposal

Project Title:

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Culvert assessment, hydrology modeling, project prioritization

Budget: \$209,600

Outcome	Completion Date
1. Morrison SWCD will hire a staff hydrologist	3-years
2. Morrison SWCD will conduct culvert inventory and model hydrology scenarios within the sensitive watersheds first, then county-wide	3-years
3. Morrison SWCD will prioritize and cost out restoration projects related to assessment	3-years

Activity 2: Morrison County will develop a performance drainage ordinance

Budget: In-Kind

Outcome	Completion Date
1. Morrison SWCD will coordinate the Water Plan Task Force and County Commissions to develop a performance drainage ordinance	3-years
2. Morrison SWCD will as a function of Water Plan priorities develop a buffer ordinance	3-years
3. Civic engagement throughout ordinance development, press release, county website	3-years

III. PROJECT STRATEGY

A. Project Team/Partners

- Morrison County Commissioners
- MN Dept. of Agriculture
- Morrison Water Plan Task Force
- Producers and stakeholder groups
- MDNR Wildlife and Fisheries
- Township road authorities
- Board of Water and Soil Resources
- The Nature Conservancy

B. Project Impact and Long-Term Strategy

Short-term this project will develop both a usable assessment inventory of the county conveyance system with a ranked prioritization and cost matrix to inform county and township infrastructure investment for restoration and maintenance. Long-term, using the policy strategy via the local county water plan, Morrison County will be able to permit and monitor performance drainage construction and impacts as a part of the hydrologic system, minor watershed by minor watershed rather than site by site or non-permitted drainage construction as exists today. This change in water management policy will link producers and land owners to farm bill and state Legacy program funds with their corresponding technical service providers for implementation and design. The strategies used in this project to improve water hydrology, quality, ground water recharge and ultimately source water protection have long reaching service values to all downstream water users. This program is scalable to be delivered at the minor watershed level with implementation strategies that fit into the local county water plan, MPCA Watershed Restoration and Protection Plans and future BWSR One Water One Plan initiatives.

C. Timeline Requirements

This project will be implemented within the three-year time frame applied for. Morrison SWCD will convene and coordinate the above partners to form a technical committee intended to work with the assessment and analysis work described to develop restoration project priorities and guidance language for a controlled drainage ordinance. Starting in 2015 the Morrison County SWCD will also coordinate the Water Plan Task Force to update the current county water plan. This public planning process will be the vehicle by which a performance drainage ordinance will be developed and moved on for County Board approval as some point during the scope of the 3-year project.

2016 Detailed Project Budget
ENRTF ID: 042-B / Morrison County Performance Drainage and Hydrology Management
 Project Title: Morrison County Performance Drainage and Hydrology Management

IV. TOTAL ENRTF REQUEST BUDGET years

<u>BUDGET ITEM</u>	<u>AMOUNT</u>
Personnel: 1. SWCD Manager - financial management of grant, supervision of staff hiring, reporting to LCCMR, working with County and Twp to develop a new drainage ordinance, purchasing necessary equipment, and conducting the outreach with producers and partners.	
Professional Hydrologist or hydrologist technician to conduct and create the inventory and researching LIDAR where feasible and develop the data base of ditch elevations and culvert elevations not available on LIDAR. Direct assistance to landowners and road authorities in design oversight, control structure design, and drainage management (3 years @ \$55,000 yr) (salary/benefits)	\$ 165,000
Equipment/Tools/Supplies: Trimble survey laser equipment \$31,000/Autocad Civil 3Dsoftware \$6,800 and ArcView \$1,200//laptop \$1,000	\$ 40,000
Travel: 8,000 miles @ .575	\$ 4,600
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST	\$ 209,600

V. OTHER FUNDS

<u>SOURCE OF FUNDS</u>	<u>AMOUNT</u>	<u>Status</u>
Township government contribution to Right of Way design and maintenance	\$50,000	<i>pending</i>
Other State \$ To Be Applied To Project During Project Period: <i>Clean Water Fund acceleration of capacity to SWCDs, and BWSR buffer kickstart funds to SWCD</i>	\$125,000	<i>pending</i>
In-kind Services To Be Applied To Project During Project Period: <i>County Board ordinance development on tiling, public hearings, LWP task force meetings, technical assistance by multiple agencies.</i>	\$ 20,000	<i>pending</i>
Funding History: Have not applied for LCCMR funding, but have applied through CWF and other entities with no success. Have received grant funds for other projects many times and have fulfilled every grant ever received.	\$ -	
Remaining \$ From Current ENRTF Appropriation:	\$ -	

Diana Griffith

Subject: FW: PRINTED - FW: Thank you! And one more note

From: stephanie.o.mcnamara@vlawmo.org <stephanie.o.mcnamara@vlawmo.org>

Sent: Tuesday, October 13, 2015 2:36 PM

To: Sen.Kari Dziedzic

Subject: Thank you! And one more note

The following email was received from:

Stephanie McNamara

800 County Road E East

Vadnais Heights, MN 55127

Home Phone: 6512046073

Work Phone: 6512046073

Email Address: stephanie.o.mcnamara@vlawmo.org

Message:

I wanted to thank you for listening to our presentation the Bacteria Treatment System Pilot Project. The diligence and effort the Commission members put into the review and selection process was very evident. We know the Legislative Citizen's Commission on Minnesota Resources is considering many good projects for possible funding. The Bacteria and nutrient treatment system in our proposal we feel is unique in that it is both a research and installation project that targets a state-wide water quality concern.

A frustration our watershed faced when monitoring showed one of our critical water resources was impaired with high bacteria levels was the lack of solid research on reduction practices that could address bacteria in an urban setting. The "Surface Water Bacteria Treatment System Pilot Project" 088-B, (Whitaker Wetlands) proposes a simple but innovative approach to reducing bacteria levels in both urban and rural settings. Over 500 water bodies are impaired due to high levels of fecal coliform bacteria. There is the potential for State wide applicability.

This research and capital project builds on an existing watershed-implemented bacteria source monitoring program analyzing bacteria DNA for effective treatment targeting. Bacteria monitoring started in 2007 on Lambert Creek. DNA source monitoring of bacteria is in its second year.

This is an urban subwatershed that drains into Vadnais Lake, the drinking water reservoir for the St. Paul Regional Water supply (SPRWS) for over 400,000 consumers. The Vadnais Lake Area Water Management Organization (VLAWMO) has a strong partnership with SPRWS as well as the local municipalities. VLAWMO has partnered with SPRWS in the past to utilize Minnesota Dept. of Health (MDH) grant funding through the Upper Mississippi Source Water Protection Plan. Grants from MDH in the past have been limited to \$10,000 which is useful in some but not all projects.

Quick overview. Using a solar pump, water would be conveyed from Whitaker pond which frequently exceeds State standards for bacteria to 3 different experimental wetland cells for treatment. Nutrient and bacteria laden water would enter the lined bottom of the subsurface constructed wetland (SSWC), filling gravel and sand layers and then entering a layer of sorptive materials that have been shown to reduce bacteria. A top layer of planting medium and deep rooted native plants would help draw the water through the system. Yes, water is designed to move upward in the wetland as it is processed. Different combinations of sorptive materials as well as targeted wetland plant species in the three wetland cells will be monitored for effectiveness in removing bacteria and nutrients, both entering & leaving the treatment cells. A report on the results will be made available for peer scientific review, to State and local agencies and municipalities.

Deliverables include:

A reduction in bacteria and nutrient levels in a much enriched urban stormwater system.

ENRTF ID: 088-B / Surface Water Bacterial Treatment System Pilot Project

An innovative project including a replicable design, construction costs, and monitoring to document effectiveness. Distribution of the design, effectiveness and monitoring via 3 technical conferences and 3 webinars targeting entities in MN who are affected by bacteria impairments.

Potential efficiencies for post-reservoir drinking water treatment.

Local wetland habitat improvement in an active use park along with educational materials on-site and online.

Partners: Vadnais Lake Area Water Management Organization, White Bear Township, St. Paul Regional Water Service, Ramsey County, City of White Bear Lake who would provide land, monitoring, maintenance and other in-kind matching contributions.

This watershed has a proven track record of successfully implementing projects. If you would like any questions answered please don't hesitate to contact me, Stephanie McNamara 651-204-6073 or Brian Corcoran 651-204-6075 at the Vadnais Lake Area Water Management Organization.

Thank you very much for your time and attention. And especially thank you for your work on the Legislative Citizens Commission on Minnesota Resources.

Diana Griffith

Subject: FW: Lake Bemidji and Itasca State Park presentations on alternative ammo for mentored youth hunts.

Hello, Brian, and everyone.

On Thursday evening and Saturday noon Kate Henry and I gave presentations for the youth mentored deer hunt participants and their mentors at Lake Bemidji State Park and Itasca State Park. I used a new presentation format using ten 30" x 40" presentation panels that summarized the essence of why alternative ammo presents three major benefits: in ballistics performance, in eliminating secondary poisoning of bald eagles, other raptors and other gupile scavengers, and in eliminating exposure of hunters and their families and friends to lead in their venison. The presentations took about 15-20 minutes, and Kate followed up with an invitation for the youths to take the survey that she was using regarding attitudes relating to use of lead and copper ammo.

There were 40 participants at the Lake Bemidji workshop (20 mentors and 20 youths) and 23 participants at the Itasca State Park workshop (11 mentors and 11 youths--and one little brother). I don't recall the number of youths who filled out the forms for the first workshop, but at Lake Itasca 9 of the 11 youths signed up for Kate. Three of the 20 youths at Lake Bemidji brought copper ammo to get the 2016 state park passes that we offered. At Lake Itasca State Park four of the 11 youths were given park permits for 2016 for planning to use copper next weekend.

After the presentation, many of the participants were very concerned about the problems of eating lead in their venison and some of the parents were being urged by their kids to get copper for their Itasca hunt before next weekend. I think this format for presentation was quite effective, and think we should prepare more of these presentation panels for use in more state park mentored hunts next year. I will be leaving to lead a People-to-People bird study trip to Cuba on Thursday, so Lori Naumann is planning to give this presentation at Afton State Park next week and at St.Croix State Park. We do not have someone to give the presentation at Lake Itasca later this week but we need to get the names and addresses of the people who bring copper ammo so I can send them their 2016 state park permit.

