THE CITY OF
NORTHFIELD
MINNESOTA
ESTD 1855

Consider Resolution Accepting Bids and Awarding Contract for the Water Treatment Plant Project

January 21, 2025

MDH Manganese Water Guidance

Infants

100 µg/L

3 of 5 Northfield wells above 100 ug/L

Everyone Else

300 µg/L

Manganese in Northfield's Tap Water

- City conducted testing in 5 locations throughout 2020 at taps where people drank water
  - No documentation on what type of treatment, if any, took place prior to the tap
- 4 of 5 sites had tests over 100 ug/L.

Reverse Osmosis & Why Water Softening?

- Soft water prevents build-up of minerals inside pipes, helps dry skin and hair, cleaner dishes, cleaner laundry, protects appliance, etc.
- Removes PFAS (forever chemical) and other future or unknown contaminants.
- Provides high quality of water to all residents
- Provides softened water to all Northfield water users who currently do not have access to softened water in their rental units
- Residents will be able to remove their in-home water softeners and no longer have to haul softener salt bags into home
- Less chlorides discharged to the Cannon River by removing home water softeners
- City can provide softened water at roughly $8 or slightly more than 1 bag of softener salt per month (typical amount used by residents)

Bid Tab

BIDDERS	TOTAL PROJECT BASE BID PRICE
1. Magney Construction, Inc.	$61,840,000.00
2. Rice Lake Construction Group	$63,558,800.00
3. Gridor Constr., Inc.	$73,569,200.00
4. McGough Construction	$75,573,112.00

Total Project Cost

Water Treatment Plant Bid	$	61,840,000
Reverse Osmosis (City Portion)	$	1,665,000
Roads, Raw Watermain, Trunk Sewer Line	$	8,348,073
10% Contingency	$	7,018,807
Engineering	$	3,793,135
Land	$	572,000
Total City Project	**$**	**83,237,015**

Estimated Reverse Osmosis Costs

- RO portion of WTP building is $3.5–$3.95 million
- Equipment is separate and is part of the Federal Funding
- If City were to eliminate RO
  - Roughly a 6 month redesign – cost for doing so
  - Close to $4M savings or around 5%
  - Project costs would go up roughly 5% or equal to RO elimination
  - Total project cost would be similar and plant would have less treatment and provide a lower quality of water to water users.

Northfield Water Treatment Plant

Landscape Plan - 10/20/2024

City Of Northfield Minnesota

BARR

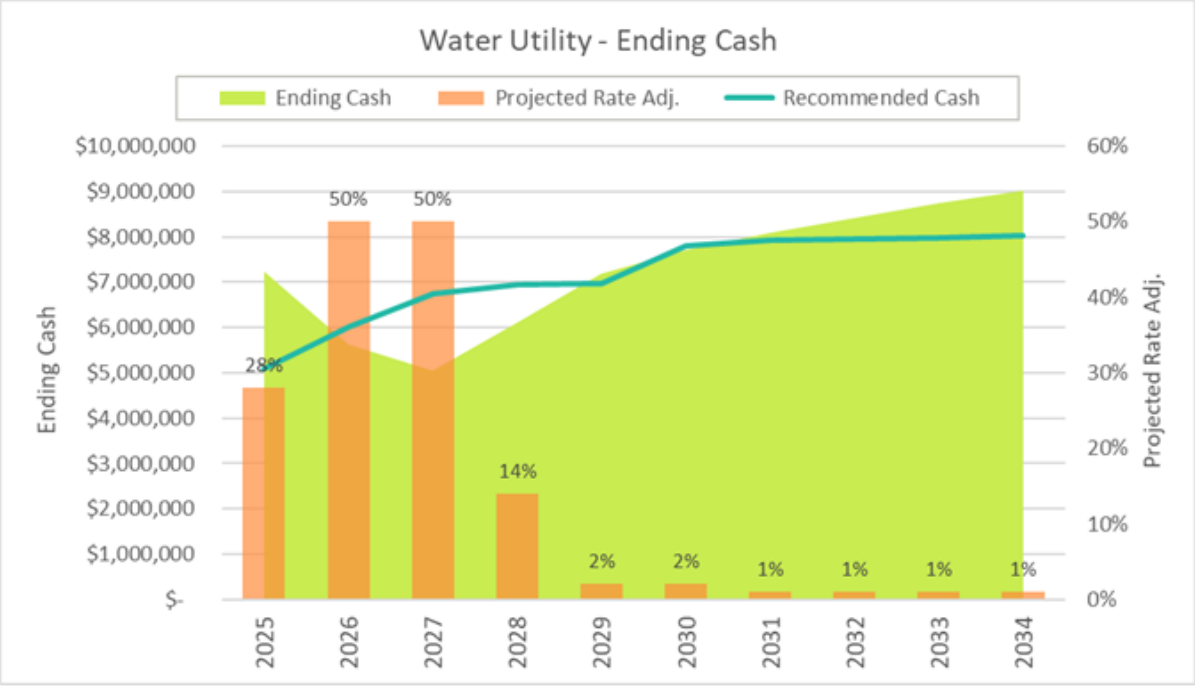
Quality of Life · Leadership · Natural World · Climate and Resilience

