



## Environment and Natural Resources Trust Fund (ENRTF)

### M.L. 2020 ENRTF Work Plan (Main Document)

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**Today's Date:** 2/17/2020

**Date of Next Status Update Report:** April 1, 2021

**Date of Work Plan Approval:**

**Project Completion Date:** June 2022

**Does this submission include an amendment request?** No

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**PROJECT TITLE:** Peatland Restoration in the Lost River State Forest

**Project Manager:** Torin McCormack

**Organization:** Roseau River Watershed District

**Mailing Address:** 714 6<sup>th</sup> Street SW

**City, State, Zip Code:** Roseau, MN 56751

**Project Manager Direct Telephone Number:** 218-452-0179

**Email Address:** [rrwd@mncable.net](mailto:rrwd@mncable.net)

**Web Address:** <http://www.roseauriverwd.com/index.html>

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**Location:** Northwest Region, Lost River State Forest, Roseau County, MN

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**Total Project Budget:** \$135,000

**Amount Spent:** \$0

**Balance:** \$135,000

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**Legal Citation:** M.L. 2020, Chp. xx, Sec. xx, Subd. xx

**Appropriation Language:**

## **PROJECT STATEMENT:**

The Lost River Forest is a state forest located in Roseau County, Minnesota. Lost River Forest contains approximately 72 square miles of wetlands along the Minnesota-Manitoba border between the cities of Roseau and Warroad Minnesota. Outdoor recreation opportunities include camping, fishing, hunting and trails designated for hiking and snowmobiling.

Like many large tracts of public land in northern Minnesota, this project area consists of extensive networks of ditches constructed in the early 1900's to convey surface and subsurface water through the project area promoting agricultural production. Currently agricultural production is very limited. The project area includes Judicial Ditch 61 (JD 61) that removes hydrology from the existing wetlands within the project limits through conveyance resulting in degradation of the peatland wetlands which impacts aquatic and terrestrial habitats. Restoring hydrology to peatland communities within the Lost River State Forest would provide ecological benefits to the plant communities and habitat through restoration of hydrologic connections between peatlands and streams in addition to reducing transport of phosphates, nitrates and suspended sediments through the existing drainage system into Lost River downstream.

The purpose of this project is to assess restoration of peatlands impacted by JD 61 in the Lost River State Forest. Due to size of the Lost River State Forest, the scope of work in this application has been divided into two (36 square mile) phases. The assessment will consist of collecting soil characteristics, water level, floristic diversity, elevation data, restoration feasibility across the ditch corridors. These features will be incorporated with existing GIS datasets to generate a decision matrix which will select the appropriate restoration strategy at each ditch segment. The results of data analysis will be a report detailing areas suitable or not suitable for restoration and potential restoration constraints due to impacts on infrastructure, road systems or private property.

Preliminary hydrologic and geotechnical reviews were completed in the early 1980s as part of the Flood Water Retention Program Flood Control Effectiveness instituted by the Lower Red River Watershed Management Board and the MNDNR. Geotechnical analysis as recent as 2008 has been completed for recent phases of the project. This data will be utilized as historic and supportive data for the project summary report. Comparison of historical reports and geotechnical logs have identified trends within the project area that indicate the need for additional data prior to proposing restoration measures.

This project presents similar challenges faced across public lands in northern Minnesota. Often addressing wetland restoration requires analysis of both the physical characteristics of the wetlands and the interconnection of public infrastructure or private lands to determine the potential of restoration and develop restoration techniques that are applicable to the project. The goal of the project is to assess a broad large scale project and develop a methodology that can be replicated on similar watershed scale wetland restoration projects throughout northern Minnesota.

## II. OVERALL PROJECT STATUS UPDATES:

First Update April 1, 2021

Second Update October 1, 2021

Third Update April 1, 2022

Final Report between project end (June 30) and August 15, 2022

## III. PROJECT ACTIVITIES AND OUTCOMES:

### ACTIVITY 1 Title: Existing Data Review and Data Collection Selection

**Description:** Review of all available existing historic data that includes aerial photos, geotechnical, county soil survey, NWI and geologic data. Complete pre-selection of data cross sections to create efficiency during field assessments. Licensed Minnesota professional soil scientist in cooperation with Watershed Specialist will review all available historic data. GIS specialist in cooperation with Watershed Specialist will determine cross section locations prior to field assessments.

