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AGENDA
MLUPA UTILITY INFRASTRUCTURE OPEN HOUSE
THURSDAY, NOVEMBER 20, 2025
COUNCIL CHAMBERS CITY HALL

CALL TO ORDER AND ROLL CALL

NEW BUSINESS:

1. MLUPA Infrastructure Open House - Current Conditions



City of Columbia Falls

Utility Infrastructure Open House



- Water and Wastewater Systems need strategic-level investment to maintain environmental compliance and desired level of service for our current and 20-year population projections.
- Costs of service delivery, maintenance, and modernization exceeds the current utility revenue rate schedules.
- Ongoing Land Use Plan development will be influenced by ongoing Preliminary Engineering Reviews.
- Near-term development applications will maximize, and likely exceed, wastewater system capacity.
- The City is investigating the applicability of Phased Developments combined with DEQ Utility Development Plans (*new in 2023 legislature*).
- Planning Commission and City Council are scheduled to discuss a decision framework to address current Utility Capacity and near-term Development Applications.
 - **Dec 11th – Planning Commission**
 - **Dec 15th – City Council**



City of Columbia Falls will fund a comprehensive Utility Rate Study in Spring 2026

- Costs of service delivery, maintenance, and modernization exceeds the current revenue rate model.
- Current water rates set in 2018 which included only a modest rate increase with no incremental growth.

2025 AE2S Annual Utility Rate Survey - Highlights:

- Rate Survey of participating cities (>5,000 population) across 11 States
 - Based on 6,000 gallons of water and wastewater
- Columbia Falls' Rankings:
 - Ground Water Systems: **#1 of 52** surveyed cities for the lowest water rate
 - Mechanical Wastewater: **#19 of 87** surveyed cities for the lowest wastewater rate
 - Total Utility Bill: **#4 of 95** surveyed cities for the lowest total utility bill



Montana Cities Typical Monthly Residential Utility Bill in 2025

Water		Sewer		Total Utility Includes Stormwater	
Columbia Falls	\$17.69	Missoula	\$21.85	Columbia Falls	\$56.54
Evergreen W&SD	\$29.77	Butte	\$28.50	Missoula	\$67.37
Great Falls	\$30.76	Great Falls	\$34.97	Butte	\$72.11
Belgrade	\$36.42	Columbia Falls	\$38.35	Great Falls	\$74.08
Billings	\$39.44	Billings	\$42.45	Billings	\$88.57
Missoula	\$40.10	Bozeman	\$54.45	Belgrade	\$100.02
Butte	\$42.36	Belgrade	\$63.60	Bozeman	\$110.53
Kalispell	\$43.09	Whitefish	\$66.68	Whitefish	\$116.14
Bozeman	\$47.54	Kalispell	\$69.50	Evergreen W&SD	\$117.47
Whitefish	\$49.46	Evergreen W&SD	\$87.70	Kalispell	\$121.66

