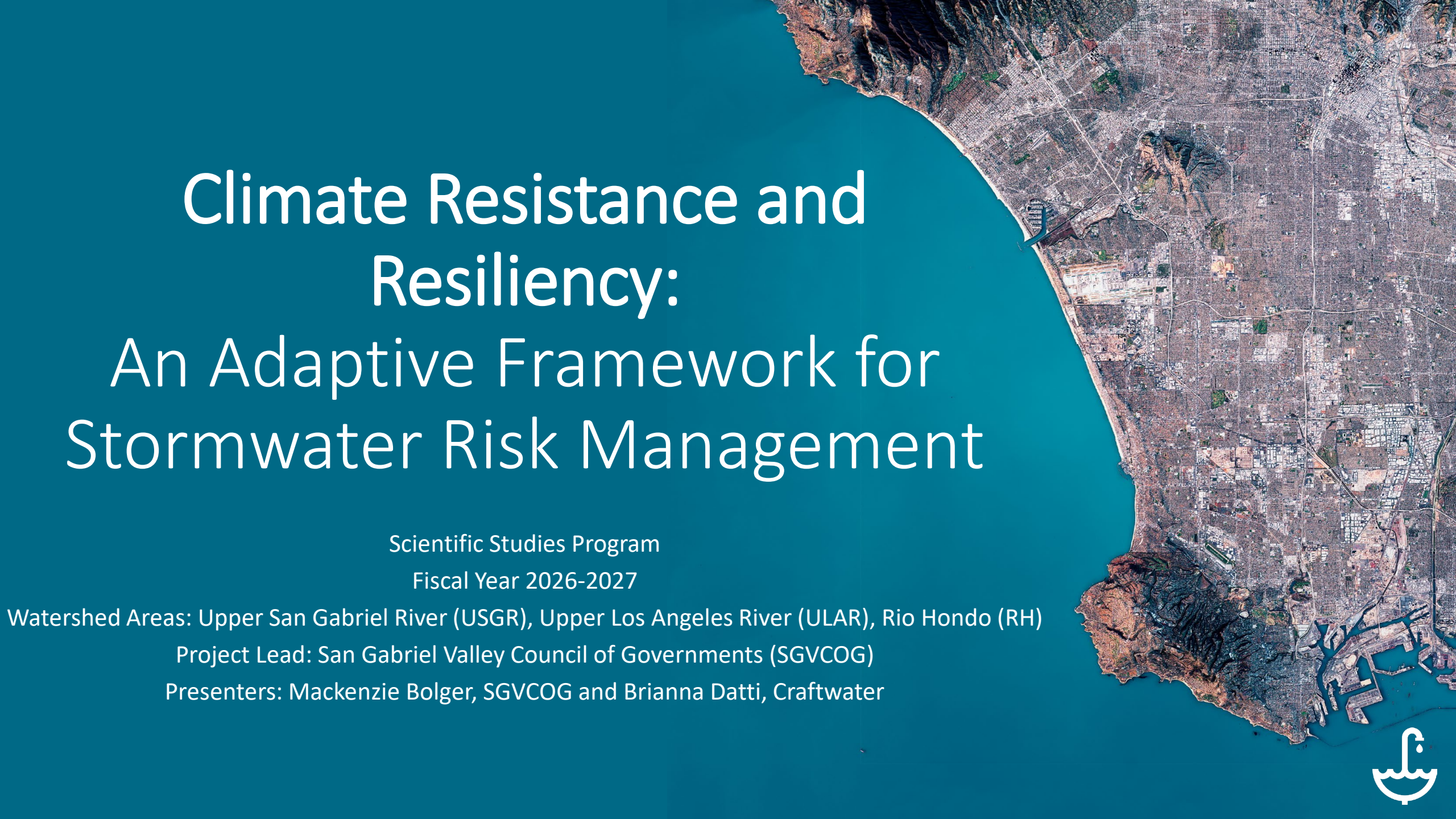




Climate Resistance and Resiliency: An Adaptive Framework for Stormwater Risk Management

Scientific Studies Program

Fiscal Year 2026-2027

Watershed Areas: Upper San Gabriel River (USGR), Upper Los Angeles River (ULAR), Rio Hondo (RH)

Project Lead: San Gabriel Valley Council of Governments (SGVCOG)

