



DATE: October 12, 2021
REVIEW/DISCUSSION

AGENDA ITEM: Review of the Final Conceptual Drinking Water Supply Plan

SUBMITTED BY: Jack Griffin, City Engineer

REVIEWED BY: Kristina Handt, City Administrator

BACKGROUND: The State of Minnesota, through its Co-Trustees, released the Final Conceptual Drinking Water Supply Plan (CDWSP) for providing safe, sustainable drinking water to the 14 communities in the East Metropolitan Area that are currently known to be affected by PFAS groundwater contamination. The Final Plan is dated August 2021 and was released to the public and workgroups in September. The complete plan can be found at 3msettlement.state.mn.us.

The Final Plan identifies the long-term goals for Priority 1 of the Settlement Agreement as follows:

- Provide clean drinking water to residents and businesses to meet current and future needs under changing conditions, population, and health-based values (HBVs), health risk limits (HRLs), and health indices (HIs).
- Protect and improve groundwater quality.
- Protect and maintain groundwater quantity.
- Minimize long-term cost burdens for communities.

The Final Plan allocates the \$700 million in available funding to the following priorities:

- \$317 million (45%) for capital infrastructure. Capital funding will be used to construct and install the drinking water supply infrastructure for public water systems and private wells. Capital infrastructure includes:
 - Treatment facilities using granulated active carbon (GAC) and based on community 2040 demands. *Ion exchange (IX) will be allowed if approved for use in MN and if cost is less than or similar to GAC.*
 - Distribution systems to deliver treated water.
 - New connections to municipal water (includes related stormwater mgmt. costs).
 - City connection fees.
 - Point of entry treatment systems (POETS).
 - Groundwater pretreatment, if determined to be cost effective (e.g. iron/manganese removal).
- \$115 million (16%) for operation and maintenance funding (O&M) for the public water systems and private well treatment.
 - \$87 million for public water systems. O&M for public water systems based on 20 years.
 - \$28 million for POETS. O&M for private well POETS based on 30 years.
 - When settlement funds are depleted, Public and Private Wells with HI ≥ 1.0 will receive continued funding through Consent Order [KH1]. Wells below HI=1.0 no longer State funded. *For Lake Elmo areas related to Washington County Landfill the hazardous substance program funding will continue.*
 - Breakdown presented in Section 9.3.

- \$70 million (10%) for drinking water protection. Funding will be used to improve drinking water quality at the source. *Does not replace 3M cleanup obligations in place through Consent Order.*
- \$183 million (26%) for contingencies.
 - To address new sampled wells; PFAS plume movement; Lower or new HBVs/HRLs.
 - To address cost overruns and increases for approved projects.
 - The Co-Trustees will determine what costs are eligible for funding by the contingency fund allocation based on the Settlement-eligible costs in the Final Plan and consistency with the framework of the Settlement and the Final Plan.
 - The contingency fund allocation may also be used to help PFAS-affected East Metropolitan Area communities fund the cost of providing an alternative source of water due to potential restrictions on use of aquifers that affect White Bear Lake levels. If an alternative water source is needed, this contingency fund could be used to help connect to St. Paul Regional Water Services (SPRWS) (See Section 9.4 for further discussion).
- \$15 million (2%) for State administration.

Final Plan for each Community: In addition, the Final Plan identifies drinking water projects for all 14 communities affected by PFAS contamination. The projects include treatment for wells that meet or exceed a health index value of at least 0.5. This treatment threshold is lower than the value that triggers a health advisory for a well, providing resilience against future changes in contamination or changes in health guidance values for PFAS. The attached exhibit provides an overview of the recommendations for each impacted community and the Plan's key components. For Lake Elmo, the Plan summary includes the following recommendations:

- Supply drinking water from a combination of existing wells and new wells or an interconnect with Woodbury. *The Co-Trustees set aside sufficient capital funding for either an autonomous option (two wells within Lake Elmo's borders that likely will need treatment) or an interconnect between Woodbury and Lake Elmo, due to some uncertainty regarding their future water source.*
- Connect 97 homes to the municipal water supply^[KH2] in addition to the 290 properties approved through the expedited projects.
- Supply other private wells with POETSS if over threshold.

