



Elgin's Source Water Protection Plan



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Agenda

1. Introduction + Elgin's Water System

2. Planning Process + Assessment

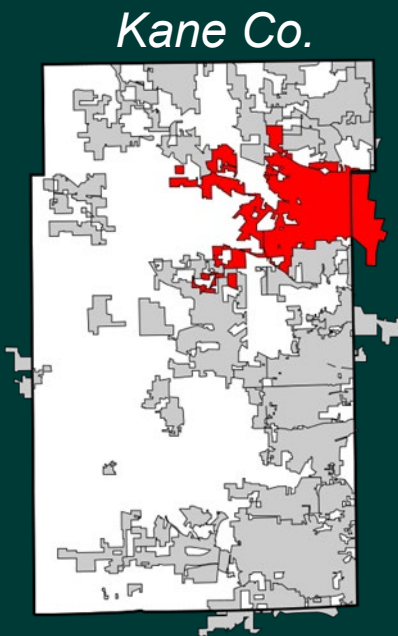
3. Action Plan Elements

4. Stakeholder Engagement + Next Steps

5. Questions

ELGIN

THE CITY IN THE SUBURBS™



KEY STATISTICS

112,000 Population Served
33,400 Customers

Demand:

11.5 MGD Average Day
15.8 MGD Maximum Day

Source Water Capacity:

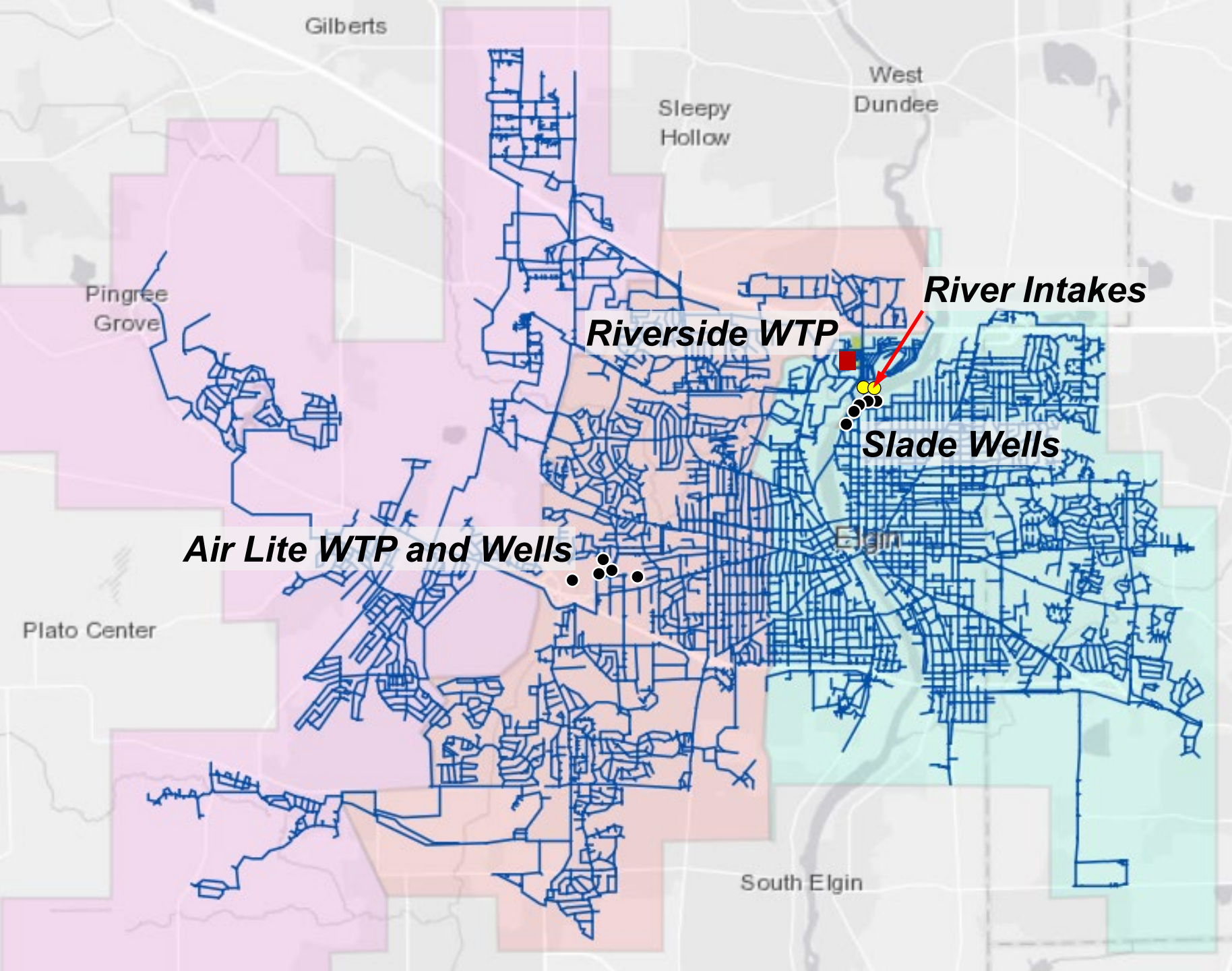
32 MGD Surface Water
17.5 MGD Ground Water

