
IDENTIFYING DATA INFORMATION GAPS AND APPROACHES IN REGIONAL WATER CHALLENGES



Research, Education, Outreach

MEGAN GUY, OUTREACH COORDINATOR

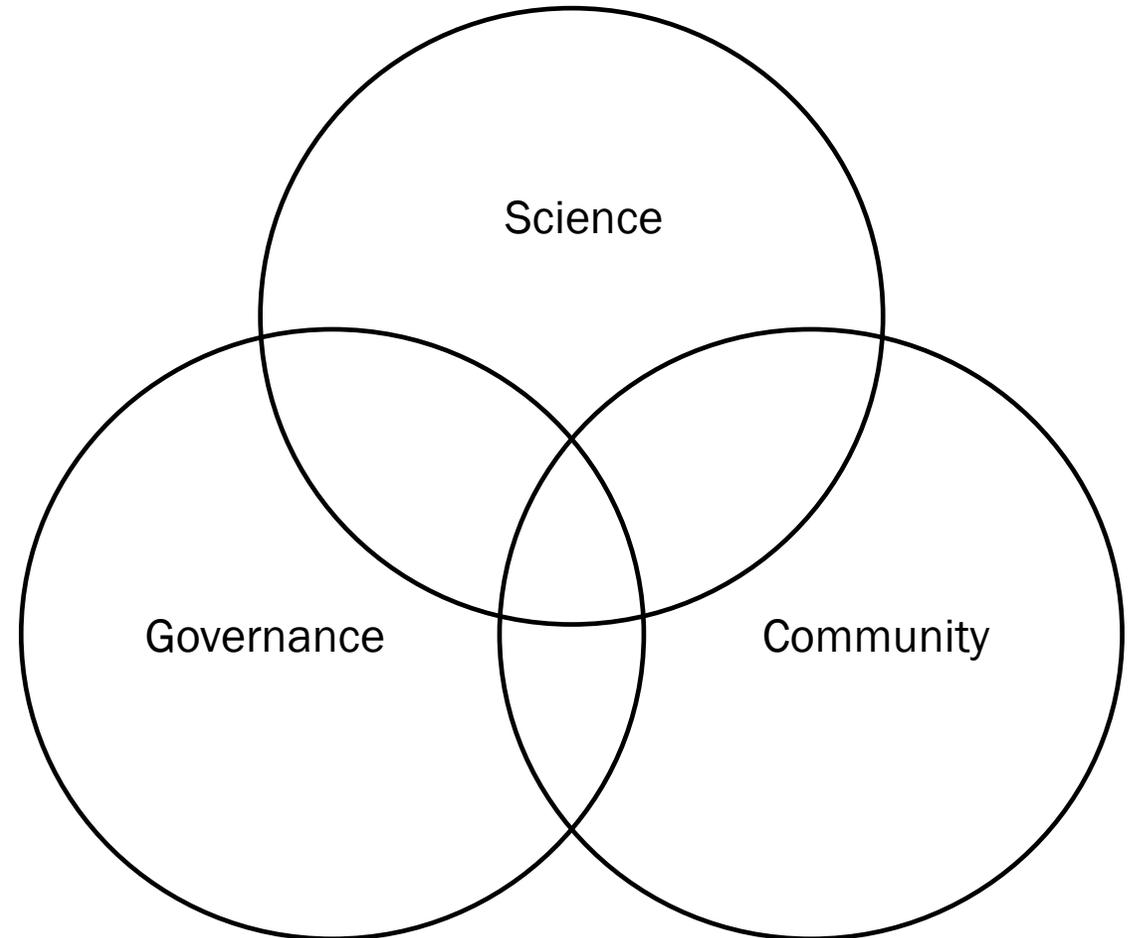
WHAT IS THE COLLABORATORY?

Vision Statement

Create a platform where community and science meet to improve and sustain regional water resources, incorporate science into decision-making, respond to community needs, and cultivate future water leadership.

Mission Statement

Improve the quality of our water resources by inspiring collaborations to efficiently collect data, communicate science, and formulate well-informed solutions to improve ecological and human health in the Upper Ohio River basin.



