



## Ohio Spotlight

# **LESSONS LEARNED FROM A COST-BENEFIT ANALYSIS OF LEAD PIPE REMOVALS**

March 26, 2025





# WELCOME!

## Ohio Spotlight: Lessons Learned

### *While you wait ...*


- Introduce yourself in the chat!
- Please use the chat box for questions.
- Please fill out the post-webinar survey so we can improve!



# ABOUT RIVER NETWORK

River Network grows and strengthens a transformational national network of water, justice, and river advocates.

*We envision a powerful and inclusive movement that ensures abundant clean water for all people and nature to thrive. We believe that joy and hope for our planet flows through our rivers.*

Meet the network and search our Water Protectors Map on our website!  
[rivernetwork.org](https://rivernetwork.org) 





# MEET OUR SPEAKERS



**Annalisa Rocca**

As the Drinking Water Manager for Ohio Environmental Council, Annalisa leads policy advocacy efforts to ensure access to safe, clean, and affordable drinking water for all Ohioans. With a strong background in environmental policy and economics, Annalisa works closely with lawmakers, government agencies, and stakeholders to advance legislation and initiatives that protect drinking water throughout the state.

Annalisa graduated from Michigan State with a degree in Environmental Economics & Management. While there, she piloted a program with the university's office of sustainability.



**Rob Moore**

Rob is the principal for Scioto Analysis. Rob has worked as an analyst in the public and nonprofit sectors and has analyzed diverse issue areas such as economic development, environment, education, and public health. His specialty is applied microeconomic analysis of public policies and tradeoffs between efficiency and equity outcomes in economic development and social safety net programs.

Rob holds a Master of Public Policy from the University of California Berkeley's Goldman School of Public Policy and a Bachelor of Arts in Philosophy from Denison University.





**What's happening with lead?**



# LEAD POLICIES

- **Final Rule: Lead and Copper Rule Improvements (LCRI)**
  - Inventory and replacement of lead pipes within 10 year
  - Lower action level: 10 ppb
  - Offer (but no requirement) to test for lead in school drinking water
- **Concerns with a Congressional Review Act (CRA)**
  - Would revert rule to previous Trump admin. Ruling (*Lead and Copper Rule Revisions*)
  - H.J. Resolutions 22 and 44 introduced





# Lead Line Replacement Act

Ohio ranks 3rd in the nation for the most lead service lines with an estimated 745,000 lines

Ohio legislation requires all public water systems to fully replace lead service lines within 15 years.

Sponsored by Assistant Minority Leader **Representative Dontavius Jarrells** (D – Columbus)





# What's the cost of doing nothing?





# Policy Options

## Status Quo

A portion of lead service lines in Ohio will be replaced either by the H2Ohio program, federal infrastructure act, or other funding.

## Full Replacement

Every lead service line in Ohio will be replaced over the next fifteen years.





# Impacts





# Impacts

## Benefits

- Decreased ADHD
- Decreased Dementia
- Decreased Depression
- Increased IQs
- Decreased Anemia
- Decreased Coronary Heart Disease
- Decreased Cardiovascular Mortality
- Decreased Infant Mortality
- Decreased Water Waste

