



# **Community Open House**

## **Water Supply Planning Report**

**May 28, 2015**



# Welcome and Introduction

- **Meeting Overview**
  - Structure
  - Purpose
  - Goal
- **Staff Introduction**



## Items for Future Discussion

- Detailed Project Budget (Beyond Preliminary Engineering Estimates)
- Water Rate Impact
- Financing Method
- Final Decision on Water Treatment Process
- Final Plant Size and Capacity
- Northwest Water Commission (NWC)



# Process

- **Where We Have Been**
  - Need identified, RFP sent out (2012)
  - Research began (2013)
  - Strand Water Supply Planning Report (presented 2015)
- **Where We Are Today**
  - Public information and involvement
  - Additional research, data collection underway
- **Where We Are Going**
  - Village Board review process
    - Further study and presentation of additional information
    - Continued public information and involvement
    - Final recommendation(s) and public discussion
  - Project implementation



## Frequently Asked Questions (FAQs)

- Why is the Village evaluating its water system and plant?
- Is our drinking water still safe? If we delay this project are we jeopardizing water quality and public health?
- What options are under consideration?
- What process has been in place to study these options?
- Should the Village decide to build a new plant, how soon would that happen?



# Existing Water Plant Facts

- **Original Construction in 1928; Expanded in 1952**
- **Conventional Water Treatment Plant**
- **Current Plant Conditions**



# Water System Master Plan

- **Why Was it Initiated?**
  - Increase in maintenance costs
  - Long-term capital improvement plans
  - Consider modernization of treatment process
- **What Was the Process/Scope of the Study?**
  - Engaged Strand Associates
  - Broad range of planning options
  - Water Supply Planning Report – Completed March 2015

# Water Supply Planning Report

Public Presentation

May 28, 2015



# Scope of the Water Supply Planning Report

- Step 1
  - General Water System Inventory
  - Water Demand Characteristics
  - Storage Capacity Analysis
- Step 2
  - Water System Model Creation and Analysis
- Step 3
  - Future Water Supply Analysis
  - Study Findings and Recommendations



# Future Water Supply Analysis

## Consideration of Community Impacts

- Cost
- Community Needs
- Control & Oversight
- Available Land
- Minimize Disruption