I think this type of short presentation would be very effective for the Forkhorn Camps of the MDHA if we could arrange for funding such an effort next year. I'm sorry I will miss the shooting clinic next weekend at Walker.

I have attached a selection of photos taken at Lake Bemidji State Park and at Lake Itasca State Park at our presentations so you can get a sense of how the panels were used.

Best wishes, Carrol

From: Brian Hiller [BHiller@bemidjistate.edu]

Sent: Saturday, October 17, 2015 9:05 PM

To: Henderson, Carrol L (DNR); Hewitt, Anthony (anthony_hewitt@fws.gov); Steve Windels (mntws2014@gmail.com); Kate Henry (henry250@d.umn.edu); Julia Ponder (ponde003@umn.edu) (ponde003@umn.edu); Julie Ernst (jernst@d.umn.edu); Patrick Redig (redig001@umn.edu); Sahr, Duane P Pete- APHIS - APHIS (Duane.P.Sahr@aphis.usda.gov); Olsen, Richard (DNR); Naumann, Lori N (DNR); Quinn, Ed M (DNR); jeanne_holler@fws.gov; browns@visi.com; Cooper, Tom (MDE); Cornicelli, Lou (DNR); Coyle, Margi (Anne) (DNR); William Faber; Johnson, Jay (DNR); Kallok, Mike (DNR); John Moriarty (JMoriarty@threeriversparkdistrict.org); Niska, Chuck E (DNR); Susan Thornton (susan.thornton@lccmr.leg.mn); Telander, Paul B (DNR); Pierce, Ann M (DNR); Cornicelli, Lou (DNR); Matt Mullner (MattM@joessportinggoods.com); Niskanen, Chris (DNR); Drieslein Rob A

Cc: Gilkeson, John (MPCA)

Subject: Bemidji Copper Bullet Demo...

Hi Folks,

I have finally heard back with confirmation of acceptance of the Copper Bullet Demo at Northstar. I have attached a copy of the flyer we've been putting around town and down in Walker. I have sent it to some of the local state representatives but don't expect to hear back from them until sometime this week. I have also sent a copy to Kev

ENRTF ID: 093-C / Hunters Choice: Alternative Ammunition

Jackson at the local radio station with the hope that he'll report on it next week and increase attendance. The students are pretty fired up about helping run things (both the Wildlife chapter and the new MDHA chapter will be helping) and have been mentioning it in a few classes as well.

At this point, we mainly need the materials to run the demo and we'll be ready to go.

Pete- I'm assuming you're bringing the bullet trap with you.

Tony & Carrol- Are you both planning to attend? We'll need the copper bullets at the very least.

I'll be in Winnipeg at the TWS Conference, but will have ready access to my email if you need to contact me.

Thanks,

Brian

Brian J. Hiller, Ph.D.
Past-Chair, Wildlife Toxicology Working Group
Assistant Professor of Biology
Bemidji State University
Bemidji, MN 56601
(218) 755-2212

Diana Griffith

Subject: FW: PRINTED - FW: LCCMR Proposal: Every 4th Grader in State Parks

From: Rivers, Erika (DNR) [<mailto:erika.rivers@state.mn.us>]

Sent: Tuesday, October 13, 2015 9:31 PM

To: Susan Thornton <susan.thornton@lccmr.leg.mn>

Cc: Conrad, Jennifer (DNR) <Jennifer.Conrad@state.mn.us>

Subject: LCCMR Proposal: Every 4th Grader in State Parks

Dear Director Thornton:

During Jennifer Conrad's *Every 4th Grader in State Parks* proposal presentation to the LCCMR staff and members, it was suggested that I provide a letter committing staff time for 4th grade visits.

We will continue to fill requests for school programs on a first come, first served basis and as schedules permit. The CCM specialist position requested in the proposal will promote the bus grants to schools and teachers. Those promotions will provide the following:

- details about applying for a bus grant
- a list of parks with naturalists and how to contact them to request a program (The naturalists will work directly with the teacher to schedule the class visit to the park. Teachers will arrange the busses and chaperones.)
- other educational offerings at the parks, including partner-led programs
- contact information for parks without naturalists

Thank you for considering this proposal to fund transportation for 4th grade visits to state parks.

Sincerely,

Erika Rivers

Erika Rivers
Division Director, Parks & Trails
Department of Natural Resources
651-259-5591

***Our Vision** is to create unforgettable park, trail, and water recreation experiences that inspire people to pass along the love for the outdoors to current and future generations.*



Diana Griffith

Subject: FW: PRINTED - FW: LCCMR proposal follow-up
Attachments: 2016_Budget_UMN_Kortshagen_final.xlsx

From: Uwe Kortshagen [<mailto:korts001@umn.edu>]
Sent: Thursday, October 15, 2015 9:04 AM
To: Susan Thornton <susan.thornton@lccmr.leg.mn>
Subject: Re: LCCMR proposal follow-up

Dear Ms. Thornton:

Here is the revised budget with details an the equipment and materials and supplies. Please let me know whether you need additional information.

Best regards,
Uwe

On Wed, Oct 14, 2015 at 2:56 PM, Susan Thornton <susan.thornton@lccmr.leg.mn> wrote:

I am reminding you of the request to send in a better budget breakdown, per the instructions in the RFP, for equipment/tools and supplies and lab supplied.

Thank you,

Susan

Susan Thornton

Director, LCCMR

[651-296-6264](tel:651-296-6264)

Rm. 65 State Office Building

100 Rev. Dr. Martin Luther King Jr. Blvd

St. Paul, Mn 55155

[Connect with Minnesota's Environment and Natural Resources Trust Fund](#)

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Uwe Kortshagen, Ph.D.

James J. Ryan Professor of Mechanical Engineering
Distinguished McKnight University Professor
Head, Department of Mechanical Engineering

University of Minnesota
111 Church Street SE
Minneapolis, MN 55455, U.S.A.
phone: +1 (612) 626 2546
email: Kortshagen@umn.edu
Department: <http://www.me.umn.edu>
Research: <http://www.menet.umn.edu/~uk>

ENRTF ID: 151-E / Waste Heat Recovery with Efficient Thermoelectric Energy Generators

Project Title: Waste Heat Recovery with Efficient Thermoelectric Energy Generators

IV. TOTAL ENRTF REQUEST BUDGET: 3 Years

BUDGET ITEM	AMOUNT
Personnel:	\$ 334,427.00
Uwe Korthagen Project Manager (2 weeks (.06FTE) + fringe 33.8% fringe) for 3 years	\$ 35,948.00
Xiajia Wang (2 weeks (.06 FTE) + fringe 33.8% fringe) for 3 years	\$ 19,564.00
2-Graduate Research Assistant 50% FTE (fall & spring include 16.6% fringe plus \$17.84/hour tuition, summer 16.6% fringe only) for 3 years	\$ 278,915.00
Equipment/Tools	\$ 40,000.00
Equipment and supplies to construct a mechanical hot-pressing system to sintering thermoelectric modules, including an integrated vacuum heated pressing furnace up to 1100 Celsius with 4" quartz tube and water cold flange (OTF-1200X-VHP4, \$23,120)	\$ 23,120.00
Sample holder for thermal sintering: 1/2" graphite die with an operation temperature of 400 Celsius in air and > 400 Celsius under nitrogen inert environment (\$200)	\$ 200.00
Equipment and supplies to construct a reactor for nanoparticle synthesis, including an RF power supply (\$6000), 2 matchboxes (\$100*2 = \$200), 1 mass flow controller (\$1500) and 1 readout (\$2000), 1 pressure gauge (\$600) and 1 readout(\$500), 2 pneumatic valves (\$450*2=\$900), 2 ball valves (\$100*2=\$200), 2 vacuum right-angle valves (\$300*2=\$600) 2 ultra-torr to KF40 adapters (\$50*2=\$100), 2 quartz reactor tubes (\$40*2=\$80), 1 wye tee (\$1000), other accessories (lines, fittings, welding, \$3000), plumbing and machining (\$6600)	\$ 16,680.00
Lab Supplies/User Fees	\$ 30,000.00
Cost for purchasing precursor gases (\$400*3=\$1200), sample substrates (\$100*3=\$300), and chemicals (\$100*3=\$300) for nanoparticle synthesis	\$ 1,800.00
Purchasing reference materials, including bare silicon (\$450), silicon dioxide (\$450), sapphire (\$600) wafers for thermal characterization.	\$ 1,500.00
User fees for rental and usage of facilities at the campus CharFac center for sample thermal property characterization (electrical conductivity, ellipsometry, and atomic force microscopy, \$1800*3=\$5400) and MNC for thin-film deposition of metal transducers (sputtering and thermal evaporation, \$1500*3=\$4500)	\$ 9,900.00
User fees for rental and usage of facilities at the campus CharFac center for nanoparticle structural/property characterization (X-ray diffraction, secondary electron microscopy, Raman spectroscopy, tunneling electron microscopy, and ellipsometry, \$3600*3=\$10800) and Usage fees for the MNC Facility for housing the plasma reactor and precursor gases and processing samples (\$2000*3=\$6000)	\$ 16,800.00
TOTAL ENVIRONMENT AND NATURAL RESOURCES TRUST FUND \$ REQUEST =	\$ 404,427

V. OTHER FUNDS

SOURCE OF FUNDS	AMOUNT	Status
Other Non-State \$ To Be Applied To Project During Project Period:		
Other State \$ To Be Applied To Project During Project Period: N/A		
In-kind Services To Be Applied To Project During Project Period: N/A		
Funding History: Minnesota private company funds for development of graphene sensors		
Remaining \$ From Current ENRTF Appropriation: N/A		

Diana Griffith

Subject: FW: LCCMR presentation follow up

From: Booth, Peggy (DNR) [<mailto:peggy.booth@state.mn.us>]

Sent: Tuesday, October 13, 2015 12:16 PM

To: Michael McDonough <michael.mcdonough@lccmr.leg.mn>

Cc: Sroka, Amanda (DNR) <amanda.sroka@state.mn.us>; Susan Thornton <susan.thornton@lccmr.leg.mn>; Mike Banker <mike.banker@lccmr.leg.mn>; Diana Griffith <diana.griffith@lccmr.leg.mn>; Pierce, Ann M (DNR) <ann.pierce@state.mn.us>

Subject: RE: LCCMR presentation follow up

1. How many acres does the DNR own?

5.5 million acres, which includes acquired, school and university trust, consolidated conservation area and Volstead lands where the state owns fee title (either title in fee simple, or fee surface interests) and DNR is the administrator.

