

**Environment and Natural Resources Trust Fund
2020 Request for Proposals (RFP)**

Project Title:

ENRTF ID: 068-AH

Rock County Aggregate Mapping

Category: H. Proposals seeking \$200,000 or less in funding

Sub-Category: A. Foundational Natural Resource Data and Information

Total Project Budget: \$ 120,000

Proposed Project Time Period for the Funding Requested: June 30, 2022 (2 yrs)

Summary:

Map the aggregate resource potential in Rock County to assist with natural resource decision-making, planning and zoning, land use, and well head protection.

Name: Eric Hartman

Sponsoring Organization: Rock County Land Management Office/SWCD

Job Title: _____

Department: _____

Address: 311 West Gabrielson Road, Suite 4
Luverne MN 56156

Telephone Number: (507) 283-8862

Email eric.hartman@co.rock.mn.us

Web Address: http://www.rockswcd.org

Location:

Region: Southwest

County Name: Rock

City / Township:

Alternate Text for Visual:

A map showing the location of Rock County within the state and status map of the DNR Aggregate Mapping Program.

_____ Funding Priorities	_____ Multiple Benefits	_____ Outcomes	_____ Knowledge Base
_____ Extent of Impact	_____ Innovation	_____ Scientific/Tech Basis	_____ Urgency
_____ Capacity	_____ Readiness	_____ Leverage	_____ TOTAL _____%



PROJECT TITLE: Rock County Aggregate Mapping

I. PROJECT STATEMENT

Rock County is interested in planning for sustainable and healthy communities. We identified the need to obtain aggregate resource information to support planning and zoning efforts, to inform decision-making with sound science-based information, and to promote the orderly development of aggregate resources while protecting critical habitats and well head protection areas.

Aggregate resources are the raw materials needed to maintain and repair infrastructure. Accessing local resources, verses transporting them long distances, reduces the tax payer burden for road publicly funded road projects. Furthermore, local resources have a lower Environmental Product Declarations by reducing emissions of greenhouse gases from trucking. However, these resources can also compete with recreational and conservation land uses. Knowing where aggregate resources are located is key in finding sustainable solutions for land use planning.

With this grant, Rock County will partner with Minnesota Department of Natural Resource (DNR) for a two year project. The DNR will complete an aggregate resource inventory of Rock County. Mapping will be completed using high-resolution elevation data (LiDAR) to delineate landforms, identify and sample aggregate deposits, and inventory active, inactive, and unreclaimed gravel pits. Final products include aggregate resource maps and GIS (Geographic Information Data) dataset for Rock County. Rock County will support this project with either in-kind services or financial contributions totaling \$7,000 toward the cost associated with fieldwork.

The final portion of this project will result in a coordinated workshop for Rock County staff, county staff, and township officials by DNR technical experts. The workshop will focus on how to integrate aggregate resource data into county planning and zoning.

II. PROJECT ACTIVITIES AND OUTCOMES

Activity 1: Data Compilation and reconnaissance level field work

Description: A DNR geologist will compile all available and relevant gravel pit data, geologic maps and reports, and related research. GIS personnel will compile available digital data. The geologist will start mapping and fieldwork

ENRTF BUDGET: \$ 25,700

Outcome	Completion Date
1. Geologic and digital data is compiled for the county	August 2020
2. Complete survey and reconnaissance level field work	August 2021

Activity 2: Conduct sampling for quality

Description: DNR geologist will conduct fieldwork to collect aggregate samples and geologic observations on aggregate deposits and sedimentary associations of glacial landforms. Rock outcrops and bedrock geology will be noted. This activity may consist of 2-3 field seasons and a field review. Approximately 80-150 drill holes per county will be collected and analyzed in a laboratory. Assistants will help with fieldwork and deliver samples to MNDOT Aggregate Materials Laboratory.

ENRTF BUDGET: \$ 35,200



Environment and Natural Resources Trust Fund (ENRTF)
2020 Main Proposal Template

Outcome	Completion Date
1. Drill and sample locations to characterize the quantity and quality of aggregate	September 2021
2. Complete survey and reconnaissance level field work Ground-truth aggregate potential models and interpretations	November 2021
3. Process samples at DNR Hibbing sediment laboratory	January 2022

Activity 3: Create Map and Digital Products

Description: During off seasons for field work, a DNR geologist will analyze collected data and historic data. Geologists, with the assistance from DNR GIS staff, will delineate and catalogue aggregate resource potential, identify aggregate resource trends, and produce draft aggregate maps. Draft maps will undergo a review process as well as undergo a public comment period.