### ACTIVITY 1 ENRTF BUDGET: \$4,604

Outcome	Completion Date
1. Historic Data Review	<i>August 2020</i>
2. Selection of Data Collection Sites for Phase I and II	<i>August 2020</i>

First Update April 1, 2021

Second Update October 1, 2021

Third Update April 1, 2022

Final Report between project end (June 30) and August 15, 2022

### ACTIVITY 2 Title: Collect peat humification data and elevation data

**Description:** Peat samples and elevation data will be collected at each cross section, located at each 1- foot interval drop in elevation across the ditch laterals. The peat samples will be located 10 meters and 100 meters from the edge of ditch or edge of spoil/roadway. MN Professional Soil Scientist/Classifier will determine humification using VonPost method. Elevation data will be collected 100 meters on either side of the ditch by Watershed specialist. Watershed Specialist will collect peat sample locations and cross section data of roadways or spoil bank, where present.

**ACTIVITY 2 ENRTF BUDGET: \$94,375**

Outcome	Completion Date
1. Field Data Collection for Phase I	<i>September 2020</i>
2. Field Data Collection for Phase II	<i>September 2021</i>

**First Update April 1, 2021****Second Update October 1, 2021****Third Update April 1, 2022****Final Report between project end (June 30) and August 15, 2022****ACTIVITY 3 TITLE: Input data into Decision Matrix, generate report**

**Description:** Data collected from the field will be converted to a shapefile format, the elevation and soil data will be combined with existing GIS datasets to create a decision matrix. The results of the decision matrix will be compared to potential constraints of adjacent properties and infrastructure landscape position. A final report will be generated, detailing the process, data results and restoration strategy best suited to the health of wetlands and water quality benefits.

**ACTIVITY 3 ENRTF BUDGET: \$36,021**

Outcome	Completion Date
1. Summary of Phase I Field Data	<i>December 2020</i>
2. Summary of Phase II Field Data	<i>December 2021</i>
3. Decision Matrix for Phase I and II	<i>June 2022</i>
4. Final Project Report	<i>June 2022</i>

**First Update April 1, 2021****Second Update October 1, 2021****Third Update April 1, 2022****Final Report between project end (June 30) and August 15, 2022****IV. DISSEMINATION:**

**Description:** The report, methodology, and documentation of data collection will be available on the Roseau River Watershed District website : <http://www.roseauriverwd.com/index.html>. The project will be listed in the projects tab of the website, reference to the project will be share on social media via facebook and Instagram. The watershed district will distribute the report to local government and agency partners.

The Minnesota Environment and Natural Resources Trust Fund (ENRTF) will be acknowledged through use of the trust fund logo or attribution language on project print and electronic media, publications, signage, and other communications per the [ENRTF Acknowledgement Guidelines](#).

**First Update April 1, 2021**

**Second Update October 1, 2021**

**Third Update April 1, 2022**

**Final Report between project end (June 30) and August 15, 2022**

## **V. ADDITIONAL BUDGET INFORMATION:**

### **A. Personnel and Capital Expenditures**

**Explanation of Capital Expenditures Greater Than \$5,000: N/A**

**Explanation of Use of Classified Staff: N/A**

**Total Number of Full-time Equivalents (FTE) Directly Funded with this ENRTF Appropriation:**

Enter Total Estimated Personnel Hours for entire duration of project: 558.5	Divide total personnel hours by 2,080 hours in 1 yr = TOTAL FTE: 0.27
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**Total Number of Full-time Equivalents (FTE) Estimated to Be Funded through Contracts with this ENRTF Appropriation:**

Enter Total Estimated Contract Personnel Hours for entire duration of project: 576	Divide total contract hours by 2,080 hours in 1 yr = TOTAL FTE: 0.28

## **VI. PROJECT PARTNERS:**

- A. Partners outside of project manager's organization receiving ENRTF funding  
N/A
- B. Partners outside of project manager's organization NOT receiving ENRTF funding

Roseau Watershed District will be the fiscal agent receiving funds for the project. Roseau County and the Minnesota Department of Natural Resources (DNR) will be cooperating partners in the project. Roseau County Administers JD61 and the Department of Natural Resources oversees the parcels within the project limits. Previously funded projects and studies have been successful with the same project partners. Some of these include; The Palmville Fen Restoration Project, Hay Creek Setback Levees and Norland Impoundment, Roseau River WMA Pool 2/Pool 3 Project and The Beltrami Island State Forest/Headwaters Project. The project partners have two active projects, The Roseau Lake Rehabilitation Project and The Roseau River Restoration Project.

