

An aerial photograph of the Los Angeles coastline and city grid, showing the ocean on the left and the city extending inland to the right. The image is partially obscured by a dark teal overlay on the left side where the text is located.

# Additional Funding Request to Support the LRS Adaptation

Scientific Studies Program

Fiscal Year 2022-2023

Rio Hondo; Upper Los Angeles River

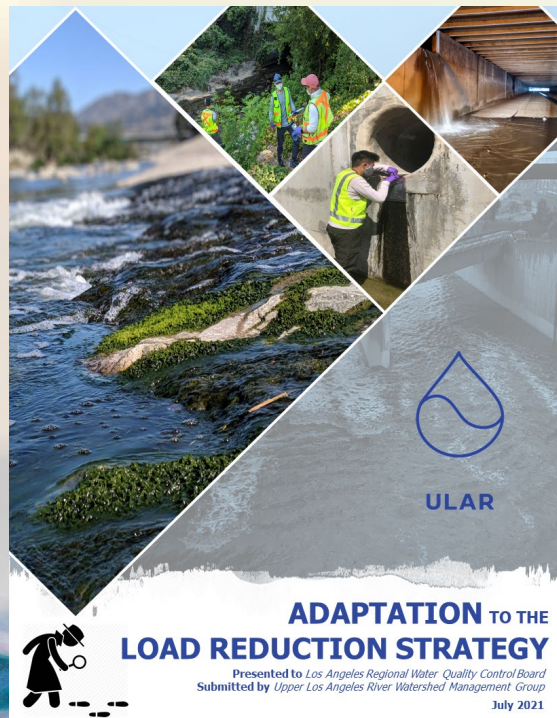
San Gabriel Valley Council of Governments on behalf of the Upper Los Angeles River Watershed Management Group (ULAR WMG)

Dawn Petschauer (LA Sanitation); Brianna Datti (Craftwater)



# Study Overview

Support strategic risk-based monitoring and human waste source investigations to guide long-term pathogen reduction



- Advance successful **implementation** of the LRS Adaptation
- More cost-effective strategies to address bacteria
- Progress on beneficial use protection



# Study Overview

Original Load  
Reduction Strategy



Unsuccessful  
Source Control

Project  
Feasibility  
Challenges

Uncertain Beneficial Use  
Attainment

New Information/Data

Advanced Scientific  
Understanding and Tools  
Available

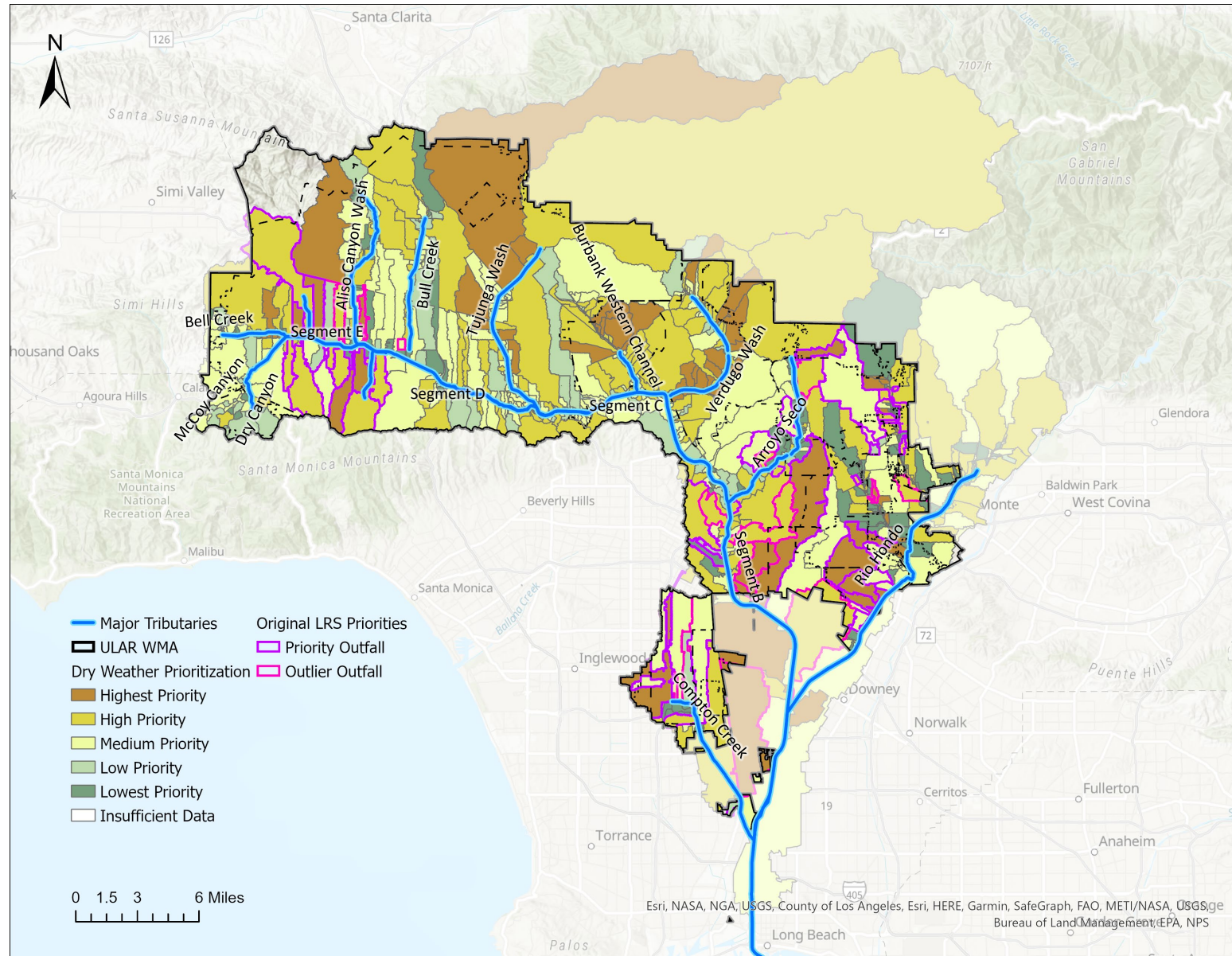
LRS Adaptation: Prioritize  
Source ID and Abatement  
Efforts

Assured Beneficial Use  
Attainment





# Study Location



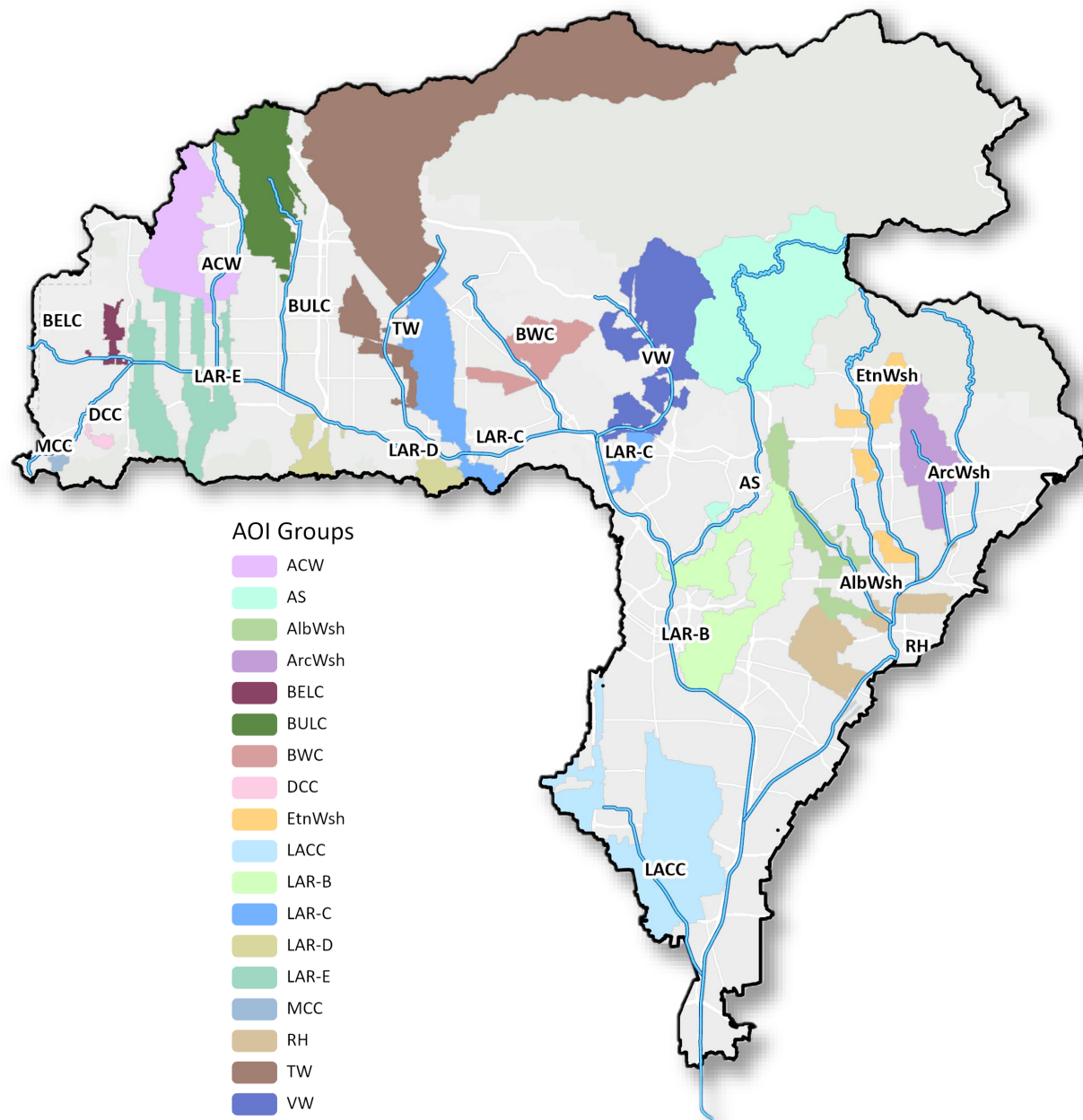
## Dry and Wet Weather Catchment Prioritization

Based On:

- Water Quality Condition Assessments (Receiving Waters and Outfalls)
- Potential Human Sources
- Hydraulic Connectivity



# Study Location



## Areas of Investigation (AOIs)

- 43 AOIs
- 166 highest/high priority outfall catchments
- Phased by segments/tributaries



# Study Details – Strategic Risk-Based Monitoring

- Paired Fecal Indicator Bacteria (FIB) and Human Marker (HF183) Monitoring
- Supports:
  - Refinement to catchment prioritization considering risk
  - Targeting of source investigations
  - Regulatory discussions





