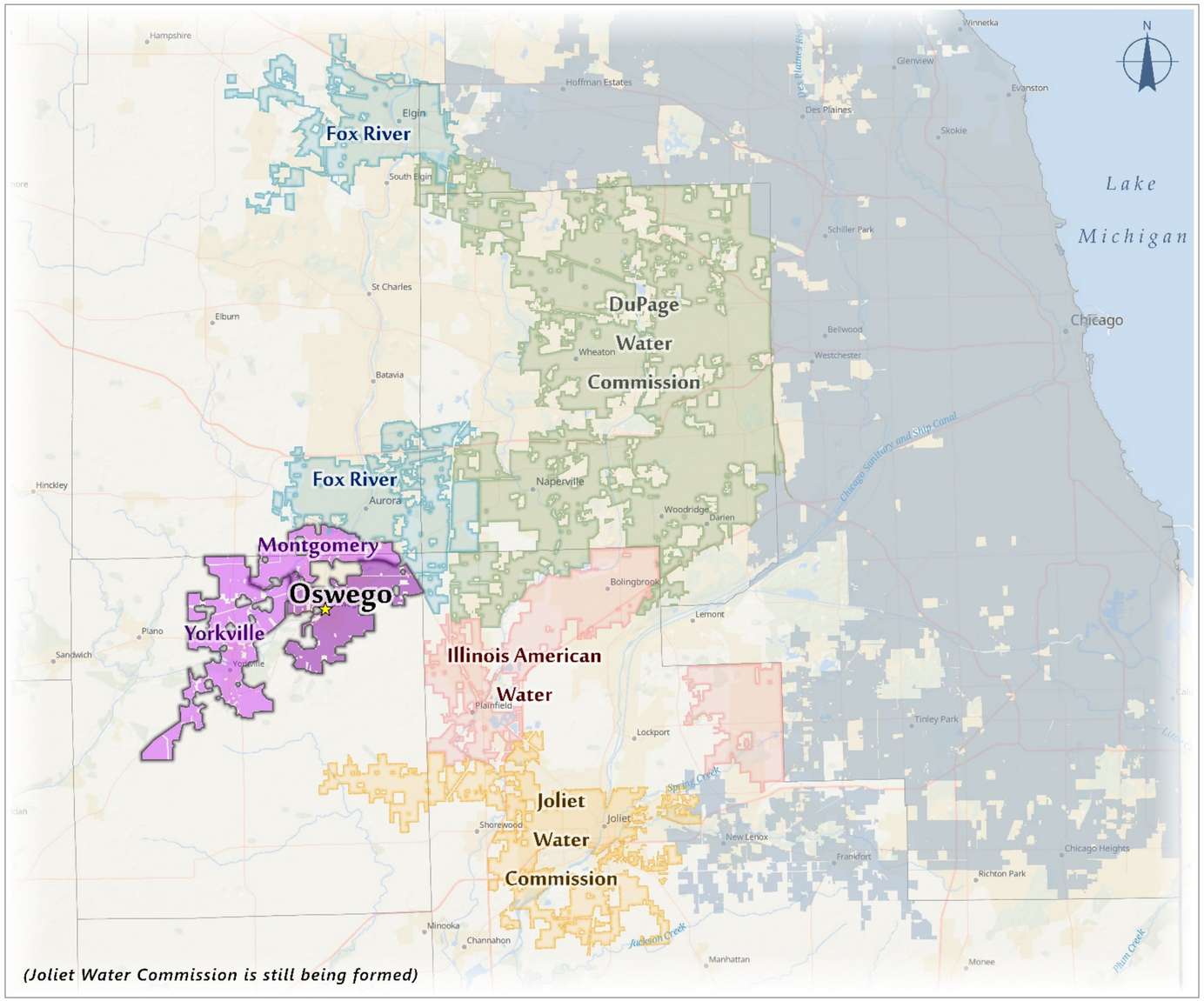
WELCOME
Alternative Water Supply



(Joliet Water Commission is still being formed)

Regional Water Source Background

Ironton-Galesville Aquifer

- Naturally Occurring Radium 226 and Radium 228
- Illinois State Water Survey Projects the Aquifer is pumped beyond its sustainable yield and water levels are dropping
- City of Joliet has decided to abandon the use of the Ironton-Galesville Aquifer for Lake Michigan Water

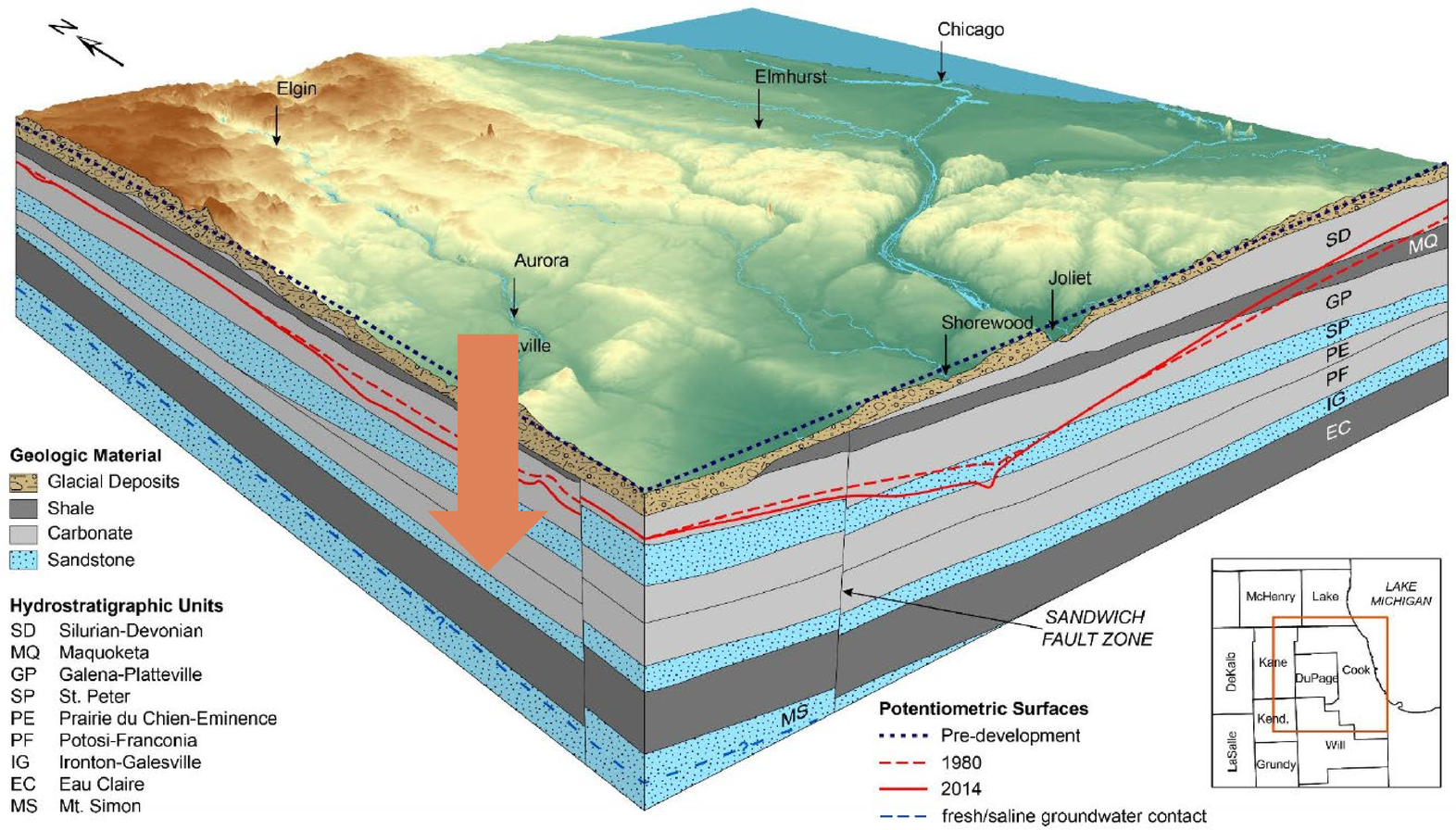
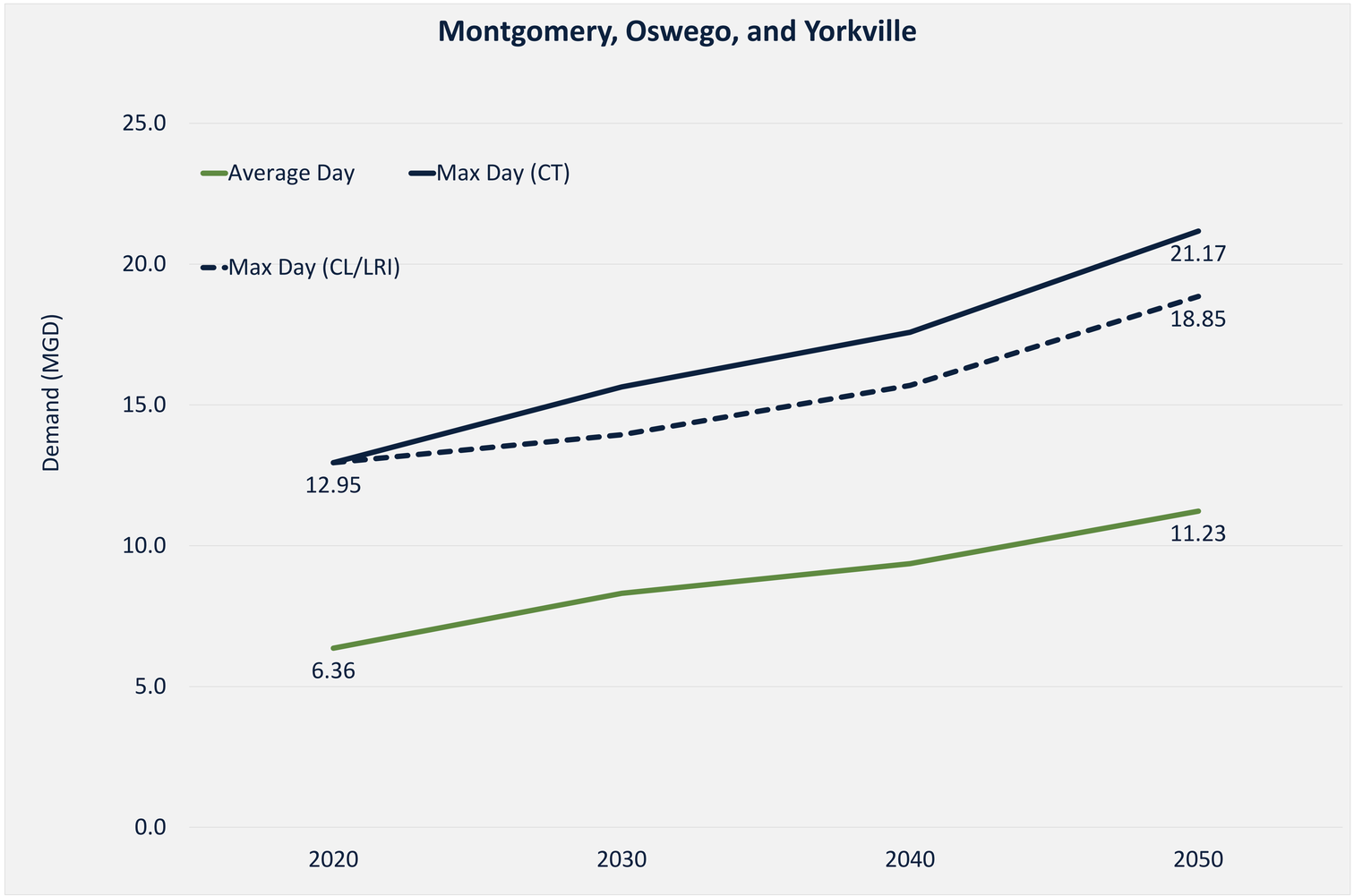