CITY OF COLUMBIA FALLS

WASTEWATER COLLECTION & TREATMENT Preliminary Engineering Report

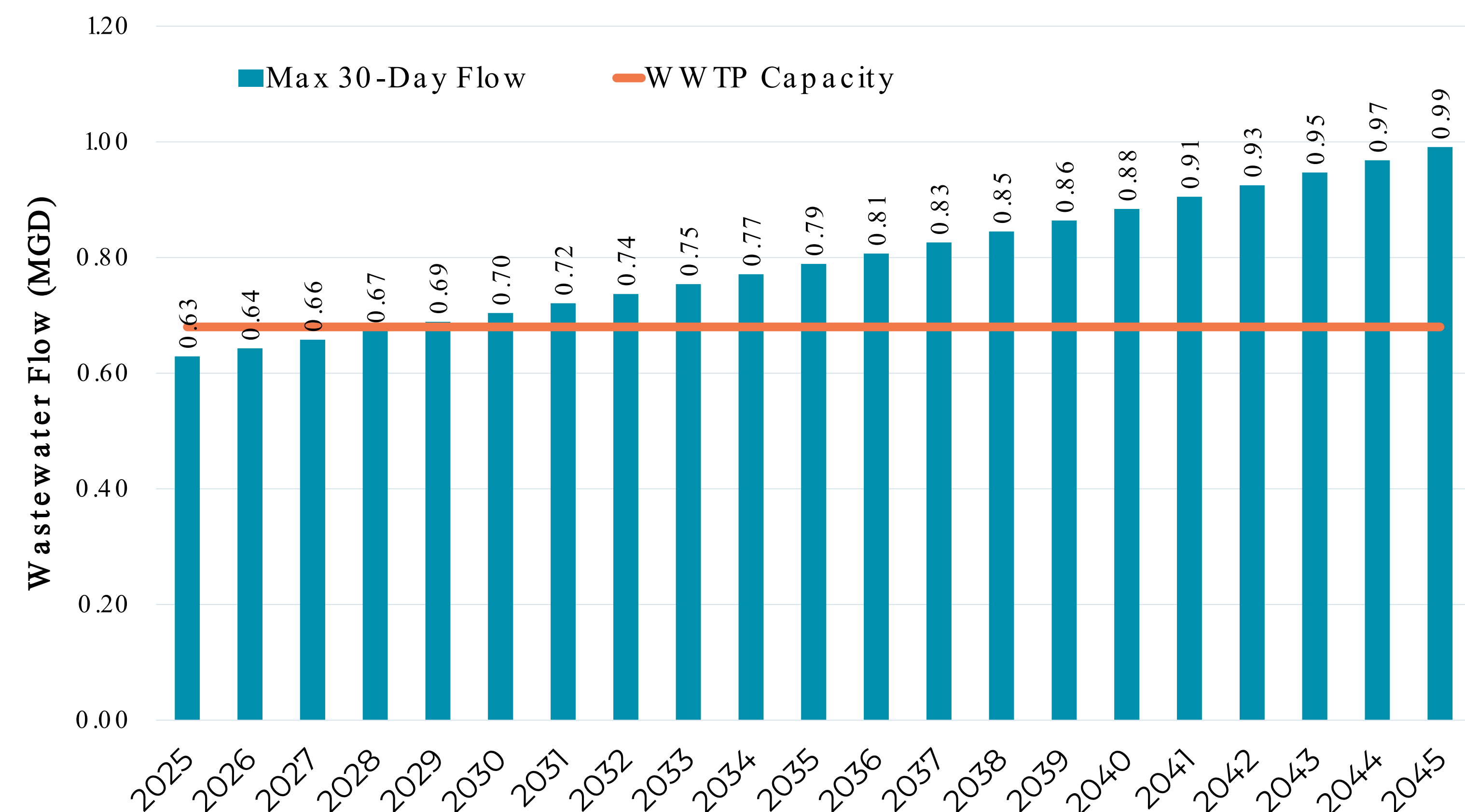
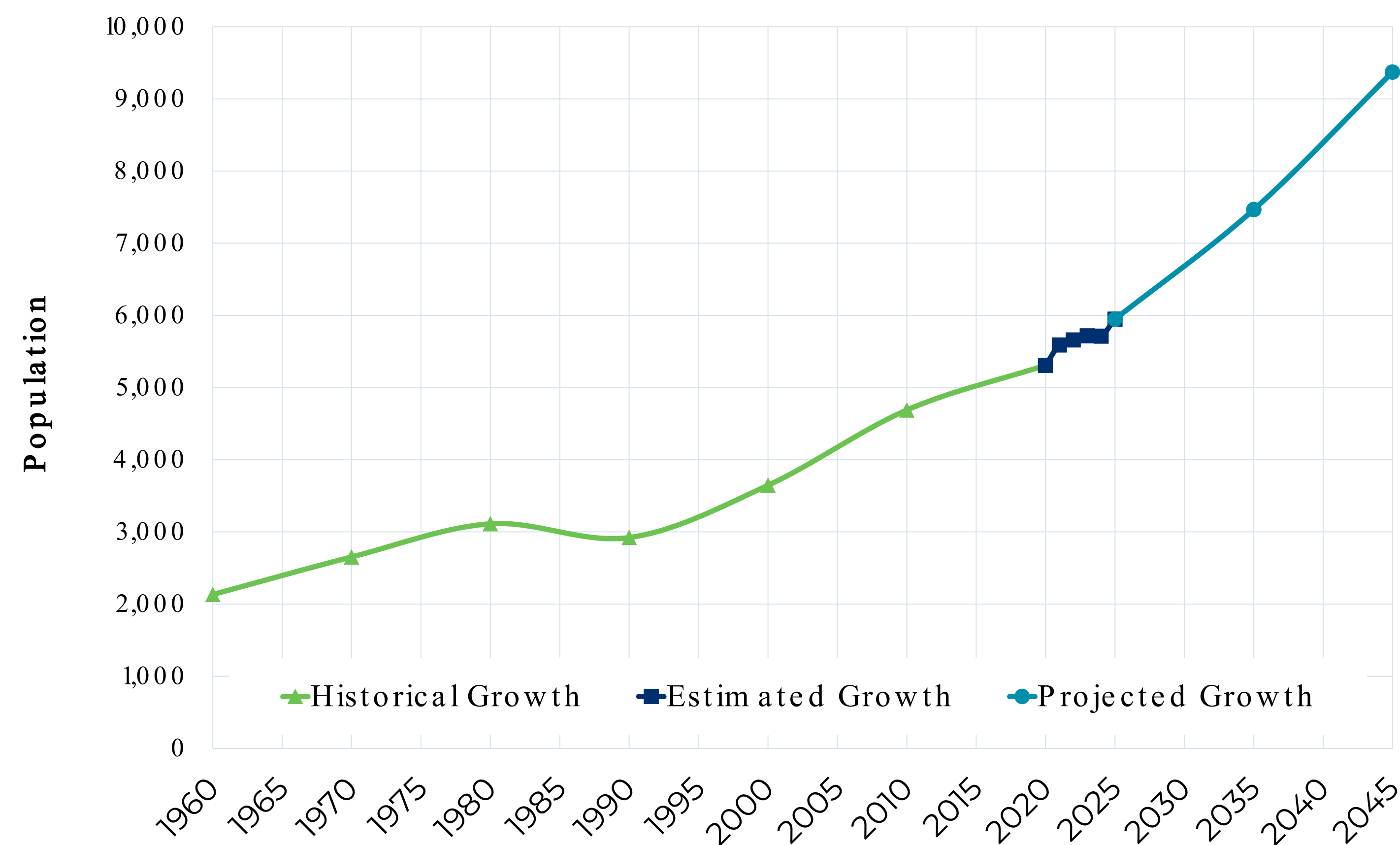
Public Meeting
Thursday, November 20, 2025

AGENDA

- Planning
 - Population Projections
 - Wastewater Flow and Load Projections
- Collection System Overview
- Treatment Plant Overview