Additional Final Plan details can be referenced in the following sections:

- Figure 8.3. Summarizes Final Plan for each Community.
- Section 9.2. Provides further details on the elements of each community.
- Section 10.3. Details the Funding Reallocation Strategy.
 - *The Final Plan is not designed to allocate the exact amount listed for each community (Section 9.2). Rather, it is intended to fund the actual expenses for the projects.*
 - *As communities develop detailed designs and solicit bids for construction, Settlement-eligible costs may be higher or lower than the estimates. The Co-Trustees developed a funding reallocation strategy to outline how such differences in actual expenses will be addressed (Section 10.3).*

ISSUE BEFORE COUNCIL: The City Council is asked to review the findings and recommendations outlined in the Final CDWSP dated August 2021, and to provide direction to staff related to the plan and implementation.

PROPOSAL DETAILS/ANALYSIS: The Final Plan Recommendations and plan details for the City of Lake Elmo is summarized as follows:

- Supply drinking water from a combination of existing wells and new wells, or an interconnect with Woodbury. Plan Capital costs based on the higher Woodbury Interconnect.
 - *Due to court decisions about White Bear Lake water levels and ongoing work to implement the court order, there is some uncertainty about Lake Elmo's future water source. The Co-Trustees will work with Lake Elmo to determine a reasonable solution within the constraints of the White Bear Lake decision. Thus, the Co-Trustees set aside sufficient capital funding for either an autonomous option (two wells within Lake Elmo's borders that likely will need treatment) or an interconnect between Woodbury and Lake Elmo.*
- Connect 97 homes to the municipal water supply.

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|-----------------------------|----------------------------------|
| ○ Homestead | 18 homes. |
| ○ Packard Park/Eden Park | 62 homes (64 lots). |
| ○ 20th Street Circle. | 4 homes. |
| ○ Impacted individual Homes | 11 homes (location unspecified). |
- In addition, there has been \$34.3 million previously funded for 12 expedited projects in Cottage Grove, Lake Elmo, Oakdale and Woodbury. Lake Elmo included \$22,760,600 to serve 290 homes.

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|---|---------------------|
| ○ Stonegate 1 and 2nd Additions | 65 homes. |
| ○ 31st Street-Stillwater Boulevard area | 6 homes. |
| ○ 38th-39th Street neighborhood area | 48 homes. |
| ○ Hamlet on Sunfish Lake | 41 homes. |
| ○ Torre Pines | 23 homes (24 lots). |
| ○ Parkview Estates-Cardinal View/Ridge | 62 homes. |
| ○ Whistling Valley | 37 homes (44 lots). |
- Supply other private wells with POETS if over HI ≥ 0.5 .
 - 7 existing POETS installed since the Settlement.
 - 18 estimated new POETS.
- Final Plan 20-Year Cost Allocation to Lake Elmo
 - \$31.845 Million Capital costs (assumes higher cost Woodbury Interconnect)
 - \$ 0.426 Million per year O&M
 - \$40.23 Million Total 20-year cost allocation

Co-trustee representatives will join the meeting remotely and provide a brief presentation about the plan.

ATTACHMENTS:

- Plan Summary and Key Components Exhibit.
- Plan Exhibits – Lake Elmo Options.

