



# **RESILIENCE PLANNING AND ADAPTATION TRAINING FOR WATER AND WASTEWATER UTILITIES**

***Sponsored by U.S. EPA's  
Creating Resilient Water Utilities (CRWU) Initiative***



# **Welcome, Workshop Objectives & Agenda**

## **July 17, 2018**

Rachid Zoghaib  
Cleveland Water Pollution Control

Ashley Greene  
U.S. EPA Headquarters

Alfredo Lagos  
GDIT

# Workshop Objectives

- Share information about how environmental conditions and extreme weather events (e.g., drought and flooding) could impact drinking water, wastewater, and stormwater utilities in the Midwestern U.S.
- Identify and share information on adaptation strategies to build utility long-term resilience and discuss strategies for making the business case to invest in resilience.
- Share utility stories of successful resilience planning effort and adaptation activities.
- Introduce EPA's Creating Resilient Water Utility (CRWU) resources and tools; and
- Share information on available resources for financing resilience and adaptation.

# Workshop Agenda: July 17<sup>th</sup>

Time	Event
8:30 a.m.	Welcome, Agenda Review and Participant Introductions <i>Rachid Zoghaib, Cleveland Water Pollution Control (WPC)</i>
9:00 a.m.	Presentation: Regional Extreme Weather Projections and Water Sector Impacts <i>James DeGrand, State Climate Office of Ohio</i>
9:30 a.m.	Presentation: Adaptation and Resilience, CRWU Tools, Concepts, and Making the Business Case <i>Ashley Greene, U.S. Environmental Protection Agency</i>
10:15 a.m.	Break
10:30 a.m.	Introduction to CREAT <i>Jennifer Heard, Cleveland Water Pollution Control (WPC)</i> <i>Rachid Zoghaib, Cleveland Water Pollution Control (WPC)</i>
12:15 p.m.	Lunch
1:15 p.m.	Refresher Activity

# Workshop Agenda: July 17<sup>th</sup>

Time	Event
1:30 p.m.	Utility Resilience Planning Case Study Panel Discussion <i>Moderator, Pamela L. Davis, Northeast Ohio Areawide Coordinating Agency (NOACA)</i> <i>Panelist, Frank Greenland, Northeast Ohio Regional Sewer District</i> <i>Panelist, Robert Munro, Avon Lake Regional Water</i> <i>Panelist, Derek Schafer, West Creek Conservancy</i>
2:30 p.m.	Break
2:45 p.m.	Small Group and Plenary Discussion: Advancing Resiliency Planning Efforts and Effective Communication Ideas Exchange
3:45 p.m.	Presentation: Financing Resilience and Adaptation <i>Jerry Rouch, Ohio EPA</i>
4:15 p.m.	Workshop Wrap-Up
4:30 p.m.	Adjourn