PITTSBURGH WATER COLLABORATORY

Est. 2018 by faculty in Dpt of
Geology & Environmental
Science

Funded by the Heinz
Endowments

Currently ~25 affiliated
faculty and growing



Leadership



Emily M. Elliott
Director



Daniel J. Bain
Associate Director, Pittsburgh
Water Collaboratory

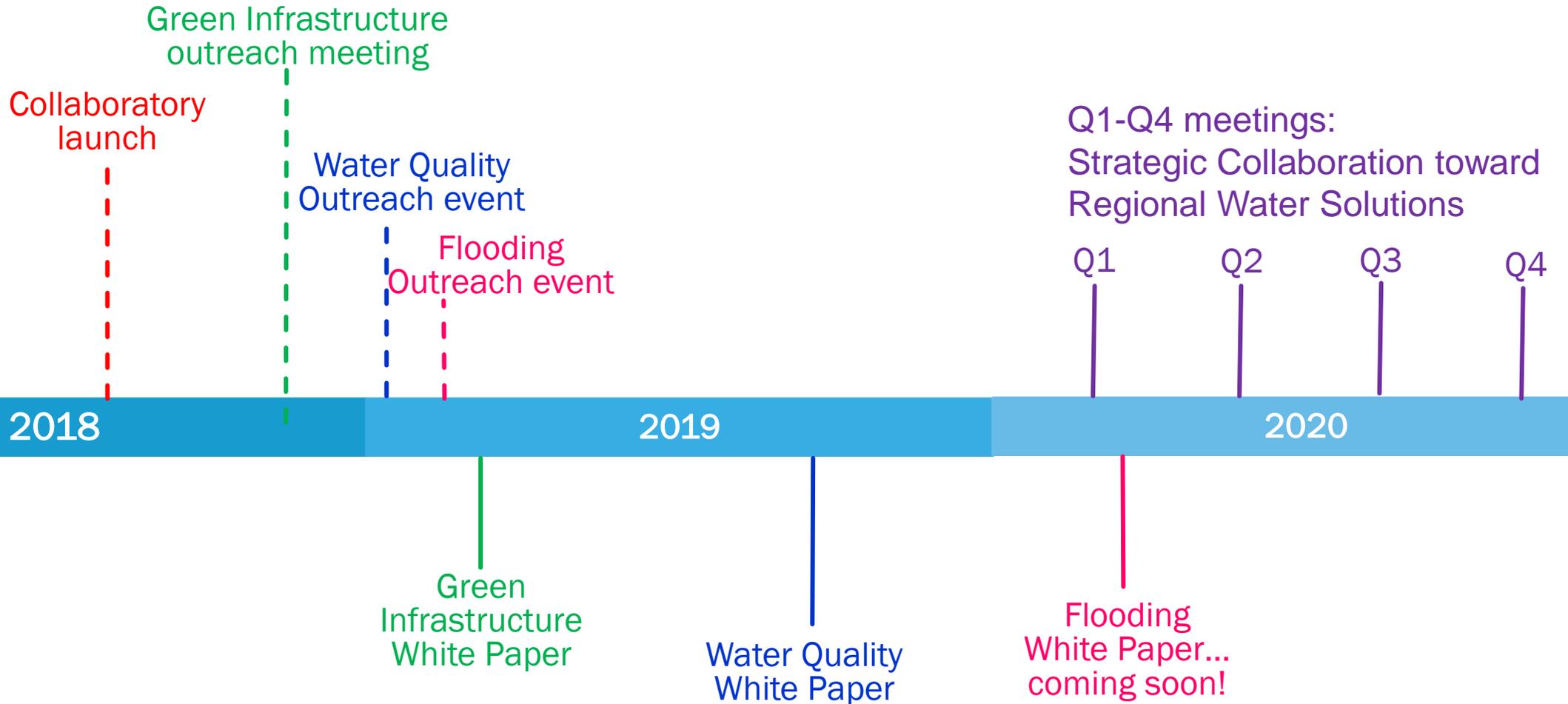


Megan Guy
Data Analyst & Outreach
Coordinator, Pittsburgh Water
Collaboratory



Eitan Shelef
Associate Director, Pittsburgh