# Study Details – Strategic Risk-Based Monitoring

## Preliminary Sampling Demonstrates New Information from Human Marker

AS-17

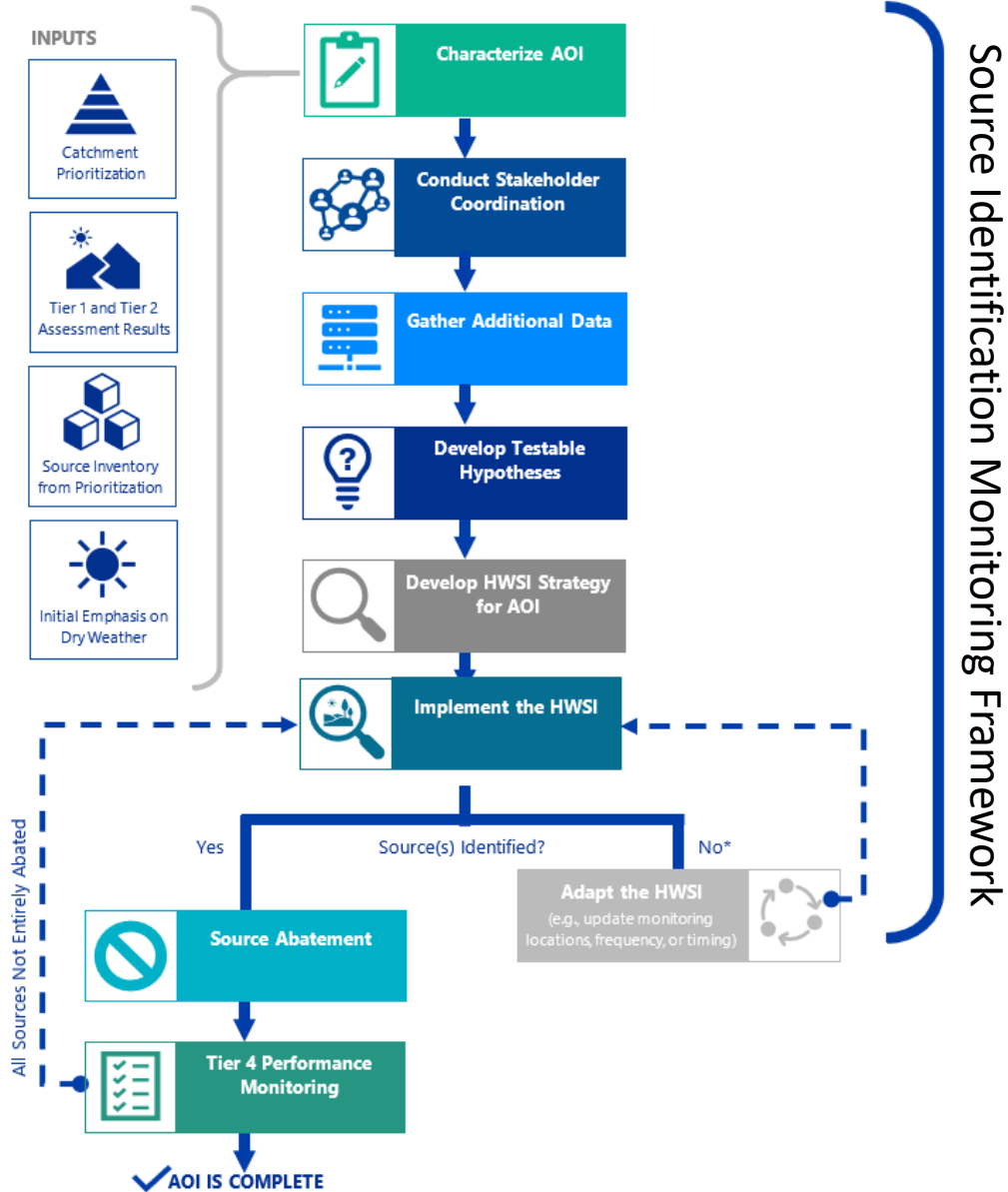
LAR-B-R2-04

RH-078



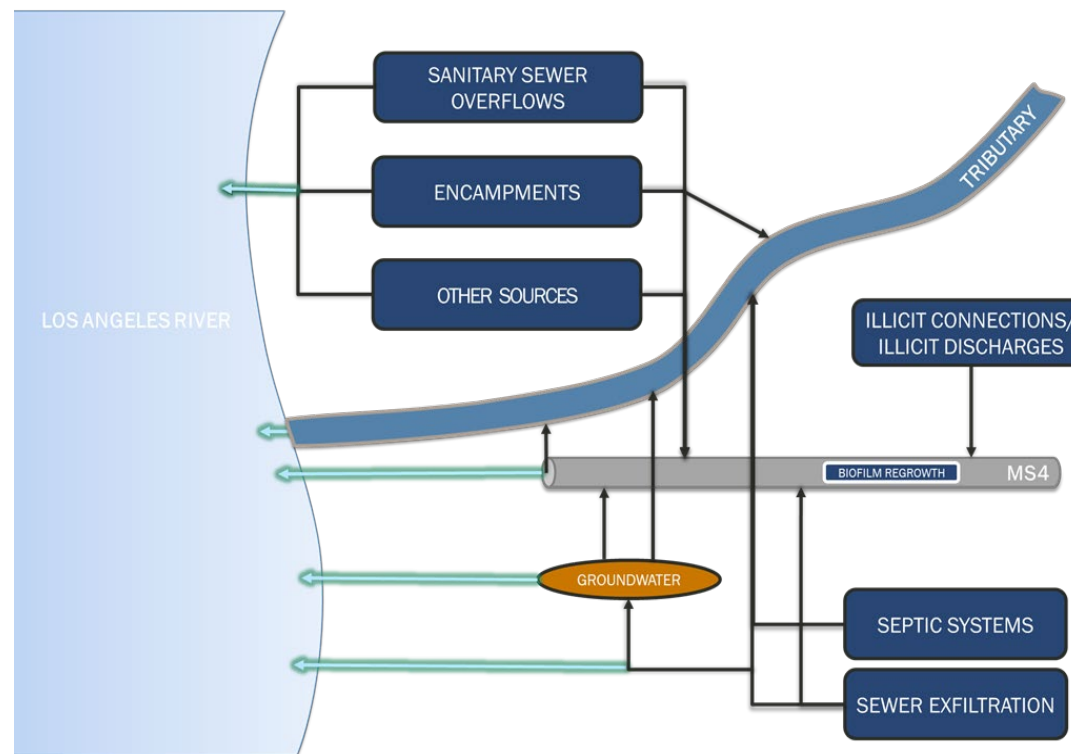


# Study Details – Human Waste Source Investigations



\*Reasons to adapt an HWSI can be driven by other factors (e.g., additional stakeholder input, additional data, new scientific techniques, etc.)

- AOI-specific monitoring
- Targeting high-risk sources and eliminating



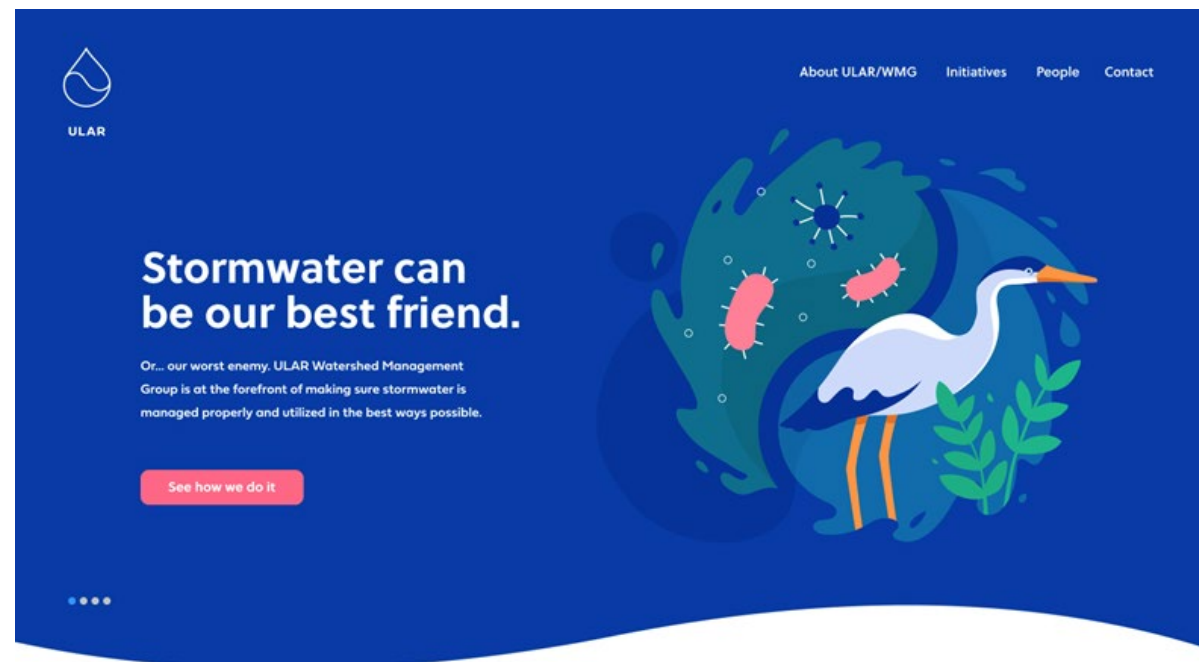




# Study Details – Webpage Content

- LRS-dedicated webpage
- Clear, consistent communication
- Includes:
  - Public-facing fact sheets
  - Interactive mapping
  - Data visualization
  - Animations and videos
  - Progress tracking
  - Key performance indicators

[www.ularwmg.com](http://www.ularwmg.com)



## What's an ULARWMG?

Water in Los Angeles is well... complicated. Not many people realize what it takes to manage and control this crucial life resource in the region. It takes planning, testing, innovating, reclaiming, and recycling to push the water system toward the sustainable future we all hope for. And that's where ULAR WMG comes in. This nerdy bunch of scientists, activists, and policy experts create initiatives and projects that work toward capturing and managing stormwater in the Upper LA River as well as the surrounding watersheds. It's a huge interconnected effort, and takes the power of the



# Schedule

Phase	Description	Completion Date
<b>Strategic Risk-Based Monitoring</b>	Initiate strategic wet weather monitoring (under separate SOW)	10/1/2021
	Monthly dry weather sampling	6/30/2024
	Minimum of three storm events sampled per year	6/30/2024
<b>Human Waste Source Investigations</b>	Initiate AOI-specific monitoring (under current study)	10/1/2021
	AOI-specific monitoring in additional selected AOIs	6/30/2024
<b>Webpage Development &amp; Content</b>	Launch Basic LRS Adaptation Webpage (under separate SOW)	10/31/2021
	Updates and Refinements to the LRS Adaptation Webpage	6/30/2024



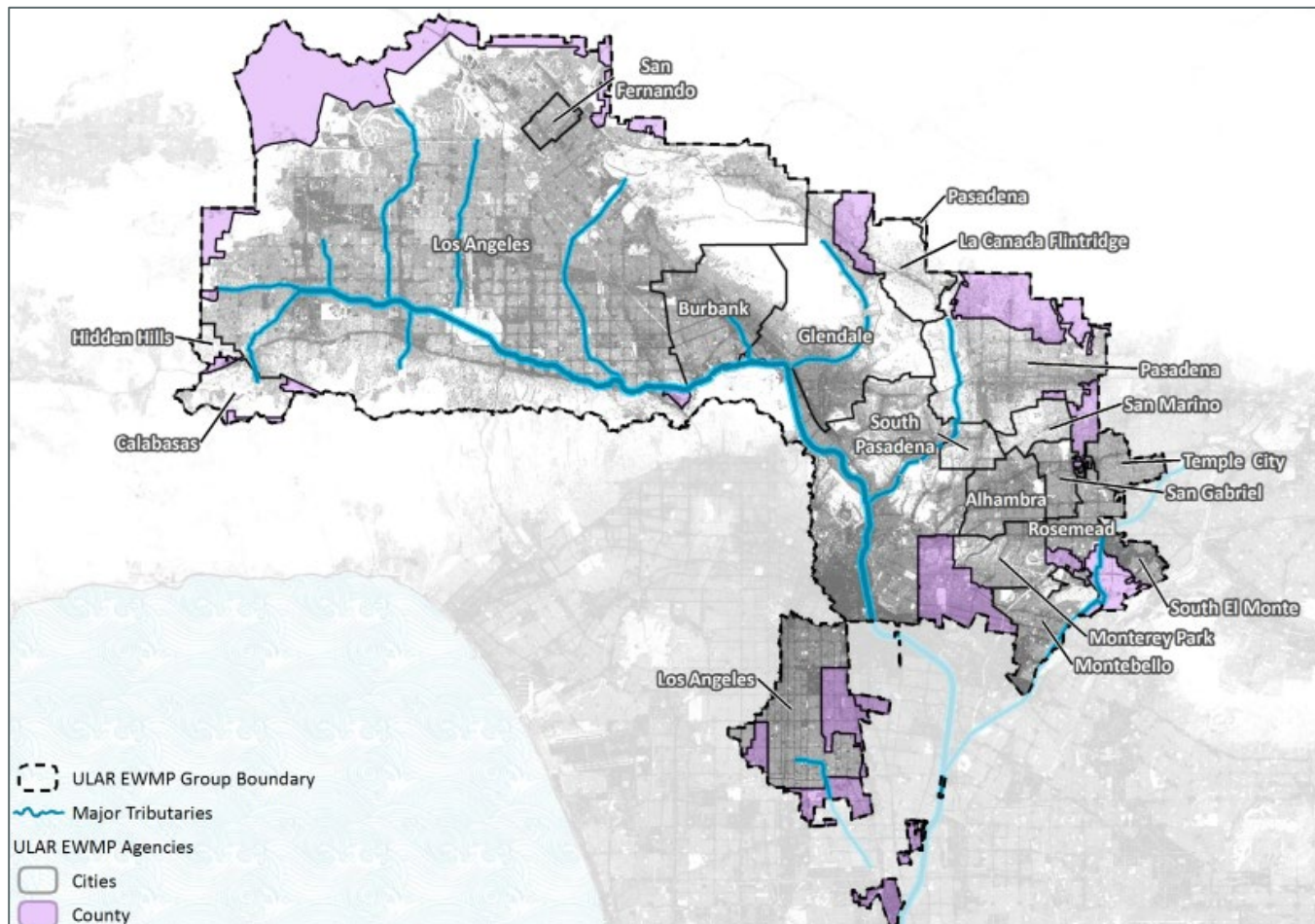
# Funding Request

WASC	Year 1	Year 2
RH	\$ 35,722	\$ 79,307
ULAR	\$ 119,590	\$ 265,505
<b>TOTAL</b>	<b>\$ 155,312</b>	<b>\$ 344,812</b>