The Plan

PFAS Health Index threshold at or above 0.5

- 1** **Maplewood, West Lakeland Township, Afton, Grey Cloud Island Township, Denmark Township**

 - Supply private wells with point of entry treatment systems (POETSs) - a whole home water filtration system - if over threshold
- 2** **Cottage Grove**

 - Treat 8 of 12 existing public wells
 - Replace 2 existing public wells with 1 new public well that will receive treatment
 - Add 2 new water treatment plants
 - Connect 156 homes
 - Supply other private wells with POETSs if over threshold
- 3** **Lake Elmo**

 - Supply drinking water from a combination of existing wells and new wells or an interconnect with Woodbury*
 - Connect 97 homes
 - Supply other private wells with POETSs if over threshold
- 4** **Lakeland, Lakeland Shores**

 - Connect 29 homes
 - Supply other private wells with POETSs if over threshold
- 5** **Newport**

 - One interconnect with Woodbury and one with Cottage Grove
 - Connect 3 homes
 - Supply other private wells with POETSs if over threshold
- 6** **Oakdale**

 - Treat 2 of 9 existing public wells and expand 1 water treatment plant
 - Replace 3 existing public wells with 3 new public wells that will receive treatment
 - Supply other private wells with POETSs if over threshold
- 7** **Prairie Island Indian Community**

 - Treat 1 existing public well
 - Add 1 new water treatment plant
- 8** **Saint Paul Park**

 - Treat 3 of 3 public wells
 - Add 1 new water treatment plant
 - Connect 6 homes
 - Supply other private wells with POETSs if over threshold
- 9** **Woodbury**

 - Treat 15 of 19 existing wells
 - Replace 1 existing public well with 1 new public well
 - Add 1 new water treatment plant
 - Connect 5 homes
 - Supply other private wells with POETSs if over threshold

**The Co-Trustees set aside sufficient capital funding for either an autonomous option (two wells within Lake Elmo's borders that likely will need treatment) or an interconnect between Woodbury and Lake Elmo, due to some uncertainty regarding their future water source.*



The Plan is... Comprehensive

Considers all private and municipal well users in all 14 communities

Safe and sustainable

Meets MDH health-based values for drinking water by addressing drinking water coming out of residents' faucets, as well as the source of drinking water

Resilient

Includes treatment for wells below the MDH health-based values so the Plan can absorb changes in those values or changing levels of PFAS in drinking water sources in the future

Flexible

Provides flexible funding so communities can adjust to accommodate their implementation preferences, along with time for each community to implement projects

The Plan's key components

It is a long-term solution:

Health Index (HI)

An HI of 1 or greater indicates one or more PFAS are present in sufficient concentrations to potentially have health effects. An HI of 1 or greater triggers a health advisory from MDH. The understanding of PFAS and the ability to detect it is continually evolving. As a result, health-based values may change or new compounds may be used to calculate the HI, or the area of contaminated groundwater may change in the future. The Plan provides treatment for wells at or above 0.5 of the current HI, which means more wells will receive treatment. This helps the State be proactive and build a degree of resiliency into communities' drinking water systems to better cover future potential changes.

Contingency funds

The Plan sets aside contingency funds to address a variety of factors, including treatment of additional wells should they become impacted in the future.

2040 population estimates

The Plan used 2040 water demand estimates to ensure that infrastructure built today will serve the East Metro in the future.

Granulated activated carbon (GAC)

The Plan includes using GAC treatment (very large-scale filters for community water treatment facilities and much smaller filters used to treat water from private wells) to remove PFAS. Communities may elect to use ion exchange (IX) instead of GAC if it is approved for use in Minnesota and it is less than or similarly expensive as GAC.

Neighborhood connections to municipal systems

In some areas the Plan calls for connecting homes to municipal systems, which reduces their risk of future PFAS contamination.

Groundwater protection

This includes money for drinking water protection projects. The fund will be used to reduce PFAS concentrations in groundwater, which can help reduce future treatment needs and costs, and will generally improve overall water quality.



SAFE AND RESILIENT

The Plan goes beyond treating those wells with a health advisory to build in resiliency due to future unknowns. A health advisory is issued by MDH when a well's HI is above at least 1. An HI equal to or greater than 1 indicates possible combined health effects.