Treatment Capacity:

32 MGD Riverside WTP
10 MGD Airlite WTP

Distribution:

450 Miles of Water Main



RATIONALE FOR UNDERTAKING SOURCE WATER PROTECTION

REGULATORY REQUIREMENT -

Provides the Motivation to Get Started

KNOWN EXISTING THREATS -

Experience Confirms Threats are Real

NEED FOR A PLAN OF ACTION -

Organized Effort in Advancing Watershed Protection Activities

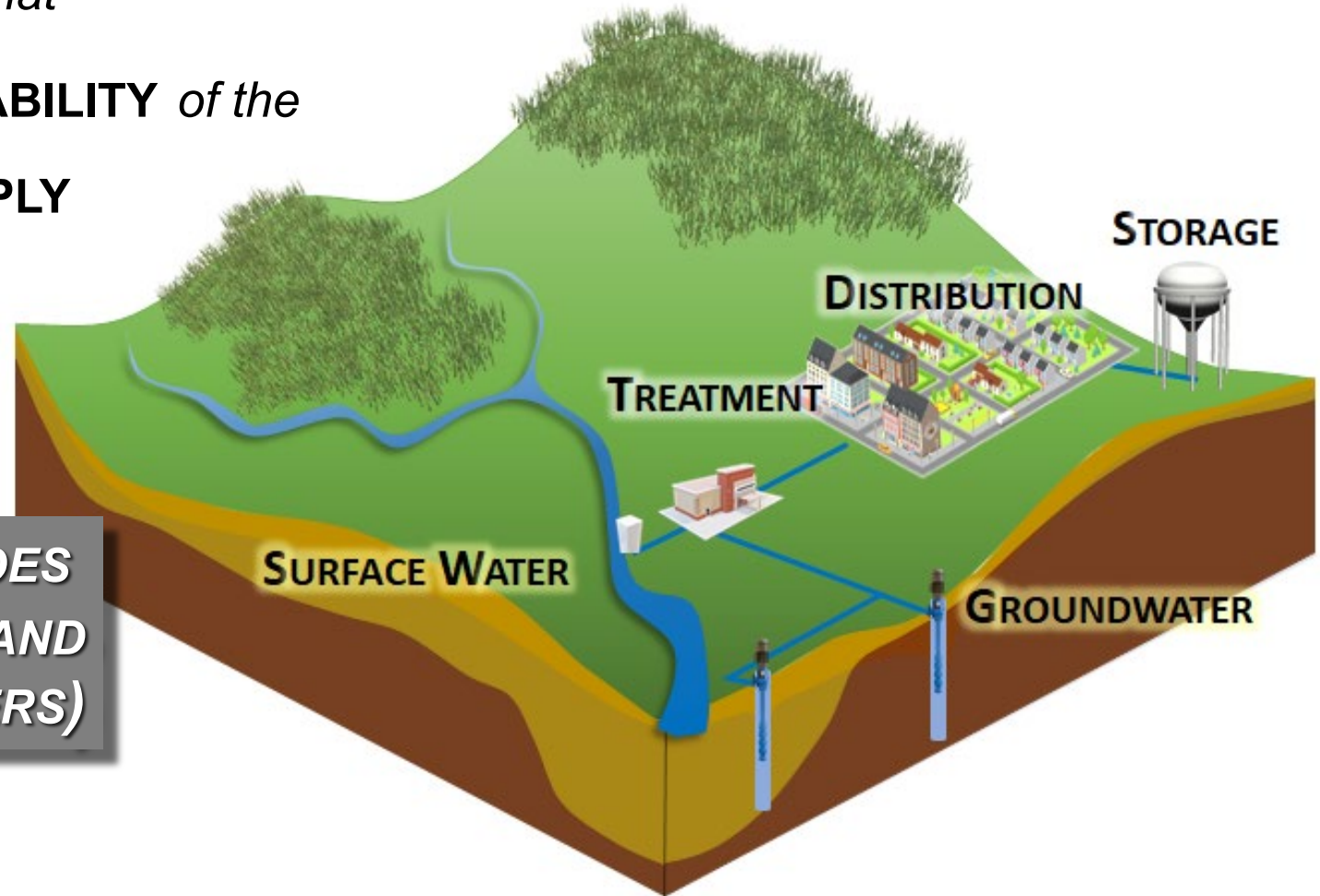
Planning Process + Assessment



SOURCE WATER PROTECTION

PLANNING AND DOING ACTIVITIES *that*
PROTECT THE QUALITY AND AVAILABILITY *of the*
