

# Peninsula Township, Michigan

## *DWSRF Project Plan Overview*



## Peninsula Township



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# Background

Peninsula Township as an owner and operator of municipal water system must adhere to the Michigan Safe Drinking Water Act (SDWA) Part 399 - enforced by the Michigan Department of Environment, Great Lakes and Energy (EGLE). To comply the Township is required to regularly monitor, sample, and report to the State on essential items, including:

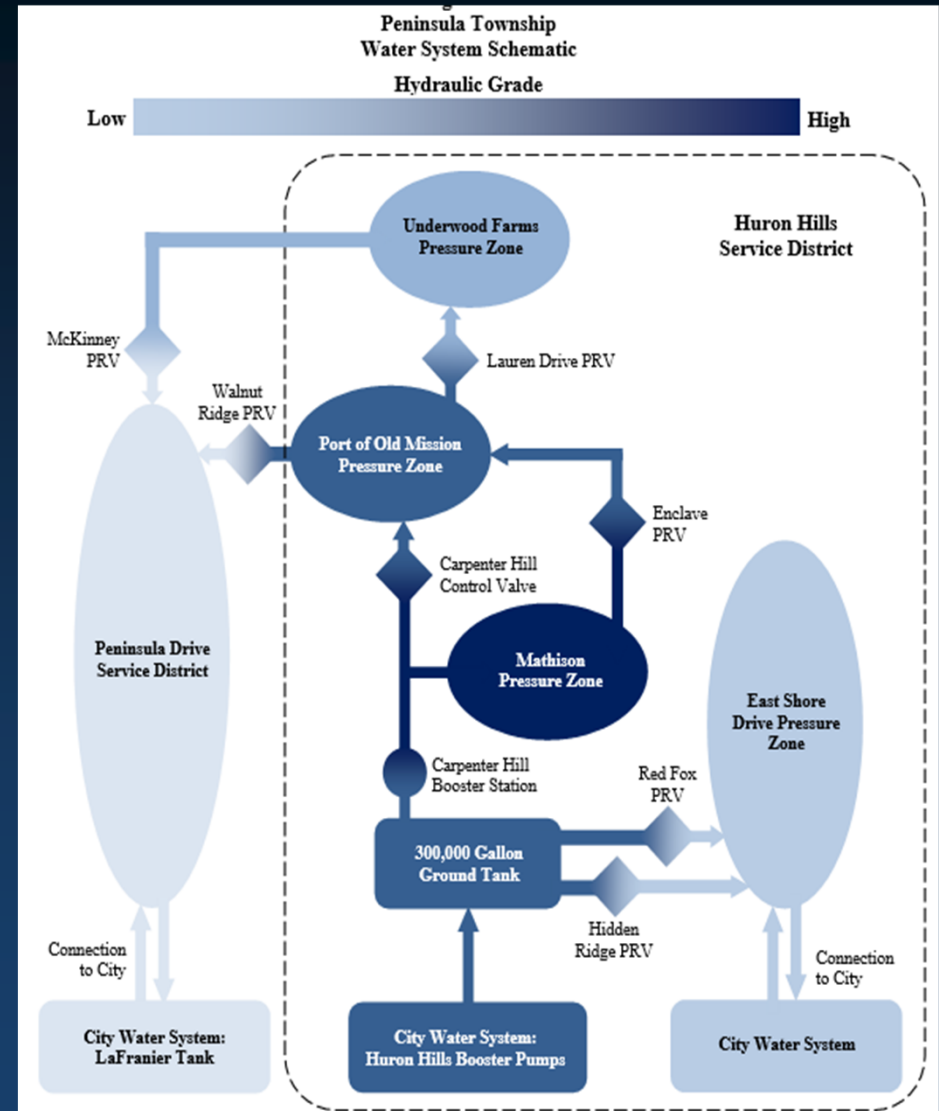
- **Water Reliability Study and Capital Improvement Plan:** a multi-year schedule of projects and funding to plan and track infrastructure needs. Due every 5 years unless waiver issued.
  - ✓ Last updated by GFA in 2015. EGLE issued waiver
  - ✓ Recent Sanitary Survey requires an update this year
  