2. How many acres do they want to buy?

The Scientific and Natural Area (SNA) Strategic Land Protection Plan proposes the purchase and designation of 32,000 acres as SNAs over the next 20 years, pending appropriations. The Plan was developed under the direction of the Commissioners Advisory Committee on Natural Heritage and with ENRTF funding support. As directed by the plan, lands within the Conservation Opportunity areas will be targeted for acquisition. To qualify for SNA acquisition and designation, lands must be predominately undisturbed native plant communities recommended for SNA protection in an Ecological Evaluation report typically prepared by the Minnesota Biological Survey. Acquisition projects must score highly using the SNA Candidate Site Evaluation Guide to rate the parcel's ecological characteristics (including presence of rare species), parcel size, location relative to other conservation lands (e.g. the MN Prairie Conservation Plan core areas), land management characteristics, etc. The SNA Plan is online at :

<http://www.dnr.state.mn.us/eco/sna/plan.html>

Each division and program has a similar strategic plan that will direct their land acquisition goals and priorities within the funding provided for that purpose.

3. Please provide an estimate for the potential PILT obligation for the SNA acquisitions in your 2016 LCCMR proposal. We understand that it a "potential" acquisition list so it is okay to provide a range.

For the SNA Programs' ML16 FY17 ENRTF Request of \$9,324,826, the PILT payments would be about \$83,000.

From: Michael McDonough [michael.mcdonough@lccmr.leg.mn]

Sent: Friday, October 02, 2015 11:42 AM

To: Booth, Peggy (DNR)

Cc: Sroka, Amanda (DNR); Susan Thornton; Mike Banker; Diana Griffith

Subject: LCCMR presentation follow up

Hi Peggy, We are looking for some follow up on your presentation yesterday.

Three item that we are looing for you to respond to:

1. How many acres does the DNR own?
2. How many acres do they want to buy?
3. Please provide an estimate for the potential PILT obligation for the SNA acquisitions in your 2016 LCCMR proposal. We understand that it a "potential" acquisition list so it is okay to provide a range.

Thanks, Michael

Michael C. McDonough

ENRTF ID: 175-G / SNA Acquisition, Restoration, Enhancement & Public Engagement

Manager Research and Planning

Legislative-Citizen Commission on Minnesota Resources

651 296-2443



Building a Better World
for All of Us®

TRANSMITTAL

To: Sen. David Tomassoni
Rep. John Persell
Commissioner Nancy Gibson
Rep. Denny McNamara and Committee Administrator Amy Zipko
Susan Thornton, Director LCCMR

Date: October 8, 2015

RE: Minnesota Point Pine Forest SNA Addition Project (Project ID# ~~175-G~~ 179-G)

We are:

- Enclosing
- Sending under separate cover
- Sending as requested

On behalf of Tom Werner, Executive Director of the Duluth Airport Authority, this packet provides additional requested information regarding the Minnesota Point Pine Forest SNA Addition Project (Project ID # 175-G).

For your:

- Information/Records
- Action
- Review and comment
- Distribution
- Approval
- Revision and resubmittal

Remarks:

By: Kaci Nowicki

c:

Minnesota Point Pine Forest SNA Addition Project

Project Proponent: Duluth Airport Authority

Project Manager: Werner

Project ID Number: 175-G

This letter responds to questions asked at the October 1, 2015 presentation by the Duluth Airport Authority to the Legislative Citizen Commission on Minnesota Resources (LCCMR) for the Minnesota Point Pine Forest Scientific & Natural Area (SNA) Addition Project.

For reference, a copy of the FAA Finding of No Significant Impact/Record of Decision (FONSI/ROD) and the Executive Summary of the Environmental Assessment/Environmental Assessment Worksheet is attached. The entire Environmental Assessment can be found here: <http://duluthairport.com/category/other-project-updates/>

Conservation Easement, SNA Designation, and Section 4(f) Designation

The Minnesota Land Trust holds a conservation easement over the property that is now designated as an SNA. This conservation easement was established in 1999. In 2002 the land was transferred from the Minnesota Land Trust to the State of Minnesota for development of the Minnesota Point Pine Forest SNA. The Minnesota Land Trust recognized the value of the natural, ecological, and aesthetic features of the property and maintained a conservation easement with the State of Minnesota to serve the policies of the state that encourage the protection of Minnesota's natural resources as set forth in Minnesota Statutes 84C.01-12 (Conservation Easements), as well as Section 86A.05 and Section 84.033 (State Scientific and Natural Areas) to conserve and preserve this property in perpetuity. This conservation easement currently held by the Minnesota Land Trust prevents any activities that would negatively impact the forest and native vegetation, such as tree topping, clearing, or removal, regardless of the how the forest is so legislatively designated (e.g., as an SNA, State Forest, or otherwise).

The Minnesota Point Pine Forest SNA is a significant publicly owned recreation area, which therefore qualifies it as a Section 4(f) resource. Section 4(f) legislation was established under the Department of Transportation (DOT) Act of 1966 (now codified at 49 USC 303, and 23 USC 138) and provides protection for publicly owned land in public parks, recreation areas, or wildlife and waterfowl refuges of national, state, or local significance or lands from an historic site of national, state, or local significance. Any part of a publicly-owned park, recreation area, refuge, or historic site is presumed to be significant unless there is a statement of insignificance relative to the whole park by the federal, state, or local official having jurisdiction thereof. The Section 4(f) regulations require the consideration of feasible and prudent alternatives that avoid using the Section 4(f) resource. If impacts cannot be avoided, measures to minimize harm must be included with the project. The FAA findings (FONSI/ROD) conclude that the proposed runway relocation is the preferred alternative because it would avoid impacts to the SNA, which is a 4(f) resource.

Summary: A change in designated land use for the SNA by the Legislature (e.g., change the SNA to State Forest) would not resolve tree height obstructions to the runway approach surface. The Conservation Easement held by the MN Land Trust over the SNA and the federal Section 4(f) designation for this resource preclude removal of the trees for this project. The only option available to the Airport that meets the project purpose and need is to relocate the runway.

Existing Site Conditions and Project Alternatives (No-Action vs. Relocation of the Runway)

Existing Site Conditions

At the Sky Harbor Airport there are approximately 599 trees obstructing the approach surface of the runway (based on 2010 surveys). Of those, 307 trees are within the SNA, 182 trees are on Duluth Airport Authority (DAA) property, and 110 trees are on property owned by Superior Water, Light and Power. The obstructions are primarily red and white pine trees. Although ranging in age, some of the red and white pine trees are more than 120 years old. This old growth forest located in the urban setting of Minnesota Point is uniquely significant in Minnesota "by virtue of its presence on Lake Superior Sand dunes" (Wilson and Rusterholz 1996), with the red and white pine woodland, its understory components, and ecological setting being the only example of this in Minnesota. Not only does this property hold significant old growth red and white pine forest, it also contains habitat for and known records of state-listed/protected flora and fauna. There is also habitat for a federally protected bird in the vicinity of this forest community.

By virtue of this old growth forest being a Section 4(f) resource, permission to impact the forest would not be allowed by the FAA, therefore the DAA would not be allowed to simply remove or top/cut trees on its property, nor would it be permitted to do that on adjacent state or private property since there is a feasible and prudent alternative that avoids using the 4(f) resource. Furthermore, the conservation easement held by the Minnesota Land Trust on the SNA property would not allow tree cutting or topping within the SNA. Lastly, permission to cut or top trees within the SNA, on DAA property, or adjacent property would also require a takings permit from the Minnesota because this habitat contains records of state-listed protected flora and fauna.

For the reasons stated above, a total of 14 project alternatives were considered in public scoping to evaluate the best alternative with the least environmentally damaging practicable alternative. These alternatives evaluated the environmental consequences of no-action (i.e., no changes to the airport and no effects on adjacent old growth forest habitat) and 13 different configurations of the runway to minimize or avoid impacts to this unique forest community. Ultimately, three (3) alternatives were carried through full environmental review to vet the consequences of no action or reconfiguration and/or relocation of the runway.

No Action

The no action alternative would result in avoiding impacts to the SNA and any old growth trees, and would avoid placement of fill in Superior Bay. However, no action would ultimately result in loss of a Minnesota Airport License because the trees would remain an obstruction to the runway approach surface, and ultimately closure of the Airport would occur.

The total cost of Airport closure that results from the no action includes the repayment of grant funds, reimbursement of land value to the FAA, removal of Airport facilities (pavement, hangars, fuel system, etc.) and site reclamation and restoration. The estimated total implementation cost of the no action alternative is approximately \$8 million. However, this cost does not include buy-outs of leases currently held by Airport tenants.

If the airport were closed, the City of Duluth would be responsible for repayment of over \$3 million in state and federal grants that have been used for in the expansion and maintenance of the Airport per grant assurances related to past grant money accepted by the Airport. Furthermore, the Airport exists on land that which was conveyed to the City of Duluth in 1938 by the State of Minnesota under that condition that the land be used for public recreation and public health, and that the facilities on the land be available for public use to resident and non-residents of the City of Duluth. The transfer of property to the City of Duluth requires that it remain open to public use, which would limit the ability of the city to sell the property to finance

the alternative. Closure would result in displacement of multiple businesses, one residence (located in the terminal building), 23 based aircraft, and nine private hangars.

The original conveyance of the property from the State of Minnesota to the City of Duluth requires that it remain for "purposes of public recreation and public health". Therefore, if the Airport closed, the property would either remain open for a public use or revert to the state per the 1938 agreement.

Relocation of the Runway

Two (2) Alternatives were considered in detail that would relocate the runway to minimize impacts to the SNA and old growth forest.