# Regional Collaboration

- 19 ULAR Agencies, LRS Technical Advisory Committee
- To date, five meetings with Regional Board staff
- Internal and external stakeholder engagement
- Leverage framework and outcomes region-wide
- Latest advancements in science and tools





## Summary of Benefits

- Targeted approach to decrease health risks due to bacteria
- Expedited pathway for improving water quality conditions
- Clear, consistent communication, opportunity to leverage



**Questions?**



# Maximizing Impact of Minimum Control Measures

Scientific Studies Program

Fiscal Year 2022-2023

Upper San Gabriel River; Rio Hondo; Upper Los Angeles River

San Gabriel Valley Council of Governments

Chad Helmle; Brad Wardynski; Brianna Datti (Craftwater)



# Study Overview

Develop tools to quantitatively *estimate effectiveness* and *support optimization* of Minimum Control Measures (MCMs)

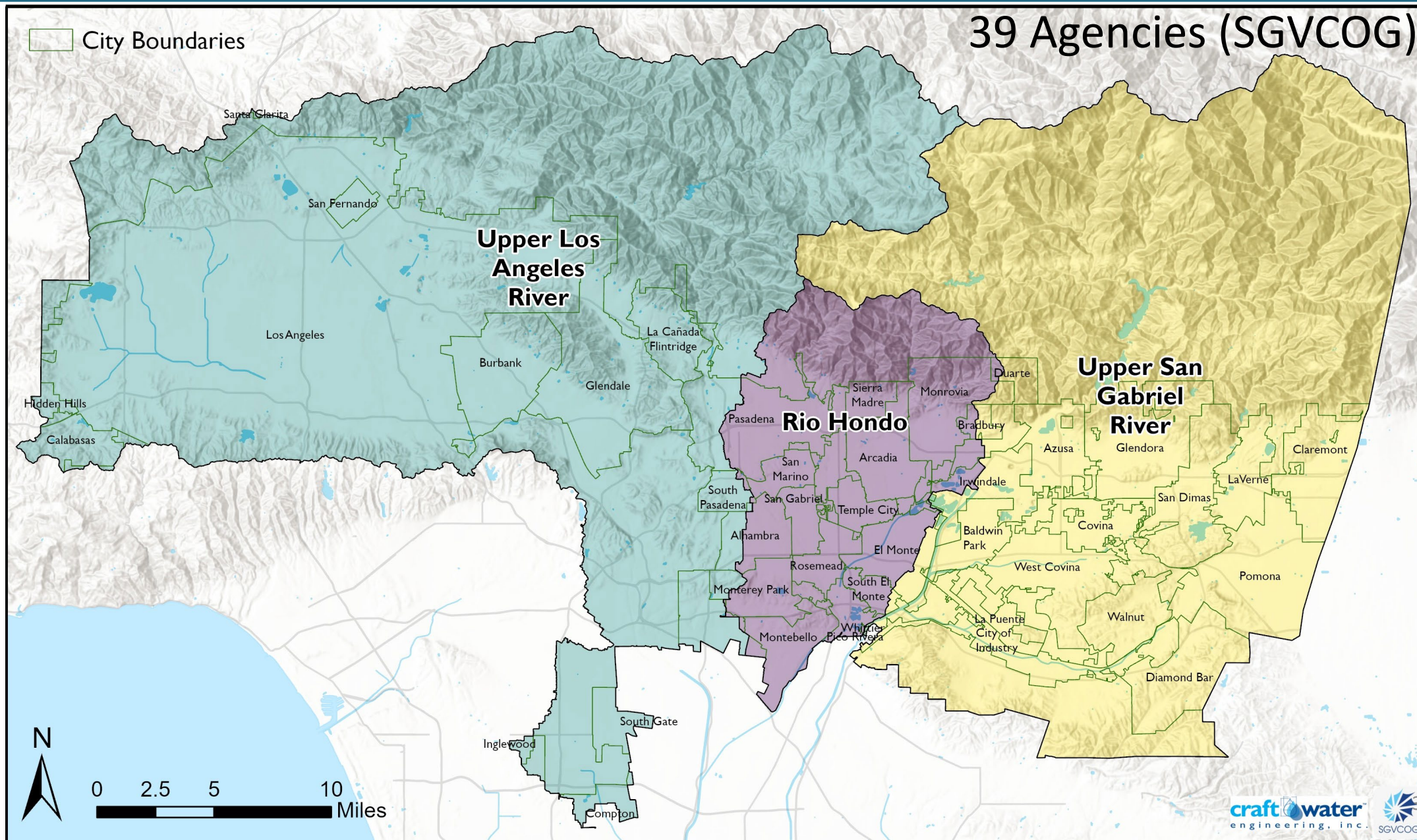
- MCMs are the first line of defense against polluted stormwater discharging to our waterways
- Efficiency in MCMs translates to more funding for nature-based solutions and community investment benefits
- Watershed-specific guidebook for targeted enhancements to MCMs







# Study Location





# Study Details – What are MCMs?



Outreach events and materials



Construction site inspections and enforcement



Miles swept and debris removed



Infrastructure inspections



IC/ID investigations and abatement



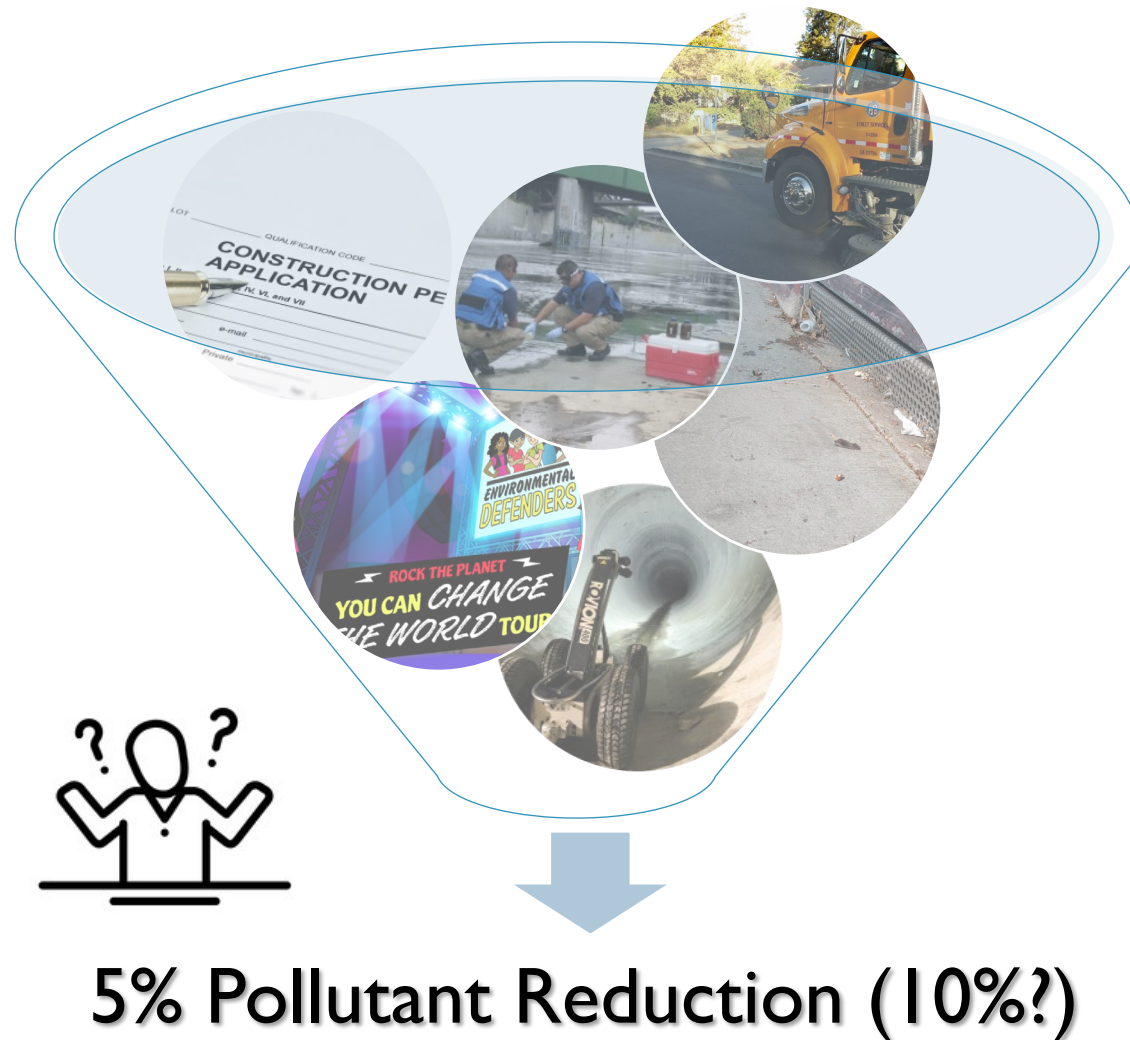
Trash capture devices installed



# Study Details – How are MCMs Assessed?

- **Then:** Limited studies on effectiveness during E/WMP development
  - Programs lumped together during analysis
  - Accepted coarse, conservative assumptions
- **Now:** State Water Board and new permit requiring robust justification

Agencies investing \$1M+/yr on average  
(LA City and County: \$50M+/yr)





# Study Details – Why MCMs Matter

## Power of Programs

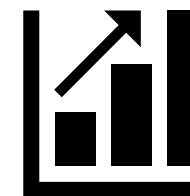
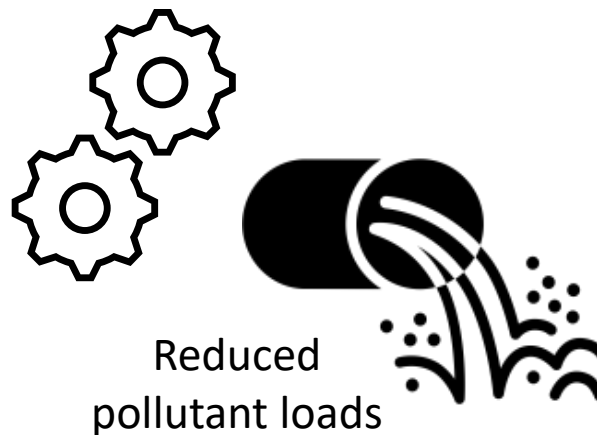
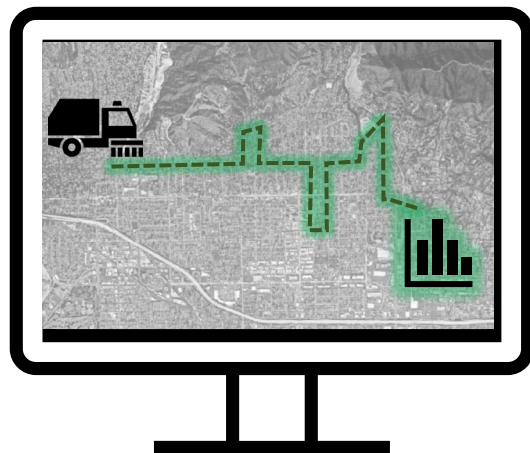
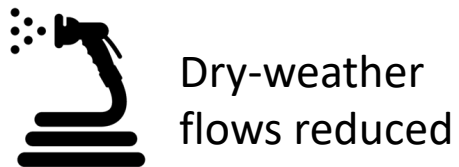
- MCM programs are orders of magnitude **cheaper**
- Recent data are showing that **something is working...**
- Compliance strategies are **shifting**

## How Do We Better Utilize Programs?

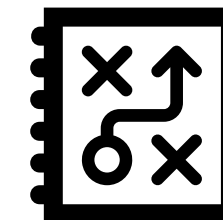
- More data and scientific understanding to support
- Quantify effectiveness and tools to optimize



# Study Details



Optimize



Guidebook

What data do we have on MCMs?