Figure 23: Potentiometric surface of the Cambrian-Ordovician sandstone aquifers for predevelopment, 1980, and 2014 in northeastern Illinois. The left cutaway runs through southern McHenry, Kane, and Kendall Counties. The right cutaway runs through Kendall, Will, and southern Cook Counties

Village of Montgomery Illinois
Village of Oswego
United City of Yorkville Illinois

Region Water Demand Projections



2050 Population Estimates

Montgomery → 42,000

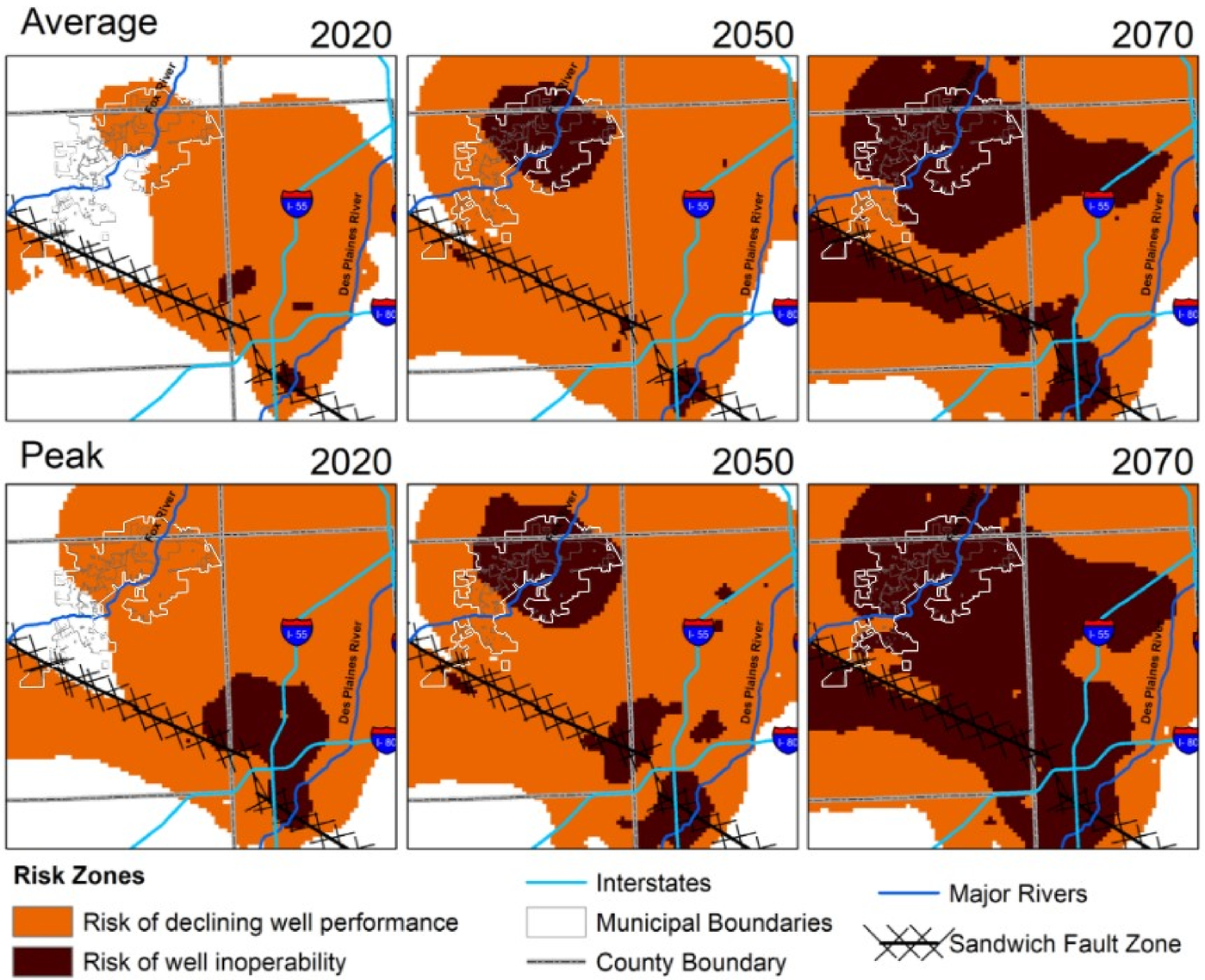
Oswego → 53,853

Yorkville → 47,796

Montgomery population and water demand projections based on full buildout before 2050

Oswego and Yorkville population and water demand projections based on CMAP GO TO 2050

Illinois State Water Survey (ISWS) Groundwater Model



ISWS Letter Report: Oswego, IL: Sandstone Water Supply Summary, May 25, 2021

ISWS Model Scenarios shows aquifer drawdown is severe throughout the Region

Illinois State Water Survey (ISWS) projects that Montgomery, Oswego, and Yorkville will be at "severe risk of being able to meet demands and becoming inoperable" by 2050.

