

An aerial photograph of Los Angeles, California, showing the coastline, the city grid, and the mountains. The image is rotated 90 degrees clockwise. The background is a solid teal color.

# Community Garden Stormwater Capture Investigation

Scientific Studies Program

Fiscal Year 2022-2023

Rio Hondo Watershed

Los Angeles Community Garden Council

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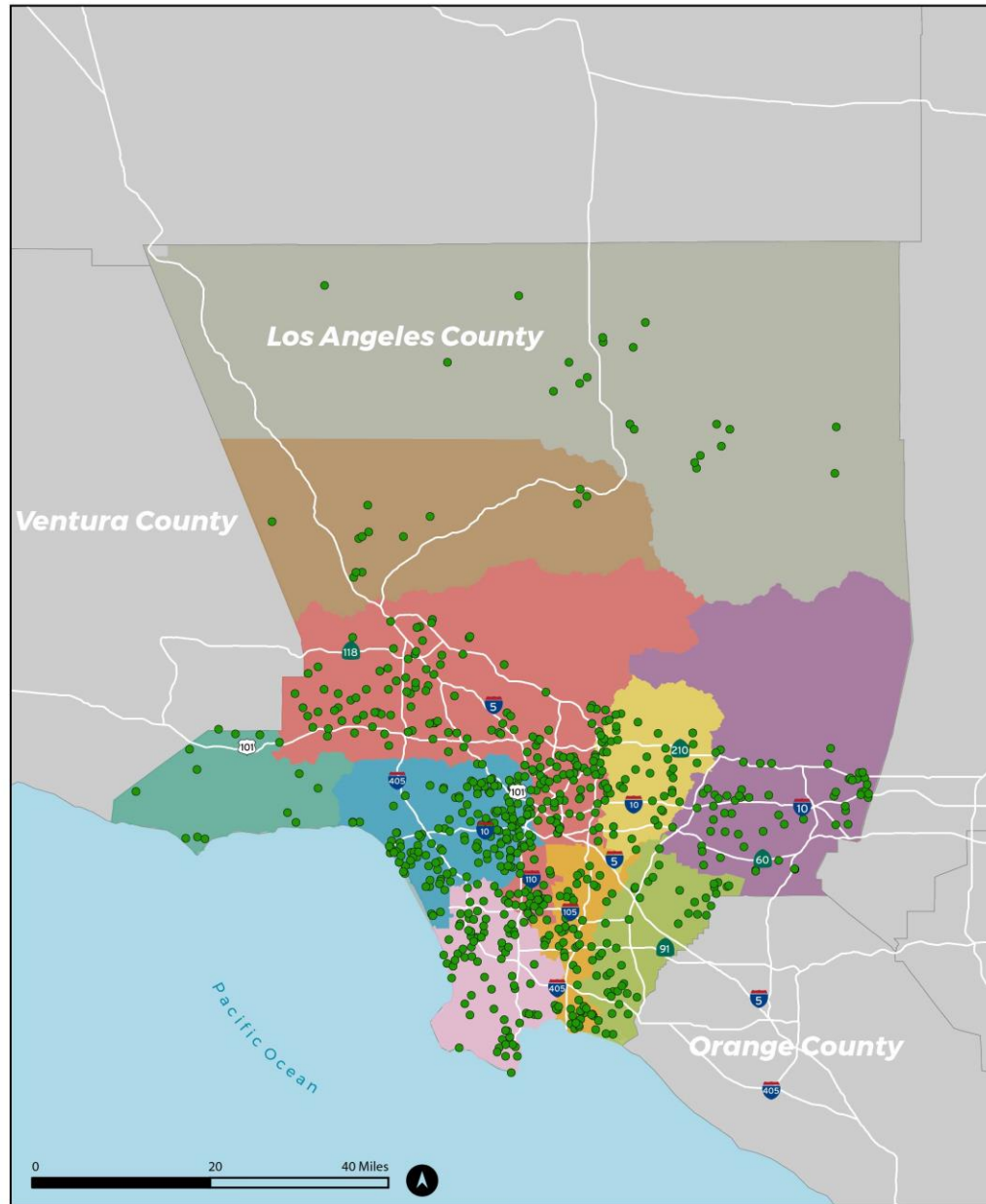
# About Us!