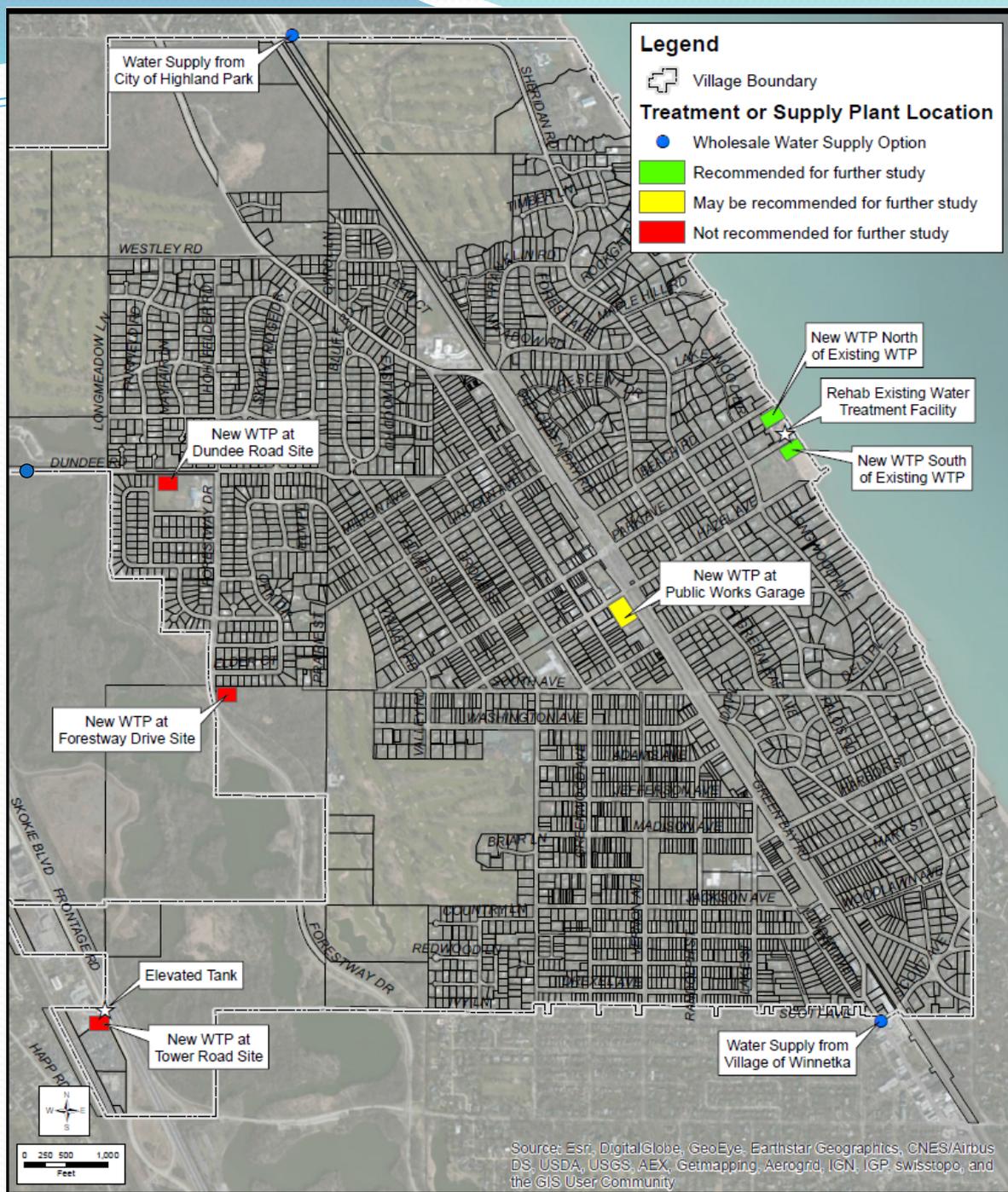
## Consideration of Engineering Feasibility