Alternative 13 – Reduced Runway Length, Shift, and Rotate

Alternative 13 considered a shifting the runway 1.5-degrees away from the SNA and shortening it by 300 feet. This alternative would reduce impacts to the SNA and old growth forest by only requiring topping or removal of 370 trees (based on a 50-year tree growth model through year 2063, which was developed in partnership with forestry experts for this project). It would require approximately 3.4 acres of fill in Superior Bay for relocating the runway. The cost for this alternative was estimated at approximately \$5.7 million. Although this alternative would cost less overall, the impacts to Section 4(f) resources, the SNA, and habitat for state-listed flora and fauna would occur, *therefore this alternative was rejected.*

Alternative 5(a) Short – Reduced Runway Length, Shift, and Rotate (Preferred Alternative)

Alternative 5(a) Short considered rotating the runway 5 degrees away from the SNA and reducing its length by 450 feet. Relocating the runway in this manner would avoid impacts to the SNA, old growth forest, and habitat for state-listed protected flora and fauna. Relocation of the runway by 5 degrees would require placement of approximately 7.49 acres of fill in the Superior Bay, but there would be no loss in airport licensure and both the airport and old growth forest would remain. *This is the preferred alternative because it would avoid the SNA and old growth forest in perpetuity.* The construction of the proposed runway relocation in this *preferred alternative* is estimated to cost approximately \$10 million. A 90% match (approximately \$9 million) would be provided by the Federal Aviation Administration (FAA); a 10% non-federal match (approximately \$1 million) would also be needed.

The following consequences to both the natural and human environment, as well as several other consequence considered, were instrumental in determining the preferred alternative

Consequences	No Action	Alternative 13	Alternative 5(a) Short (Preferred)
<i>Old Growth Trees Cut/Topped</i>	0 trees	370 trees	0 trees
<i>Fill in Superior Bay</i>	0 acres	3.4 acres	7.49 acres
<i>Airport Loss of License/Closure</i>	Yes	No	No
<i>Permittable Impacts</i>	Yes	No	Yes
<i>Total Project Costs</i>	\$8 million (all of which would be paid for by DAA/ City of Duluth) and economic impact loss of \$1.5 million every nine (9) months	\$5.7 million (\$5.5 million FAA, \$750k non-federal match)	\$10 million (\$9 million FAA, \$1 million non-federal match)
<i>Federal FONSI/ROD</i>	Rejected	Rejected	Accepted as Preferred

Summary: *The least environmentally damaging practicable alternative that meets the project's purpose and need is to relocate the runway under Alternative 5(a) Short. The other option that would result in shutting down the Airport (No Action) is impracticable because this would trigger \$8 million of local costs compared to Alternative 5(a) Short having \$1 million of non-federal costs. The remaining 90% of the costs for Alternative 5(a) will be paid by the federal government (FAA). Thus the total costs are a minimum of \$8 million to shut down the Airport or \$10 million to relocate the runway and preserve the Airport and its economic benefits for the public. From a local or state perspective, the costs are \$8 million paid locally to shut down, or \$1 million non-federal match to relocate the runway as proposed. The cost benefit analysis is clearly on the side of relocating the runway. From a cost per tree perspective, the 599 old growth trees and the entire forest ecosystem must be balanced against these costs.*

Hazardous Wildlife Attractants

Preparation of the environmental review document included consultation with the United States Department of Agriculture Wildlife Services. The USDA indicated that the selected alternative was unlikely to increase the wildlife hazards present at the airport.

Additional Agency Coordination Background

Extensive agency and public coordination took place throughout the preparation of the environmental review document. Both Technical and Public Advisory Committees were utilized throughout the process. The Public Advisory Committee included the Park Point Community Club, former Congressman Oberstar's Office, Duluth Tree Commission, City of Duluth and other interested parties. The Technical Advisory Committee included the Federal Aviation Administration (FAA), MnDOT, U.S. Army Corps of Engineers (USACE), multiple divisions of the DNR, Minnesota Pollution Control Agency, Bois Forte Band of Chippewa, 1854 Treaty Authority, Metropolitan Interstate Commission, Minnesota Land Trust, and the City of Duluth.

Additionally, a Tree Study Technical Committee was convened to review the results of a Tree Growth Model and Tree Fate Study and included DNR staff, members of the Duluth Tree Commission, City of Duluth, and the FAA.

ENRTF ID: 179-G / Minnesota Point Pine Forest SNA Addition Project

In addition, the Duluth Airport Authority, FAA and USACE entered into a Memorandum of Understanding (MOU) with the intent to preclude the need for routine revisiting of decisions that have already been agreed to earlier in the environmental review process, to encourage early substantive participation by the agencies, and to ensure that the information is adequate to address each agency's regulatory requirements.

In addition to the three signatory parties of the MOU, there are several non-signatory participating federal and state agencies. They include the Environmental Protection Agency, U.S. Fish and Wildlife Service, and the State of Minnesota (Department of Natural Resources, Department of Transportation, and Pollution Control Agency).

The MOU included four concurrence points where the USACE would provide written concurrence on decisions made. The four concurrence points include (1) Purpose and Need, (2) Alternatives Carried Forward, (3) Preferred Alternative and (4) Preliminary Design Phase Impact Sequencing. **Concurrence letters have been received for Concurrence Points 1-3.** Concurrence Point four (4) will be completed before permits are issued.

Diana Griffith

Subject: FW: PRINTED - FW: Wilder Forest Acquisition for Conservation, Preservation and Education

From: Daniel Tilsen [<mailto:djtilsen@gmail.com>]

Sent: Thursday, October 15, 2015 12:39 PM

To: Susan Thornton <susan.thornton@lccmr.leg.mn>

Subject: Wilder Forest Acquisition for Conservation, Preservation and Education



October 15, 2015

Legislative-Citizen Commission on Minnesota Resources
100 Rev. Dr. Martin Luther King Jr. Blvd.
State Office Building, Room 65
Saint Paul, Minnesota 55155

Susan Thornton, Director

This memo is to further elaborate on some of the questions raised during our presentation on October 1, 2015.

Why is Wilder Forest the appropriate location to do our work? For more than 100 years these lakes, prairies, and woods have been tended to by farmers and educators. The story of the Wilder Forest is literally woven into the fabric of the life of the land. MFA became part of this history more than a decade ago when we became have stewards of 150 acres of the Wilder Forest.

As longtime members of the community and tenants on the land, we are keenly aware of the importance of these lands to our neighbors and the tens of thousands of Minnesotans who have visited here. We have intimate knowledge of the wide range of landforms, vegetative types and waterways. Conservation of the assembled properties creates a unique opportunity to build a management plan that will support long-term research and environmental education.

How would an agricultural group manage the natural resources? Minnesota has been a leader in the creation of integrated Natural Resource and Agricultural management plans and we have assembled a team that will help facilitate the creation of that plan. Our partners include the Washington Conservation District, Carnelian-Marine-St. Croix Watershed District, Warner Nature Center, the Minnesota Department of Natural Resources, as well as professors from the University of Minnesota and Extension Services.

Together we will create a regenerative plan that will focus on cross-cultural experiences while growing healthy food and protecting our natural resources and enhancing the environment.

For example, our plan includes conducting research and educational opportunities focusing on the transition zones. Buffers are needed to protect our waterways. We know we can protect our waterways while growing healthy food. Perhaps a wall of berries and fruit will provide protection and habitat for the pollinators and

ENRTF ID: 180-G / Wilder Forest Acquisition for Conservation, Preservation and Education

revenue for farmers. We will develop and demonstrate new models will set the standard for protecting our environment while at the same time producing food and income.

How will you fund this effort? We know that this is project a win, win, win. We are uniquely positioned to step up to protect this land. The investment you make today will be matched, and the state will get over 130-percent return on its investment. We have a variety of funding sources that this grant will set into motion. And at the end of the day, the Amherst Wilder Foundation will use the proceeds again in our state by providing more good work and investment in the people of this great State of Minnesota.

With your help we can preserve an important part of our natural history. Through management and programming we can grow healthy food, educate young and old, and train a new generation of farmers and stewards of the land. And we can achieve all of this while protecting the waterways, forest, fauna and pollinators from development and build on the legacy established by the May Family more than a century ago.

Thank you for your time and consideration,

Daniel Tilsen, Chair Land Task Force
Minnesota Food Association
[651-283-7546](tel:651-283-7546)

180G WILDER FOREST ACQUISITION FOR CONSERVATION

Wilder Forest Purchase Offer and Tax Value Comparisons						
PID	Acres	Name	Offer	Tax Value	Tax \$ per Acre	Offer \$ per acre
14.031.20.31.0002	263.12	Main Farm Site	\$ 4,503,360	\$ 4,978,000	\$ 18,919.12	\$ 17,115.23
22.031.20.11.0001	30.56	Village 1 - \$1,370,000	\$ 606,859	\$ 2,598,700	\$ 85,035.99	\$ 19,857.95
23.031.20.22.0001	38.43	Village 2	\$ 763,141	\$ 1,911,000	\$ 49,726.78	\$ 19,857.95
15.031.20.33.0001	38.24	Upper Mays 1 - \$2,833,000	\$ 1,278,658	\$ 675,500	\$ 17,664.75	\$ 33,437.72
15.031.20.34.0001	47.98	Upper Mays 2	\$ 1,604,342	\$ 719,800	\$ 15,002.08	\$ 33,437.72
22.031.20.21.0001	36.64	Lower Mays 1 - \$295,000	\$ 202,792	\$ 729,600	\$ 19,912.66	\$ 5,534.71
22.031.20.13.0001	16.66	Lower Mays 2	\$ 92,208	\$ 459,600	\$ 27,587.03	\$ 5,534.71
22.031.20.14.0001	30.17	School House	\$ 642,000	\$ 697,200	\$ 23,109.05	\$ 21,279.42
23.031.20.23.0001	38.22	Lake Access	\$ 840,000	\$ 667,000	\$ 17,451.60	\$ 21,978.02
14.031.20.14.0001	39.6	Hackman 1 - Exempt from LCCMR - \$235,000	\$ 159,349	\$ 351,300	\$ 8,871.21	\$ 4,023.97
14.031.20.13.0006	18.8	Hackman 2 - Exempt from LCCMR	\$ 75,651	\$ 242,900	\$ 12,920.21	\$ 4,023.97
		Average cost per acre				
			Offer	Tax Value	Tax \$ per Acre	Offer \$ per acre
		Total without Hackman - \$ 10,533,360	\$ 10,533,360	\$ 13,436,400	\$ 26,927.32	\$ 16,916.49
		Hackman	\$ 235,000	\$ 594,200		
		Total with hackman	\$ 10,768,360	\$ 14,030,600		