GROWTH & W WTP CAPACITY

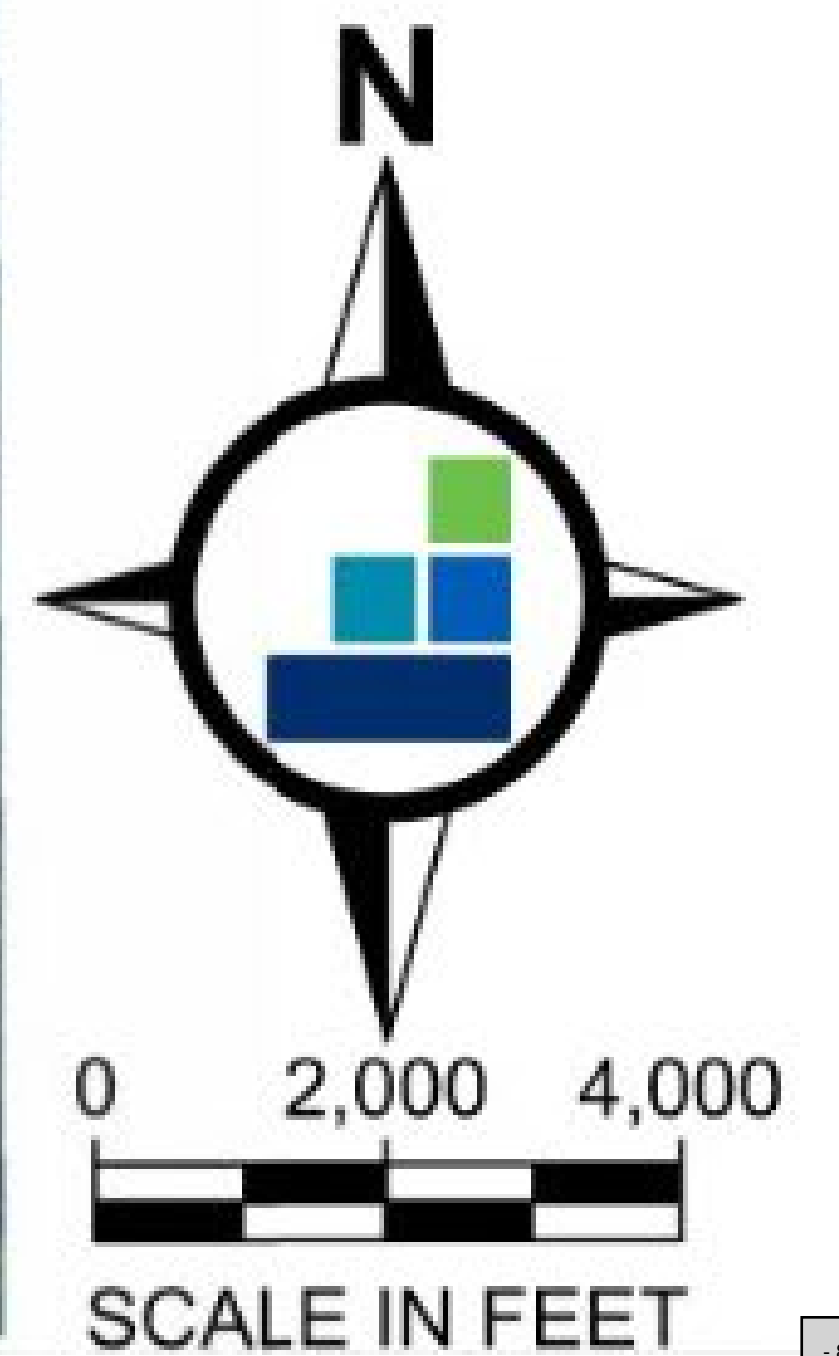
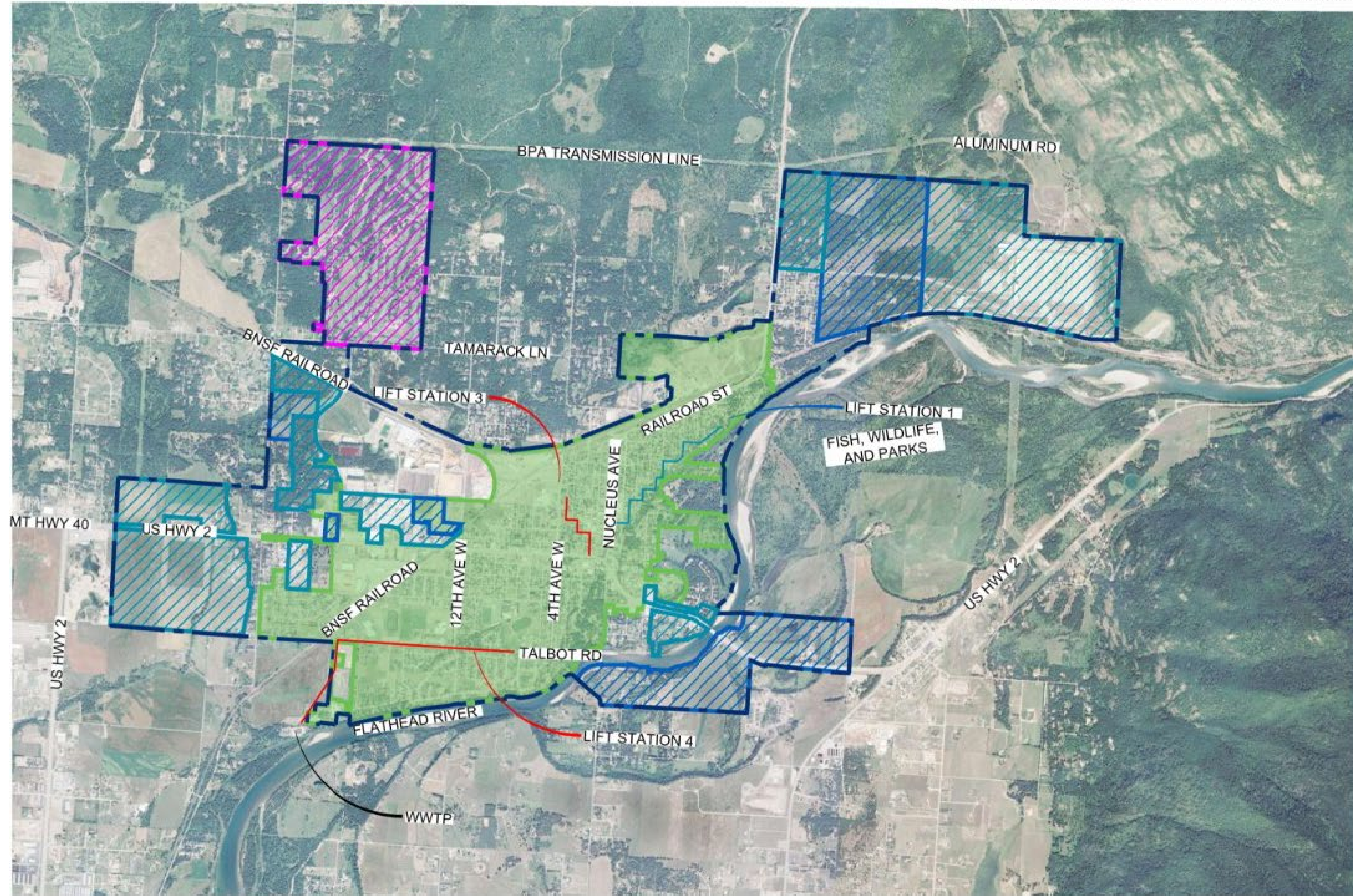