ENRTF BUDGET: \$ 50,100

Outcome	Completion Date
1. Field data interpreted, processed, and entered into DNR's information systems.	April 30, 2022
2. Digital maps (GIS polygon data) created for aggregate resource potential, compiled sampling results (sieve analysis, deleterious lithology, and soundness).	April 30, 2022
3. Designation of mapping units with field checks as needed.	April 30, 2022

Activity 4: Deliver Survey Results

Description: DNR will provide interpretation of results from Activities 1 through 3 and deliver the final products and technical assistance to Rock County

ENRTF BUDGET: \$ 9,000

Outcome	Completion Date
1. DNR provide workshops to Rock County, townships, and municipalities.	June 30, 2022
2. Final draft of maps and GIS products are available on DNR website.	June 30, 2022

III. PROJECT PARTNERS AND COLLABORATORS:

The Minnesota Department of Natural Resources

IV. LONG-TERM IMPLEMENTATION AND FUNDING:

ARMP information, data, and technical guidance have proven critical to local governments and the state. Because this information is only funded through ENRTF funds, DNR ARMP is unfunded and looking to the legislature to provide long-term sustainable funding until the state's aggregate resources are fully mapped. This priority reflects the recommendations coming from the 2017 Aggregate Resource Task Force Final Report.

V. SEE ADDITIONAL PROPOSAL COMPONENTS:

- A. Proposal Budget Spreadsheet**
- B. Visual Component or Map**
- C. Project Manager Qualifications and Organization Description**
- D. Letter or Resolution**

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

Legal Citation:

Project Manager: Eric Hartman

Project Title: Rock County Aggregate Mapping

Organization: Rock County

Project Budget: \$120,000

Project Length and Completion Date: June 30, 2022

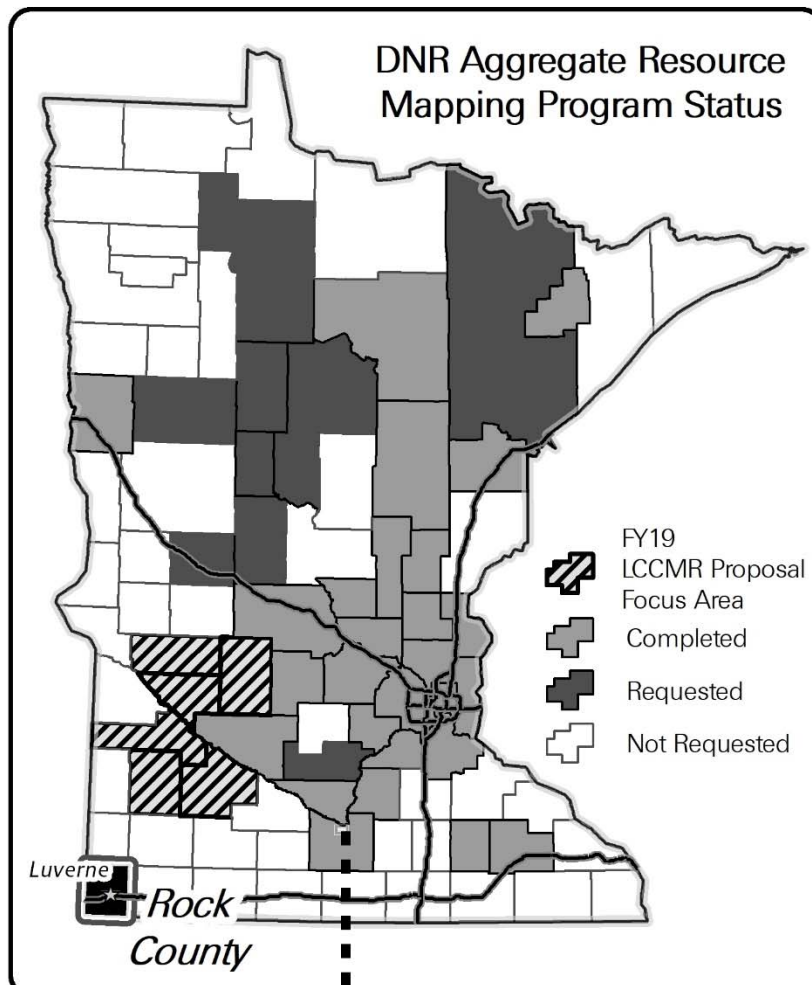
Today's Date: 4/15/2019



ENVIRONMENT AND NATURAL RESOURCES TRUST FUND BUDGET		Budget	Amount Spent	Balance
BUDGET ITEM				
Personnel (Wages and Benefits)		\$ -	\$ -	\$ -
Professional/Technical/Service Contracts				
A Memorandum of Understanding (MOU) will be executed between Rock County and the State of Minnesota, Department of Natural Resources, Division of Lands and Minerals to conduct aggregate resource mapping. MOU terms and conditions will specify intermittent deadlines and final deadlines in compliance with this LCCMR proposal - \$25,700 for data compilation and field work, \$35,200 for sampling and aggregate quality assessments, \$50,100 to create maps and digital products, \$9,000 to train Rock County staff, review aggregate ordinances and zoning.		\$ 120,000	\$ -	\$ 120,000
Equipment/Tools/Supplies				
		\$ -	\$ -	\$ -
Capital Expenditures Over \$5,000				
		\$ -	\$ -	\$ -
Fee Title Acquisition				
		\$ -	\$ -	\$ -
Easement Acquisition				
		\$ -	\$ -	\$ -
Professional Services for Acquisition				
		\$ -	\$ -	\$ -
Printing				
		\$ -	\$ -	\$ -
Travel expenses in Minnesota				
		\$ -	\$ -	\$ -
Other				
		\$ -	\$ -	\$ -
COLUMN TOTAL		\$ 120,000	\$ -	\$ 120,000
SOURCE AND USE OF OTHER FUNDS CONTRIBUTED TO THE PROJECT				
	Status (secured or pending)	Budget	Spent	Balance
Non-State: Rock County will commit \$7,000 for travel expensis related to the project.	Pending	\$ 7,000	\$ -	\$ 7,000
State:		\$ -	\$ -	\$ -
In kind:		\$ -	\$ -	\$ -
Other ENRTF APPROPRIATIONS AWARDED IN THE LAST SIX YEARS				
	Amount legally obligated but not yet spent	Budget	Spent	Balance
		\$ -	\$ -	\$ -

