

**FRSG Annual Meeting
November 6, 2025**

**Not Your Father's Fox Metro:
Building a Utility of the Future**

100
Fox Metro
Water Reclamation District
1925 - 2025

100th Anniversary of Aurora Sanitary District

**AURORA
SANITARY DISTRICT**
Election: Tuesday, May 26th, 1925

LOOK! HERE'S WHERE YOU VOTE
SEE BELOW

FIRST PRECINCT
POLLING PLACE: Residents on west side of river, north of Galena Street, vote at Illinois Avenue School, 251 Illinois Avenue.

SECOND PRECINCT
POLLING PLACE: Residents on west side of river, and north of Prairie Street and First Street, and south of Galena Boulevard, vote at No. 3 Hose House, 63 South Lake Street.

THIRD PRECINCT
POLLING PLACE: Residents on west side of river, and south of Prairie Street, vote at South Lake Street School, 489 South Lake Street.

FOURTH PRECINCT
POLLING PLACE: Residents on east side of river, and south of Bluff Street, Marion Avenue and Fifth Avenue, vote at Reuland's Garage, Cor. Talma Street and Seventh Avenue.

FIFTH PRECINCT
POLLING PLACE: Residents on east side of river, and between Fifth Avenue and New York Street, vote at Dano's Barber Shop, 115 Jackson Street.

SIXTH PRECINCT
POLLING PLACE: Residents on east side of river, and between New York Street and center line of the C. B. & Q. R. R. Co. right of way, vote at No. 4 Hose House, Corner Union Street and Columbia Street.

SEVENTH PRECINCT
POLLING PLACE: Residents on east side of river, and north of the center line of the C. B. & Q. R. R. Co. right of way, vote at Trippon's Store, Corner Pierce Street and High Street.

SAMPLE BALLOT

FOR SANITARY DISTRICT	X
AGAINST SANITARY DISTRICT	

SAMPLE BALLOT

ELECTION: TUES., MAY 26, 1925

SEE OTHER SIDE FOR MAP OF PRECINCT BOUNDARIES

Barker Printing Company 146 Fox St., Aurora, Ill.

- “Protecting human health and the environment”
- Walter Sperry: 1930 to 1959
- Isaak Walton League local chapter
- Public park and landscaping
- Pond and stream on site
- Greenhouse
- Public education
 - Handmade signs for ASD and FVPD
- Experimentation



Giving Water a Second Chance: Effluent Quality

- 300K people served around Aurora
- Remove 98-99% of compatible pollutants
- Tertiary filtration
- Thermal refuge for Fox River aquatic life