- Current service population = 5,947
 - 6,702 with Meadow Lake W&S
- Historical Annual Growth: 1.2% - 2.6%
 - Since 1960
- 2025 Housing Study: 1.8% to 2.5%
- Projected Annual Growth: 2.3%
- 20-year service population = 9,372
 - 10,562 with Meadow Lake W&S

- Current capacity = 0.68 million gallons per day (m g d)
- Capacity is reached in 2028
- Additional capacity measures
 - Carbon Addition = 0.71 m g d
 - Additional Bioreactor = 1.4 m g d

COLLECTION SYSTEM

LEGEND



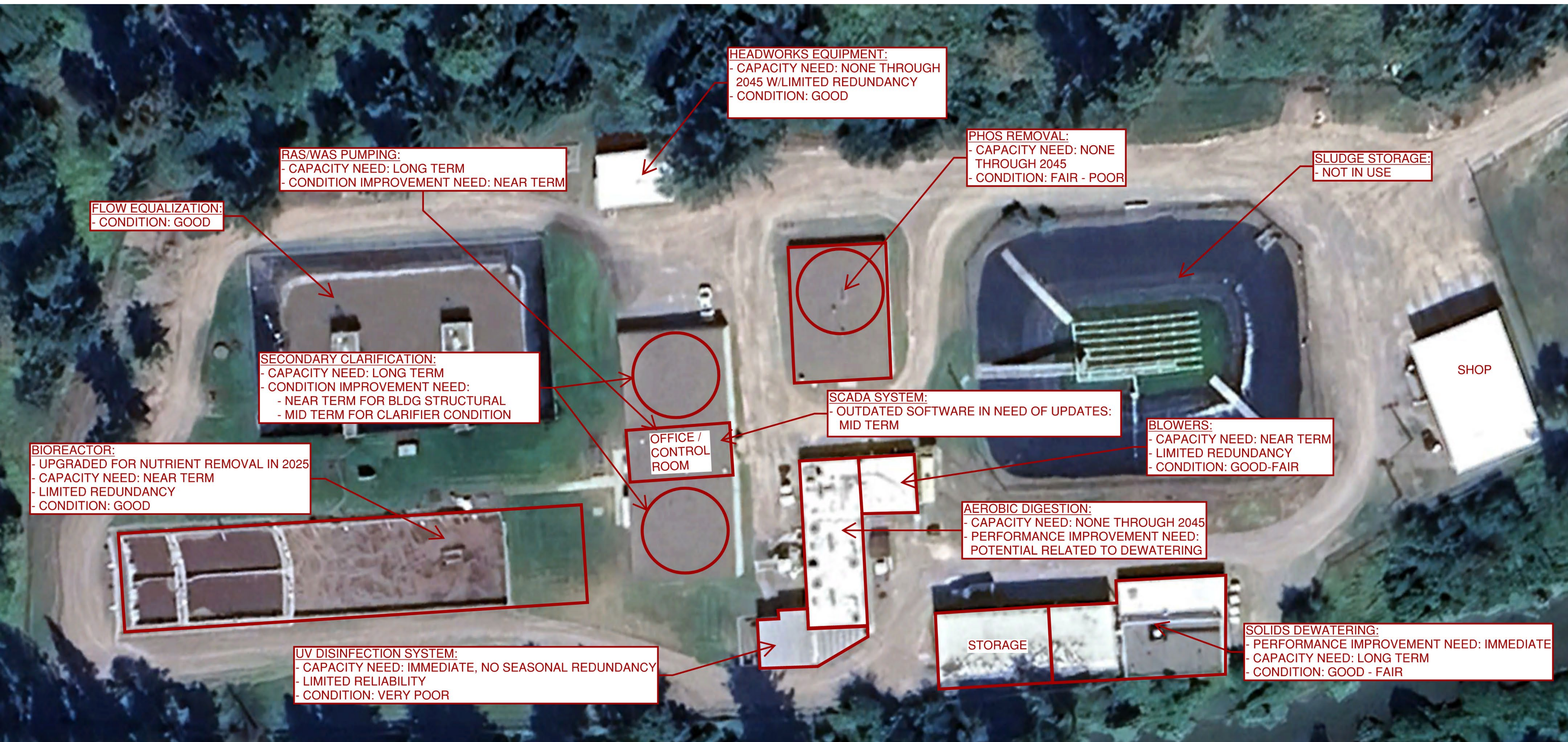
COLLECTION SYSTEM

Lift Station Conditions

- Back-up Power
 - Permanent generators
- Electrical Equipment
 - Life expectancy
- Lift Station Enclosures
 - Security fence around electrical equipment



WASTEWATER TREATMENT PLANT



QUESTIONS

- CR Leisinger
- Dom Goble
- Rika Lashley



UTILITY PUBLIC INFRASTRUCTURE MEETING #1

WATER SYSTEM PRELIMINARY ENGINEERING REPORT UPDATE

NOVEMBER 20, 2025



FOR:
CITY OF
COLUMBIA FALLS



WGMGROUPTM
Community Values. Inspired Futures.



