

Safe, Clean Water Program

Fiscal Year 2021-2022

WASC Review Sheet



Project Name	
Project Lead	
Total SCW Funding Requested	
Phases for which SCW Funding is being requested	

Question	Yes/No	Notes
Does this project assist in achieving compliance with MS4 permit? If Yes, explain how.		
Does the project provide DAC benefits (refer to the ordinance for definition)? If Yes, explain how.		
Does the project provide benefits to the municipality? If Yes, explain how.		
Does the project prioritize nature-based solutions? If Yes, explain how.		
Does this meet the goals of the program stated in the ordinance (refer to Section 18.04)		
Does the project/scientific study have a nexus to stormwater and urban runoff capture and pollution reduction? If yes, explain how.		

Safe, Clean Water Program

Fiscal Year 2021-2022

WASC Review Sheet



Question	Yes/No	Notes
What is the plan for community engagement and what efforts have been made to date?		
What is the anticipated CEQA and permitting needs and how is this incorporated in the cost and schedule?		
Why is this the best location for this type of project?		
Were other alternatives considered? Why is this the best solution?		
How was the Project developed? (ie IRWMP/EWMP process, community engagement, etc...)		
If awarded partial funding by the WASCs, could the project fulfill their stated scope and benefits? If not funded, would the WASC lose the opportunity to fund this project at future rounds?		
General Notes (and follow up questions regarding any topic in the feasibility study/project submittal)		
Public Comments		



Rubio Wash Dry-Weather Diversion

Funding Program (Infrastructure Program)

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

Presenters: Vik Bapna and Katie Harrel (CWE)



Project Overview

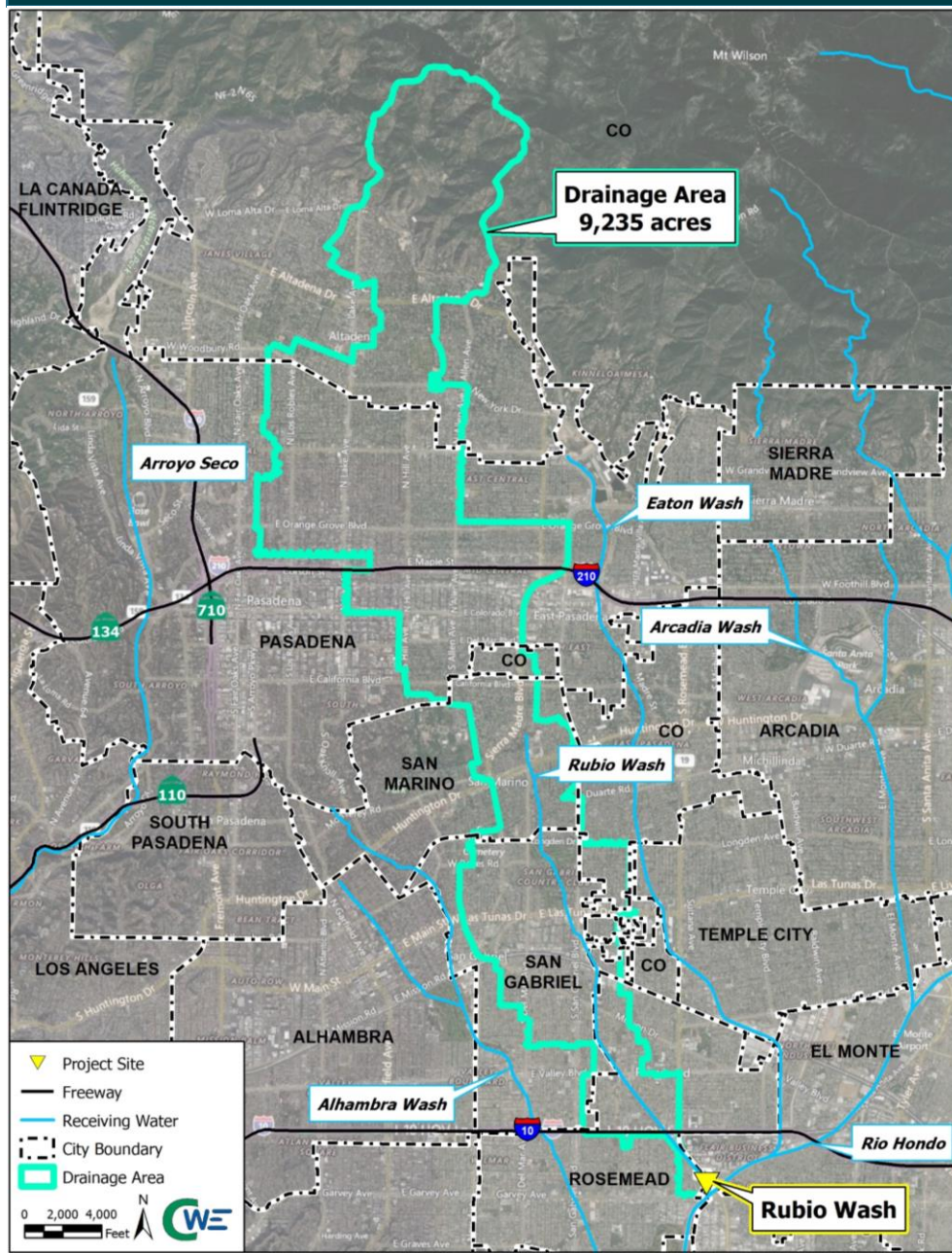
A collaboration between SGVCOG, LA County, and Cities of Pasadena and San Marino. This multi-benefit project will treat dry-weather runoff from Rubio Wash upstream of Rio Hondo to address bacteria.