How can we represent MCMs and learn from the data?



How much are MCMs achieving?



How can we do more with MCMs?



# Schedule

Phase	Description	Completion Date
<b>Stakeholder Engagement</b>	Form Stakeholder Group	12/31/2022
<b>Identify Programs and Standardized Data</b>	Select Program Strategies to Evaluate	1/31/2023
	Develop Standardized Data Templates	3/31/2023
<b>Evaluate Methodologies to Model the Effectiveness of Selected Programs</b>	Draft Program Performance Evaluation Methodologies	4/30/2023
	Final Program Performance Evaluation Methodologies	6/30/2023
<b>Quantify Effectiveness of Selected Programs</b>	Draft Program Performance Evaluation	9/30/2023
	Final Program Performance Evaluation Methodologies	11/30/2023
<b>Technical Platform to Visualize Programs Effectiveness</b>	Draft Program Tracking and Assessment Technical Platform	2/29/2024
	Final Program Tracking and Assessment Technical Platform	6/30/2024
<b>Develop Recommended Program Implementation Strategies</b>	Recommend MCM Implementation Strategies for Optimization	6/30/2024



# Funding Request

WASC	Year 1	Year 2
RH	\$ 83,275	\$ 157,190
ULAR	\$ 278,068	\$ 524,878
USGR	\$ 136,137	\$ 256,972
<b>TOTAL</b>	<b>\$ 497,480</b>	<b>\$ 939,040</b>

*Study advancement is not contingent upon funding from every WASC*



# Regional Collaboration

MCMs are critical implementation strategies across the region, which are typically undervalued and not well understood

Collaboration and support:

- Regional Board
- Stormwater Monitoring Coalition
- New York City
- Accelerate Resilience L.A.







# Summary of Benefits

- **Robust, scientific approach** to:
  - Visualize and communicate MCM implementation
  - Quantify effectiveness
  - Identify adjustments/additions to increase water quality, water supply, and community benefits
- Continue support and investments in critical programs, **uniquely integrated in our communities**
- **Cheaper and faster** strategies progressing water quality goals
- Reduce burden on structural projects, allowing SCW funds to focus on multi-benefit projects that maximize **nature-based solutions** and **community investment benefits**



**Questions?**



**ULAR**

UPPER  
LOS  
ANGELES  
RIVER

**craft**  **water**<sup>™</sup>  
engineering, inc.

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preSIP SCIENTIFIC STUDY UPDATE | 16 NOV 2021 | RIO HONDO WASC

# PRESIP GOALS



Find great **project** opportunities



Engage **partners** to pursue collective success



Plot a more achievable compliance **pathway**



Design a **platform** to help you plan, develop, and fund successful projects

# Why It's Needed – Intro to ULAR EWMP

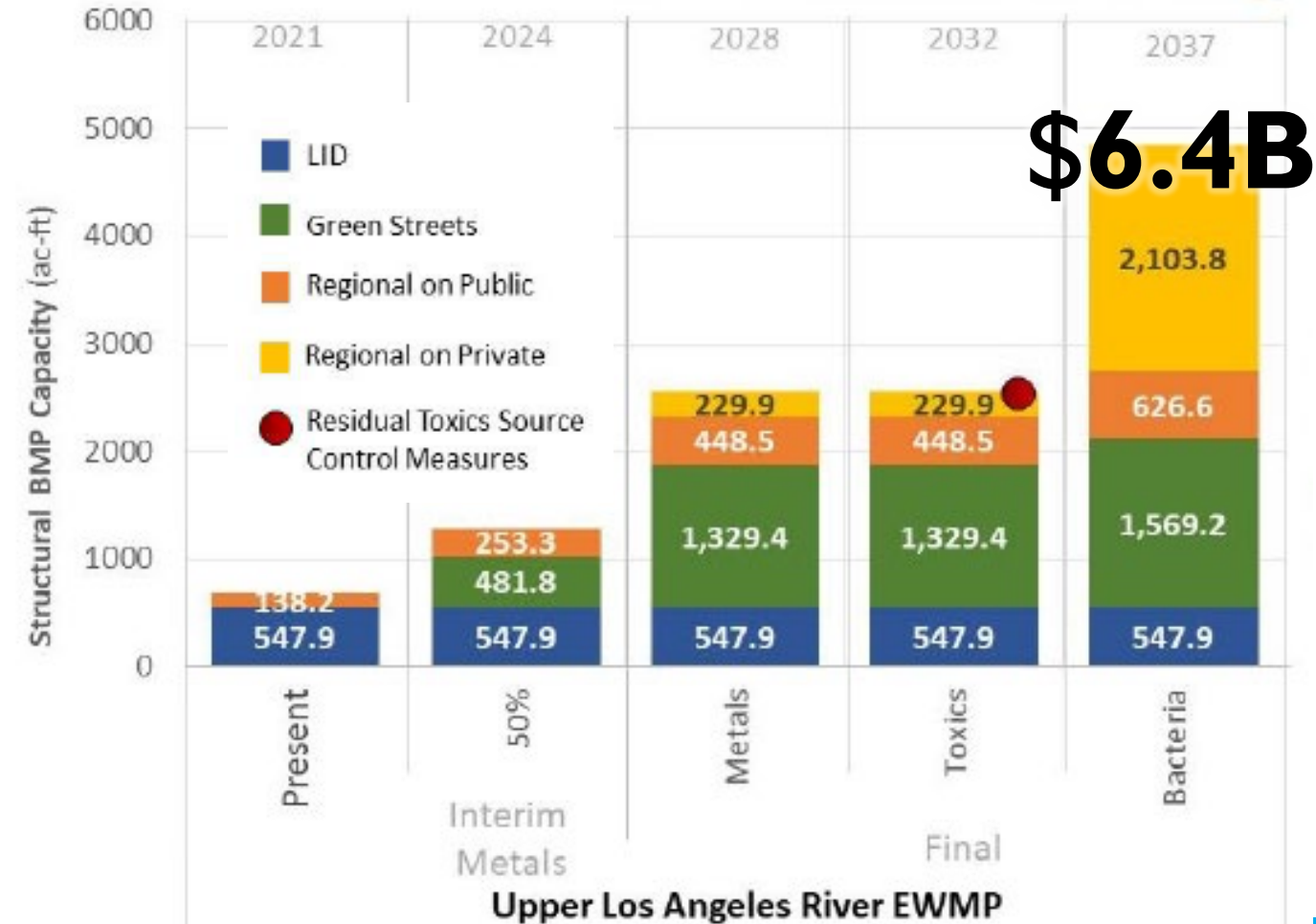
## Control Measure Scheduling



Upper Los Angeles River EWMP

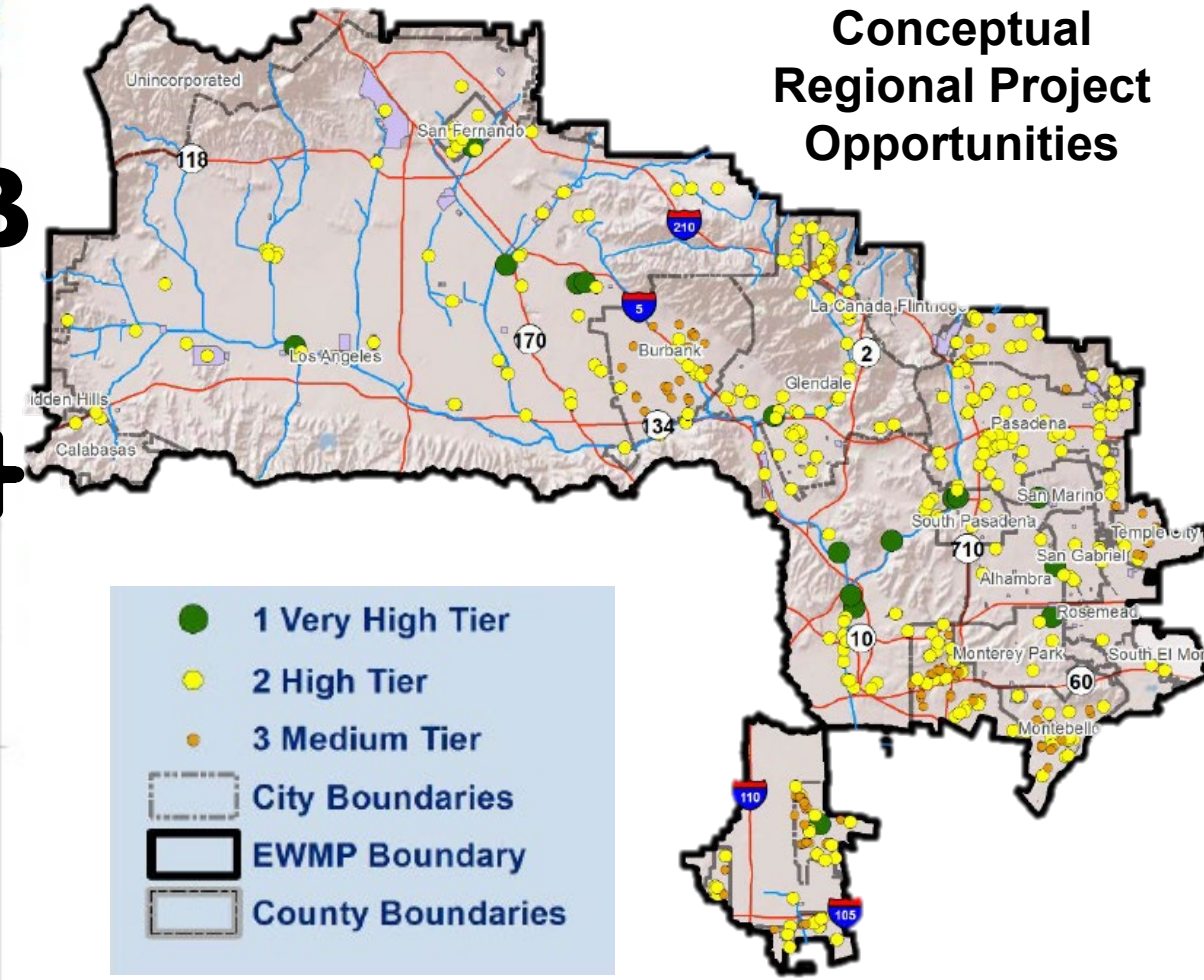
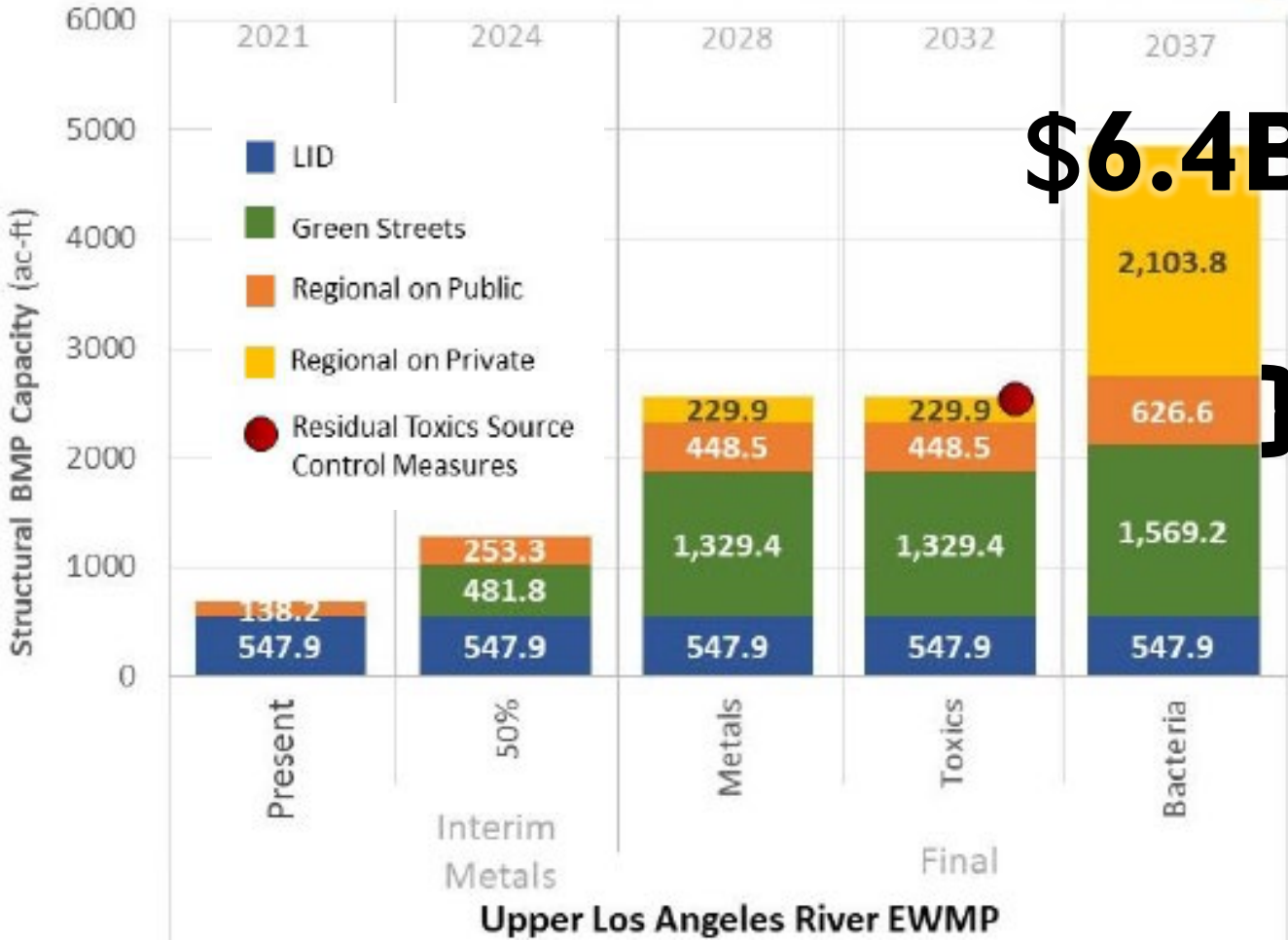
# Why It's Needed – Intro to ULAR EWMP