INTRODUCTION

1. Project team
2. Purpose of the Water System Preliminary Engineering Report (PER) Update to the previous report completed in 2018
 - Identifies system deficiencies now and in the future
 - Aids in funding applications for identified projects
3. Project schedule and next steps



AGENDA

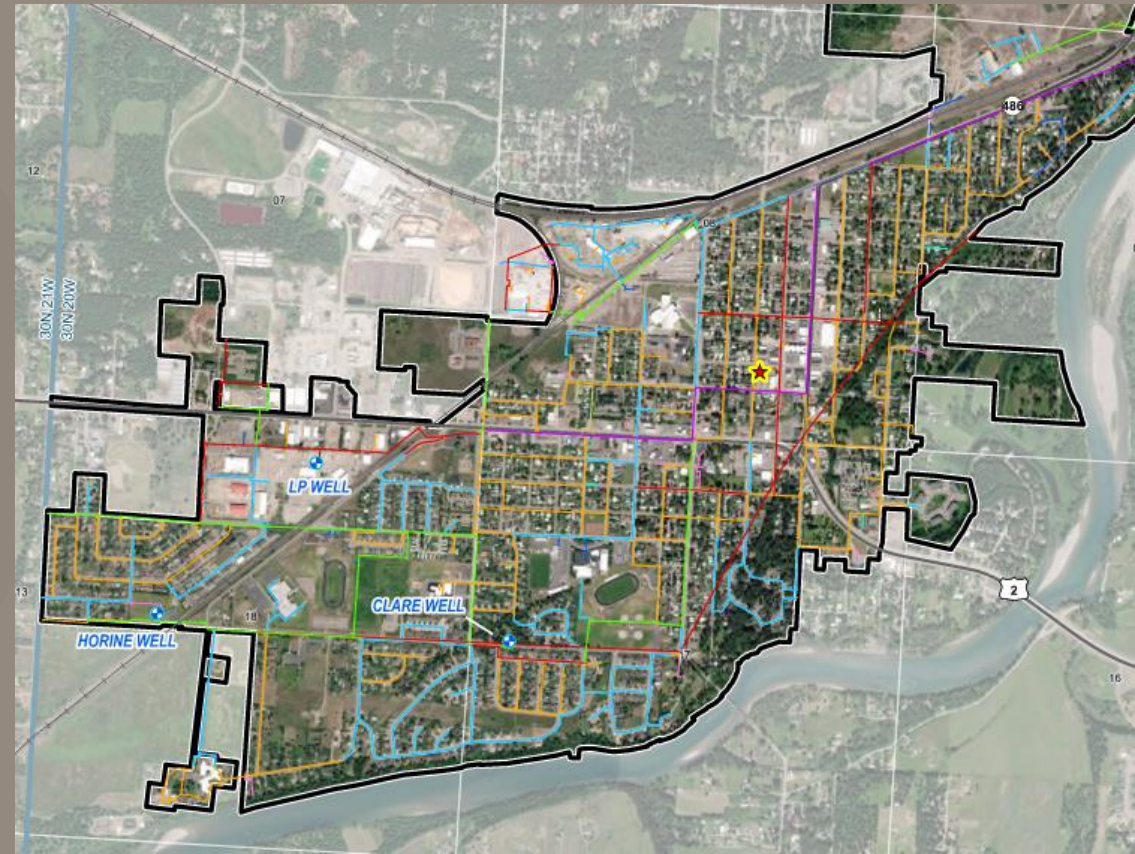
1. Existing system overview
2. Water production and meter use
3. Results of existing conditions water modeling
4. Evaluation of source and storage capacity



Item No.1.

OVERVIEW OF EXISTING SYSTEM

- Three operational municipal wells
- One 2.1-million-gallon (MG) ground level concrete storage tank
- ~44 miles of transmission and distribution piping
- 345 fire hydrants
- One pressure zone
 - Static pressures range from 60 psi to over 110 psi.



OVERVIEW OF EXISTING SYSTEM, CONT'D

- The city meters a total of 2,292 individual service lines
- Pipe types include PVC, galvanized iron, cast iron, ductile iron, asbestos cement, steel, and HDPE
- Pipe sizes range from 3/4" to 16"
- Most of the pipe ages range from 1951 to 2023.

Water Main Size (in.)	Total Length (ft.)	Type of Pipe(s)
3/4"	197'	Galvanized
1"	345'	PVC, Galv.
1.5"	897'	PE, Galv.
2"	4,202'	PVC, HDPE, Galv.
3"	1,304'	PVC, CU, D.I.
4"	3,201'	PVC, PE, Steel, DI, AC, Galv.
6"	86,323'	PVC, CI, AC, Steel, DI,
8"	56,033'	PVC, PE, CI, DI, AC, Steel
10"	31,427'	PVC, CI
12"	23,105'	PVC, AC
14"	1,217'	PVC, CI
16"	23,145'	Steel, AC
Total	231,396'	

WATER PRODUCTION DATA DEFINITIONS



AVERAGE DAILY DEMAND (ADD)

The total volume of water delivered to the system in a year, divided by the number of days in the year.



MAXIMUM DAY DEMAND (MDD)

The largest volume of water delivered to the system in a single day.



PEAK HOURLY DEMAND (PHD)

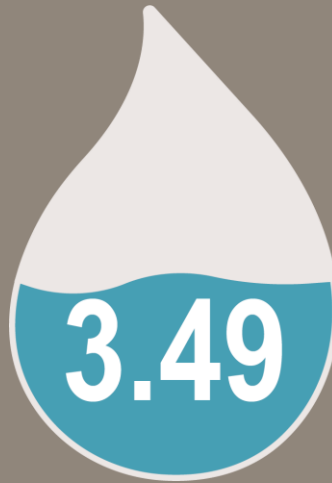
The maximum volume of water delivered to the system in a single hour expressed in gallons per day.

