

Utility Infrastructure Planning

City Planning Commission

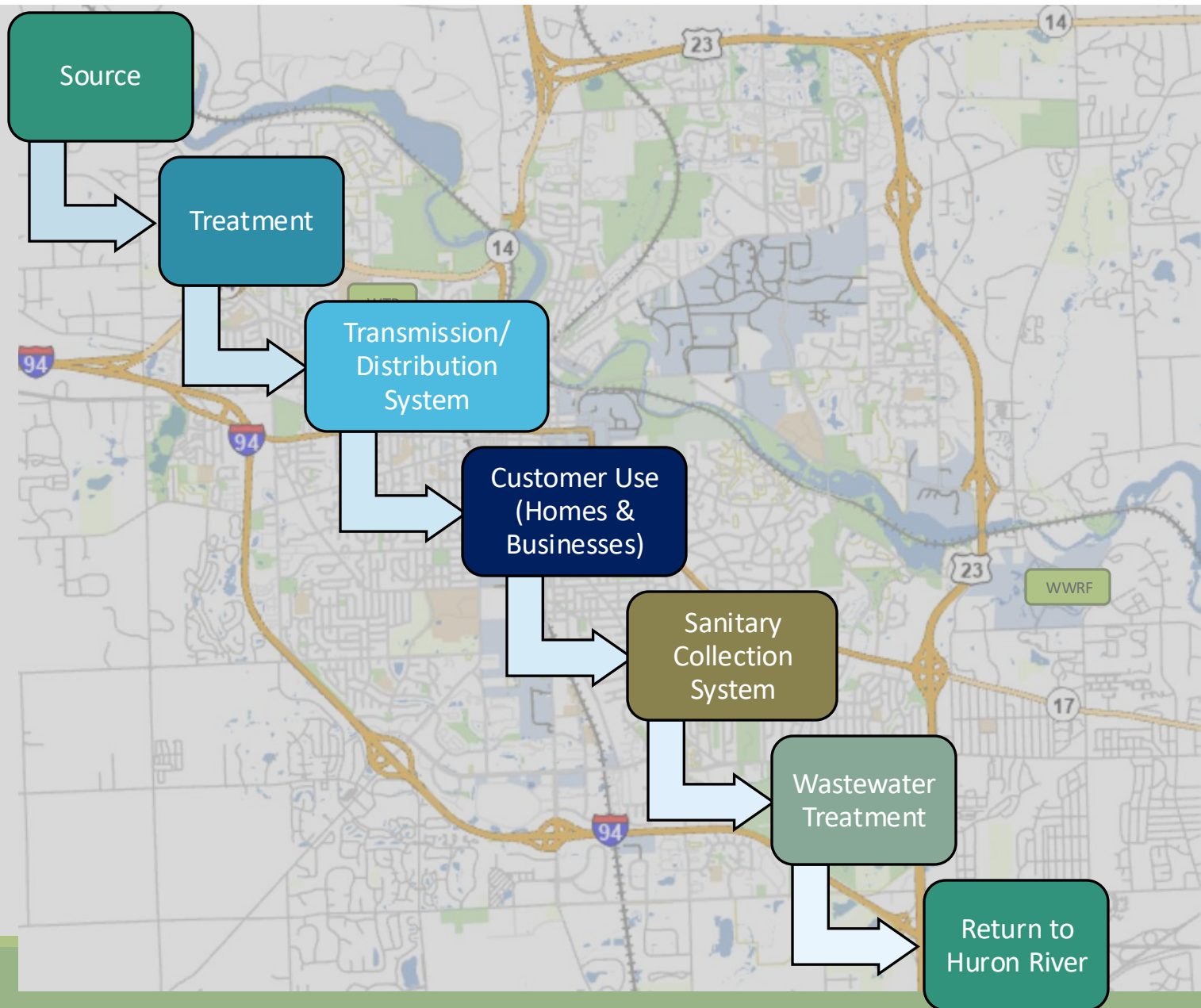
TUESDAY, JUNE 3, 2025



Agenda

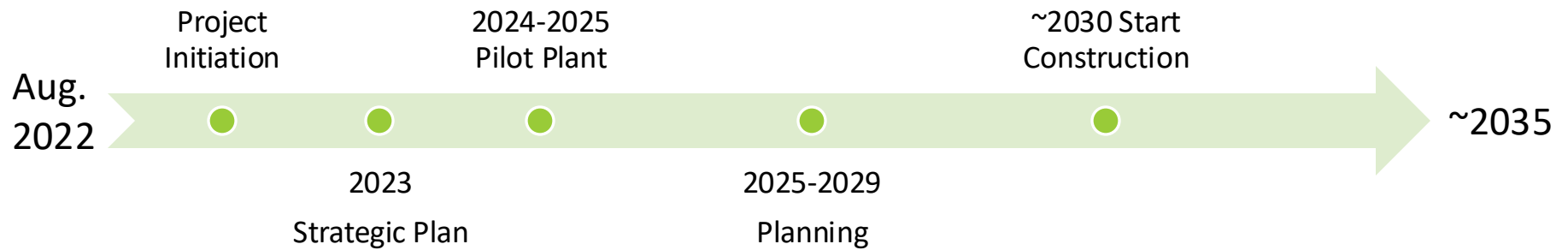
- Water & Sanitary Utility Infrastructure Overview
- Growth Scenarios
- Water System Planning Efforts
 - Source Capacity
 - Water Treatment Plant Capacity
 - Water Distribution System Constraints
- Sanitary Sewer Collection System Planning Effort
 - Collection System Constraints
 - Wastewater Treatment Plant Capacity
- Next Steps, Questions, & Discussion