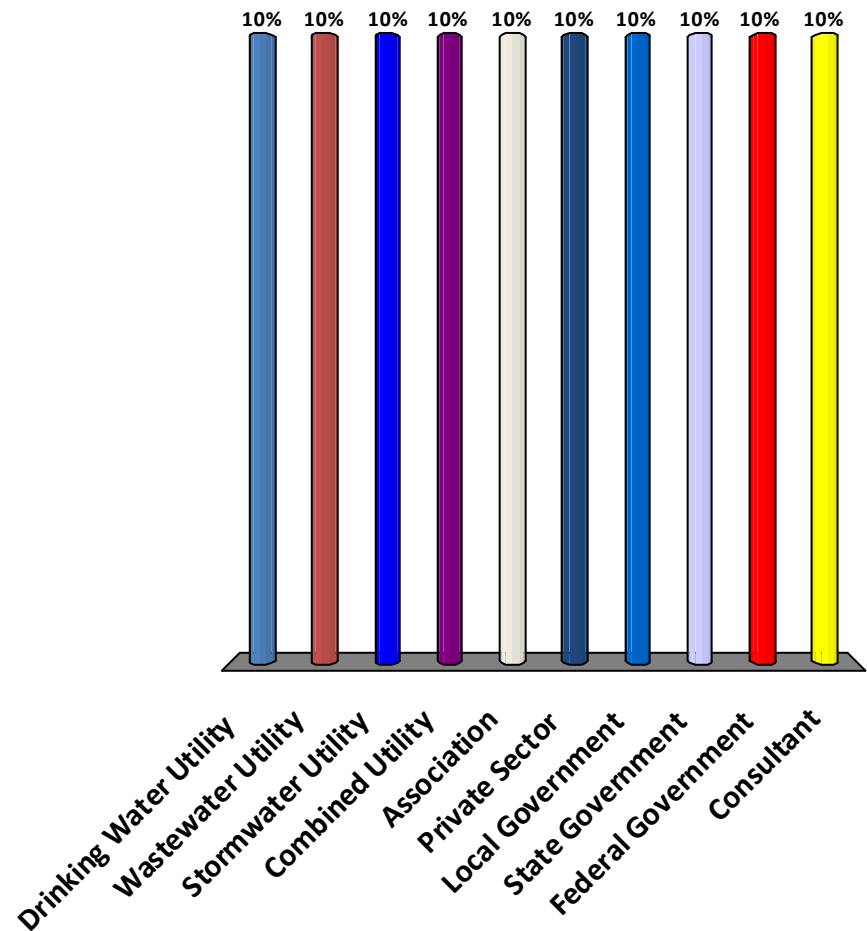


# **Introductions and Perspectives on Extreme Events**

Alfredo Lagos  
GDIT

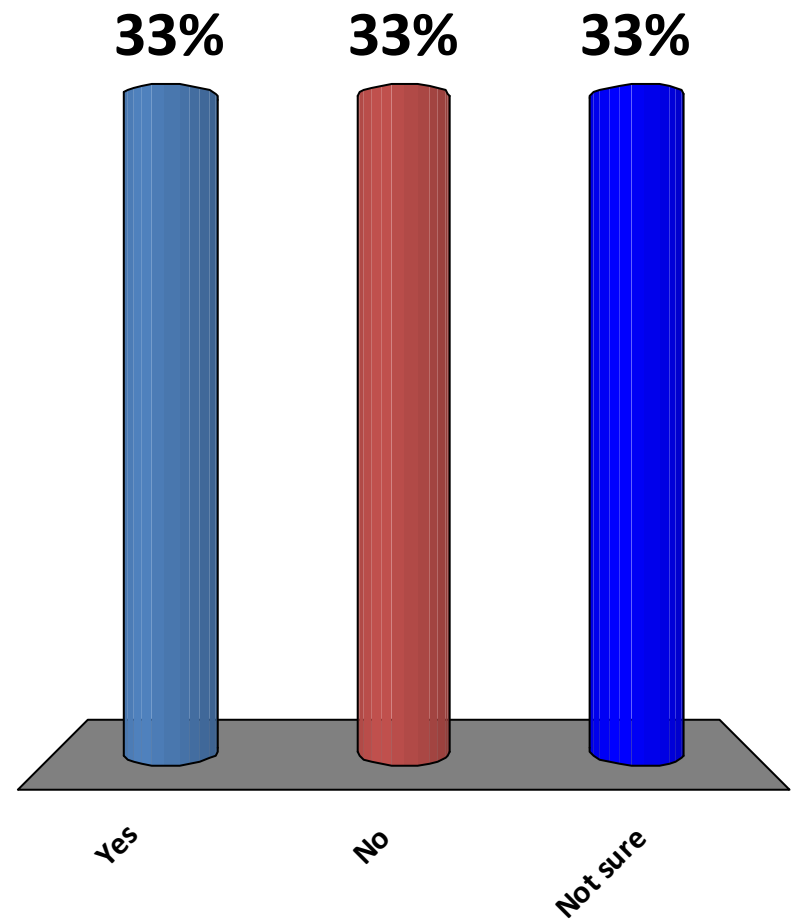
## What group do you represent?