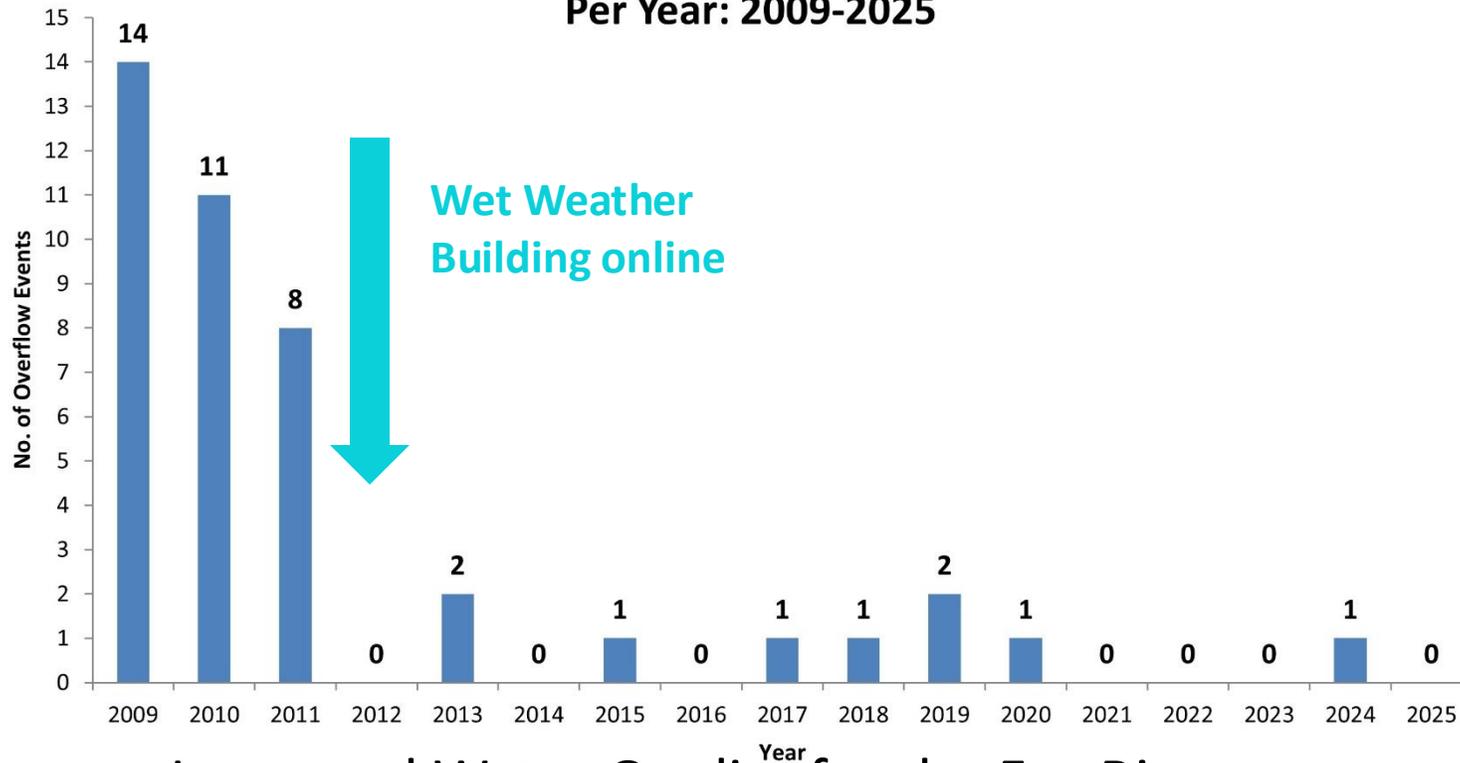
Giving Water a Second Chance: WWTP Regionalization

- Chasing brown algae since 2014
- Indiana University 2018: failed wastewater treatment plant
- Fox Metro consolidated Oswego, Sugar Grove, WCC, Shore Heights
- Plant #5 = Mooseheart connected to Fox Metro in 2024. Personal goals.



Giving Water a Second Chance: Effluent Quality

Annual Combined Sewer Overflow Events
Per Year: 2009-2025



= Improved Water Quality for the Fox River

- City of Aurora
 - Repairs
 - Sewer Separation
 - Rain Gardens
- City of Aurora and Fox Metro: \$150M on CSO LTCP in the last 20 years



Giving Water a Second Chance: Effluent Reuse

- 3 mgd onsite for:
 - Irrigation
 - Heating & Cooling
 - Cleaning
- Local agency reuse 2025