- Engineering Best Practices
- Regulatory Requirements

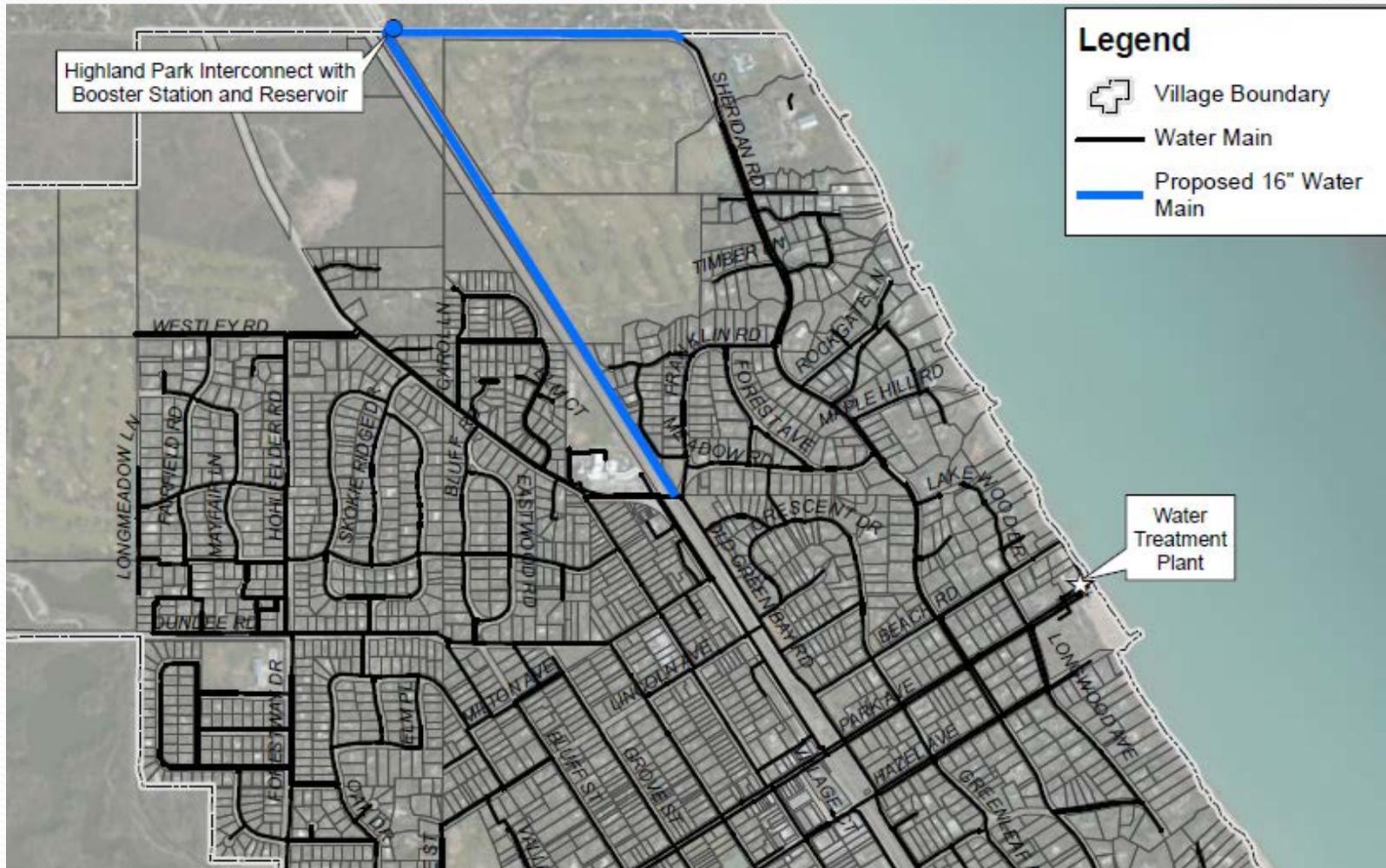
# Future Water Supply Analysis

Three options were investigated for the future water supply:

1. Purchase Water from Neighboring Community
2. Rehabilitate Existing Water Treatment Plant
3. Build New Water Treatment Plant
  - At Inland Location
  - At Lakefront Location