Village of Montgomery Illinois

Village of Oswego

United City of Yorkville Illinois

Illinois State Water Survey (ISWS) Impact on Water Supply

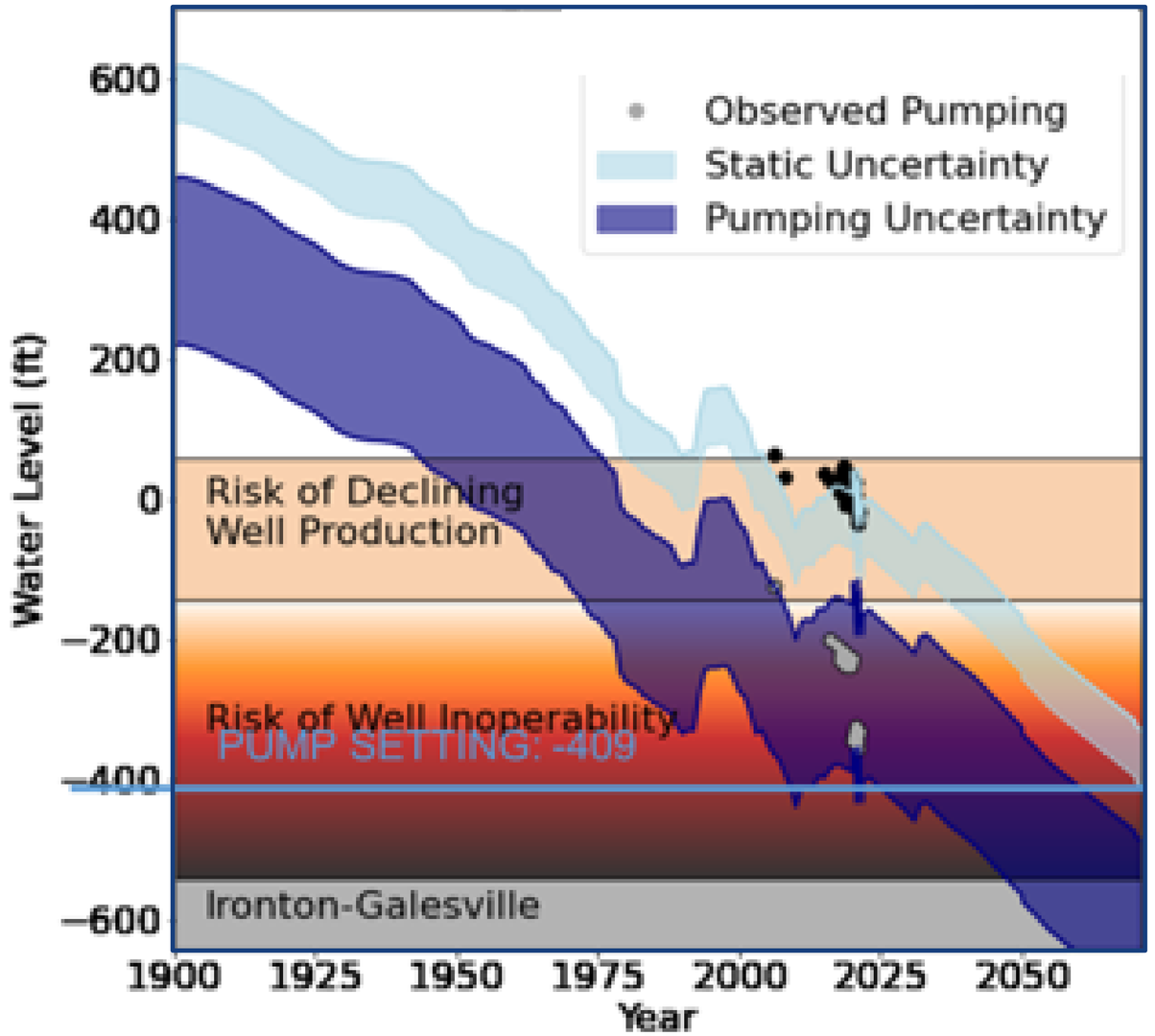
Possible Impacts of Declining Water Levels

SUSTAINABILITY OF WATER SOURCE

- ✓ Reduced production capacity of the well
- ✓ Potential for caving in the deeper sandstone formation
- ✓ Limits on depths for pump settings
- ✓ Increased risk of pumping sand

COST

- ✓ Increased cost associated with lifting water over a greater distance
- ✓ Increased cost associated with more frequent well rehabilitation



ISWS Letter Report: Oswego, IL: Sandstone Water Supply Summary, May 25, 2021

Village of Montgomery Illinois | Village of Oswego | United City of Yorkville Illinois

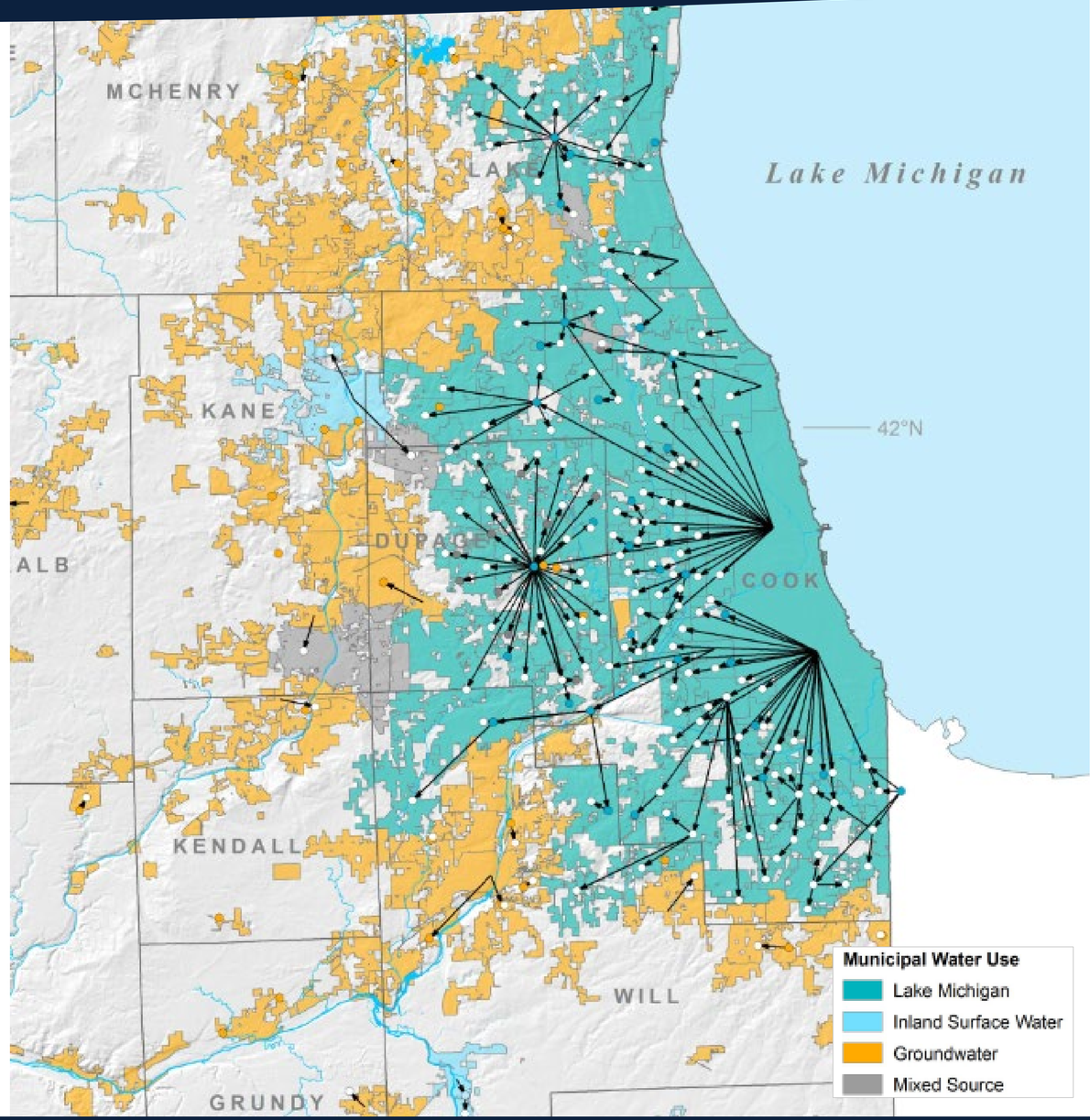
Alternative Water Sources

Fox River

- Drains 938 square miles in Wisconsin and 1,720 square miles in Illinois
- Carries storm water and wastewater treatment plant effluents
- Water withdrawal may be restricted due to low flows
- Water source for Cities of Elgin and Aurora
- New regional surface water plant required
- IDNR governs flow withdrawal from Fox River
- Water hardness 260 – 400 mg/l
- Communities required to keep some wells

