



# Environment and Natural Resources Trust Fund (ENRTF) M.L. 2019 ENRTF Work Plan (Main Document)

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**Today's Date:** August 24, 2018

**Date of Next Status Update Report:** March 1, 2020

**Date of Work Plan Approval:** June 5, 2019

**Project Completion Date:** June 30, 2022

**Does this submission include an amendment request?** \_\_\_

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**PROJECT TITLE:** Aggregate Resource Mapping

**Project Manager:** Heather Arends

**Organization:** Department of Natural Resources

**College/Department/Division:** Division of Lands and Minerals

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**Web Address:** [https://www.dnr.state.mn.us/lands\\_minerals/aggregate\\_maps/index.html](https://www.dnr.state.mn.us/lands_minerals/aggregate_maps/index.html)

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**Location:** Southwest Minnesota – specifically the counties of Kandiyohi, Swift, Sibley, and Redwood.

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**Total Project Budget:** \$700,000.00

**Amount Spent:** \$0

**Balance:** \$700,000.00

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**Legal Citation:** M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 03h

**Appropriation Language:** \$700,000 the first year is from the trust fund to the commissioner of natural resources to map the aggregate resource potential for four counties and make this information available in print and electronic format to local units of government for use in planning and zoning.

## **I. PROJECT STATEMENT:**

The goals of this project are to map the aggregate resources of four counties and work with local governments to include this information in planning and zoning. Aggregate resource mapping will be achieved by conducting geologic fieldwork and GIS analysis to produce related datasets and maps. Directed by Statute 84.94, this effort provides necessary information to local governments to support sound natural resources decision-making and to ensure the availability of aggregate resources for future generations.

The Aggregate Resource Mapping Program (ARMP) proposes to 1) identify and characterize aggregate resources in four counties; 2) survey the location and status of reclamation of all gravel pits within each county 3) create geospatial information and databases at a scale of 1:100,000 4) provide technical support to counties regarding how to incorporate aggregate resources in planning, permitting, and reclamation; 5) disseminate data and maps to county staff, elected officials, and the public through on-line web mapping service:

([https://www.dnr.state.mn.us/lands\\_minerals/aggregate\\_maps/online\\_maps/index.html](https://www.dnr.state.mn.us/lands_minerals/aggregate_maps/online_maps/index.html)). The four counties include Kandiyohi, Swift, Redwood, and Sibley. Future phases of mapping will include Chippewa, Lyon, and Yellow Medicine. All listed counties passed a county board resolution requesting this work to be completed.

Aggregate resources are needed to maintain and repair critical and aging infrastructure. In rural areas, upwards of 90% of aggregates are paid with public tax money. While aggregate demand is associated with urbanization, rural areas are responsible for the largest network of roads. Rural areas are also confronted with unique issues that significantly impact access to and availability of aggregates, such as natural scarcity of high quality aggregates. Without locally available aggregates, the distance to transport aggregates directly increases the cost of publically funded projects and the carbon foot-print of construction projects. Knowing the location of all sources of aggregate as well as their quality is needed by local land use planners and elected officials to make informed decisions. For this reason, the Minnesota Association of County Planners and Zoning Administrators (MACPZA) supports the funding of aggregate mapping in their 2018 Legislative platform. In addition, the final recommendations of the 2017 Aggregate Resources Task Force Final Report supports funding for accelerated mapping of aggregate resources with the goal of completing the state in 10 years.

The Department of Natural Resources (DNR) is directed to map aggregate resources under MN Statute §84.94. Aggregate resource mapping is a cooperative effort between the DNR and the Minnesota Geologic Survey as well as the Minnesota Department of Transportation (Mn/DOT). Every effort is made to collaborate with these agencies, as well as local governments, to inform the data, interpretations, and final products generated by the DNR.

## **II. OVERALL PROJECT STATUS UPDATES: (See Below)**

## **III. PROJECT ACTIVITIES AND OUTCOMES:**

### **Activity 1: Aggregate mapping**

**Description:** Current mapping projects in Kandiyohi, Redwood, Swift, and Sibley are most likely to need funding from this grant to sustain progress. Staff will compile all available and relevant gravel pit data, historic geologic maps, reports, and digital data. Geologists will conduct fieldwork to describe and sample landforms, survey gravel mines and bedrock quarries, and collect geologic observations. Geologic data is then analyzed and to produce draft maps. Draft maps undergo review and public comment period. Concurrently, associated databases are

formalized and prepared for use in geographic information systems and distribution. Maps are also printed for use of local governments, such as townships and municipalities.

**ENRTF BUDGET: \$ 700,000**

<b>Outcome</b>	<b>Completion Date</b>
1. Completion of counties currently in progress - Kandiyohi and Redwood	Dec 2020
2. Completion if new aggregate maps with a priority on Swift and Sibley which are next in line based on the date in which a county board resolution was passed requesting aggregate resource maps.	June 2022
3. Conduct four workshops to assist local governments use and incorporate data from project into land use	2 workshops in Winter 2021; 2 workshops in Spring 2022
4. Start the compilation of data for next counties on current waitlist (see attached)	June 2022

