



Environment and Natural Resources Trust Fund

2027 Request for Proposal

General Information

Proposal ID: 2027-520

Proposal Title: Chatfield Wastewater Treatment Native Reed Plant Study

Project Manager Information

Name: Michele Peterson

Organization: City of Chatfield

Office Telephone: (507) 867-3810

Email: mpeterson@cityofchatfieldmn.gov

Project Basic Information

Project Summary: The project includes the planting of two native reed beds, monitoring for and mitigating potential spread of invasive reeds, and conducting additional sampling/testing to evaluate native reed performance.

ENRTF Funds Requested: \$77,000

Proposed Project Completion: December 31, 2028

LCCMR Funding Category: Small Projects (G)

Secondary Category: Land (F)

Project Location

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

Region(s): SE

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 City of Chatfield has an opportunity to construct and study native reed beds for the treatment of wastewater. The city currently has six invasive reed beds and the project would replace two of those with native reed beds. The current reeds are non-native to Minnesota and although the city has used this for treatment for several years, the reed, an invasive Phragmites (Common Reed) is problematic and has been identified by the University of Minnesota Aquatic Invasive Species Research Center (MAISRC) and MN DNR to cause environmental harm. Seeds can spread by wind or human activity, allowing the spread of this invasive common reed. The common reed can alter wetlands, reduce plant diversity, disrupt habitats, and diminish the abundance of fish and birds. They typically outcompete native plants for essential resources, such as light, water and nutrients. The common reed can form dense monocultures, effectively choking out native plant communities for local wildlife. The MN DNR has listed the common reed as a prohibited invasive species and phase-out of invasive phragmites is required. The city has been coordinating with the MN DNR to strategize on how to make the phase-out work and this project aims to complete the phase-out.

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.

The funding would allow the City of Chatfield to construct and study native reed beds for water treatment, to generate performance data, develop native reed design documentation, and set an example for other Minnesota communities transitioning away from invasive reeds. The information generated during this testing period will help guide future projects and inspire confidence that native reeds are a viable alternative for wastewater treatment plants. The project aims to prevent the spread of invasive Phragmites while implementing a sustainable effective wastewater treatment option.

Collecting samples and testing will be conducted both in-house and through third party lab testing. Some metrics will be measured at the plant, while some samples are taken at the influent and effluent of the plant. The measurements that will be taken at the influent/effluent of the reeds to get an accurate estimate of their performance include BOD5, TSS (Unfiltered), % Solids (Unfiltered), Ammonia, TKN, Nitrate, Nitrite, and Total Phosphorus

The purpose of the funding is to study and implement effective wastewater treatment while mitigating emerging threats to the environment and natural resources. In addition, the city is working toward phasing out the existing reeds as required in a manner that is effective and environmentally sustainable.

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?

This project will protect the state's natural resources as it is anticipated that the native reeds will be effective in wastewater treatment. Furthermore, cities across Minnesota will be encouraged to use native reed beds as an alternative to mechanical sludge treatment. The environmental benefits include reducing the spread of invasive Phragmites and removing the need to be build a digester reducing energy usage which comes from the operation of such as system. Additionally, there will be a reduction in sludge reducing transferring to landfills resulting in reduced trucking and carbon emission, thus preserving and enhancing the state's natural resources.

Activities and Milestones

Activity 1: Construction

Activity Budget: \$68,600

Activity Description:

Replace two of six reed beds with genetically verified native reeds to keep existing wastewater residuals management practices while protecting Minnesota water resources by reducing invasive reed spread and generating transferable, field-based guidance for similar systems. A qualified supplier will provide genotyped native reed seedlings (not rhizomes) to improve establishment success. Grant-funded construction includes manual combing of pea gravel to remove remaining invasive rhizomes, installation of a clean sand layer, and planting seedlings at 1 ft spacing. Beds will be operated with effluent-only flow initially to support root establishment before applying sludge. To limit invasive expansion from adjacent beds, invasive seed heads will be cut prior to maturity. Outputs include two planted native reed beds utilizing existing infrastructure and an establishment period documented for future replication. The expected impact is reduced risk of invasive propagation, while allowing the city to maintain their current sludge handling process. Establishment will be evaluated using measurable criteria.

Activity Milestones:

Description	Approximate Completion Date
All Construction Funds Legally Secured	July 31, 2027
Rhizome combing and removal	July 31, 2027
Sand installation	July 31, 2027
Native reed planting	July 31, 2027
Cutting of invasive seed heads	August 31, 2027
Signage Installed with ENRTF Language or Logo	September 30, 2027
Biosolids application to reed beds (Open for Intended Use)	September 30, 2027
One year of biosolids application (Certificate of Occupancy or Equivalent Obtained)	September 30, 2028
Notice of Funding Restriction Recorded (if applicable)	September 30, 2028

Activity 2: Sampling and Engineering Support

Activity Budget: \$8,400

Activity Description:

Quantify native reed bed performance to inform operational decisions that protect water quality and support evidence-based adoption of practices that conserve resources and reduce future maintenance and biosolids disposal impacts. Monitoring will supplement the City’s standard testing to capture performance outcomes relevant to water quality and solids handling. Quarterly sampling will include BOD and TSS, plus ammonia, TKN, nitrate, nitrite, and total phosphorus. Sludge characteristics will be measured monthly for percent solids and percent volatile solids. Dewatering performance will be assessed quarterly through two day sludge in bed solids testing (four samples per bed per event). Engineering support will review data, summarize trends, and provide operational recommendations. Outputs include a structured one-year performance dataset and an engineering interpretation memo suitable for sharing with other Minnesota communities using reed bed systems. Outcomes will be evaluated by comparing trends before/after solids loading (e.g., changes in dewatering solids, nutrient/BOD/TSS performance, and operational stability), providing practical guidance communities transitioning to native reed systems to protect water quality statewide.