UTILITY'S SOURCE OF WATER SUPPLY

*ELGIN'S SOURCE WATER INCLUDES
SURFACE WATER (FOX RIVER) AND
GROUNDWATER (AQUIFERS)*



SOURCE WATER PROTECTION PROGRAM STEPS

06 EVALUATE / REVISE

Periodic Review and Continuous Improvement

05 IMPLEMENTATION

Documentation of Actions Taken, Adaptive and Iterative

04 ACTION PLAN

Required Actions for Protection, Timeline, Resources



01 VISION

Commitment, Alignment of Priorities and Resources

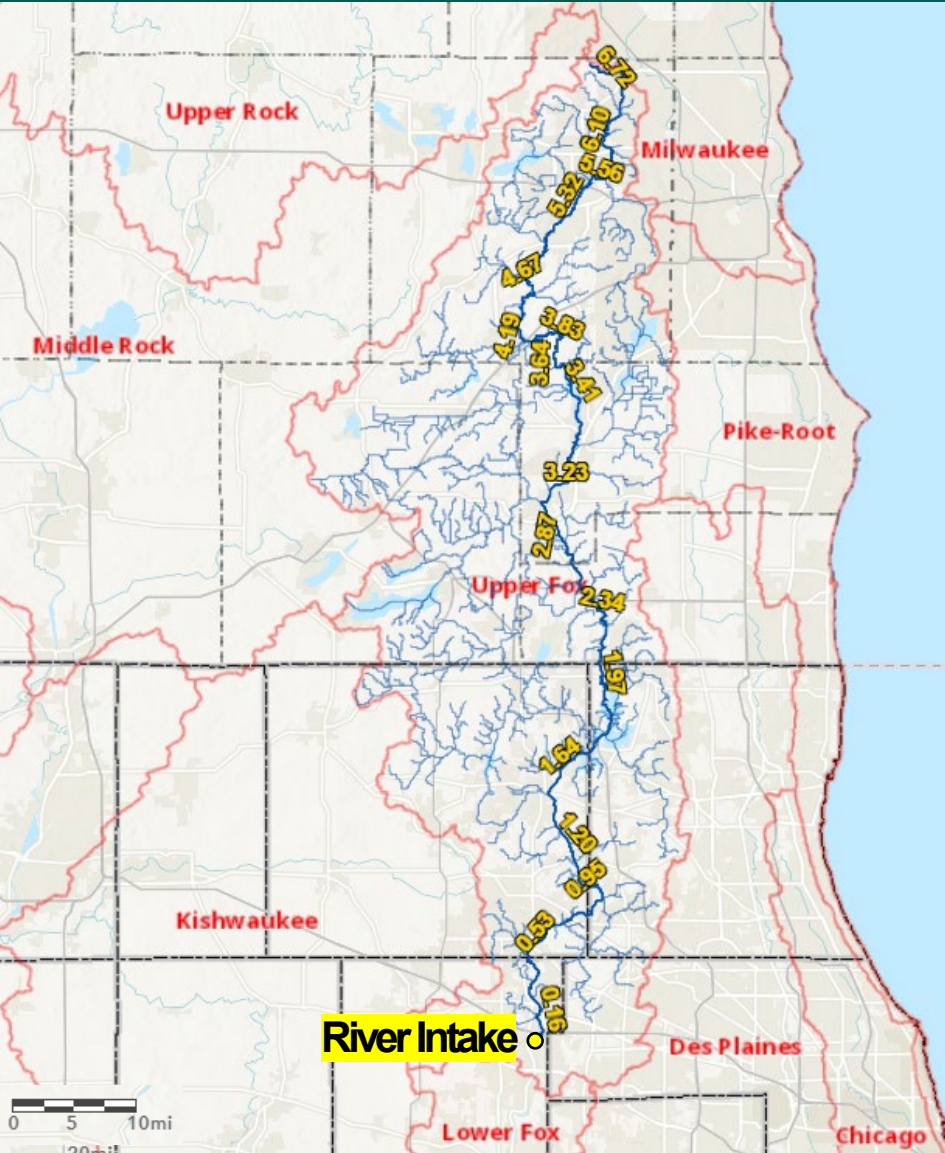
02 ASSESSMENT

Source Characterization, Potential Contaminants, Susceptibility, et al.

