



Environment and Natural Resources Trust Fund

2024 Request for Proposal

General Information

Proposal ID: 2024-275

Proposal Title: Lino Lakes Water Stewards Program

Project Manager Information

Name: Michael Grochala

Organization: City of Lino Lakes

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Email: mgrochala@linolakes.us

Project Basic Information

Project Summary: The City is proposing to implement a web based, interactive application for municipal water customers and City utility staff that provides information to make informed decisions about future usage.

Funds Requested: \$96,000

Proposed Project Completion: December 31, 2024

LCCMR Funding Category: Small Projects (H)

Secondary Category: Water Resources (B)

Project Location

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

Region(s): Metro

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

Region(s): Metro

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 Lino Lakes provides potable water to 17,000 residents and over 230 businesses (drinking water, irrigation, industrial use) on a daily basis using six (6) wells with an annual MN DNR water appropriation of 900 million gallons. The City draws its water supply from the Prairie Du Chien/Jordan Aquifer. Concern over decreasing lake levels of White Bear Lake led to court imposed restrictions on municipal water appropriation permits and the formation of the North and East Metro Groundwater Management Area. The Mn DNR identified the area, including Lino Lakes, as an area of specific concern where groundwater resources are at risk of overuse and degraded quality. Clean groundwater is a finite resource that is a basic need for all residents and drives economic development.

As the City grows in conformance with regional plans so does its reliance on these resources. With limited or cost prohibited options for alternative water supply sources the City is focused on reducing the per capita residential demand to the lowest extent possible. One of the largest obstacles to overcome and at the same time most cost effective means to reduce consumption is to change consumer habits.

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.

Providing more frequent access to water use data, in an understandable and easy to use interface, will allow residents to self-monitor use and identify problems sooner and adjust accordingly. Utility staff will also have more readily accessible analytics available to identify and timely respond to water loss issues.

The solution proposes utilizing a remote, automated data network that is built upon existing City infrastructure. This network is a combination of hardware (base station, antenna, and radio receivers/transmitters) and software that provides continuous data collection and analytics in real time. The base station and antenna would be installed in a strategic location where it can effectively communicate with all radio receivers installed within individual homes and businesses.

The software allows customers to review water use data, target use goals, and set up alerts within a customer portal accessed via computer, tablet or other smart device. Customers will eventually have access to data in 4 hour increments as the system is implemented. Current access is only available every 3 months as part of the quarterly billing cycle, making it nearly impossible to affect behavior.

The system will be maintained and updated by the City as part of ongoing utility operations.

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?

Conservation of groundwater resources through reduced usage.

Refined data on who is using and when in order to pinpoint usage issues.

Easy to understand use data in the hands of the city and water users.

Opportunity for water customers to become a participant in managing the city's water resources.

Development of an informed city staff and community members on groundwater use and conservation.

Activities and Milestones

Activity 1: Purchase and install communications base station and software

Activity Budget: \$32,000

Activity Description:

The first step will be to purchase and install the necessary hardware. The base station will be installed and connected to the antenna located on Water Tower No. 3. This will provide coverage for the entire city.

Activity Milestones:

| Description | Approximate Completion Date |
|--|-----------------------------|
| Install base station and connect to Antenna (supplied by City) | August 31, 2024 |

Activity 2: Regional Network Interface (RNI), Software as a Service (SaaS) and Analytics Software Installation

Activity Budget: \$37,000

Activity Description:

After installation of the antenna and base station the city will install the network software (Sensus RNI SaaS) and analytics software on city computers. Part of the software installation will include training for city staff on the RNI and analytics package.

City staff can develop a customer analytics package that will allow them to gather user specific suite of data on water usage and include real time alerts (unaccounted for water loss, identification of leaks, etc.). The data is anticipated to be communicated every 4 hours once implementation is complete. Approximately 20% of system customers will have 4 hour read times upon project rollout. The City will increase manual readings to once a month rather than every 3 months allowing all utility customers to immediately benefit from the system.

As data is assessed and trends identified, the city can adaptively change settings, consumer messaging and analytic calculations as needed.