version 10-29-2024

Legend: ISI Envision Performance Criteria

Quality of Life	Wellbeing	QL1.1 Improve Community Quality of Life
		QL1.2 Enhance Public Health & Safety
		QL1.3 Improve Construction Safety
		QL1.4 Minimize Noise & Vibration
		QL1.5 Minimize Light Pollution
		QL1.6 Minimize Construction Impacts
	Mobility	QL2.1 Improve Community Mobility Access
		QL2.2 Encourage Sustainable Transportation
		QL2.3 Improve Access & Wayfinding
	Community	QL3.1 Advance Equity & Social Justice
		QL3.2 Preserve Historic & Cultural Resources
		QL3.3 Enhance Views & Local Character
		QL3.4 Enhance Public Space & Amenities
Leadership	Collaboration	LD1.1 Provide Effective Leadership & Commitment
		LD1.2 Foster Collaboration & Teamwork
		LD1.3 Provide for Stakeholder Involvement
		LD1.4 Pursue Byproduct Synergies
	Planning	LD2.1 Establish a Sustainability Management Plan
		LD2.2 Plan for Sustainable Communities
		LD2.3 Plan for Long-Term Monitoring & Maintenanc
		LD2.4 Plan for End-of-Life
	Economy	LD3.1 Stimulate Economic Prosperity & Developmen
		LD3.2 Develop Local Skills & Capabilities
		LD3.3 Conduct a Life-Cycle Economic Evaluation
Resource Allocation	Materials	RA1.1 Support Sustainable Procurement Practices
		RA1.2 Use Recycled Materials
		RA1.3 Reduce Operational Waste
		RA1.4 Reduce Construction Waste
		RA1.5 Balance Earthwork On Site
	Energy	RA2.1 Reduce Operational Energy Consumption
		RA2.2 Reduce Construction Energy Consumption
		RA2.3 Use Renewable Energy
		RA2.4 Commission & Monitor Energy Systems
	Water	RA3.1 Preserve Water Resources
		RA3.2 Reduce Operational Water Consumption
		RA3.3 Reduce Construction Water Consumption
		RA3.4 Monitor Water Systems
Natural World	Siting	NW1.1 Preserve Sites of High Ecological Value
		NW1.2 Provide Wetland & Surface Water Buffers
		NW1.3 Preserve Prime Farmland
		NW1.4 Preserve Undeveloped Land
	Conservation	NW2.1 Reclaim Brownfields
		NW2.2 Manage Stormwater
		NW2.3 Reduce Pesticide & Fertilizer Impacts
		NW2.4 Protect Surface & Groundwater Quality
	Ecology	NW3.1 Enhance Functional Habitats
		NW3.2 Enhance Wetland & Surface Water Function
		NW3.3 Maintain Floodplain Functions
		NW3.4 Control Invasive Species
		NW3.5 Protect Soil Health
Climate and Resilience	Emissions	CR1.1 Reduce Net Embodied Carbon
		CR1.2 Reduce Greenhouse Gas Emissions
		CR1.3 Reduce Air Pollutant Emissions
	Resilience	CR2.1 Avoid Unsuitable Development
		CR2.2 Assess Climate Change Vulnerability
		CR2.3 Evaluate Risk and Resilience
		CR2.4 Establish Resilience Goals and Strategies
		CR2.5 Maximize Resilience
		CR2.6 Improve Infrastructure Integration

