



Environment and Natural Resources Trust Fund

2026 Request for Proposal

General Information

Proposal ID: 2026-502

Proposal Title: Regional Ground-Source Energy Project Screening Toolkit

Project Manager Information

Name: Samuel Sharp

Organization: Region Nine Development Commission

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Project Basic Information

Project Summary: Region Nine Development Commission and Geosyntec are developing an interactive planning tool to optimize ground source energy site selection in Minnesota, reducing inefficiencies and enhancing project viability through data-driven insights.

ENRTF Funds Requested: \$400,000

Proposed Project Completion: December 31, 2027

LCCMR Funding Category: Energy (E)

Project Location

What is the best scale for describing where your work will take place?

Region(s): Central

What is the best scale to describe the area impacted by your work?

Statewide

When will the work impact occur?

During the Project and In the Future

Narrative

Describe the opportunity or problem your proposal seeks to address. Include any relevant background information.

The Region Nine Development Commission (RNDC) and Geosyntec seek to address the challenge of identifying optimal locations for ground source heat pump (GSHP) energy projects in Minnesota. The state's volatile weather and climate patterns necessitate resilient and adaptive energy solutions. Currently, energy developers and city/county planners often invest significant resources in renewable energy projects only to discover late-stage issues and other unforeseen obstacles, which can halt project completion and result in financial losses.

To mitigate these risks, RNDC and Geosyntec are developing a regional web-based tool that will evaluate ground source energy site locations through hydrogeologic analysis. This tool will provide critical insights into potential project considerations, enabling informed decision-making. By optimizing site selection, the tool will reduce inefficiencies, enhance long-term project security, and drive cost savings, ultimately improving overall system performance. This proactive approach will support sustainable energy development and ensure that projects are both viable and cost-effective.

What is your proposed solution to the problem or opportunity discussed above? Introduce us to the work you are seeking funding to do. You will be asked to expand on this proposed solution in Activities & Milestones.

RNDC proposes to develop a GSHP planning tool that is based on the best available data, science, and technology alternatives used in ground source energy systems. While a wide range of geologic and hydrogeologic data exists for areas within RNDC's jurisdiction, specialized engineering and design services are typically needed to interpret this information and use it to appropriately plan for, site, and design GSHP projects. This proposal will consolidate, analyze, and incorporate these data with zoning, development, and regulatory constraints to provide the tool needed for public and private sectors to use in planning.

What are the specific project outcomes as they relate to the public purpose of protection, conservation, preservation, and enhancement of the state's natural resources?

By developing a regional interactive tool to evaluate ground source energy site locations, the Region Nine Development Commission (RNDC) aims to enhance Minnesota's natural resource protection, conservation, preservation, and enhancement. This tool will provide critical insights for resilient and adaptive energy solutions, mitigating financial risks and optimizing site selection. It supports climate resiliency and adaptation plans, reducing the impacts of climate change and extreme weather events. The project will also promote equitable access to renewable energy, encouraging sustainable practices across various sectors, and ensure that projects are developed with proper consideration for other resources (e.g., groundwater supplies).

Activities and Milestones

Activity 1: Outreach and Administration

Activity Budget: \$75,000

Activity Description:

The goals of Activity 1 are to: (1) establish a Technical Advisory Committee (TAC) to provide input on tool development; and (2) to screen for and incorporate local initiatives development plans into Activity 2.

RNDC and Geosyntec will host a kickoff meeting comprised of regional stakeholders and project personnel. Prior to the kickoff meeting, a TAC will be formed to provide feedback on project development. The TAC will include State regulatory agencies (e.g., MDH and MNDNR), which were coordinated with in advance of this proposal and their participation in the TAC is planned for.

RNDC will lead outreach efforts through direct community engagement, workshops, and support from the TAC. Each assessment will follow a three-county approach, with RNDC personnel engaging communities and key stakeholders to assess interest and identify viable sites for GSHP integration. Upon completion of the assessments, RNDC will compile an inventory of interested communities and potential project locations, ensuring a strategic foundation for tool development and future GSHP implementation.

Activity Milestones:

Description	Approximate Completion Date
Kickoff Introduction	September 30, 2026
Establish Technical Advisory Committee (TAC)	September 30, 2026
County-wide Assessments of Interested Communities, Entities, and Potential Project Sites (3 total)	August 31, 2027

Activity 2: Tool Development

Activity Budget: \$250,000

Activity Description:

A spatial dataset of hydrogeologic metrics, and environmental (e.g., groundwater quality), zoning, and regulatory constraints will be developed from existing sources. These data will be used to develop a geospatial model to evaluate GSHP wellfield suitability for a variety of technologies. Hydrogeologic metrics of interest include depth to productive aquifer(s), piezometric surface, transmissivity, hydraulic gradient, hydraulic conductivity, water quality, etc., and will be synthesized from existing publicly available sources (MDH and DNR databases, well testing reports, aquifer characterization and geologic reports, water quality data, etc.). A conceptual hydrogeologic model with rating factors will be developed and used to combine these metrics and develop a rating of GSHP suitability that overlays with zoning, existing code requirements, environmental regulations, and anticipated facility size (e.g., domestic vs. industrial). For areas with higher ratings, analytical modeling may be incorporated into the study to identify potential GSHP well yields and wellfield construction needs. Results will be provided in a geodatabase for use in energy development planning.