Lake Michigan

- Watershed covers 45,600 square miles in WI, MI and IL
- Source of drinking water for Chicago area since mid-1800s
- Chicago River reversal helped carry sewage away from Chicago's water supply
- 1967 Supreme Court decree limits amount of water to 2,068 Million Gallons
- 6.6 Million Illinois residents receive Lake Michigan Water
- IDNR governs water allocation from Lake Michigan
- Water hardness 140 – 150 mg/l
- Not required to keep backup wells but can keep for emergency



Alternative Water Supply Key Considerations

SUSTAINABILITY OF WATER SOURCE

The ability of the water option to have sufficient water quantity to meet demand projections in 2050 and beyond

WATER QUALITY & PERMITTING

The quality and variability of the raw water source

GOVERNANCE & OPERATIONAL RESPONSIBILITY

The ability to maintain complete control of the water source, including operations and maintenance of infrastructure

INTERNAL SYSTEM IMPROVEMENTS

The improvements required to each community including new water main, water storage, and pumping facilities

TIMELINE

The total project schedule, including design, permitting, easement acquisition, contract negotiations, and construction

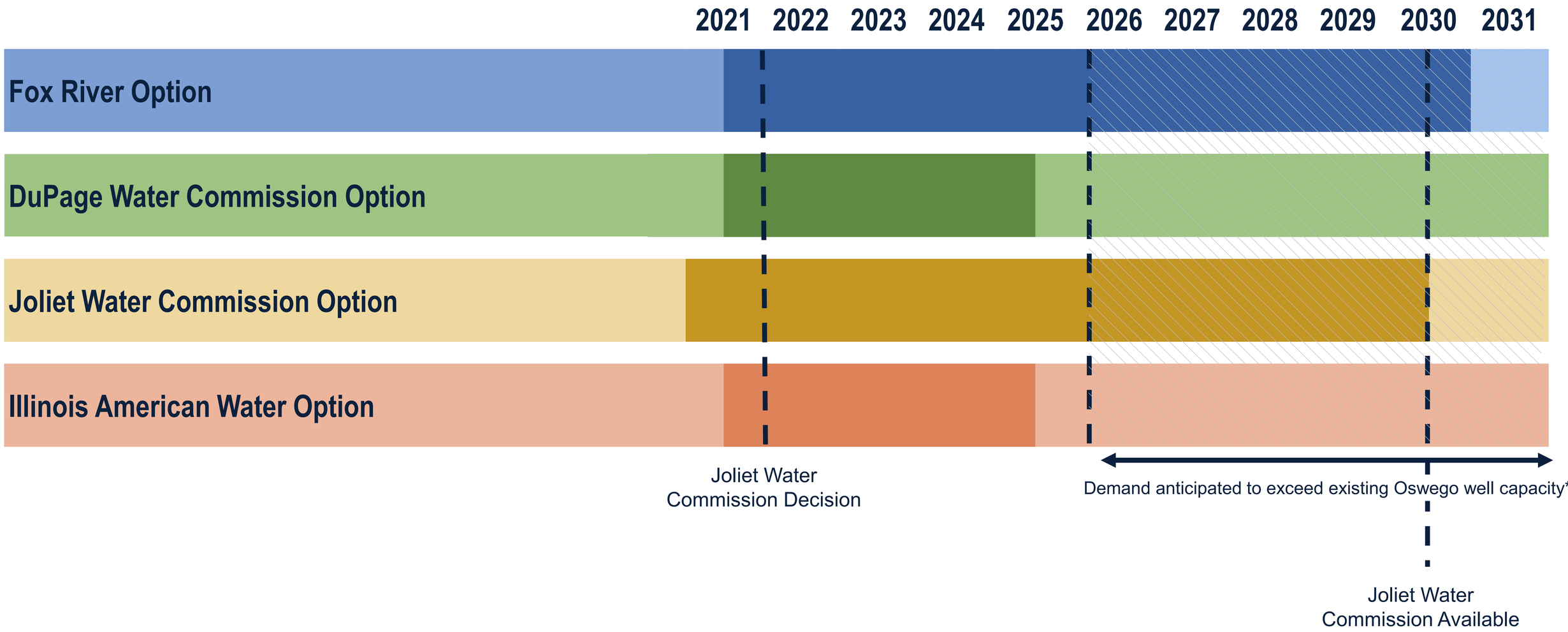
COST

Cost information anticipated in September 2021

Decision Schedule

COMMUNITY	COST PRESENTATIONS TO BOARD/COUNCIL	BOARD/COUNCIL DISCUSSION	BOARD/COUNCIL DECISION
	2021		
Montgomery	October	November	December
Oswego	October	October/November	November/December
Yorkville	September/October	October/November	December

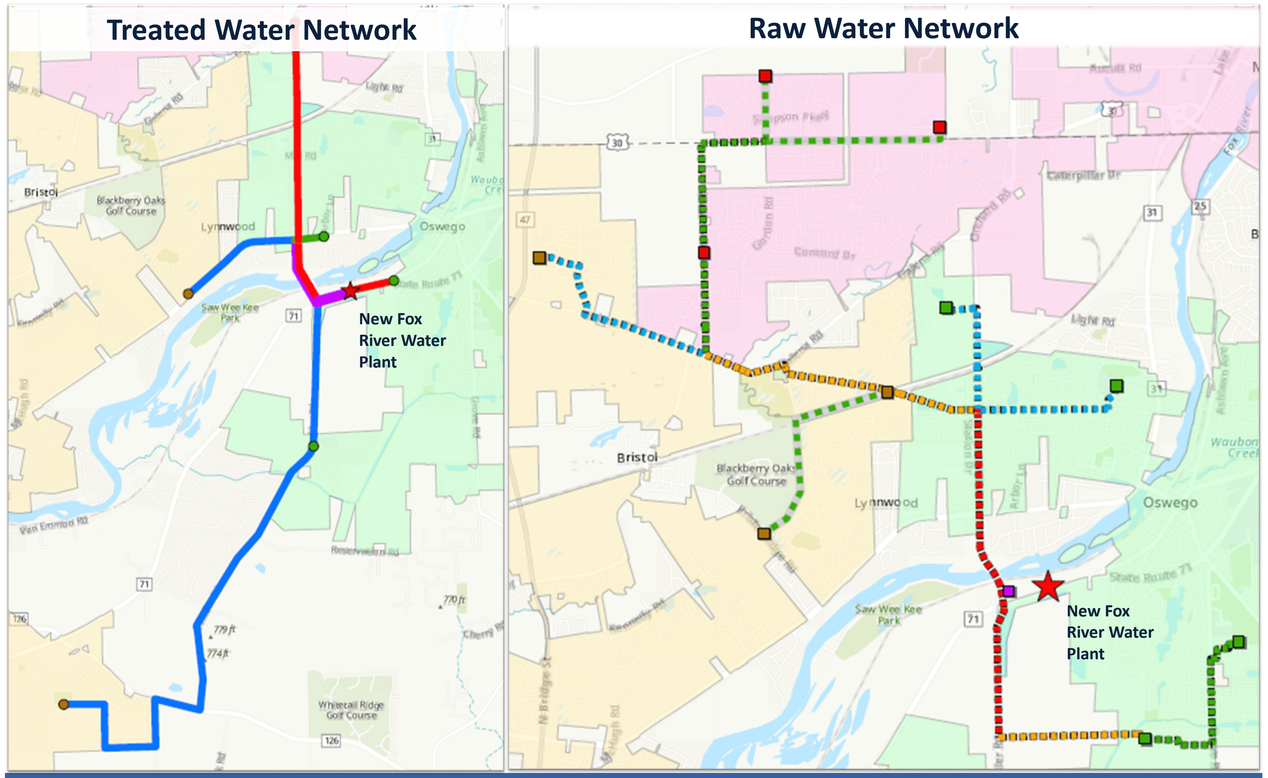
Water Supply Alternatives
Estimated Timelines