WATER PRODUCTION DATA

7-year average production (2018 – 2024), *Million Gallons per Day:*



ADD



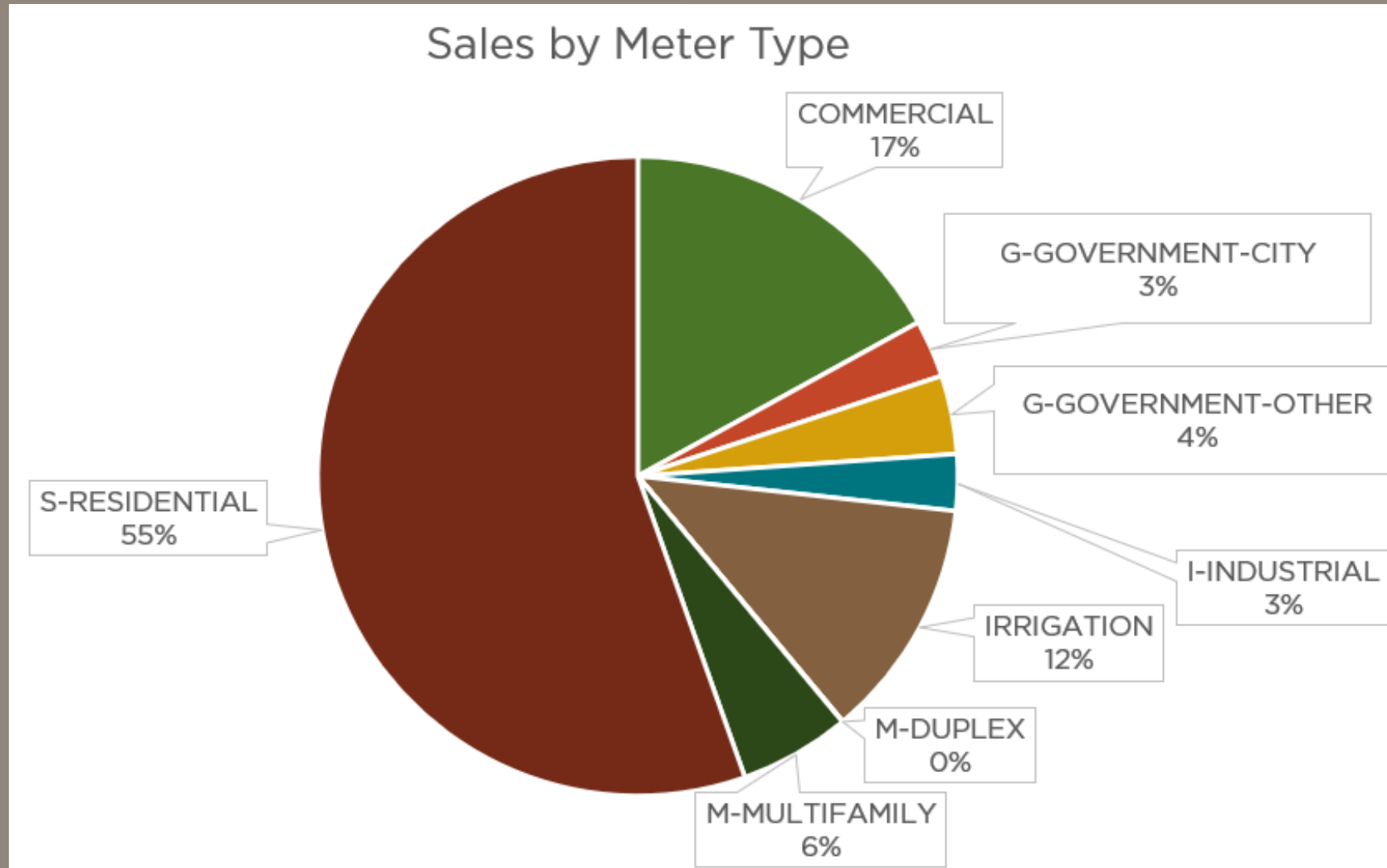
MDD



PHD

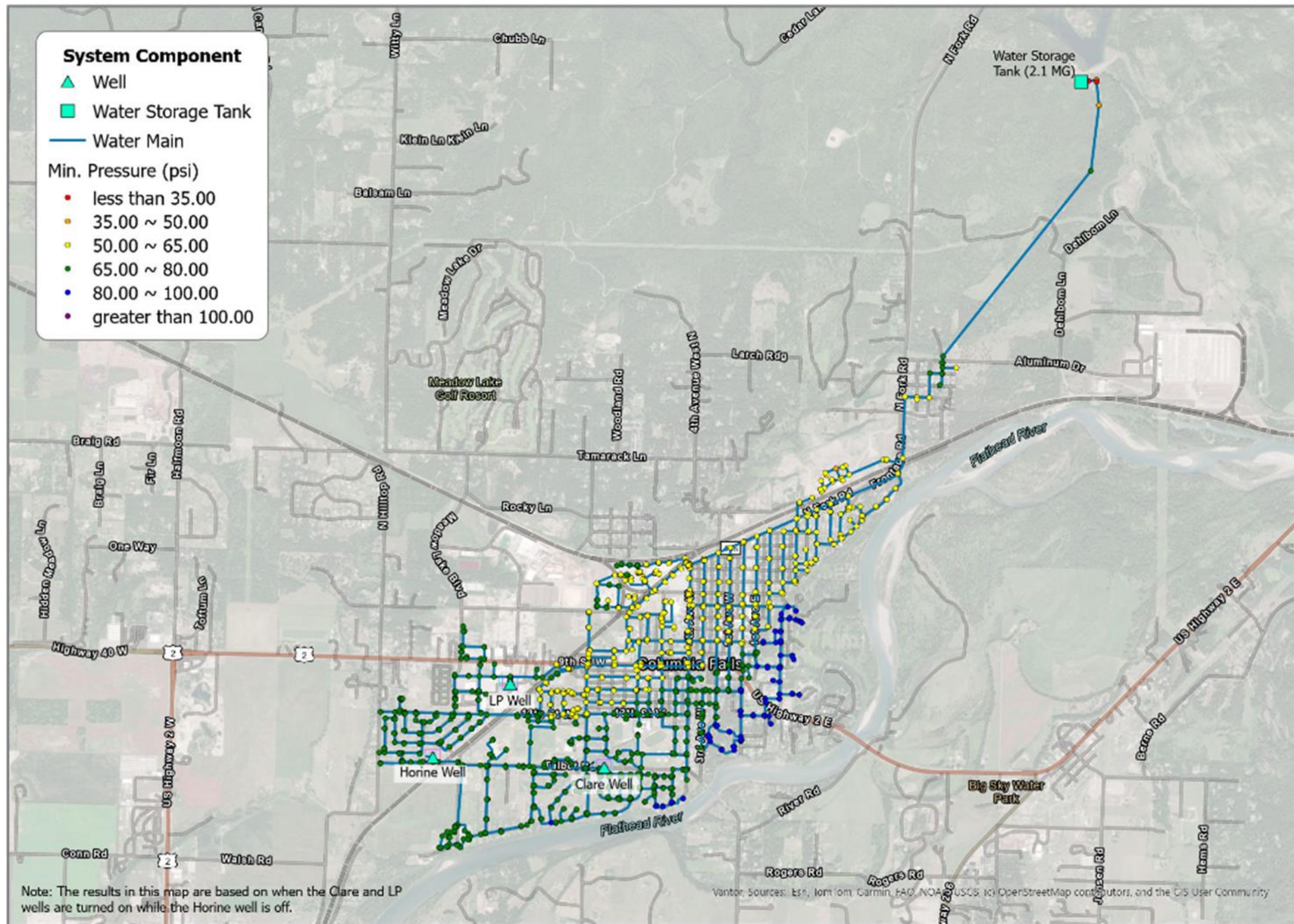
**City's 2024 population estimate from the US Census is 5,713*