Water Collaboratory

KNOWLEDGE GAP ASSESSMENT & STRATEGIC COLLABORATIONS



GREEN INFRASTRUCTURE



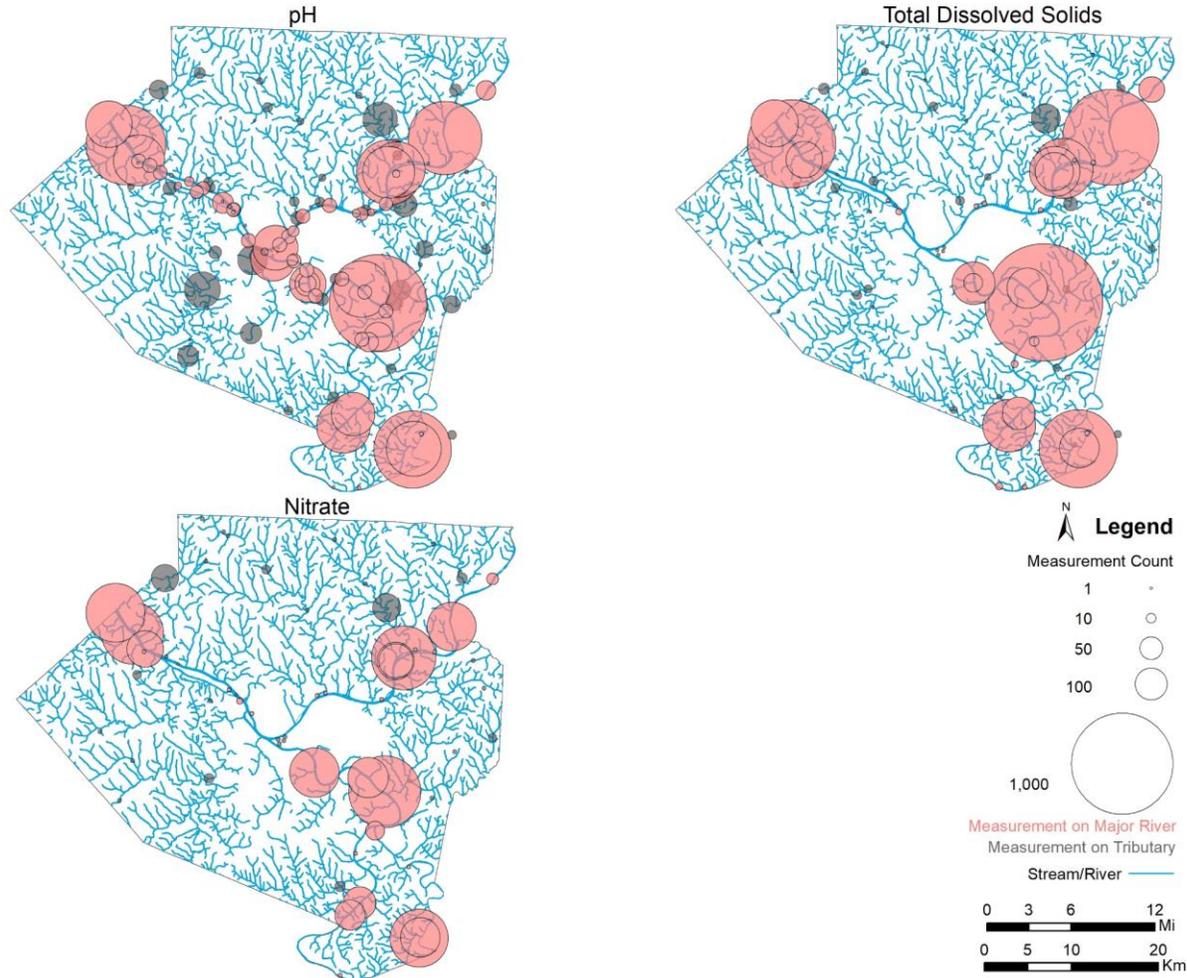
- **Forge a regional GI data strategy**
 - Create means to share information about GI implementation and effectiveness
 - Share data on capital, maintenance, monitoring costs
 - Drive process with a group of users from across broad GI community
 - Determine how to ensure participation and data-sharing