Control Measure Scheduling



# Why It's Needed – Intro to ULAR EWMP

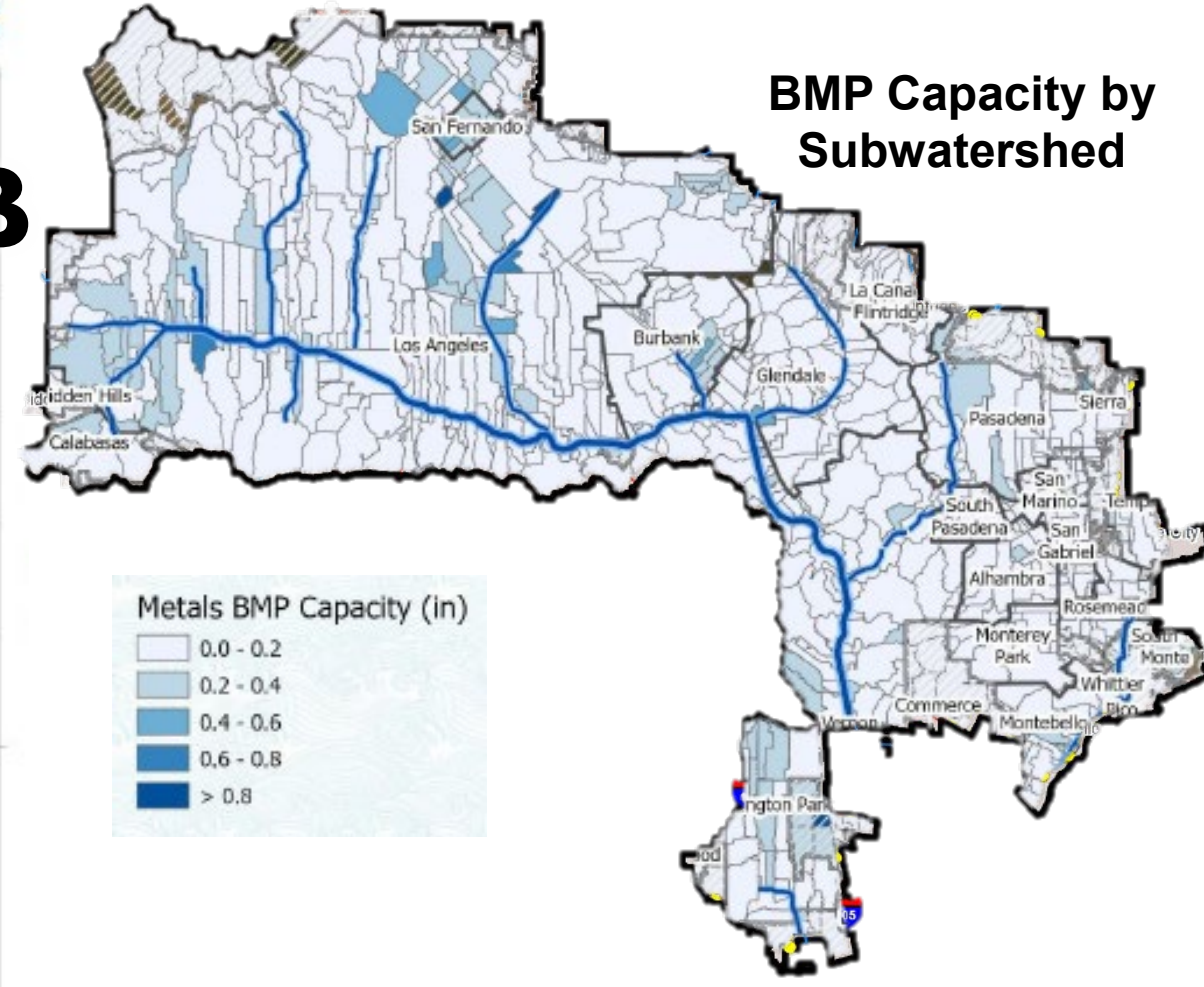
## Control Measure Scheduling



# Why It's Needed – Intro to ULAR EWMP

## Control Measure Scheduling

**\$6.4B**



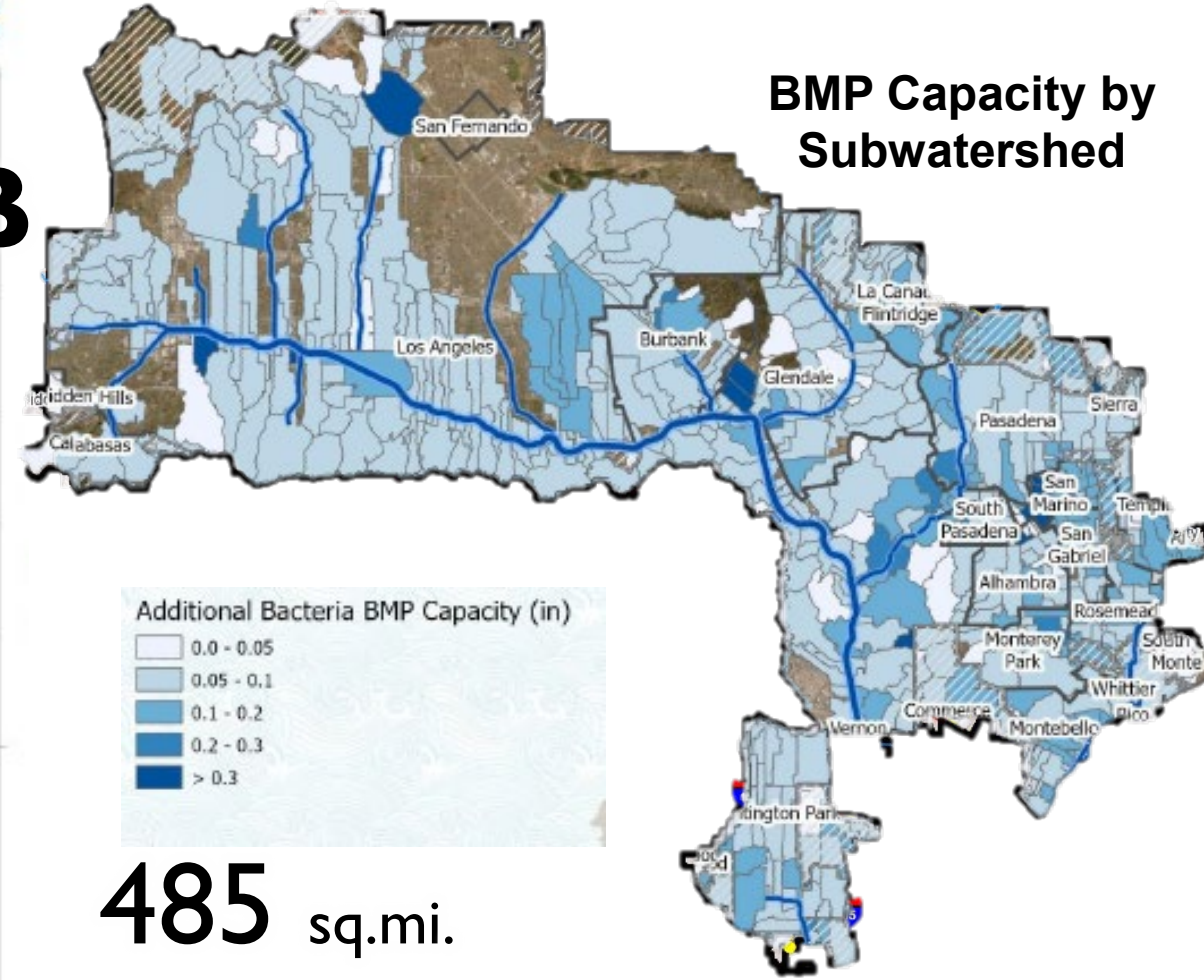
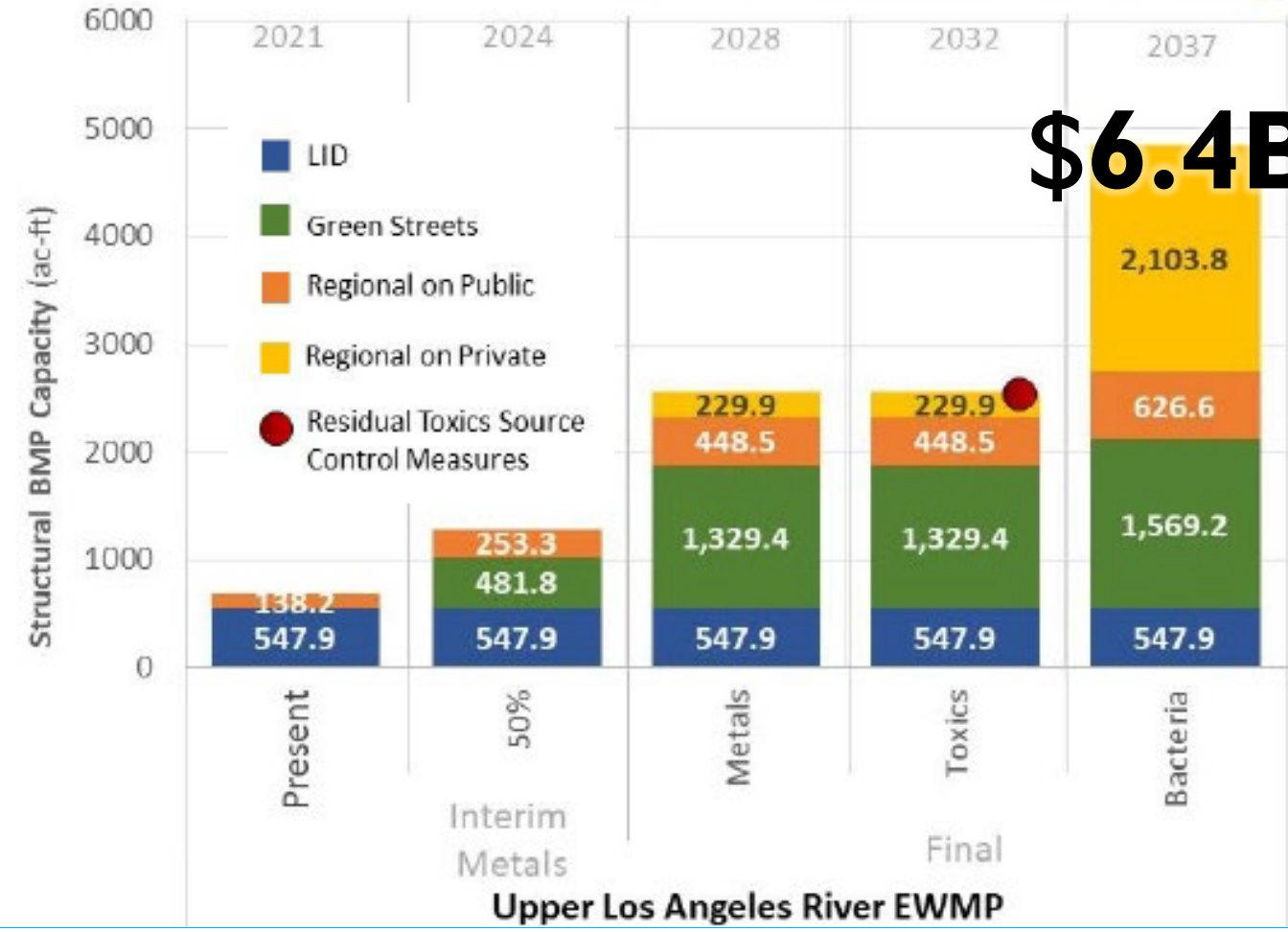
Upper Los Angeles River EWMP