Water Utility Infrastructure Overview

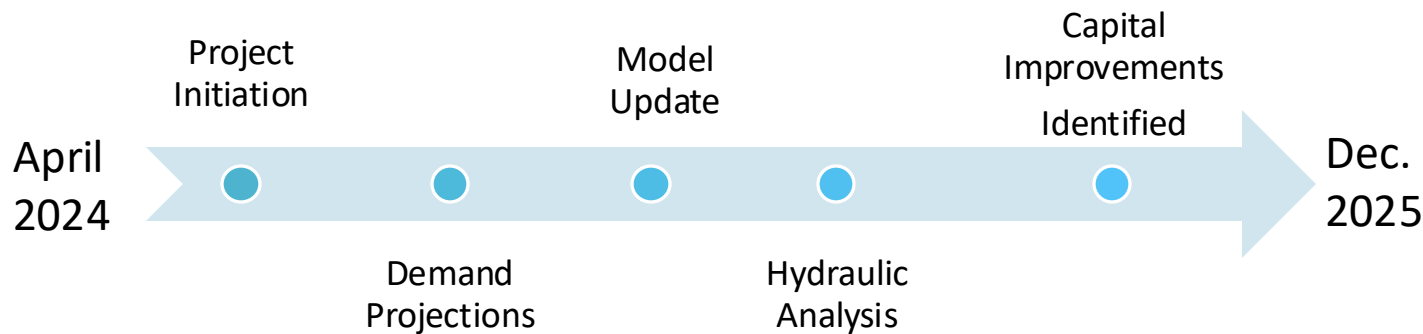


Drinking Water Utility Planning Efforts

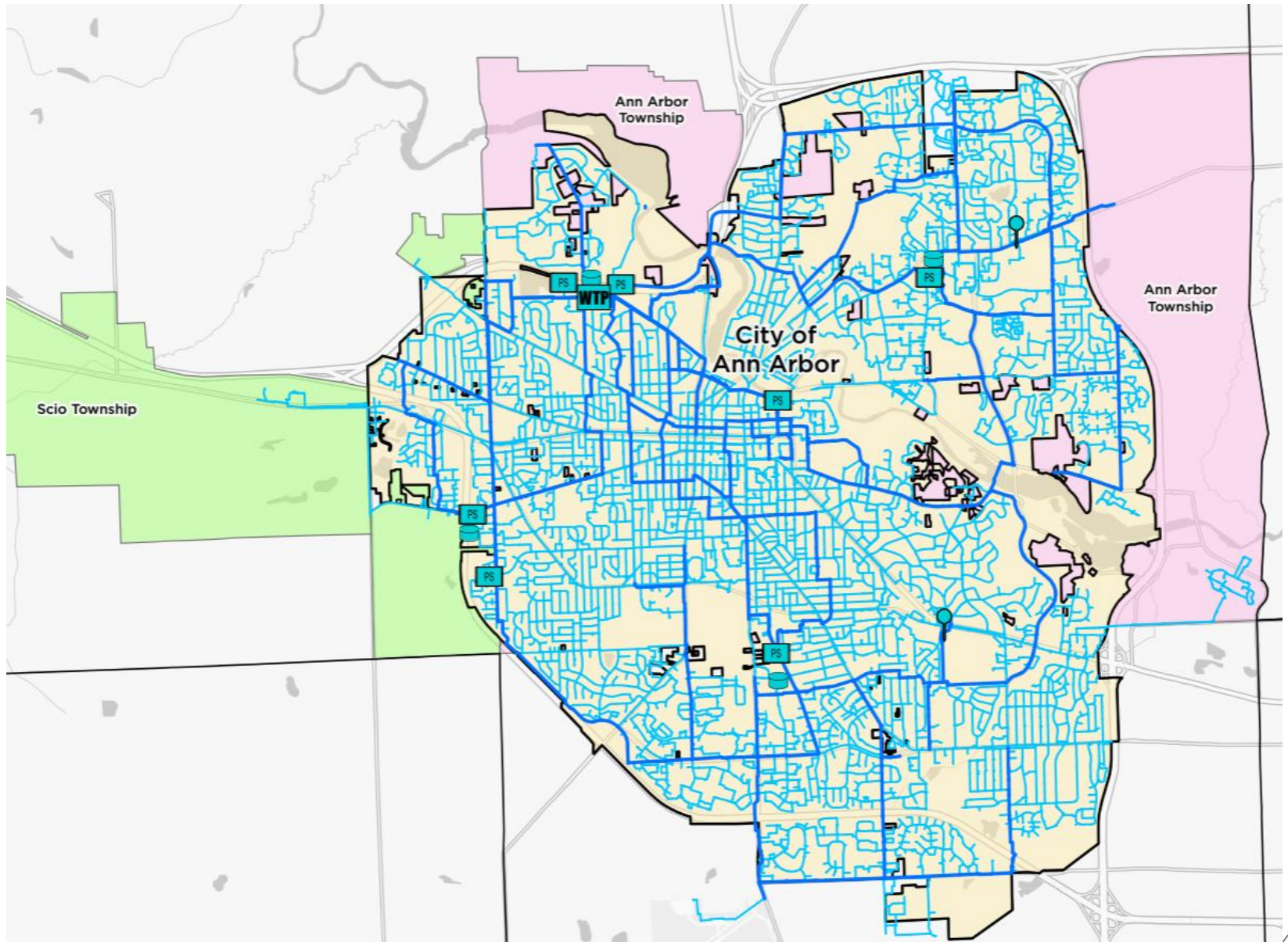
Water Treatment Plant Facilities Plan (AECOM)



Water Distribution Plan (OHM)