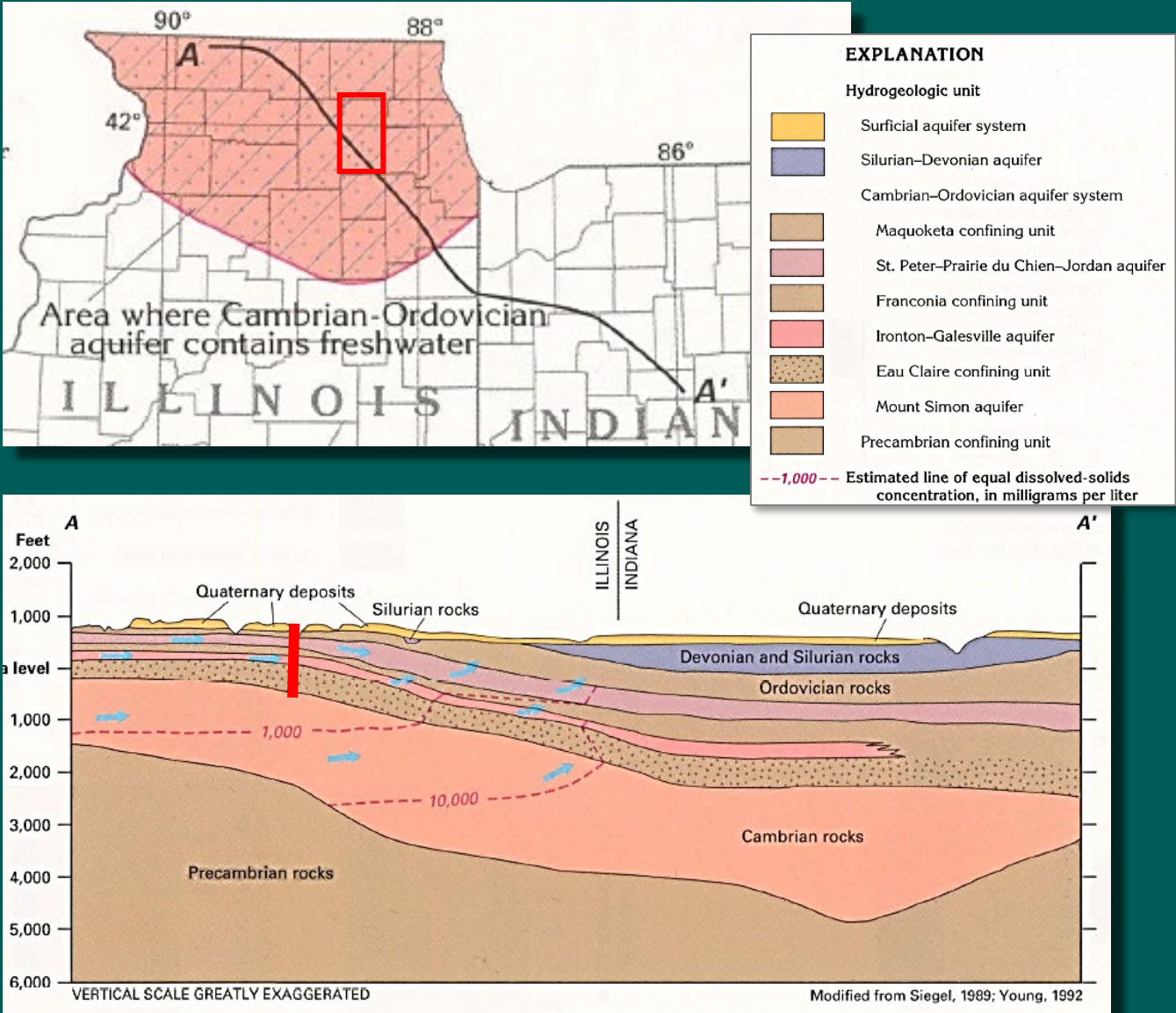
03 OBJECTIVES

Prioritize the Concerns of Greatest Importance