- **Asset Management:** Assessment of existing infrastructure conditions. Required for communities with 1,000+ population.
  - ✓ AMP - Completed by DPW Staff in January 2018
  - ✓ Recent Sanitary Survey requires an update this year
  
- **Lead and Copper Rules:** Implemented by the State of Michigan in June 2018 to protect public health by minimizing lead and copper levels in drinking water.
  - ✓ Inventory Completed by DPW Staff January 1, 2020
  
- **Water Rate Analysis:**
  - ✓ Completed by UFS in 2021
  - ✓ Update / Review currently being performed



# Infrastructure

The sole water source is supplied by the City of Traverse City through a Bulk Water Agreement. Water is supplied through Master Meters that are recorded monthly by the GTC DPW for tracking and billing purposes located at the boundary line. The existing water system is separated into two (2) Service Districts. The system consists of one (1) water storage tanks, one (1) booster station, seven (7) pressure reducing valve stations and 15 miles of water distribution lines. Currently there are 591 customers that are connected to the Township's water system. This infrastructure provides the domestic and fire water supply and pressures to the entire service area.

All infrastructure in the Township is owned by the Township and operations / maintenance contracted through the GTC DPW. Township contractually is allocated 1 MGD from the City and currently utilizes 0.2 MGD Average Day.