Water Distribution System Service Area



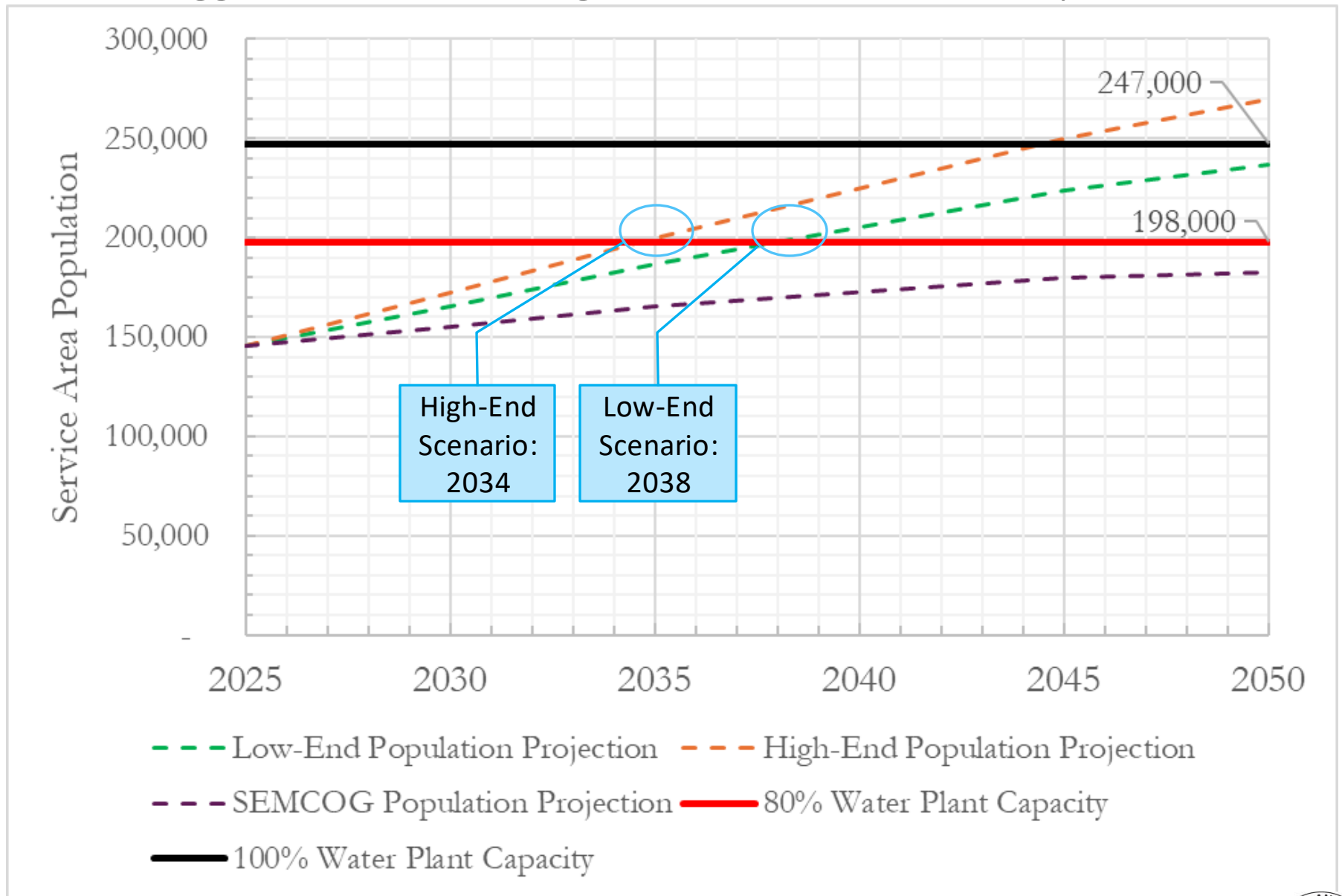
Growth Scenarios

Source	Average Annual Housing Unit Increase	Population Increase by 2050	Percent Increase by 2050
Southeast Michigan Council of Governments (SEMCOG)	~200*	~11,000	9%
Draft CLUP Low-End Build Out	~1,200	~66,000	52%
Draft CLUP High-End Build Out	~1,800	~99,000	79%

**Per Planning Department, in the last few years the City has constructed approximately 650 units/year*



Trigger Point for Planning Water Treatment Plant Expansion



Water Treatment Constraints

- Future demands expected to exceed current & planned treatment capacity based on the low and high-end build out scenarios.
- Existing landlocked site cannot support additional capacity.
- Planning for Plant 1 replacement has been underway for years based on maintaining current capacity
- Major investments are required regardless of growth