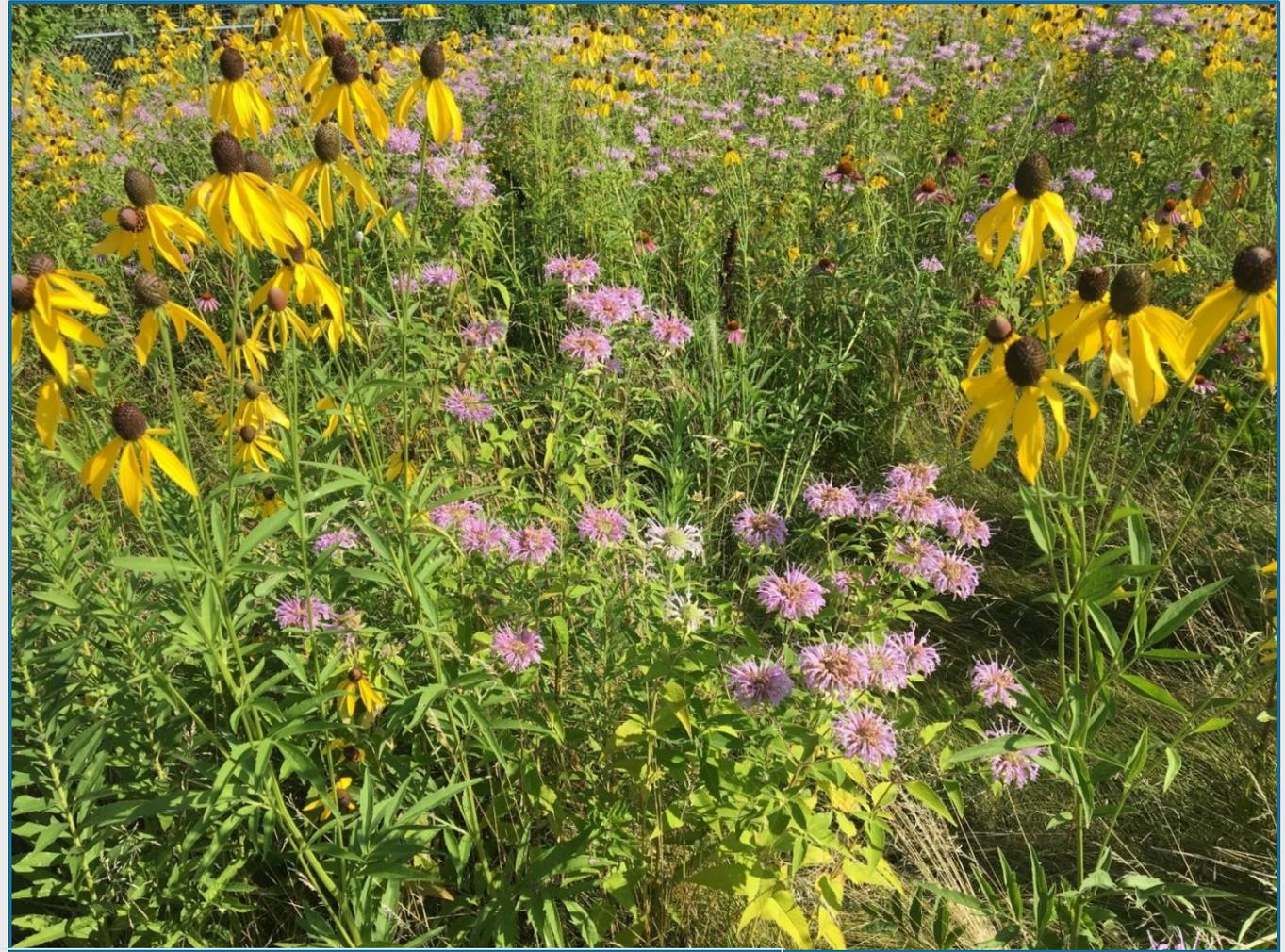


Giving Land a Second Chance: Restoring Native Landscapes

- Restored approximately 12 acres to prairie and other native landscaping
- Scheduled to restore approximately 6 more over the next few years



1955: Hollyhocks near the sludge beds



Today: native plantings across campus



Giving the Environment a Second Chance: Phosphorus Removal Improvements

- Almost \$100 million investment
- Combination of biological and chemical P removal
- Started July 10, 2019
- Meeting current and future limits
- Loading reduced by ~75%
 - 2017: 227,941 lbs.
 - 2024: 54,686 lbs.
 - Goal was 2/3 reduction



Giving the Environment a Second Chance: Public EV Charging Station

- Mayors Metropolitan Caucus
Powering Safe Communities Grant
- Installed in 2022
- Pass through expense