WATER USE DATA



WATER MODELING RESULTS

- WaterCAD Model
- Methodology of applying water demands to each node and adding fire flows to hydrant locations.



1 inch equals 2,400 feet



Locator Map Not to Scale

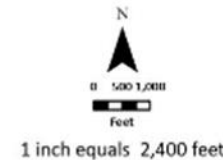
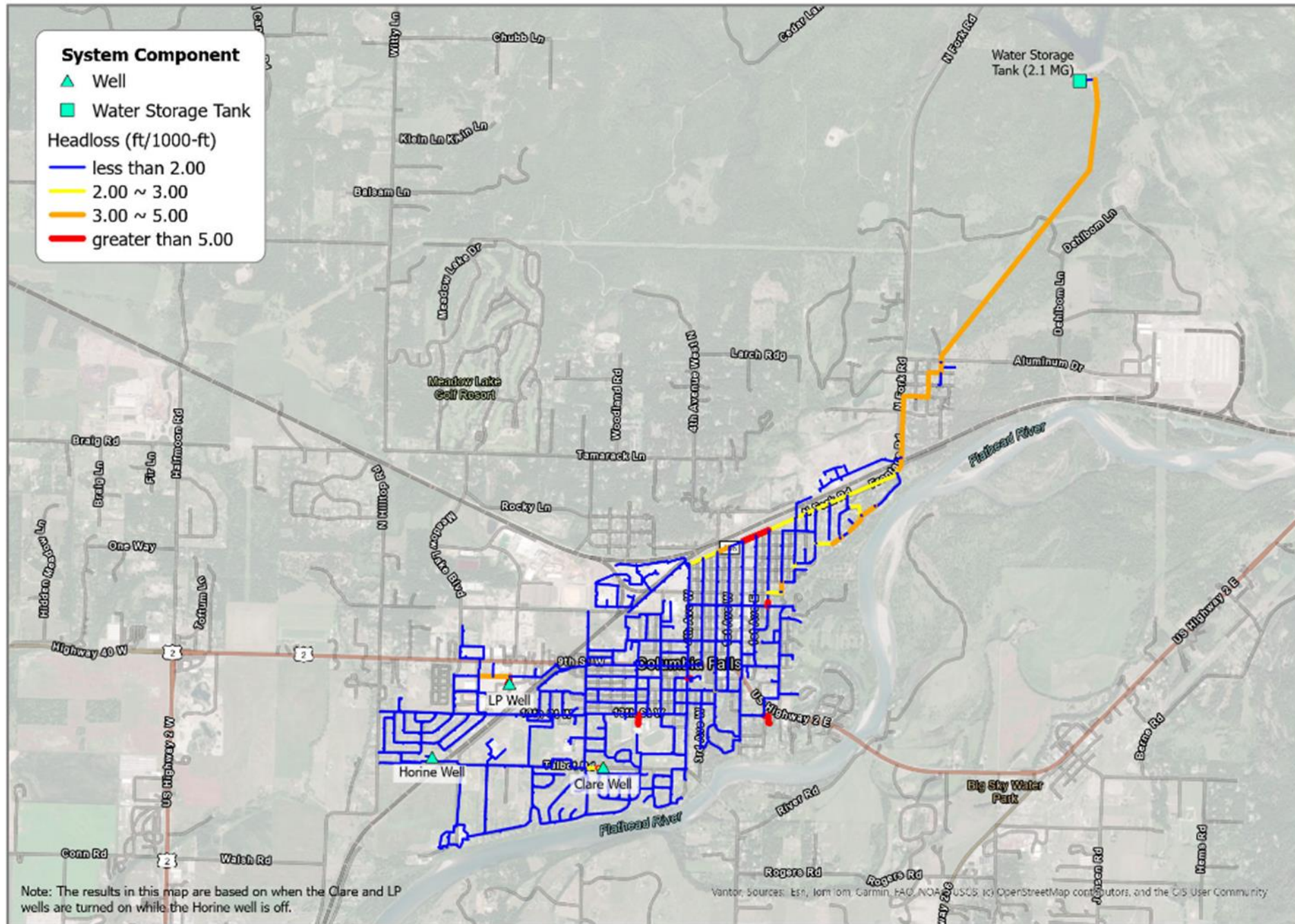
Columbia Falls
Flathead County, MT**COLUMBIA FALLS
WATER SYSTEM****MINIMUM
PRESSURE DURING
PEAK HOUR OF MAX
DAY DEMAND**

CITY OF COLUMBIA FALLS

Date: 11/12/2025



Vendor Sources: Esri, TomTom, Garmin, FAD, NOAA, USGS, ICS, OpenStreetMap contributors, and the GIS User Community



