# URBANWATERS

10-Year Anniversary Celebration

# *The event will start momentarily.*

## DAY 2

10:00 am EST Climate Equity Workshop

<15 min break>

12:15 pm EST Youth Engagement & Job Creation Workshop

### Housekeeping notes:

- Spanish Translation and Close Captions are available
- The chat room will be open during the meeting to share comments and questions, resources.
- Please keep your mics on mute

# Climate Equity Workshop Goals

1. **Exploring ways in which Urban Waters Federal Partnership locations can leverage their unique role as multi-stakeholder platforms** to promote a holistic understanding of local climate threats and identify and advance multi-benefit solutions that garner broad community support

2. **Identifying ways in which UWFPs can launch or support initiatives that develop local leadership capacity**, so that a broader spectrum of the community participates in discussions and decisions related to climate mitigation and resilience.

# Agenda

## Opening Remarks

## Urban Waters Partner Perspectives Panel

❖ **Action:** Panelists followed by a moderated Q & A

- East-West Gateway Council of Governments | **Mary Grace Lewandowski**
- University of Maryland/Maryland Sea Grant Extension | **Kelsey Brooks**
- U.S. Geological Survey (USGS) | **Bob Shedlock**
- USGS Oklahoma-Texas Water Science Center | **Julio Beltran**

## Breakout Groups

- River Network | **Diana Toledo**

## Breakout Group Debrief

❖ **Action:** Report back from breakout groups

## Conclude

# URBANWATERS
## FEDERAL PARTNERSHIP
*Restoring Urban Waters, Revitalizing Communities*

## Mission & Vision

*"The Urban Waters Federal Partnership will help urban and metropolitan areas, particularly those that are **underserved or economically distressed**, connect with their waterways and work to improve them."*

**Focus Areas:**

- Revitalization
- Restoration,
- Stormwater Management/GI,
- Greening,
- Outreach and Public Engagement
- Youth Engagement
- Support Local, State and Watershed/Multi-jurisdictional Planning,
- Provide Access to Federal Tools and Resources

*Darryl Haddock, Former Urban Waters Ambassador for Atlanta's Proctor Creek, during a cleanup event.*

**More info at: URBANWATERS.GOV**

# Water Reuse Action Plan (WRAP) Pilot Project

URBANWATERS FEDERAL PARTNERSHIP
Restoring Urban Waters, Revitalizing Communities

river NETWORK
connecting people · saving rivers

Promoting Equitable Water Supply Management Through Integrated Planning and Partnerships--An Urban Waters Project


# Equitable Resilience White Paper

URBANWATERS FEDERAL PARTNERSHIP
Restoring Urban Waters, Revitalizing Communities

## Urban Waters Resiliency Project White Paper

Integrating Equity and Environmental Justice into Hazard Mitigation and Resilience Planning

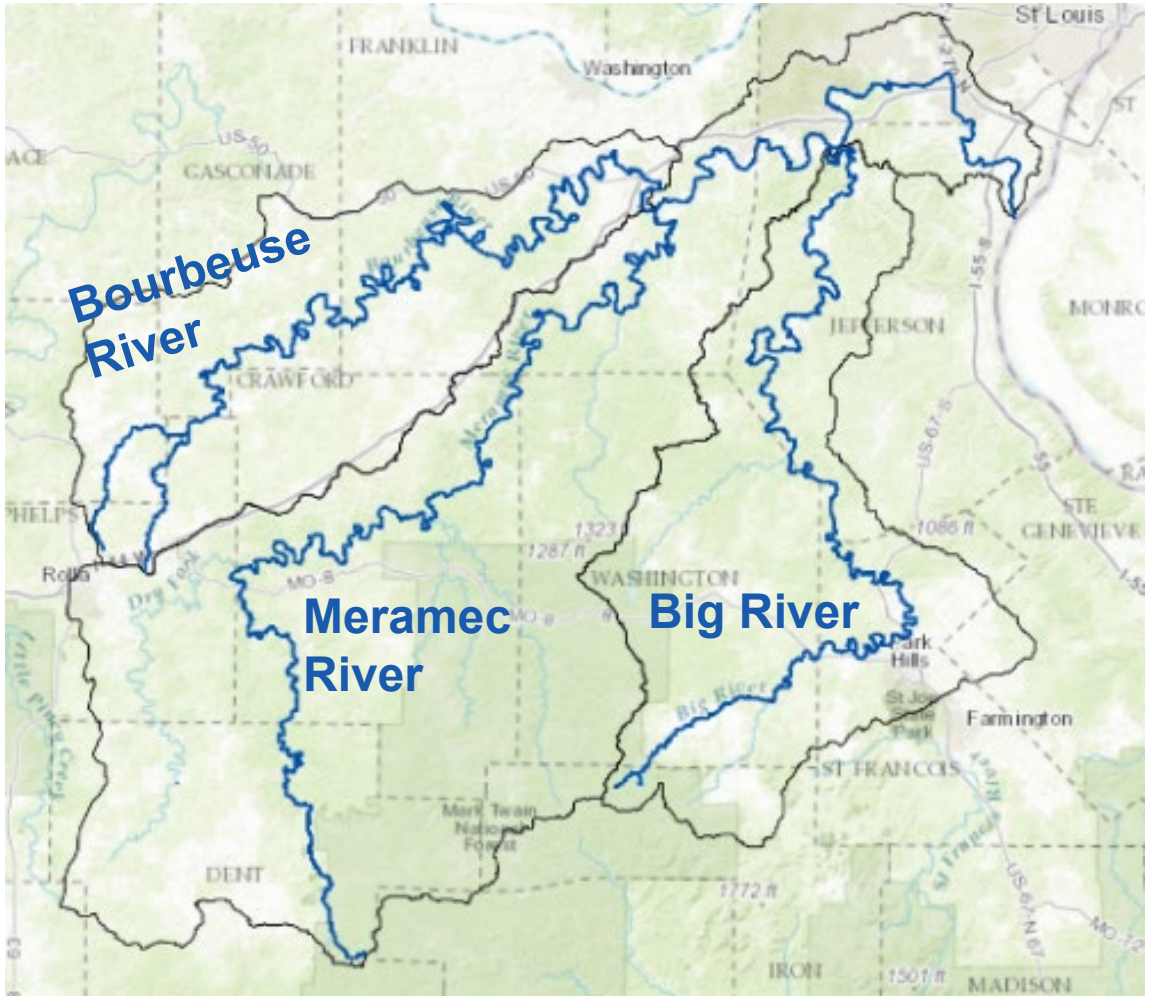
Sponsored by the U.S. Environmental Protection Agency (EPA) Urban Waters Program, Office of Water

# Urban Waters Federal Partnership Role

- **Brings weight and convening power of federal agencies**, which helps attract and sustain the participation of key stakeholders;
- **Coordinates consistently** across a wide range of activities that maintains continuity of focus over time;
- **Engages key partners** who bring technical expertise, garner resources, and develop useful information for decision making; and
- **Builds trust and relationships** that engender stakeholders' willingness to invest time and energy in the collaboration.