Surface Water Source: Upper Fox River Watershed

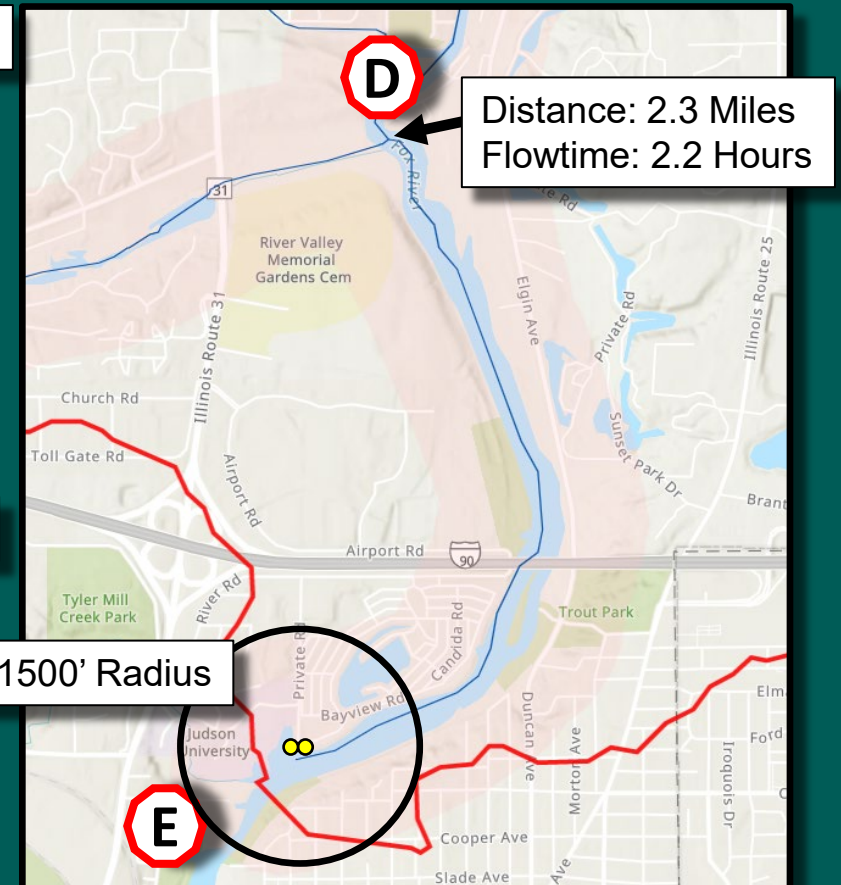