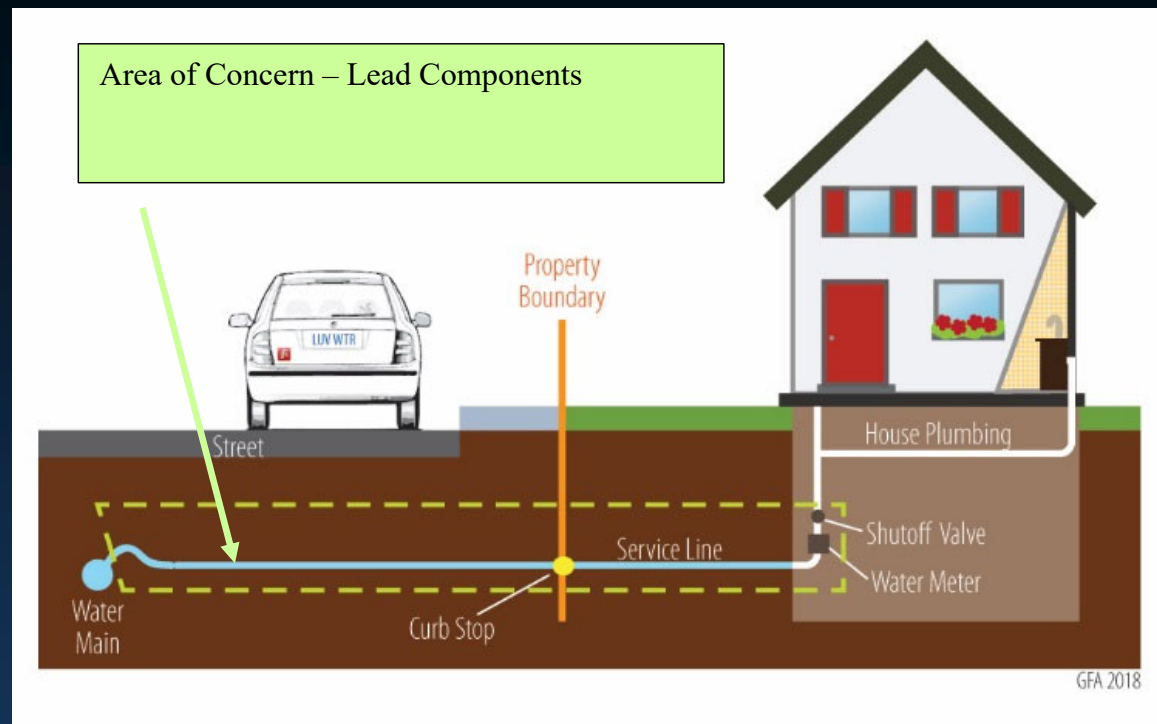
# Supply, Storage, and Distribution

- **Supply:** The sole water source is supplied by the City of Traverse City through a Bulk Water Agreement regulated by the two (2) governmental entities allotting for a maximum day use of 1 MGD to Peninsula Township. Supply is treated surface water with chlorine and fluoride addition.
- **Storage:** One (1) partially buried concrete storage tank with a 300,000-gallon capacity.
- **Distribution:** This infrastructure is comprised of one (1) booster station, one (1) control valve, six (6) reducing valve stations and approximately 15 miles of distribution piping. Booster stations pump water to outlying districts at higher elevations and water is fed back down towards the City of Traverse City to some extent through pressure reducing valves (PRVs). Most of the system piping is composed of ductile iron, PVC, or polyethylene typically ranging in size from 6-inch to 12-inch.



# Recent Lead and Copper Rule Changes

EGLE rule changes require communities that provide municipal water to increase sampling protocols, inventory infrastructure for lead materials, increase public awareness if present, and begin implementing the replacement of known or suspected lead components over the next 20 years.



This includes:

- ❖ Complete Replacement of service lines to within the home. Limits in the home are 18" inside or 1<sup>st</sup> shutoff valve
- ❖ Galvanized lines (Steel with zinc coating) once connected to lead must also be replaced
- ❖ Replacement by 2037

	Status
Completion of a Preliminary Material Inventory by January 1, 2020	Completed
Final Inventory / Site Inspection to Confirm by January 1, 2025.	Completed
Sampling protocol changes, including location and amounts.	Completed
Lead Service Line Replacement (LSR) shall be implemented effective January 1, 2021. Minimum of 5% per year over 20 years (23 leads per year)	In process
Change in MCL from 15 ppb to 12 ppb.	Effective January 1, 2025.

# Why is lead a concern?

## Sources of LEAD in Drinking Water



What is lead? Lead is a natural metal that can be found in the ground. Over the years, it has been used in many things, including batteries, gasoline, make-up, paint, ceramics, solder, water pipes, and faucets. You likely would not be able to smell or taste lead in your water.

What health problems can lead cause? In large amounts when ingested it can cause problems with learning, behavior, speech, hearing, growth rates, and nervous system development.

## How could lead get into my drinking water?

Lead water pipes can sometimes be found in older homes. Galvanized service lines were typically installed to supply water to homes and businesses prior to the 1970's and were typically connected to a 1 to 2 feet long piece of lead pipe (referred to as a lead gooseneck) at the water main in the right of way.

Even drinking water faucets manufactured before 2014 were allowed to contain up to eight percent (8%) lead. The lead is soluble (dissolved in water) or particulate and can get into drinking water when materials begin to break down or dissolve.

# Project Need - Lead Service Line Investigations

## Preliminary Inventory

- 590 Total Service Leads
  - Preliminary inventory submitted to EGLE in 2020 identified 100 that may contain lead (18%)

## *Summary / Location:*

Location / Neighborhood	Quantity
Peninsula Knolls	40
Old Mission Peninsula	60
TOTAL	100

# FUNDING OPTIONS

## USDA:USDA Rural Development

- Eligible for intermediate interest rate due to income
  - Currently no grant funds available for 2026
- Loan terms up to 40 Years @ 3.75%
- Service lead replacement only within limits of public ROW/ Easement

## Low Interest Loan / Municipal Bond

- Eligibility: No Restrictions
- Terms: up to 30 Year @ 4.29% Interest

## EGLE DWSRF

- Eligible for up to 50% grant based upon income, scope of work and need
- Loan terms up to 30 Years @ 2.75%
- Allocated funding available specific for LSL replacement from EPA (\$336 Million) for 2027 only

To initiate this process, the Township was required to submit an Engineering Project Plan for review and input by the Township, Local and State Officials, and the Public. The report as prepared by GFA addresses the following:

- ✓ Description and Need for the Project including impact to water quality
- ✓ Alternatives and recommended Alternative including costs Project financing and costs to users
- ✓ Any social and environmental impacts as a result of the project and measures to mitigate



# Water System - Need for Project

Peninsula Township's critical infrastructure has continued to be well maintained by the Township and DPW, though to ensure compliance with the Michigan Safe Drinking Water Act (SDWA) the Township is required to replace all known lead service lines by 2037. Replacement is required from water main to within home (private and public side replacement).