- Primary objective: improve water quality
- Secondary objective: incorporate nature-based solutions/community enhancements
- Currently in design phase
- Requesting funds for design and construction
- Requesting \$2,812,080





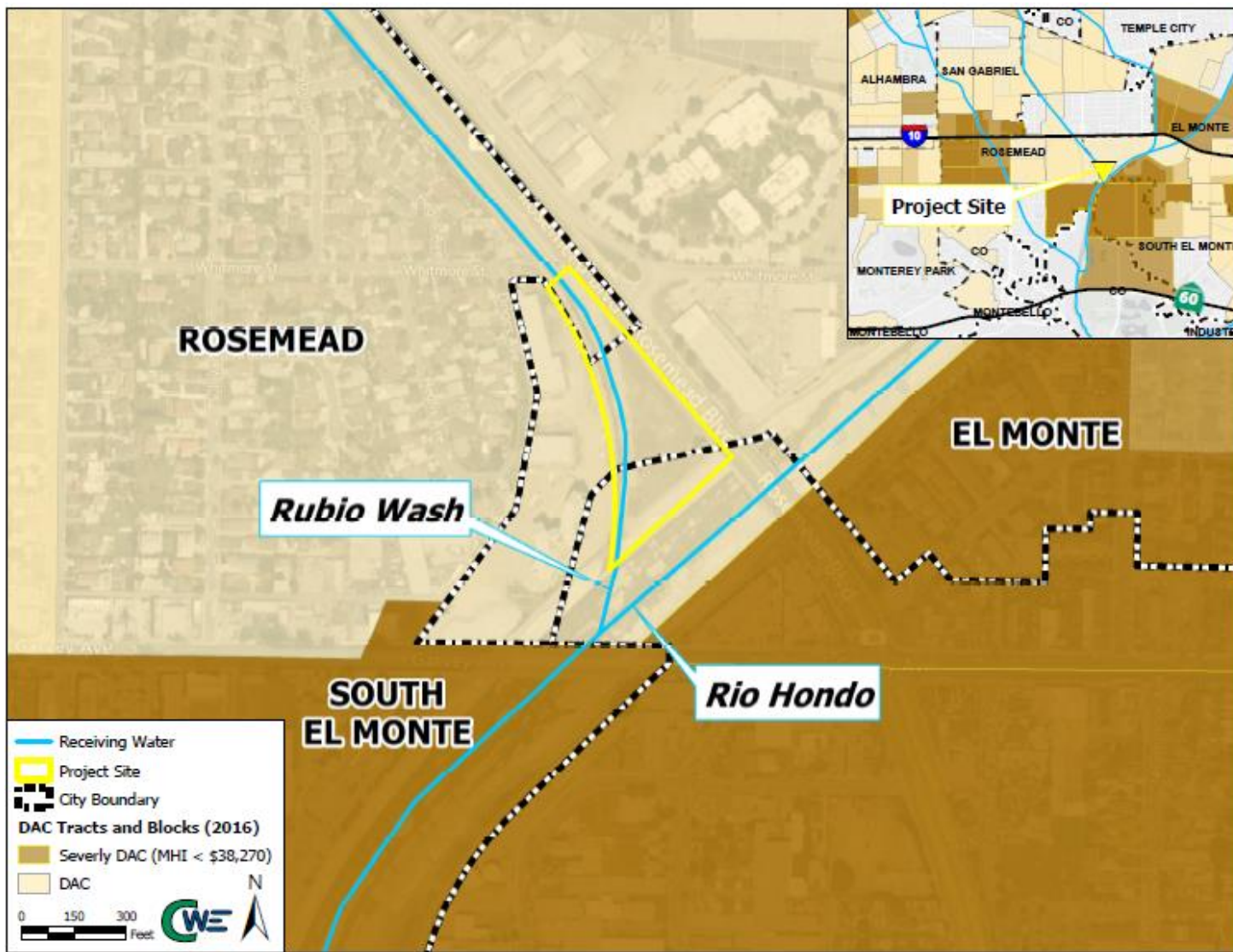
Project Location



- Within the Rio Hondo Watershed (Rubio Wash Subwatershed)
- 9,235 acres
- Major land uses:
 - 68% single-/multi-family residential
 - 18% vacant
 - 8% commercial



Project Location



- Intersection of Rosemead Boulevard and Whitmore Street
- City of Rosemead/El Monte
- Just upstream of confluence with Rio Hondo
- Within and surrounded by DAC
- Near residential and non-residential areas
- Coordination with Caltrans for work on Rosemead Boulevard

