



Elgin's Source Water Protection Initiative

NWPA TAC Meeting

January 25, 2022



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Agenda

- 1. Introduction + Elgin's Water System**
- 2. Planning Process + Assessment**
- 3. Identified Concerns**
- 4. DRAFT Vision Statement + Objectives**
- 5. Stakeholder Engagement + Next Steps**
- 6. Questions + Group Discussion**

KEY STATISTICS

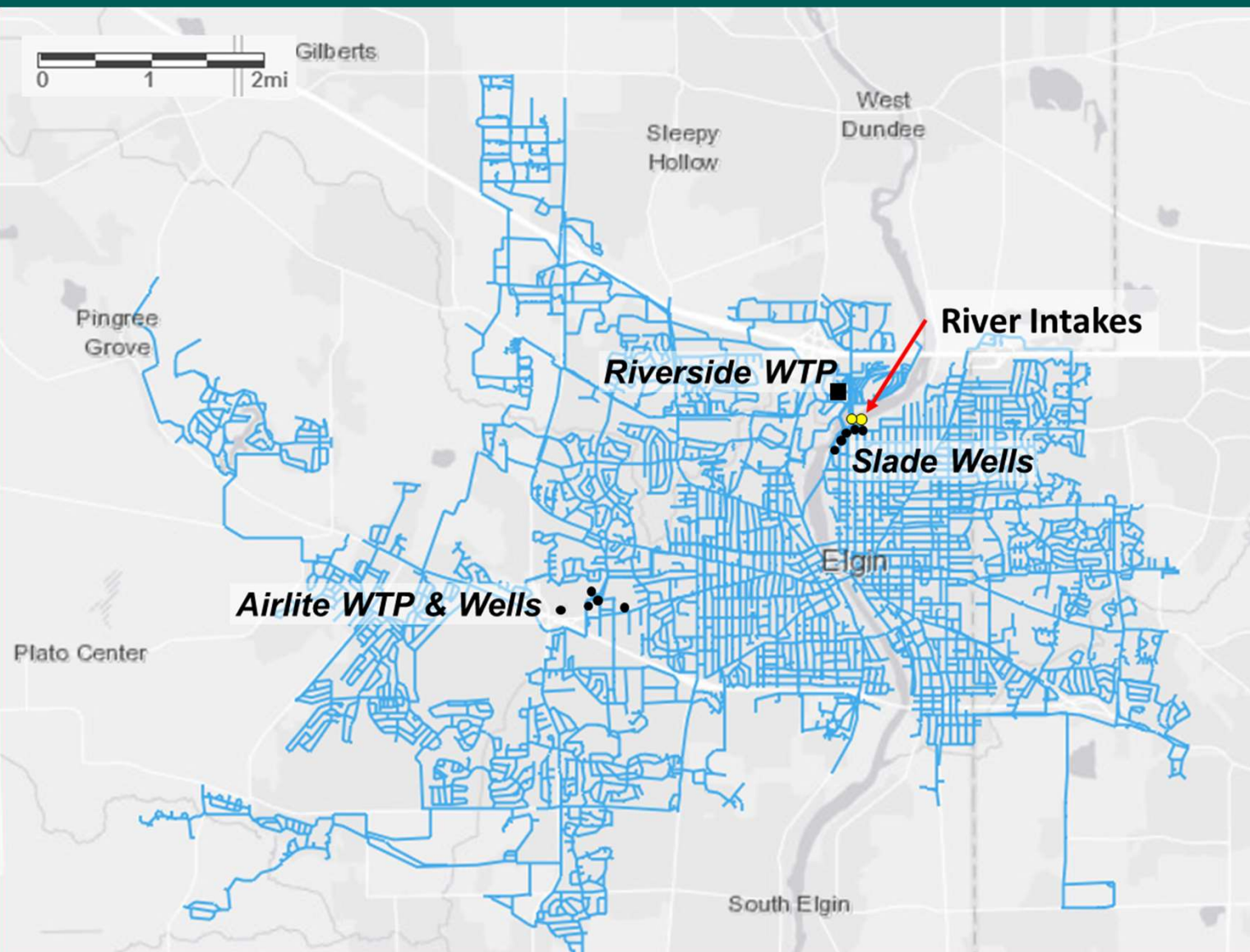
112,000 Population Served
33,400 Customers