Residential needs: The Township has committed to providing quality water service to its' customers for over 40 years. Replacing LSL will address potential water quality concerns and ensure quality / quantity water supply to existing and future customers.

Overall municipal impact: The infrastructure identified to be **replaced** and/or upgraded are to ensure continued water quality and compliance with state and federal regulations.

Overall environmental impact/water quality: The proposed projects will ensure continued compliance with drinking water standards and reduce the risk of impact of lead service lines. Upgrades will ensure compliance with regulatory agencies.



# Alternatives Evaluated – LSL Replacement

Two (2) alternatives were presented, and Alternative No. 2 is recommended.

- Alternative No. 1: The “No Action” alternative would maintain current system operations with no improvements. There is a cost associated with the “No Action” alternative, although it is difficult to quantify. The "No Action" alternative would result in non-compliance with state regulatory agencies. This will ultimately cost the Township more money in the long run.
- Alternative No. 2 : Lead service line replacement of all identified LSLs and complete investigations of remaining leads to be confirmed. This alternative is the most economical and effective to provide reliability. It is preferred alternative to optimize existing facilities.

No other viable alternatives were reviewed as they were not economically feasible due to existing piping and site configurations.

Alternative	Description	Capital Costs
Alternative No. 1	No Action	N/A
Alternative No. 2	Lead Service Line Replacement	\$1,698,000.00

Description	Capital Costs
Construction Cost	\$1,320,000.00
Contingency (15%)	\$198,000.00
Engineering, Construction Management & Inspection Costs	\$132,000.00
Professional Services (Legal, Bond, Financial)	\$40,000.00
Administration Costs	\$8,000.00
<b>TOTAL ESTIMATED PROJECT COSTS</b>	<b>\$1,698,000.00</b>



# Costs

- Project Costs: The table below indicates the total project costs for the recommended alternative if implemented. This cost includes engineering, construction and contingencies.
- Financing: The Township would pursue DWSRF to obtain a loan with possible grant for this project. The current terms available are 20 year @ 2.5% or 30 year @ 2.75%
- Costs to Users: The user charge system is currently in place and is designed to provide revenue to pay for O & M costs, capital improvements and debt retirement. The current fee (monthly charge) is \$46.93.
- A rate increase of approximately \$8 per month per customer is projected to cover costs of this project. This value is a worst case scenario assuming all 100 leads require replacement and loan only.
- A rate study is currently being performed by UFS to account for this project and future CIP projects by both the Township and City

Description	Capital Costs
Annual DWSRF Payment	\$83,855.00
Monthly DWSRF	\$6,988.00



# Project Impacts and Mitigation

Impacts: Overall the impacts as a result of the project are negligible. There is a greater potential long term impact if they were NOT implemented.

- Environmental: Long term benefit to ensure reliable and quality supply of water. No impacts to public, endangered species, or environmental sensitive areas. All properties have existing infrastructure and no new areas will be disturbed.
- Construction: Temporary and manageable.
- Operational: Temporary and manageable
- Social: Increased water quality.

## Mitigation:

- Environmental: Long term to ensure reliable and quality water is provided to the customers
- Construction: Compliance and oversight to ensure compliance with regulatory agencies. SESC measures and construction oversight
- Operational: Staging and Coordination between Staff and Contractor



# 2027 Application Timeline

Below is a table of 2027 (Quarter 3 assumed) DWSRF Funding Requirements Timeline



Application Item	Due Date
Intent to Apply	January 2026
Pre-Application Meeting	February 2026
Engineering Project Plan	June 1, 2026
Environmental Assessment Published	February 2, 2027
Part I and Part II Application	February 10, 2027
Final Plans & Specs Due (All Planning Documents)	March 4, 2027
FNSI Clearance (Final Plans & Specs Approved) Bid Ad Posted no later than:	March 4, 2027
Part III Application Bid Data Submittal (w/ Tentative Contract Award)	April 19, 2027
EGLE Order of Approval Issued	May 12, 2027
Borrowers Pre-Closing w/ MFA	May 26, 2027
MFA Closing Notice to proceed issued no later than:	June 3, 2027 August 3, 2027