# Why It's Needed – Intro to ULAR EWMP

## Control Measure Scheduling

**\$6.4B**

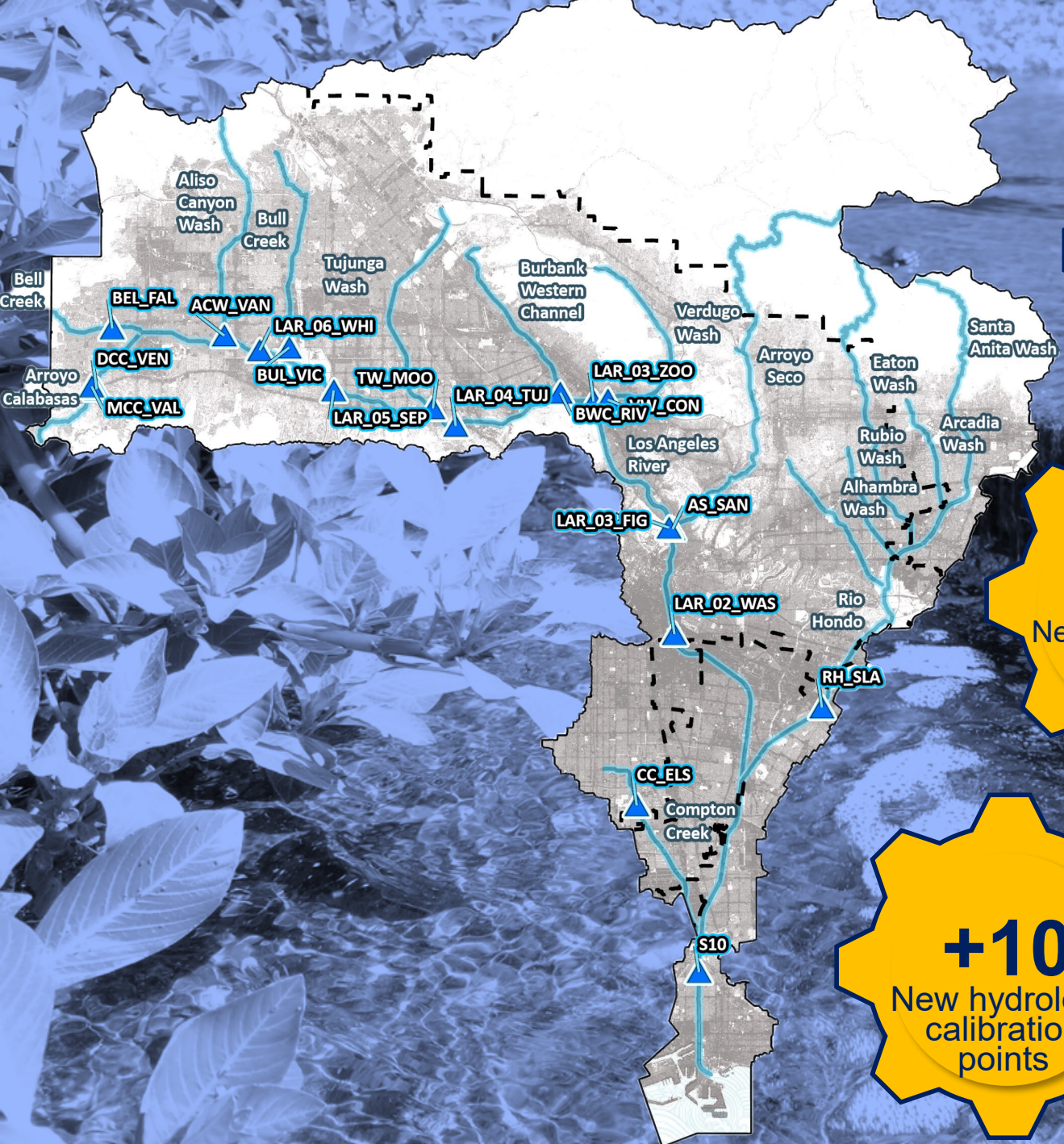


Upper Los Angeles River EWMP

- 
- An aerial photograph of a concrete-lined canal. On the left, a black corrugated pipe discharges water into the canal. Further down, a concrete weir structure is visible. The canal is bordered by a black metal fence and lush green vegetation on the left bank. The water in the canal is dark and turbulent.
- Build a **reliable, higher certainty** model to inform investment planning
  - Better align water quality targets with **beneficial uses** to improve achievability and measurability

# TASK 2: GOALS, OBJECTIVES, METRICS

# Watershed Model Improvements



**900+**  
simulations

**+22**  
New water quality  
calibration  
points

**10**  
sediment  
parameters

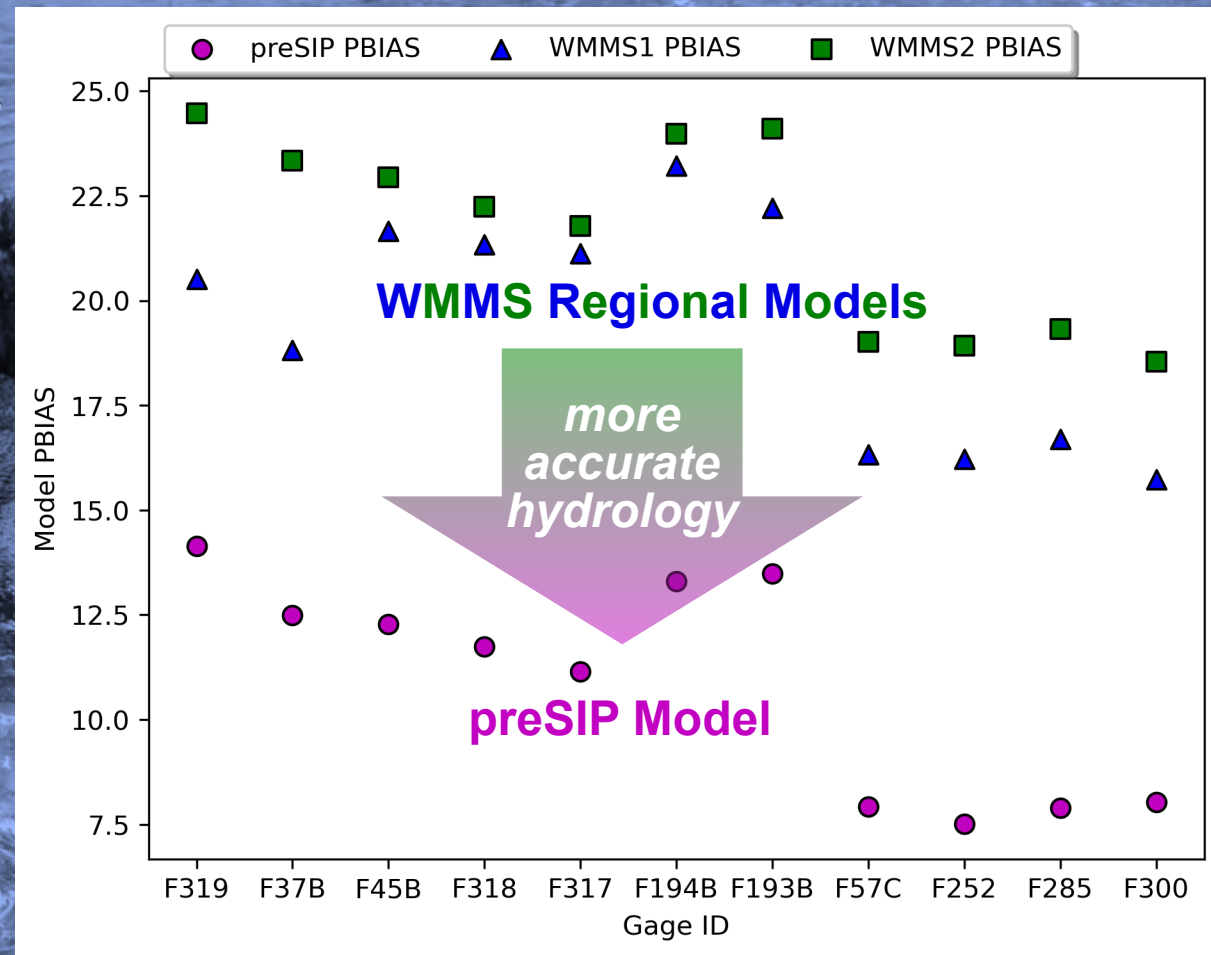
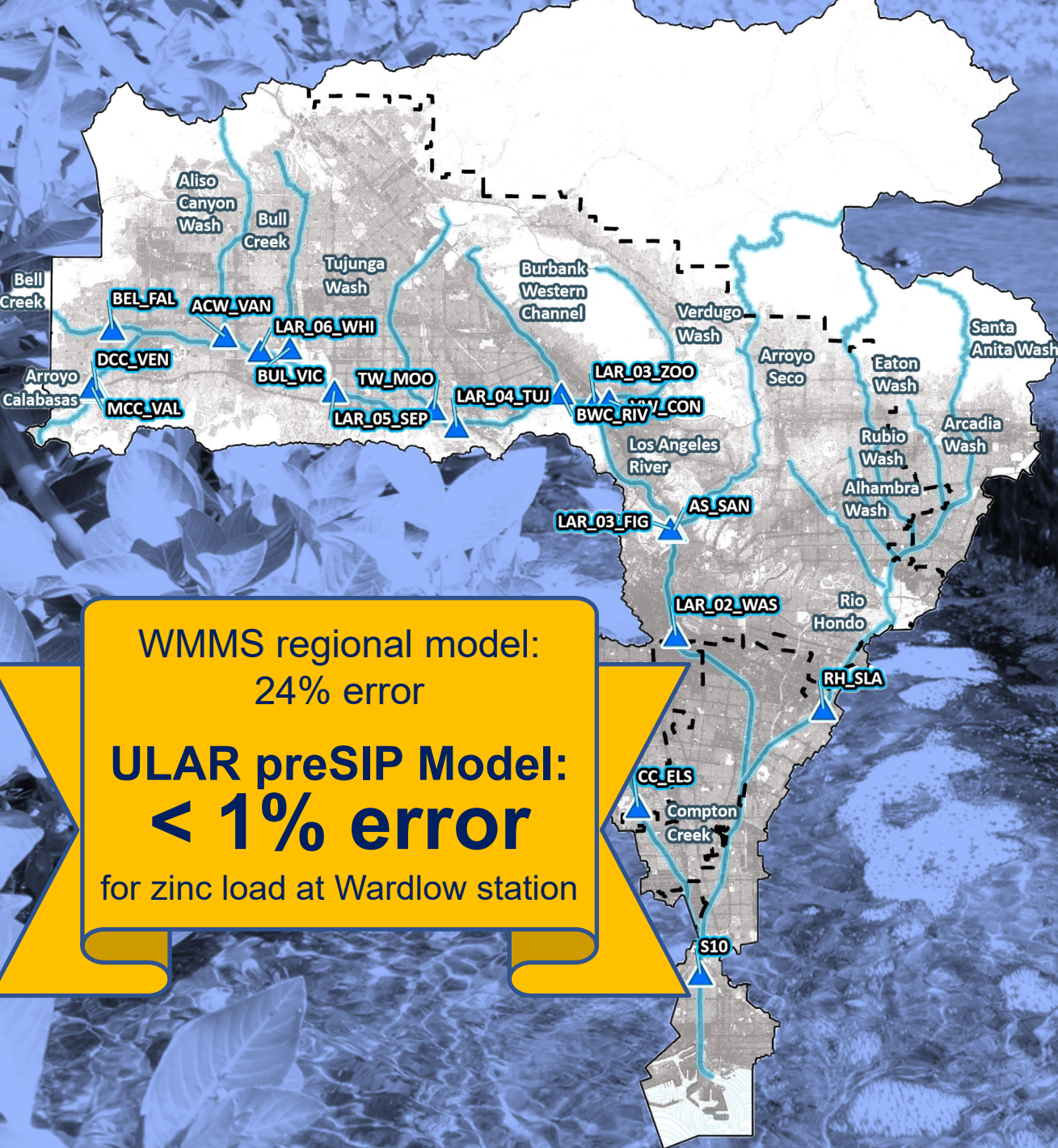
**33**  
performance  
metrics