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



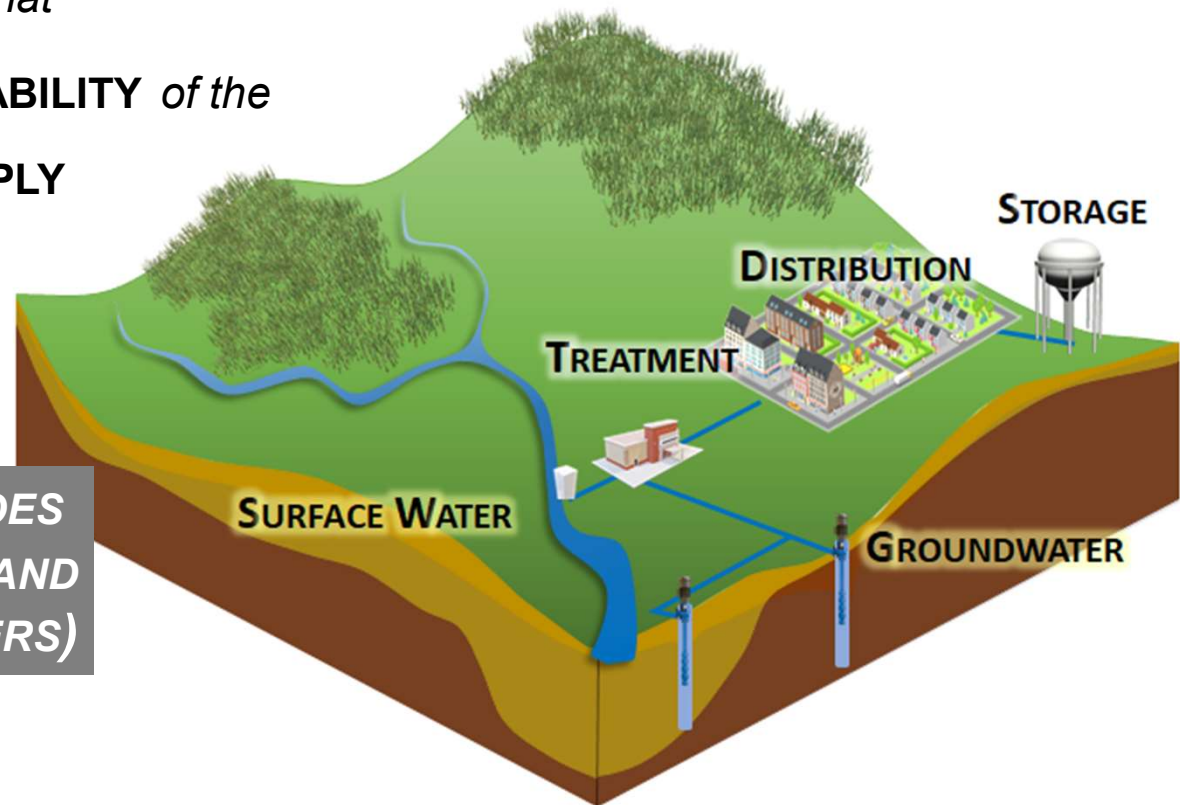
Planning Process + Assessment



SOURCE WATER PROTECTION

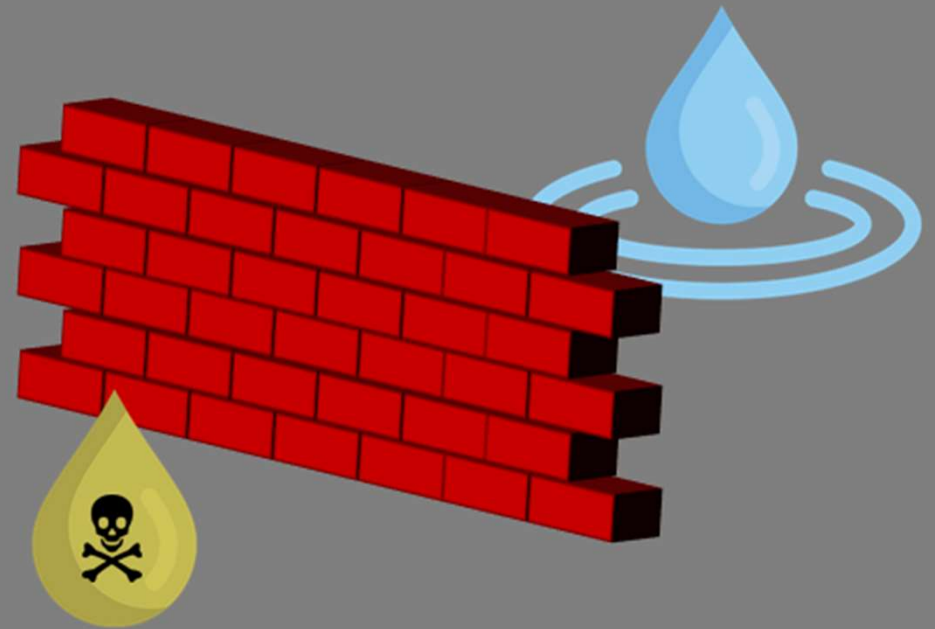
PLANNING AND DOING ACTIVITIES *that*
PROTECT THE QUALITY AND AVAILABILITY *of the*
UTILITY'S SOURCE OF WATER SUPPLY

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



SOURCE WATER PROTECTION IS PART OF A MULTI-BARRIER APPROACH

- Best Possible Source* 
- Source Water Protection* 
- Water Treatment* 
- Distribution* 
- Monitoring* 
- Emergency Response* 



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

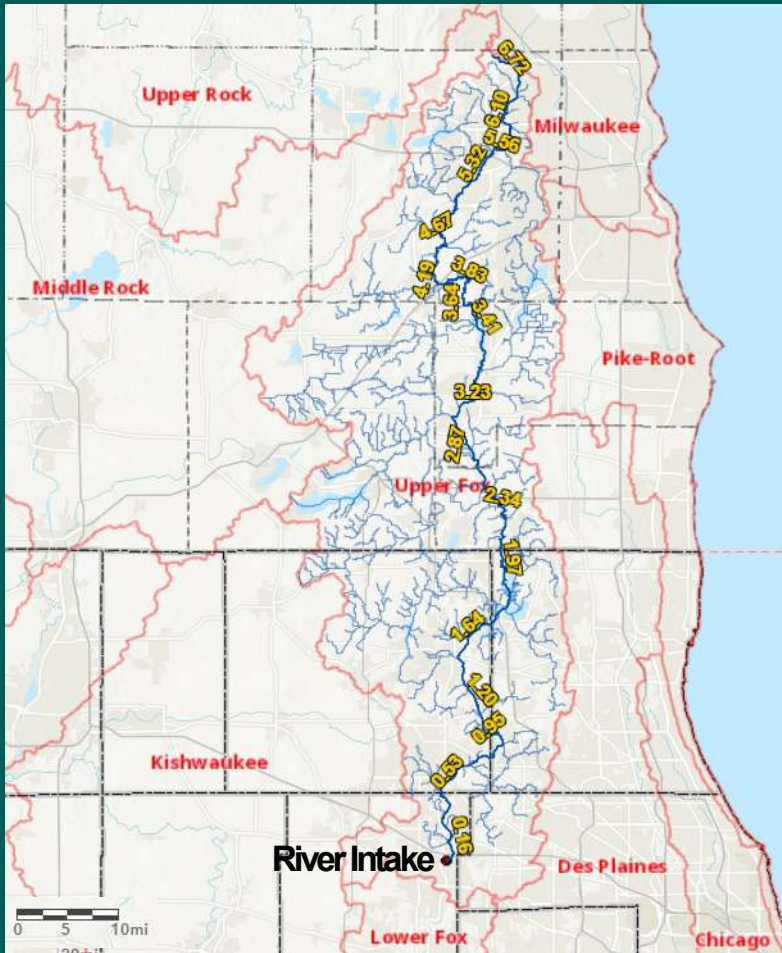
Source Characterization, Potential Contaminants, Susceptibility

