



Environment and Natural Resources Trust Fund

M.L. 2024 Approved Work Plan

General Information

ID Number: 2024-077

Staff Lead: Tom Dietrich

Date this document submitted to LCCMR: June 10, 2024

Project Title: Improving Water Efficiency Programming with Measurable Outcomes

Project Budget: \$200,000

Project Manager Information

Name: Heidi Quinn

Organization: City of Woodbury

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Project Reporting

Date Work Plan Approved by LCCMR: June 20, 2024

Reporting Schedule: June 1 / December 1 of each year.

Project Completion: December 31, 2026

Final Report Due Date: February 14, 2027

Legal Information

Legal Citation: M.L. 2024, Chp. 83, Sec. 2, Subd. 04e

Appropriation Language: \$200,000 the second year is from the trust fund to the commissioner of natural resources for an agreement with the city of Woodbury to accelerate the implementation of new and innovative water efficiency programs to conserve water and serve as a model for other communities.

Appropriation End Date: June 30, 2027

Narrative

Project Summary: The project will accelerate the implementation of three water efficiency programs that are estimated to save 79 million gallons of water annually and serve as an example for other communities.

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

The City of Woodbury recognizes the connection between surface water, groundwater, and drinking water and the importance of considering impacts to all water resources when making decisions, referred to as the One Water Vision. Resilience is a key component of the 2040 Comprehensive Plan and the 2040 Local Surface Water Management Plan to achieve water quantity and quality goals.

The city's goals around quantity and quality include providing abundant, safe drinking water for current and future generations of residents by protecting and managing groundwater. We recognize that this must also meet all state and federal standards and guidelines, including PFAS, chloride and lead. To achieve this goal, the city has adopted a policy to strive toward flat total annual water usage through 2030 and a policy to create and implement water efficiency programming.

Woodbury is a growing community and has committed to increasing efficiency of water use while adding residential and commercial properties to our borders. We have done this by piloting and formalizing numerous water efficiency programs including lawn watering restrictions, irrigation reuse and water efficiency rebates. After more than a decade of work, moving the needle on water conservation is becoming more difficult and requires additional resource commitment.

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 city has instituted several initiatives to help the community reach water stewardship goals and has shown great success through these programs. Efforts include: smart irrigation controller program, stormwater irrigation reuse, and low-flow toilet pilot programs for residential and commercial properties. The city has also established and updated policies to promote water efficiency.

Although the city has been successful with these programs, staff has completed a data-driven assessment and evaluation of past, current, and future water efficiency programming, and confirmed there is more progress to be made. While we have built momentum on tangible improvements, it's been identified that future programming will be more technical and robust to continue to improve city-wide efficiency.

To make more progress, the city will accelerate implementation and introduction of new and innovative water efficiency programs that will include a pilot residential water softener optimization/replacement program, re-envisioning of the commercial and homeowner association irrigation system optimization cost share program, formalize the pressure regulated sprinkler head replacement program, and conduct a targeted education campaign.

Data related to efficiency programming will be tracked, evaluated, and presented to interested parties and similar communities.

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?

Through enhanced water efficiency programming implementation, the city estimates a decreased water consumption of 79 million gallons annually through irrigation improvements and water softener optimization by 2030. The water softener optimization program will also reduce chloride loading in the region. The grant will be used to achieve approximately 3 million gallons of water annually or 4% of the annual water saving by the end of 2026.

The proposed programming will result in striving towards regional goals for groundwater protection. These efforts align with DNR northeast groundwater management area and guidance pertaining to the protection of the Valley Creek Trout Stream.

Project Location

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

City(s): Woodbury

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

City(s): Woodbury

When will the work impact occur?

During the Project and In the Future

Activities and Milestones

Activity 1: Residential water softener optimization/replacement program to increase efficiency of existing units

Activity Budget: \$65,000

Activity Description:

The City’s water softener efficiency program is an innovative program that will reduce water use through optimization of existing softeners, or replacement of outdated softeners with new efficient models. The City will design the pilot program using the MPCA Guide to Developing a Local Water Softener Rebate Program (2019), and then carry out pilot-scale implementation for residential customers. Funds will be used to cover the costs for residential softener optimization, rebates for softener replacement, and for program design and implementation assistance. The first step in the pilot program will include an in-person inspection by a city-approved contractor free of charge to the homeowner, who can make optimization improvements on site, or determine if the homeowner is eligible for an upgrade. If an upgrade is recommended, based on system age, efficiency or condition, the second step would offer a rebate for new, high efficiency models. The City plans to pilot this program with up to 75 residential customers prior to full scale implementation. The City will conduct direct educational outreach with residential customers through water billing information and City communication channels. Data related to the optimization inspections and replacements will be tracked, and reductions in water consumption will be estimated.