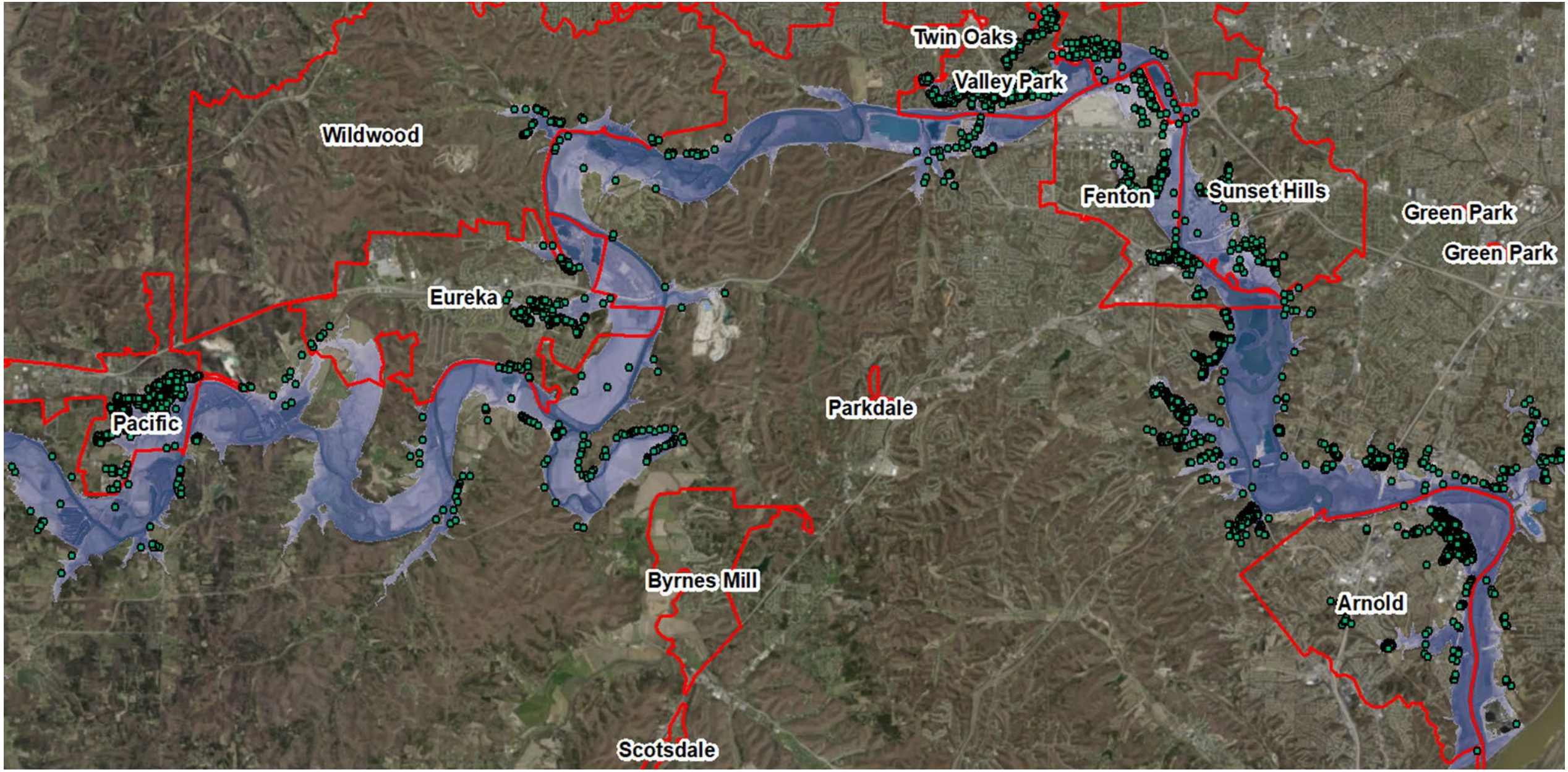
# Meramec River/Big River UWFP

- The Meramec River and its tributaries are one of the most ecologically important watersheds in the Upper Mississippi River basin.
- The MR/BR UWFP was accepted in 2011 - one of 20 locations nationally.
- Communities generally are lower-income & lower than average education levels.
- Many partners involved including federal, state, local and non-profits.
- Meramec basin is an important recreational asset for eastern Missouri and the St. Louis region.



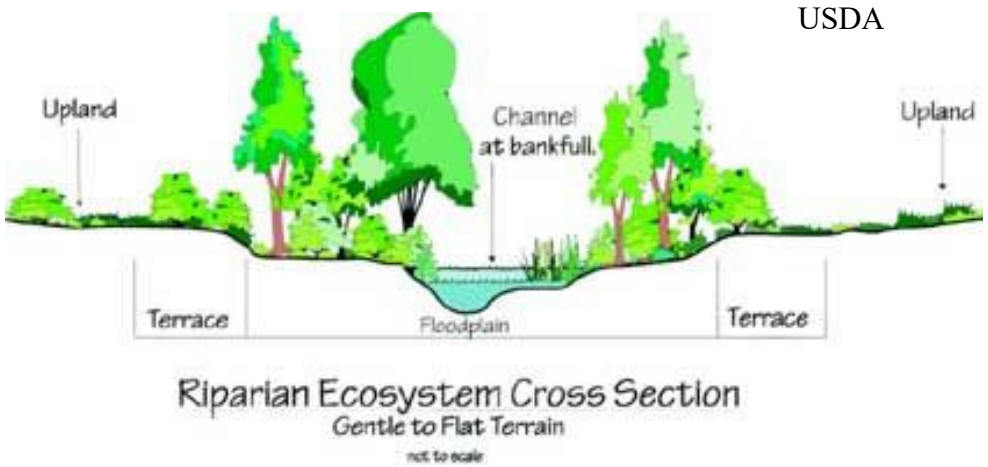

https://www.epa.gov/urbanwaterspartners/urban-waters-and-meramec-and-big-rivers-missouri

# USACE Meramec River FMP



# Lower Meramec Healthy Watershed Cost-Benefit Analysis


Flood-prone Property Acquisition




USDA

Floodplain Restoration

Open Space Preservation
(Mix: park land, walking trails & floodplain restoration)