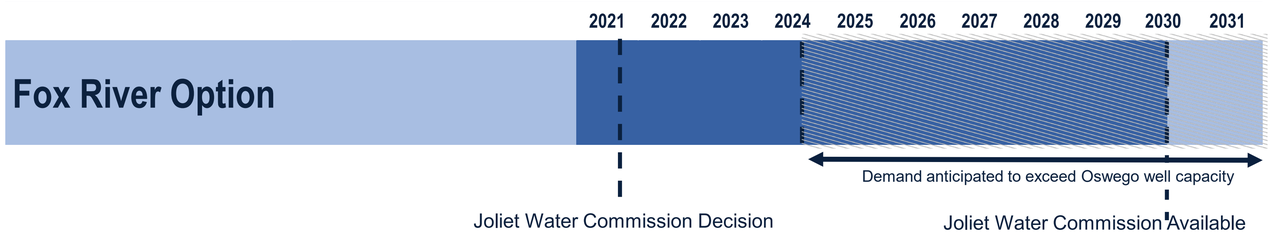
**Estimated well capacity timeline for Oswego only. Montgomery and Yorkville well capacity timeline are under review at this time.*

Fox River Option
Key Considerations

ROUTE MAP



PROJECT DURATION



SUSTAINABILITY OF WATER SOURCE

- Fox River Water
- Low Flow/Seasonal Water quality restriction
- Network wells required for backup

WATER QUALITY & PERMITTING

- Lime Softening Water Plant with Ultrafiltration (Class A)
- Seasonal changes in water quality
- 3 miles downstream of Fox Metro Water Reclamation Facility

GOVERNANCE & OPERATIONAL RESPONSIBILITY

- Intergovernmental agreement needed between Montgomery, Oswego, and Yorkville
- Shared ownership and control of source, treatment, and distribution

INTERNAL SYSTEM IMPROVEMENTS

- Transmission mains
- New wells
- New storage
- New Oswego well likely needed

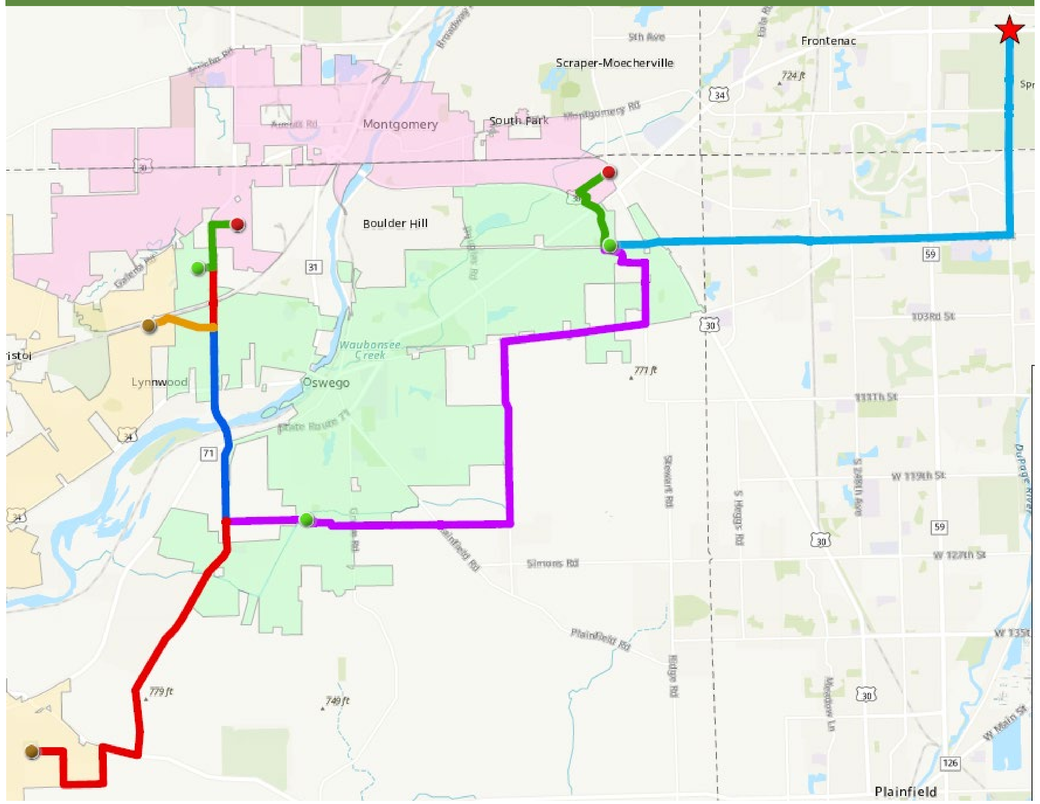
TIMELINE

- Estimated 9-11 years

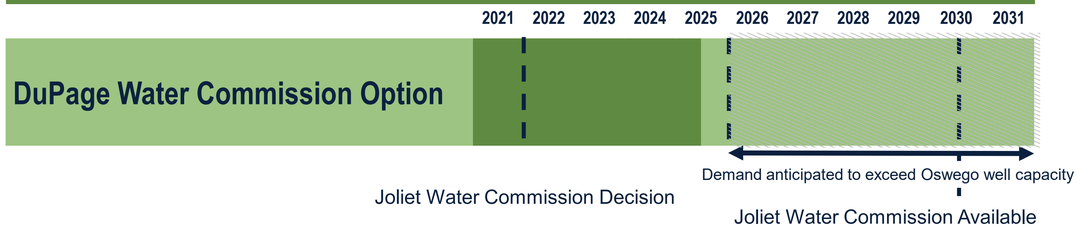
Village of Montgomery Illinois
Village of Oswego
United City of Yorkville Illinois

DuPage Water Commission Option
Key Considerations

ROUTE MAP



PROJECT DURATION



SUSTAINABILITY OF WATER SOURCE

- Lake Michigan water
- No seasonal restrictions/ MDD:ADD 1.7
- Wells kept for emergency
- Looped water mains in DWC

WATER QUALITY & PERMITTING

- Chicago treats water
- Chlorine disinfection of treated water (Class C)
- Seasonally consistent water quality

GOVERNANCE & OPERATIONAL RESPONSIBILITY

- No direct ownership or control of source water
- Indirect control of the transmission infrastructure