## Costs

- Cost of pipe replacement to customers
- Cost of pipe replacement to utilities





# Results

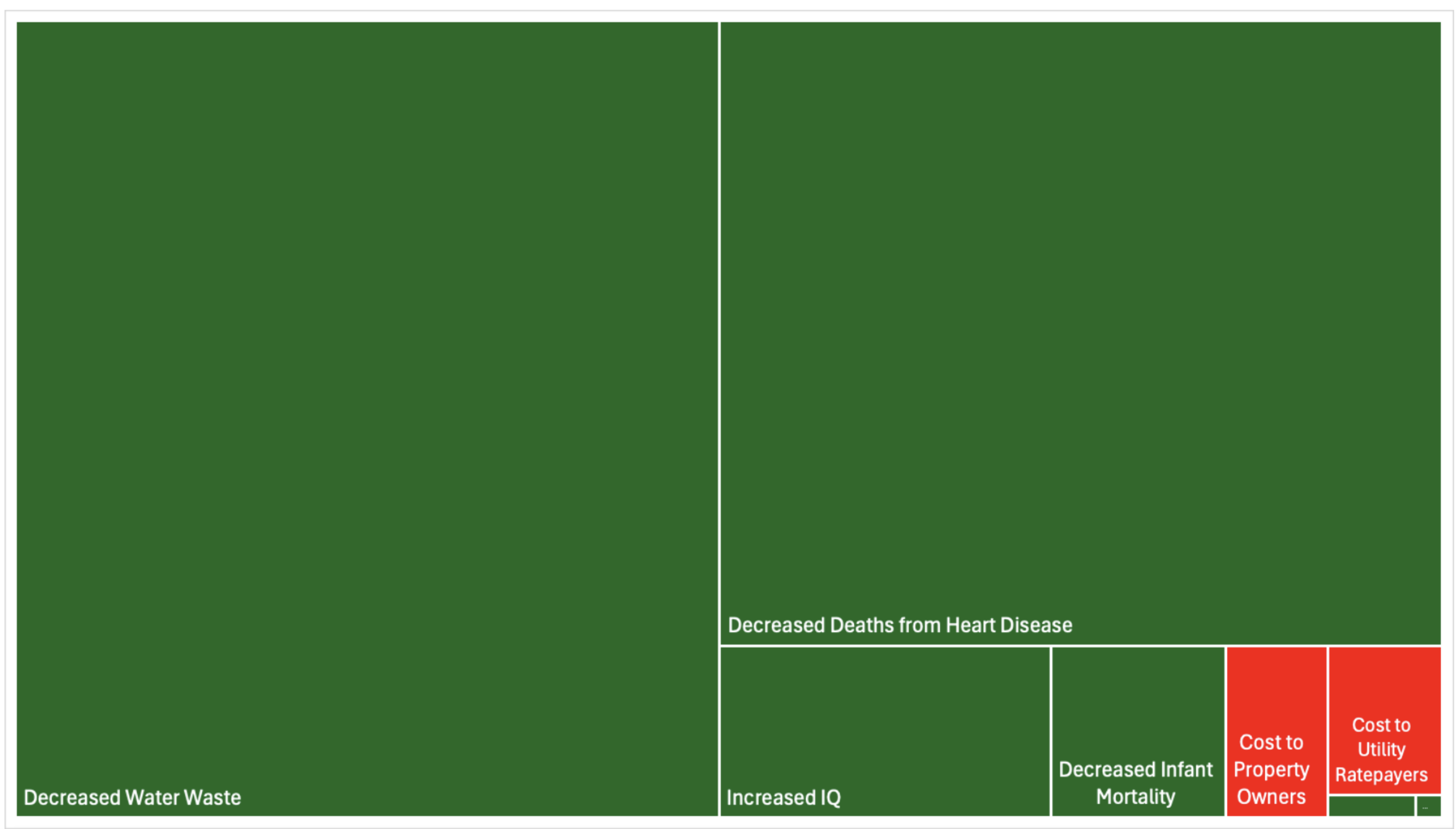


Benefits		
Impact	Quantified Impact	Monetized Impact
Decreased ADHD	150 ADHD Cases	\$1.5 million
Decreased Dementia	520 Dementia Cases	\$13 million
Decreased Depression	3,800 Depression Cases	\$290 million
Increased IQs	1.25 Average IQ-point increase for 290,000 children	\$8.4 billion
Decreased Anemia	7,300 Anemia Cases	\$22 million
Decreased Coronary Heart Disease	2,400 Coronary Heart Disease Cases	\$52 million
Decreased Cardiovascular Mortality	9,700 Deaths from Heart Disease	\$66 billion
Decreased Infant Mortality	650 Infant Lives	\$4.4 billion
Decreased Water Waste	-	\$82 billion
Total Benefits	-	\$160 billion
Costs		
Impact	Monetized Impact	
Utility	\$2.7 billion	
Customer	\$2.3 billion	
Total Costs	\$4.9 billion	
Total		
Net Present Value	\$160 billion	
Benefit-Cost Ratio	31:1	