03 OBJECTIVES

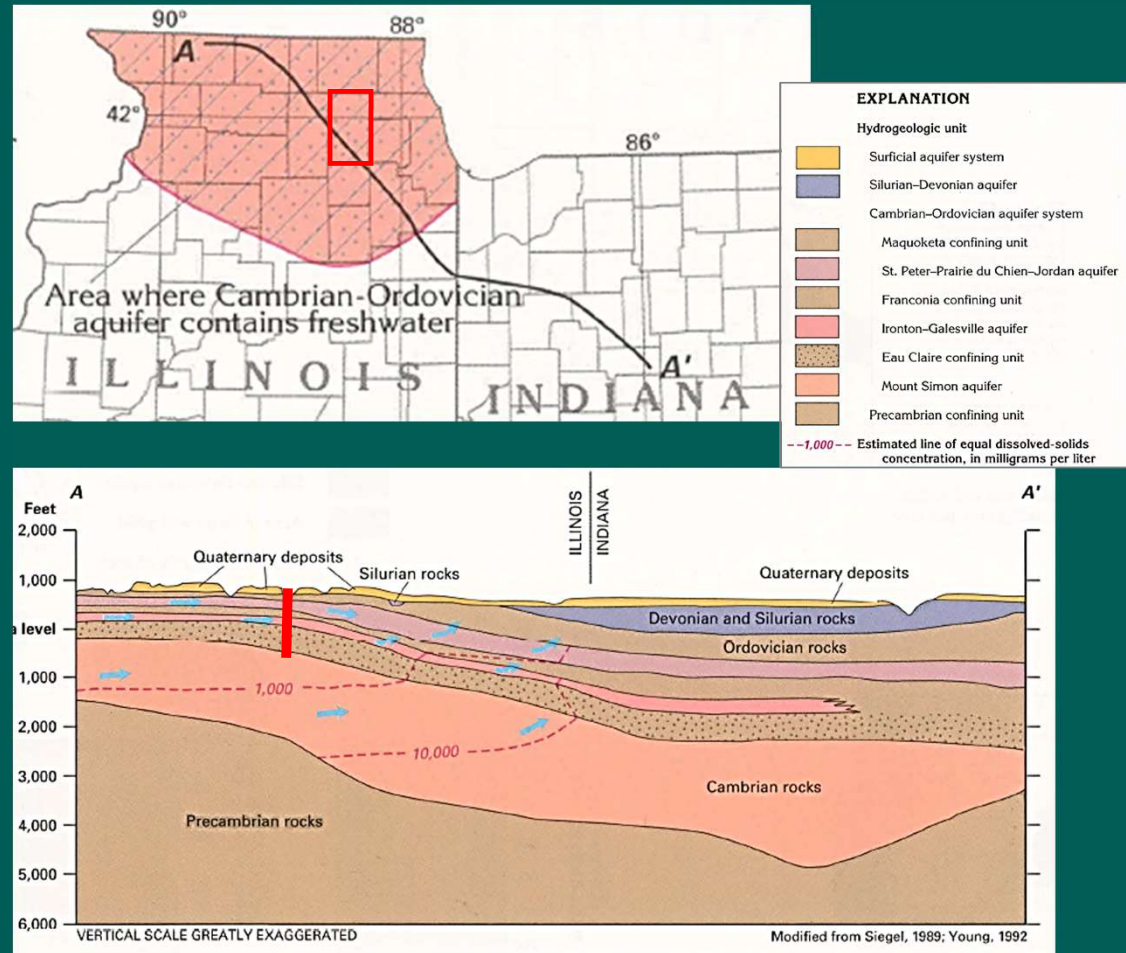
Prioritize the Concerns of Greatest Importance

Based on: Source Water Protection Operational Guide to AWWA Standard G300

Surface Water Source: Upper Fox River Watershed



Groundwater Source: Cambrian-Ordovician Aquifer



SURFACE WATER PROTECTION ZONES:

