Utility Infrastructure Planning

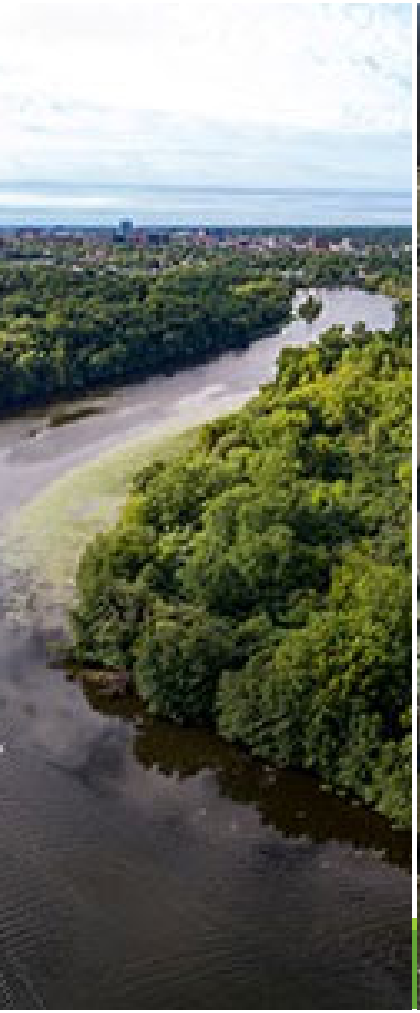
City Council Work Session

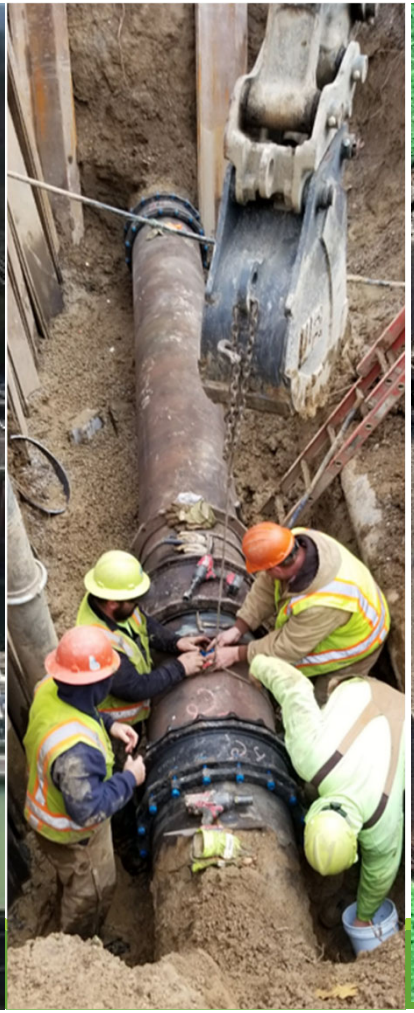
MONDAY, APRIL 27, 2026

Study Goals

1. Ensure long term sustainability of utility systems
2. Update working models of our water & sanitary systems for planning and operations
3. Develop road map moving forward