**+10**  
New hydrology  
calibration  
points

**5x6**  
water quality  
parameters

**11**  
hydrology  
parameters

# Watershed Model Improvements



- 
- A construction site featuring several large, grey, rectangular StormTrap units arranged in a row. A blue crane is positioned to the right, and a yellow forklift is visible in the background. The ground is dirt, and there are some black tarps covering parts of the site. The background shows a chain-link fence and some trees under a clear blue sky.
- Engage partners to identify existing/planned projects
  - Find new, currently unknown, high-impact projects
  - Explore interactions of projects in series
  - Prioritize and schedule projects to demonstrate achievable pathway to compliance while balancing SCWP goals

## TASK 3: IDENTIFY & RECONCILE WATERSHED-WIDE OPPORTUNITIES

# Coordinating and Supporting Parallel Plans



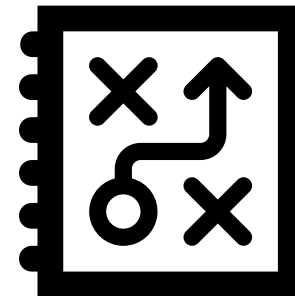
**POTENTIAL  
WMG PROJECTS**



- Water Agencies
- NGOs
- Schools
- Mobility/Streets
- Other Plans/Permittees



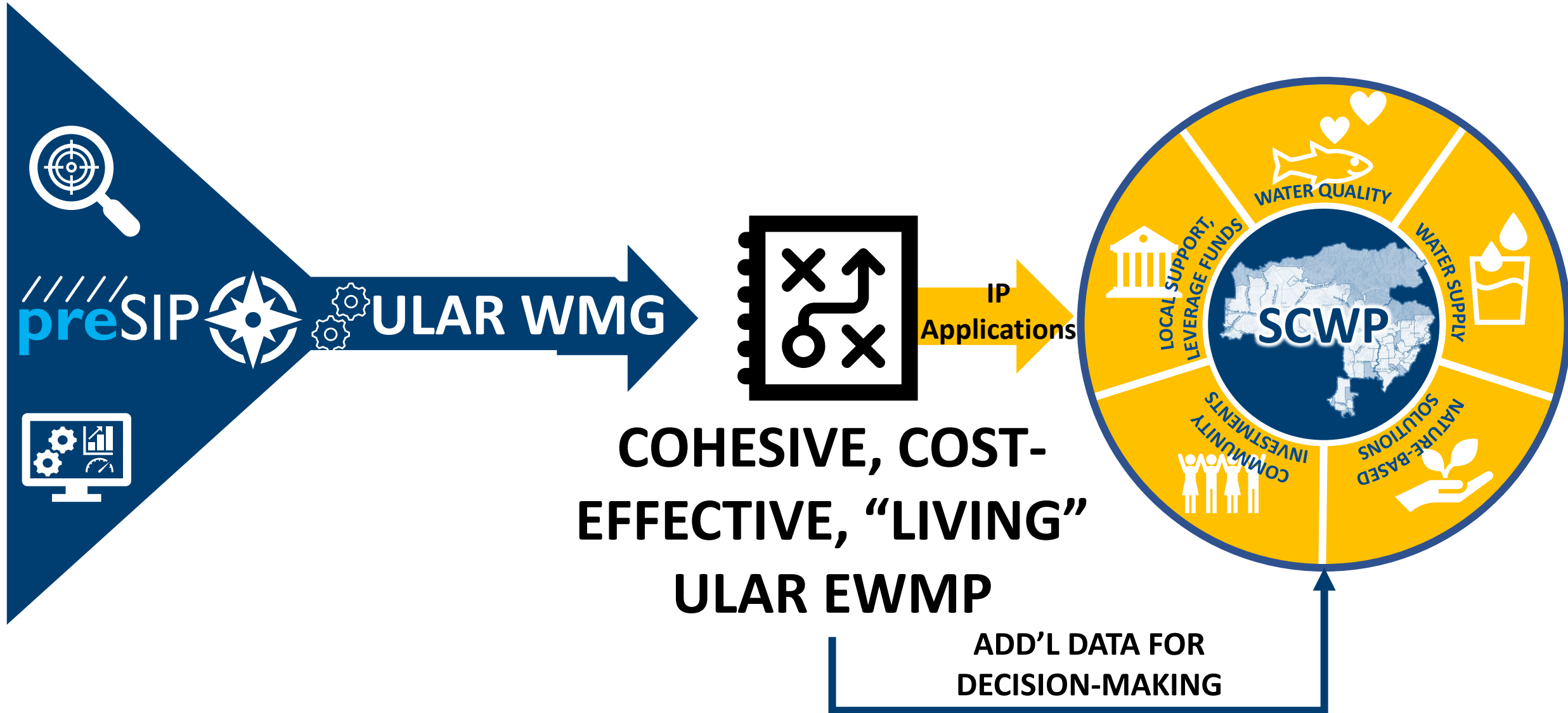
**OTHER POTENTIAL  
PROJECTS**



**COHESIVE, COST-  
EFFECTIVE, "LIVING"  
ULAR EWMP**



# Synchronizing with SCWP Goals



# 28 Partner Organizations Engaged to Date

The Nature  
Conservancy



Public Works  
LOS ANGELES COUNTY



ULAR

UPPER  
LOS  
ANGELES  
RIVER



Caltrans



preSIP

A Platform for  
Watershed Science  
and Project Collaboration

ARLA



SAFE  
CLEAN  
WATER



TREEPEOPLE

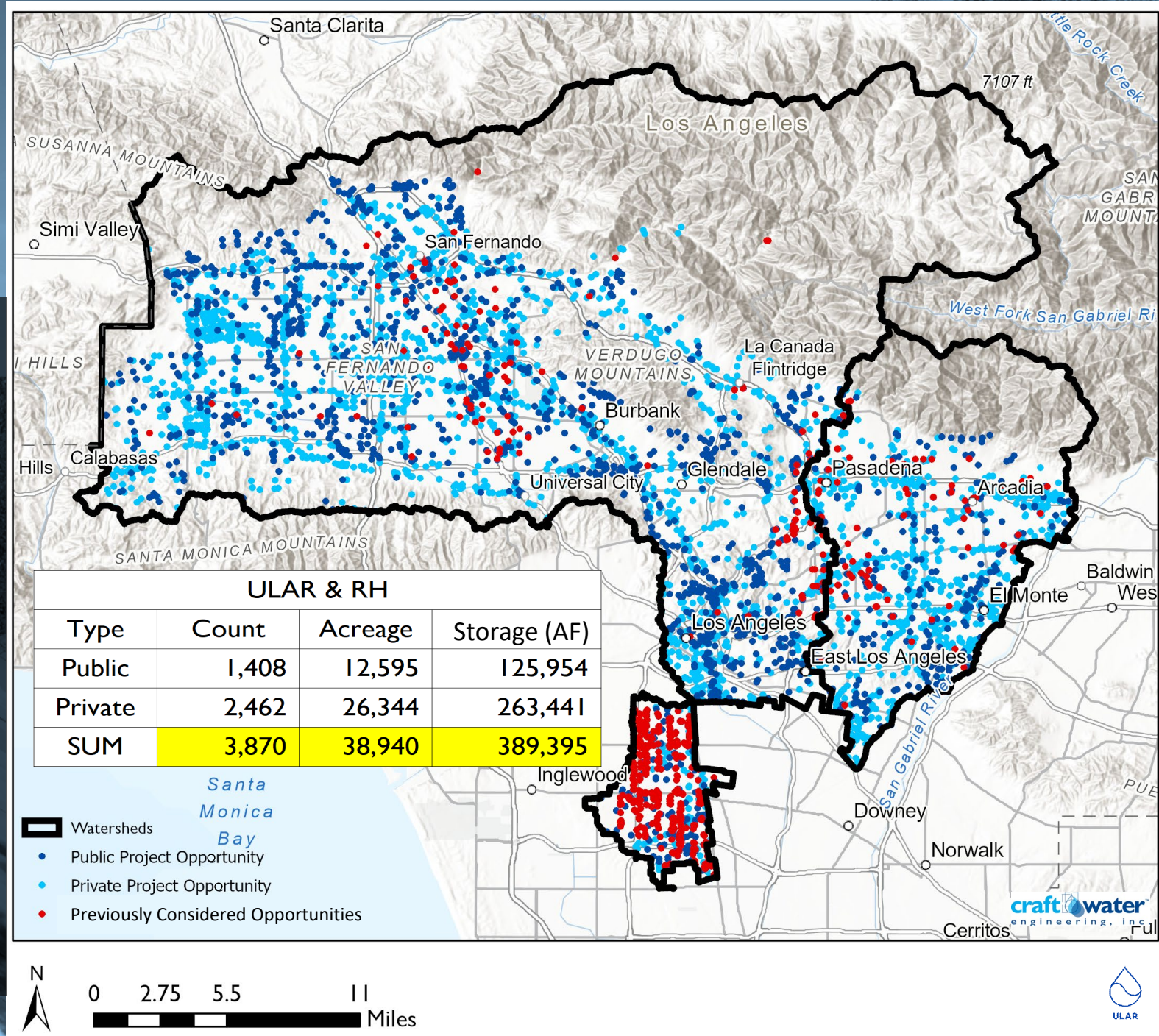



Metro



# New Project Screening Progress

- How do opportunities overlap with **planned or considered projects**?
- **Where** do we have new, untapped storage opportunities?
- How do projects interact in a **network**?
- How can runoff be diverted to each project to **maximize capture**?
- What is the **engineering feasibility** and constructability of each?