Projected Water Rates



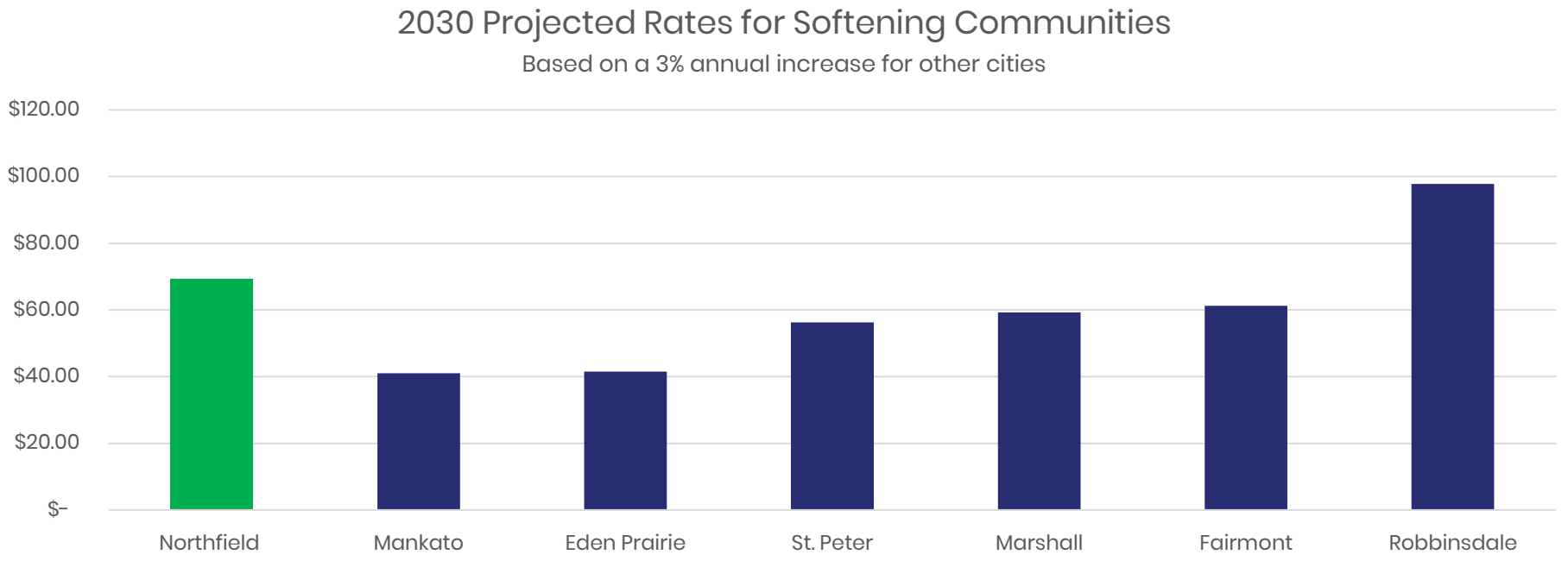
Sample Utility Bill

Sample Bills - Residential								
Average Residential								
589	cubic feet							
0.33	acre lot							
	2024	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
Water	$ 20.27	$ 25.95	$ 38.92	$ 58.38	$ 66.55	$ 67.88	$ 69.24
Sewer	$ 40.42	$ 42.24	$ 44.14	$ 46.13	$ 47.51	$ 48.94	$ 50.40
Garbage (35 gal)	$ 12.42	$ 12.54	$ 12.67	$ 12.80	$ 12.92	$ 13.05	$ 13.18
Storm Water	$ 9.92	$ 11.41	$ 13.12	$ 15.09	$ 17.35	$ 17.70	$ 18.05
	$ 83.03	$ 92.14	$ 108.85	$ 132.39	$ 144.34	$ 147.57	$ 150.88

How much does 5 gallons of Water cost?