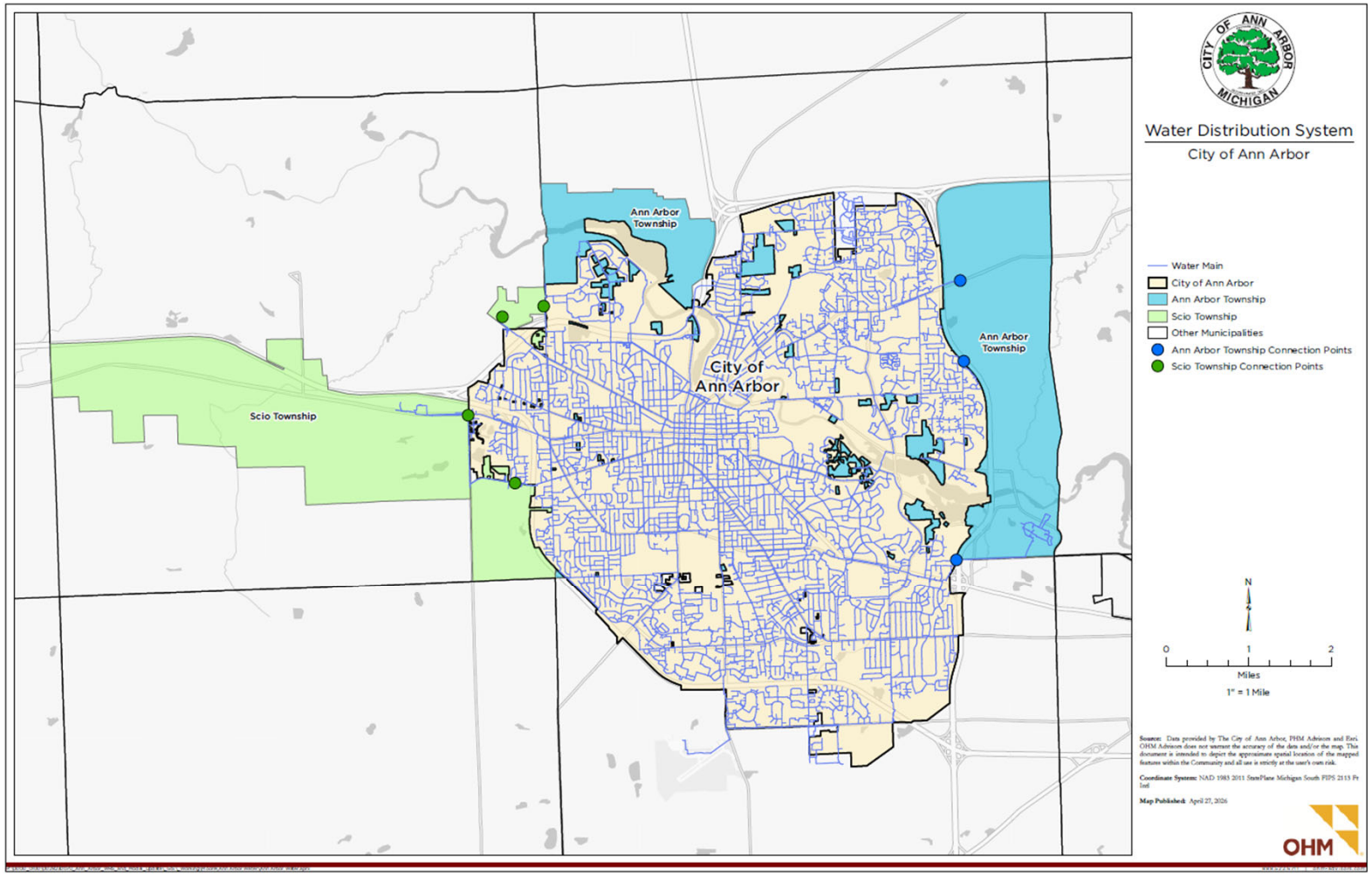
Utility Infrastructure Overview



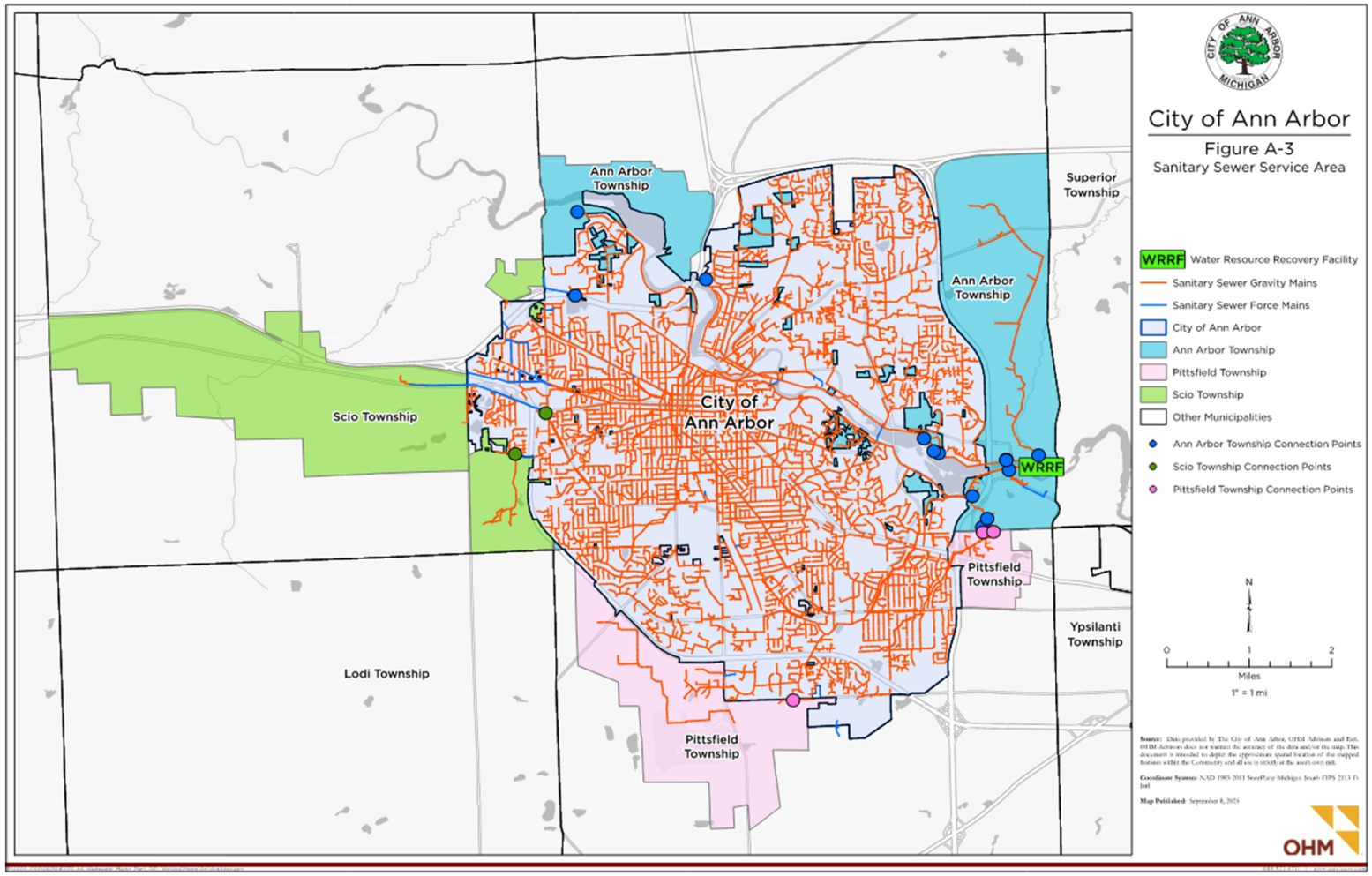