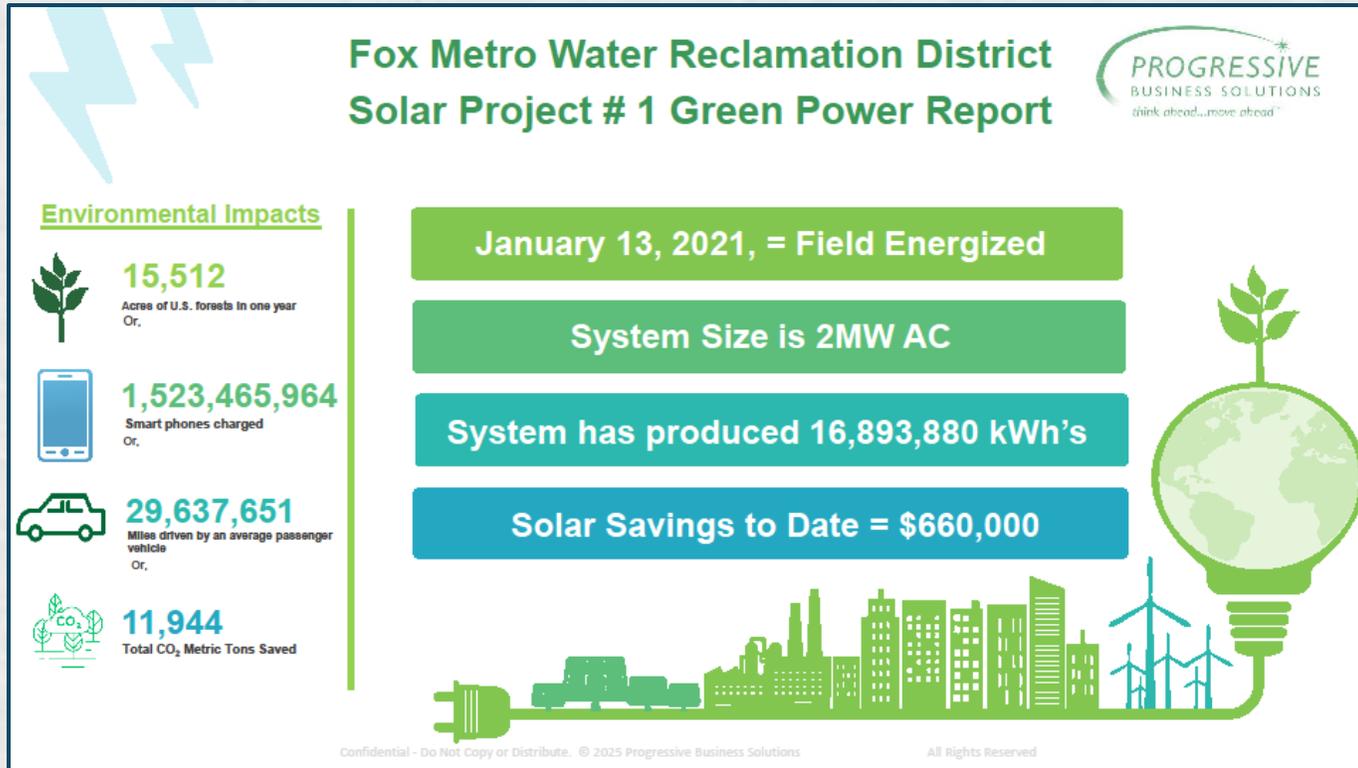


Giving Land a Second Chance: Brownfield to Greenfield

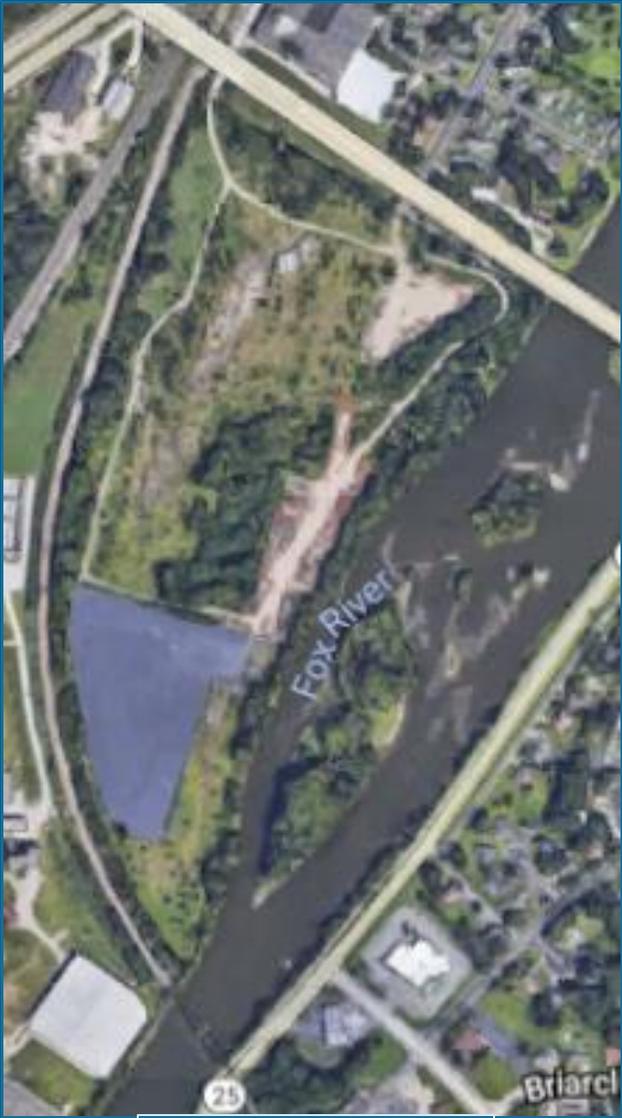
- Solar Field #1: Live January 2021
- 2 megawatt solar field/ 8 acres
- Environmentally contaminated
 - US EPA Brownfield to Greenfield
 - On site landfill
 - IEPA voluntary cleanup still in progress
- Zero ratepayer dollars used
- ~20% of our annual energy costs
- Estimated energy savings = \$4 million over 25 years