Table 2: Total Quantified and Monetized Benefits and Costs, Base Scenario



# Results





# Monte Carlo Simulation

10,000 Simulations

Inputs varied

- Ratios used to adjust to local conditions
- Dementia rate
- Value of statistical life
- Decreased water waste
- Cost per lead pipe replacement
- Number of lead pipes





# Monte Carlo Simulation

Impact	5th Percentile	Average	95th Percentile
Net Present Value	\$140 billion	\$160 billion	\$180 billion
Benefit-Cost Ratio	32:1	37:1	45:1
Heart Disease Deaths Prevented	8,100	8,800	9,600
Coronary Heart Disease Cases Prevented	2,600	2,900	3,100
Depression Cases Prevented	525	575	625

**Table 4:** Monte Carlo Simulation Results



# Sensitivity Analysis

Pessimistic Inputs: 23:1 B-C Ratio

\$0 VSL: 18:1 B-C Ratio

Eliminate decreased water waste: 16:1 B-C Ratio





# Sensitivity Analysis

Scenario	Net Present Value	Benefit-Cost Ratio
20% of replacements take place in first 5 years	\$130 billion	28:1
20% of replacement takes place in first 8 years	\$100 billion	22:1
20% of replacement takes place in first 10 years	\$82 billion	18:1

**Table 5:** Partial sensitivity analysis of speed of implementation



# Press Tour

Four day press tour around the state of Ohio

- Columbus
- Youngstown
- Cleveland
- Cincinnati

13 different speakers

- 6 elected officials
- 4 different organizations represented
- community health officials



**UNFORTUNATELY, OHIO  
RANKS AS ONE OF THE TOP  
STATES IN THE COUNTRY  
FOR LEAD SERVICE LINES.**

*And this infrastructure issue  
has an outsized impact on our  
health and economy.*

*learn more: [bit.ly/replace-ohio-lead-lines](https://bit.ly/replace-ohio-lead-lines)*





# Media Reach

Evening TV news spot in 4 major cities

12 articles

1 podcast interview

## Social Media Campaign

	Estimated Reach
Mobile Articles	101.1 M
Web Articles	81.9M
Twitter	7,790



Ohio Environmental Council

# REPLACING OHIO'S LEAD LINES

New report shows significant public health and economic benefits of fully replacing Ohio's lead water service lines





Ohio Environmental Council


## A NEW COST-BENEFIT ANALYSIS REVEALS REPLACING ALL OF OHIO'S ESTIMATED 745,000 LEAD WATER SERVICE LINES OVER THE NEXT 15 YEARS WILL RESULT IN:



BETTER PHYSICAL & MENTAL HEALTH OUTCOMES



FEWER DEATHS



LESS WATER WASTE



SIGNIFICANT ECONOMIC BENEFITS

### FOR ALL WHO CALL OHIO HOME

learn more: [bit.ly/replace-ohio-lead-lines](https://bit.ly/replace-ohio-lead-lines)

ohioenviro



ohioenviro NEW REPORT: Today, the OEC released a new cost-benefit analysis demonstrating the significant public health and economic benefits of fully replacing Ohio's lead service lines.

Ohio unfortunately ranks as one of the top states in the country for lead service lines. These pipes release low levels of lead into drinking water that can contribute to chronic health issues for adults and children.

We must act now to get the lead out. The faster we act, the sooner Ohioans will realize the health and economic benefits of replacing those service lines. Learn more at the link in our bio.