Water System Service Area

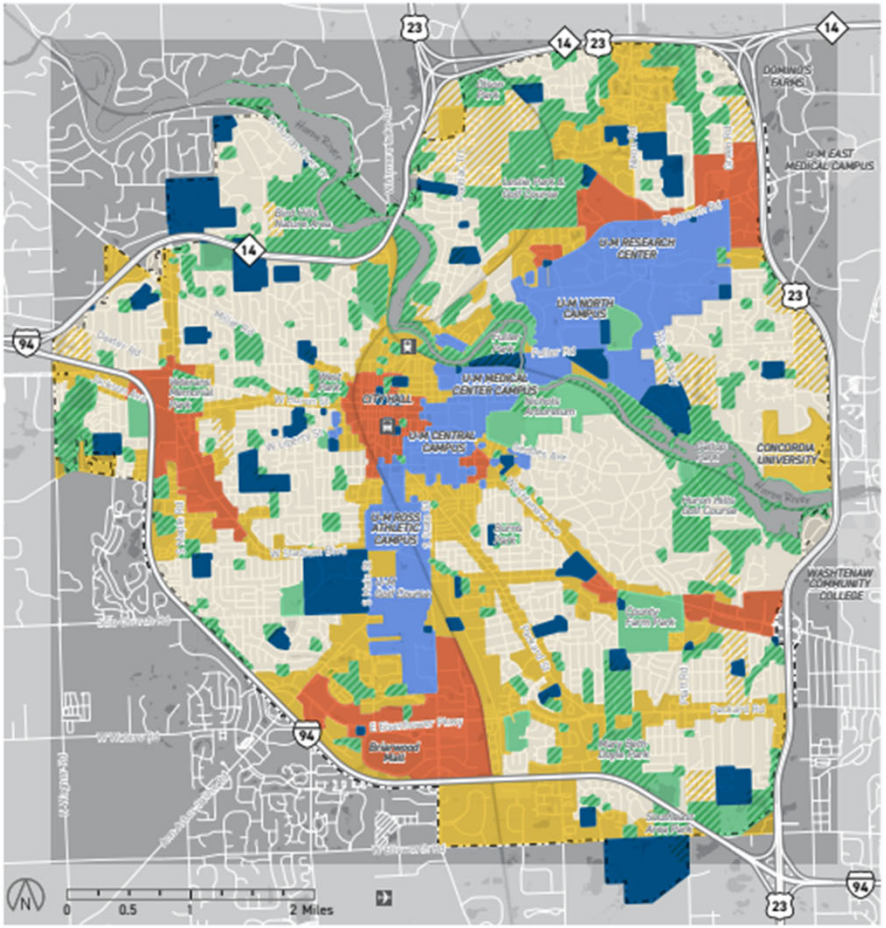


Sanitary Sewer System Service Area



Timing & Context

Land Use Plan discussions increased the focus on available utility capacity and future growth potential