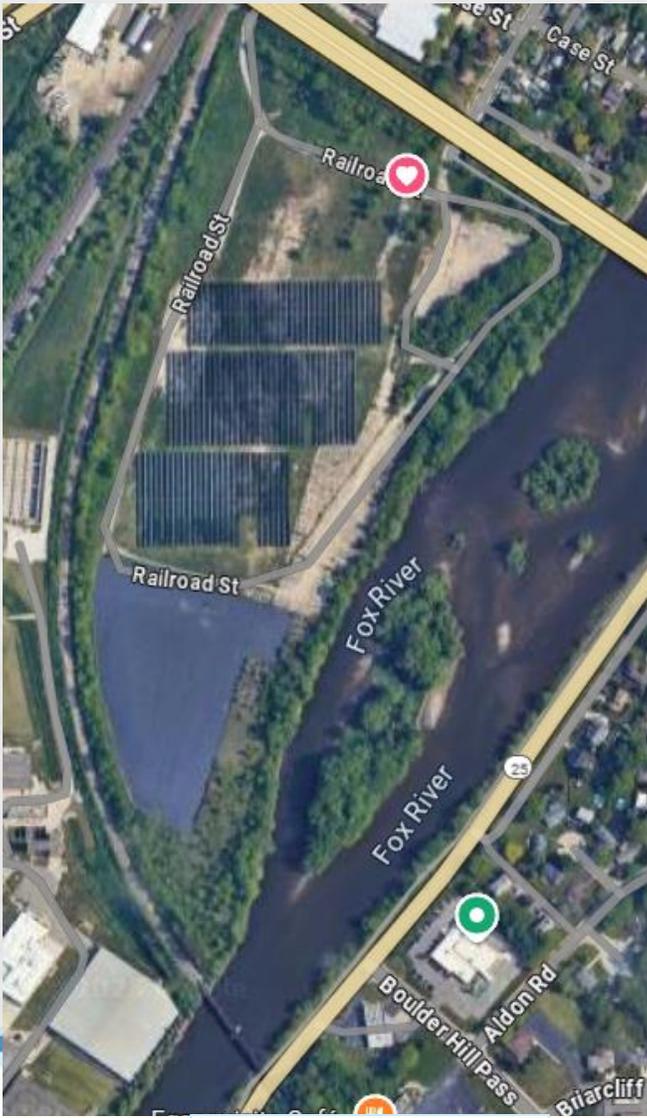
Giving Land a Second Chance: Solar Field #1 Performance through June 4, 2025