#GetTheLeadOut #CleanWater #OhioEnviro

27w



Liked by [rileyadean](#) and 38 others





September 12, 2024

REPLACING OHIO'S LEAD LINES

For every dollar invested in lead service line removal in Ohio,



the state will see a public health and economic benefit of \$32 to \$45.



learn more: [bit.ly/replace-ohio-lead-lines](https://bit.ly/replace-ohio-lead-lines)



# Other Uses

## Water Policy Briefing at the Statehouse

- Over 50 lawmakers, aides, and fellows
- Republicans and Democrats in attendance

## Community and Lawmaker education meetings and presentations





# Bi-partisan support for Lead Line Replacement Act

Sponsored by Assistant Minority Leader Representative Dontavius Jarrells (D – Columbus) **AND** Representative Monica Robb Blasdel (R – Columbiana)

Watch out for reintroduction this spring!





# ONLINE COMMUNITY

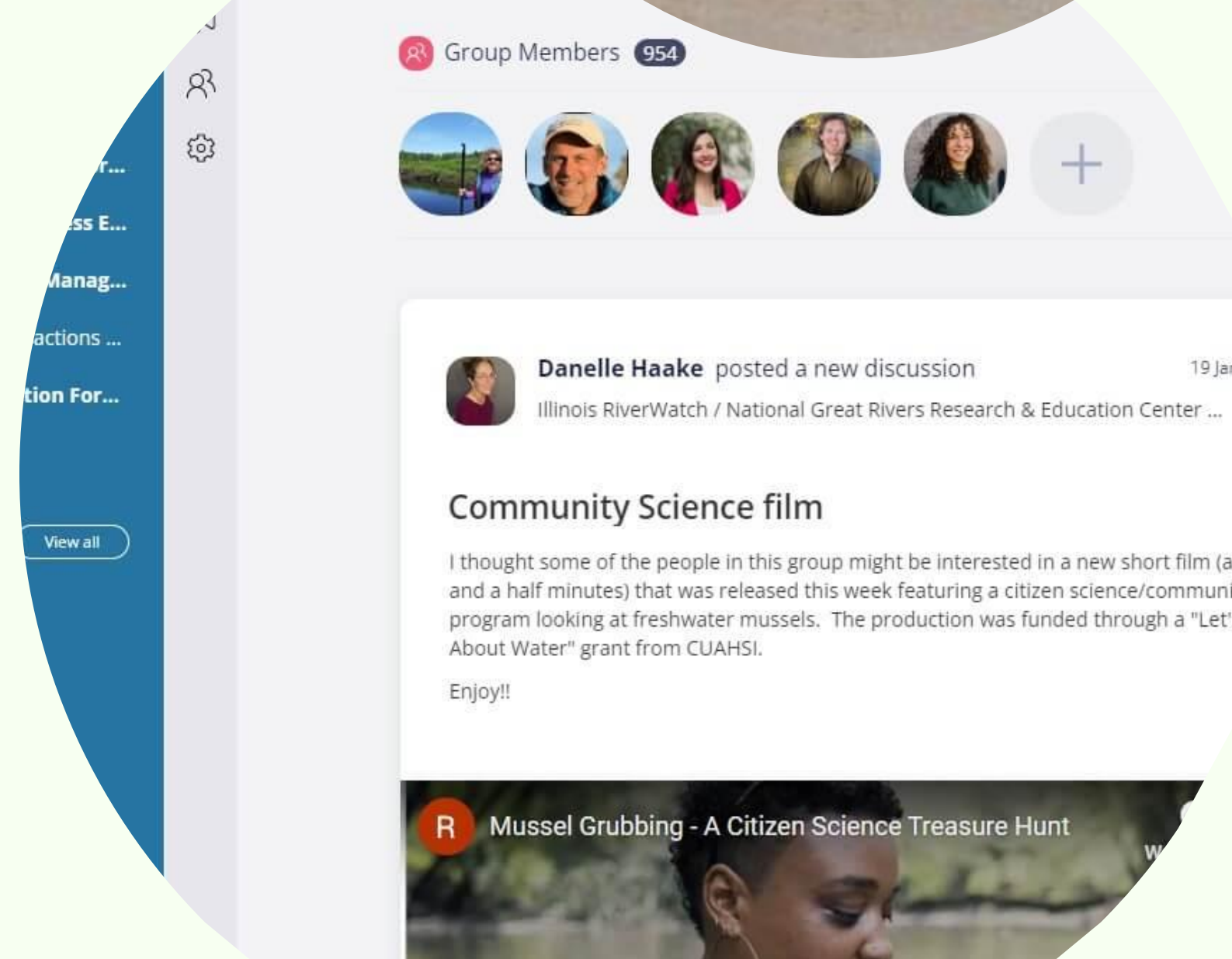
*Join the River Network Online Community to:*