Municipalities are encouraged to consult with trusted financial advisors to interpret and assess the results of this report

# Meramec Funding Source Database

Filter by:

All | Local Government | Nonprofits | grant | Federal Government | State Government | Tribal Government

Floodplain Restoration | Green Infrastructure | Acquisition | Planning | Conservation | Bioretention | No Match

Infrastructure | Stormwater | Match | Outreach and Education | Private Business | Restoration | Project Design | epa

Technical Assistance | Bond | College/University | Property Owners | Outdoor Recreation | Tax | development | loan

Stream Restoration | Green Space | Demolition | Human Health | fee | training | Private Funding

Soil and Water Conservation Districts | construction | Incentives | Schools | Trees | FEMA | Individual Landowners/Rancher

political subdivisions | Partnerships | Policy Guidance | State Agencies | hud | USDA | Easement | public schools

Universities | Education and Outreach | Businesses | NRCS | Donations | trash-free waters

https://www.mvs.usace.army.mil/missions/programs-project-management/lower-meramec-basin/

U.S. Army Corps of Engineers St. Louis District webpage

- FMP Final Report
- Appendices
- Maps
- Summary of Findings

Additional Links:

- The Nature Conservancy Lower Meramec Floodplain Prioritization Tool
- WSU EFC Lower Meramec Watershed: Healthy Watershed Options Report
- WSU EFC Healthy Watershed Funding Tool
- NRCS Naturally Resilient Communities
- Missouri Floodplain Management/Floodplain Insurance Programs
- USGS Flood Inundation Mapper

Mary Grace Lewandowski
Ambassador
Meramec/Big River Urban Waters Location
marygrace@ewgateway.org

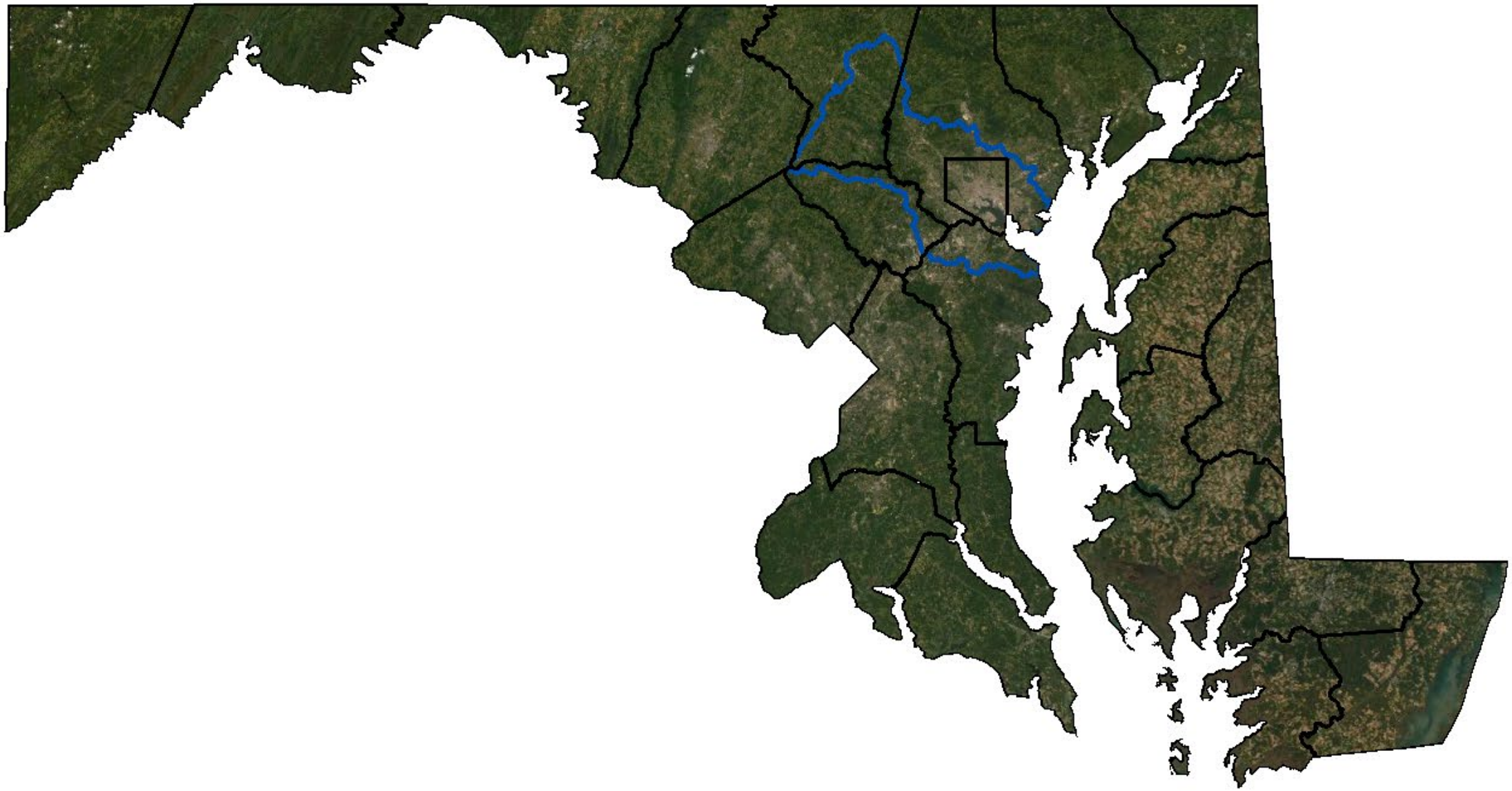
Lower Big River Mussel Bed
Jefferson County, MO