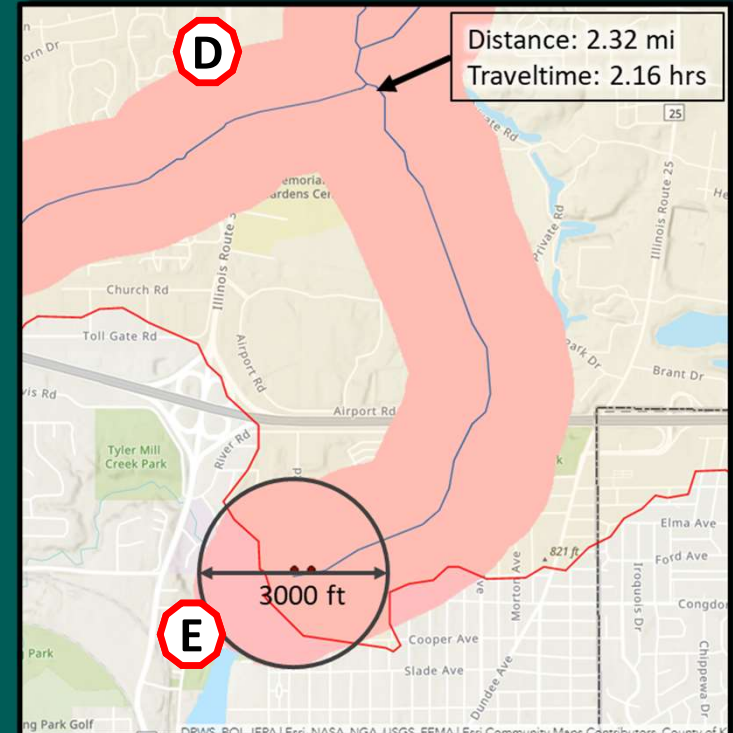
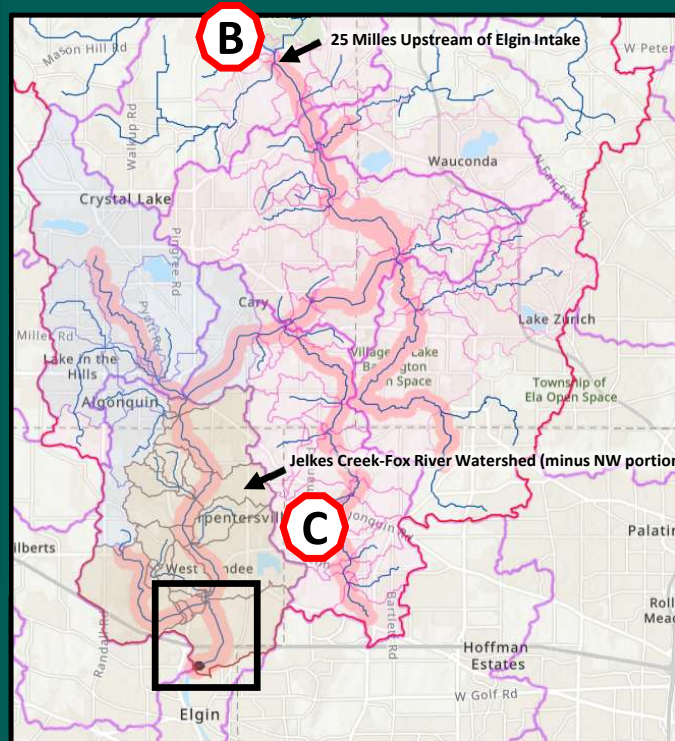
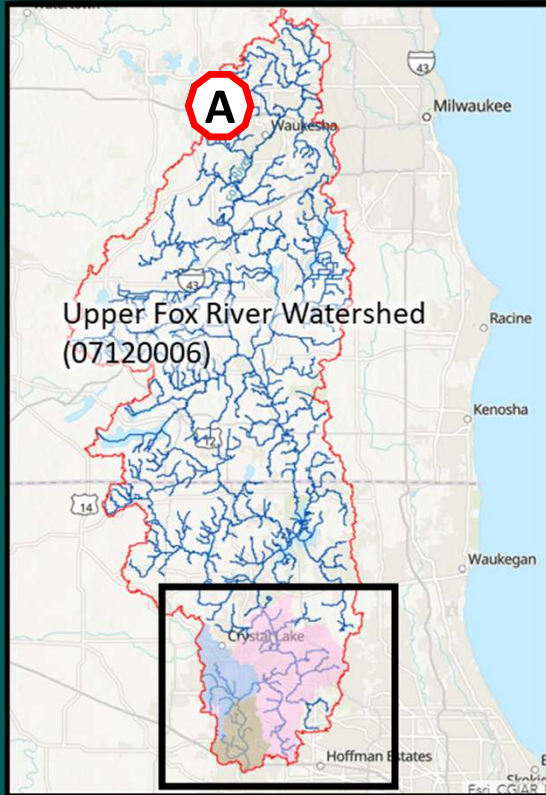
A - Upper Fox River Watershed (07120006)

B - 1.2-Day Flowtime Upstream of Intake, Fox R. & Tribs., 1500' Buffer

C - Jelkes Creek Watershed (minus NW portion)