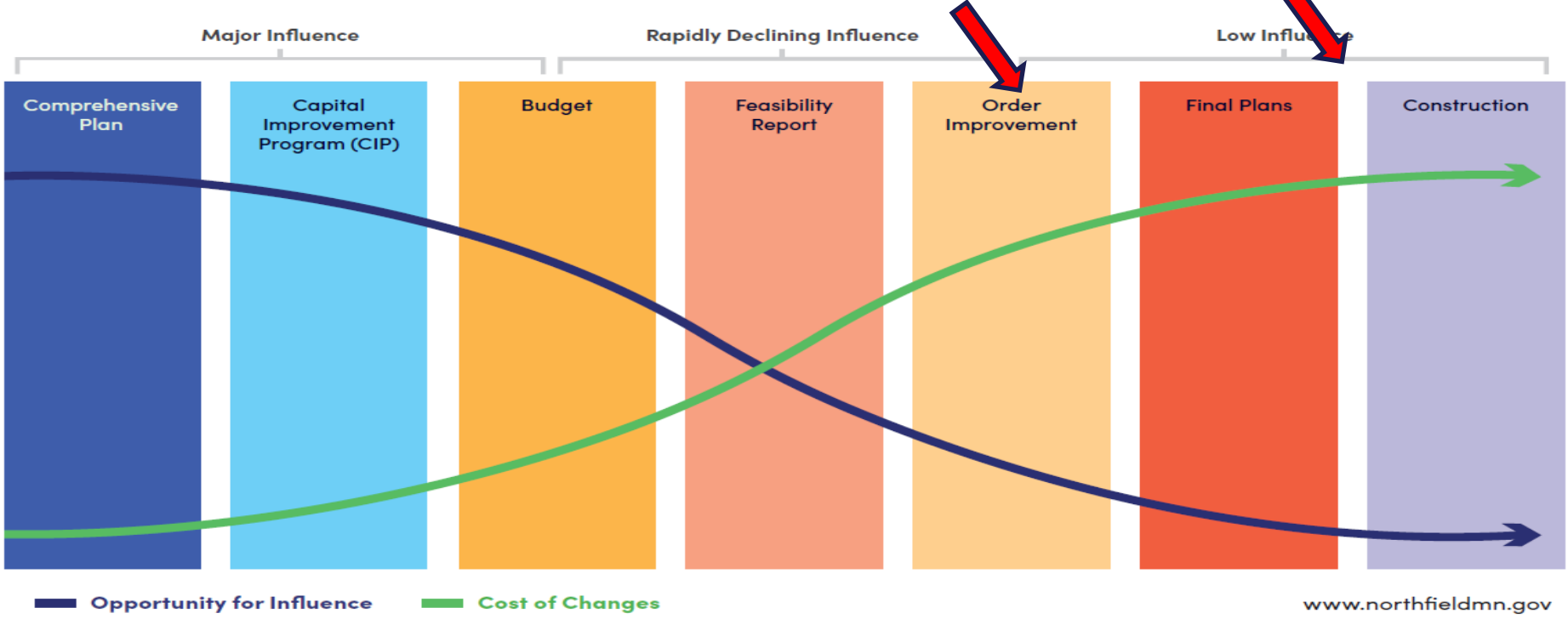
- Through your tap in 2024 ~3¢
- Through your tap in 2030 ~9¢
- At store or water supply company between $6.00 and $8.50

Comparable Cities



Note: These are some examples and with 22 cities with PFAS exceeding limits there will be many more new similar plants being built to remove those forever chemicals.

Project Influence



Project Timeline

Water System Study recommending water treatment plant with gravity filtration and reverse osmosis

2021 - 2022

City Council Accepted Water System Study

April 5, 2022

Design of Water Treatment Plant

April 2023 – October 2024

City Council Approved Contract with Bolton and Menk for Design

April 18, 2023

Open House on Water Treatment Plant

October 29, 2024

City Council Approves Plans and Specs Authorized Advertisement for Bid Project

November 12, 2024

Construction of Water Treatment Plant and Roadways

2025 - 2027

City Council Awards Project

January 21, 2025

Consider Resolution Accepting Bids and Awarding Contract for Water Treatment Plant Project

Thank you

Building Plan