- Connect with peers on topics that matter to you
- Share opportunities and address challenges
- Stay up to date on the latest water news
- Foster partnerships for shared impact

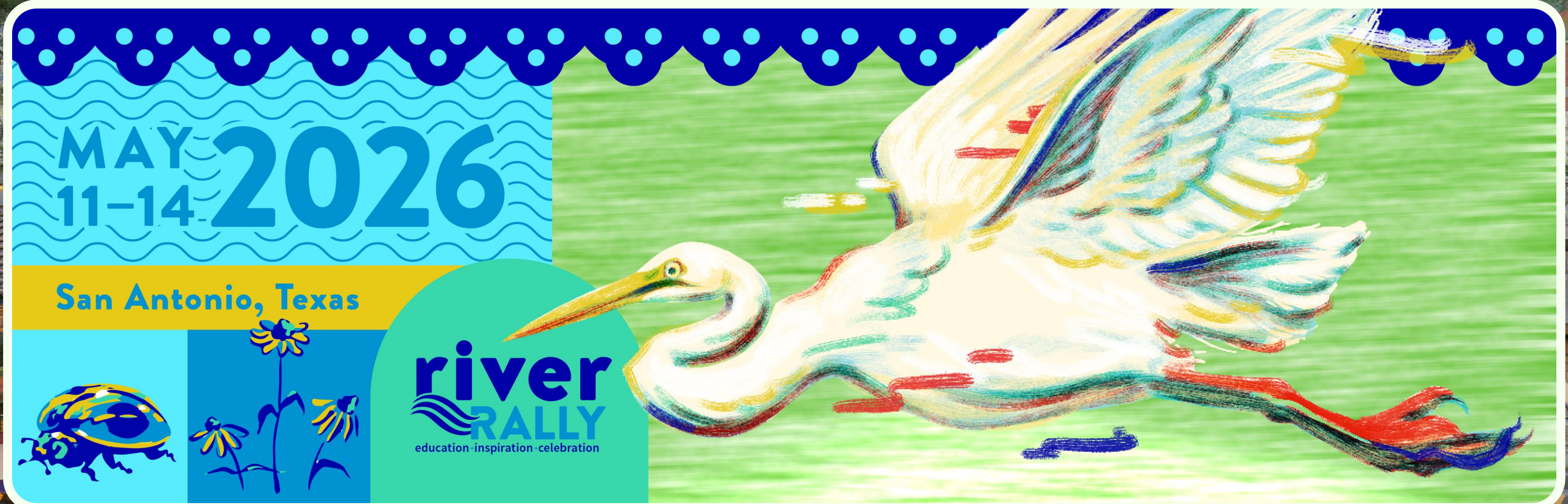
*To register and start connecting, visit:*

*→ [rivernetwork.org/connect-learn/community](https://rivernetwork.org/connect-learn/community)*

*The community is open to all River Network members. Not a member? Your free membership begins when you join. Together, we can do more!*







**SAVE THE DATE!**  
*May 11-14, 2026 in San Antonio, Texas*

→ [rivernetwork.org/river-rally](http://rivernetwork.org/river-rally)



# ***THANK YOU!***

This presentation will  
be available online.

*We would love your feedback on this event!*

→ [bit.ly/RN-Feedback](https://bit.ly/RN-Feedback)