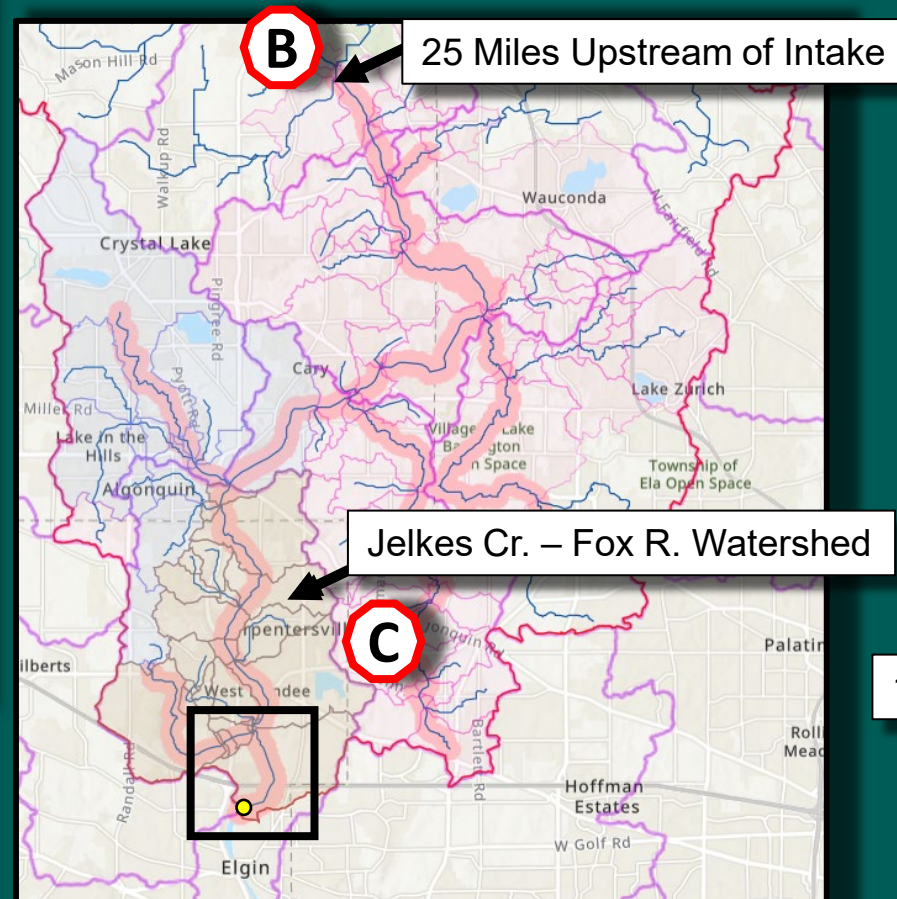
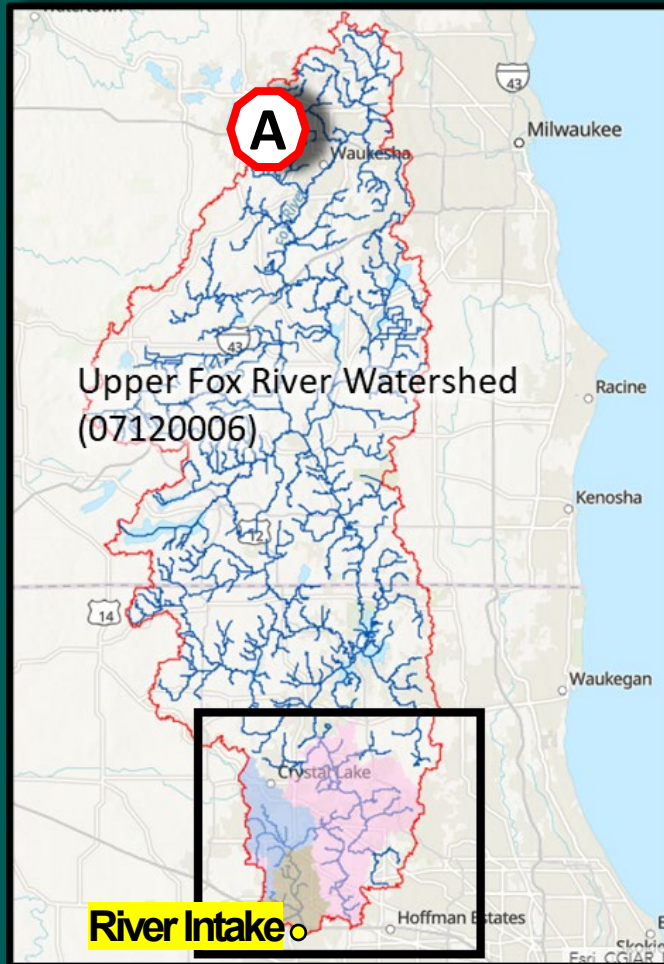


