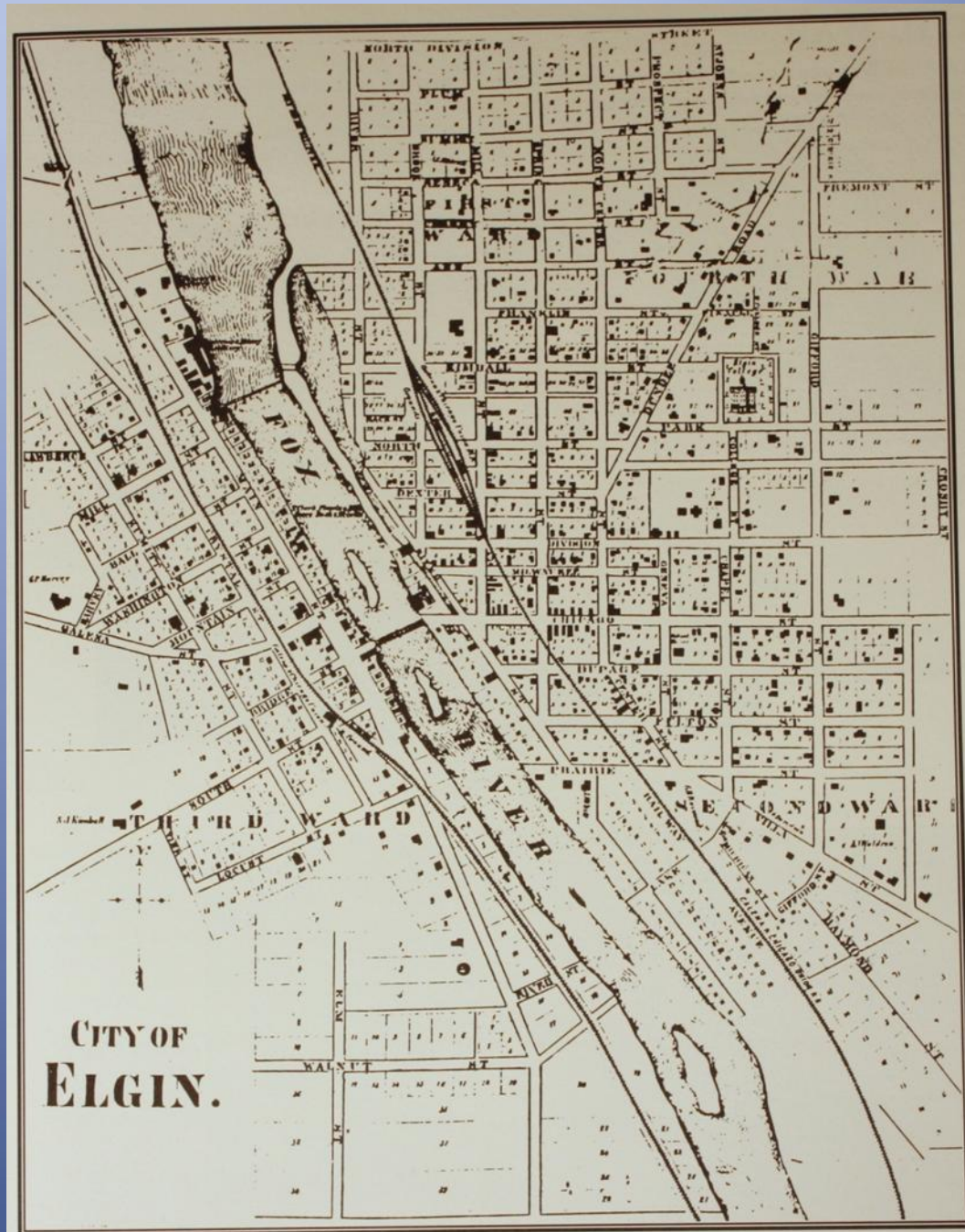


# The History & Future of Elgin's Water Supply



Map of ELGIN, IL  
In 1860  
(From "OLD ELGIN"  
By E. C. Alft p31)