TOTAL 598.42 ACRES
 PROPOSAL 540.02 ACRES

↑
 TAX ASSESSED VALUE
 BY PARCEL AND TOTAL

ENRTF ID: 182-G / Otter Tail River Protection and Recreation Trail Acquisition

October 12, 2015

Ms Susan Thornton, Director
LCCMR
100 Rev. Dr. Martin Luther King Jr. Blvd.
State Office Building, Room 65
St. Paul, MN 55155

Re: LCCMR funding request for Project 182-G
Fergus Falls, Minnesota

Dear Ms Thornton:

This letter is written as a response to questions that have been raised during and after the presentation made to the LCCMR Commissioners and staff regarding project 182 – G; specifically, description of the sight, valuation and potential environmental contamination. Following are answers to each of these questions:

- Description of site - The City of Fergus Falls has authorized its representative to enter into negotiations for a proposed acquisition of property located adjacent to the Otter Tail River within the city limits. The property had been used as a dairy plant but has been shuttered for many years. The dairy property consists of four individual land parcels with a total area of approximately 29 acres. From the total site, the City is proposing that the land area fronting the river, which is estimated to be approximately 16.6 acres, be segregated from the balance of the site and retained or otherwise controlled by the City, through easement or dedication (“Encumbered Site”) for project 182 – G. The balance of the site would either be utilized for other civic purposes or potentially utilized as a re-development site. Specifically, the Encumbered Site would be utilized for a river buffer zone as well as walking and bike paths. An illustration of the proposed Encumbered Site and the total Dairy Site follow as Exhibits A and B respectively. Currently, the location of the bike and walking paths have not yet been

ENRTF ID: 182-G / Otter Tail River Protection and Recreation Trail Acquisition

laid out; therefore, the exact size, location and legal description are approximate and subject to modification.

- Due Diligence – If an option to purchase agreement and/or contingent purchase agreement can be successfully negotiated between the seller and the City, the agreement would contain a lengthy due diligence period in order for the City to further study the entire site. Due diligence items would include but not be limited to title, survey, appraisal, environmental evaluation, demolition and site clean-up costs, etc. During this period, the Encumbered Site size and location for the buffer zone, walking and bike paths plus a proposed legal description would be established.
- Appraisal – The City is in the process of engaging Mr. Robert J. Strachota, President of Shenehon Company, MAI, MCBA, and CRE® to provide an appraisal of the Encumbered Site. Mr. Strachota is listed as a DNR approved appraiser. Besides his engagement for the Encumbered Site, Mr. Strachota will work in conjunction with Mr. Paul Bakken - MAI, CCIM, MS Certified General Real Property Appraiser and President of the Valuation Group for the appraisal of the total site.
- Environmental - As noted in the due diligence section, the City will retain a qualified environmental engineering, testing and consulting services company to conduct a thorough site analysis. The City will not accept any liabilities associated with environmental contamination if any should exist on the site.

I hope this explanation answers LCCMR questions; however, in the event further explanation is required or new questions arise please feel free to contact me.

Sincerely,

Rod Spidahl – Fergus Falls City Councilmember
Gordon Hydukovich – Fergus Falls Planning Director
William (Bill) Adams - Consultant

PROPOSED 16.6 ACRE ENCUMBERED LCCMR GRANT REQUEST 182-G



OTTER

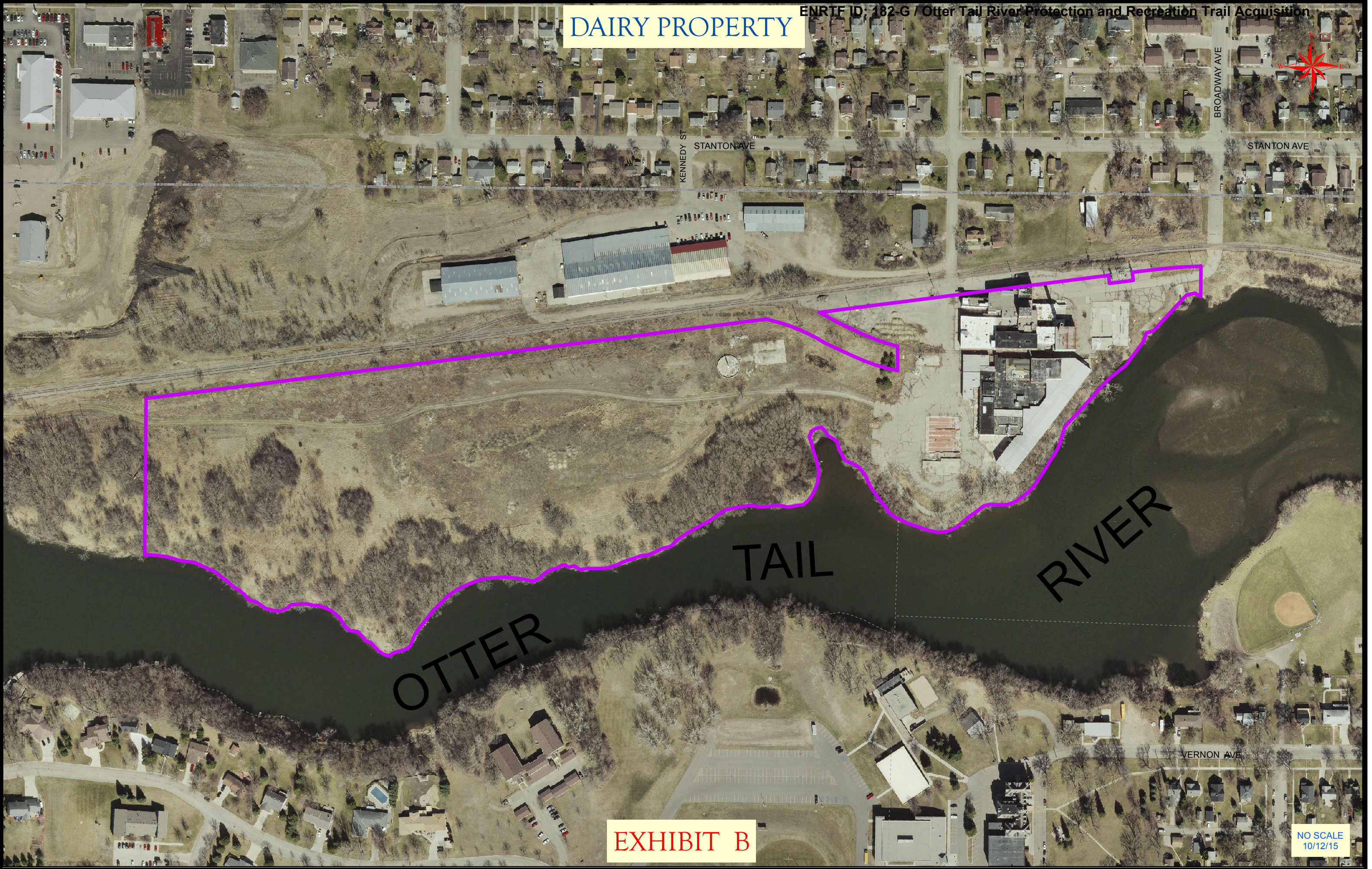
TAIL

RIVER

EXHIBIT A

NO SCALE
10/12/15

DAIRY PROPERTY



OTTER

TAIL

RIVER

EXHIBIT B

KENNEDY ST

STANTON AVE

BROADWAY AVE

STANTON AVE

VERNON AVE

ENRTF ID: 183-G / Tower Historic Harbor Nature Trail/Kayak Route

Project Name: **Tower Harbor LCCMR Cost Estimate**
 SEH Project No: **TOWER 125068**
 Date: **October 12, 2015**
 Estimator: **MB**
 Description: **Preliminary Opinion of Cost**

PEDESTRIAN TRAIL - HARBOR TO TRAIL HEAD	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
SITE PREPARATION - CLEARING AND REMOVALS	LUMP SUM	1	\$ 12,500.00	\$ 12,500.00
COMMON EXCAVATION	CU YD	455	\$ 18.00	\$ 8,190.00
CLASS 5 AGGREGATE BASE	CU YD	305	\$ 29.00	\$ 8,845.00
CONCRETE PAVEMENT (10' WIDE)	SQ FT	16380	\$ 7.00	\$ 114,660.00
GEOTEXTILE FABRIC	SQ YD	1820	\$ 1.50	\$ 2,730.00
FENCING	LIN FT	200	\$ 75.00	\$ 15,000.00
DRAINAGE (SWALES AND CULVERTS)	LUMP SUM	1	\$ 20,000.00	\$ 20,000.00
SUBTOTAL				\$ 181,925.00
PEDESTRIAN TRAIL - MESABI CONNECTION	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
SITE PREPARATION - CLEARING AND REMOVALS	LUMP SUM	1	\$ 22,500.00	\$ 22,500.00
COMMON EXCAVATION	CU YD	680	\$ 18.00	\$ 12,240.00
CLASS 5 AGGREGATE BASE	CU YD	455	\$ 29.00	\$ 13,195.00
BITUMINOUS PAVEMENT (10' WIDE)	TON	410	\$ 90.00	\$ 36,900.00
GEOTEXTILE FABRIC	SQ YD	2725	\$ 1.50	\$ 4,087.50
BOARDWALK	LIN FT	250	\$ 250.00	\$ 62,500.00
DRAINAGE (SWALES AND CULVERTS)	LUMP SUM	1	\$ 20,000.00	\$ 20,000.00
SUBTOTAL				\$ 171,422.50
SIGNAGE	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
WAY FINDING	EACH	5	\$ 1,000.00	\$ 5,000.00
INTERPRATIVE	EACH	5	\$ 1,000.00	\$ 5,000.00
SUBTOTAL				\$ 10,000.00
SUB TOTAL				\$ 363,347.50
TRAFFIC CONTROL			1%	\$ 3,633.00
MOBILIZATION			15%	\$ 54,502.00
EROSION CONTROL			5%	\$ 18,167.00
MISCELLANEOUS CONSTRUCTION			10%	\$ 36,335.00
CONTINGENCIES			15%	\$ 54,502.00
TOTAL CONSTRUCTION				\$ 530,486.50
CIVIL DESIGN, PERMITTING, CONSTRUCTION ADMIN, CONSTRUCTION STAKING			20%	\$ 106,097.00
LEGAL, FISCAL, AND ADMINISTRATIVE			5%	\$ 26,524.00
OTHER CONSULTANTS (ENVIRONMENTAL, GEOTECHNICAL, ETC.)			3%	\$ 15,915.00
TOTAL PROJECT				\$ 679,022.50