Groundwater Source: Cambrian-Ordovician Aquifer



SURFACE WATER PROTECTION ZONES:

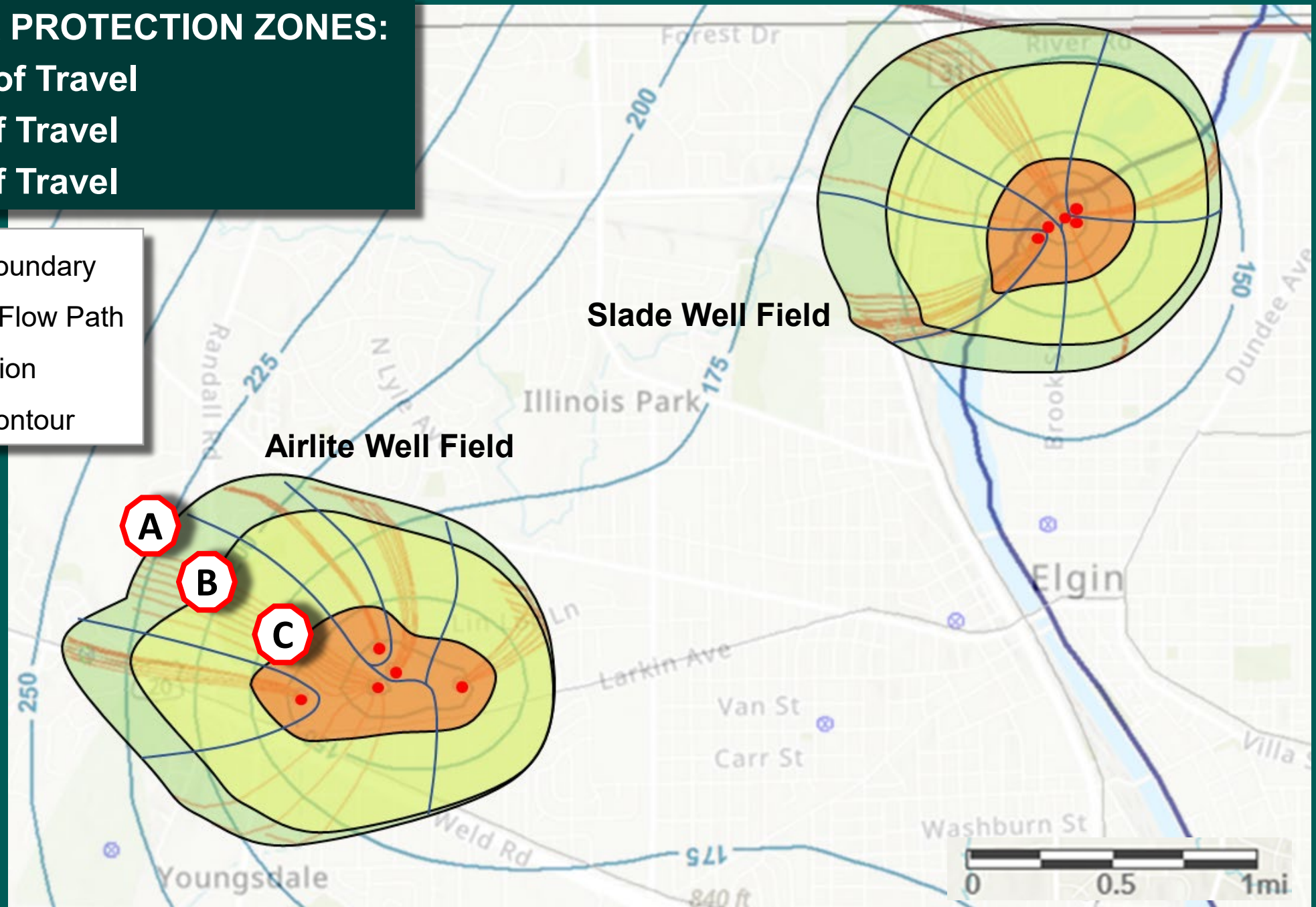
- A** Upper Fox River Watershed (07120006)
- B** 1.2-Day Flowtime Upstream of Intake, Fox R. & Tribs., 1500' Buffer
- C** Jelkes Creek Watershed
- D** Approx. 2-hr Flowtime, Fox River & Tributaries, 1500' Buffer
- E** 1500-Foot Radius Around Intakes