INTERNAL SYSTEM IMPROVEMENTS

- Transmission mains
- New storage
- Receiving station/pumping stations

TIMELINE

- Estimated 4-5 years

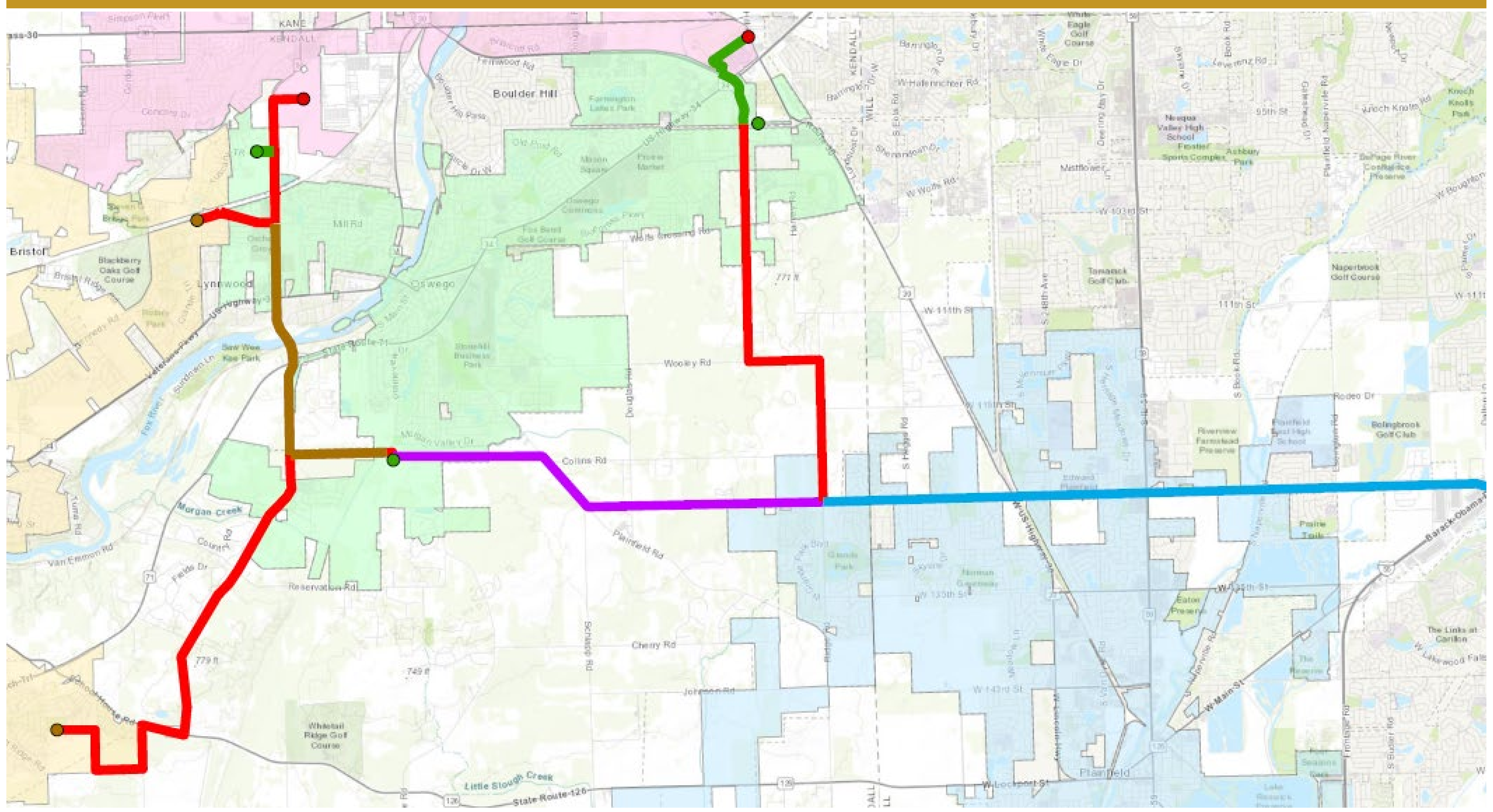
Village of Montgomery Illinois

Village of Oswego

United City of Yorkville Illinois

Joliet Water Commission Water Option Key Considerations

ROUTE MAP



**Transmission main route is not final*

PROJECT DURATION

SUSTAINABILITY OF WATER SOURCE

- Lake Michigan water
- No seasonal restrictions/ MDD:ADD 1.7
- Wells kept for emergency
- Single supply/not looped main

WATER QUALITY & PERMITTING

- Chicago treats water
- Chlorine disinfection of treated water (Class C)
- Seasonally consistent water quality

GOVERNANCE & OPERATIONAL RESPONSIBILITY

- Joliet Water Commission still being formed
- No direct ownership or control of source water
- Indirect control of transmission infrastructure

INTERNAL SYSTEM IMPROVEMENTS

- Transmission mains
- New storage
- Receiving station/pumping stations
- New Oswego well likely needed

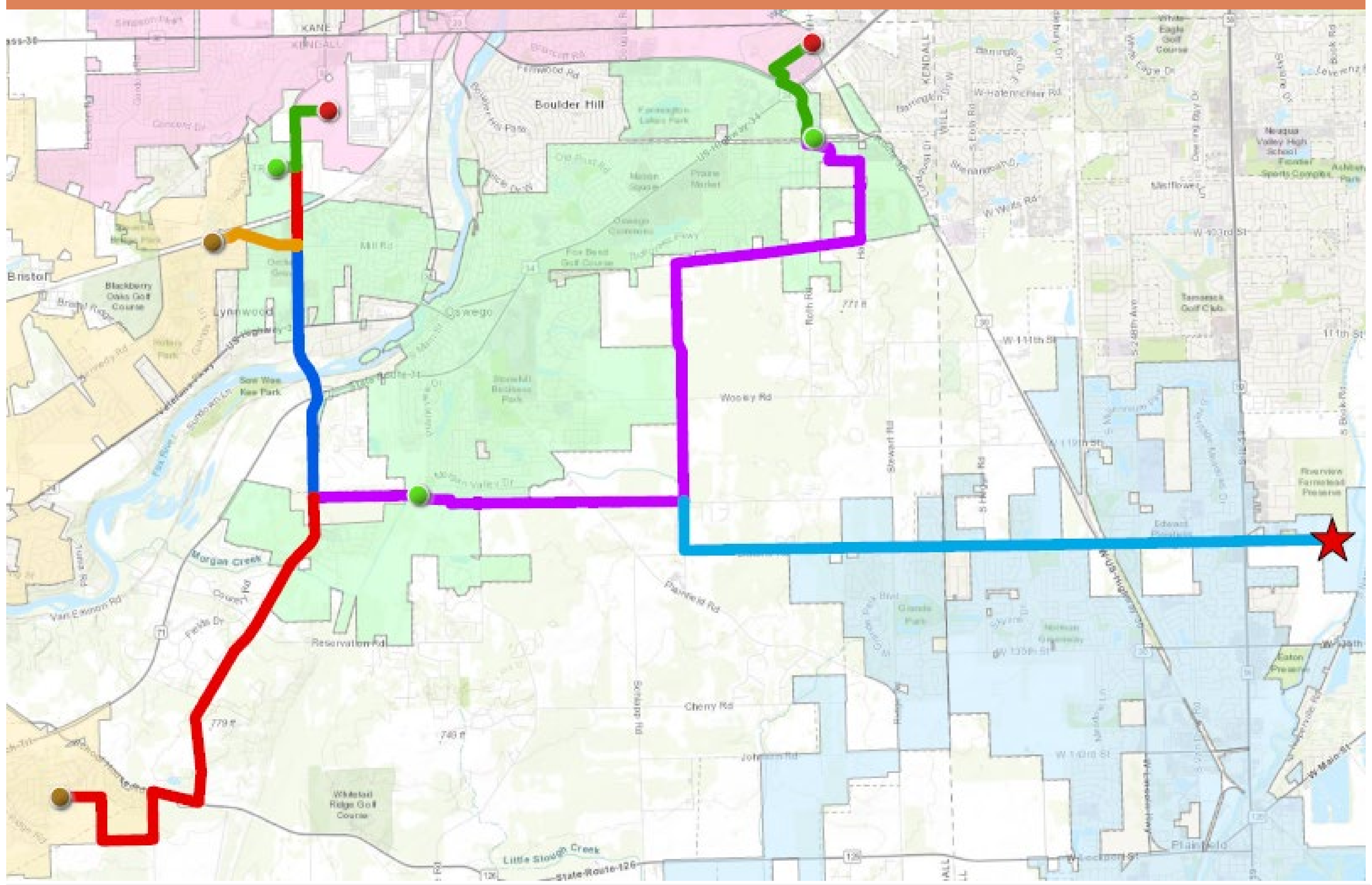
TIMELINE

- No earlier than 2030

Village of Montgomery Illinois · Village of Oswego · United City of Yorkville Illinois

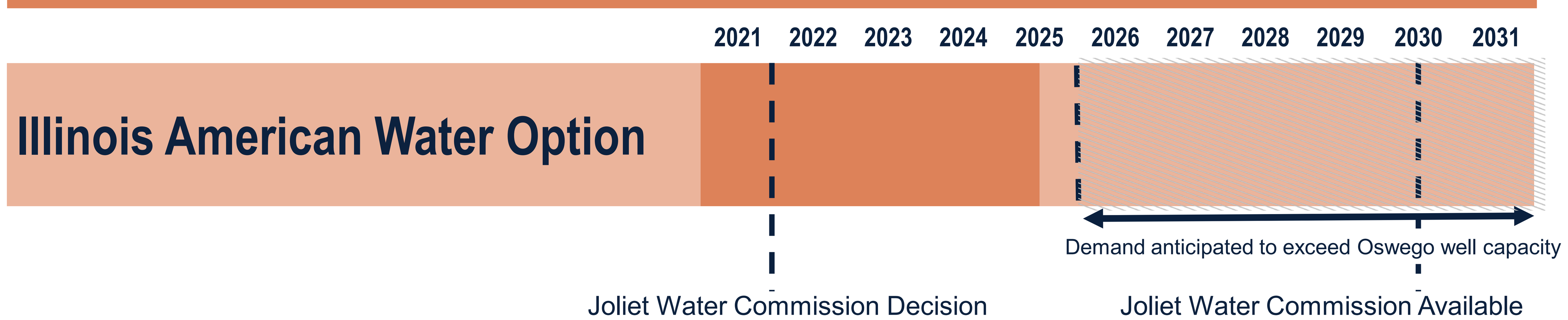
Illinois American Water Option Key Considerations

ROUTE MAP



**Transmission main route is not final*

PROJECT DURATION



SUSTAINABILITY OF WATER SOURCE

- Lake Michigan water
- No seasonal restrictions/ MDD:ADD 1.7
- Wells kept for emergency
- Unlooped supply mains

WATER QUALITY & PERMITTING

- Chicago treats water
- Chlorine disinfection of treated water (Class C)
- Seasonally consistent water quality

GOVERNANCE & OPERATIONAL RESPONSIBILITY

- Illinois American Water is a private utility
- No direct ownership or control of source water
- No direct control of the transmission infrastructure

INTERNAL SYSTEM IMPROVEMENTS

- Transmission mains
- New storage
- Receiving station/pumping stations

TIMELINE

- Timeline still to be determined, estimated 4-5 years

Water Conservation

Conservation is critical to ensuring the availability of water, sustaining the natural world and supporting economic, recreation, and drinking water needs.