ENRTF ID: 183-G / Tower Historic Harbor Nature Trail/Kayak Route

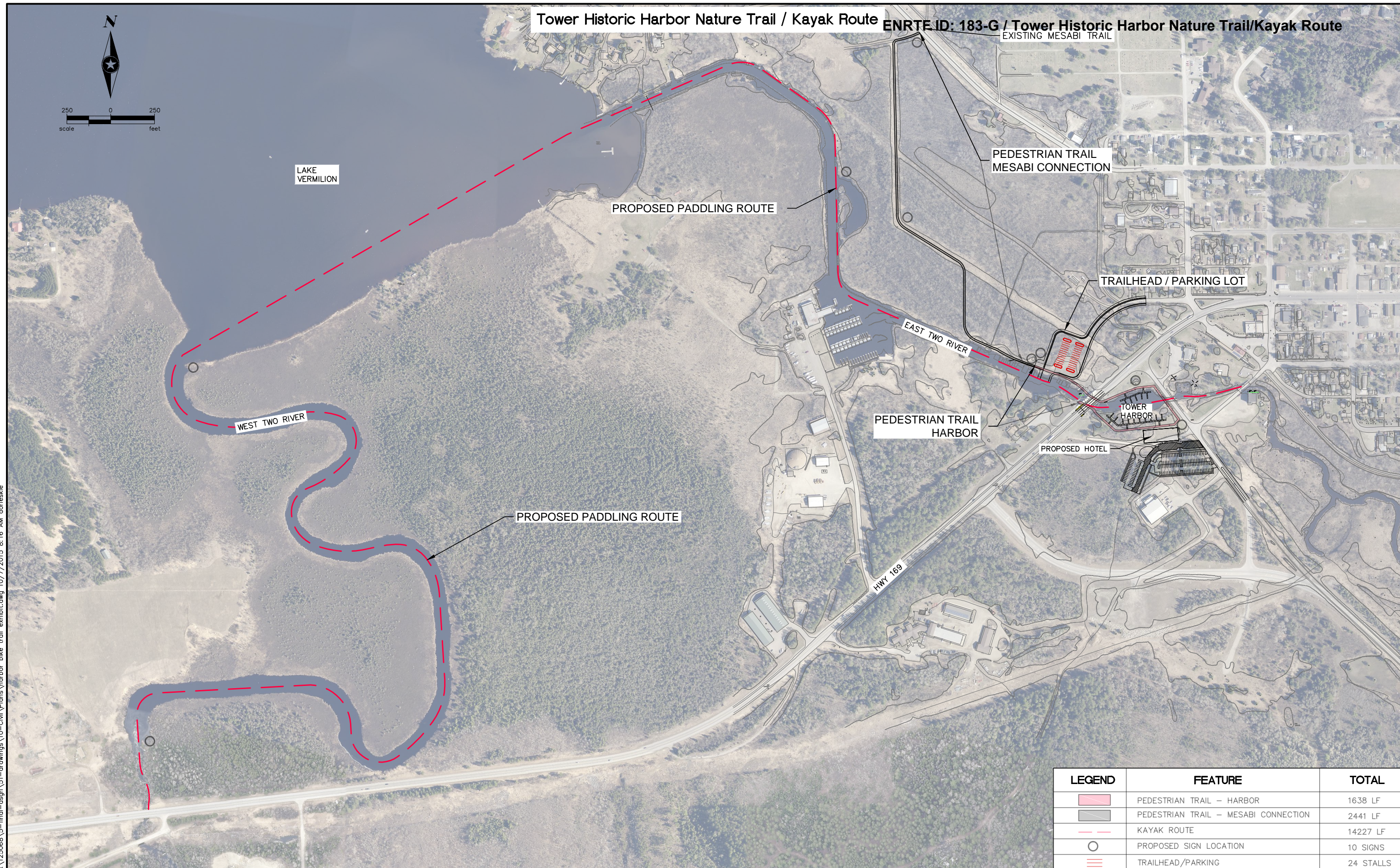
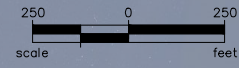
ENRTF ID: 183-G / Tower Historic Harbor Nature Trail/Kayak Route



Project Name: Tower Harbor LCCMR Cost Estimate
 SEH Project No: TOWER 125068
 Date: October 7, 2015
 Estimator: MB
 Description: Preliminary Opinion of Cost

PEDESTRIAN TRAIL - HARBOR TO TRAIL HEAD	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
SITE PREPARATION - CLEARING AND REMOVALS	LUMP SUM	1	\$ 12,500.00	\$ 12,500.00
COMMON EXCAVATION	CU YD	455	\$ 18.00	\$ 8,190.00
CLASS 5 AGGREGATE BASE	CU YD	305	\$ 29.00	\$ 8,845.00
CONCRETE PAVEMENT (10' WIDE)	SQ FT	16380	\$ 7.00	\$ 114,660.00
GEOTEXTILE FABRIC	SQ YD	1820	\$ 1.50	\$ 2,730.00
FENCING	LIN FT	200	\$ 75.00	\$ 15,000.00
DRAINAGE (SWALES AND CULVERTS)	LUMP SUM	1	\$ 20,000.00	\$ 20,000.00
SUBTOTAL				\$ 181,925.00
PEDESTRIAN TRAIL - MESABI CONNECTION	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
SITE PREPARATION - CLEARING AND REMOVALS	LUMP SUM	1	\$ 22,500.00	\$ 22,500.00
COMMON EXCAVATION	CU YD	680	\$ 18.00	\$ 12,240.00
CLASS 5 AGGREGATE BASE	CU YD	455	\$ 29.00	\$ 13,195.00
BITUMINOUS PAVEMENT (10' WIDE)	TON	410	\$ 90.00	\$ 36,900.00
GEOTEXTILE FABRIC	SQ YD	2725	\$ 1.50	\$ 4,087.50
BOARDWALK	LIN FT	250	\$ 250.00	\$ 62,500.00
DRAINAGE (SWALES AND CULVERTS)	LUMP SUM	1	\$ 20,000.00	\$ 20,000.00
SUBTOTAL				\$ 171,422.50
SIGNAGE	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
WAY FINDING	EACH	5	\$ 1,000.00	\$ 5,000.00
INTERPRATIVE	EACH	5	\$ 1,000.00	\$ 5,000.00
SUBTOTAL				\$ 10,000.00
TRAIL HEAD/PARKING LOT/BOAT LAUNCH	UNIT	EST. QUANTITY	UNIT PRICE	AMOUNT
SITE PREPARATION - CLEARING AND REMOVALS	LUMP SUM	1	\$ 15,000.00	\$ 15,000.00
COMMON EXCAVATION	CU YD	2540	\$ 25.00	\$ 63,500.00
BITUMINOUS PAVEMENT	TON	1560	\$ 95.00	\$ 148,200.00
CURB AND GUTTER (B624)	LIN FT	1960	\$ 18.00	\$ 35,280.00
CLASS 5 AGGREGATE BASE	CU YD	1460	\$ 25.00	\$ 36,500.00
SELECT GRANULAR BORROW	CU YD	1850	\$ 19.00	\$ 35,150.00
GEOTEXTILE FABRIC	SQ YD	6600	\$ 1.50	\$ 9,900.00
STRIPING	LIN FT	1000	\$ 0.75	\$ 750.00
LIGHTING	EACH	6	\$ 1,200.00	\$ 7,200.00
RAMP	LUMP SUM	1	\$ 22,000.00	\$ 22,000.00
DOCKS & BULKHEAD	LUMP SUM	1	\$ 75,000.00	\$ 75,000.00
STORM WATER TREATMENT	LUMP SUM	1	\$ 18,000.00	\$ 18,000.00
SUBTOTAL				\$ 466,480.00
SUB TOTAL				\$ 829,827.50
TRAFFIC CONTROL			1%	\$ 8,298.00
MOBILIZATION			10%	\$ 82,983.00
EROSION CONTROL			5%	\$ 41,491.00
MISCELLANEOUS CONSTRUCTION			5%	\$ 41,491.00
CONTINGENCIES			15%	\$ 124,474.00
TOTAL CONSTRUCTION				\$ 1,128,564.50
CIVIL DESIGN, PERMITTING, CONSTRUCTION ADMIN, CONSTRUCTION STAKING			20%	\$ 225,713.00
LEGAL, FISCAL, AND ADMINISTRATIVE			5%	\$ 56,428.00
OTHER CONSULTANTS (ENVIRONMENTAL, GEOTECHNICAL, ETC.)			3%	\$ 33,857.00
TOTAL PROJECT				\$ 1,444,562.50

Tower Historic Harbor Nature Trail / Kayak Route ENRTE ID: 183-G / Tower Historic Harbor Nature Trail/Kayak Route



LEGEND	FEATURE	TOTAL
	PEDESTRIAN TRAIL - HARBOR	1638 LF
	PEDESTRIAN TRAIL - MESABI CONNECTION	2441 LF
	KAYAK ROUTE	14227 LF
	PROPOSED SIGN LOCATION	10 SIGNS
	TRAILHEAD/PARKING	24 STALLS

S:\PT\TOWER\125068\5-final-dsgn\51-drawings\10-Civil\Plans\harbor bike trail exhibit.dwg 10/7/2015 8:16 AM carleskie

DRAWN BY: -				
DESIGNER: -				
CHECKED BY: -				
DESIGN TEAM	NO.	BY	DATE	REVISIONS

2016 LCCMR APPLICATION



TOWER, MINNESOTA

TOWER HARBOR PROPOSED LCCMR MAP

FILE NO. TOWER 125068	1 1
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ENRTF ID: 186-H / Roseau Lake Watershed: Targeted Water Quality Improvement

Diana Griffith

Subject: FW: Follow-up item after LCCMR Proposal Hearing 186H
Attachments: Roseau_Lake_proposal_report.pdf; Roseau Lake Rehabilitation_LSOHC2015.pdf

Subject: FW: Follow-up item after LCCMR Proposal Hearing 186H

Dear LCCMR Members,
Per Rep. McNamara's request.
Susan

Susan Thornton
Director, LCCMR
651-296-6264
Rm. 65 State Office Building
100 Rev. Dr. Martin Luther King Jr. Blvd
St. Paul, Mn 55155

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From: Van Offelen, Henry (DNR) [<mailto:Henry.Van.Offelen@state.mn.us>]
Sent: Tuesday, October 13, 2015 10:17 AM
To: Susan Thornton <susan.thornton@lccmr.leg.mn>; Michael McDonough <michael.mcdonough@lccmr.leg.mn>
Cc: Diana Griffith <diana.griffith@lccmr.leg.mn>; charles@iwinst.org
Subject: Follow-up item after LCCMR Proposal Hearing 186H

Hello Susan and Michael,

Several commission members asked for additional information about the elements of the Roseau Lake project associated with habitat and flood damage reduction. Attached is a copy of the slide show that was presented to the LSOHC on September 2 as well as the original proposal. At the time of the LSOHC hearing, we reduced the total request to LSOHC to \$6 million dollars in order to focus funding on the habitat related element of the lake rehabilitation. The proposal itself originally requested over \$9 million.