GREEN INFRASTRUCTURE



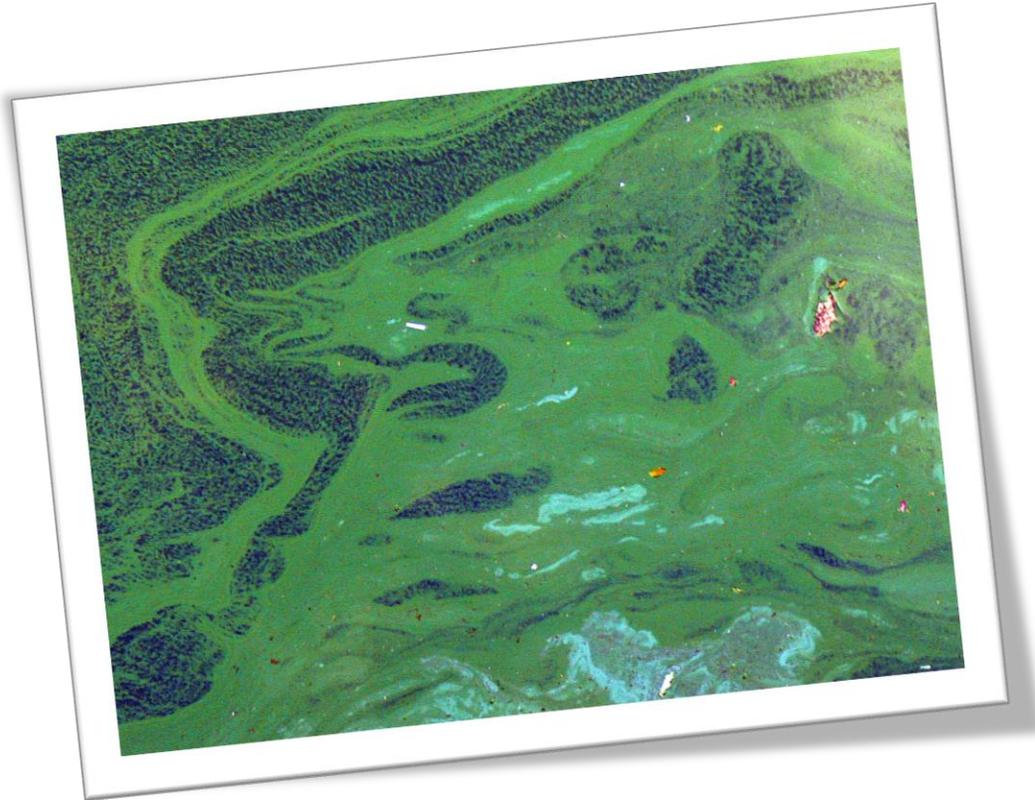
- **Define a realistic and effective monitoring agenda**
 - Determine parameters to monitor
 - Water quantity, water quality, ecological health, costs, co-benefits
- **Push toward a comprehensive approach to GI**
 - Develop a more comprehensive evaluation of GI co-benefits
 - job growth, social impact, environmental/health benefits

WATER QUALITY



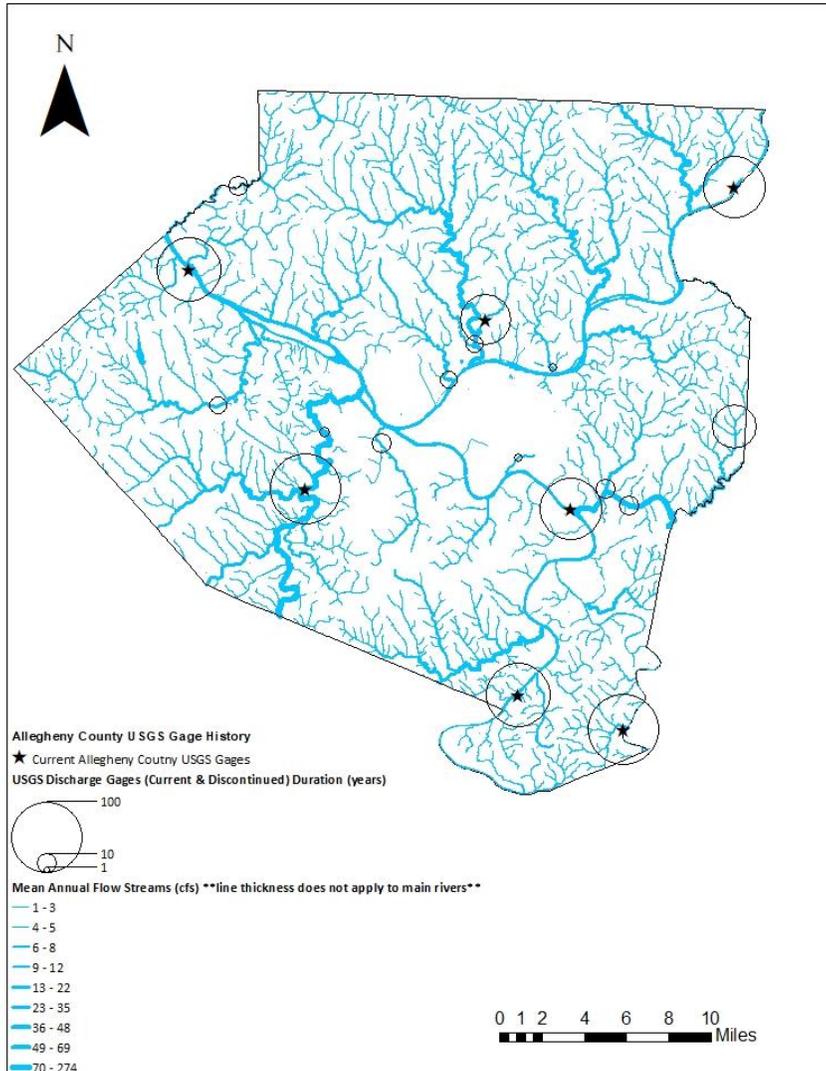
- Coordinate to monitor for a broader suite of contaminants in regional waters
 - Coordinate amongst partners to **reduce marginal cost** of monitoring (gvt agencies, NGOs, academics)
 - Evaluate which chemical constituents pose the highest risk
 - Assess use and production of emerging contaminants (i.e., industrial, residential) in regional activities