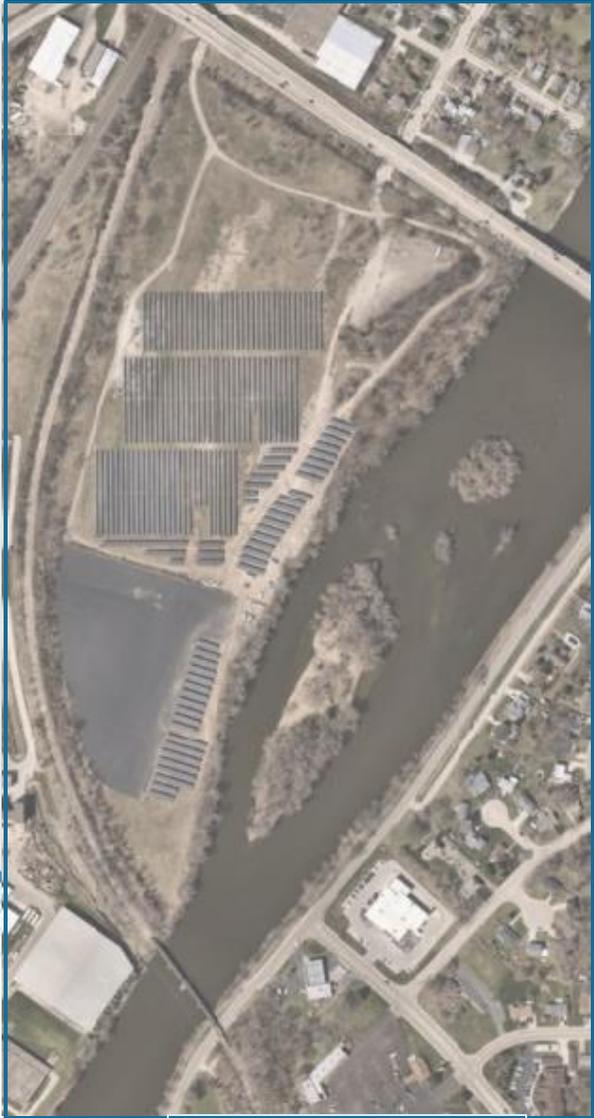
Giving Land a Second Chance: Brownfield to Greenfield



2018



2024



2025



Giving Land a Second Chance: Brownfield to Greenfield



Giving Land a Second Chance: Solar Field #2N and #2S

- Solar Field #2S: 1-acre demonstration garden with low profile native plants, live May 2025
- Solar Field #2N: 8 more acres, live August 2025
- Supplying ~40% of our annual energy costs



Giving Land a Second Chance: Ribbon Cutting October 2025



Giving Waste a Second Chance: Methane Gas Reuse



Fox Metro Water Reclamation District

November 18, 2020 · 🌐



The short days and leaf fall make our methane gas flare more visible this time of year. Just a reminder that it's normal and everything is fine. Fox Metro is NOT on fire -- please do not call the fire department. Thanks!



- Nicor pilot project (quietly) released in Summer 2021
- Federal Inflation Reduction Act (IRA) in August 2022
- Climate Pollution Reduction Act in 2024



Project Drivers: Over 50% of Biogas is Wasted Via Flare

**Solids from Both
WW
Treatment
Plants**



Year	Total Production (cu ft/day)	Boilers (cu ft/day)	Flares (cu ft/day)	Gas Used (%)
2018	428,763	28,225	400,538	7
2019	435,694	176,999	258,695	41
2020	463,800	205,703	258,097	44
2021	474,775	195,475	279,300	41
2022	495,181	196,672	298,509	40