As discussed last week, the companion proposal in front of the LCCMR is to actively develop and market a local campaign to implement clean water related projects in the watershed to ensure the long-term success of the lake rehabilitation.

Please distribute this information to commission member and contact me with any questions.

Thank you,

Henry Van Offelen
Red River Basin Coordinator
MN DNR Ecological and Water Resources
218-846-8406 (office)
218-849-5270 (cell)

ENRTF ID: 186-H / Roseau Lake Watershed: Targeted Water Quality Improvement
Lessard-Sams Outdoor Heritage Council
Fiscal Year 2017 / ML 2016 Request for Funding



Date: October 07, 2015

Program or Project Title: Roseau Lake Rehabilitation

Funds Requested: \$9,500,000

Manager's Name: John Williams, Regional Wildlife Manager, DNR; Tracy Halstengard Roseau River Watershed District

Organization: MN Department of Natural Resources, Roseau River Watershed District

Address: 2115 Birchmont Beach Road NE

City: Bemidji, MN 56601

Office Number: (218)-308-2680

Email: john.williams@state.mn.us

County Locations: Roseau

Regions in which work will take place:

- Northern Forest

Activity types:

- Protect in Easement
- Restore
- Enhance
- Protect in Fee

Priority resources addressed by activity:

- Wetlands
- Habitat

Abstract:

This multi-purpose project will partially restore a large drained lake, provide water level management capacity to substantially improve wildlife habitat conditions and provide flood damage reduction benefits, and will contribute to water quality improvements in the Roseau River.

Design and scope of work:

Roseau Lake was drained in the early 1900s when the Roseau River was channelized and dredged and associated ditch systems were constructed to increase agricultural production in the watershed. Prior to drainage, Roseau Lake provided excellent fish and waterfowl habitat. After drainage, much of the lake basin was farmed for many year and produced crops in drier times, but production was low and unreliable in wetter years. Over time, there has been recognition by local landowners that farming the lake bed would always be tenuous and large portions of the lake basin became part of the Roseau Lake Wildlife Management Area in the 1960s. Interest in a partial restoration of the lake has grown in recent year because the DNR, the watershed district, local governments, and citizens recognize that there are opportunities to develop a multipurpose project with significant wildlife habitat and flood damage reduction benefits (see attached citizen's advisory report).

The project has two primary purposes:

- 1) To improve the quantity and quality of wildlife habitat in and surrounding the Roseau Lake basin area. A key objective of the project is to provide migratory habitat (including an abundance of forage) for waterfowl and shorebirds in spring and in fall.
- 2) To effectively use the water storage capacity of the lake basin to reduce peak flows on the Roseau River downstream of the lake bed by 10% or more compared to current conditions as well as reduce the footprint of the 100-year floodplain.

Wildlife habitat benefits will be achieved by constructing a system of levees and water control structures to provide capacity to actively manage water levels in the lake basin. This infrastructure will allow wildlife managers to manage lake levels throughout the year to achieve wildlife management objectives. Specifically, timely water level management in spring and fall will create conditions to provide

ENRTF ID: 186-H / Roseau Lake Watershed: Targeted Water Quality Improvement

suitable forage in abundance for migratory waterfowl and shore birds. In addition, better management of water levels in the basin during the growing season will enhance the relative value of surrounding grass cover for nesting and provide brood-rearing cover for waterfowl and other waterbirds. Benefits to aquatic invertebrates, amphibians, reptiles, and aquatic mammals will accrue whenever water is present. Fish habitat on the river will improve as a result of features and operation that improve water quality, hydrologic conditions and the habitat corridor along the Roseau River.

At the same time, this infrastructure will provide water managers the ability to manipulate the timing of flood flows in the area to optimize the water storage capacity of the lake bed to achieve flood damage reduction objectives. In its current state, the Roseau Lake basin area floods in the early portion of the flood hydrograph such that flood storage is unavailable when the flood peak passes through the area. Flood damage reduction benefits will be achieved by altering the timing of water storage in the Lake Basin area so the available storage in the lake bed is more effectively used to reduce peak flows downstream.

The project has secondary benefits including improved hydrologic conditions in the Roseau River which will contribute to improved water quality, stream stability, and fish habitat and will also benefit rare plant communities in the Big Swamp area downstream. The project is consistent with the watershed plan and will compliment other ongoing work in the watershed to improve fish and wildlife habitat, improve water quality, and reduce flood damage.

Crops:

Will there be planting of corn or any crop on OHF land purchased or restored in this program - **No**

How does the request address MN habitats that have: historical value to fish and wildlife, wildlife species of greatest conservation need, MN County Biological Survey data, and/or rare, threatened and endangered species inventories:

Roseau Lake was historically an important wildlife lake providing a diversity of habitats for many aquatic mammals, birds, amphibians, and reptiles. The basin area is now inundated on a nearly annual basis and there are large water level fluctuations which create degraded habitat conditions and minimal shallow lake functions for wildlife. The habitat within the lake and adjacent uplands are degraded due to uncontrolled water level fluctuations. The flashy nature of flooding in the basin has greatly diminished habitat quality and wildlife production (e.g., ground nesting by birds) in and near the basin.

Since the project will reduce downstream peak flows, it will also benefit habitat in the Big Swamp area in western Roseau County. This vast area is characterized by a mosaic of shallow wetlands, wet meadows, lowland brush, and aspen. Over the last few decades, native vegetation in this area has been degraded by excessive duration, frequency, and depth of flooding. Reed canary grass and hybrid cattail have invaded such sites, thus reducing habitat production over a few thousand acres. Moderating such flooding will reduce impacts to existing native plant and animal populations and allow restoration of native vegetation.

What is the nature of urgency and why it is necessary to spend public money for this work as soon as possible:

A watershed team has developed the concept for this multipurpose project. LSOHC funds will ensure that important wildlife habitat elements are incorporated into the project. Also, Laws of Minnesota 2015, First Special Session, Chapter 4, Section 140. WATER RETENTION PROJECTS provides a window of opportunity for this request.

Describe the science based planning and evaluation model used:

DNR wildlife has identified this project as a regional priority. This project is identified in the Roseau River Watershed Comprehensive plan. The RRWMB Distributed Detention Study has identified this project as the most effective place to store water in the RRWD.

Which sections of the Minnesota Statewide Conservation and Preservation Plan are applicable to this project:

- H4 Restore and protect shallow lakes
- H7 Keep water on the landscape

Which other plans are addressed in this proposal:

- Long Range Duck Recovery Plan
- North American Waterfowl Management Plan

ENRTF ID: 186-H / Roseau Lake Watershed: Targeted Water Quality Improvement

Which LSOHC section priorities are addressed in this proposal:

Northern Forest:

- Protect shoreland and restore or enhance critical habitat on wild rice lakes, shallow lakes, cold water lakes, streams and rivers, and spawning areas

Relationship to other funds:

- Environmental and Natural Resource Trust Fund
- Clean Water Fund
- Flood Hazard Mitigation Program

This project will provide funds for permanent habitat protection and enhancement to compliment expected flood hazard mitigation program funding. The watershed district will request funds from this program for this project. In addition, a proposal is being submitted to the LCCMR for a complimentary project which will develop a targeted implementation plan to improve water quality in the lake's watershed. This targeted implementation plan will provide the mechanism to leverage Clean Water funds granted to the local soil and water conservation district.

How does this proposal accelerate or supplement your current efforts in this area:

The watershed team has developed this concept and is at the stage of evaluating various project alternatives which have a range of abilities to meet wildlife habitat objectives. Securing LSOHC funds will accelerate project development and ensure that habitat enhancement components of this project are refined and incorporated into the final project design for implementation. Project partners will continue to seek funding from other sources and securing these state funds will provide match that may be needed.

Describe the source and amount of non-OHF money spent for this work in the past:

Appropriation Year	Source	Amount
FY 15 & 16	Mdtn Wk Grp & RRWD	\$128,000

How will you sustain and/or maintain this work after the Outdoor Heritage Funds are expended:

The Roseau River Watershed District will be primarily responsible for all future maintenance of this project's infrastructure under a joint agreement with MN DNR. The Watershed District is authorized by law to complete long-term maintenance of this project (Minnesota Statutes 103D). Habitat enhancements within the rehabilitated lake basin will be the responsibility of the Mn DNR Section of Wildlife as part of ongoing habitat maintenance on the Wildlife Management Area.

Explain the things you will do in the future to maintain project outcomes:

Year	Source of Funds	Step 1	Step 2	Step 3
2018-2023 Monitoring	Local RRWD Levy & DNR	Monitor & Act as Needed		

Activity Details:

If funded, this proposal will meet all applicable criteria set forth in MS 97A.056 - **Yes**

Will local government approval be sought prior to acquisition - **Yes**

Is the land you plan to acquire free of any other permanent protection - **Yes**

Is this land currently open for hunting and fishing - **Yes**

All state lands (WMA) within the project footprint are open for public hunting. The Roseau River is open to fishing through boat accesses.

Will the land be open for hunting and fishing after completion - **Yes**

Most state lands in the project footprint will likely remain open to public hunting. A portion of the lake basin and some associated uplands may be designated as a waterfowl refuge for feeding and resting to enhance overall opportunities for recreational hunting and bird watching on lands within the area which are open to public hunting. All lands acquired for the project in fee title will be open for

ENRTF ID: 186-H / Roseau Lake Watershed Targeted Water Quality Improvement

hunting and fishing where applicable. All private lands secured through easements will be open at the discretion of the landowner.