WATER QUALITY



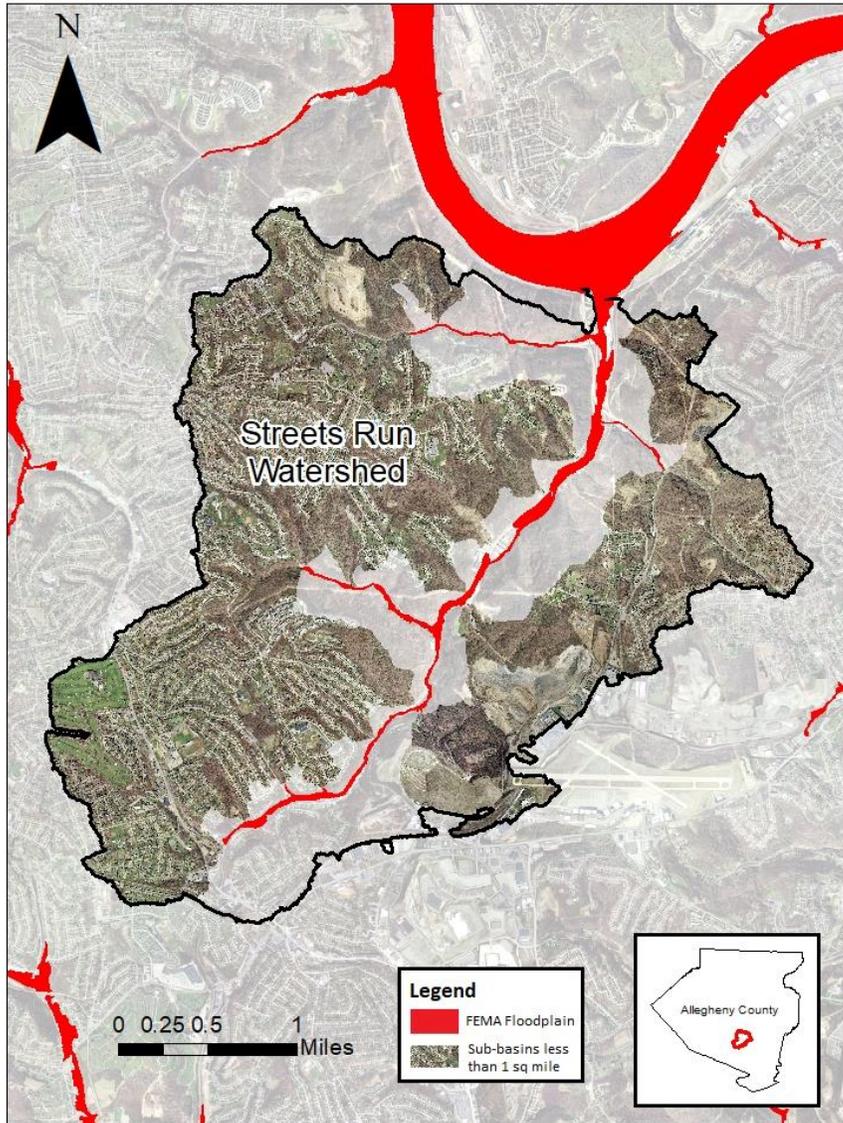
- **Develop and broaden regional water quality information management systems**
 - Find home for database and resources to sustain/maintain.
 - Assemble advisory group that represents the breadth of the regional water quality community

FLOODING



- Improve flood risk assessment
 - Add more USGS gages on streams while maintaining sites with long, historic records
 - 7 existing gages, biased towards rivers
 - Existing methods for delineating floodplains are not keeping pace with changes in climate, land use
 - Enhance coordination with FEMA
 - Sustain valuable 3RWW raingage network
 - Encourage flood reporting in existing 311 system. Clarify options.

FLOODING



- **Improve flood risk assessment**
 - Assess risk of small stream flash flood events ($<1 \text{ mi}^2$) that fall outside FEMA mapping zones
- **Increase citizen awareness**
 - Create visualization tools to illustrate hard-to-grasp concepts regarding risk
- **Evaluate the “true cost” of flooding**
 - Comprehensive cost assessment
 - Cleanup costs, infrastructure repair costs, businesses closed, emergency medical costs, missed workdays, property value depreciation, and mental/physical health costs.
 - Realization of “true cost” may provide powerful incentive for change