D - Approx. 2-hr Flowtime, Fox River & Tributaries, 1500' Buffer

E - 1500-Foot Radius Around Intakes

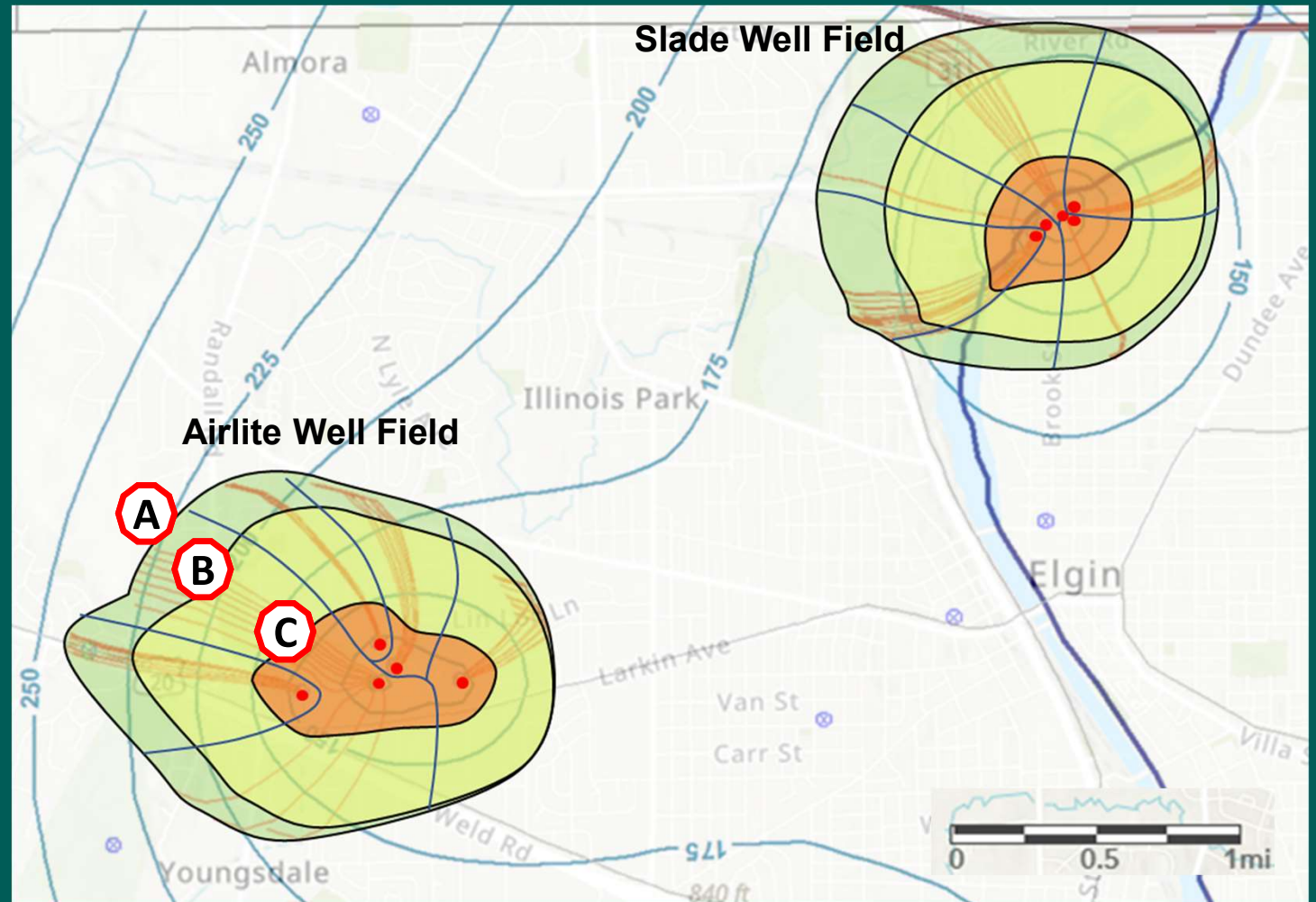


**GROUND WATER
PROTECTION ZONES:**

A: 10-Year Time of Travel

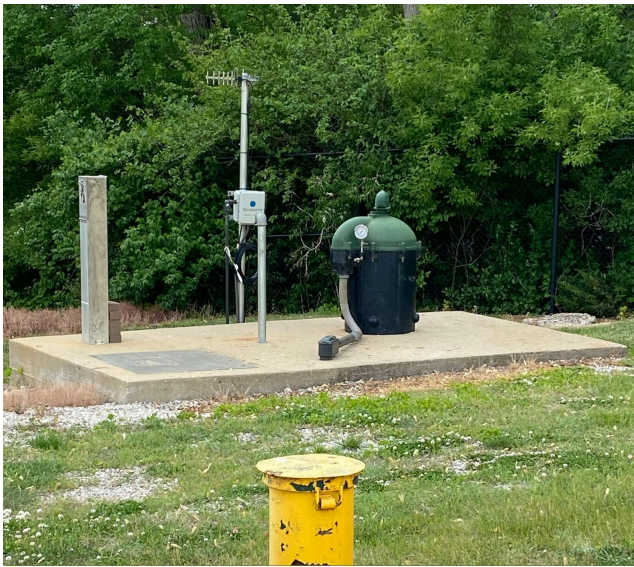
B: 5-Year Time of Travel

C: 1-Year Time of Travel



Identified Concerns





Identified Source Water Concerns

Surface Water