The model for GSHP performance screening and the corresponding geodatabase will be designed for expansion to other geographies within Minnesota, providing the opportunity for this tool to benefit areas outside of RDNC's jurisdiction.

Activity Milestones:

Description	Approximate Completion Date
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Obtain and consolidate existing data and establish project database	December 31, 2026
Develop rating system and model for performance screening	January 31, 2027
Data synthesis and model build	April 30, 2027
GIS layer development and database refinement	July 31, 2027

Activity 3: Project Summation and Scope Expansion Strategy

Activity Budget: \$75,000

Activity Description:

A Project Report will be prepared to cover the methods, findings, and results of tool development conducted under Activity 2. Figures, tables, and summary attachments will be provided with the report that summarizes the intended use, context, and limitations of the GSHP planning tool, including recommended pathways for technology selection and project development. The report will be prepared in draft form for review and comment by the TAC, then finalized and provided to the public for use in project planning.

Because this project is for development of the GSHP planning tool that addresses areas only within RNDC's jurisdiction, the report and coordination with the TAC under this activity will provide a pathway and appropriate documentation to allow expansion of this tool to other jurisdictions within Minnesota. This will include recommendations for methods to increase the volume of data incorporated into the model (geographic expansion), accessibility improvements, long-term web-based hosting/maintenance, and additional technical considerations for further model refinement. A public presentation of findings will be provided after the draft report is prepared to discuss the implementation of the GSHP screening tool at the regional and statewide level.

Activity Milestones:

Description	Approximate Completion Date
Provide draft report to TAC	August 31, 2027
Public Presentation and Engagement on Draft Findings	October 31, 2027
Finalized Project Report	December 31, 2027

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Andrew Austreng	Geosyntec Consultants	Principal Hydrogeologist. Andrew is a hydrogeologist focusing on projects involving ground source heat pump (GSHP) wellfield planning, design, and construction. He will be responsible for technical execution, including managing the technical team, developing the screening tool, report writing, and TAC coordination.	Yes

Long-Term Implementation and Funding

Describe how the results will be implemented and how any ongoing effort will be funded. If not already addressed as part of the project, how will findings, results, and products developed be implemented after project completion? If additional work is needed, how will this work be funded?

As the project nears completion, RNDC will implement follow-up strategies with regional stakeholders to encourage project development and seek additional funding resources to support GSHP implementation. RNDC will integrate this interactive toolkit within their planning prowess, thus demonstrating shovel-ready projects to prospective funders. Additionally, RNDC will collaborate with external partners, including Regional Development Organizations (RDOs) and statewide agencies, to expand efforts beyond its jurisdiction.

RNDC engages with other RDOs through monthly meetings to exchange knowledge and insights. These meetings provide an opportunity to present project findings and share the developed interactive toolkit, potentially paving the way for statewide adoption.

Project Manager and Organization Qualifications

Project Manager Name: Samuel Sharp

Job Title: Energy and Environment Planner

Provide description of the project manager's qualifications to manage the proposed project.

Samuel Sharp is the Energy and Environment Planner for the Region Nine Development Commission. His role focuses on connecting the nine counties of south-central Minnesota to resources from state and federal funding opportunities. Samuel is responsible for community outreach and engagement, grant research and writing, and offering energy and environment related assistance to communities. Most recently, Samuel helped complete a Climate Resilience Plan for the City of Comfrey, MN, featuring clean energy and environmental initiatives as the focal point. Additionally, Samuel secured funding through the US Department of Energy to perform a regional biofuels study. While his primary role did not focus entirely on the technical analysis, his main responsibility entailed direct community outreach and stakeholder engagement. Stakeholder identification and involvement spanned across sectors, incorporating representation from higher education, municipal and county leadership, and community champions committed to clean energy and environment-related solutions. In Spring 2024, Samuel successfully submitted an application to the MN GreenCorps program, where he is now a site supervisor for a MN GreenCorps member focusing on community readiness and outreach. As a site supervisor, Samuel has assisted the GreenCorps member by creating regional connections with rural communities and helping identify project opportunities for climate and community resilience.

As Project Manager, Samuel will coordinate with internal staff and project partners to drive project progress and ensure milestones are met efficiently. Additionally, he will oversee stakeholder engagement and recruitment efforts to establish a Technical Advisory Committee (TAC). Once the TAC is formed, Samuel and his team will shift their focus to conducting county-wide assessments aimed at promoting ground-source heat pump (GSHP) education and identifying communities and organizations interested in adopting this technology. As opportunities are identified, Samuel will leverage RNDC resources to incorporate these needs into development plans for future implementation.