# Purchase Water From Neighboring Community – Pumping from Highland Park

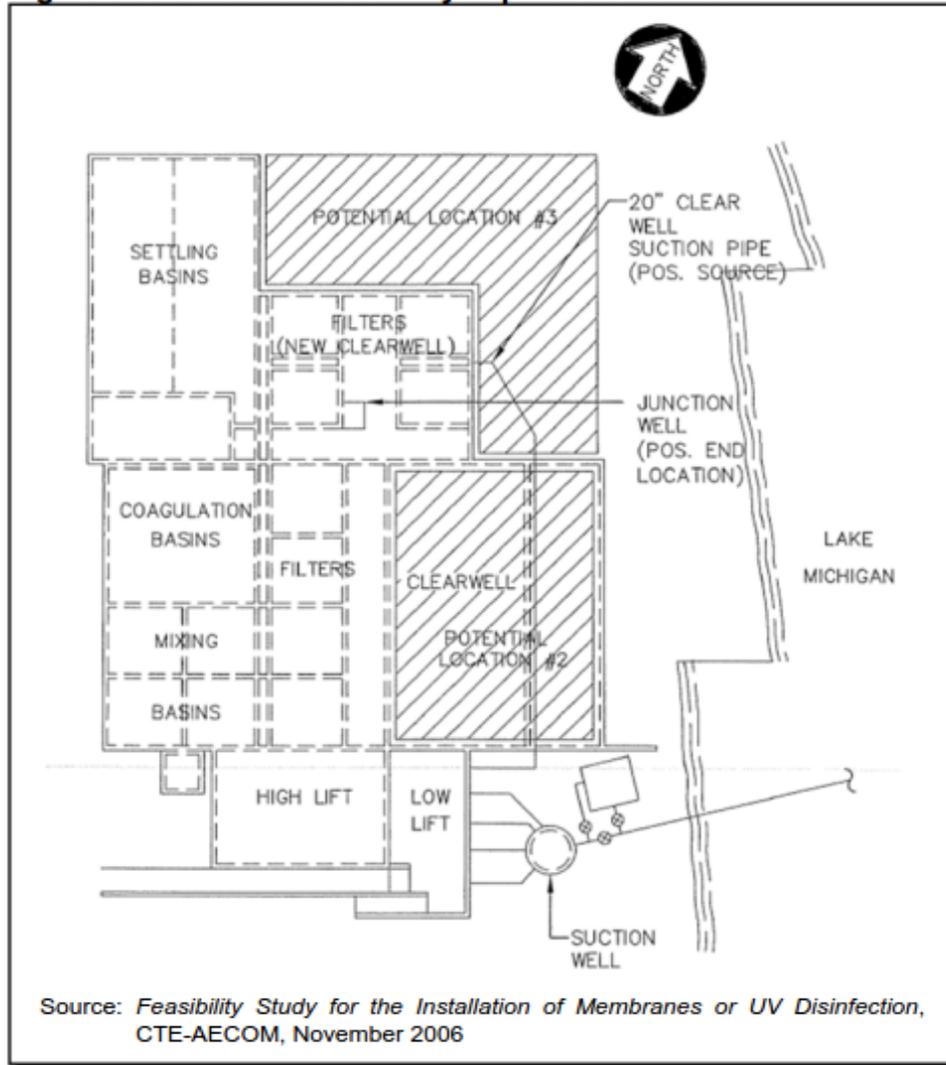


# If the Village Determines it Appropriate to Continue to Produce Water, Two Options Exist

- Rehabilitate the existing water treatment plant to replace deteriorated infrastructure/equipment
- Build a new fully modernized plant

# Rehabilitate Existing Water Treatment Plant

Figure 5.03-3 Membrane Facility Expansion Locations



Source: *Feasibility Study for the Installation of Membranes or UV Disinfection*, CTE-AECOM, November 2006

# Building a New Water Treatment Plant

- Consideration of Treatment Process (regardless of location)
  - Conventional Water Treatment Process
  - Direct Membrane Filtration Process
- Analysis of Inland WTP Options
- Analysis of Lakefront WTP Options