Activity Milestones:

Description	Approximate Completion Date
Design a pilot inspection, optimization, and rebate program for pilot softener replacement program	January 31, 2025
Identify and engage program partners: Local Watershed Districts (3), Water Quality Association, MPCA, MNDNR	March 31, 2025
Establish list of approved softener optimization contractors	March 31, 2025
Conduct outreach and education with residential customers	June 30, 2025
Complete water softener optimization and replacement pilot program	March 31, 2026
Evaluate pilot program and plan for full-scale implementation	December 31, 2026

Activity 2: Commercial and Homeowner’s Association (HOA) irrigation system optimization cost share program.

Activity Budget: \$65,000

Activity Description:

From 2017 to 2021 the City offered a cost share program with commercial properties and homeowner associations that helped to fund efficient irrigation practices, which results in a 22% reduction in irrigation water use at 64 properties. The city funded up to 50% of the cost (a maximum of \$8,000 per customer account) to improve irrigation practices, which included irrigation system efficiency improvements. A study conducted by the City in 2022 documented over 20 million gallons of water per year saved because of the cost share program. The City will review past participation, water savings, feedback from past participants, and costs to inform modifications to this program. The City will use grant funds to recreate the commercial and HOA cost share program and provide funding for at least 8 irrigation efficiency improvement projects, toward the goal of funding improvements at 50 properties by 2030. The City plans to conduct direct educational outreach with HOA managers and board members, high water use commercial properties, and irrigation system service companies. Local water conservation volunteers will assist with outreach. Data related to the efficiency improvements will be recorded, and reductions in water use documented through water billing records.

Activity Milestones:

Description	Approximate Completion Date
Compile inventory of HOA managers and contacts	August 31, 2024
Identify and engage program partners: Woodbury Chamber of Commerce, MNDNR, HOAs	October 31, 2024
Targeted educational outreach with HOAs, targeted commercial properties, and irrigation contractors	April 30, 2025
Implementation and documentation of irrigation system improvements	September 30, 2026
Document water savings associated with cost share projects	October 31, 2026
Review progress and plan for continuation of cost-share program toward full implementation	December 31, 2026

Activity 3: Pressure regulated sprinkler head replacement reimbursement program

Activity Budget: \$65,000

Activity Description:

The pressure regulated sprinkler head replacement reimbursement program is an innovative program that will cover the costs up to a specified maximum amount for residential water customers to upgrade existing irrigation systems with high-efficiency, water-saving components. In 2018 a study by the City and MnTAP at the University of Minnesota found that homeowners could save an average of 32,000 gallons per year by switching to pressure regulated sprinkler heads. Analysis conducted by the City in 2022 established a goal of 1,300 residential system replacements through 2030. The City will design the program, and then identify targeted customers through review of water billing and water system pressure data who will be solicited to participate. The City will provide a free irrigation system audit for applicants, and provide up to \$800 for equipment and installation by a qualified contractor. Funds will be used to cover reimbursement costs for approximately 50 participants, and for program design and implementation assistance. Direct educational outreach will include information on potential cost savings and payoff period for homeowners. Water savings will be tracked through water billing information. City will review and evaluate the program as part of planning for full-scale implementation.

Activity Milestones:

Description	Approximate Completion Date
Design a pressure regulated sprinkler head replacement reimbursement program for pilot implementation	November 30, 2024
Identify and engage program partners: Local Watershed Districts (3), Washington County Conservation District, MnDNR	January 31, 2025
Establish list of qualified contractors	February 28, 2025
Perform targeted educational outreach to eligible residential customers	March 31, 2025
Complete audits and installation of pressure regulated sprinkler heads in 50 residential systems	October 31, 2025
Track water use through customer billing data to document water savings	October 31, 2026
Evaluate program and plan for full-scale implementation	December 31, 2026

Activity 4: Create water efficiency education materials

Activity Budget: \$5,000

Activity Description:

The city recently surveyed residents to learn how to increase participation in water efficiency programming. The survey results identified a need to increase allocated resources to expand education, outreach, and engagement. The city will create educational materials to support the water efficiency and conservation programs. This will include education about the city’s overall water efficiency programming and goals, and tailor educational materials for programming. The materials will include potential water and cost savings associated with efficiency practices. Targeted educational outreach will be conducted with participants identified under each program activity. All materials will be distributed to

customers through the city’s existing communication channels including but not limited to, social media, city newsletter distributed to over 31,000 mailboxes, and showcased at local community events. Distribution of the educational materials is funded in-kind by the city and not funded by ENRT grant.

Activity Milestones:

Description	Approximate Completion Date
Design education materials for water efficiency programming	December 31, 2024
Targeted education and outreach (ongoing throughout program lifecycle)	June 30, 2025

Project Partners and Collaborators

Name	Organization	Role	Receiving Funds
South Washington Watershed District	Watershed District	Partner	Yes

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.

The water efficiency programs will be advertised and distributed to customers through the city’s existing communication channels including but not limited to, city website, social media, city newsletter distributed to over 31,000 mailboxes, and showcased at local community events. All education materials and water efficiency programs funded through the grant will acknowledge that funding was received from the Environment and Natural Resources Trust Fund (ENRTF) and will display the trust fund logo.