Will the eased land be open for public use - **Yes**

Only if permitted by the landowner.

Is the land you plan to acquire free of any other permanent protection - **Yes**

Are there currently trails or roads on any of the acquisitions on the parcel list - **Not Listed**

Will new trails or roads be developed as a result of the OHF acquisition - **Not Listed**

Will restoration and enhancement work follow best management practices including MS 84.973 Pollinator Habitat Program - **Yes**

Is the activity on permanently protected land per 97A.056, subd 13(f), tribal lands, and/or public waters per MS 103G.005, Subd. 15 - **Yes (WMA, Private Land, Public Waters, Roseau River Watershed District)**

Accomplishment Timeline:

Activity	Approximate Date Completed
Preliminary Engineering	June 2016
Environmental review and permitting	Fall 2016
Final Engineering	Fall 2016 - Spring 2017
Operating plan	2017
Hearings	2016
Construction phase 1	2016 - 17
Construction phase 2	2017 - 18
Post Construction Monitoring	2025
Acquisition	2017

Federal Funding:

Do you anticipate federal funds as a match for this program - **No**

Outcomes:

Programs in the northern forest region:

- Improved availability and improved condition of habitats that have experienced substantial decline *The site will be monitored through a joint 5 year monitoring plan between the RRWD and DNR. Monitoring will include an evaluation of bird species use; plant community condition; water quality; water quantity as measured against project outcomes and current conditions.*

ENRTF ID: 186-H / Roseau Lake Watershed: Targeted Water Quality Improvement Budget Spreadsheet

Total Amount of Request: \$9,500,000

Budget and Cash Leverage

Budget Name	LSOHC Request	Anticipated Leverage	Leverage Source	Total
Personnel	\$0	\$0		\$0
Contracts	\$6,000,000	\$3,000,000	WD; RRWMB; USDA	\$9,000,000
Fee Acquisition w/ PILT	\$540,000	\$0		\$540,000
Fee Acquisition w/o PILT	\$1,300,000	\$1,000,000	WD; RRWMB; USDA	\$2,300,000
Easement Acquisition	\$1,160,000	\$1,000,000	WD; RRWMB; USDA	\$2,160,000
Easement Stewardship	\$0	\$0		\$0
Travel	\$0	\$0		\$0
Professional Services	\$500,000	\$500,000	RRWMB	\$1,000,000
Direct Support Services	\$0	\$0		\$0
DNR Land Acquisition Costs	\$0	\$0		\$0
Capital Equipment	\$0	\$0		\$0
Other Equipment/Tools	\$0	\$0		\$0
Supplies/Materials	\$0	\$0		\$0
DNR IDP	\$0	\$0		\$0
Total	\$9,500,000	\$5,500,000	-	\$15,000,000

Amount of Request: \$9,500,000
 Amount of Leverage: \$5,500,000
 Leverage as a percent of the Request: 57.89%
 DSS + Personal: \$0
 As a % of the total request: 0.00%
 Easement Stewardship: \$0
 As a % of the Easement Acquisition: -%

Output Tables

Table 1a. Acres by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	270	270
Protect in Fee W/O State PILT Liability	0	0	0	1,000	1,000
Protect in Easement	0	0	0	0	0
Enhance	3,000	0	0	1,900	4,900
Total	3,000	0	0	3,170	6,170

Table 2. Total Requested Funding by Resource Type

Type	Wetlands	Prairies	Forest	Habitats	Total
Restore	\$0	\$0	\$0	\$0	\$0
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$540,000	\$540,000
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$1,300,000	\$1,300,000
Protect in Easement	\$0	\$0	\$0	\$1,160,000	\$1,160,000
Enhance	\$0	\$0	\$0	\$6,500,000	\$6,500,000
Total	\$0	\$0	\$0	\$9,500,000	\$9,500,000

Table 3. Acres within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	0	0	0	0	0	0
Protect in Fee with State PILT Liability	0	0	0	0	270	270
Protect in Fee W/O State PILT Liability	0	0	0	0	1,000	1,000
Protect in Easement	0	0	0	0	0	0
Enhance	0	0	0	0	4,900	4,900
Total	0	0	0	0	6,170	6,170

Table 4. Total Requested Funding within each Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest	Total
Restore	\$0	\$0	\$0	\$0	\$0	\$0
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$0	\$540,000	\$540,000
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$1,300,000	\$1,300,000
Protect in Easement	\$0	\$0	\$0	\$0	\$1,160,000	\$1,160,000
Enhance	\$0	\$0	\$0	\$0	\$6,500,000	\$6,500,000
Total	\$0	\$0	\$0	\$0	\$9,500,000	\$9,500,000

Table 5. Average Cost per Acre by Resource Type

Type	Wetlands	Prairies	Forest	Habitats
Restore	\$0	\$0	\$0	\$0
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$2,000
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$1,300
Protect in Easement	\$0	\$0	\$0	\$0
Enhance	\$0	\$0	\$0	\$3,421

ENRTF ID: 186-H / Roseau Lake Watershed: Targeted Water Quality Improvement

Table 6. Average Cost per Acre by Ecological Section

Type	Metro/Urban	Forest/Prairie	SE Forest	Prairie	Northern Forest
Restore	\$0	\$0	\$0	\$0	\$0
Protect in Fee with State PILT Liability	\$0	\$0	\$0	\$0	\$2,000
Protect in Fee W/O State PILT Liability	\$0	\$0	\$0	\$0	\$1,300
Protect in Easement	\$0	\$0	\$0	\$0	\$0
Enhance	\$0	\$0	\$0	\$0	\$1,327

Target Lake/Stream/River Feet or Miles

3

Parcel List

Section 1 - Restore / Enhance Parcel List

Roseau

Name	TRDS	Acres	Est Cost	Existing Protection?
State Wildlife Management Area Lands	1634020	4,900	\$0	Yes

Section 2 - Protect Parcel List

Roseau

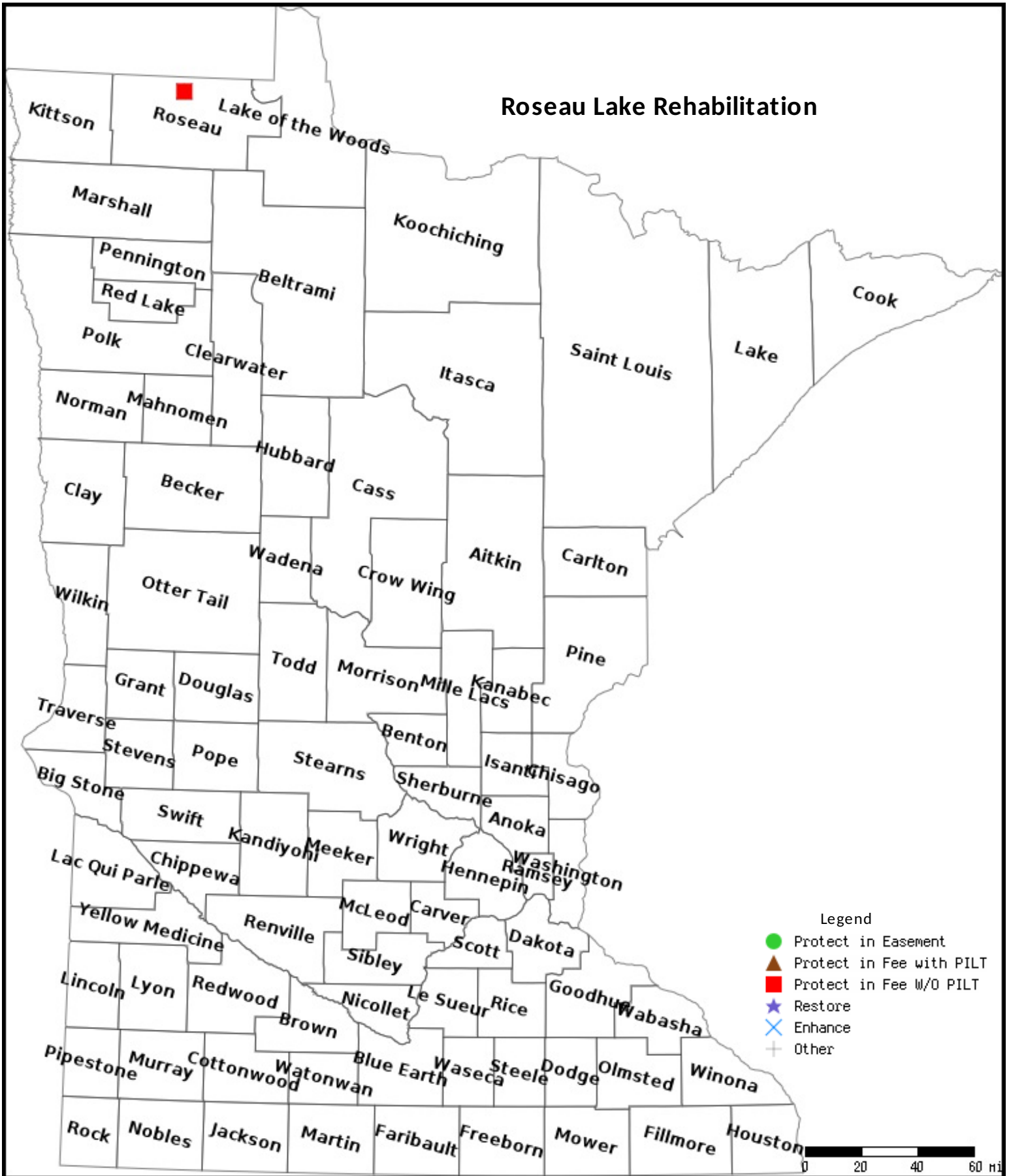
Name	TRDS	Acres	Est Cost	Existing Protection?	Hunting?	Fishing?
Private Parcels - WD Acquisition/easements	1634020	1,000	\$0	No	Full	Not Applicable
Private Parcels - WMA acquisition		270	\$0	No	Full	Not Applicable

Section 2a - Protect Parcel with Bldgs

No parcels with an activity type protect and has buildings.

Section 3 - Other Parcel Activity

No parcels with an other activity type.



Data Generated From Parcel List

