



## EMERGENCY REPLACEMENT OF PRESSURE REDUCING VALVES (PRV'S)

HOUSE FILE 4012 / SENATE FILE 4220

FUNDING REQUEST: \$1,070,000 / TOTAL EST. PROJECT COSTS: \$2,140,000

Presenters: Lana Fralich, Silver Bay City Administrator and Luke Heikkila, Bolton & Menk, Inc. – City Engineering Firm



**CURRENT UNDERGROUND VAULT PRV'S**



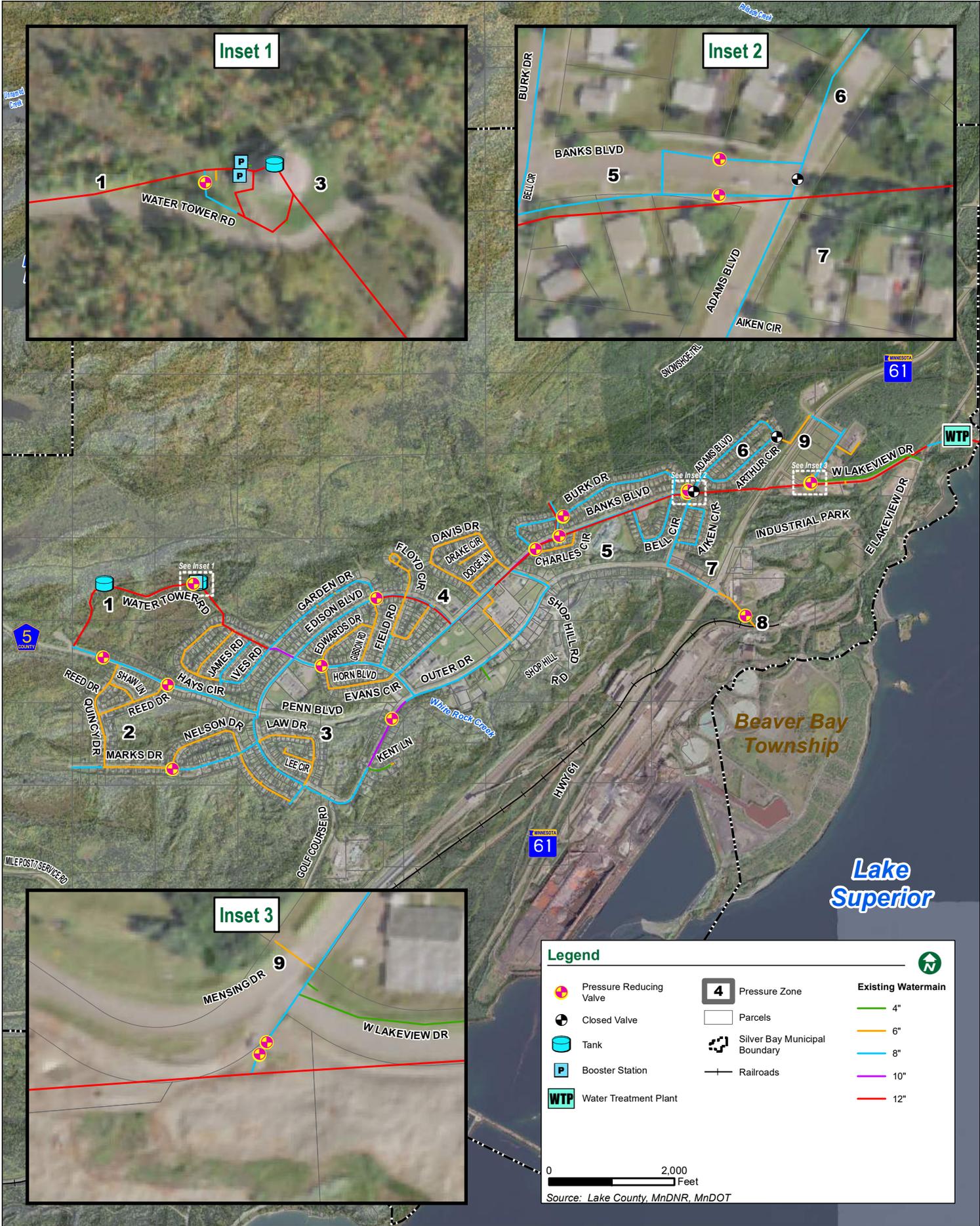
**PROPOSED ABOVE GROUND STANDARD PRV**

**What are Pressure Reducing Valves?** They are a safety valve that automatically reduces and maintains a stable water pressure, protecting the city's water system along with protecting our residents and businesses plumbing fixtures and appliances that can be damaged caused by high water pressure. Silver Bay is unique, as it currently has water pressures of 230psi, where normal municipal water system pressures are generally between 60-80psi. PRV's are also not common as many communities throughout the state do not have them or have a limited amount (1-2). Silver Bay, a small community with population of 1863, has fourteen (14) PRV's due to its elevation to pump water from Lake Superior to its Water Tower, prior to distribution.

**Reasons for Need:** Silver Bay was built all at the same time by Reserve Mining Company in the mid 1950's and its infrastructure is failing at the same time making it unaffordable and unable to repair in phases. When the PRV's fail, they produce a domino effect of water breaks, which the city is experiencing. MN Rural Water and Commercial Pump Solutions were called to assist in the multiple day repair. It was commented that the valves have outlasted its useful life and need immediate replacement. Silver Bay is upgrading its water treatment facility and adding a water booster station to help alleviate pressures, but PRV's were not part of the original project scope. The city has met its affordability cap, per PFA, has maximized its WIF funding, and is increasing water rates to pay for PFA debt. Furthermore, the city has fears that a failing PRV would damage newly replaced infrastructure and roads, making it even more important to get updated.

**Project Scope:** Funds would be used for the predesign & final engineering, construction administration, and construction for full replacement of vaults and PRV's. The goal is to replace with all above ground vaults but underground vaults may be necessary, pending funding, costs, and location.

***Thank you for your support and consideration of our request!***



**Inset 1**

**Inset 2**

**Inset 3**

**Legend**

- |  |                         |  |                               |  |                    |
|--|-------------------------|--|-------------------------------|--|--------------------|
|  | Pressure Reducing Valve |  | Pressure Zone                 |  | Existing Watermain |
|  | Closed Valve            |  | Parcels                       |  | 6"                 |
|  | Tank                    |  | Silver Bay Municipal Boundary |  | 8"                 |
|  | Booster Station         |  | Railroads                     |  | 10"                |
|  | Water Treatment Plant   |  |                               |  | 12"                |

0 2,000 Feet

Source: Lake County, MnDNR, MnDOT