- A** 10-Year Time of Travel
- B** 5-Year Time of Travel
- C** 1-Year Time of Travel

-  Time-of-Travel Boundary
-  Trace of Particle Flow Path
-  Area of Contribution
-  Potentiometric Contour

Computer modeling
performed by Illinois
State Water Survey





Identified Source Water Concerns

Surface Water

- Nutrients
 - Phosphorous, Nitrogen
- Chlorides
- Harmful Algae Blooms
- Forever Chemicals
 - (PFAS)
- Riverbed Siltation
- Availability
 - Adequate Flow

Groundwater

- Barium
 - Barite Deposition
- Availability
 - Sustainable Withdrawals
- Saline Water Intrusion
 - Upconing in Mt. Simon

Potential Sources

Surface Water

- Combined Sewer Overflows
- Agricultural / Urban Runoff
- Accidental Discharges/Spills
- Streambank Modifications
- Flow Regulation (Dams)
- Shallow GW Contamination

Groundwater

- Aquifer Overuse
- Well Interference
- Improperly Constructed / Abandoned Wells



DRAFT
Action Plan
Elements



DRAFT Vision Statement

Elgin's Source Water Protection Program ensures the long-term safety and sustainability of the City's drinking water sources through a proactive, equitable, and inclusive approach.



DRAFT Objectives



❖ **Strengthen water quality monitoring program(s)**

- Continue Geosmin/MIB sampling program (w/ Aurora)
- Installing YSI Sonde at river intake to measure Blue-Green Algae & other parameters

❖ **Participate in minimizing nutrient loads, siltation, and other emerging contaminants**

- Completing combined sewer separation project to reduce CSOs
- Conducting river intake study and dredging plan
- Explore implementation of sensible salting practices

***DRAFT* Objectives (cont.)**



❖ Improve surface water quality management

- Establish clear communication channels with upstream dischargers for emergency response preparedness
- Explore dam removal

❖ Ensure long-term supply availability

- Continue surface and ground water level monitoring
- Implement outdoor water use restrictions to reduce demand (City Ordinance)

***DRAFT* Objectives (cont.)**



- ❖ **Coordinate with land use planners to minimize noncompatible land uses within protection zones and reduce flooding**
 - Update zoning codes, ordinances, and comprehensive plan to support appropriate land uses within identified protection zones
 - Encourage use of nature-based solutions (GSI) on public and private property

- ❖ **Enhance communications and partnerships in support of source water protection**
 - Continue active participation in regional water-focused groups
 - Partner to create educational signage along City's riverfront

Stakeholder Engagement + Next Steps



GOVERNMENT / REPS

City Council, **Sustainability Commission, Northwest Water Planning Alliance**, Kane/Kendall Council of Mayors

BUSINESS

Elgin Area Chamber of Commerce

UPSTREAM COMMs / WWTPs

Fox Waterway Agency, Carpentersville, Fox River Grove, McHenry, Johnsburg

ENVIRONMENT / WATER QUALITY

Fox River Study Group

AGRICULTURE

Kane-DuPage Soil & Water Conservation District

GENERAL PUBLIC / OTHER

Aurora Water Department, WaterCon



Identified Stakeholders

A scenic view of a lake with a building and trees in the background under a cloudy sky. The sky is filled with large, white, puffy clouds. The lake is dark and calm. In the background, there is a line of green trees and a small, brown, rectangular building with a flat roof. To the right of the building, there are some houses and more trees.

Next Steps:

- Continued Stakeholder Engagement + Feedback
- Draft Plan – including Actions/Strategies + Funding Ideas



Takeaways to Share:

1. Capitalize on (and include) SWP actions you are already doing!
2. Update your SWP assessment – identify new or existing contaminants/threats.
3. Achieve SWP through stakeholder and community member engagement.

Questions?

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