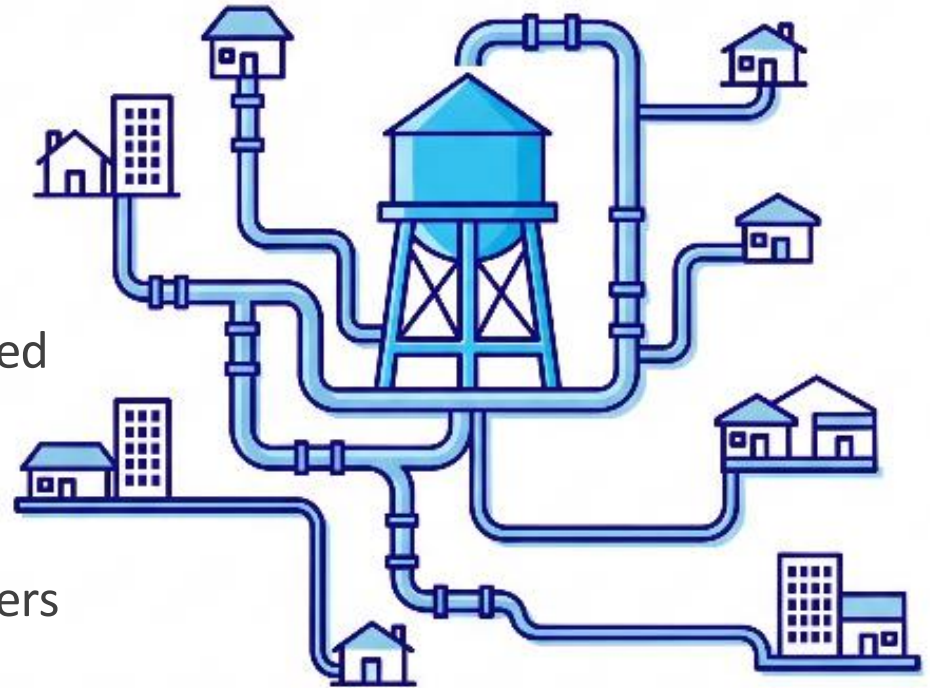
Source Water Constraints

- Currently 85% Huron River & 15% Wells (Steere Farm)
- Not permitted to withdraw more water from the Huron River
- Future demands expected to exceed available source water based on the low and high-end build out scenarios.
- Additional supply will require a new wellfield (with treatment) or regional connection

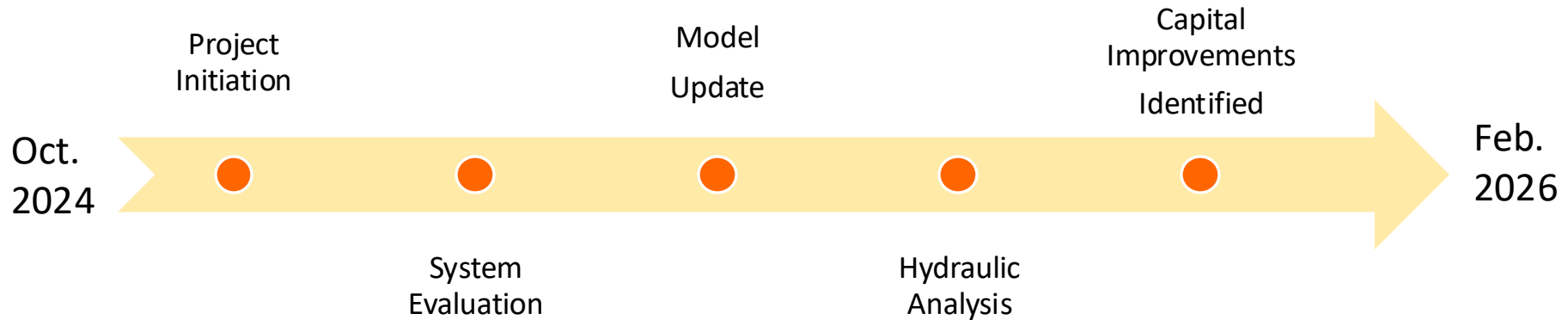


Water Distribution System Constraints

- Future demand evaluation currently underway
- Distribution improvements will be evaluated for water quality as well as pressure and fire flow
- Added finish water storage is anticipated
- Pump station improvements are anticipated
- Additional growth for contract customers has not been incorporated to date, i.e. Scio Twp and Ann Arbor Twp