- A 501(c)3 non-profit organization founded in 1998
- Our mission is to strengthen communities by building and supporting community gardens where every person in Los Angeles County can grow fresh food in their neighborhood
- Manage 40+ community gardens
- Offer workshops, gardening advice, and community organizing
- Advocate for accessibility to affordable, healthy food





# SCW and Scientific Study Program Goals



- The purpose of the Scientific Studies Program is to provide funding for scientific and technical activities related to Stormwater and Urban Runoff capture and pollution reduction.
- The study will develop knowledge of the ability of community gardens to advance SCWP goals.

# Project Overview

Can community gardens function as stormwater capture facilities?

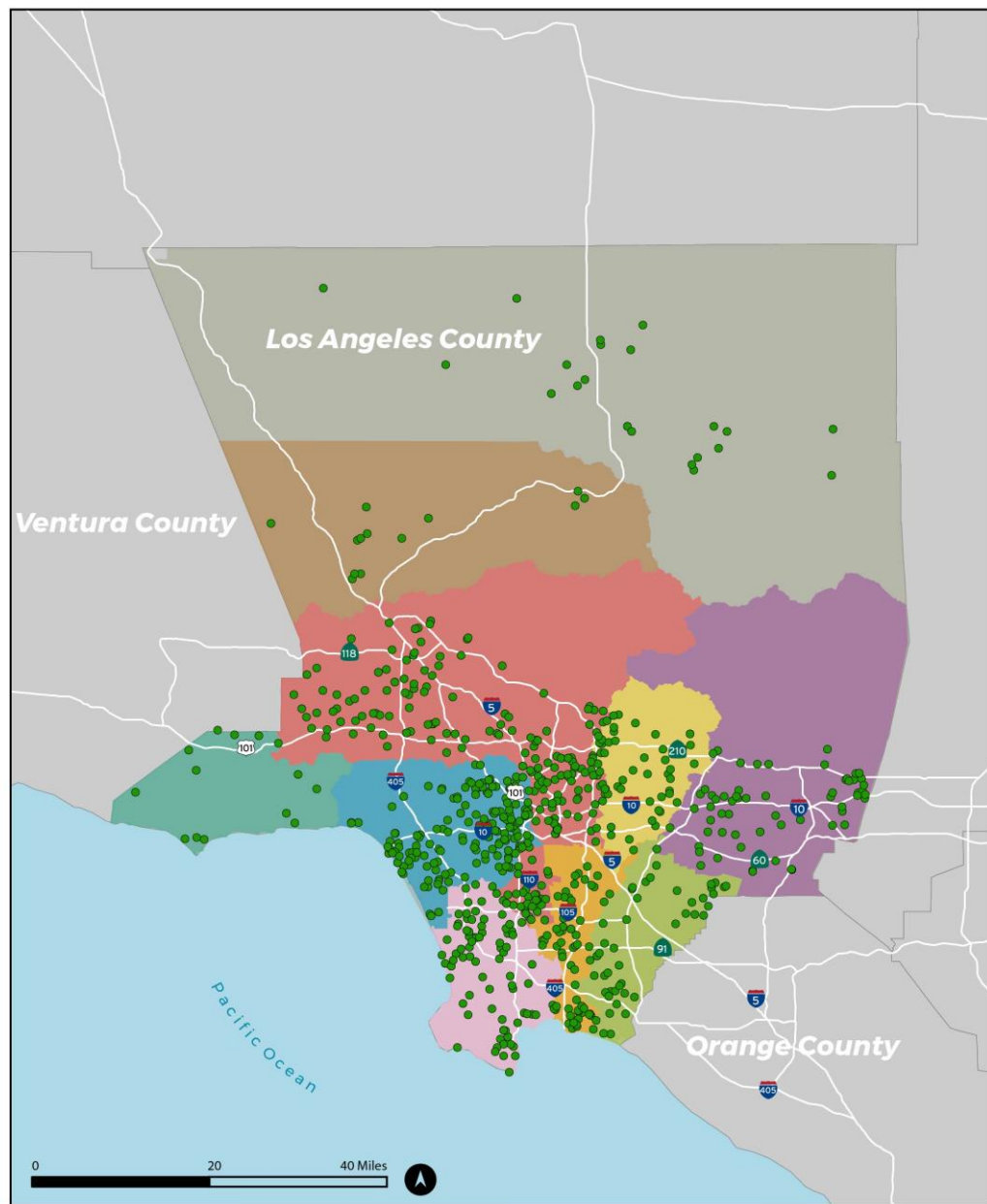
This study will investigate community gardens as a land use, identify site characteristics (i.e. land ownership, infiltration potential, etc.) to determine if the land use has the potential to contribute towards SCW Program goals.