Presenters: Mackenzie Bolger, SGVCOG and Brianna Datti, Craftwater



Study Overview

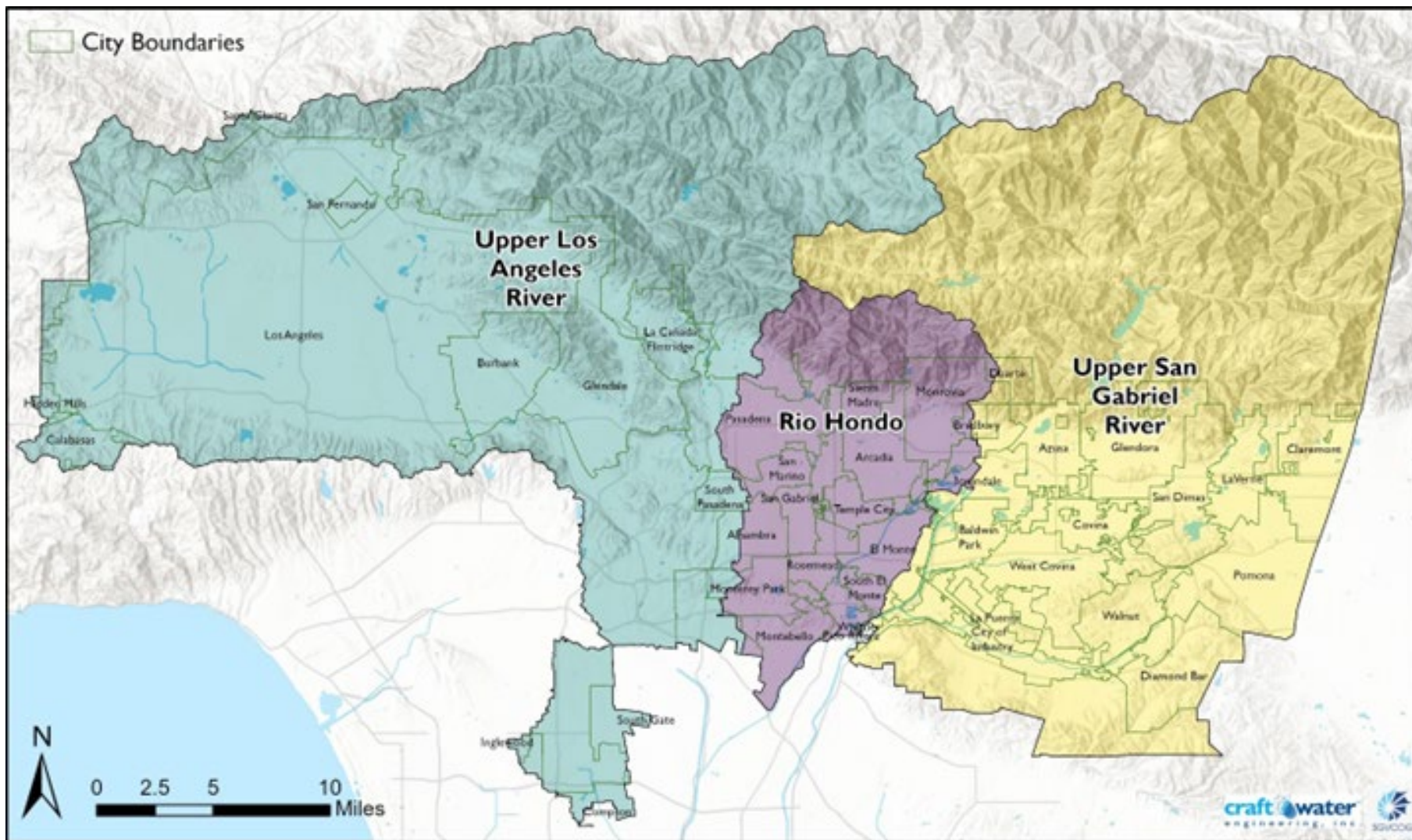
Framework for proactive, adaptive strategies under extreme conditions of climate change and growing frequency and severity of natural disasters

- Climate change and natural disasters pose threat to quality of stormwater, urban runoff, and availability of local water supplies
- Identifying strategies to prevent and mitigate these negative impacts





Study Location



Watersheds:

- Upper Los Angeles River
- Rio Hondo
- Upper San Gabriel River
- Emphasis on 31 agencies within SGVCOG



Study Team

Lead



SAN GABRIEL VALLEY COUNCIL OF GOVERNMENTS

One Valley. One Voice.