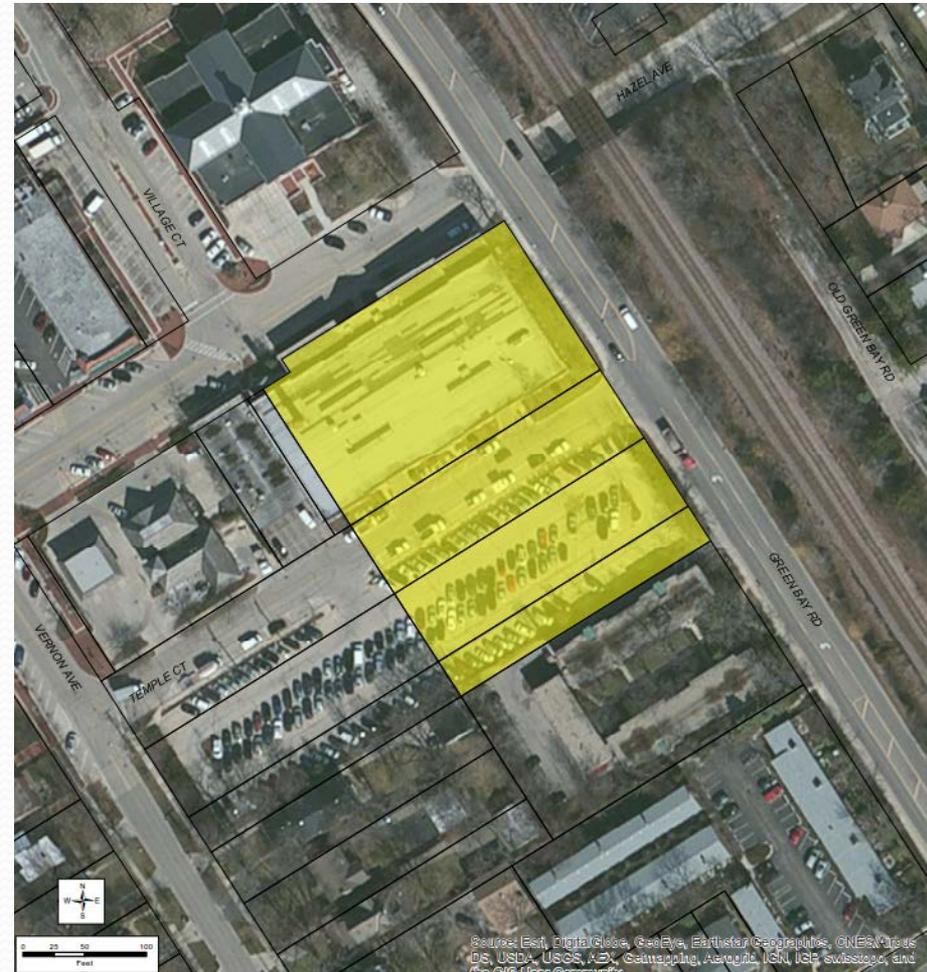
# Inland Options for New WTP

- Dundee Road / West School
- Forestway Drive / CCFPD
- Public Works Garage Facility Site
- Village Water Tower Site



# Public Works Garage Facility Site

- Require new Public Works Facility
- Likely require Parking Structure to replace lost parking
- Raw Water Transmission Main Extension



## Potential Lakefront Locations:

- On the existing Water Treatment Plant site
- South of the existing Water Treatment Plant site
- North of the existing Water Treatment Plant site