- Primary Objective: Identify conditions under which Community Garden locations have potential for stormwater capture.
- Secondary Objectives: Engage through direct dialog with gardeners to understand their potential needs. Identify 3 locations that can serve as templates for planning purposes.
- Project Status: Planning
- Total Funding Requested: \$2,647,990 total/ \$378,285 per watershed.





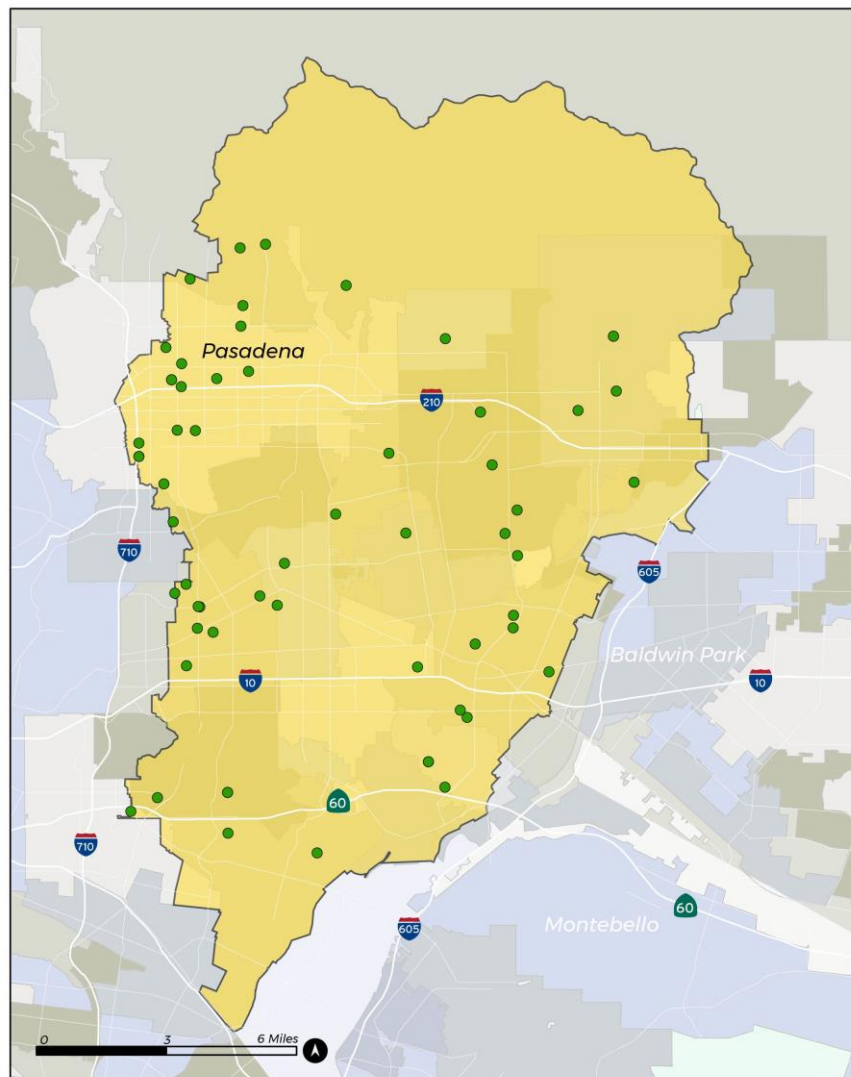
# Project Location



- Almost 800 Community Gardens across LA County
- Many are managed by community groups
- Community gardens serve diverse communities in the County