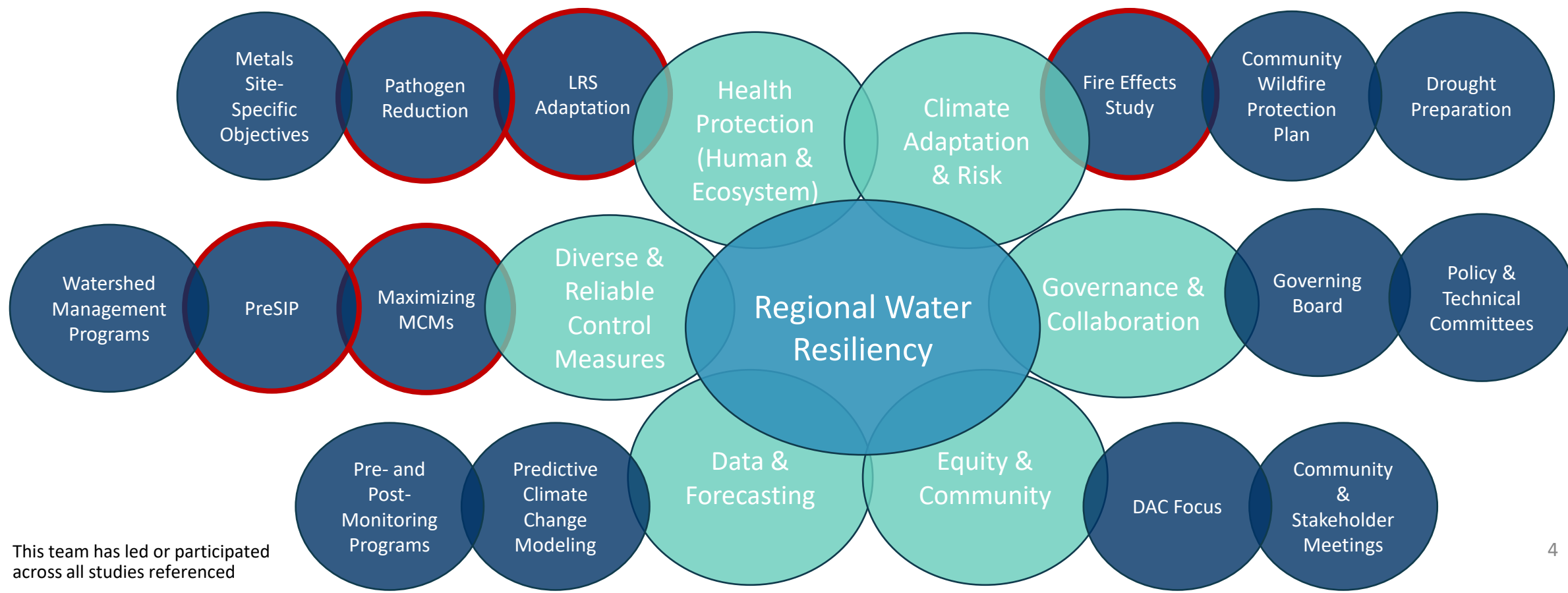
Anticipated Developer



CRAFTWATER

SCIENCE • STRATEGY • ENGINEERING

Committed to...



This team has led or participated across all studies referenced



Study Details – Problem Statement

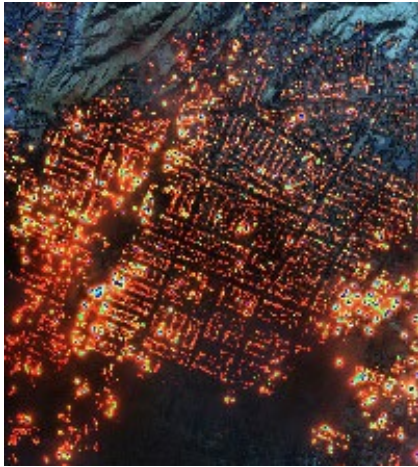
Stormwater Management is increasingly challenged by impacts of **climate change** and growing frequency and severity of **natural disasters**.



More **proactive, adaptive strategies** are required to achieve the goals of stormwater programs to **safeguard communities** and **protect the environment** under these extreme conditions.