The City of Woodbury has a history of creating repeatable water efficiency programming, sharing information with communities, as well as, presenting at local and national conferences. Some examples include that several communities have replicated the city’s discounted irrigation controller program, and staff have presented at conferences geared towards professionals in engineering and public works, such as- the MN Water Resources Conference, and most recently at the national AWWA sustainable water management conference. The city will continue to share information and data related to efficiency programming and will acknowledge that funding was received from the ENRTF and display the trust fund logo.

The three proposed water efficiency programs and creation of educational materials are part of a larger city water efficiency programming implementation plan proposed through 2030. The goal of the water efficiency programming implementation plan is to promote behavior change and conserve groundwater resources by offering programming that is focused on education and outreach while removing barriers (such as cost) that prevent customers from implementing water conservation practices.

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?

Woodbury City Council has committed to funding water efficiency programming from the Water and Sewer Utility Fund. The city has been operationalizing these programs, as they are developed, and continues to provide funding to incentivize water efficiency by users. While decreased water sales results in decreased revenue, the city clearly sees the environmental and utility-system management benefits far outweigh the decreased capital.

City staff is actively engaged in the PFAS Priority 2 Government and 3M Work Group and the city continues to be committed to allocate funding to provide abundant, safe drinking water for current and future generations of residents.

Budget Summary

Category / Name	Subcategory or Type	Description	Purpose	Gen. Ineligible	% Benefits	# FTE	Classified Staff?	\$ Amount
Personnel								
							Sub Total	-
Contracts and Services								
TBD Contractor	Professional or Technical Service Contract	Pilot-scale implementation of residential water softener optimization/replacement program to increase efficiency of existing units. Contracted services for water softener inspections and optimization : 75 customers @ \$200 per visit				1		\$15,000
TBD Contractor	Professional or Technical Service Contract	Implementation of pressure regulated sprinkler head replacement reimbursement program. Contracted services for Irrigation system inspections, and prioritized pressure regulated sprinkler head replacement (as recommended). 50 customers @ up to \$1,000 per customer				1		\$50,000
TBD	Professional or Technical Service Contract	Create water efficiency education materials. Design educational communication materials to inform the community on the city water efficiency goals, water conservation education, and new water efficiency opportunities for the community.				1.5		\$5,000
TBD	Professional or Technical Service Contract	Program evaluation, design, and implementation services (all three water efficiency programs)				1.5		\$28,500
							Sub Total	\$98,500
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								
		Rebate Incentive	Pilot-scale implementation of residential water softener optimization/replacement program to increase efficiency of existing units. Rebate for new, high efficiency water softener model installed by a city approved contractor: 75 customers @ \$500 per rebate					\$37,500
		Cost-Share Incentive	Commercial and Homeowner's Association (HOA) water efficiency measure cost share program. Commercial and HOA Cost-share program: 8 properties @ \$8,000 per property					\$64,000
							Sub Total	\$101,500
							Grand Total	\$200,000

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				
In-Kind	City of Woodbury Water Efficiency Programming Budget	July 2024- December 2026 city budget dedicated to water efficiency programming	Secured	\$250,000
			Non State Sub Total	\$250,000
			Funds Total	\$250,000

Attachments

Required Attachments

Visual Component

File: [dc6918fd-d0f.pdf](#)

Alternate Text for Visual Component

Proposed City of Woodbury Water Efficiency Programming Implementation Schedule without ENRT Grant funding...

Board Resolution or Letter

Title	File
Resolution 23-46 Authorizing Application to the Legislative-Citizen Commission on Minnesota Resources 2024 Environmental and Natural Resources Trust Fund Grant	f9975e30-e9e.pdf

Supplemental Attachments

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

Title	File
U of M MnTAP Letter of Support	1ca58cb0-d2e.pdf
Washington County Letter of Support	4aac49c9-491.pdf
EPA WaterSense Letter of Support	cadb9018-ecb.pdf
Metropolitan Council Letter of Support	8225e3f0-ef4.pdf
Valley Branch Watershed District Letter of Support	a444dca8-c22.pdf
Woodbury Chamber of Commerce Letter of Support	647b59ec-985.pdf
Washington Conservation District Letter of Support	ea1945c0-27b.pdf
South Washington Watershed District Letter of Support	4bb414da-86b.pdf
Ramsey-Washington Metro Watershed District Letter of Support	eb7afda5-9a2.pdf

Difference between Proposal and Work Plan

Describe changes from Proposal to Work Plan Stage

Addressed requested revisions to the narrative and budget. Updated number of years for Professional/Technical Contracts. 6/10/24: Changed participants in 2017-2021 cost-share program from 62 to 64. 64 is the accurate number of participants from 2017-2021.

Additional Acknowledgements and Conditions:

The following are acknowledgements and conditions beyond those already included in the above workplan:

Do you understand and acknowledge the ENRTF repayment requirements if the use of capital equipment changes?

N/A

Do you agree travel expenses must 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?

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