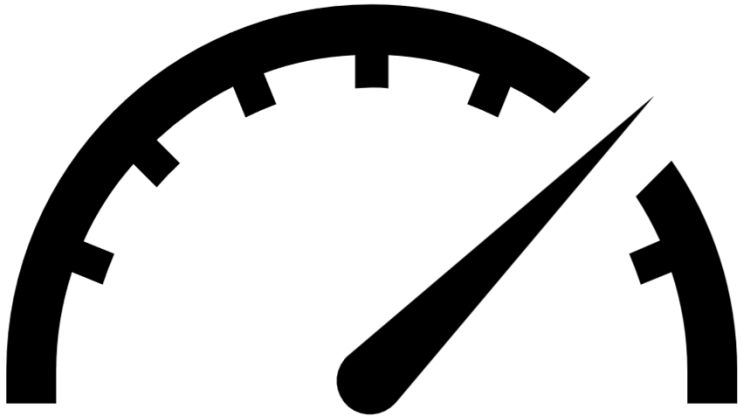


Map
Future
Land Use

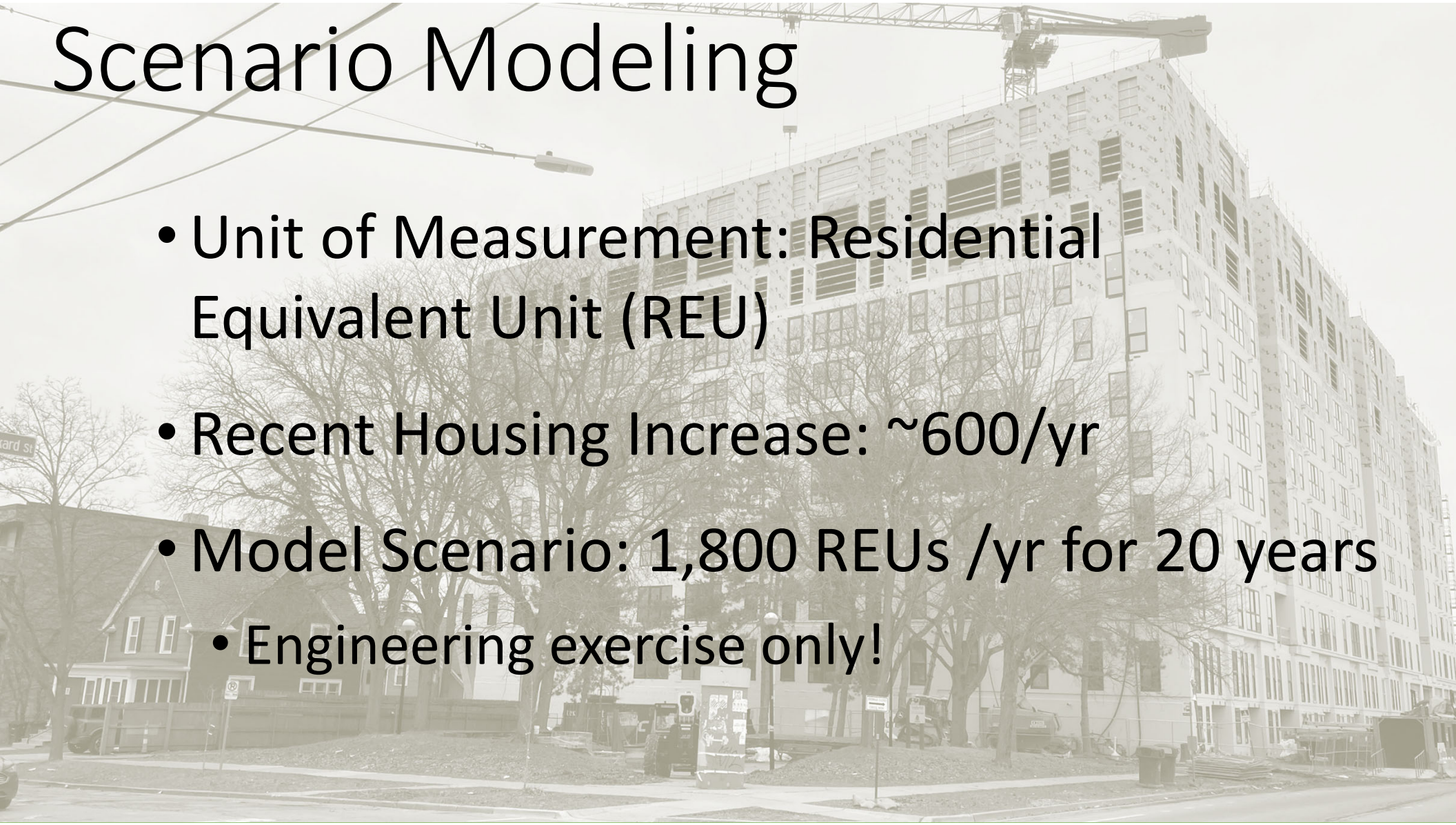
Unlike zoning, which provides a regulatory framework applied on a parcel-by-parcel basis, land use offers a broader, more flexible approach to planning. Recognizing that each property in the city is unique, the Future Land Use Map is designed with intentional flexibility, allowing certain boundaries to be fluid rather than strictly prescriptive.

- Residential
- Transition
- Residential or Transition
- Hub
- Public (City/County/School District)
- University of Michigan
- Parks/Open Space/Recreational Facili
- City Owned Parks

What are the limits to our existing utilities?



Scenario Modeling



- Unit of Measurement: Residential Equivalent Unit (REU)
- Recent Housing Increase: ~600/yr
- Model Scenario: 1,800 REUs /yr for 20 years
  - Engineering exercise only!

Source Water

Available Capacity		
Today	**In 20 years under modeled scenario**	**Beyond 20 years**
YES	YES*	NO

**Pending completion of previously identified capital projects*



Source

- ~85%: Huron River
- ~15%: Groundwater wells

Constraints

- River withdrawal limited
- Expansion potential for existing wells limited
- Limited potential for new wells within city limits

Water Treatment

Available Capacity		
Today	**In 20 years under modeled scenario**	**Beyond 20 years**
YES	ALMOST	NO



Capacity vs. Demand

- Capacity: 47.5 Million Gallons per Day (MGD)
- Current Average Day: 11-12 MGD
- Current Max Day: 22-23 MGD

Constraints

- Site constrained with no room for expansion
- Modeled to reach treatment capacity during max day conditions in ~19 years.
- The plant is reaching its useful life and a major upgrade is needed regardless of capacity needs.

