

Village of Ogden

Water System Planning Report

Existing Conditions

- The Village has three wells that are functioning adequately and are able to meet demand.
- The elevated storage tank is structurally sound and provides sufficient storage capacity. There is some mildew on the base of the tank.
- The water treatment plant is in good condition and has had valves recently replaced. The following items in the treatment plant are recommended for improvement:
 - Replace the filter media, which was last replaced in 1996 and is reaching the end of its useful life.
 - Replace the aerator electrical and control equipment, which contains mercury switches that pose a health risk.
 - Install an automatic transfer switch for the generator.
- The Village's average water hardness is 345 mg/L, which is relatively high and has resulted in consumer complaints. The treatment plant is otherwise effective at removing contaminants and there are no other water quality concerns.
- The water meters were last partially replaced in 2003, and some may have last been replaced in the 1990s. The meters are reaching the end of their useful life, are under-reading, and require a high amount of labor hours to read.
- The distribution system consists primarily of cast iron pipe that was installed in the 1950s. The cast iron is corroding and reaching the end of its useful life, leading to frequent leaks and repeated failures.

Proposed Alternatives

Alternative B

- Core system water main replacement: replace the cast iron water main in the downtown area with PVC water main and upsize certain sections.
- Replace the filter media.
- Replace the aerator electrical and controls.
- Install an automatic transfer switch for the generator.
- Replace all water meters.
- Install a softening system to reduce treated water hardness to 100 mg/L.

Alternative C

- Full system water main replacement: replace all original cast iron water main with PVC water main and upsize certain sections.
- Replace the filter media.
- Replace the aerator electrical and controls.
- Install an automatic transfer switch for the generator.
- Replace all water meters.
- Install a softening system to reduce treated water hardness to 100 mg/L.

VILLAGE OF OGDEN

Alternative C Water System Improvements Project

IEPA Funding Scenarios - 03/05/2026				
	20 YEAR LOAN		30 YEAR LOAN	
	No PLF & 2.16% Rate	30% PLF & 2.16% Rate	No PLF & 2.16% Rate	30% PLF & 2.16% Rate
Total Estimated Project Costs	\$5,188,630			
Construction	\$4,117,430			
Contingency	\$412,000			
Design Engineering & Bidding	\$329,600			
Construction Engineering	\$329,600			
Estimated Loan Amount	\$5,188,630	\$3,632,041	\$5,188,630	\$3,632,041
Annual Debt Service (P&I)	\$322,240	\$225,568	\$236,800	\$165,760
Annual revenue needed by user	\$931.33	\$651.93	\$684.39	\$479.07
Current Average Monthly Water Rate	\$33.75			
Additional user charge per month	\$77.61	\$54.33	\$57.03	\$39.92
New Average Monthly Water Rate	\$111.36	\$88.08	\$90.78	\$73.67
Water Rate User Cost per MHI	1.58%	1.25%	1.29%	1.04%
Total Interest Paid	\$1,256,174	\$879,322	\$1,915,363	\$1,340,754

Loan Term	20		30	
Principal Forgiveness	\$0	\$1,556,589	\$0	\$1,556,589
Reduced Rate (50% of Market Rate)	2.16%			
Number of Users	346			
Average use per month (gallons)	5,000			
Median Household Income	\$84,688			

WATER RATES & FEES

2025 RATE, EFFECTIVE UNTIL MAY 1ST, 2026

RESIDENTS:

Minimum Charge	\$	15.00
Thereafter	\$	3.75 per 133.7 cubic feet

**BRINE SOFTENING
ESTIMATE OF PROBABLE COSTS
VILLAGE OF OGDEN**

CONSTRUCTION YEAR: 2027

ITEM NO.	DESCRIPTION	QTY.	UNIT	UNIT PRICE	TOTAL PRICE
1	5-ft Dia. Softening Vessel	1	EA	\$ 250,000.00	\$ 250,000.00
2	Salt Storage Vessel	1	EA	\$ 135,000.00	\$ 135,000.00
3	Process Piping	1	LS	\$ 50,000.00	\$ 50,000.00
4	Electrical & Controls	1	LS	\$ 90,000.00	\$ 90,000.00
5	Softener Drain Sewer (For Backwash)	70	LF	\$ 200.00	\$ 14,000.00
6	Building Addition	225	SF	\$ 350.00	\$ 78,750.00
<i>CONSTRUCTION SUBTOTAL</i>					\$ 617,750.00
		Inflation	4%	per year	\$ 24,710.00
<i>CONSTRUCTION SUBTOTAL (2027)</i>					\$ 642,460.00
		Contingency	10%		\$ 64,300.00
		Design Engineering & Bidding	8%		\$ 51,400.00
		Construction Engineering	8%		\$ 51,400.00
TOTAL ESTIMATED COST:					\$ 809,560.00