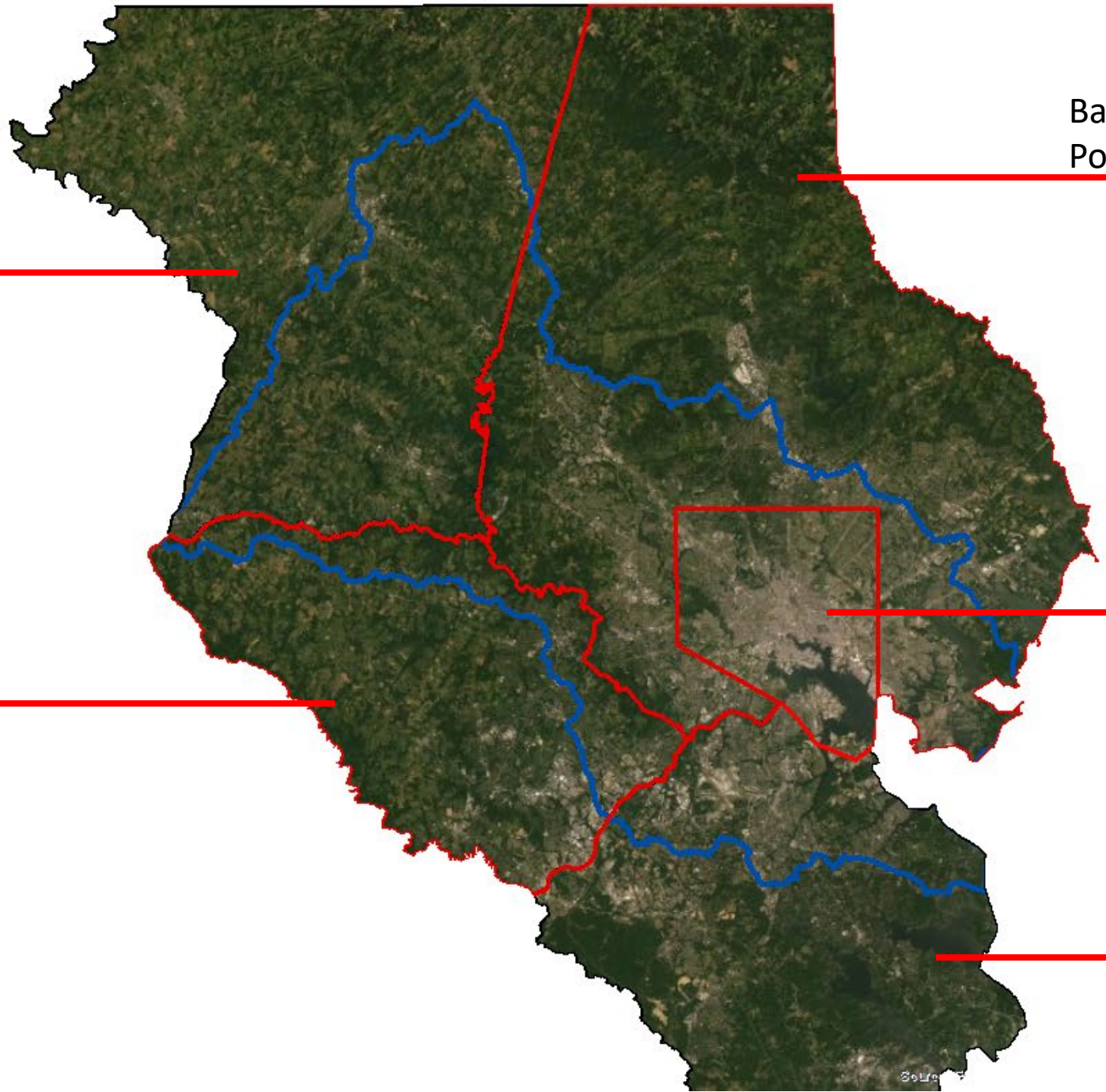
# Baltimore Urban Waters Partnership

Kelsey Brooks & Bob Shedlock

Urban Waters Climate Equity Workshop

12/01/21





Carroll County
Pop: ~173,000

Baltimore County
Pop: ~854,000

Baltimore City
Pop: ~585,700

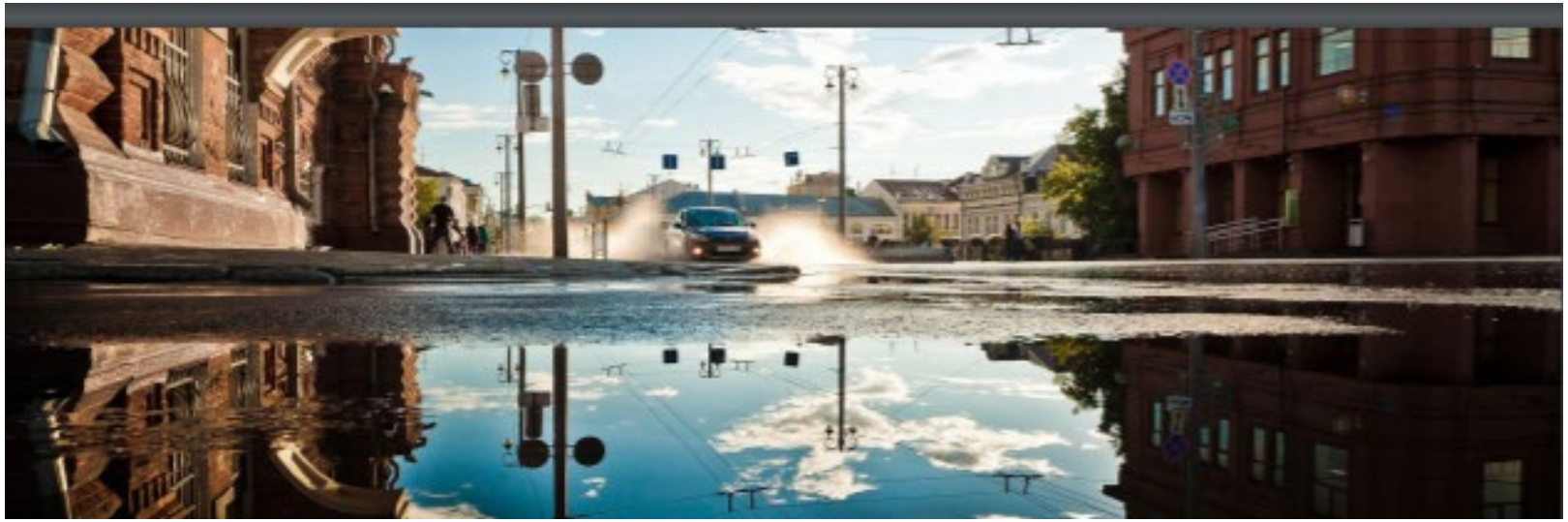
Howard County
Pop: ~332,000

Anne Arundel County
Pop: ~588,000

# Baltimore Urban Waters

## Actionable Science Flood Team

## December, 2021



# Goals of Baltimore UWP Flood Team

- **Provide forums for communication and coordination in the Greater Baltimore area** among jurisdictions, nongovernment organizations, and scientists and engineers on **flood-related activities and issues**
- Use these forums and other communications to **identify critical information and research needs** to help target flood preparation and mitigation activities
- Formulate ways **of educating policy-makers and the public on flood hazards** and what can be done to prepare for and manage these threats. (*Balt Co. Outreach Grant Proposal)*