Water Conservation Practices:

- USEPA WaterSense
- Low Flow Plumbing
- High Efficiency Appliances
- Public Education
- Seasonal Peak Demand Reduction
- Irrigation Requirements
- Lawn and Watering Restrictions
- Sod/Seed Restrictions

AVERAGE GALLONS OF WATER USED PER PERSON

Montgomery residents use 84 gallons of water per person

Yorkville residents use 84 gallons of water per person

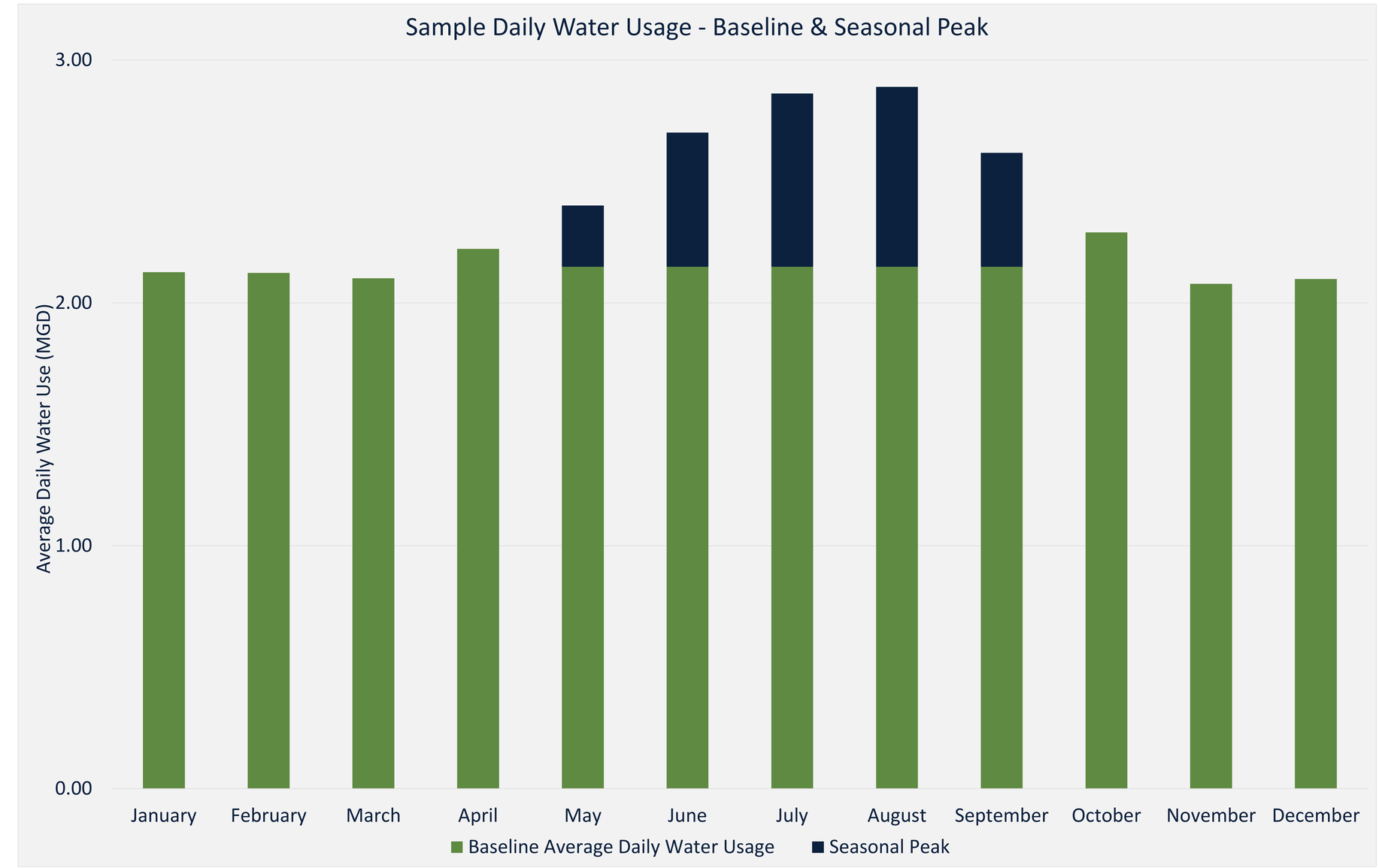
Oswego residents use 68 gallons of water per person

Village of Montgomery Illinois

Village of Oswego

United City of Yorkville Illinois

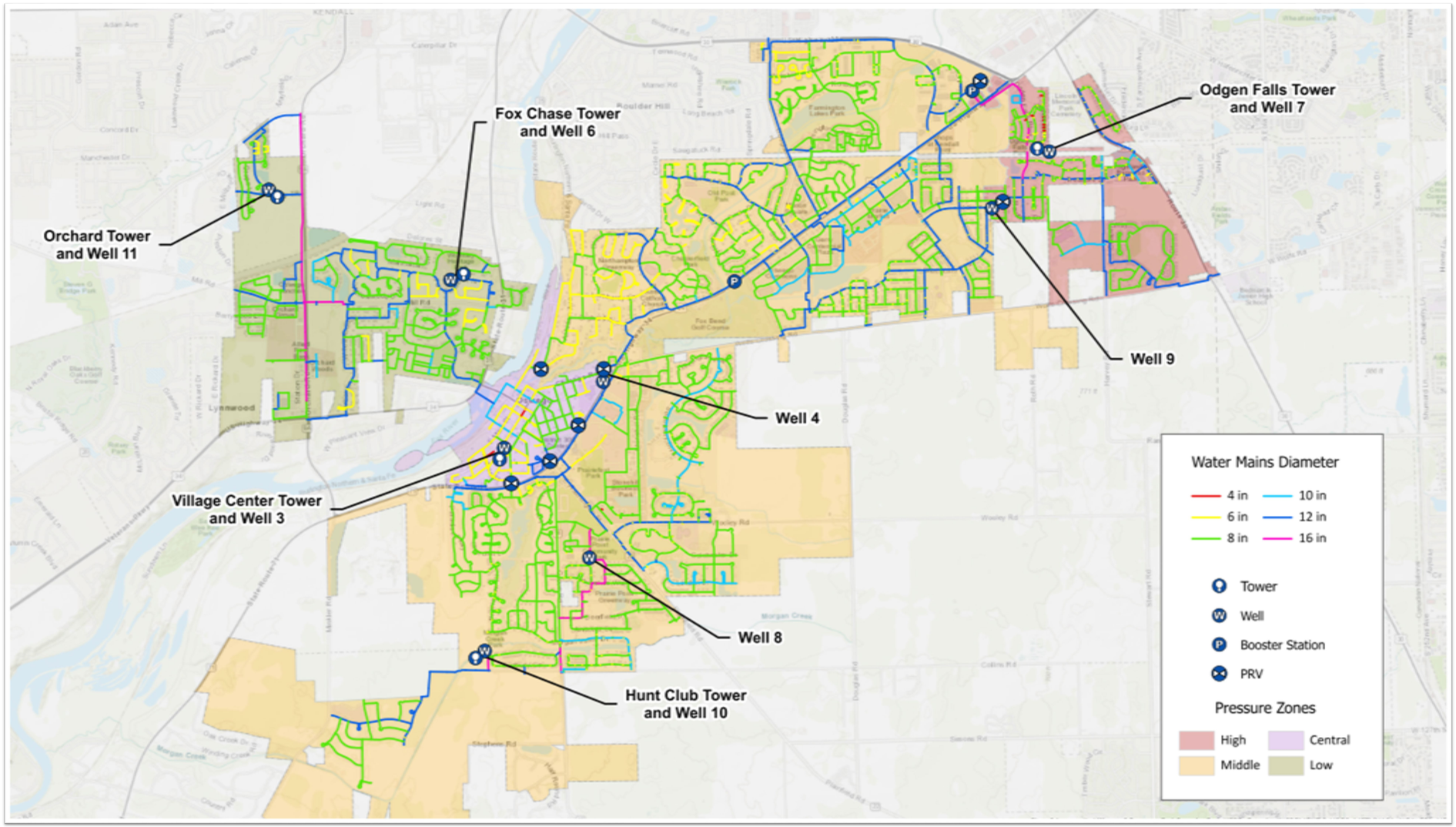
Water Conservation
Minimize Peak Water Demands