1. Drinking Water Utility
2. Wastewater Utility
3. Stormwater Utility
4. Combined Utility
5. Association
6. Private Sector
7. Local Government
8. State Government
9. Federal Government
10. Consultant



# Have you conducted any extreme event or climate adaptation planning at your organization?

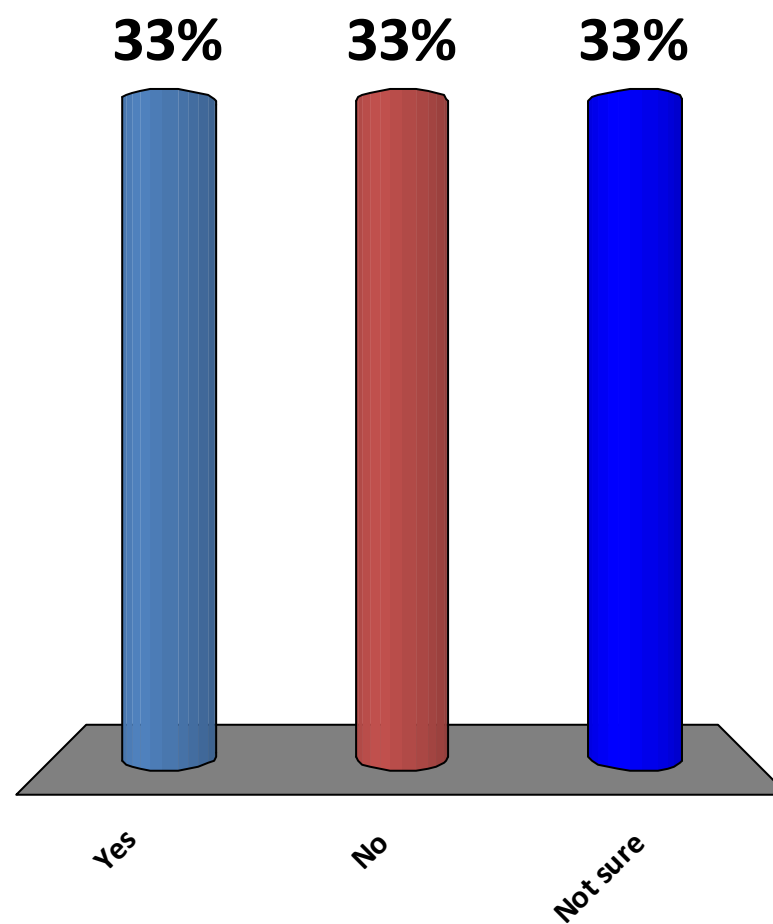
1. Yes
2. No
3. Not sure





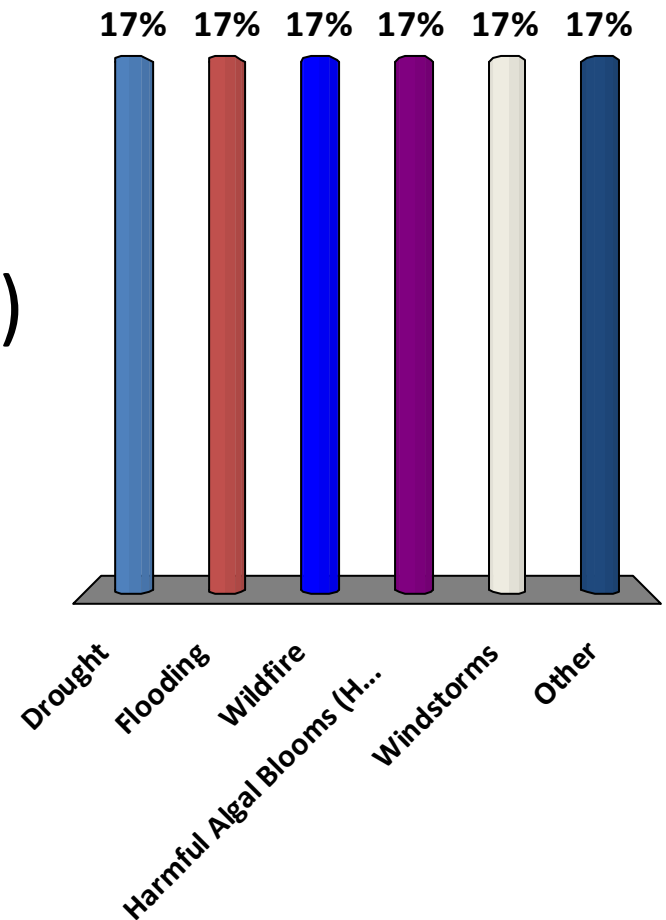
## Have you ever used CREAT or any other USEPA Creating Resilient Water Utilities (CRWU) resource before?