# Baltimore Flood Team Participants and Organizations

- Kim Grove
- Radu Zamfirache
- Kimberley Knox
- Dave Guignet
- Kevin Wagner
- Kelsey Brooks
- Kris Singleton
- Blake Fisher
- Anne Hairston-Strang

***State and Local Agencies***

- Jeanine Finley
- John Hammond
- Jon Dillow
- Edward Doheny
- Roger Barlow
- Morgan Grove
- Bob Shedlock

***Federal Agencies***

- Mike Galvin
- Bob Summers
- Nick Lindow

***Environmental Consultants***

- Mitch Pavao-Zuckerman
- Andy Miller
- Claire Welty
- Ming Li
- V. Beth Kuser Olsen
- Bernice Rosenzweig

***University/Academic Researchers***

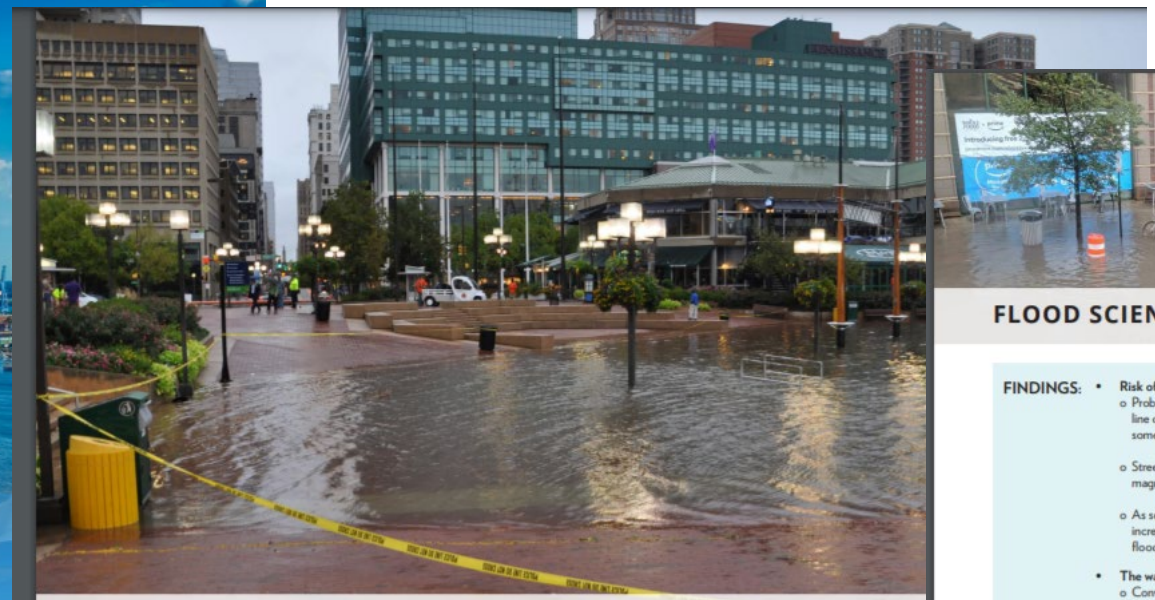
- Erik Meyers
- Carmera Thomas
- Laura Connelly
- Alice Volpitta
- Bill Stack
- Nick Long

***NGO's***

# BALTIMORE URBAN WATERS FLOOD SCIENCE AND POLICY WORKSHOP ACTION REPORT

AUGUST 2021

DOCUMENT NUM



## WORKSHOP SUMMARY: KEY FINDINGS

Photo courtesy of Baltimor

Rich discussions were held throughout the event and discussions can be summarized around the five key then

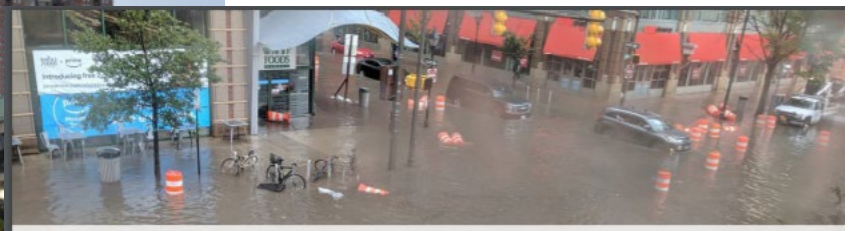
FLOOD SCIENCE AND IMPACTS

DATA AND TECHNICAL RESOURCES

GOVERNMENT COORDINATION AND POLICY

EQUITY AND SOCIAL VULNERABILITY

OUTREACH AND EDUCATION



## FLOOD SCIENCE AND IMPACTS

Photo courtesy of Alex Krupey/Baltimore Magazine

FINDINGS:

- **Risk of flooding is increasingly imminent.**
  - Probabilistic flood mapping estimates and recent flood events show that places outside the 100-year floodplain line could be flooded at any time, and that a substantial strip along the margins of the 100-year floodplain is at some significant risk.
  - Street/pluvial flooding frequently results from cloudburst rain events and is projected to increase in frequency and magnitude in the coming decades in the absence of near-term, significant mitigation of global climate change.
  - As sea level rises the frequency and magnitude of both nuisance flooding and storm surge flooding will increase. Simulation studies show that regional mitigation actions will be required to reduce storm surge flooding in urban areas.
- **The watershed-floodplain relationship needs to better explained.**
  - Conveying water into the floodplain is an existing challenge, in addition the ability to convey water from the top of the watershed to the floodplain is becoming more limited. Some regulations end up squeezing conveyances in closed storm systems that cannot accommodate the excess storm flows, which makes upstream flooding worse.
- **Urban streams are especially vulnerable.**
  - Urban streams are highly responsive to increases in the intensity and frequency of extreme precipitation, which is occurring in the US, particularly in the Northeast, as documented in the US National Climate Assessment report.
- **Water quantity and water quality are inextricably linked.**
  - If the quantity is too high, erosion and sanitary sewer overflows are worsened making management of water quality more difficult too.

## RECOMMENDATIONS

- **There is a need for scientists, regulators and policymakers to better understand flood risk and threats.**
  - The spectrum (e.g., from street flooding to riverine and tidal flooding) of flood risk and vulnerabilities related to financial consequences of property damage and public health threats must be considered. Scientists and policymakers need to work together on future flood scenarios to developed policies based on actionable science.
  - It is important to consider increases in cloudburst frequency and magnitude, and the impacts of climate change, to understand changes in the occurrence of street flooding.
  - Trackable cloudburst development features include wind, hail, water quantity and especially the development of strong updrafts and downdrafts. This capability is an important advancement in understanding how hydrometeorological phenomena impact urban flooding to monitor risk of floods.
- **Policy efforts should account for urban areas due to their increased susceptibility of extreme rain events.**
  - Extreme rainfall events are increasingly resulting in urban flooding; the problem is a growing source of significant economic loss, physical disruption and housing inequality for communities across the nation.