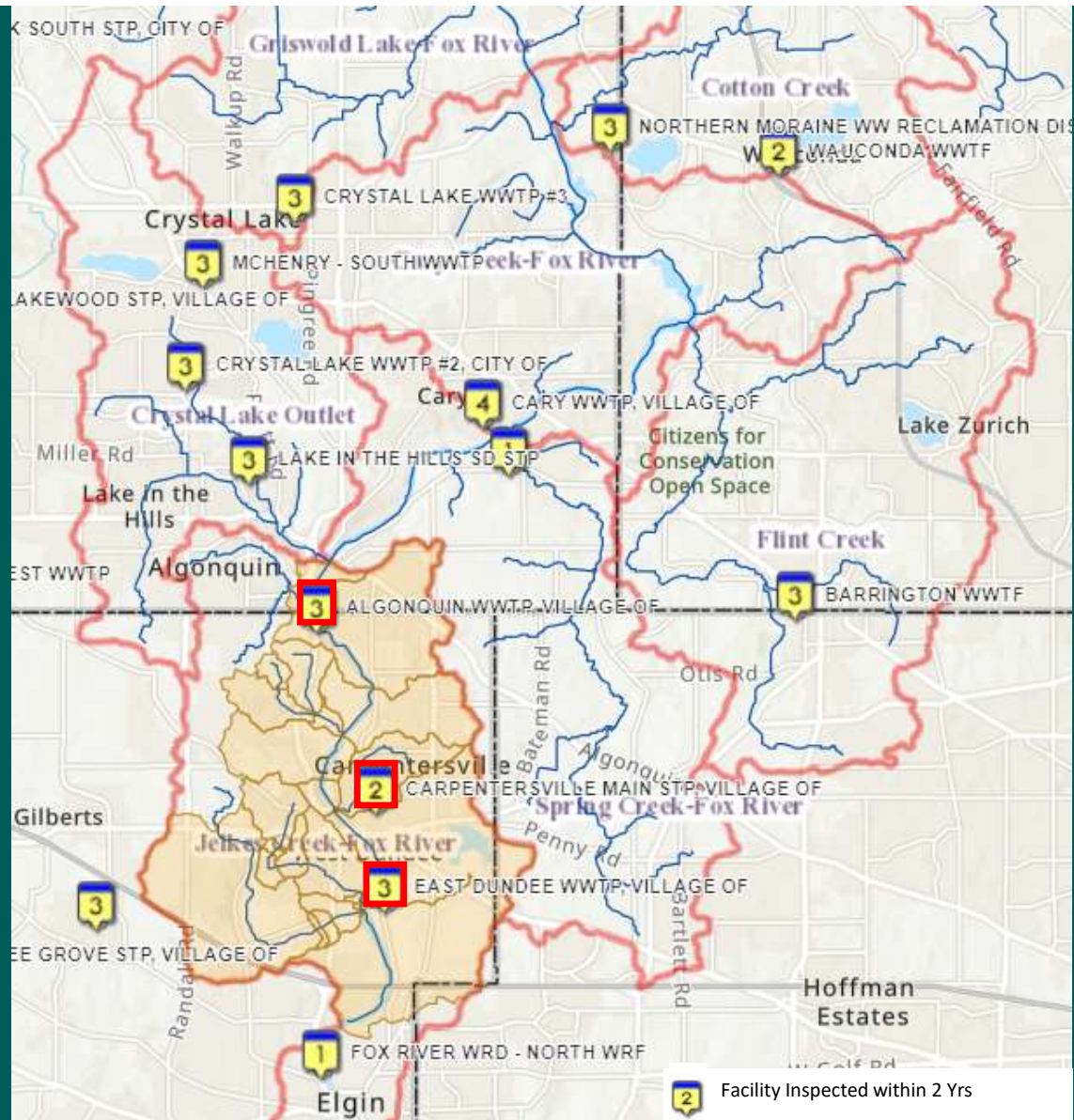
- Nutrients
 - Phosphorous, Nitrogen
- Chlorides
- Harmful Algae Blooms
- Forever Chemicals
 - (PFAS)
- Riverbed Siltation
- Availability
 - Adequate Flow

Groundwater

- Barium
 - Barite Deposition
- Availability
 - Sustainable Withdrawals

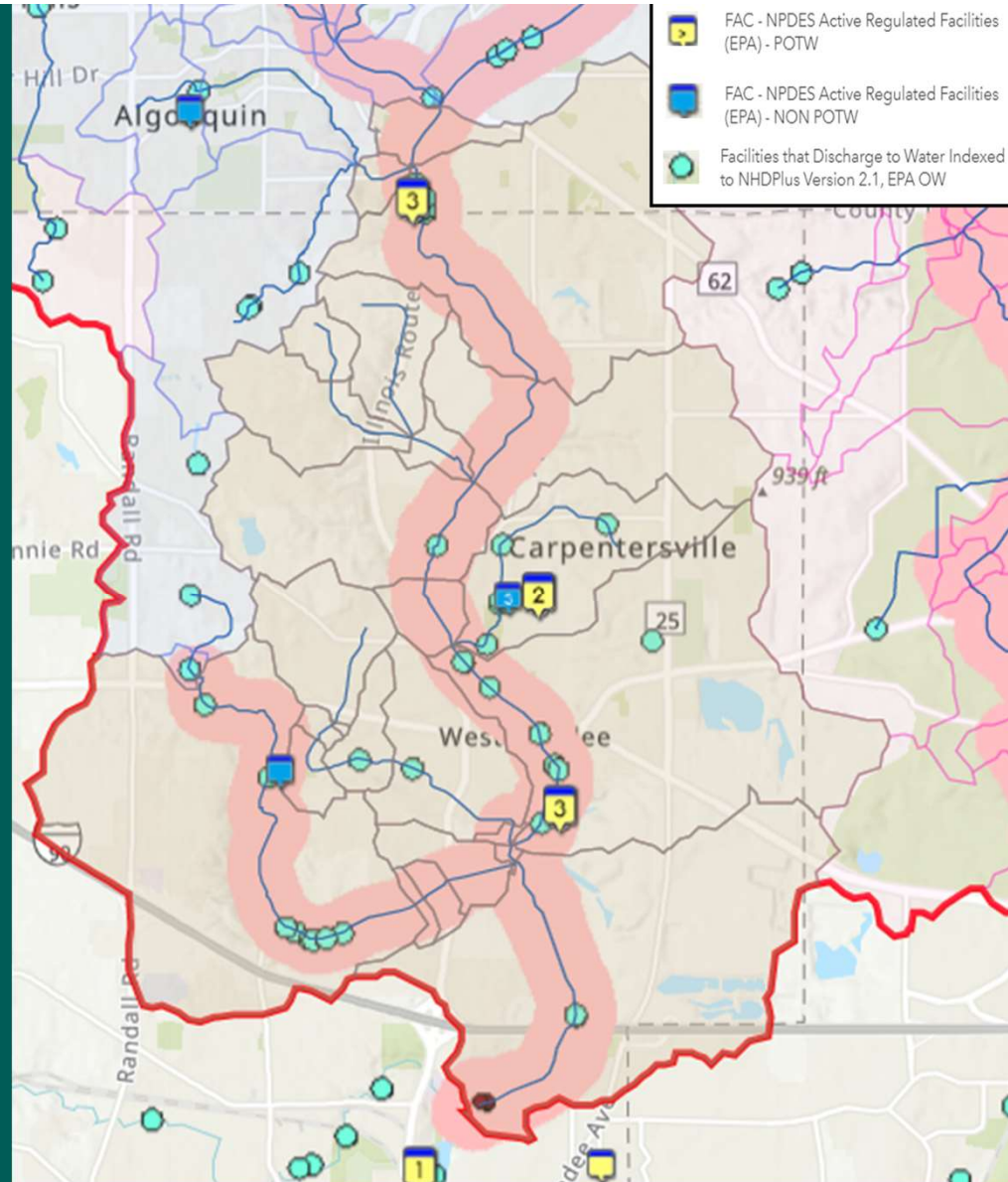
1.2-day Flowtime Fox River & Tributaries