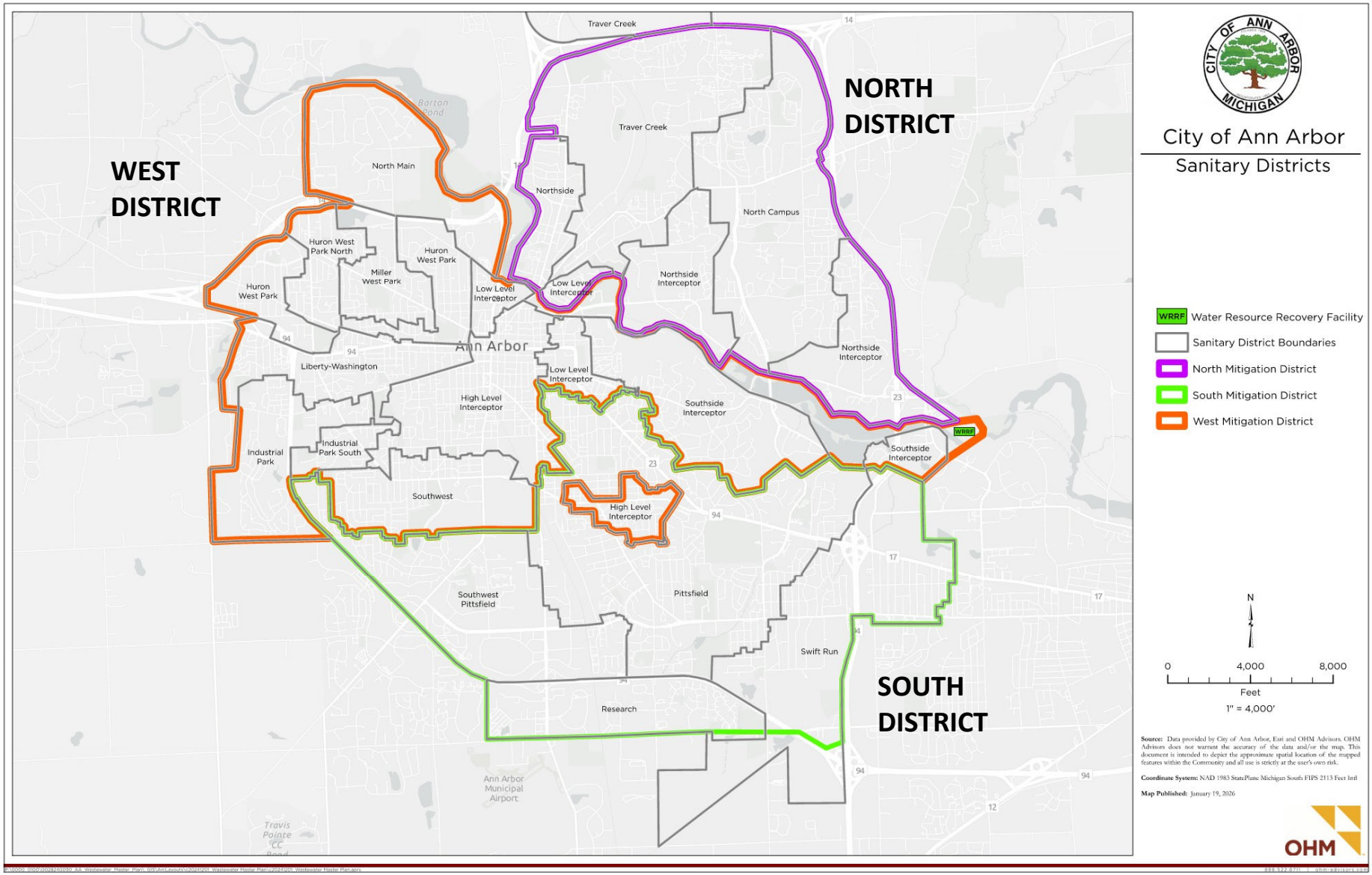
Water Distribution System

Available Capacity		
Today	**In 20 years under modeled scenario**	**Beyond 20 years**
YES	NO	NO