# *Flood Team Draft Conceptual Map*

**Watershed Approach to Urban Flooding**

**Public education and outreach**

Flood Issues: Inundation, personal injury, property damage, displacement of people, effects on roads and utilities, stormwater designs, public health, environmental degradation, insurance, social inequity

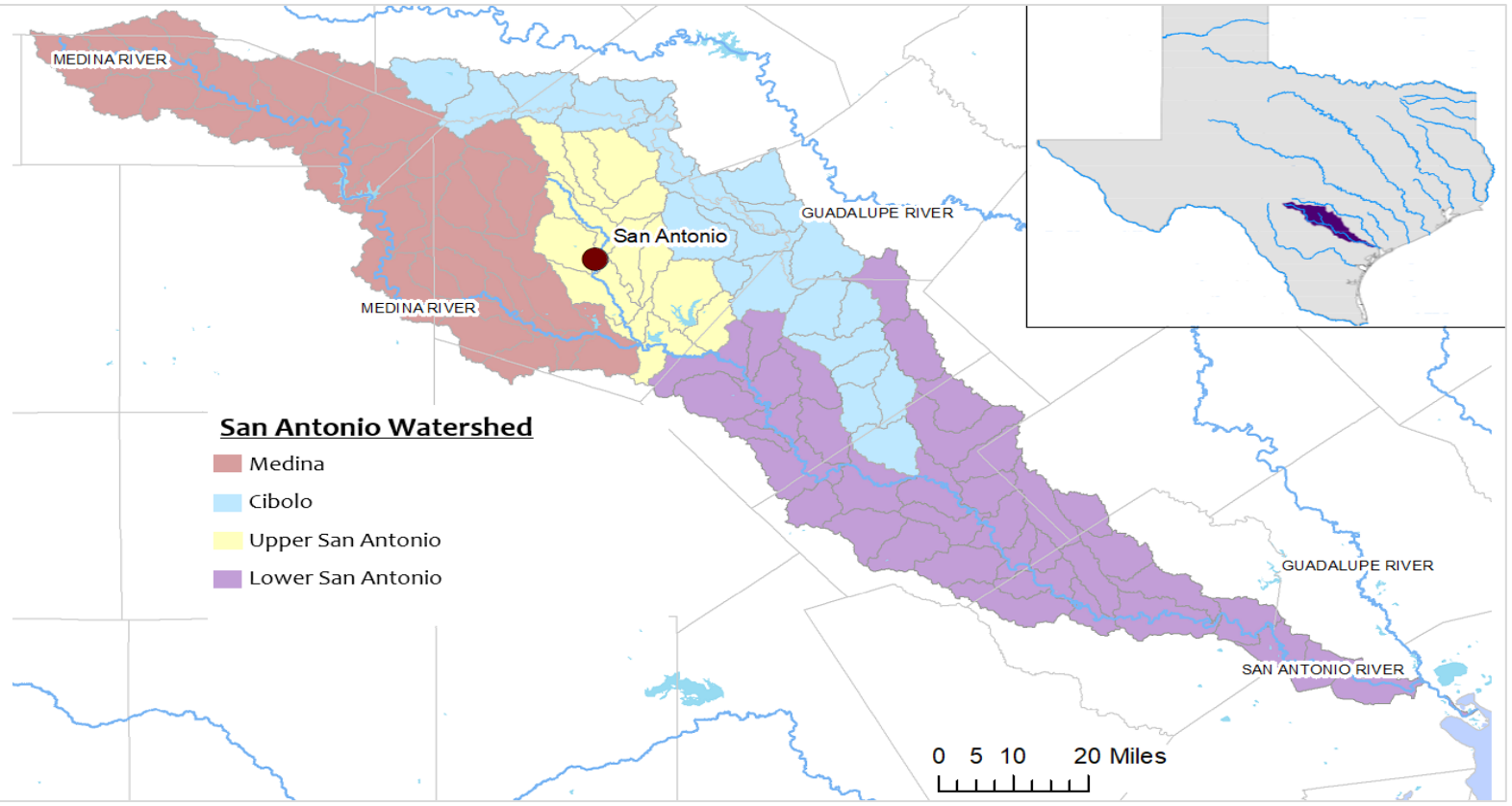
Baltimore City, Baltimore Co., Howard Co., MDE, MD-DNR, U of MD, UMBC, USGS, USFS, EPA, CWP, BWB, Ecologix, CUERE, other NGO's, HOA's, other researchers, etc

Drivers: Climate Change, Land use change, stormwater systems, transportation infrastructure

Mitigation approaches, Green Infrastructure, other flood prevention actions

**Social Vulnerability and Community Resilience**

# WRAP Pilot in San Antonio, TX




- National Water Reuse Action Plan (WRAP): Action 1.4 Leveraging EPA's Water Partnership Programs
- <u>Goals of the pilot:</u>
  - Expand local stakeholders engaged in IWRM and water reuse activities through UWFP
  - Advance inclusive approach to water reuse goals in the context of IWRM at watershed/ river-basin scale

# WATER PRIORITIES & CHALLENGES

Stormwater Management

Water Quality & Pollution

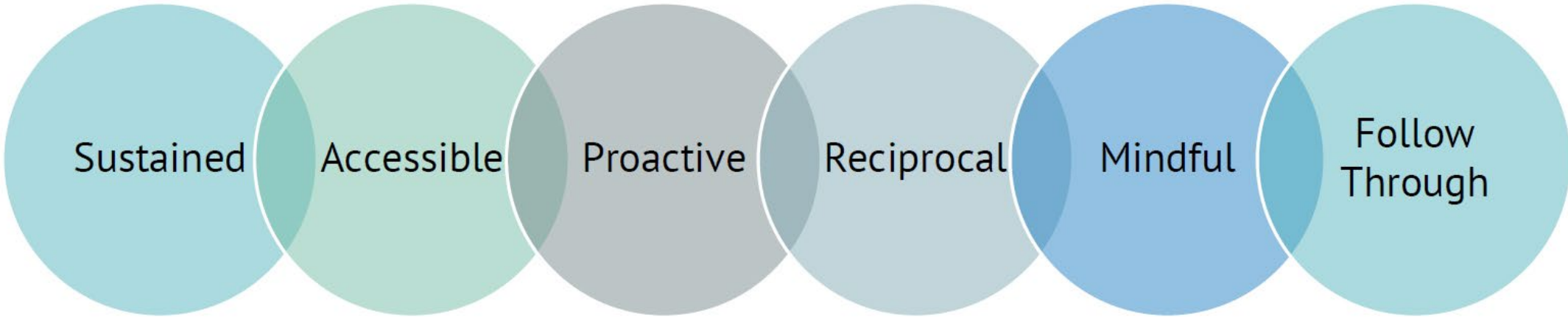
Flood risk/resilience

Integrating Water & Land-Use Planning

Water Availability, Conservation & Reuse

Equity

# INCLUSIVE & EQUITABLE ENGAGEMENT




*Communities engaged in every step of whole process*

*Various engagement opportunities, in multiple languages*

*Intentional efforts to reach the most impacted communities*

*Communities as partners and co-creators*

*Centered in relationship, with understanding of history/context. Based on respectful dialogue.*

