

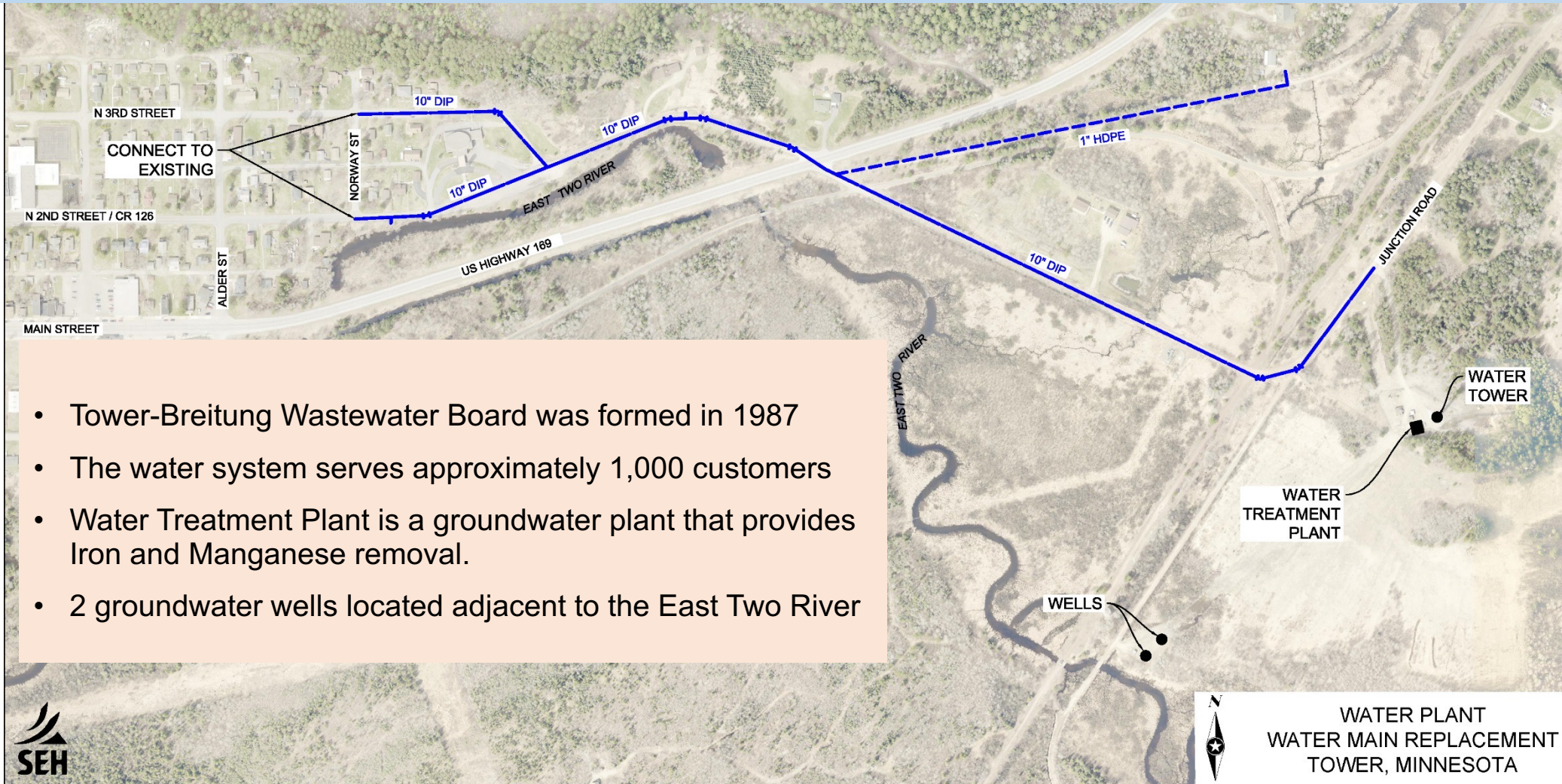
# WATER SYSTEM IMPROVEMENTS FOR THE TOWER AND SOUDAN COMMUNITIES

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# WATER TREATMENT AND WATER MAIN IMPROVEMENTS



- Tower-Breitung Wastewater Board was formed in 1987
- The water system serves approximately 1,000 customers
- Water Treatment Plant is a groundwater plant that provides Iron and Manganese removal.
- 2 groundwater wells located adjacent to the East Two River



WATER PLANT  
WATER MAIN REPLACEMENT  
TOWER, MINNESOTA



# WHY WE ARE HERE?

## ESSENTIAL SERVICES

Need to provide safe drinking water and continue to meet drinking water standards

## CURRENT ISSUES

- Groundwater Wells Under Influence
- Existing Facility only treats for Iron and Manganese removal
- Disinfection Byproduct Issues
- MDH has detected Viruses
- Alternative Wells Not Feasible
- 80 Year Old Water Main That Serves Tower Is Past Life Expectancy



# WHAT ARE THE SOLUTIONS?

Existing treatment facility is not suited for organic material removal.

- **Disinfection By-Products**

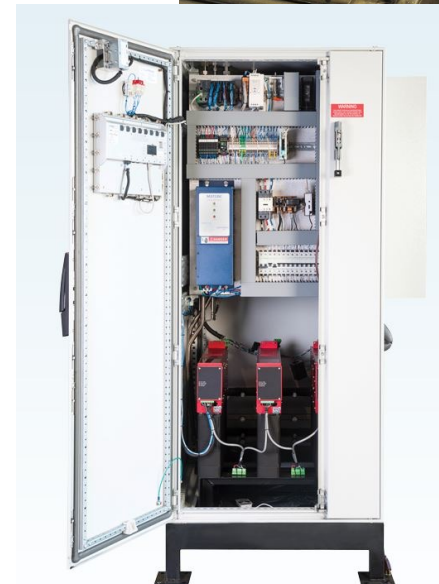
- Trihalomethane Limit: 80 ug/L
- Haloacetic Acid Limit: 60 ug/L

- **Viruses and Bacteria**

- Rotavirus (3 positive samples)
- Cryptosporidium (1 positive sample)
- Giardia (1 positive Sample)
- Human Bacteroids (5 positive samples)

- **MDH Recommends Proceeding with Facility Upgrade**

- **Currently Pilot Testing Surface Water Treatment Technologies**





## PROJECT COSTS AND FUNDING SOURCES

<b>ESTIMATED PROJECT COSTS</b>	
WATER TREATMENT PLANT	\$5,300,000
WATER TRANSMISSION MAIN	\$1,000,000
<b>TOTAL</b>	<b>\$6,300,000</b>

<b>PFA Ranking</b>	
Project Priority List	No. 4
Intended Use Plan	Fundable Range

<b>PROJECT FUNDING</b>	
BONDING BILL	\$2,000,000
PFA LOAN/ARMY CORPS	\$4,300,000
<b>TOTAL</b>	<b>\$6,300,000</b>