# Project Location



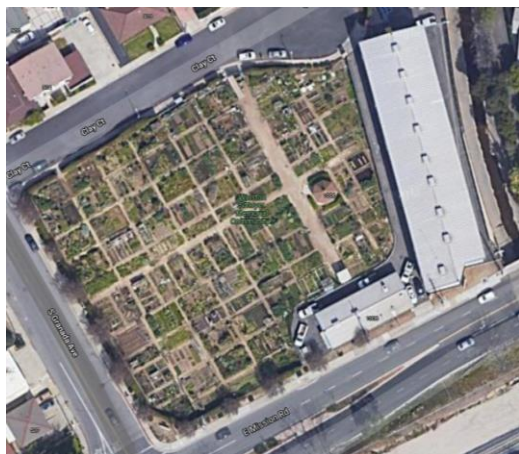
## Legend

Community Gardens ●

Rio Hondo (60)

## Rio Hondo Watershed

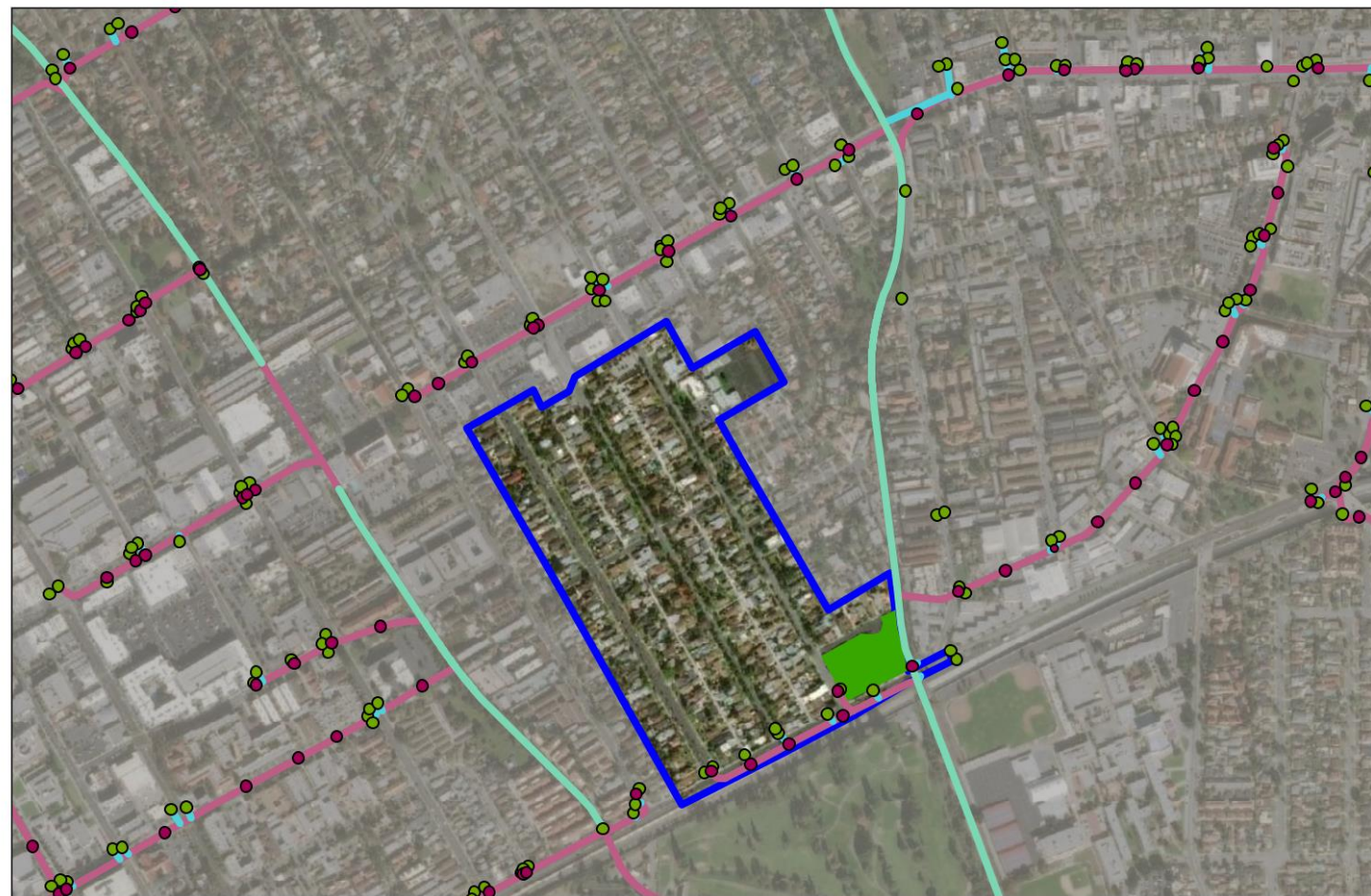
- 60 community gardens in the watershed



- Winston Smoyer Memorial Community Garden
  - Approximately 2.4 acres
  - Can gardens downstream of urban areas be redesigned to collect offsite “run-on” from these areas to provide pollutant reduction benefits to municipalities?



# Project Location



## Legend

- Winston Smoyer Memorial Community Garden (2.36 acres)
- Watershed Area (62 acres)

## Utilities

- Maintenance Hole
- Catch Basin
- Gravity Main
- Lateral Line
- Open Channel

- Example Community Garden with Upstream Tributary Area
- Drainage area is 62 acres to the community garden







## Project Background

- Primary Objective: Identify conditions under which Community Garden locations have potential for stormwater capture.
- The Community Garden Stormwater Capture Scientific Study will propose and implement a methodology to compile and evaluate community garden sites to see if compatible with SCWP goals.



# Cost & Schedule

Schedule Milestone Table

Milestone Name	Completion Date
Database of Existing Community Gardens	01/03/2022
Develop Screening Criteria	03/01/2022
Preliminary Investigation	05/02/2022
Site Reconnaissance and Outreach	08/01/2022
Concept Reports and Fact Sheet	10/14/2022
SCW Program Technical Resources Funding Application	11/30/2022



# Funding Request

## Funding Requested Per Year Per Watershed

Funding Request Year	Watershed Area	Amount for Year