*Input is considered, reflected back, and incorporated into decisions*

river NETWORK
connecting people · saving rivers

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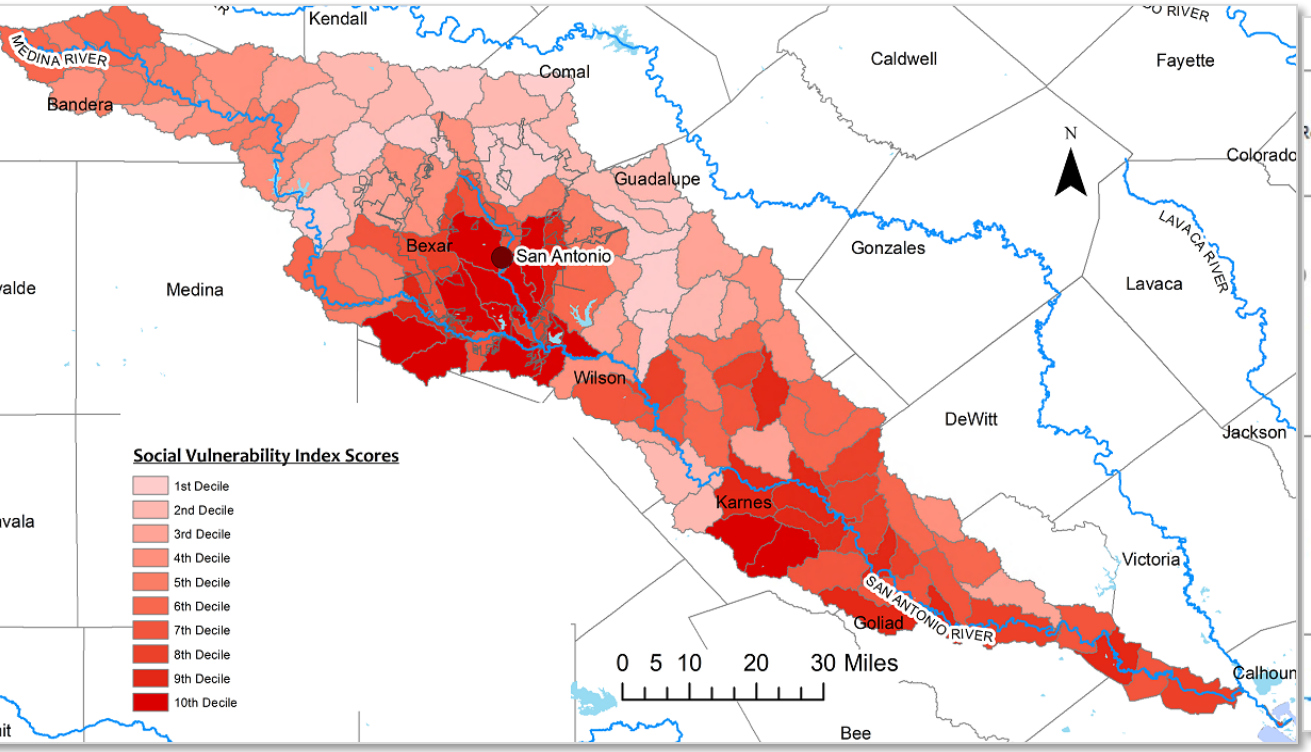
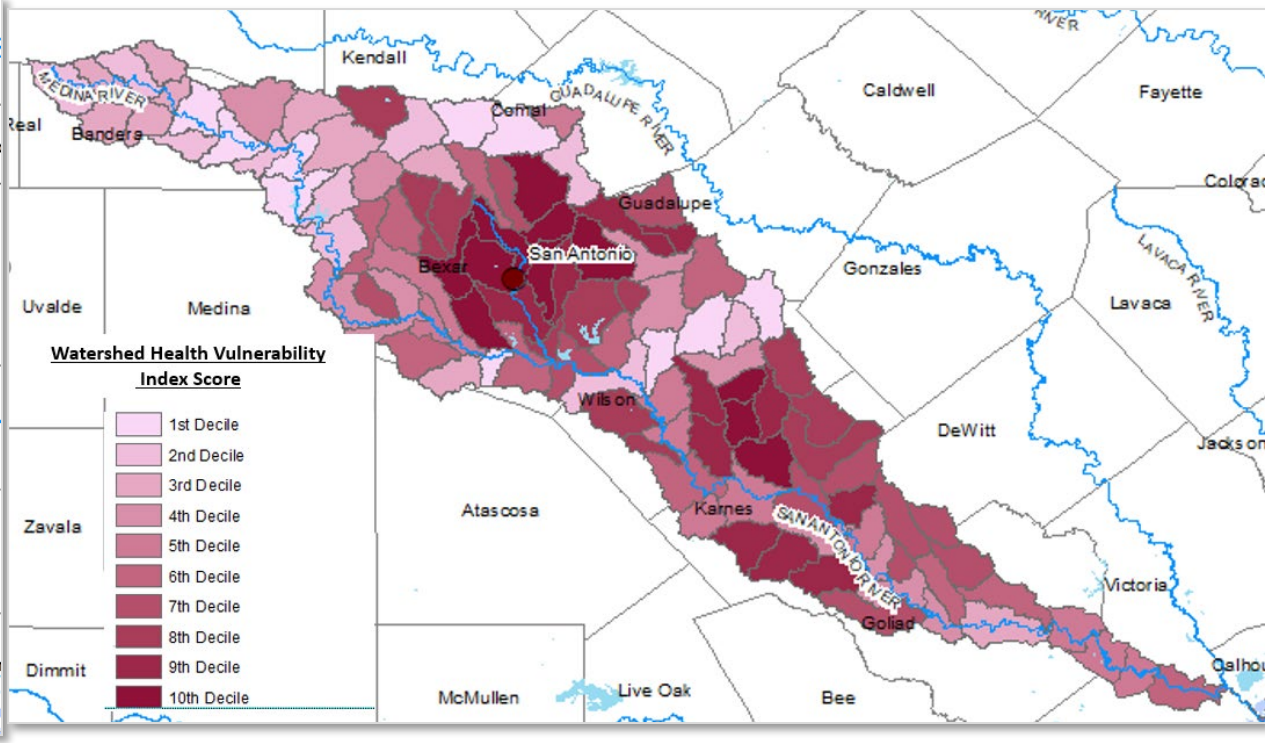
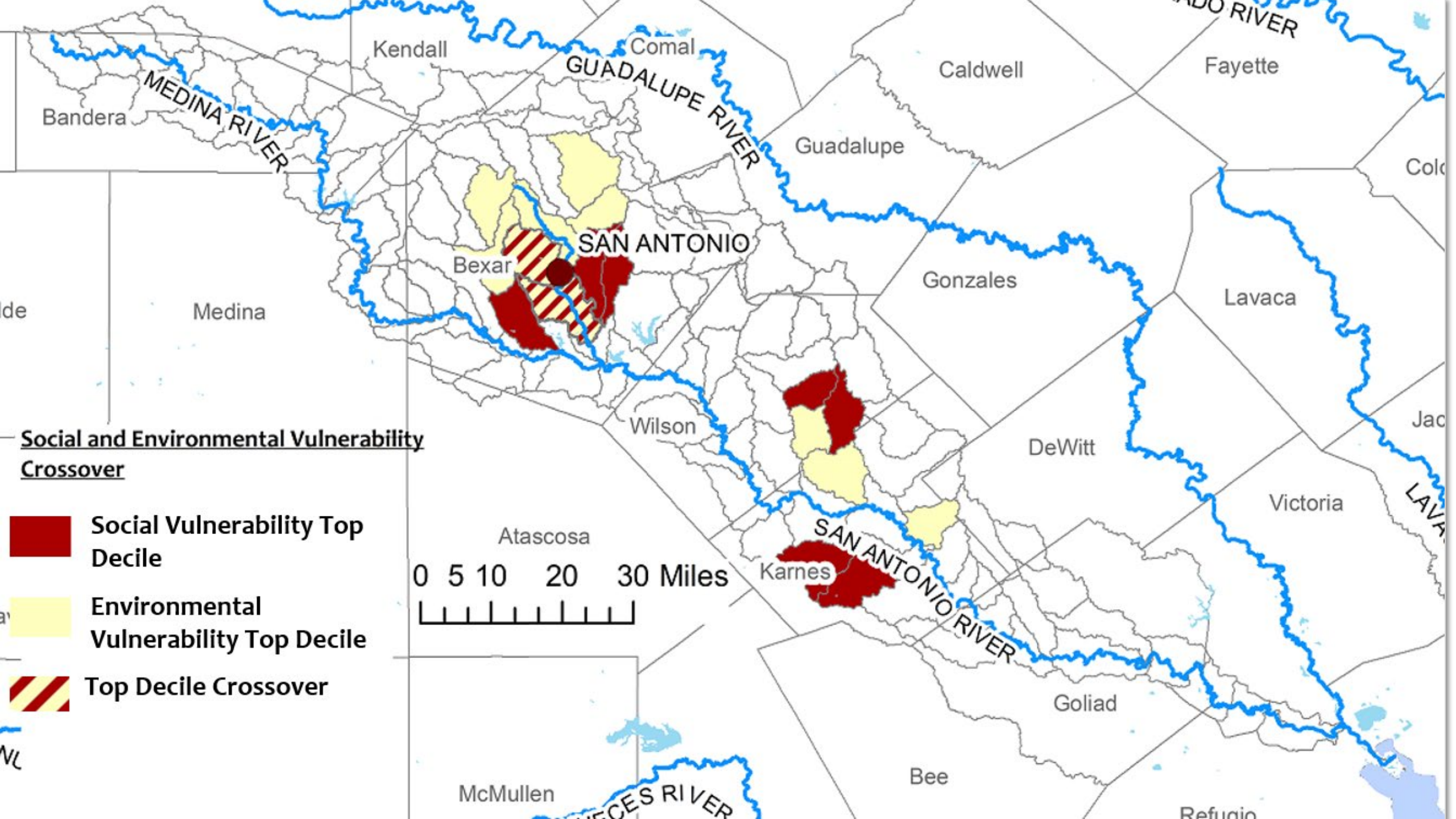
CBI
CATALYZING COLLABORATION