Activity Milestones:

Description	Approximate Completion Date
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Initiation of performance monitoring	August 31, 2027
Completion of performance monitoring	July 31, 2028
Engineering interpretation memo	December 31, 2028

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
Michele Peterson	City of Chatfield	City Administrator	No
Steven Schlichter	City of Chatfield	Wastewater Superintendent	No
Jessica Hedin	Short Elliott Hendrickson, Inc. (SEH)	Consulting Engineer	No

Dissemination

Describe your plans for dissemination, presentation, documentation, or sharing of data, results, samples, physical collections, and other products and how they will follow ENRTF Acknowledgement Requirements and Guidelines.

Performance monitoring will be conducted, and an engineering interpretation memo will be prepared.

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?

The city will oversee implementation of the project and will work with their consultant engineer. Additionally, there is an opportunity to partner with the University of Minnesota (UMN) Extension Program. The city's consultant engineer has been consulting with UMN. Additional work is not anticipated. The city is committed to the project but needs grant assistance to fully complete the project components.

Project Manager and Organization Qualifications

Project Manager Name: Michele Peterson

Job Title: City Administrator

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

Michele Peterson has 15 years of experience in local government and city administration, including the successful management of several large, grant-funded projects throughout her career. This includes working with PFA on a Water Treatment Facility, as well as a new Wastewater Treatment Facility. In addition, Michele has worked with the MN DNR on Legislative Directed Funds for the repair and renovation of a Hydroelectric Stone Arch Dam. City Wastewater Superintendent Steven Schlichter will assist Michele in the implementation of the project. Steven Schlichter has 18 years of experience in local government and is a licensed class A wastewater operator with a type 4 biosolids license with experience in wastewater maintenance, operations and successful management of projects throughout his career, including: various and multiple mechanical updates at multiple wastewater facilities, biosolids dewatering and storage, multiple sewer and water main repair / replace projects along with the normal daily repair, maintenance and operations of the various facilities. Previous experience is 2-year industrial maintenance course and 6 years as an industrial maintenance mechanic at a large meat processor with a wastewater pretreatment facility.

Organization: City of Chatfield

Organization Description:

The City of Chatfield is a unit of local government. Known for its rich history and high quality of life, Chatfield offers 64 acres of parkland land in 9 city parks. Chatfield, known to many as "The Chosen Valley" or "Bandtown, USA," is located

in the valley where Mill Creek and the north branch of the Root River meet, and sits equally in both Olmsted and Fillmore Counties in southeastern Minnesota. Chatfield is only twenty miles from the Mayo Clinic and has scenic panoramic views of southern Minnesota's Driftless Area bluffs.

The City has experienced steady growth in the last couple of decades, with a 25% increase in population from the 2000 Census to the 2020 Census. With a population of 3,034 Chatfield boasts a strong sense of community spirit and a welcoming atmosphere. The City of Chatfield works to create a connected, welcoming community by supporting quality housing, local jobs, vibrant public spaces, and cultural and recreational opportunities for residents and visitors of all ages.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
							Sub Total	-
Contracts and Services								
SEH, Inc.	Service Contract	Initiate/Complete Performance monitoring and prepare engineer interpretation memo.				0		\$4,650
TBD	Service Contract	Sampling & Analysis: BOD and TSS, plus ammonia, TKN, nitrate, nitrite, and total phosphorus.				0		\$3,750
TBD	Service Contract	Construction: Rhizome combing & removal, sand installation, native reed planting, and cutting of invasive seed heads.				0		\$68,600
							Sub Total	\$77,000
Equipment, Tools, and Supplies								
							Sub Total	-
Capital Equipment								
							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	\$77,000

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				
Cash	City of Chatfield	Local matching for engineering monitoring, analysis/sampling & construction	Secured	\$25,875
			Non State Sub Total	\$25,875
			Funds Total	\$25,875

Total Project Cost: \$102,875

This amount accurately reflects total project cost?

Yes

Attachments

Required Attachments

Visual Component

File: [f1e4d222-2a2.pdf](#)

Alternate Text for Visual Component

Chatfield Native Reed Project Map...

Financial Capacity

Title	File
City of Chatfield Financial Statements	72b883fa-0fe.pdf

Board Resolution or Letter

Title	File
City of Chatfield Resolution	8b38fa32-7ca.pdf

Supplemental Attachments

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

Title	File
Budget Addendum	ee6a8155-8ef.pdf
Budget Addendum	7db78dfd-7a5.xlsx
Capital Construction Project Questionnaire	b8300dcc-dba.pdf
Letter of Support	7b23e618-14c.pdf
Photos of Existing Reed Beds	f5643f0d-c18.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?

No

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?

Yes

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:

Michele Peterson

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