The following local agencies will assist by providing technical input: Minnesota Natural Resource Conservation Service (NRCS), Minnesota Department of Natural Resources (DNR), US Fish and Wildlife Services, US Forest Services and the US Army Corps of Engineers. Outside services required to complete the project include soil classification, environmental and GIS services.

## **VII. LONG-TERM- IMPLEMENTATION AND FUNDING:**

The long-term implementation of the project is to complete large scale peatland restoration within the Lost River State Forest. The restoration of hydrology and vegetation of these wetland complexes will provide numerous ecological and water quality benefits both within and downstream of the Lost River State Forest. Secondly a result of the project will develop a methodology that can be replicated on similar watershed scale wetland restoration projects throughout northern Minnesota and a “road map” for watershed scale restorations that provide sustainable strategies to improve water quality, ecological integrity and resiliency to climatic change.

Additional funding requests will be required for engineering and construction of peatland restoration in the Lost River State Forest. Long-term monitoring and maintenance will be implemented on future funded restoration projects to assure all constructed peatland restoration measures are adequately functioning as designed in addition to monitoring the ecological and biological diversity of the peatland wetlands.

## **VIII. REPORTING REQUIREMENTS:**

- Project status update reports will be submitted April 1 and October 1 each year of the project
- A final report and associated products will be submitted between June 30 and August 15, 2022

## **IX. SEE ADDITIONAL WORK PLAN COMPONENTS:**

**A. Budget Spreadsheet**

**B. Visual Component or Map**

**C. Parcel List Spreadsheet – N/A**

**D. Acquisition, Easements, and Restoration Requirements – N/A**

**E. Research Addendum – N/A**

Attachment A: Project Budget Spreadsheet  
 Environment and Natural Resources Trust Fund  
 M.L. 2020 Budget Spreadsheet

Legal Citation:

Project Manager: Torin McCormack

Project Title: Peatland Restoration in the Lost River State Forest.

Organization: Roseau River Watershed District

Project Budget: \$135,000.00

Project Length and Completion Date: 2 years, 6/30/2022

Today's Date: 2/17/2020



ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET		Budget	Amount Spent	Balance
<b>BUDGET ITEM</b>				
<b>Personnel (Wages and Benefits)</b>		\$ 43,320	\$ -	\$ 43,320
Watershed Specialist wages; phase 1 fieldwork 168 hrs (\$12,587.84), phase 2 fieldwork 192 hrs (\$14,386.56), GIS Services 60hrs (5,994.40), Report Writing 20hrs (\$1,498.60), Hydraulic Analysis 20hrs (\$1,498.60) Total = \$35,966.00 (7%FTE for 3 years) .				
Watershed Administrator wages; project coordination and grant reporting 98.5 hrs (\$7,354.00)Total = \$7,354.00 (5% FTE for 3 years)				
<b>Professional/Technical/Service Contracts</b>				
Contract with TBD to complete Phase 1 and 2 fieldwork, Report Writing, Hydraulic Analysis and GIS Services. Contractor will be selected through a RFQ process.		\$ 72,080	\$ -	\$ 72,080
<b>Equipment/Tools/Supplies</b>				
Survey Equipment Rental 360 hrs @ \$25hr = \$9,000.00 ATV With Tracks Rental 250 hrs @ \$30hr = \$7,500.00 Peat Sampling Equipment: \$2,100.00		\$ 19,600	\$ -	\$ 19,600
<b>Capital Expenditures Over \$5,000</b>				
		\$ -	\$ -	\$ -
		\$ -	\$ -	\$ -
<b>COLUMN TOTAL</b>		\$ 135,000	\$ -	\$ 135,000
<b>SOURCE AND USE OF OTHER FUNDS CONTRIBUTED TO THE PROJECT</b>		<b>Budget</b>	<b>Spent</b>	<b>Balance</b>
<b>Non-State:</b>		\$ -	\$ -	\$ -
<b>State:</b>		\$ -	\$ -	\$ -
<b>In kind:</b> Roseau River Watershed, Project Construction Fund: Staff Time Watershed Specialist 120 hrs Total = \$8,991.60 Administrative Assistant 40 hrs Total = \$1,480.00 Professional/Consultant Services 90 hrs Total = \$11,700.00		\$ 22,172	\$ -	\$ 22,172
<b>Other ENRTF APPROPRIATIONS AWARDED IN THE LAST SIX YEARS</b>		<b>Budget</b>	<b>Spent</b>	<b>Balance</b>
		\$ -	\$ -	\$ -