POTWs; Permits in Effect



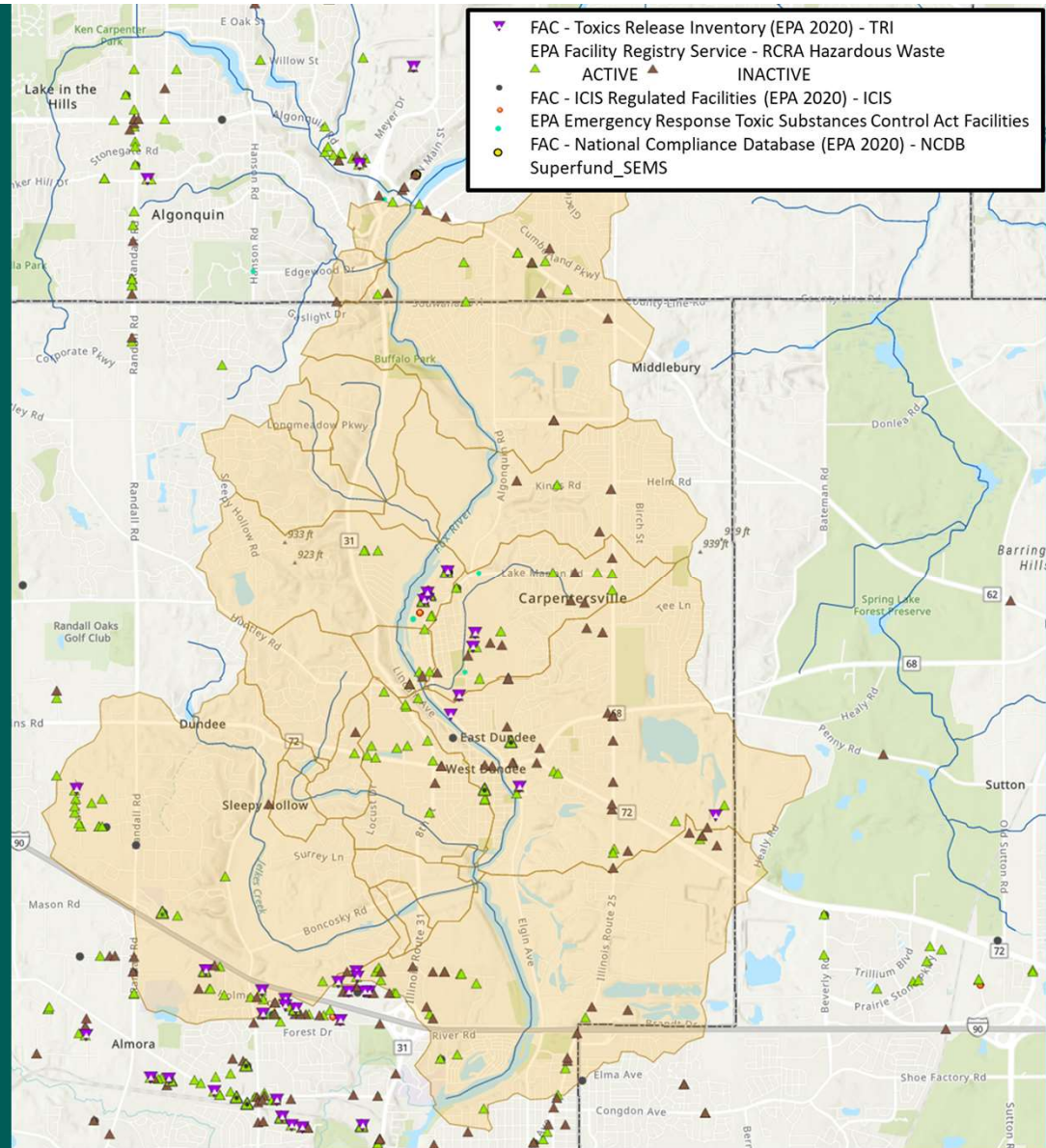
0.35-day Flowtime for Fox River & Tributaries