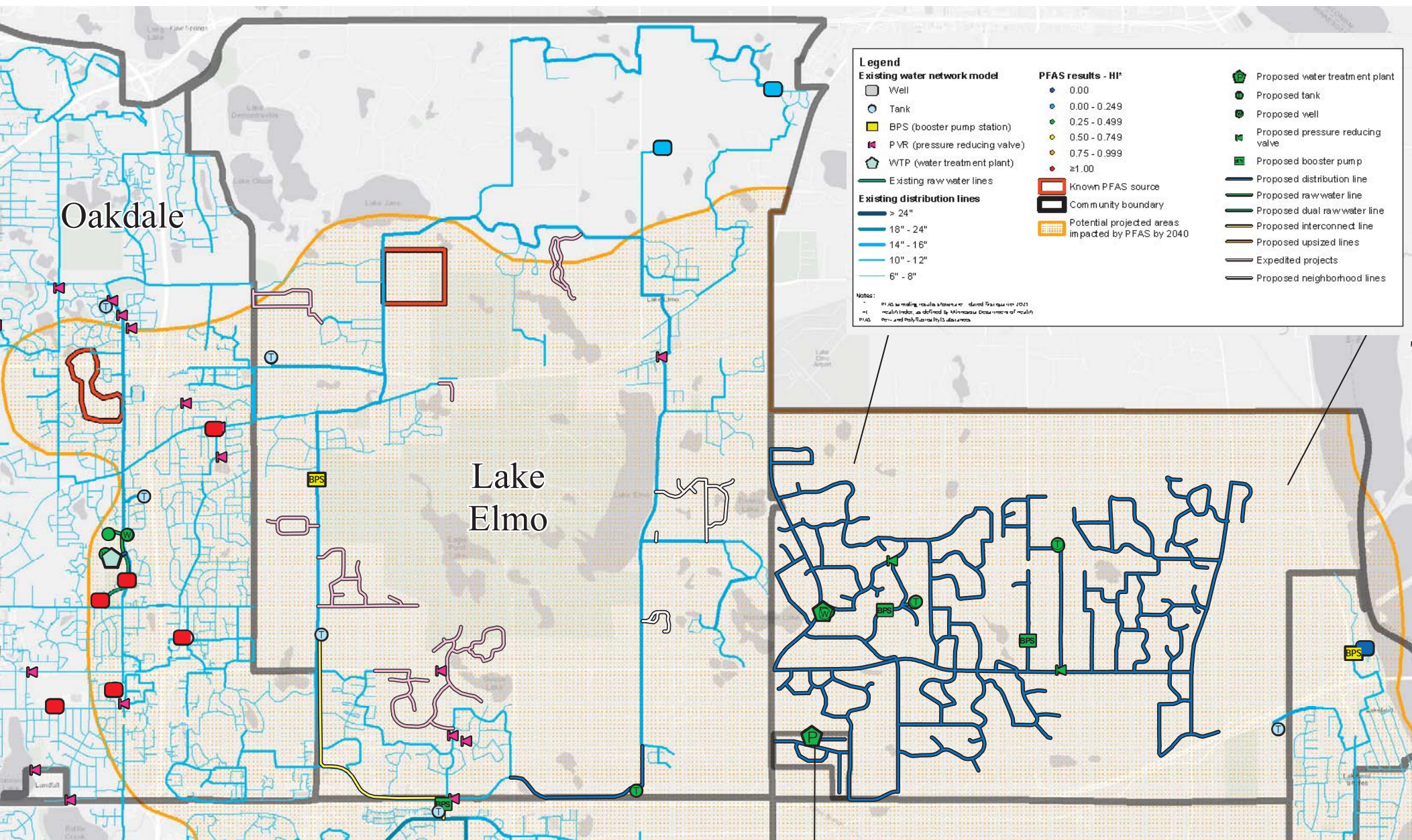


Figure E.2a Updated recommended Option 1 municipal infrastructure improvements map for H20.5 (Lake Elmo interconnect)