Organization: Region Nine Development Commission

Organization Description:

The Region Nine Development Commission (RNDC) serves South Central Minnesota, supporting economic and community development across nine counties. As a regional planning organization, RNDC provides technical assistance, funding support, and strategic planning for local governments, businesses, and nonprofits. Its work spans areas such as economic resilience, clean energy, infrastructure, transportation, and workforce development.

RNDC plays a key role in fostering regional collaboration, connecting communities with state and federal resources to promote sustainable growth. The commission supports initiatives in renewable energy, agricultural innovation, and rural economic diversification, ensuring communities remain competitive and adaptable.

With a focus on equity and sustainability, RNDC helps municipalities navigate complex challenges, from housing to climate adaptation. Its programs encourage local leadership, workforce training, and business support to strengthen the region's economic foundation. Through partnerships with higher education institutions, industry, and government agencies, RNDC advances initiatives that improve quality of life while driving long-term economic vitality.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
RNDC Planning Staff (2)		Responsible for project outreach, administration, and coordination with internal staff and partners to ensure milestones are met. Leads stakeholder engagement, recruitment, and formation of a Technical Advisory Committee (TAC). Conducts county-wide assessments to promote ground-source heat pump (GSHP) education and identify interested communities.			26%	0.66		\$75,000
							Sub Total	\$75,000
Contracts and Services								
Gensyntec Consultants	Service Contract	Technical lead, data procurement and synthesis, public and TAC meeting participation, completing model development and analysis, tool platform design, QA/QC, and reporting. Project Director (0.01FTE); Principal Hydrogeologist (0.12FTE) Hydrogeologist and Modeler(0.14FTE); Analyst & GIS Developer (2) (0.17FTE); Data Scientist (2) (0.18FTE).				1.26		\$325,000
							Sub Total	\$325,000
Equipment, Tools, and Supplies								
							Sub Total	-
Capital Expenditures								
							Sub Total	-
Acquisitions and Stewardship								
							Sub Total	-
Travel In Minnesota								

							Sub Total	-
Travel Outside Minnesota								
							Sub Total	-
Printing and Publication								
							Sub Total	-
Other Expenses								
							Sub Total	-
							Grand Total	\$400,000

Classified Staff or Generally Ineligible Expenses

Category/Name	Subcategory or Type	Description	Justification Ineligible Expense or Classified Staff Request
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Non ENRTF Funds

Category	Specific Source	Use	Status	Amount
State				
			State Sub Total	-
Non-State				
			Non State Sub Total	-
			Funds Total	-

Total Project Cost: \$400,000

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [d95d869a-3f6.pdf](#)

Alternate Text for Visual Component

The proposed workflow of the project and the tool development milestones....

Financial Capacity

Title	File
RNDC 2024 Annual Financial Report - 3rd Party Audit and Financial Statements)	08c77a94-521.pdf

Board Resolution or Letter

Title	File
RNDC Board Letter	e0ae6dbc-f43.pdf
RNDC Board Resolution	6994f02f-bf8.pdf

Supplemental Attachments

Capital Project Questionnaire, Budget Supplements, Support Letter, Photos, Media, Other

Title	File
RNDC Footprint	1be8a79c-96f.pdf
RNDC Communities	45fbecdd-234.pdf
TAC Template Form	ab6c4db7-451.pdf

Administrative Use

Does your project include restoration or acquisition of land rights?

No

Do you understand that travel expenses are only approved if they follow the "Commissioner's Plan" promulgated by the Commissioner of Management of Budget or, for University of Minnesota projects, the University of Minnesota plan?

N/A

Does your project have potential for royalties, copyrights, patents, sale of products and assets, or revenue generation?

No

Do you understand and acknowledge IP and revenue-return and sharing requirements in 116P.10?

N/A

Do you wish to request reinvestment of any revenues into your project instead of returning revenue to the ENRTF?

N/A

Does your project include original, hypothesis-driven research?

No

Does the organization have a fiscal agent for this project?

Yes, Region Nine Area Inc.

Does your project include the pre-design, design, construction, or renovation of a building, trail, campground, or other fixed capital asset costing \$10,000 or more or large-scale stream or wetland restoration?

No

Do you propose using an appropriation from the Environment and Natural Resources Trust Fund to conduct a project that provides children's services (as defined in Minnesota Statutes section 299C.61 Subd.7 as "the provision of care, treatment, education, training, instruction, or recreation to children")?

No

Provide the name(s) and organization(s) of additional individuals assisting in the completion of this proposal:

Andrew Austreng, Geosyntec

Do you understand that a named service contract does not constitute a funder-designated subrecipient or approval of a sole-source contract? In other words, a service contract entity is only approved if it has been selected according to the contracting rules identified in state law and policy for organizations that receive ENRTF funds through direct appropriations, or in the DNR's reimbursement manual for non-state organizations. These rules may include competitive bidding and prevailing wage requirements

Yes, I understand