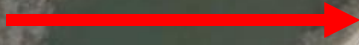






**FOX RIVER**

**Deep Well Water  
Treatment Facility**



**Deep Wells supplied water to Elgin Residents until we converted to the use of the FOX RIVER**





Aquitard



Aquifer (sandstone)

Water Level (Head)

- - - 1863

- - - - 2014

Whiteside  
County

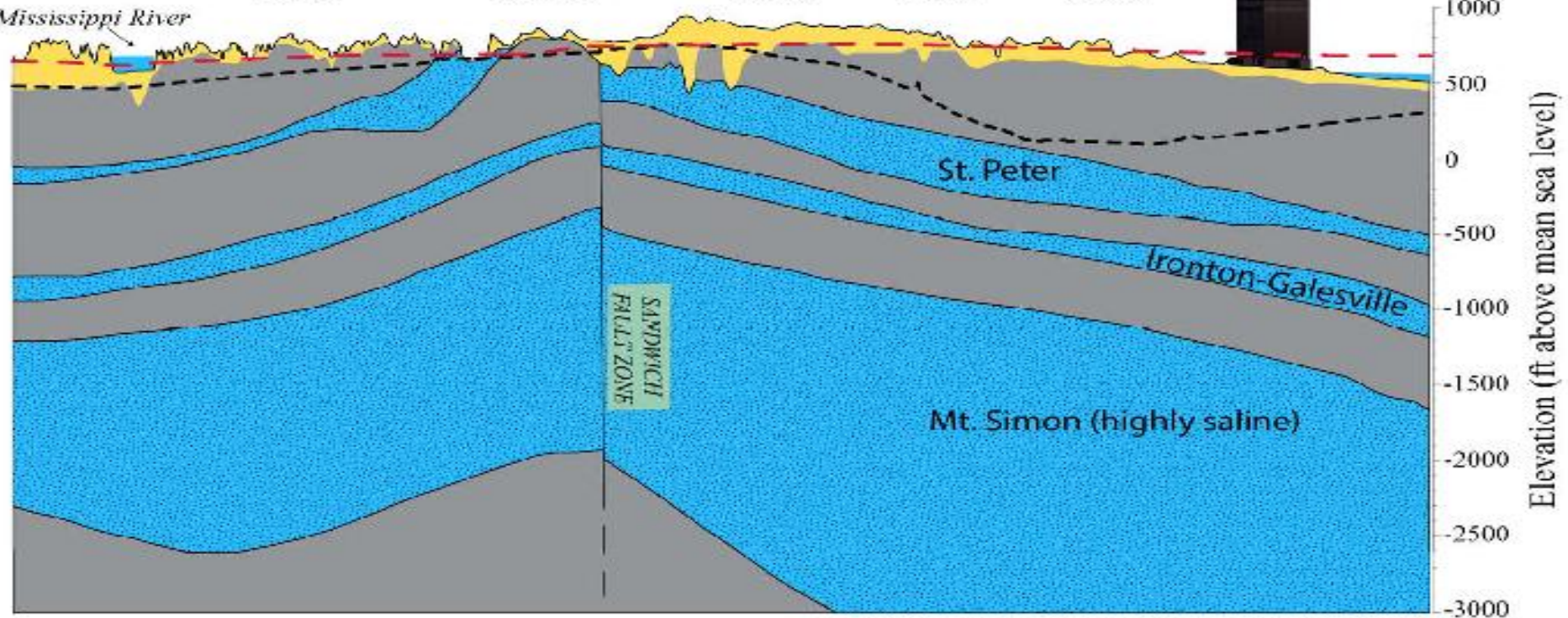
Lee/Ogle  
Counties

DeKalb  
County

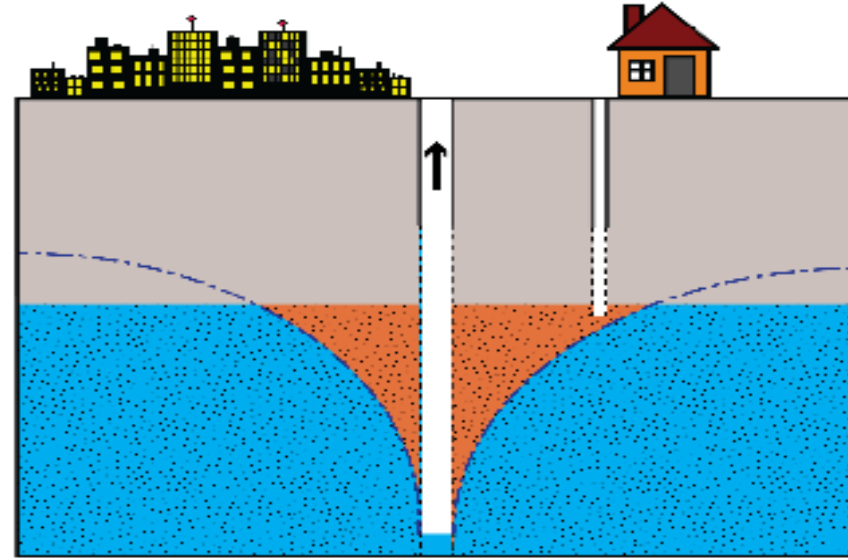
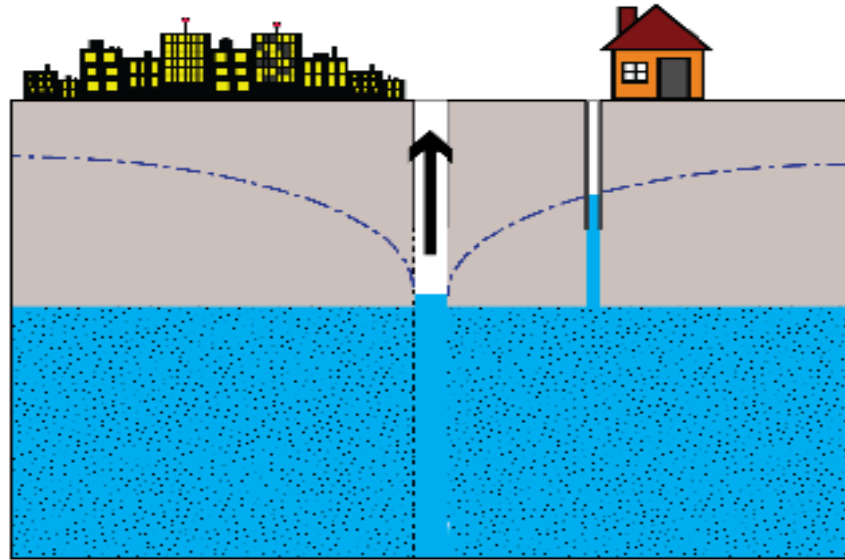
Kane  
County