0 1 2 Miles

1 inch = 4,000 feet



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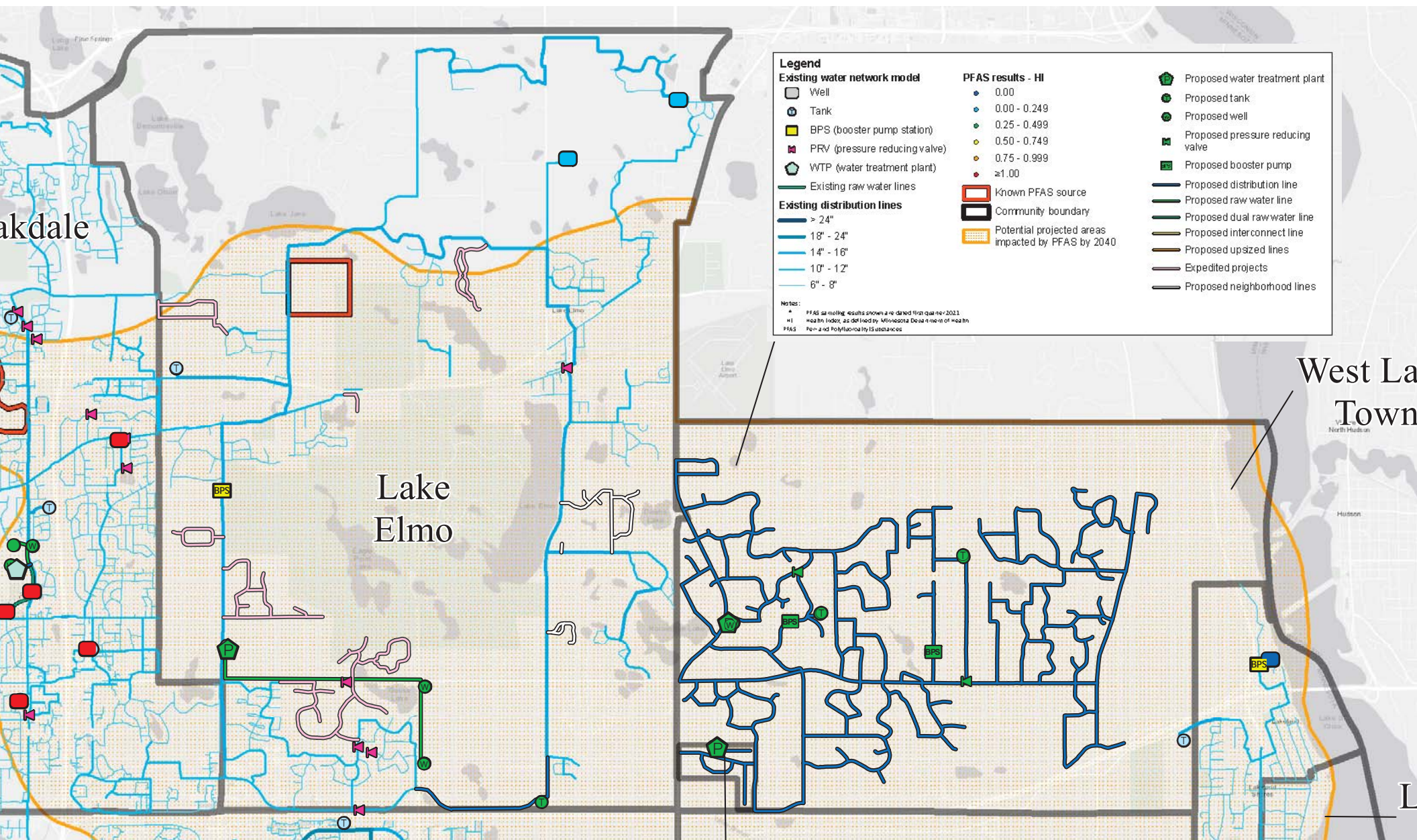


Figure E.4b Updated recommended Option 2 municipal infrastructure improvements map for HI20.3 (Lake Elmo autonomous)

0 1 2 Miles

1 inch = 4,000 feet



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