

Ely Water Supply Improvements

Project Description

The City of Ely’s water pump house, intake structure and intake line were originally constructed in 1932, over 90 years ago. The intake line runs approximately 25,000 lf from Burntside Lake to the municipal water plant located in the northwest corner of Ely. The route this line takes is through wetlands and over three river and creek crossings. The waterline crosses these creeks supported on wooden pilings that have not had significant repair in 55 years.

The water supply from the water treatment plant to the water tower and distribution system is provided by two cast iron water mains. There is a 10” line that is the original supply line and an additional 12” line that was added later. The original line is over 100 years old and has experienced significant failures in the past year requiring emergency repairs. The line is extremely corroded and beyond repair. Replacement is necessary. Previous work replaced a section of both of these lines. A break on this line resulted in a city-wide outage and boil order in late 2024. Two additional breaks in 2025 also jeopardized supply.

Proposed Improvements

To provide for safe and reliable water supply to the City of Ely the intake structure and piping as well as pump house and WTP improvements are necessary. This will include a new pump, automated controls, remote access and monitoring and structural repairs. The existing cast iron piping is beyond its useful life and requires replacement. To provide a more resilient supply, the bridges will be replaced with directional bored high-density polyethylene (HDPE) water line beneath the rivers and wetlands. The remaining water main will be replaced by open trenching methods, slip lining or pipe bursting. Approximately 3000 lf of water main is located under TH 1/169. MNDOT has no immediate plans for reconstruction.

Replacement of raw water intake and pump house/WTP improvements	\$1,630,000
Replacement of Water Supply to Plant and Dist.	\$6,648,000
Engineering	<u>\$ 545,000</u>
Total	<u>\$8,823,000</u>

Project Funding

Currently Secured Funding

CDBG (St. Louis County)	\$200,000
IRRR (Public Infrastructure)	\$191,000
MN PFA- (MNDOH Loan)	\$2,513,000
CDS- (EPA- STAG)	<u>\$2,000,000</u>
Total	<u>\$4,904,000</u>

Gap in secured funding and estimated project cost- \$3,919,000

Ely is a low to moderate income community with a median household income of \$43,901, 50% under the state MHI. Water rates have been raised over 21% in the last two years and additional increases are unaffordable.



Burntside River Repaired Section- March 2023