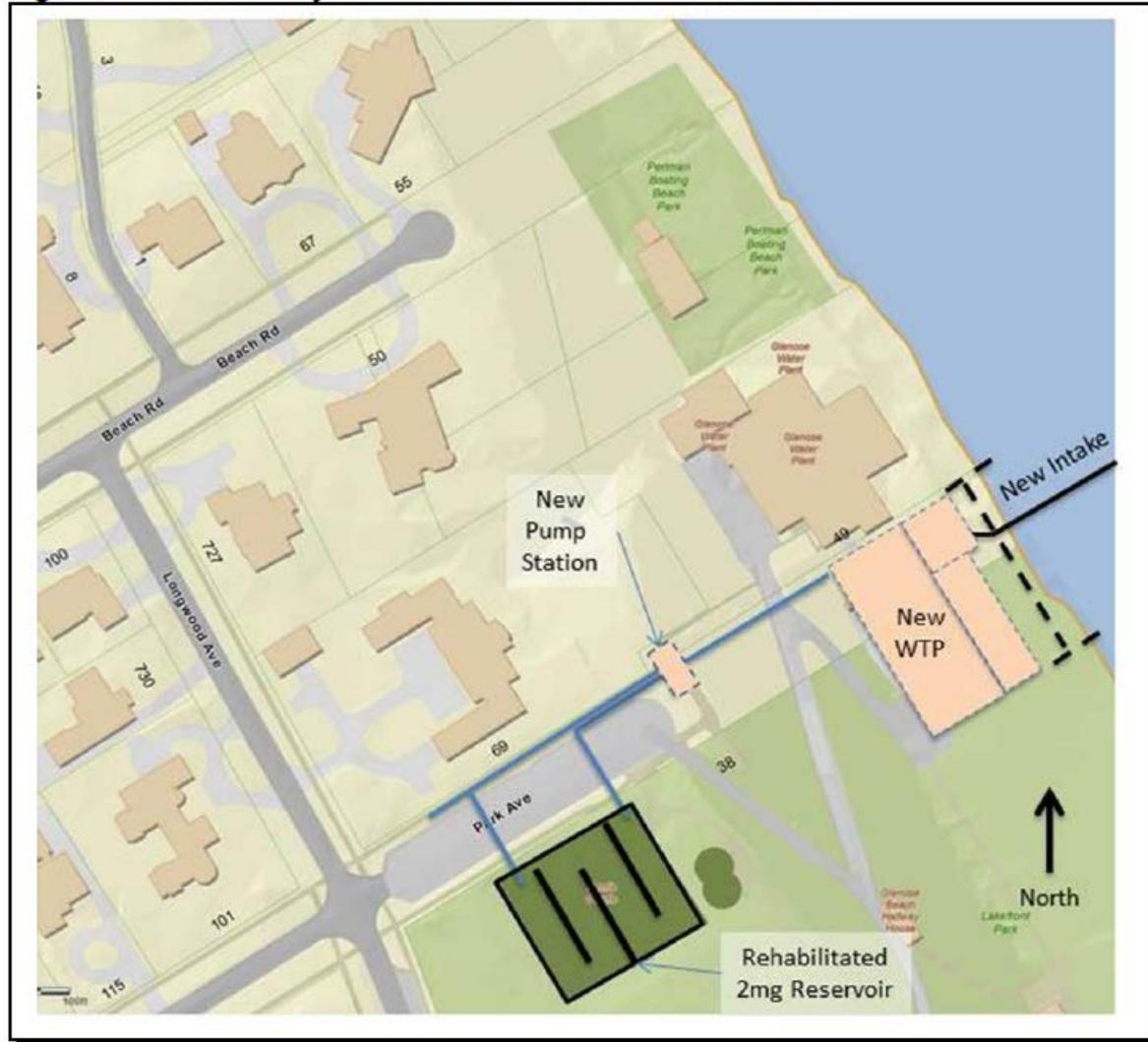
# Lakefront Location on existing WTP Site