DuPage  
County

Mississippi River



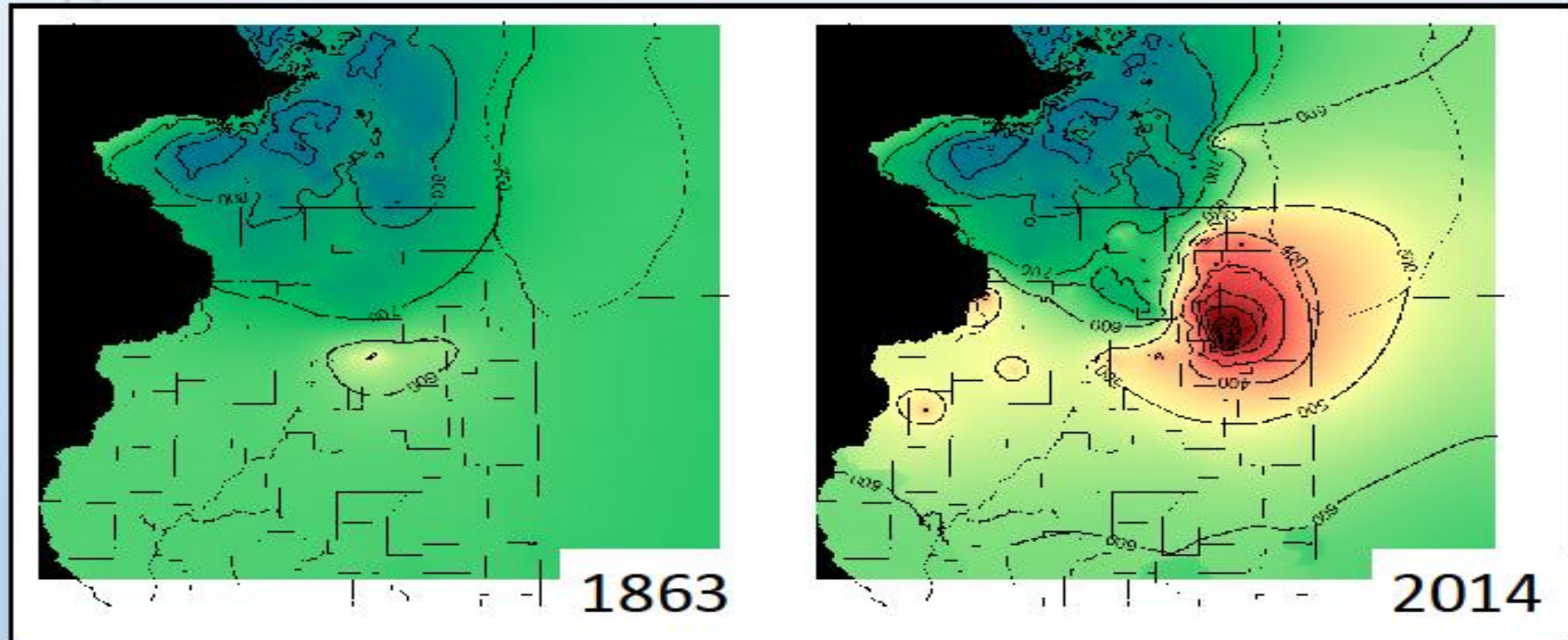
# Desaturation of sandstone aquifers



## Concerns Related to Desaturation:

1. Shallow sandstone wells go dry
2. Public supply wells pump less water from the sandstone and potentially go dry
3. Sandstone is exposed to oxygen, which can cause a variety of water quality issues