Constraints

- Significant system investments could be required to support 20-year modeled scenario (~$70M+)
- Specific improvement needs would be heavily dependent on intensity and location of future development

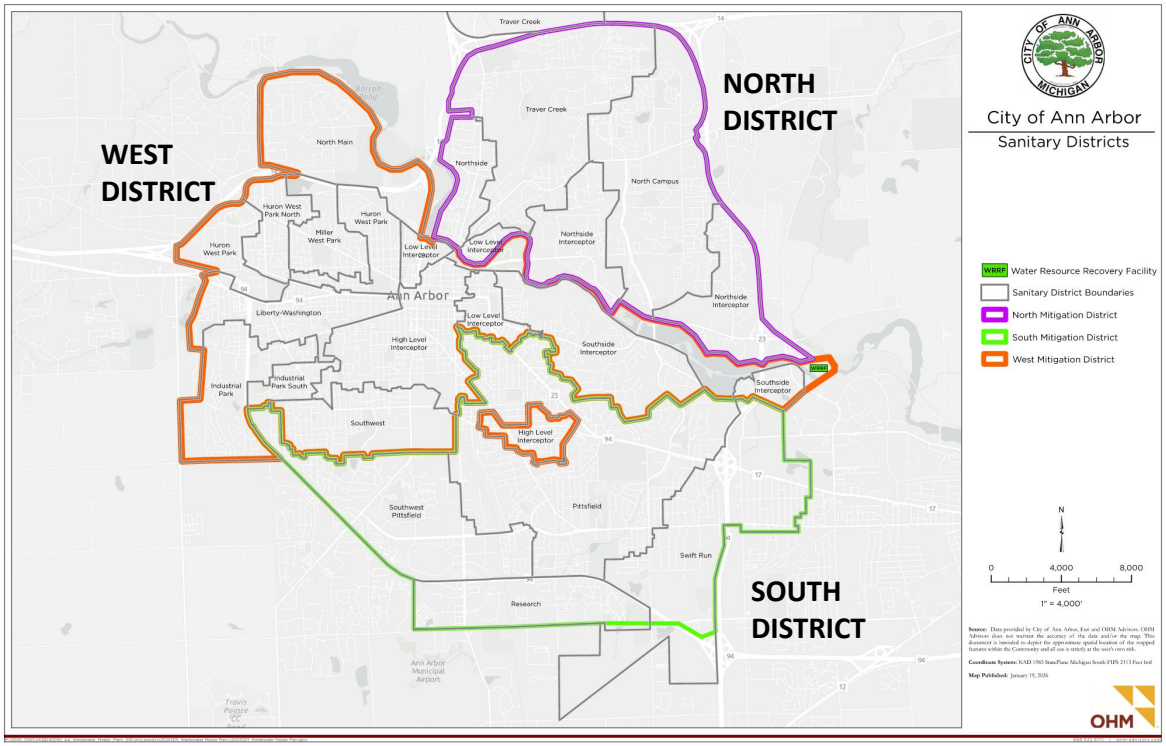



NORTH DISTRICT
WEST DISTRICT
SOUTH DISTRICT
Traver Creek
Barton Pond
North Main
Northside
North Campus
Huron West Park North
Huron West Park
Miller West Park
Huron West Park
Low Level Interceptor
Northside Interceptor
Ann Arbor
Liberty-Washington
High Level Interceptor
Southside Interceptor
Industrial Park
Industrial Park South
Southwest
Southwest Pittsfield
Pittsfield
Swift Run
Research
Ann Arbor Municipal Airport
Travis Pointe CC
WRRF
City of Ann Arbor
Sanitary Districts
Water Resource Recovery Facility
Sanitary District Boundaries
North Mitigation District
South Mitigation District
West Mitigation District
N
0
4,000
8,000
Feet
1" = 4,000'
Source: Data provided by City of Ann Arbor, Esri and OHM Advisors. OHM Advisors does not warrant the accuracy of the data and/or the map. This document is intended to depict the approximate spatial location of the mapped features within the Community and all use is strictly at the user's own risk.
Coordinate System: NAD 1983 StatePlane Michigan South FIPS 2113 Feet Intl
Map Published: January 19, 2026
OHM

Sanitary Collection System – Dry Weather

Available Capacity		
Today	**In 20 years under modeled scenario**	**Beyond 20 years**
YES	YES	YES

Sufficient capacity across the collection system under **dry** weather conditions



Up to **50%** of flow in our sanitary system following a major rain event can be attributed to clean rain water finding its way into the sanitary system.