Year 1	Central Santa Monica Bay	\$ 189,142.00
Year 1	Lower Los Angeles River	\$ 189,142.00
Year 1	Lower San Gabriel River	\$ 189,142.00
Year 1	Rio Hondo	\$ 189,142.00
Year 1	South Santa Monica Bay	\$ 189,142.00
Year 1	Upper Los Angeles River	\$ 189,144.00
Year 1	Upper San Gabriel River	\$ 189,142.00
Total Year 1		\$ 1,323,996.00
Year 2	Central Santa Monica Bay	\$ 189,142.00
Year 2	Lower Los Angeles River	\$ 189,142.00
Year 2	Lower San Gabriel River	\$ 189,142.00
Year 2	Rio Hondo	\$ 189,142.00
Year 2	South Santa Monica Bay	\$ 189,142.00
Year 2	Upper Los Angeles River	\$ 189,142.00
Year 2	Upper San Gabriel River	\$ 189,142.00
Total Year 2		\$ 1,323,994.00
Total Funding		\$ 2,647,990.00

# Project Benefits

Identify under which conditions community gardens can function as stormwater capture facilities.

- Identify conditions under which Community Garden locations have potential for stormwater capture within the Watershed which will benefit WASC member agencies.
- Engage through direct dialog with gardeners to understand their potential needs.
- Identify 3 locations that can serve as templates for planning purposes.





# Questions?



# Regional Pathogen Reduction Study

Scientific Studies Program

Fiscal Year 2022-2023

Central Santa Monica Bay Watershed Area, Lower LA River Watershed Area, Lower San Gabriel Watershed Area, North Santa Monica Bay Watershed Area, Rio Hondo Watershed Area, Santa Clara River Watershed Area, South Santa Monica Bay Watershed Area, Upper LA River Watershed Area, and Upper San Gabriel River Watershed Area