## Regional sandstone heads



Provisional results



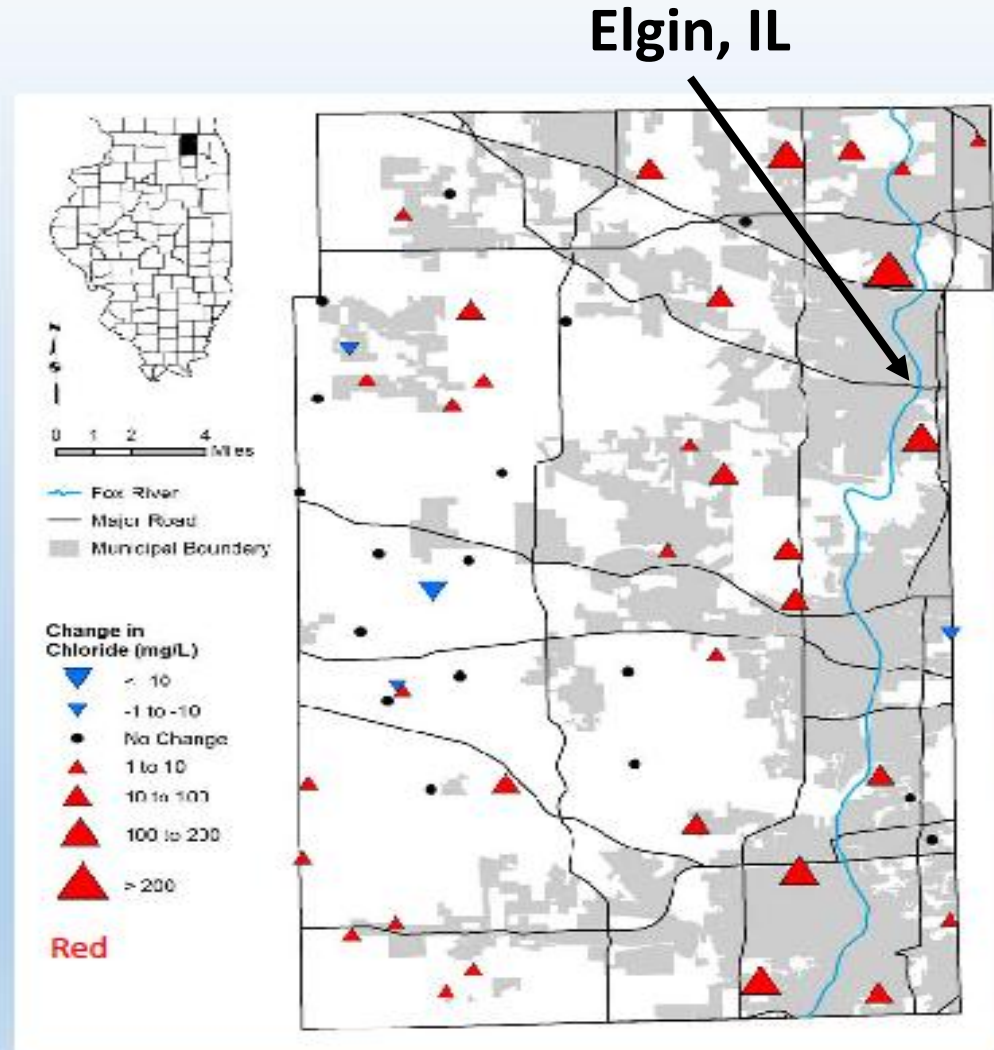


**Elgin Draws Its Water for the FOX RIVER**



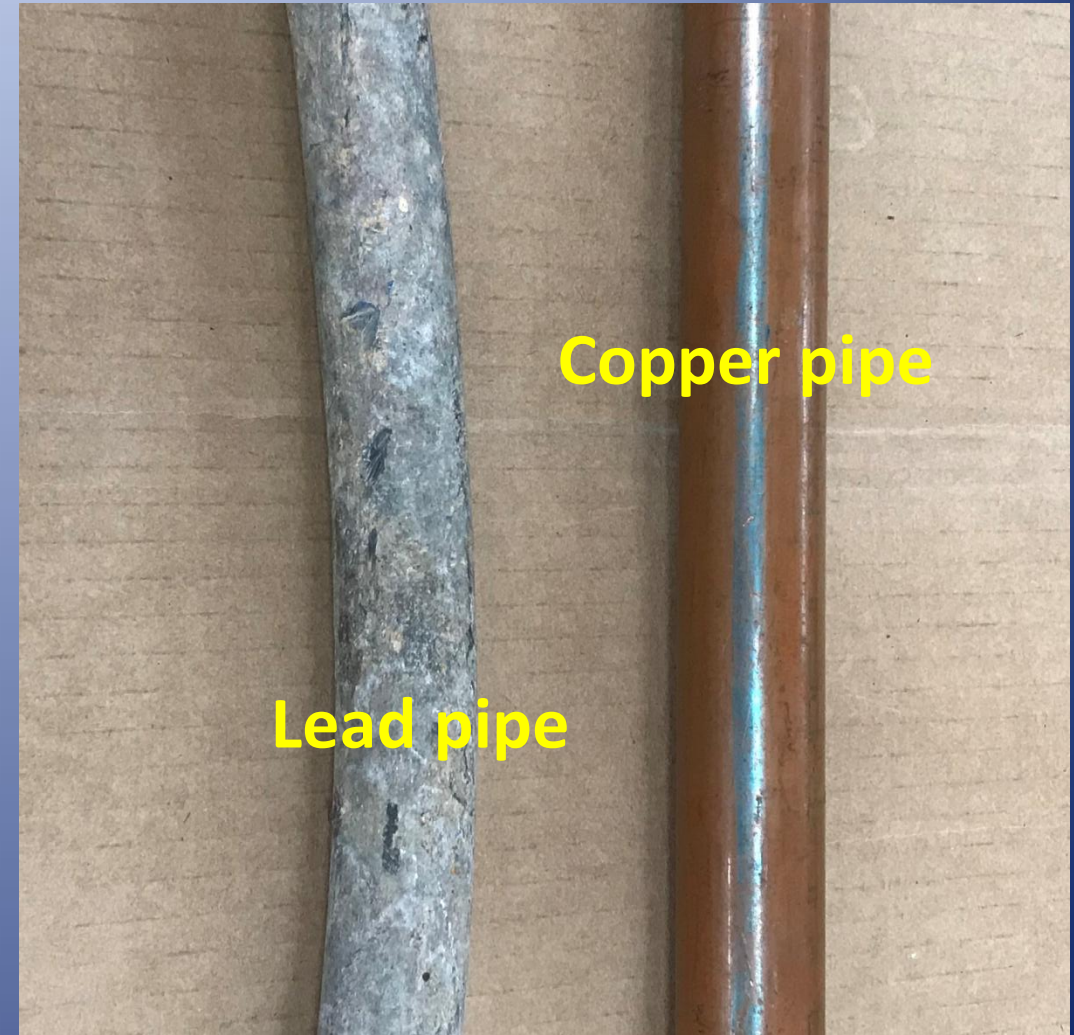
## Change in chloride: 2003 - 2015

- 5 wells increased more than 100 mg/L
- Average chloride increase in East wells was 46.3 mg/L
  - (about 4 mg/L per year)



Provisional results Kane County, IL





**Current underground water service line (L) & its possible replacement (R)**

## Surface Water Systems

<u>Year</u>	<u>Municipality</u>	<u>Water Rate</u>	<u>unit</u>	<u>Standardized to COE</u>	<u>cycle</u>	<u>monthly bill</u>	<u>population (2013)</u>	<u>notes</u>
	Elgin	\$ 3.38	100 cf	\$3.38	monthly	\$ 35.58	108,188	
2018	Decatur	\$ 4.91	100 cf	\$4.91	monthly	\$ 43.25	75,407	
2018	Springfield	\$ 1.64	100 cf	\$1.64	monthly	\$ 22.72	116,250	\$1.64 for first 5 ccf, \$2.64 for next 5 ccf
2018	Moline	\$ 4.89	1000 gal	\$3.66	quarterly	\$ 38.43	43,259	
2018	Bloomington	\$ 4.01	100 cf	\$4.01	monthly	\$ 37.08	77,733	
2018	Aurora	\$ 5.15	100 cf	\$5.15	bi-monthly	\$ 50.73	199,932	
2018	Rock Island	\$ 3.37	100 cf	\$3.06	monthly	\$ 53.70	39,018	\$3.06 for first 5 ccf, 2.80 for next 295 ccf
2018	IL American - Peoria	\$ 5.85	1000 gal	\$4.38	monthly	\$ 55.01	115,007	private
2018	Aqua Illinois - Kankakee	\$ 6.90	1000 gal	\$5.16	monthly	\$ 57.49	76,299	private



**How Can We Ensure  
We Will Have Enough  
Drinking Water in the  
Future?**