cu ft/day=cubic feet per day

Annual Average Total Digester Gas Production and Utilization



Flare

**Methane
Gas**



Gas Sphere

Previously Used to Fuel Generators



Boilers to Heat Digesters



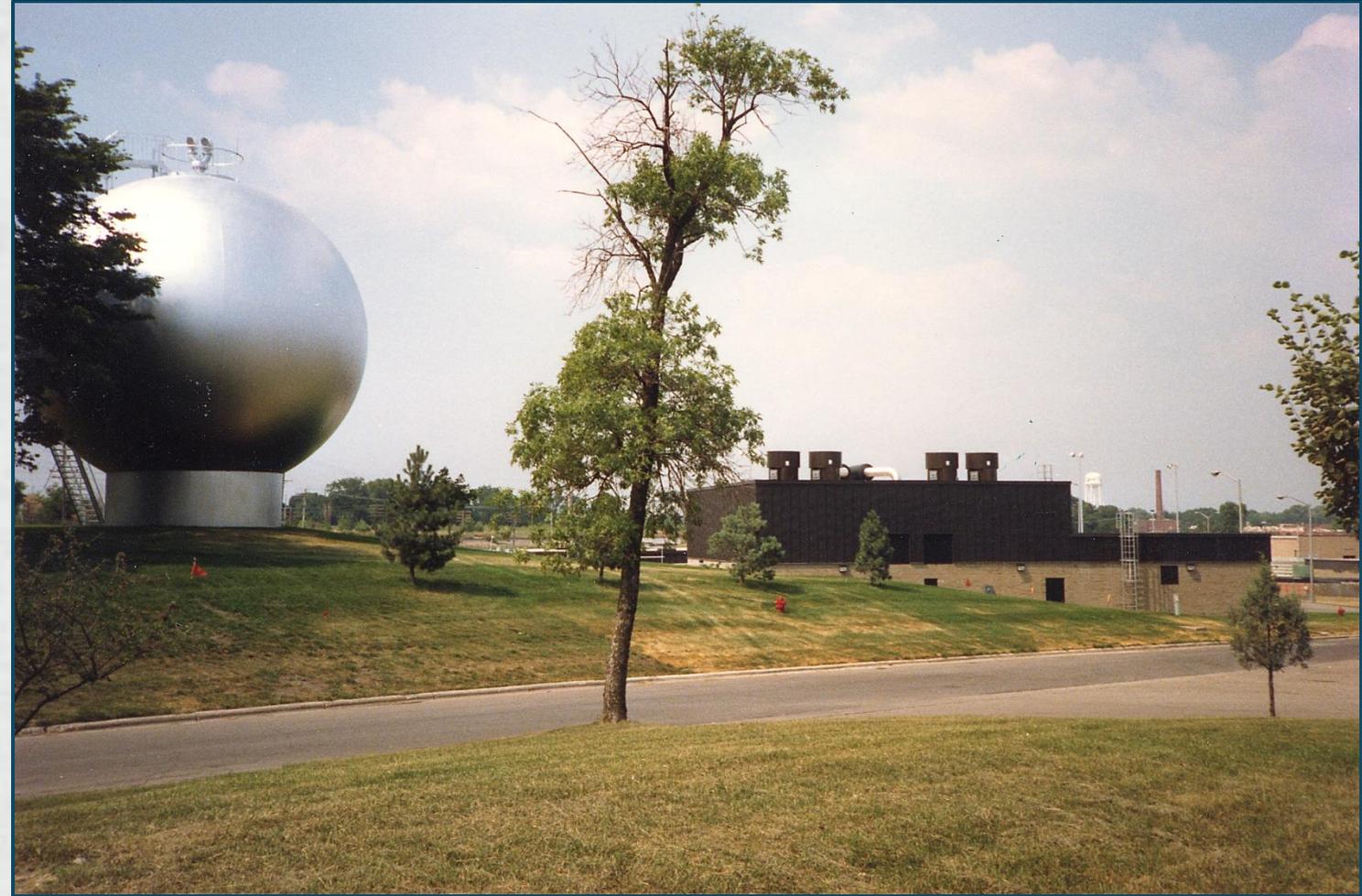
Giving Waste a Second Chance: Methane Gas Reuse

- Springfield 1915 gas lifters
- Reused gas since 1930
- Gas lifters in 1958
- CHP in 1989;
Decommissioned ~2015
- Engines sold in 2019



Giving Waste a Second Chance: Methane Gas Reuse

- Reuse existing building, piping, and sphere
- RNG Production for Pipeline Injection
- Year 4 of Negotiations with Nicor = Tenacity



Giving Waste a Second Chance: Methane Gas Reuse



- Currently under construction
- \$11M; Payback = 4 years
- Subsequently cash positive
- Nonmonetary benefits
 - Less nuisance
 - Less waste
 - Reuse existing infrastructure
 - Environmental stewardship
 - Innovative project



What's Next? Sustainability projects

- Batteries ordered for BESS
 - \$6M ordered and being built
 - 2-year payback
 - Bridge power gap in emergencies
 - Sell excess power via real-time monitoring
 - \$5.5M profit over 15 years



What's Next? Illinois Water Reuse Chapter



- Reusing effluent since 1930
- 2006 project stalled out due to prohibition and public misconceptions
- Already have plans, specs, and some easements
- Need: prohibition repealed and offtakers (data centers?)



What's Next? Connecting to the Mission

- Chasing failed septic systems
- Connecting to sanitary sewer where available, grants?
- Silver Tsunami = Waubonsee Community College Public Works program
- Public Outreach Coordinator

Waubonsee Water Ways:
Building Pathways to Careers in
the Water Sector.