- 
- Create process to source new candidate projects for inclusion in ULAR WMP
  - Develop tool to explore project library and continuously adapt
  - Enable dynamic analysis of watershed-scale implementation scenarios

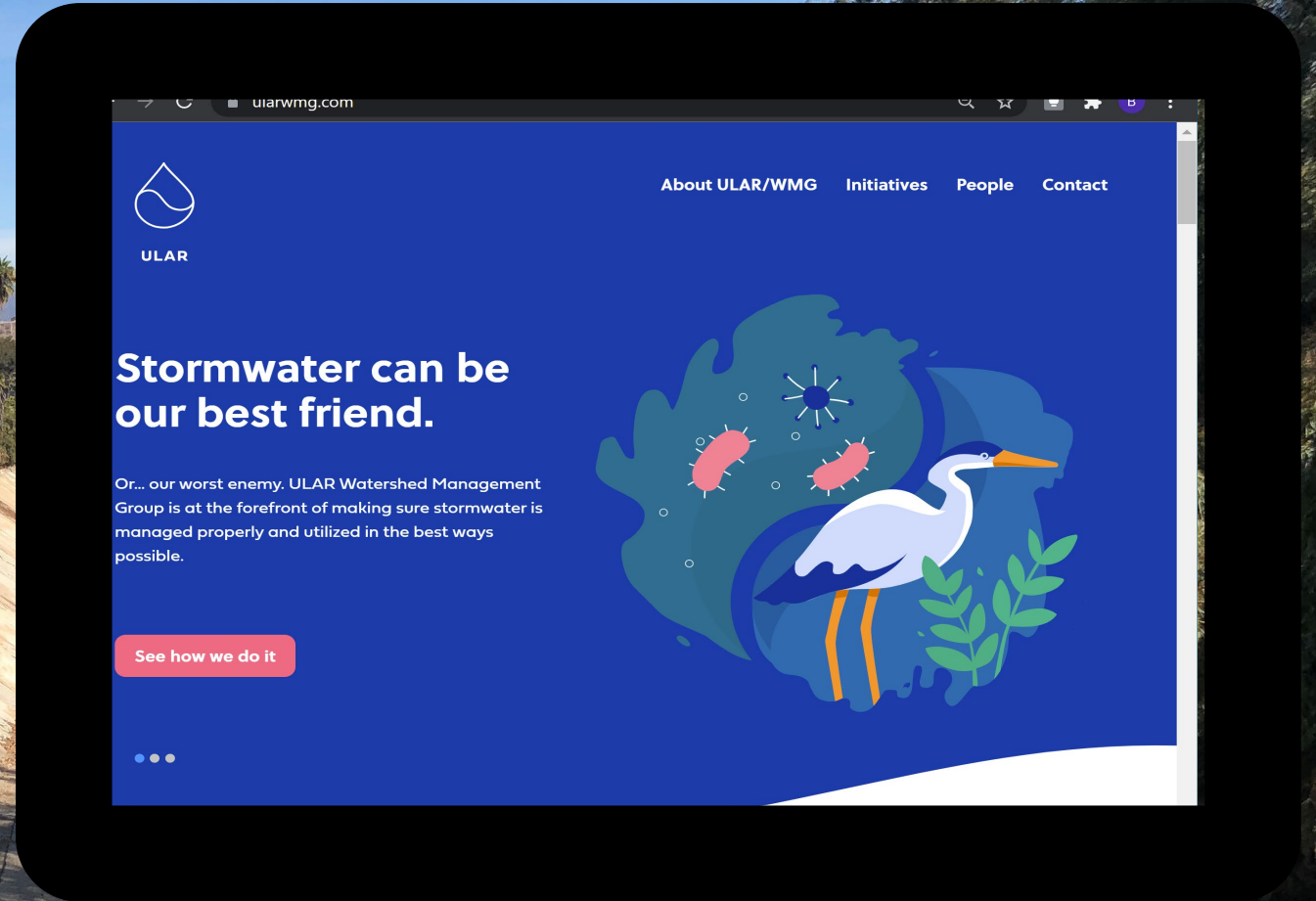
## **TASK 4: DESIGN TECHNICAL PLATFORM TO ASSESS ALTERNATIVE SCENARIOS & BENEFITS**

# Public Website (ularwmg.com)



Platform helps answer key questions:

- **Project Applicants:** How does my project fit with other nearby projects?

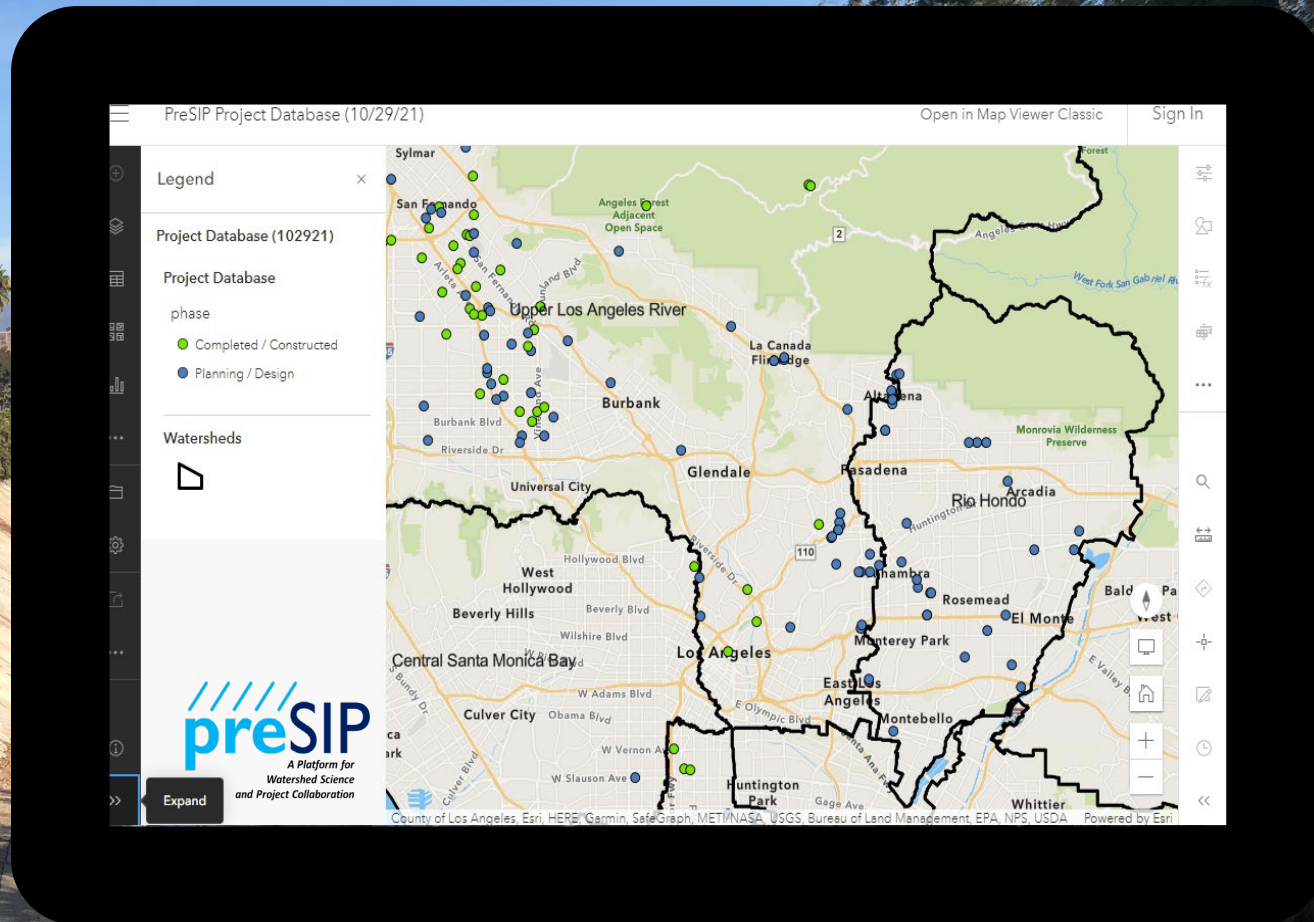


# ULAR Project Library & Planning Interface



Platform helps answer key questions:

- **Project Applicants:** How does my project fit with other nearby projects?
- **Watershed Management Groups:** Which projects should I support/advance next for rapid compliance?

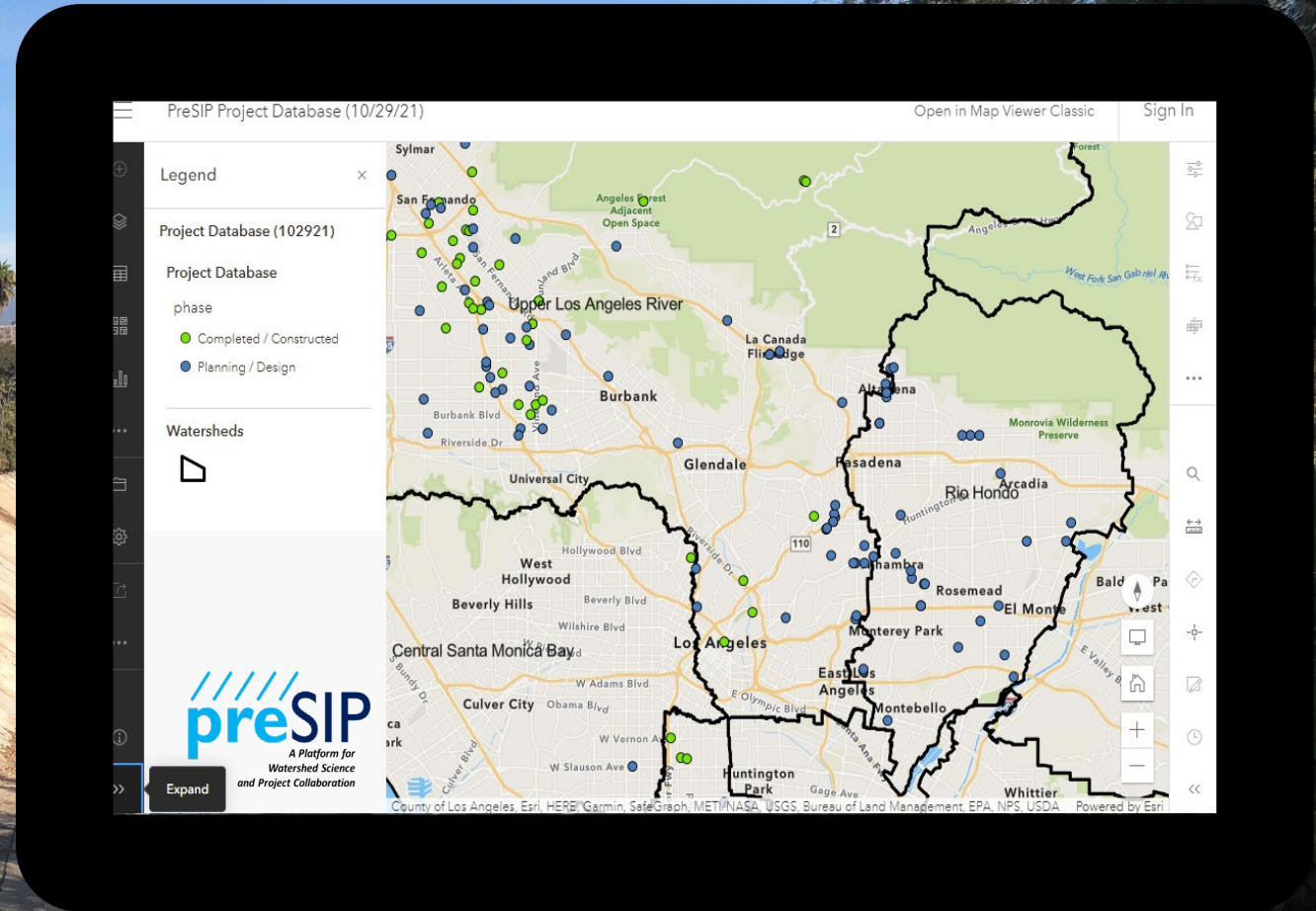


# ULAR Project Library & Planning Interface



Platform helps answer key questions:

- **Project Applicants:** How does my project fit with other nearby projects?
- **Watershed Management Groups:** Which projects should I support/advance next for rapid compliance?
- **WASC:** How does this slate of potential projects advance SCWP goals?



# QUESTIONS?



ULAR

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engineering, inc.

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