**First Update March 1, 2020**

**Second Update September 1, 2020**

**Third Update March 1, 2021**

**Fourth Update September 1, 2021**

**Fifth Update March 1, 2022**

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

**IV. DISSEMINATION:**

Every aggregate map is produced in portable document format (PDF), an interactive web map, as geographic information system files (GIS), and in printed form. The digital files are available as a DVD, and are also available to download from the Department of Natural Resources as well as the Minnesota Geospatial Commons. Each completed county as its own webpage that links to the above mentioned formats of dissemination:

[https://www.dnr.state.mn.us/lands\\_minerals/aggregate\\_maps/index.html](https://www.dnr.state.mn.us/lands_minerals/aggregate_maps/index.html). Each project culminates in several public meetings including a workshop of the results to the county staff, and any other interested parties; a presentation to the county commissioners at a regularly scheduled board meeting; and an evening public meeting. At these meetings the products are described, access to the products is explained, and examples of applications of the products to common resource management situations are demonstrated. Printed copies are shared with the county, who in turn can distribute them to libraries, schools, townships, and other agencies. Any member of the public may request a map, free of charge.

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](#).

**Description:**

**First Update March 1, 2020**

**Second Update September 1, 2021**

**Third Update March 1, 2021**

**Fourth Update September 1, 2022**

**Fifth Update March 1, 2022**

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

**V. ADDITIONAL BUDGET INFORMATION:**

**A. Personnel and Capital Expenditures**

<b>BUDGET ITEM</b>	<b>COSTS</b>
Personnel	\$600,000
Equipment/Tools/Supplies	\$15,400
Travel	\$33,000
Direct and Necessary Costs	\$51,600
Total Request	\$700,000

**Explanation of Use of Classified Staff:** Only a portion of a GIS related FTE and a portion of a mining aide's FTE throughout the year will be spent on this project. For the mining aide, whose duties include facility care and management, LAM may need to contract out cleaning and maintenance services. For the GIS staff, DNR-LAM will need to rely on MnIT services to backfill these positions.

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

Enter Total Estimated Personnel Hours for entire duration of project: 16400	Divide total personnel hours by 2,080 hours in 1 yr = TOTAL FTE: 2.4
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**VI. PROJECT PARTNERS:**

N/A

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

**VIII. REPORTING REQUIREMENTS:**

- Project status update reports will be submitted March 1 and September 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

Attachment A:  
 Environment and Natural Resources Trust Fund  
 M.L. 2019 Budget Spreadsheet  
 Legal Citation: M.L. 2019, First Special Session, Chp. 4, Art. 2, Sec. 2, Subd. 03h  
 Project Manager: Heather Arends  
 Project Title: Aggregate Resource Mapping  
 Organization: MN DNR  
 Project Budget: \$700,000  
 Project Length and Completion Date: June 30,2022  
 Attachment A:



ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET	Budget	Amount Spent	Balance
<b>BUDGET ITEM</b>			
<b>Personnel (Wages and Benefits)</b>		\$ -	\$ -
Geologist/Research Scientist (72% salary, 28% benefits), 1 unclassified FTE for 3 years	\$ 256,380		
Geologist/Research Scientist (72% salary, 28% benefits), 1 unclassified FTE for 3 years	\$ 256,380		
GIS/Cartographer (72% salary, 28% benefits) 0.25 classified FTE for 3 years	\$ 66,811		
Field Technician (72% salary, 28% benefits) 0.25 classified FTE for 2 years	\$ 20,429		
<b>Professional/Technical/Service Contracts</b>			
	\$ -	\$ -	\$ -
<b>Equipment/Tools/Supplies</b>			
Equipment is used from previous survey periods when at all possible (e.g. GPS units, drilling equipment, augers, cameras, communication/safety equipment, etc.) but replaced, repaired, or updated as necessary. Items such as batteries, sample bags, field notebooks, and hand held augers.	\$ 15,400	\$ -	\$ 15,400
<b>Capital Expenditures Over \$5,000</b>			
	\$ -	\$ -	\$ -
<b>Fee Title Acquisition</b>			
	\$ -	\$ -	\$ -
<b>Easement Acquisition</b>			
	\$ -	\$ -	\$ -
<b>Professional Services for Acquisition</b>			
	\$ -	\$ -	\$ -
<b>Printing</b>			
		\$ -	\$ -
<b>Travel expenses in Minnesota</b>			
Travel expenses for MN travel related to field survey in Activities 1 & 2. Travel expenses are subject to State of MN labor agreements and DNR policy. Most travel expenses are related to the 4-6 months of time when staff are conducting field work that requires food, transportation in seasonal DNR fleet vehicles, and lodging.	\$ 36,737	\$ -	\$ 36,737
<b>Other</b>			
<b>Direct and Necessary Costs:</b> Direct and Necessary expenses: HR Support (~\$10,712), Safety Support	\$ 47,863	\$ -	\$ 47,863
<b>COLUMN TOTAL</b>	\$ 700,000	\$ -	\$ 100,000

OTHER FUNDS CONTRIBUTED TO THE PROJECT	Status (secured or pending)	Budget	Spent	Balance
<b>Non-State:</b>		\$ -	\$ -	\$ -
<b>State:</b>		\$ -	\$ -	\$ -
<b>In kind:</b>		\$ -	\$ -	\$ -

PAST AND CURRENT ENRTF APPROPRIATIONS	Amount legally obligated but not yet spent	Budget	Spent	Balance
<b>Current appropriation:</b>		\$ -	\$ -	\$ -
<b>Past appropriations:</b>		\$ -	\$ -	\$ -