Figure 5.04-5 Preliminary Site Plan—Existing WTP Lakefront Location

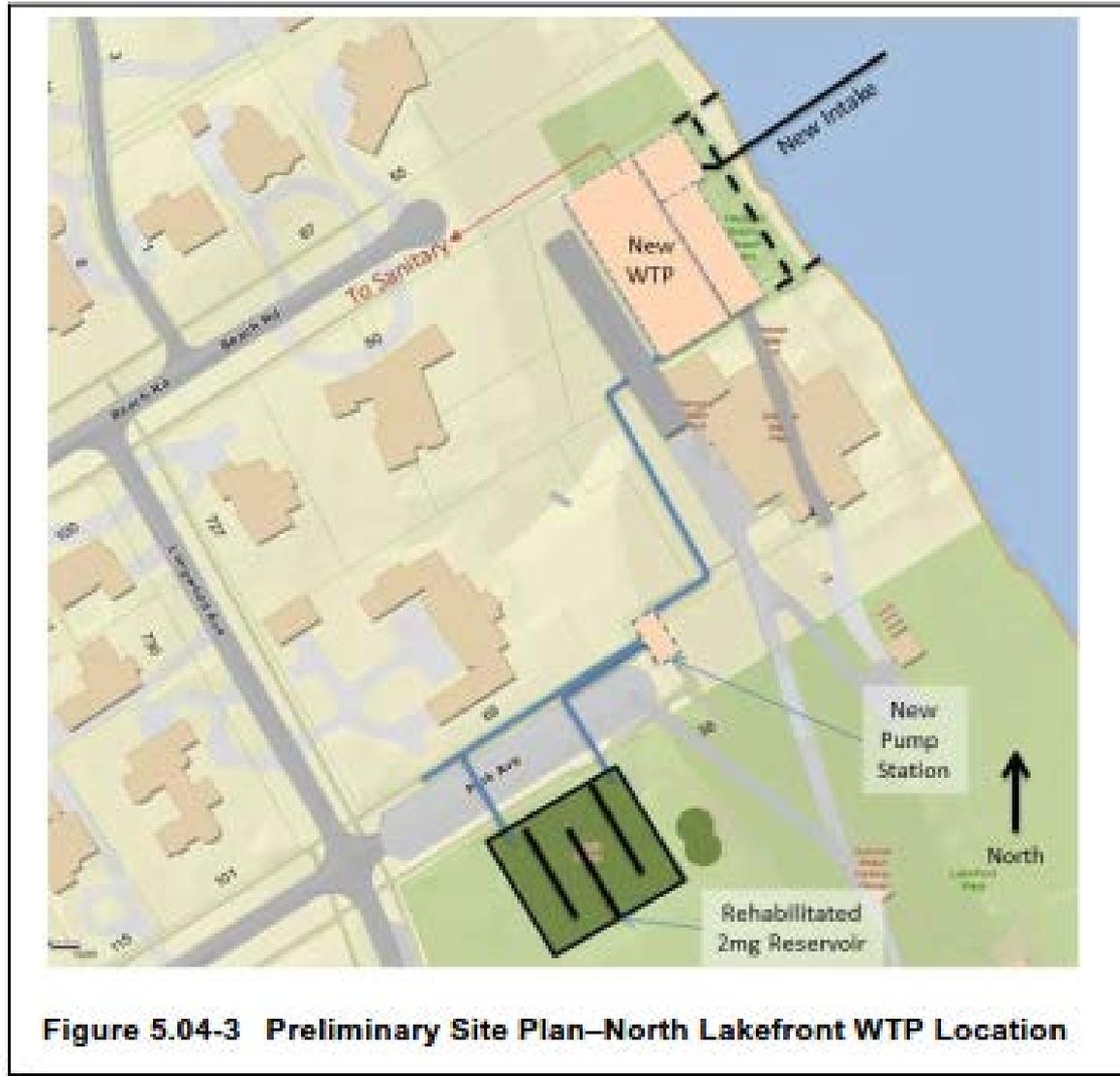


# Lakefront Location – South of Existing WTP

Figure 5.04-4 Preliminary Site Plan–South Lakefront WTP Location



# Lakefront Location – North of Existing WTP



# Summary of OPCC and Addition of Cost to Purchase Water During Construction

**Table 5.05-1 Water Supply OPCC Summary**

<b>Water Supply Alternative</b>	<b>OPCC</b>	<b>Purchased Water Cost During Construction</b>	<b>Total OPCC</b>
Rehabilitate Existing WTP	\$31,253,000	\$621,000	\$31,874,000
New WTP-Existing Site	\$47,800,000	\$3,777,000	\$51,577,000
New WTP-South of Existing Site	\$47,800,000	\$621,000	\$48,421,000
New WTP-North of Existing Site	\$47,800,000	\$621,000	\$48,421,000
New WTP-Existing Public Works Garage Site	\$65,044,000	\$621,000	\$65,665,000
Purchase Water from Highland Park	\$11,717,000		\$11,717,000

NOTE: Cost may increase depending on complexity of construction

“All estimates are Preliminary and in 2015 dollars”

# Recommendations

- If the Village determines it appropriate to become a wholesale purchaser of water, consider purchasing from Highland Park as the sole source.
- If the Village determines it appropriate to continue to produce water, consider construction at the Lakefront to minimize the costs and impacts to the majority of the Village residents and reduce the amount of additional infrastructure.



# Breakout Session

- **Options for Sustainable Water Supply**
- **Water Treatment Methods**



# Additional Information

- **Stay Connected**

- Website: <https://www.villageofglencoe.org/news/wtpinitiative.aspx>
- Email: [waterplant@villageofglencoe.org](mailto:waterplant@villageofglencoe.org)
- Upcoming public engagement forums
  - Monday, June 8, 7 pm at the Glencoe Union Church
  - Saturday, June 27, 10 am at the Glencoe Public Library