1. Yes
2. No
3. Not sure



# What potential extreme weather or future environmental condition impact are you most concerned about at your organization?

1. Drought
2. Flooding
3. Wildfire
4. Harmful Algal Blooms (HABs)
5. Windstorms
6. Other



# Introductions

- Name
- Title
- Affiliation
- Brief statement about your experience with or concerns about extreme events or potential environmental impacts to your utility, organization, or location



# **Regional Extreme Weather Projections and Water Sector Impacts**

James DeGrand

State Climate Office of Ohio



# **Adaptation and Resilience, CRWU Tools, Concepts, and Making the Business Case**

Ashley Greene

U.S. Environmental Protection Agency  
Office of Ground Water and Drinking Water  
Creating Resilient Water Utilities (CRWU) Initiative



# Introduction to CREAT

Jennifer Heard  
Rachid Zoghaib

Cleveland Water Pollution Control



# Refresher Activity

Alfredo Lagos  
GDIT



## **Utility Resilience Planning Case Study Panel Discussion**

Moderator, Pamela L. Davis  
Northeast Ohio Areawide Coordinating Agency

Panelist, Frank Greenland  
Northeast Ohio Regional Sewer District

Panelist, Robert Munro  
Avon Lake Regional Water

Panelist, Derek Schafer  
West Creek Conservancy





## **Small Group and Plenary Discussion: Advancing Resiliency Planning Efforts and Effective Communication Ideas Exchange**

Alfredo Lagos  
GDIT

# Small Group Discussion: Objectives

## Group Charge

- Share examples and actions your organization has implemented to adapt and build resilience to extreme events
- Exchange ideas and lessons learned about integrating resilience and adaptation activities into drinking water, wastewater, and stormwater utility operations
- Share examples and ideas of successful communication strategies to gain stakeholder support and build partnerships to advance water utility resilience planning
- Identify next steps you could take within your utility or community to advance resilience planning efforts

# Small Group Discussion: Process – *30 minutes*

## **Self-facilitated Process**

- Break into groups based on the colored dot on your name tent for placement
- Discuss all questions with your group
- Draw on workshop content and your own experience
- Record your key takeaways on worksheet
- Support staff will help facilitate
- Identify a group member to provide summary and report highlights

***Enjoy your conversation!***

## Small Group Discussion: Questions

- 1) Building on the information presented earlier in the day and during the case study panel, what actions has your organization/utility implemented or is planning to implement to adapt to extreme events? If you have not implemented any actions yet, what ideas do you have for getting started?
- 2) What lessons have you learned from implementing these actions and integrating them into utility operations? What has been successful and/or challenging?

## Small Group Discussion: Questions

- 3) Who are the key decision-makers or stakeholders whose support or buy-in is necessary to make or advance progress on resilience planning? What communication methods or strategies have worked or not worked to gain support? Who have been successful partners in advancing efforts?
- 4) How can you continue to raise awareness about the benefits of resilience planning in your utility or community? What steps can you take after this workshop to advance the discussion and action?

# Small Group Reports

- 1) Building on the information presented earlier in the day and during the case study panel, what actions has your organization/utility implemented or is planning to implement to adapt to extreme events? If you have not implemented any actions yet, what ideas do you have for getting started?
- 2) What lessons have you learned from implementing these actions and integrating them into utility operations? What has been successful and/or challenging?
- 3) Who are the key decision-makers or stakeholders whose support or buy-in is necessary to make or advance progress on resilience planning? What communication methods or strategies have worked or not worked to gain support? Who have been successful partners in advancing efforts?
- 4) How can you continue to raise awareness about the benefits of resilience planning in your utility or community? What steps can you take after this workshop to advance the discussion and action?