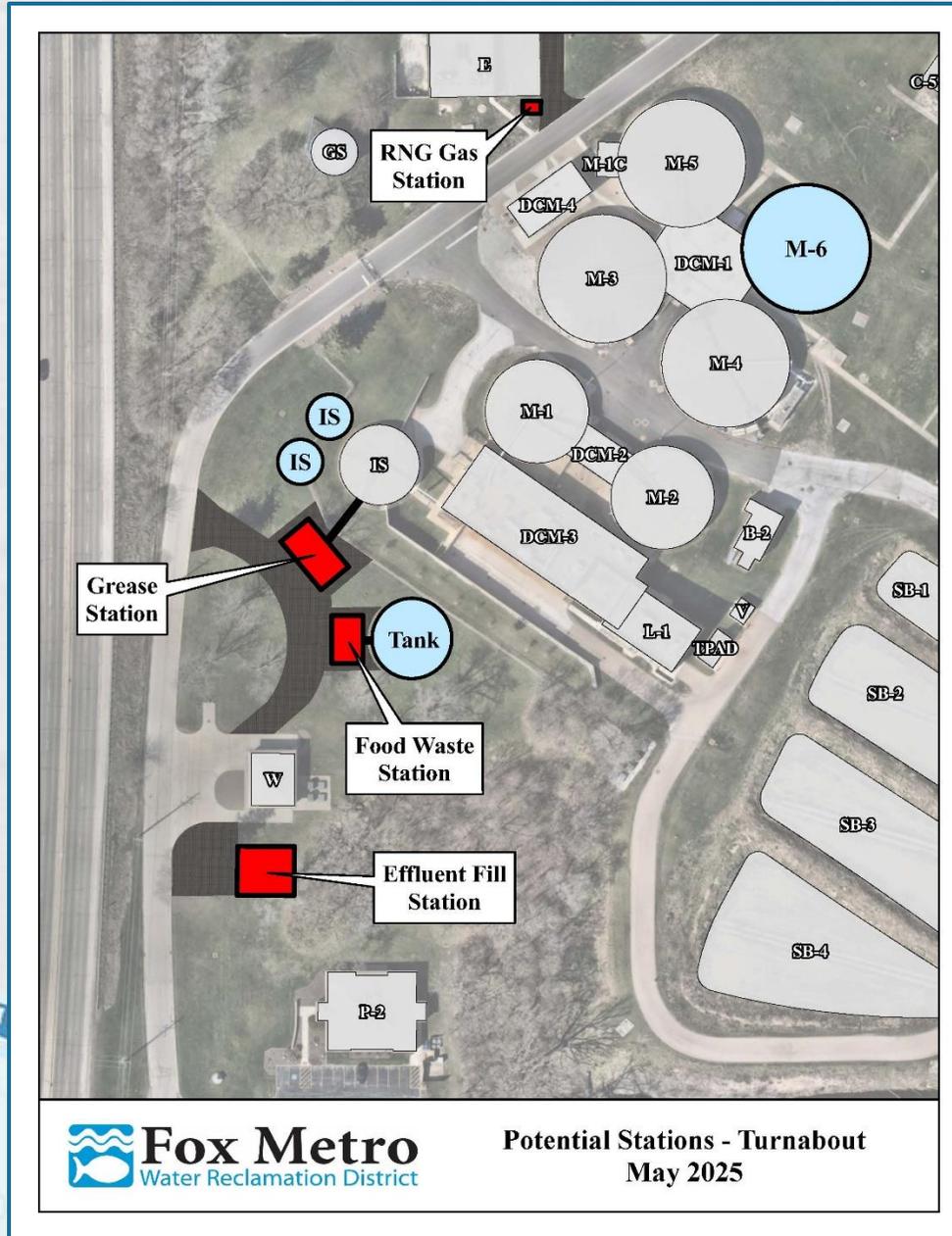


A grant from the National
Science Foundation

uniquely positions Waubonsee to train you to enter this in-demand field **in just one year.**



What's Next? Sustainability projects



- Regional hub for RNG
- Solar field #3 for UV system
- Solar power for lift stations
- Fleet vehicle charging
- Food and grease waste reclamation = more gas



Acknowledgements

- Current staff
- Past staff
- Consulting firms



Drought 2005: Fox Metro Effluent vs. Fox River



Giving Waste a Second Chance: Biosolids as Fertilizer

- Class B
- Farmers like it
- \$19M Bar Screen project should help quality

