



City of Brighton Water Master Plan

PLUMMER

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Water Master Plan Overview

- Why:
 - Understand existing water treatment, water storage and distribution system
 - Evaluate current water demand and future growth impacts
 - Identify anticipated improvements and costs
 - Prioritize improvements
- How:
 - Distribution system computer model, including storage and booster pump stations
 - Interactive approach with staff input
 - Identify anticipated improvements to be made with cost estimates

Project Overview



**Model
Development**

**Assess
Demand**

**Model
Calibration**

**Current and
Future
System
Analysis**

Master Plan

Pump

Type

 Active

Valve


Type

 Active

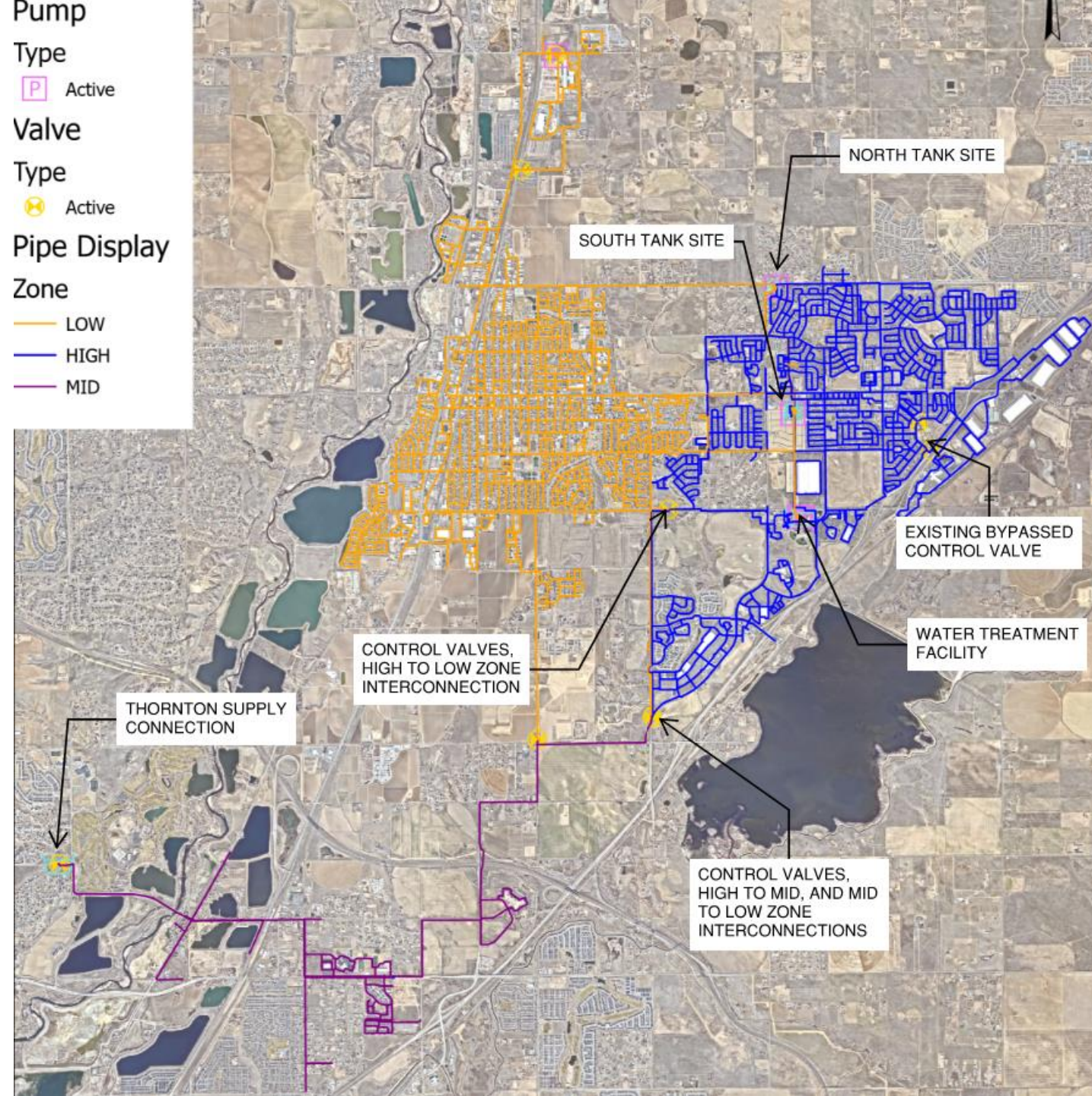
Pipe Display

Zone

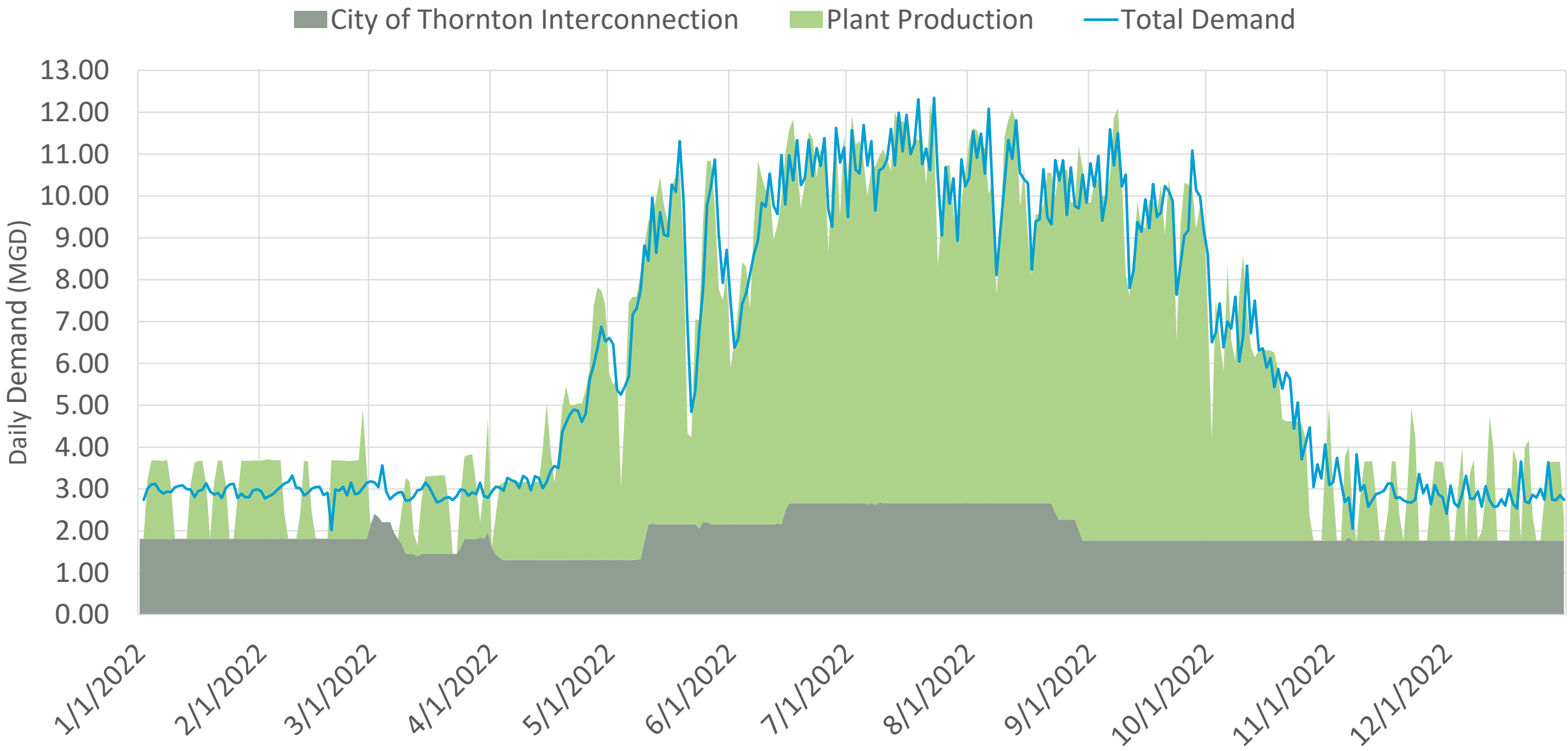
 LOW

 HIGH