# Financing Resilience and Adaptation

Jerry Rouch

Ohio Environmental Protection Agency

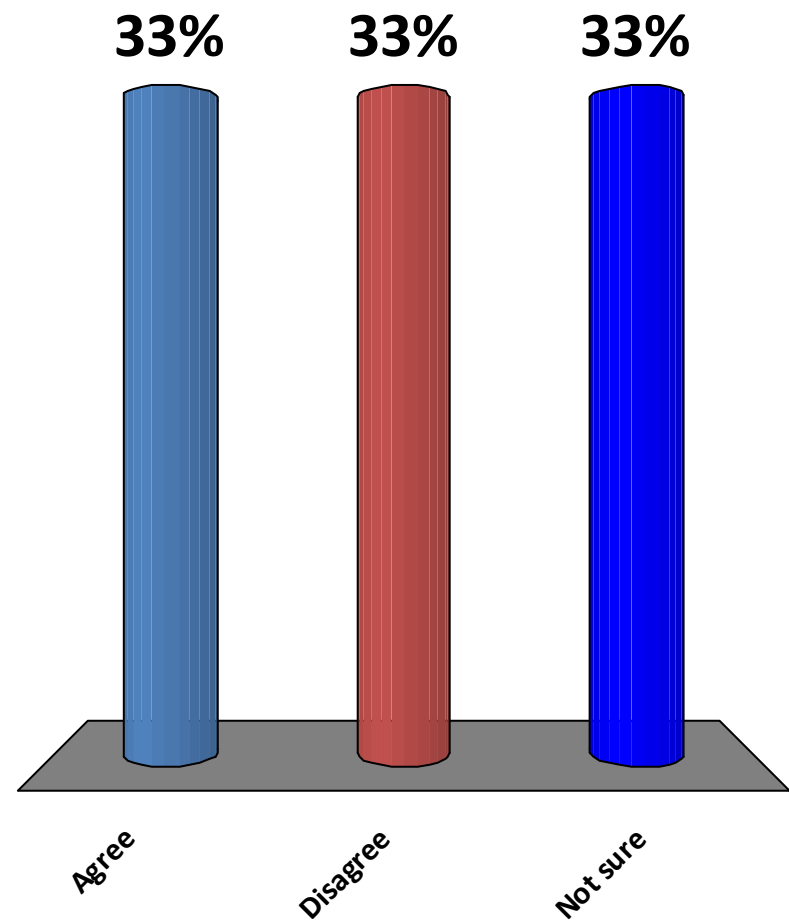


## **Workshop Wrap-Up**



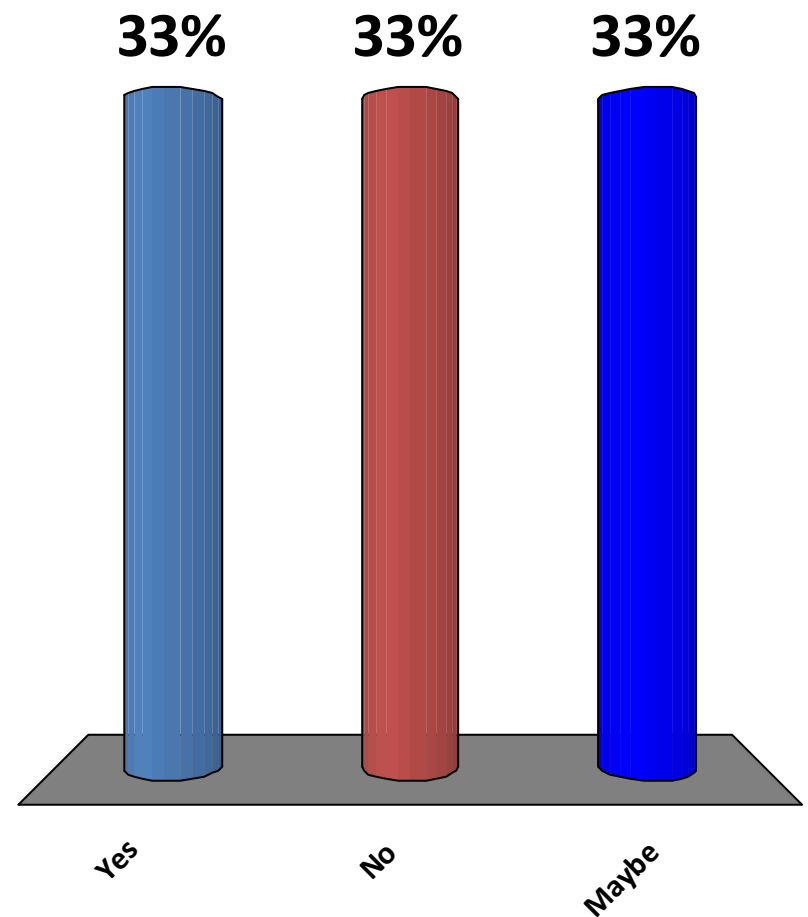
I will share the information I learned at this training with my colleagues and management.