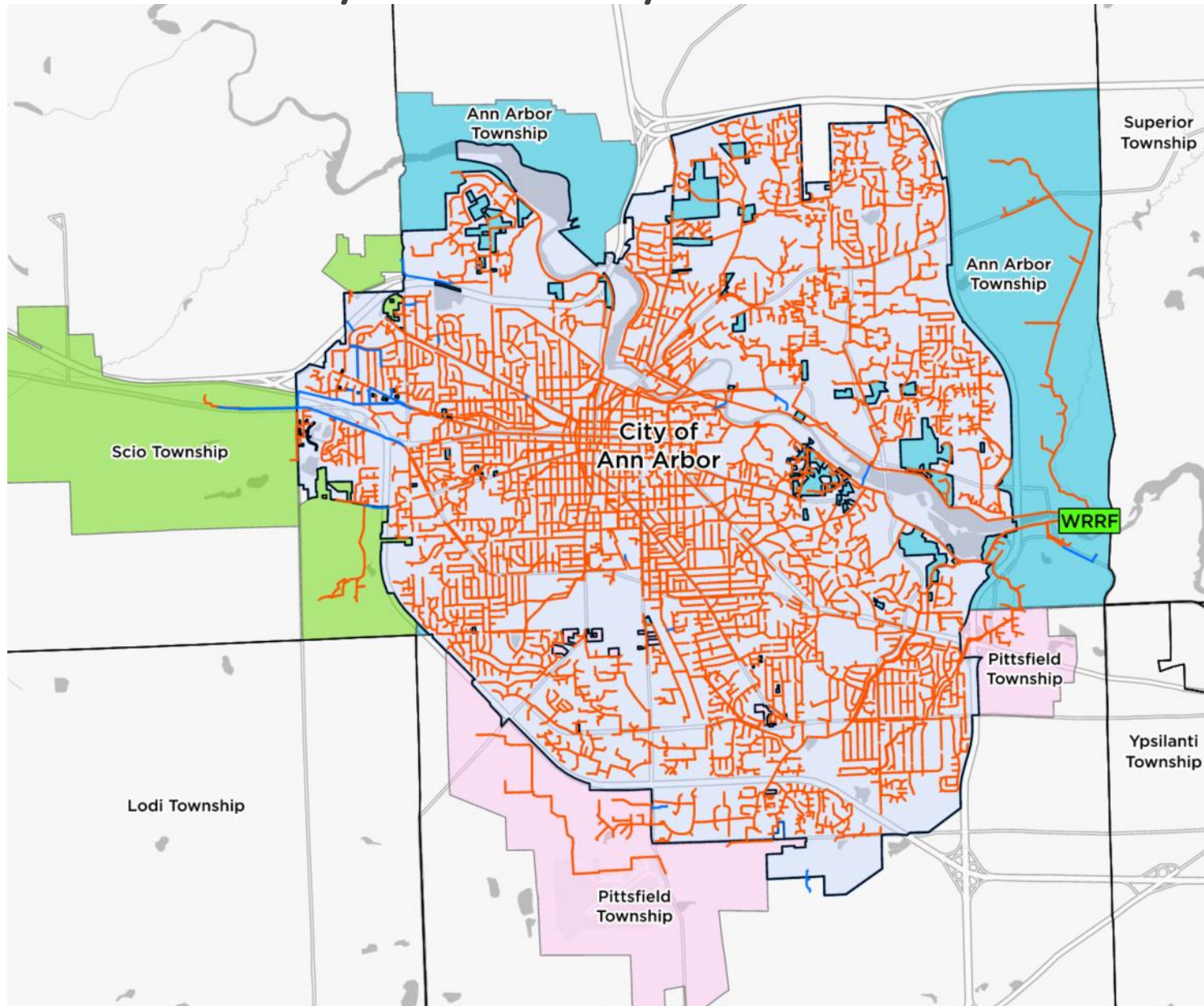
Sanitary Sewer Collection System Comprehensive Plan