NPDES Facilities & Facilities that Discharge to Water



0.35-day Flowtime Fox River & Tributaries

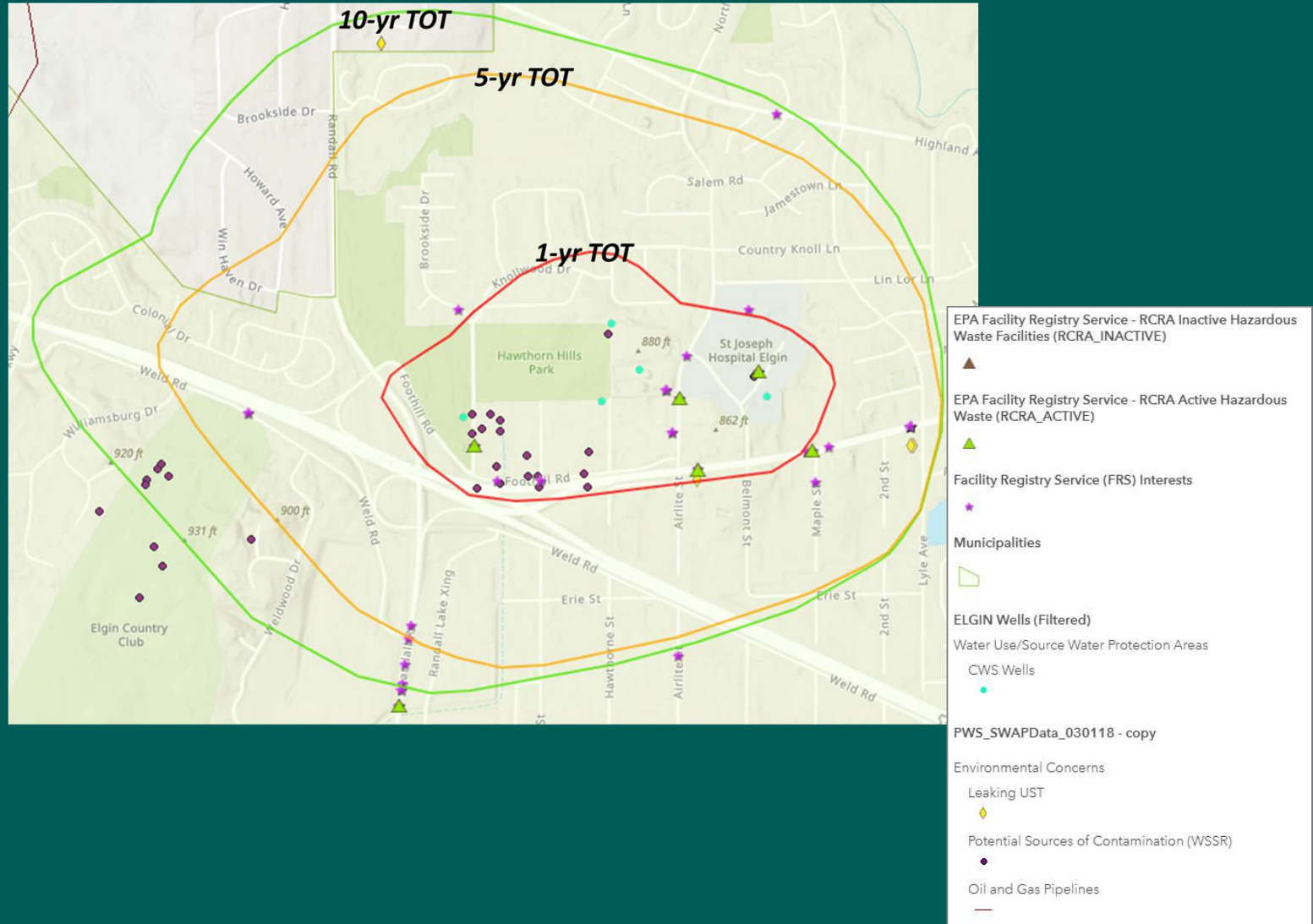
Potential Sources of Contamination



Airlite Well Field

Time-of-Travel Zones

Potential Sources of Contamination



Potential Contamination Source Evaluation Matrix

		Potential Sources Of Contamination							
		Point Sources				Non-Point Sources			
		Major NPDES	Discharges to Water	Toxic Release Inventory	RCRA Site	Soil Erosion	Bacteria / Nutrients	Agri-Chemicals	Sediments / Salting / PAHs
Source Water Protection Zones	SW-A								
	SW-B								
	SW-C								
	SW-D								
	SW-E								
	GW-A								
	GW-B								
	GW-C								

SURFACE WATER PROTECTION ZONES

- A – U. Fox R. Watershed
- B - 1.2-Day / 1500' Buffer
- C - Jelkes Cr. Watershed
- D - 2-hr / 1500' Buffer
- E – 1500' Radius at Intake

GROUNDWATER PROTECTION ZONES

- A - 10-Year TOT
- B - 5-Year TOT
- C - 1-Year TOT

DRAFT
**Vision Statement +
Objectives**



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 Action Plan Objectives

- Strengthen water quality monitoring program(s)
- Participate in minimizing nutrient loads, siltation, and other emerging contaminants
- Improve surface water quality management
- Ensure long-term supply availability
- Coordinate with land use planners to minimize noncompatible land uses within protection zones and reduce flooding
- Enhance communications and partnerships in support of source water protection

Source Water Protection Strategy Evaluation Matrix

SOURCE WATER PROTECTION STRATEGIES

Broader Application and Less Restrictive



Focused Application and More Restrictive

SURFACE WATER PROTECTION ZONES

- A – U. Fox R. Watershed
- B - 1.2-Day / 1500' Buffer
- C - Jelkes Cr. Watershed
- D - 2-hr / 1500' Buffer
- E – 1500' Radius at Intake

GROUNDWATER PROTECTION ZONES

- A - 10-Year TOT
- B - 5-Year TOT
- C - 1-Year TOT

		Source Water Protection Strategies						
		Awareness	Education	Contingency Planning	Monitoring	Inspection	Restrictive Use	Prohibitions
Source Water Protection Zones	SW-A							
	SW-B							
	SW-C							
	SW-D							
	SW-E							
	GW-A							
	GW-B							
	GW-C							

**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 and McHenry-Lake Soil & Water Conservation Districts

GENERAL PUBLIC / OTHER

Regulatory Update, WaterCon (March 2022), **Aurora Water Department**

Next Steps:

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

Questions + Discussion





Group Discussion:

- Any pollutants not mentioned that you are aware of? What pollutants are most concerning to your utility?
- How is SWP planning going for your utility? Any approaches or lessons to share with the group?
- Any existing initiatives, plans, or projects within our region we all should be aware of that support source water protection?

Thank You!

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