Locator Map Not to Scale

Columbia Falls
Flathead County, MT

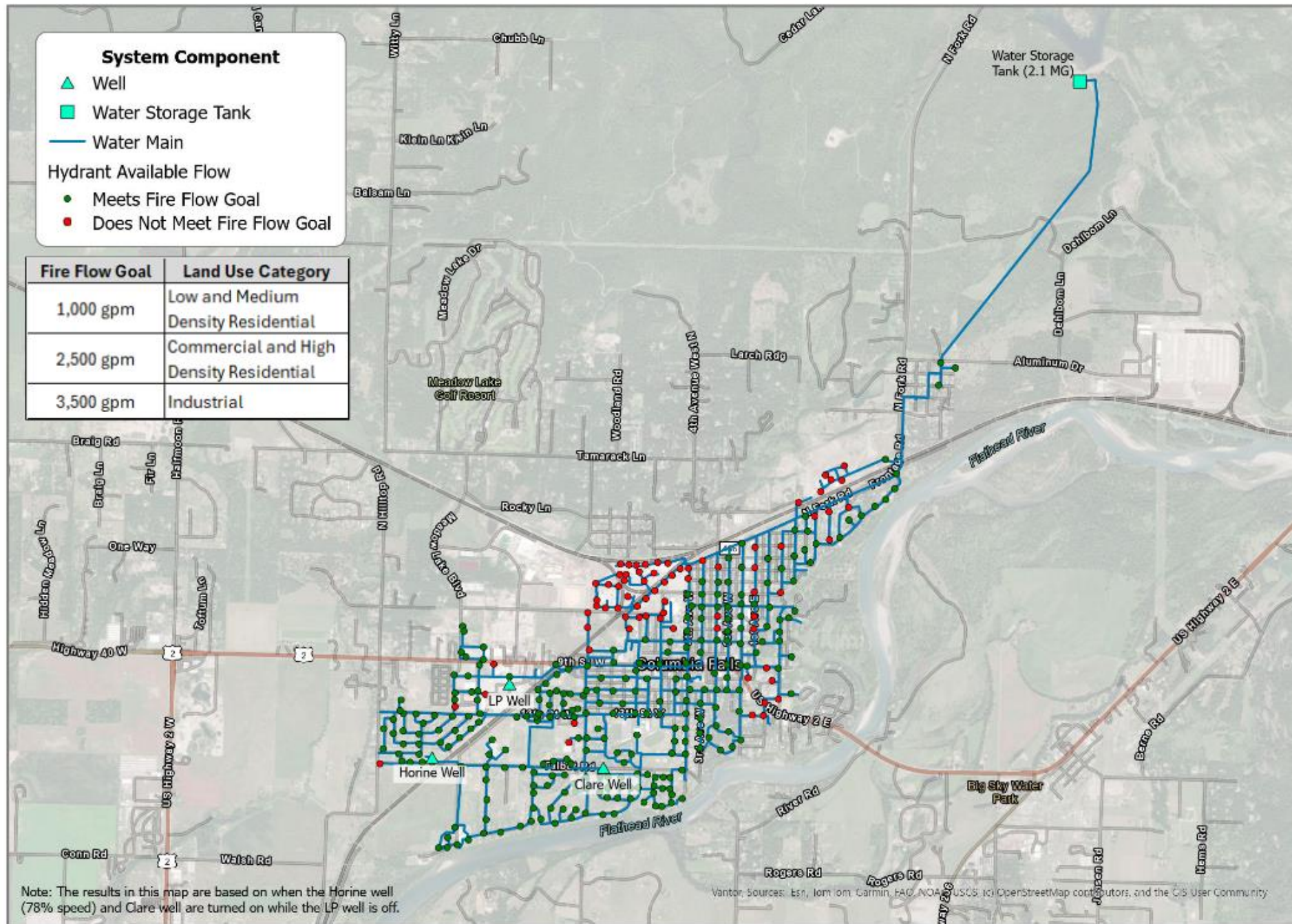
COLUMBIA FALLS WATER SYSTEM

WATER MAIN HEADLOSS DURING PEAK HOUR OF MAX DAY DEMAND

CITY OF COLUMBIA FALLS

Date: 11/12/2025





EXISTING SOURCE CAPACITY EVALUATION

- DEQ Circular 1 requires groundwater supply sources be able to meet or exceed the MDD with the largest producing source out of service.
- Existing MDD = 3.49 MG
- Total existing well capacity with largest producing well offline is 3.02 MG (for two wells running for 24 hours).



EXISTING STORAGE CAPACITY EVALUATION

- Per DEQ Circular 1, the minimum allowable volume for storage facilities must be equal to the ADD plus fire flow demand.
- ADD = 1.24 MG
- Fire Flow Demand = 0.63 MG
 - For a fire flow of 3,500 gpm for a duration of 3 hours per Appendix B of International Fire Code.
- Total storage required = 1.87 MG
- Existing storage tank capacity = 2.05 MG



RESULTS

- Adequate to high pressure throughout the system.
- Pipe age, material, and sizes restrict available fire flow.
- Allowable land use zoning equates to certain fire flow criteria that cannot be met in some portions of the system.
- Source capacity appears undersized for current conditions, so an additional well will be needed.
- Redundancy and additional capacity are needed for the transmission main and storage tank.

NEXT STEPS

- Future conditions water modeling based on 20-year planning period
- Identify future project needs
- Evaluate alternatives to address existing system deficiencies
- Complete the Final Water System PER Update in May 2026

MLUPA Plan of Action & Milestones

Public Engagement Opportunities

Nov 13	City Council & Planning Commission - LUP Kickoff
Nov 20	<i>Utility Infrastructure Public Meeting 1</i>
Dec-Feb	<i>Land Use Plan Outreach Round 1 (Surveys, Interviews)</i>
Dec 11	Planning Commission
Jan 8	Planning Commission
Jan 26	Council MLUPA Workshop
Feb __	<i>Utility Infrastructure Public Meeting 2</i>
Feb 12	Planning Commission (<i>LUP workshop</i>)
Mar 12	Planning Commission (<i>LUP workshop</i>)
Apr 9	Planning Commission
Apr 13	Council MLUPA Workshop
Apr-May	<i>Land Use Plan Outreach Round 2</i>
Apr 23	MLUPA Public Hearing Planning Commission
May 4	MLUPA Public Hearing Council – First Reading
May 18	MLUPA Public Hearing Council – Approves Plan

Any questions or comments?

THANK YOU!

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