Basement Backups



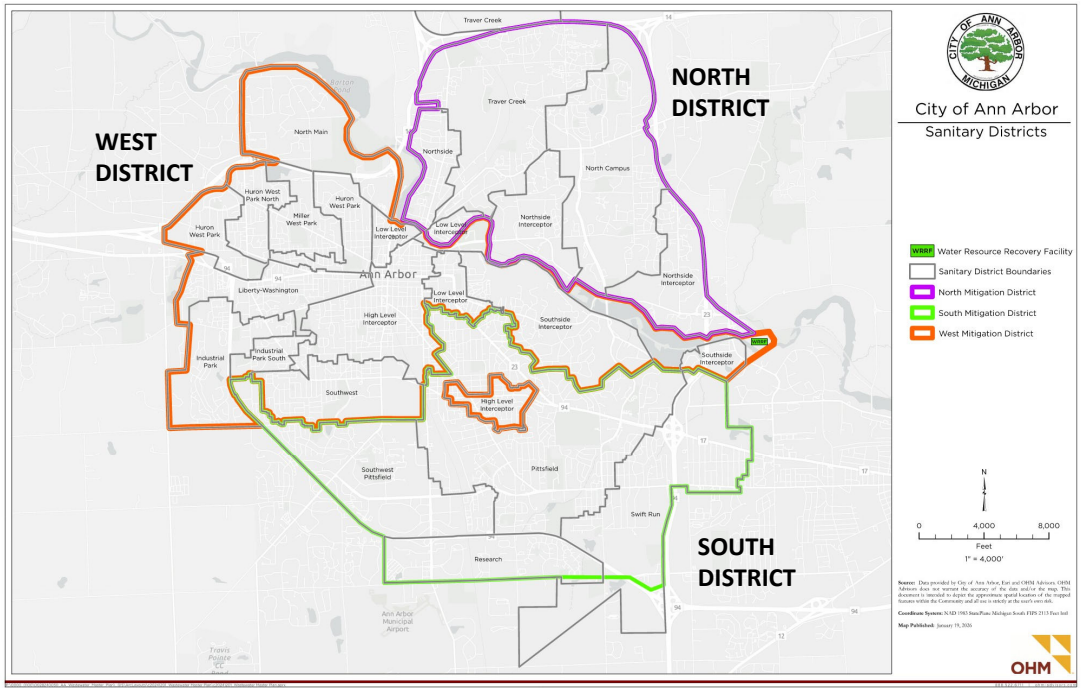


Sanitary Sewer Overflows

Sanitary Collection System – Wet Weather

Available Capacity			
WET WEATHER	**Today**	**In 20 years under modeled scenario**	**Beyond 20 years**
North of Huron River	YES	YES	YES
Downtown/ West	YES*	YES*	YES
South/ Southeast	YES	NO	NO

**targeted improvements required*



Water Resource Recovery Facility

Available Capacity			
	Today	**In 20 years under modeled Scenario**	**Beyond 20 years**
DRY WEATHER	YES	YES	YES
WET WEATHER	YES	NO	NO

Constraints:

- Limitations on the volume and rate of sewage that can be processed
- Site expansion is limited, some modifications are possible



Key Takeaways

1. There is room for growth.
2. The most pressing constraint is the sanitary collection system in the South/Southeast part of the city.
3. Long term source water, water treatment, distribution system, and wastewater treatment constraints if growth is significant.
4. Specific recommendations will be in the final reports by end of fiscal year.
5. Some recommended improvements will be needed regardless of growth; other projects can wait and see if needed.