Project Lead: Gateway Water Management Authority

Presenter: Bruce Hamamoto



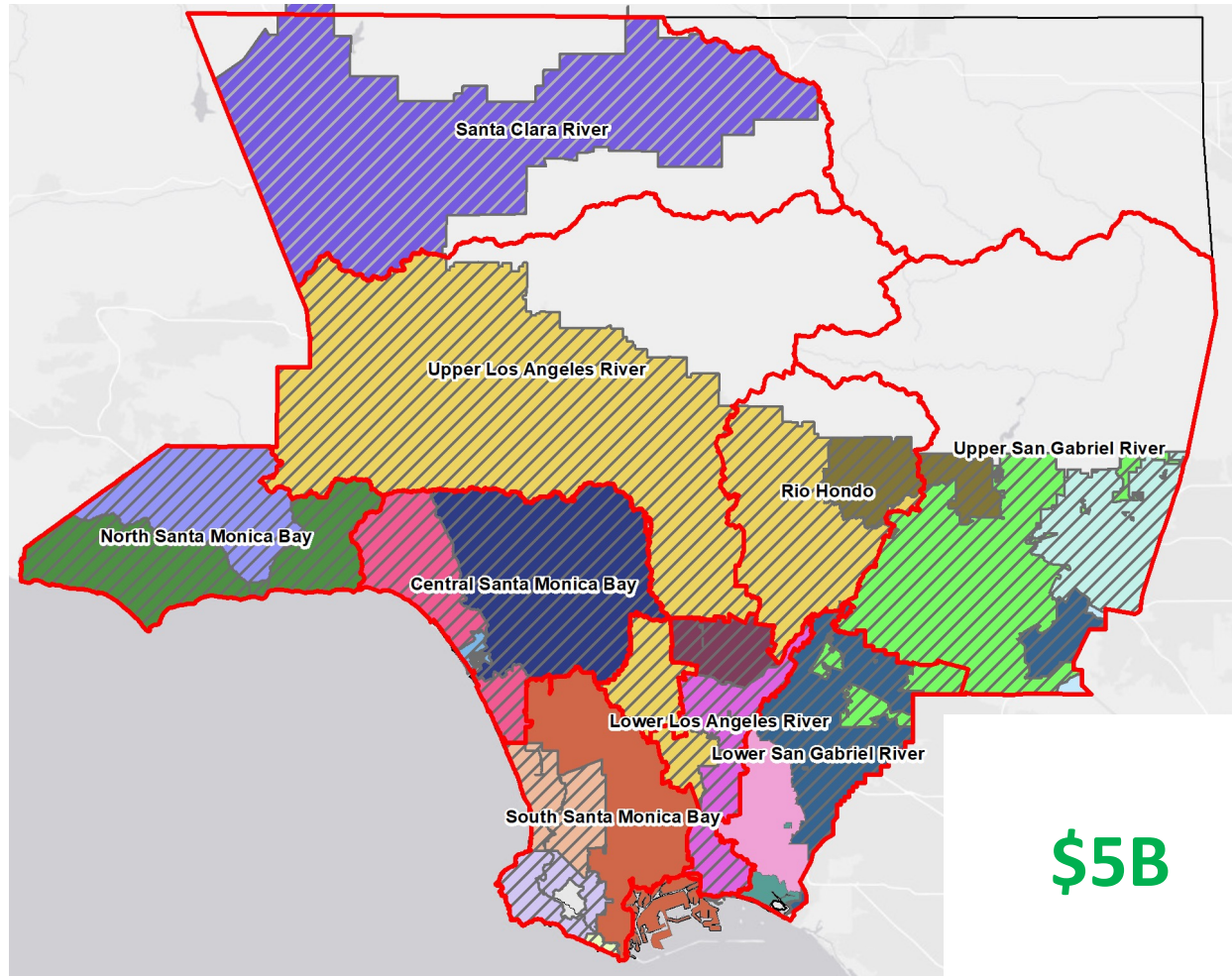
# Study Overview

- This Study aims to use the latest available science to measure water-borne pathogens across watersheds. It will help identify key sources of human health risk, and develop cost-effective protective strategies
- Nexus to Stormwater and Urban Runoff Capture and Pollution Reduction
  - Study will facilitate improved targeting of pathogen sources and water to capture and/or treat
  - Study may reduce the level of stormwater capture for bacteria compliance purposes through the identification of non-MS4 sources of risk thereby improving the protection of human health
  - Study will likely lead to partnering with various parties, such as wastewater agencies and homeless services agencies, to address human sources of pathogens.