# Water Equity Mapping




Kendall
Comal
Bandera
MEDINA RIVER
GUADALUPE RIVER
Caldwell
Fayette
Guadalupe
SAN ANTONIO
Bexar
Medina
Gonzales
Lavaca
Wilson
DeWitt
Victoria
Atascosa
Karnes
SAN ANTONIO RIVER
Goliad
Bee
McMullen
Social and Environmental Vulnerability Crossover
Social Vulnerability Top Decile
Environmental Vulnerability Top Decile
Top Decile Crossover
0 5 10 20 30 Miles

# Breakout Rooms

**Instructions**

- Click "Breakout Rooms" at the bottom of the window if you do not see a pop-up
- Self select into a breakout discussion topic of interest
- If you have trouble joining a breakout room, stay in the main room and Abu Moulta-Ali can assist you

# Discussion Topics

## A1+A2: Defining 'underserved.'

What tools/frameworks have you used to develop a shared definition of what groups are "underserved"? What challenges have you encountered developing that definition?

## B1+B2: Understanding equitable resilience

How have you worked to build a shared understanding of what "equitable resilience" means in your community?

## C1+C2: Navigating complex community relationships.

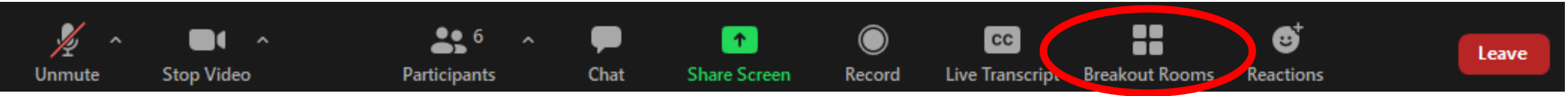
For multi-stakeholder collaboration, what approaches have you found helpful for tapping into the strengths and working through the challenges that variations in stakeholder experiences can bring?

## D1+D2: Integrating community knowledge

How can you support the integration of community knowledge into your own organization/agency's policy decisions and investments of dollars and technical resources?

## E1+E2: Investing in relationship building

How can we build support within our institutions for investing the time and resources needed to develop strong, trusting relationships?



# UW Workshop Planning Team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