1. Agree
2. Disagree
3. Not sure



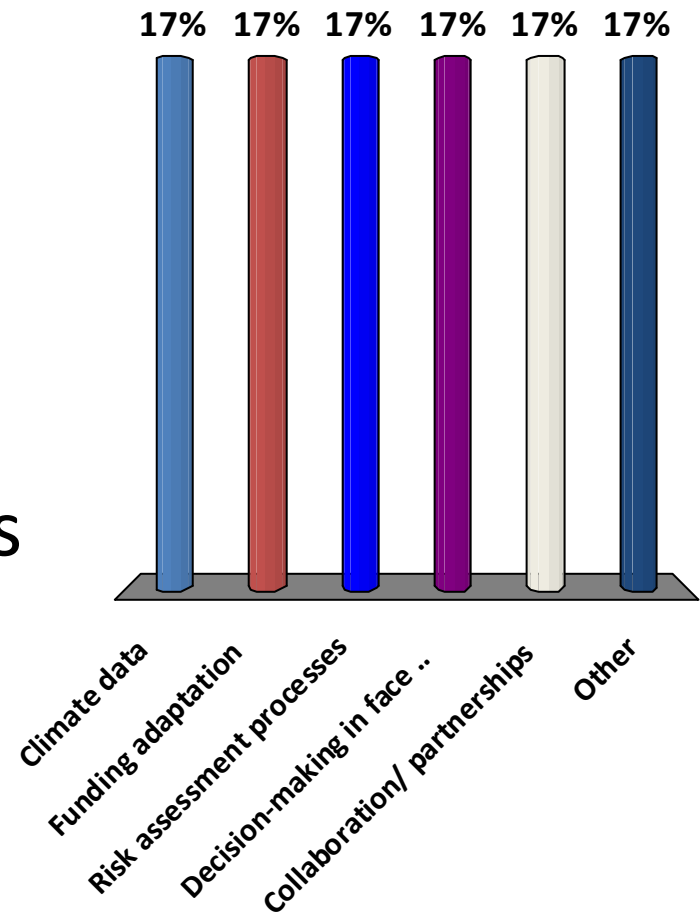
# Would you like to participate in future webinars to learn more about CRWU resources or get additional help with your CREAT assessment?

1. Yes
2. No
3. Maybe



## What topic would you like more information on in the future?

- A. Climate data
- B. Funding adaptation
- C. Risk assessment processes
- D. Decision-making in face of uncertainty
- E. Collaboration/ partnerships
- F. Other



# Contact Us

- [crwuhelp@epa.gov](mailto:crwuhelp@epa.gov)
- Curt Baranowski
  - [Baranowski.Curt@epa.gov](mailto:Baranowski.Curt@epa.gov)
- Steve Fries
  - [Fries.Steve@epa.gov](mailto:Fries.Steve@epa.gov)
- Ashley Greene
  - [Greene.Ashley@epa.gov](mailto:Greene.Ashley@epa.gov)

Visit us on the web at:  
[www.epa.gov/crwu](http://www.epa.gov/crwu)

Join our mailing list:  
[crwu\\_contacts@lists.epa.gov](mailto:crwu_contacts@lists.epa.gov)