# Study Location







## Study Details

### *Problem Statement:*

- Waterborne pathogens represent the most significant potential threat to the health of people recreating in and around the ocean and inland waters of Los Angeles County.
- Current standards are based on FIB (fecal indicator bacteria), which are used as proxies for pathogens.
  - FIB are ubiquitous; a vast network of structural control measures would need to be implemented to provide adequate control – projected cost over \$5 billion.
  - USEPA and academia agree that human sources of pathogens pose the greatest risk
  - Unless high-risk sources are targeted, water capture projects may receive large FIB loads, but miss the highest risk human sources.

(Continued)



## Scientific Study Details (Continued)

### *Methodology:*

- Study work plan will be developed through a stakeholder-led process with the input of technical experts, including academics.
  - Stakeholder engagement is at the forefront of the study to ensure that diverse viewpoints are incorporated.
- Study will collect samples from beaches and waterbodies. Samples will be analyzed for traditional bacterial indicators, viruses, and human markers during wet and dry weather.
  - Identify areas with highest risk to support a focus on those areas
  - Identify the sources causing the highest risk to focus on those sources
- Study will assess control measure effectiveness and efficiency
  - Identify the best BMPs to address the sources
  - Support planning, applying municipal funds, requests for SCWP funding, and actions by other parties

(Continued)



## Scientific Study Details (Continued)

- *Regional collaboration efforts:*
  - Small Group Initiated Discussions and built a scope for a Safe, Clean Water Regional Program project
  - Presented Approach to E/WMP Groups
  - Discussed with proponents of watershed-specific studies
  - Discussed with Regional Board staff
- Revised study twice to address concerns
  - Clearly focused on human pathogens
  - Clarified that study is a component of overall strategy to protect human health
  - Clarified that implementation continues during the study
  - Recognized that we do not need to wait until the end of the study to take action
  - Reduced first year cost of study



## Recent Revisions to Regional Pathogen Summary

- Added North Santa Monica Bay back into study
- Added an illustrative overview in Attachments (for Section 2.3)
- Added a Details Attachment (for Section 2.4)
- Attachments include a fact sheet, a table of potential constituents, and a map of potential monitoring sites
- Clarified that focus is on urbanized areas
- Clarified that monitoring sites would be chosen from MS4 monitoring sites.



## Cost & Schedule

Phase	Description	Cost	Schedule
Task 1	Stakeholder Process	\$490,000	7/22 – 6/27
Task 2	Health Risk Assessment	\$5,880,000	7/22 – 9/26
Task 3	Risk Management	\$1,734,600	4/23 – 3/27
Task 4	Application of Study Findings	\$490,000	1/26 – 6/27
<b>TOTAL</b>		<b>\$8,594,600</b>	



# Funding Request

WASC	Year 1	Year 2	Year 3	Year 4	Year 5
CSMB	\$47,109.15	\$329,764.06	\$282,654.91	\$307,364.38	\$107,432.50
LLAR	\$33,843.21	\$236,902.50	\$203,059.29	\$220,810.57	\$77,179.51
LSGR	\$44,169.54	\$309,186.78	\$265,017.24	\$288,184.85	\$100,728.71
NSMB	\$4,748.60	\$33,240.22	\$28,491.61	\$30,982.33	10,829.20
RH	\$30,413.67	\$212,895.68	\$182,482.01	\$198,434.45	\$69,358.42
SCR	\$15,866.36	\$111,064.53	\$95,198.17	\$103,520.32	\$36,183.27
SSMB	\$48,654.33	\$340,580.32	\$291,925.99	\$317,445.93	\$110,956.29
ULAR	\$102,094.95	\$714,664.67	\$612,569.72	\$666,120.09	\$232,827.71
USGR	\$49,973.39	\$349,813.71	\$299,840.33	\$326,052.14	\$113,964.40
<b>TOTAL</b>	<b>\$376,873.21</b>	<b>\$2,638,112.47</b>	<b>\$2,261,239.26</b>	<b>\$2,458,915.06</b>	<b>\$859,460.00</b>



## Summary of Benefits

- By developing a better understanding of pathogens present in the region's watersheds, the relative risk to human health they pose, and the effectiveness of various control measures, new or adapted BMPs can be established that improve water quality and reduce human health risks at our beaches and inland waterbodies.
- Short-term: results could be used to protect people from health risks that aren't currently known.
- Long-term: results will enable the targeted placement of BMPs in locations where they can maximize the prevention or treatment of key sources of human pathogens.



**Questions?**