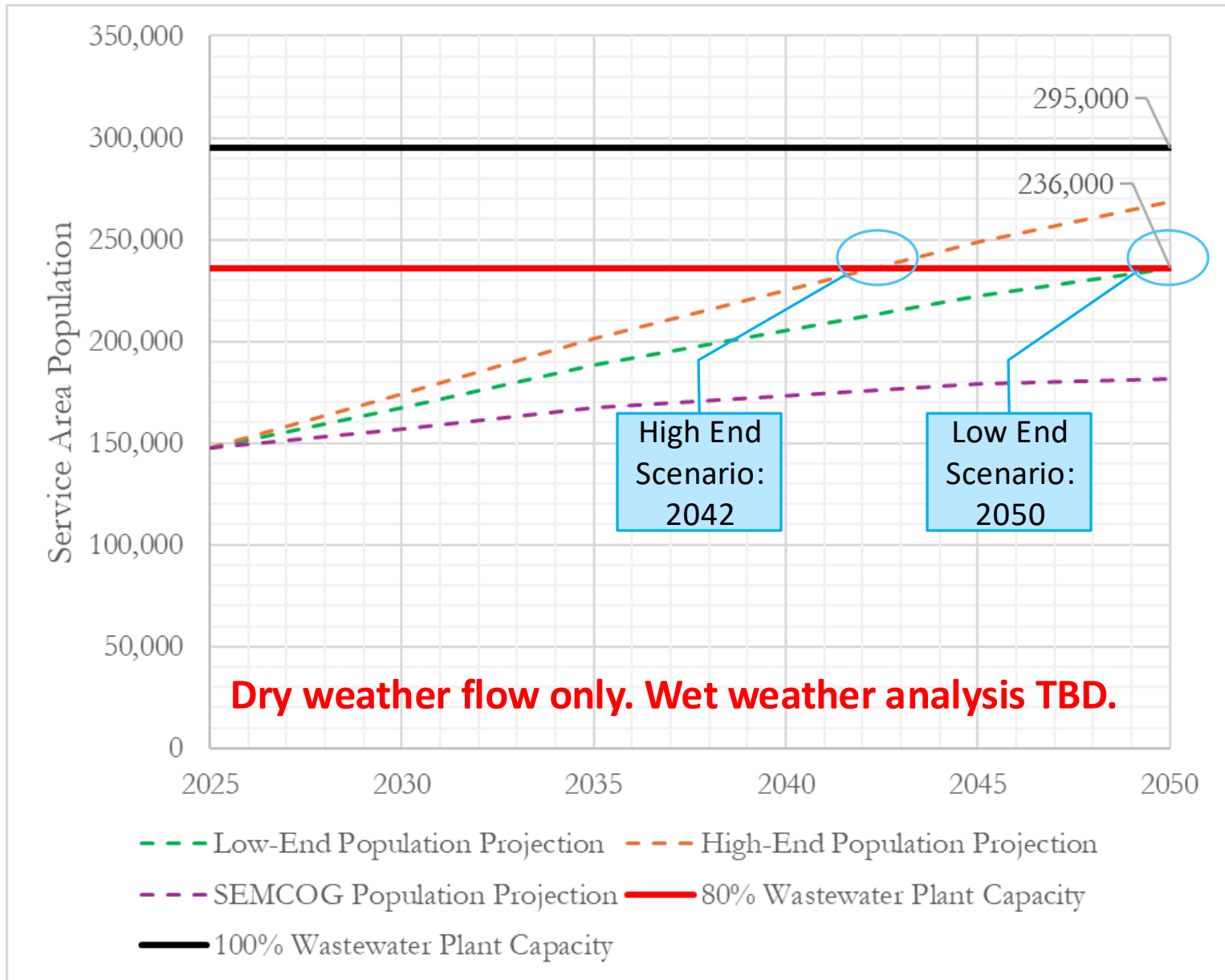
Purpose: Identify capacity constraints and improvements needed for existing system and future growth.



Sanitary Collection System Service Area



Trigger Point for Planning Wastewater Treatment Plant Expansion



Wastewater Treatment Constraints

- Capacity is available to accommodate projected future growth under dry weather conditions.
- Limited capacity to accommodate peak wet weather flows under existing and future conditions.
- Existing landlocked site cannot support significant additional capacity



Sanitary Collection System Constraints

- Several capacity constraints identified in trunklines during existing wet weather flow conditions.
- Analysis in progress to identify additional capacity constraints under both existing and future wet weather flow conditions.



Takeaways

- There are constraints to our utility infrastructure.
- Analysis will continue.
- There is capacity for growth, but it will drive the need for major infrastructure investments.
- Funding strategy needed.

Utility Challenges with Growth	Water	Sanitary
Source	Major Constraints	N/A
Distribution / Collection	Constraints; Analysis in progress	Major Constraints; Analysis in progress
Treatment	Major Constraints	Constraints; Further Analysis Needed