Study Details – Problem Statement



Fires



Floods



Mudslides



Droughts



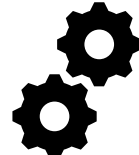
Earthquakes



Increased Pollutant Loading



Lose of Water Supply



Degraded Level of Service for Infrastructure



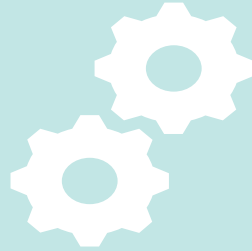
Increased Burden on Operations



Study Details – Objectives & Outcomes



**CHARACTERIZE
RISK**



**IDENTIFY
PREVENTION &
MITIGATION
STRATEGIES**



**PROACTIVE
PREVENTION
AND RAPID
RESPONSE
MITIGATION
FRAMEWORK**



**ASSESS RISK-
BENEFIT**

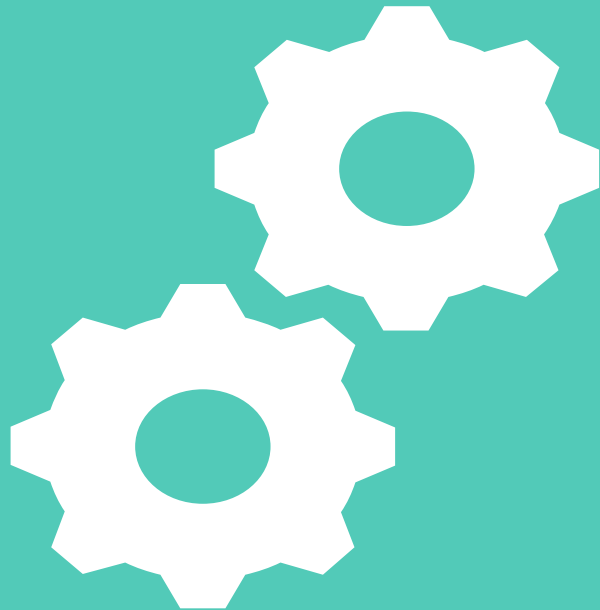


Characterize Risk

- Worst-case scenarios
- Spatial & temporal factors
- Climate Projections (CMIP & Local)
- Characterize magnitude & timing of risks for 5 natural disasters
 - Increased pollution
 - Decreased water supply
 - Degraded LOS in infrastructure
 - Increased burden on O&M



Study Details – Objectives & Outcomes



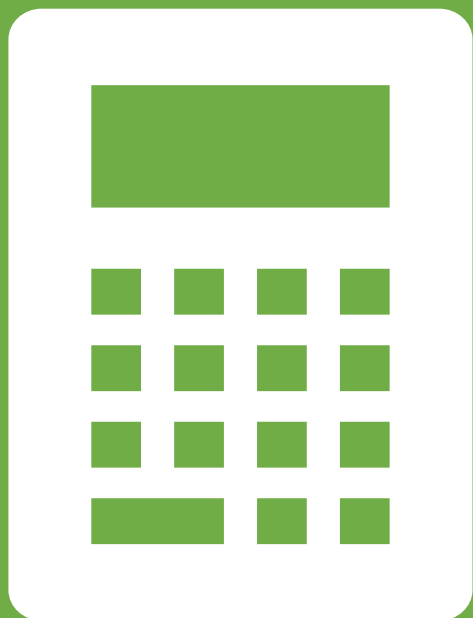
Identify Strategies

- Compile existing and identify new
- Calculate magnitude of costs



Proactive Prevention & Rapid Response Mitigation Framework

- Integrate in local hazard mitigation plans



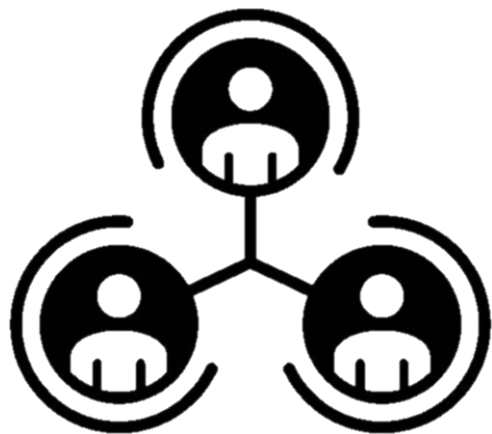
Assess Risk-Benefit

- Calculate costs of stormwater-relevant impacts
 - Probability of event occurring
 - Potential impact
- Risk-benefit calculator, pairs probability-scaled impact costs with strategy implementation costs



Study Details – Collaboration & Expansion

Technical Stakeholder Committee



- Academics, Research Institutes, Municipal Agencies
- Inform tools and leverage existing resources
- Provide input & feedback

Community Engagement



- Community Meetings
- Integrate local concerns
- Develop community-specific flyers and fact sheets on preparation and responses



Cost & Schedule

Phase	Description	Cost	Completion Date
Pre-Study and Work Planning	Technical Stakeholder Committee & Community Engagement	\$91,300	12/31/2029
Study Implementation	Characterize Risk	\$709,500	12/31/2028
Study Implementation	Identify Prevention & Mitigation Strategies	\$280,500	6/30/2029
Post-Study	Assess Risk-Benefit	\$121,000	12/31/2029
TOTAL		\$1,202,300	



Funding Request

WASC	Year 1	Year 2	Year 3	TOTAL
RH	\$120,633	\$207,900	\$72,233	\$400,766
ULAR	\$120,634	\$207,900	\$72,234	\$400,768
USGR	\$120,633	\$207,900	\$72,233	\$400,766
TOTAL	\$361,900	\$623,700	\$216,700	\$1,202,300



Summary of Benefits



Water Quality: Prevention and mitigation strategies to protect and progress towards water quality goals even under extreme natural disasters



Water Supply: Preparedness for droughts



Public Health: Framework for managers and communities to mitigate and adapt to effects of climate change and increasing prevalence of extreme natural disasters

A person is seen from the side, pointing at a wall covered in numerous sticky notes. A large screen is projected onto the wall, displaying text. The scene is dimly lit, with light coming from the screen and the sticky notes.

Questions?

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Craftwater**

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