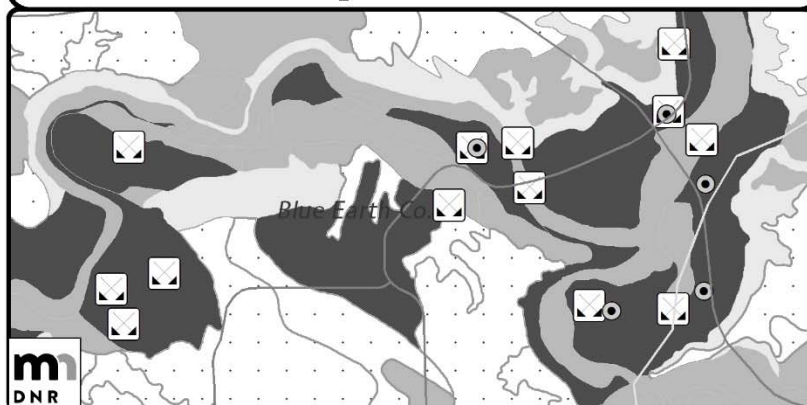
Aggregate Resource Mapping of Rock County, MN

- Local governments need information to make science-based land use decisions.
- While aggregate resources are vital to maintaining community infrastructure, they often compete with critical habitats and well head protection areas.
- Knowing the location of aggregate resources helps avoid, mitigate, and minimize the impacts of aggregate mining and supports natural resource conservation efforts.

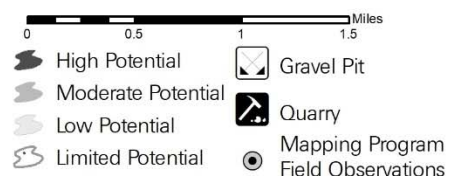


Why do we need to map aggregate resources?

- Managing competing land uses requires compatible information mapped at similar scales
- Geologic processes have created an **uneven distribution** of resources within the region
- Rock County's permitted aggregate mines are facing depletion issues
- Over 80% of aggregate is used for **publicly funded** roads and infrastructure



A portion of a DNR aggregate map showing sand and gravel potential in Blue Earth County, Minnesota.





Rock County Land Management Office/SWCD

311 West Gabrielson Road
Luverne, MN 56156
(507) 283 - 8862

Soil & Water Conservation District - Planning & Zoning - Environmental Office

April 12, 2019

Rock County Land Management Office/SWCD

<http://rockswcd.org>

Rock County is located in the extreme southwest corner of Minnesota, with a population of just under 10,000 residents. The Rock County Land Management Office/SWCD was formed through a joint powers agreement between the Rock County Board of Commissioners and the Rock Soil and Water Conservation District Board of Supervisors in April of 1996. The office serves as a one-stop shop for a multitude of environmental and conservation services and programs for the citizens in Rock County which include: planning and zoning, solid waste and recycling, water resources planning and protection, feedlot permitting, technical assistance and professional services for the design and placement of conservation practices, geographic information systems, and others.

Project Manager

Eric A. Hartman
Director – Rock County LMO/SWCD

Eric is currently the Director of the Rock County Land Management Office/SWCD for Rock County, Luverne, Minnesota, serving in this role since 2002. He oversees the staff and the operations, with two of his principal responsibilities serving as the zoning administrator for Rock County as well as administrator for the Rock Soil and Water Conservation District. The Rock County LMO/SWCD and its staff have been extensively involved in promoting local efforts, and providing technical services, for a number of rural agricultural and non-agricultural business ventures, soil and water conservation initiatives, groundwater/surface water and wellhead protection plans, and a number of conservation easements on marginal agricultural lands. Mr. Hartman obtained his undergraduate degree in Agricultural Business and Applied Economics at the University of Minnesota – Twin Cities in 1989, then completed a Master's in Business Administration from Southwest Minnesota State University in 2013, with his emphasis placed on Leadership and Marketing. Through his 30 years of professional work, he has also obtained a number of certifications, with respect to his role in environmental services, as well as agricultural practices.