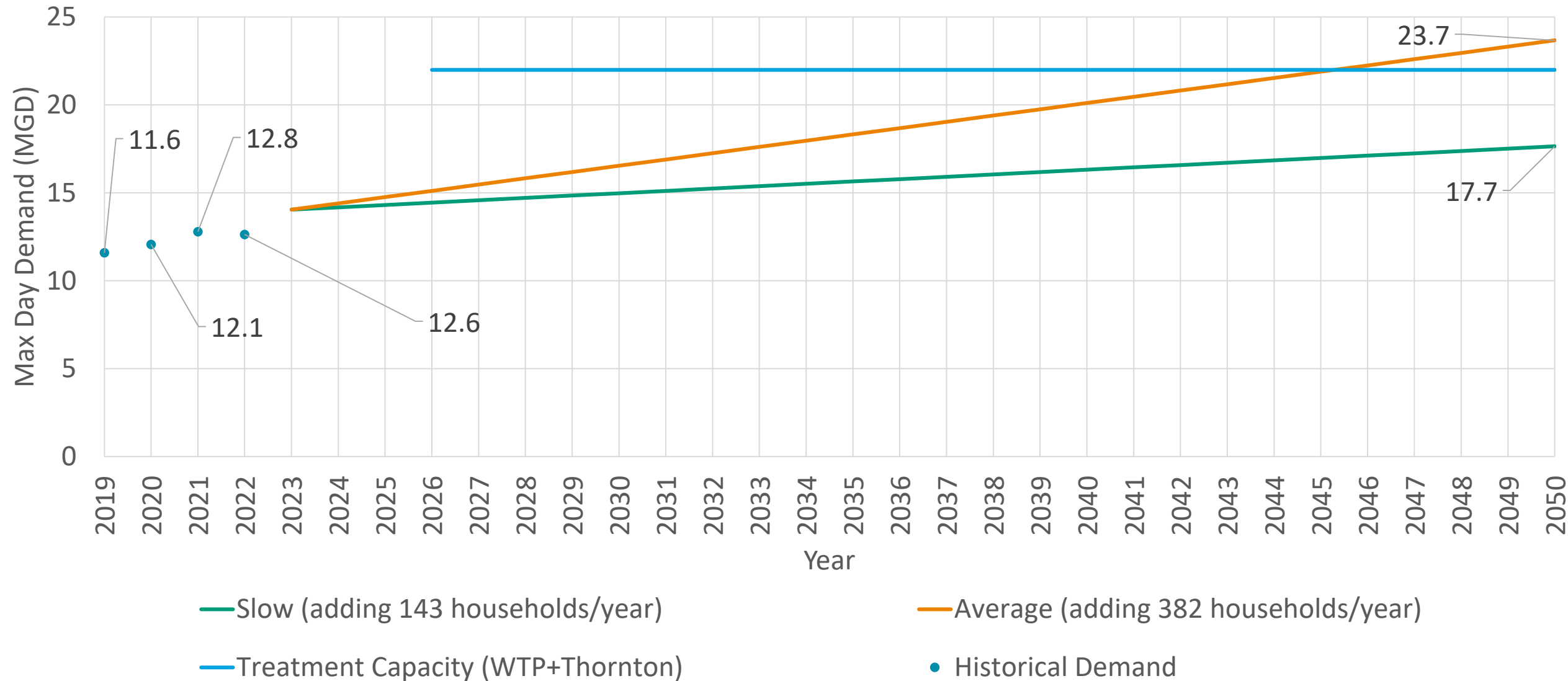
 MID



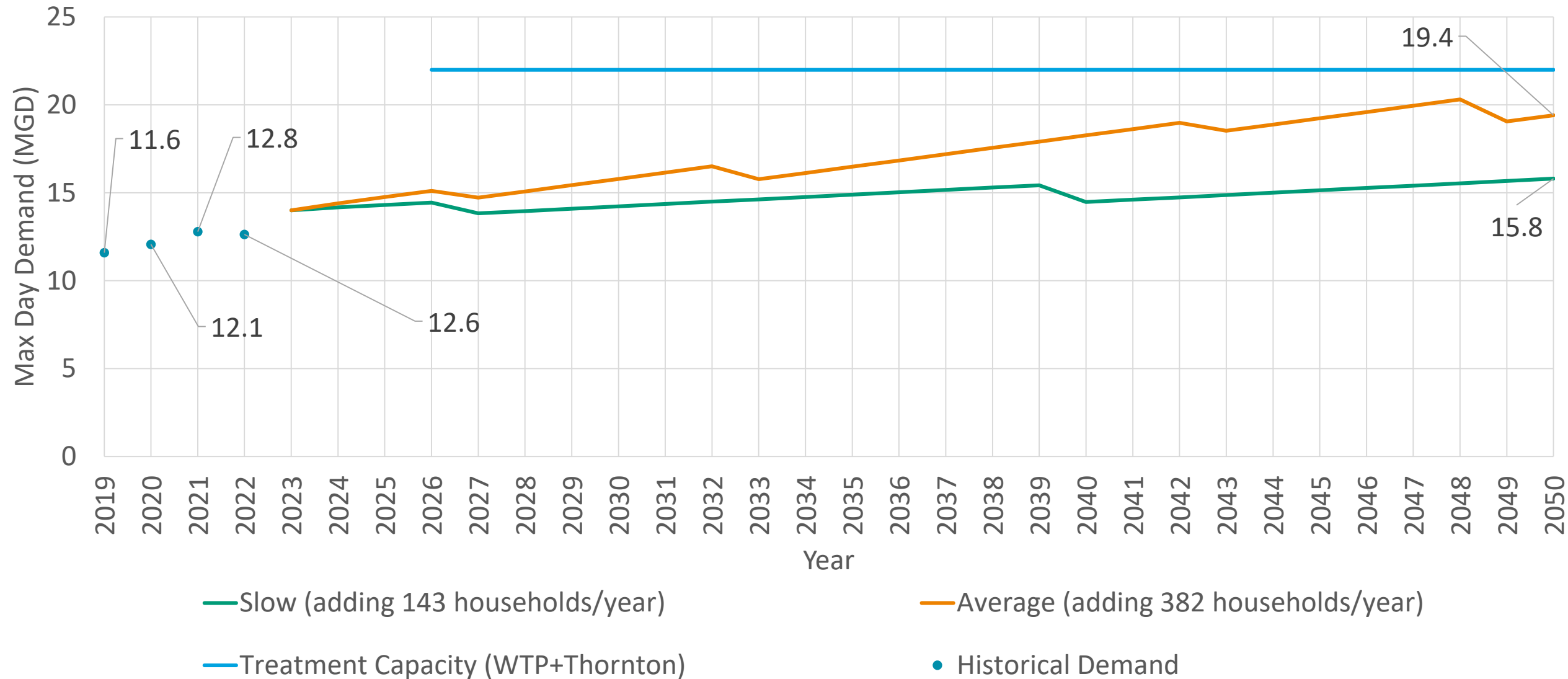
Existing Water Demand



Demand Growth Projections



Demand Growth Projections – With Lutz Reservoir and Pump Station



Pump

Type

 Active

Valve

Type

 Active

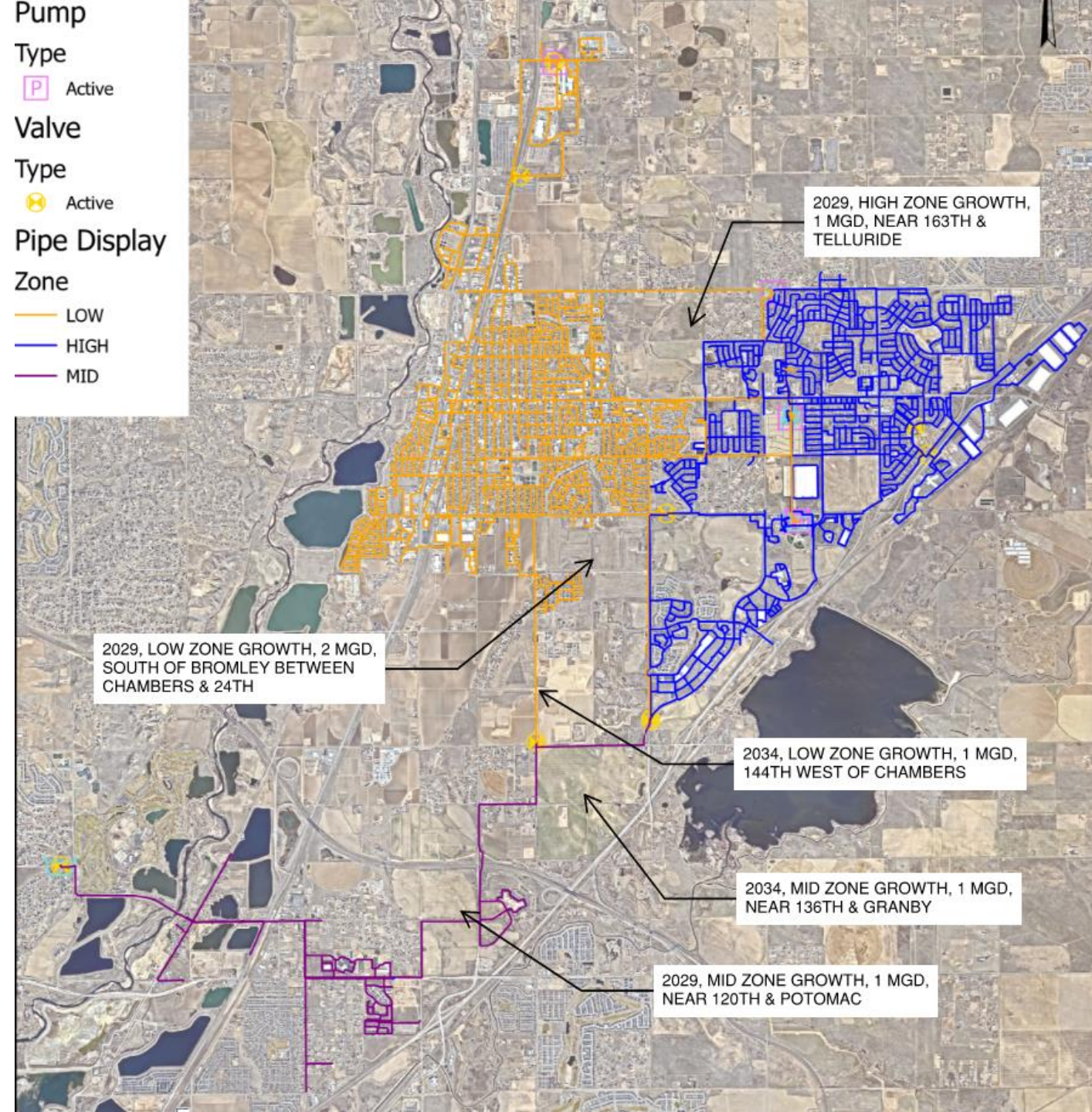
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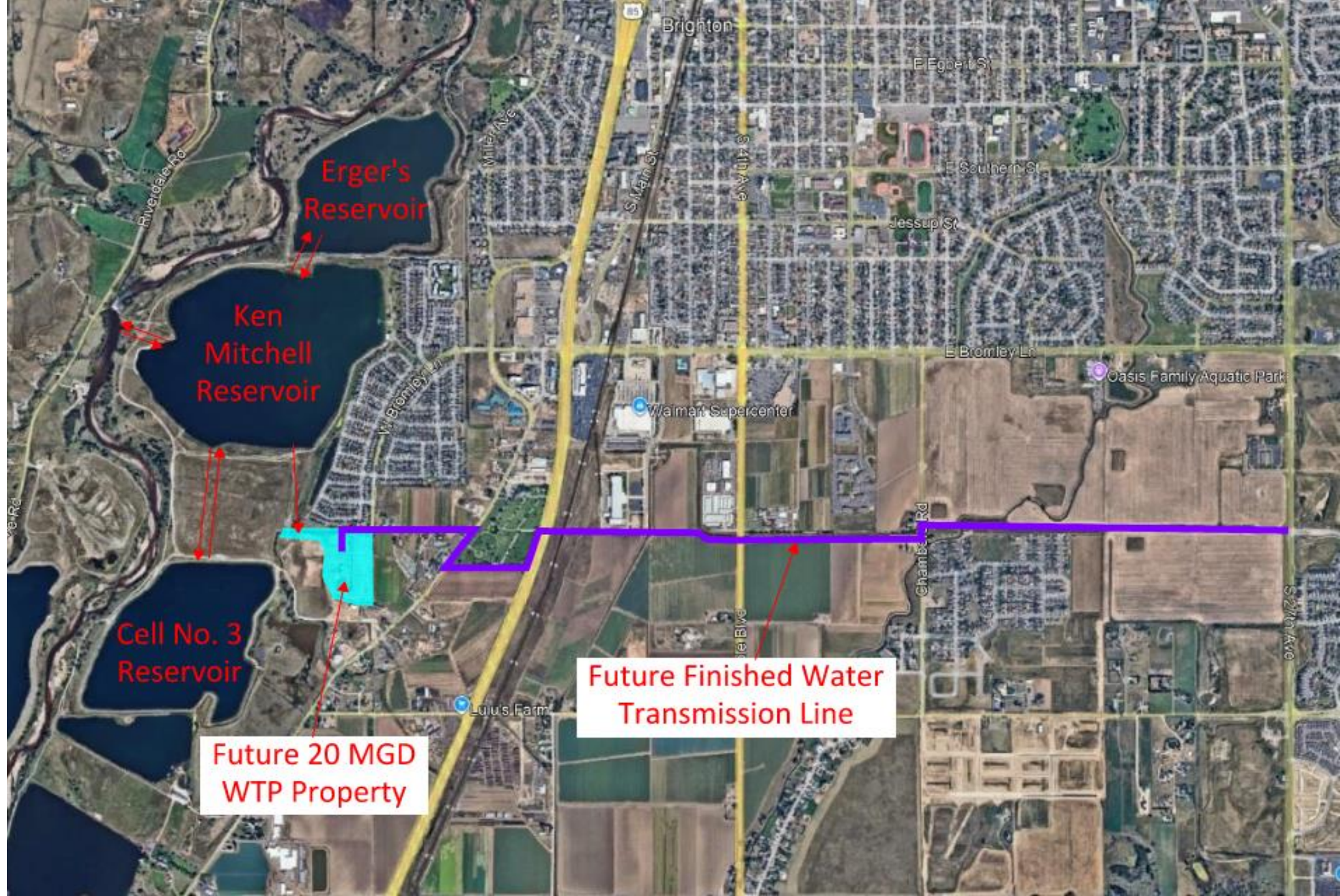
Zone

 LOW

 HIGH

 MID





Erger's
Reservoir

Ken
Mitchell
Reservoir

Cell No. 3
Reservoir

Future 20 MGD
WTP Property

Future Finished Water
Transmission Line

Capital Improvements Projects

- 22 necessary projects were developed to achieve “buildout” and maintain system
 - Improve/install drinking water wells
 - Improve/obtain augmentation storage reservoirs (KM Cell #1, KM Cell #3, Erger’s, Lupton Meadows)
 - Improve/replace distribution system in various locations
 - Construct new storage tanks
 - Install additional pumps at Lutz Reservoir pump station as system utilization increases
 - Southwest WTP (Future 20 MGD surface water plant)
- Staff have prioritized most projects into the financial model and will update model with results of master plan

Capital Improvements Projects

- Approximately \$450 Million in projects (Future WTP accounts for ~\$330 Million)
 - Possibility to phase construction of the Future 20MGD WTP to avoid \$330 Million at once
 - City also exploring other options to reduce time between new WTP and future Southwest WTP
- Future Southwest WTP may be required by 2042 at average growth (design starts in 2035)
- Utilization of Lutz Reservoir Non-Potable System could delay Future Southwest WTP to be required in 2052 (design starts in 2045)

QUESTIONS?



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