Activity Milestones:

| Description | Approximate Completion Date |
|---|-----------------------------|
| Install RNI SaaS system | October 31, 2024 |
| Install analytics software and and develop user specific data | October 31, 2024 |
| RNI and Analytics Training | October 31, 2024 |

Activity 3: Create Customer Portal

Activity Budget: \$27,000

Activity Description:

The final activity will be the development of the customer portal. The customer portal will be the interface with which water customers will interact with the data to become informed on their individual usage habits. This information will include the volume of water used and how that is affecting their water bill as progress toward user defined targets. The interface can also be used as a communication tool for the city to relate critical information on the city's water supply in expedited fashion, including freeze warnings, watering restrictions, water usage anomalies and recommended

household actions. The City will also conduct a public education campaign using social media, water bills, website, and newsletter to advertise the system availability.

Activity Milestones:

| Description | Approximate Completion Date |
|---|-----------------------------|
| Customer Portal Setup | November 30, 2024 |
| Customer Portal Training | November 30, 2024 |
| Customer Portal Public Education Campaign | November 30, 2024 |
| Release Customer Portal Live | December 31, 2024 |

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?

Results would be implemented almost immediately after the network and software are installed, and the customer portal (website) is up and running. City staff would be able to set specific thresholds and review for outliers immediately and begin to develop a data review process that establishes an assessment timeline and specific metrics for reporting and thresholds exceedance actions.

This data will allow city staff to address specific usage concerns as identified by the unique radio receiver/transmitter and residents would be able to monitor use and utility billing to make adjustments to use

Project Manager and Organization Qualifications

Project Manager Name: Michael Grochala

Job Title: Community Development Director

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

Project Manager has been the City's Community Development Director for 21 years and in that capacity responsible for budgeting and management of both planning processes, capital improvement projects, as well as leading new programmatic initiatives.

Organization: City of Lino Lakes

Organization Description:

The City of Lino Lakes is located in Anoka County, MN, with a population of 21,399 (2020 US Census Estimate) and covers an area of 33.1 square miles with roughly 20% of this area covered by water resources. Designated by Metropolitan Council as Emerging Suburban Edge, the community has seen significant residential and commercial growth over the past 20 years. Lino Lakes provides a wide range of municipal services across its 12 departments including, public safety, municipal water supply and natural resource protection.

Budget Summary

| Category / Name | Subcategory or Type | Description | Purpose | Gen. Ineligible | % Benefits | # FTE | Classified Staff? | \$ Amount |
|---------------------------------------|--|--|--|-----------------|------------|-------|-------------------|-----------|
| Personnel | | | | | | | | |
| | | | | | | | Sub Total | - |
| Contracts and Services | | | | | | | | |
| Core and Main | Professional or Technical Service Contract | Installation of RNI SaaS, analytics, and customer portal setups and fees | | | | 1 | | \$64,000 |
| | | | | | | | Sub Total | \$64,000 |
| Equipment, Tools, and Supplies | | | | | | | | |
| | | | | | | | Sub Total | - |
| Capital Expenditures | | | | | | | | |
| | | M400 Base Station | communication with 510M receivers/transmitters | | | | | \$32,000 |
| | | | | | | | Sub Total | \$32,000 |
| 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 | \$96,000 |

Classified Staff or Generally Ineligible Expenses

| Category/Name | Subcategory or Type | Description | Justification Ineligible Expense or Classified Staff Request |
|---------------|---------------------|-------------|--|
|---------------|---------------------|-------------|--|

Non ENRTF Funds

| Category | Specific Source | Use | Status | Amount |
|------------------|--------------------------------------|---|----------------------------|-----------------|
| State | | | | |
| | | | State Sub Total | - |
| Non-State | | | | |
| Cash | City Municipal Water Operating funds | City acquisition and installation of communications antenna | Secured | \$32,000 |
| In-Kind | City Budget - Utlity Operating Fund | This funds will support implementation of the system components, training and public education campaign | Secured | \$7,500 |
| | | | Non State Sub Total | \$39,500 |
| | | | Funds Total | \$39,500 |

Attachments

Required Attachments

Visual Component

File: [ce7af909-c04.pdf](#)

Alternate Text for Visual Component

This graphic shows an example of the customer portal view (top images) and city staff analytics (bottom figure)....

Board Resolution or Letter

| Title | File |
|---|----------------------------------|
| Lino Lakes Resolution 23-029 approving application to ENRTF | 4d3ec623-2e7.pdf |

Administrative Use

Does your project include restoration or acquisition of land rights?

No

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

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 design, construction, or renovation of a building, trail, campground, or other capital asset costing \$10,000 or more?

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?

No