- **Baseline Demand**
  - Low-flow plumbing
  - High efficiency appliances
  - Public education
- **Seasonal Peak Demand**
  - Irrigation requirements
  - Lawn watering restrictions
  - Sod/seeding restrictions
- **Defer short-term capital improvements needed to meet increasing water needs**

Village of Montgomery Illinois
Village of Oswego
United City of Yorkville Illinois

Oswego Existing System



8 Deep Wells

8 Radium Removal Water Plants

5 Elevated Storage Tanks

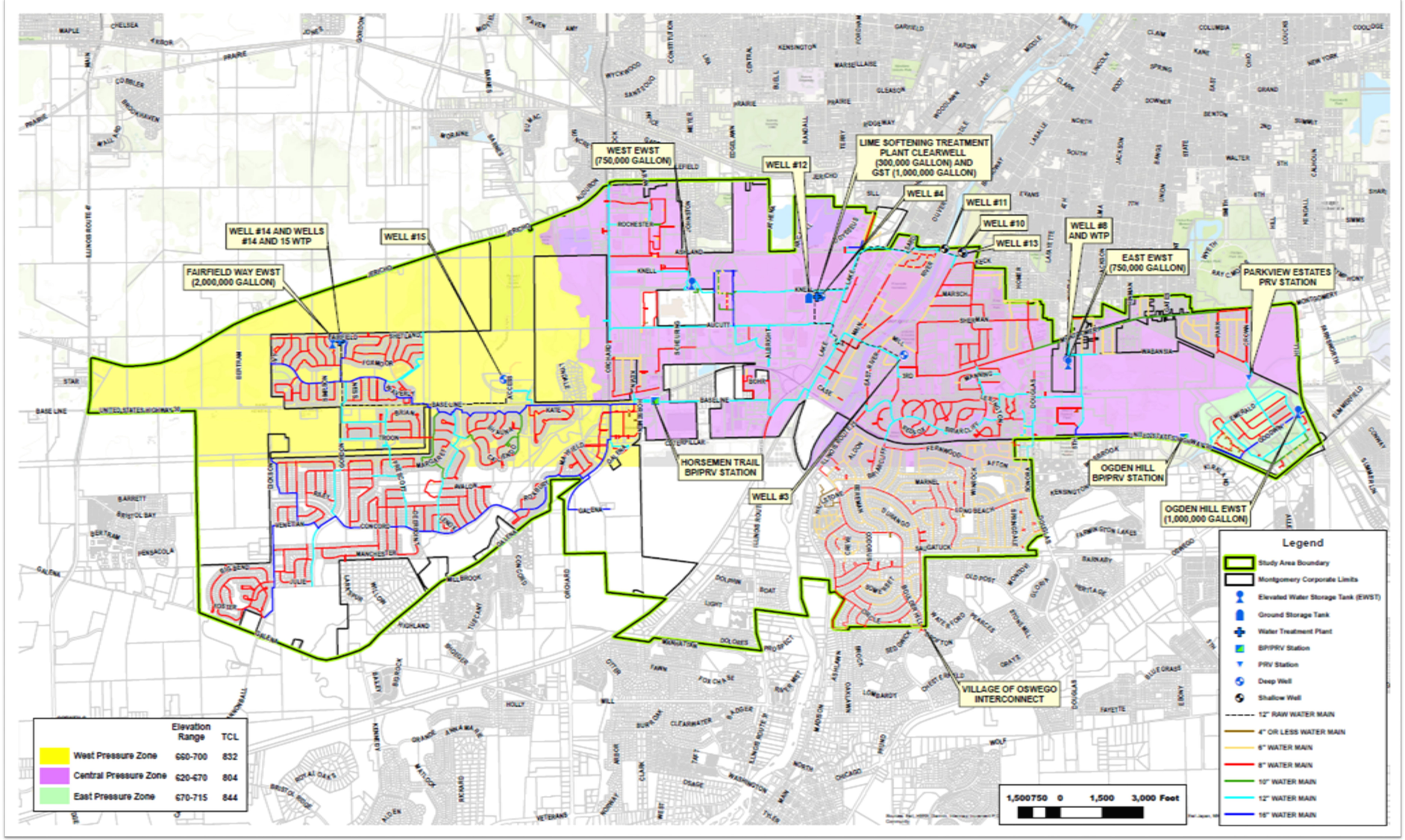
170 Miles of Water Main

Village of Montgomery Illinois

Village of Oswego

United City of Yorkville Illinois

Montgomery Existing System



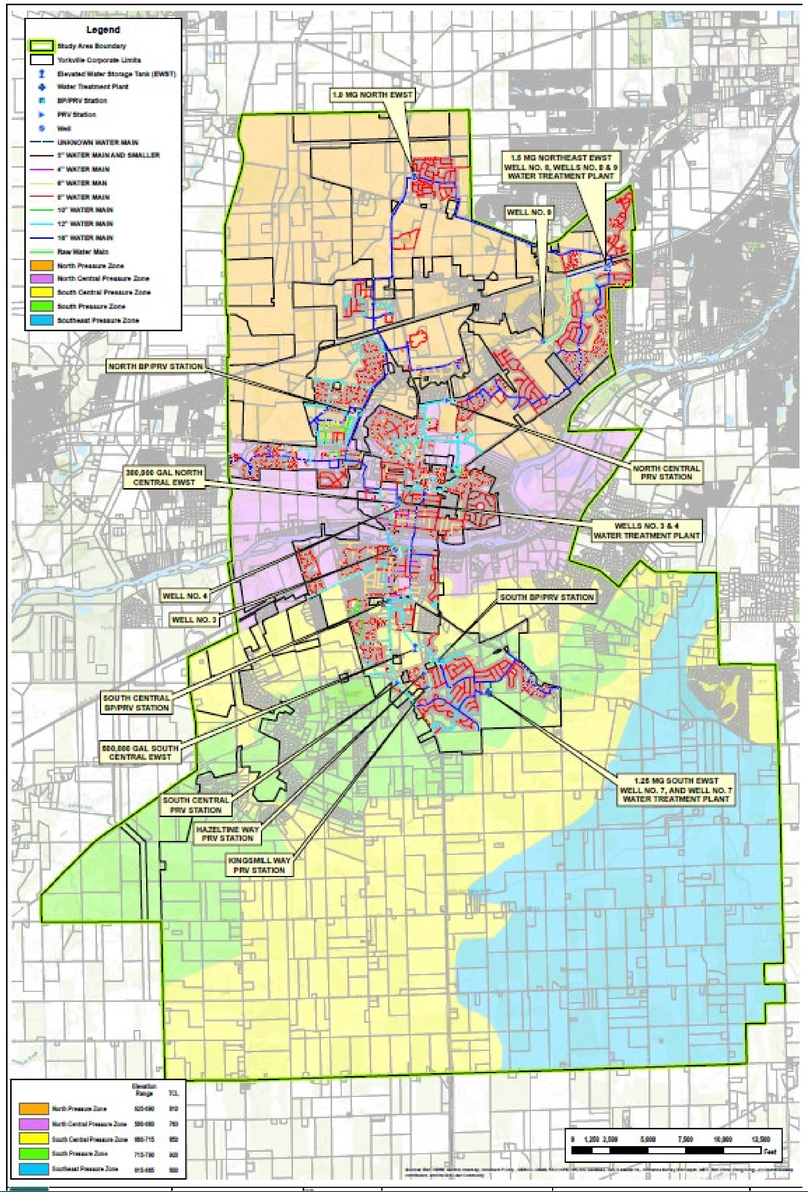
5 Deep Wells

3 Radium Removal Water Plants

4 Elevated Storage Tanks/ 1 Ground Storage Tank

135 Miles of Water Main

Yorkville Existing System



4 Deep Wells

3 Radium Removal Water Plants

5 Elevated Storage Tanks

150 Miles of Water Main