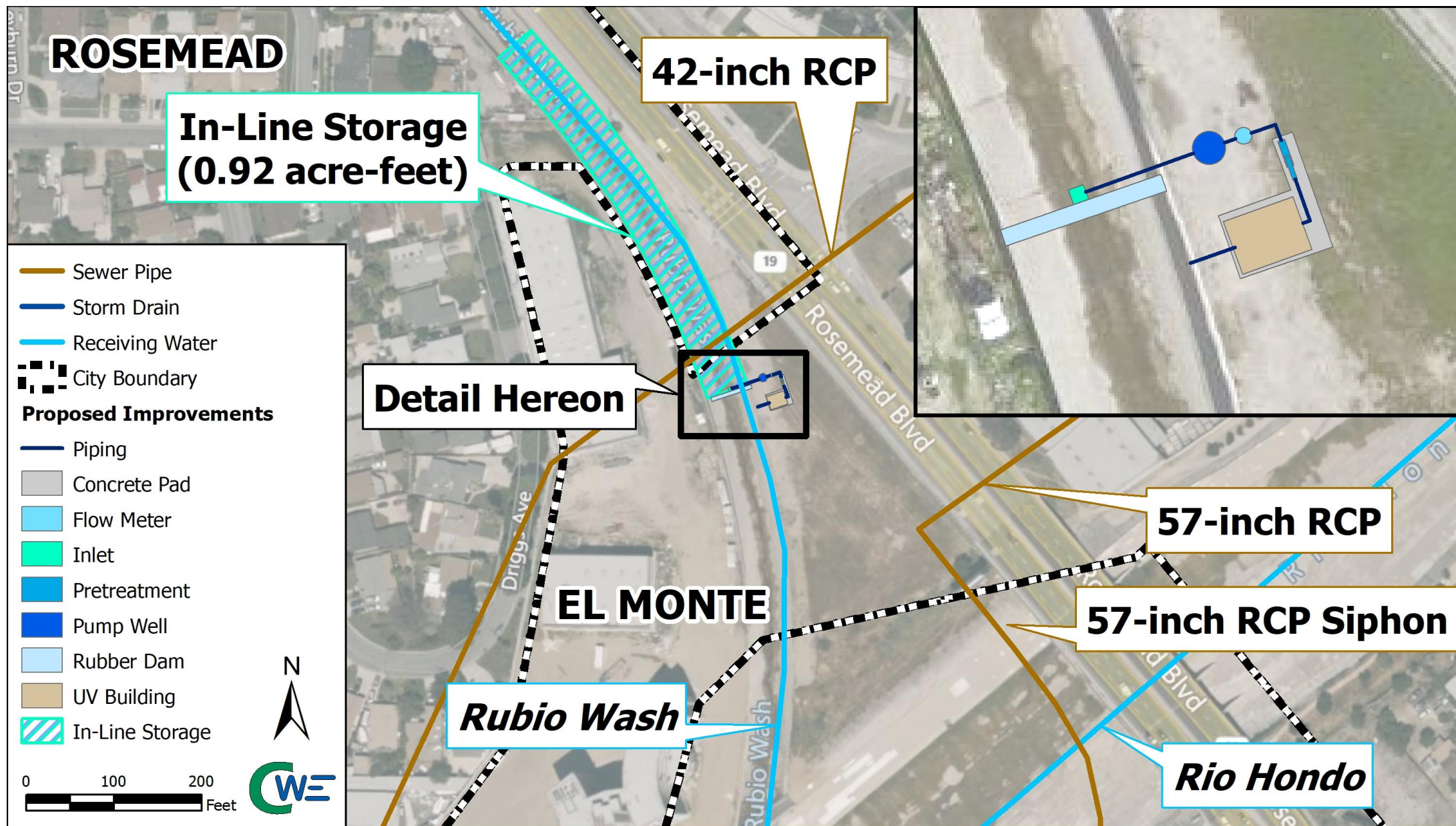


Project Background

- Upper Los Angeles River (ULAR) Enhanced Watershed Management Plan (EWMP) identified need for low flow diversions
- Rio Hondo Load Reduction Strategy (LRS) and amendments
- Project is needed to address bacteria loading to Rio Hondo (Los Angeles River Bacteria TMDL)
- Feasibility Study completed – selected preferred alternative
- Improves DAC community:
 - Enhances local environment with trees + shade
 - Includes educational signage for community engagement
 - Creates 8,000 square-feet of bioswale

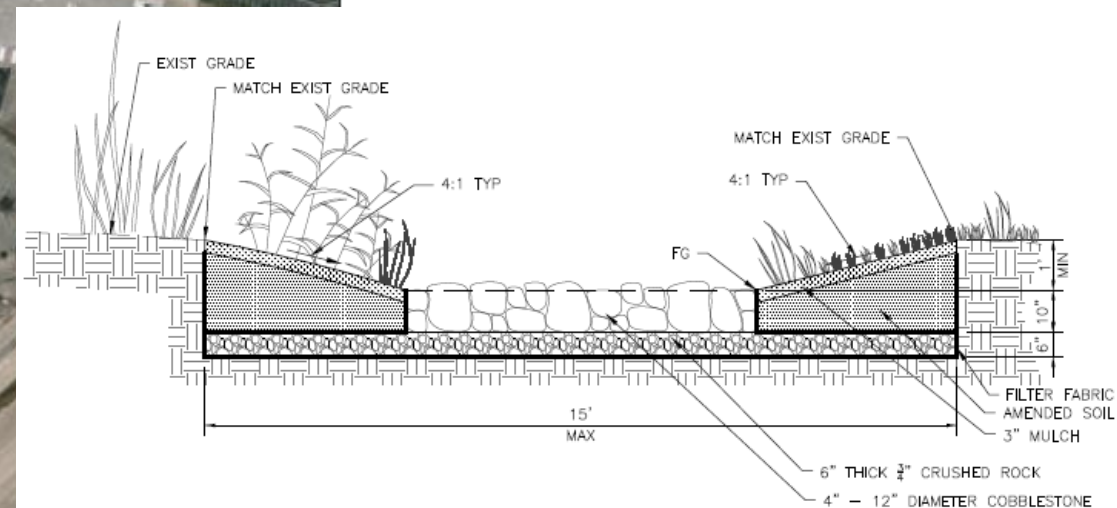


Project Details





Project Details



1 PRELIMINARY BIOSWALE DETAIL
NOT TO SCALE

- Trees
- Bioswale
- Educational signage
- Exact locations under evaluation

Amenities shown are under review with local jurisdictions and will be finalized (size, location, and quantity) during the design process



Project Details

- Other alternatives evaluated:
 - Diversion to sanitary sewer
 - In-line storage vs. off-line storage
 - Regional treatment facility
 - Groundwater injection
- Site currently vacant and privately owned
- Groundwater expected 25 feet beneath surface
- Infiltration rates observed: 0.09 inches/hour



Cost & Schedule

Phase	Description	Cost	Completion Date
Planning	Preliminary Engineering and Feasibility Study	\$125,000	06/2020
Design	Design and Permitting	\$483,600	12/2021
Design	Acquisition (purchase full/partial property or coordinate for easement)	\$2,235,000	12/2022
Construction	Construction and Construction Management	\$2,780,600	08/2024
TOTAL		\$5,624,200	

- Annual maintenance: \$115,000; annual operation: \$50,000; annual monitoring: \$50,000 (total annual cost = \$215,000)
- Project lifespan and lifecycle cost: 30 years, \$9,641,152.72



Funding Request

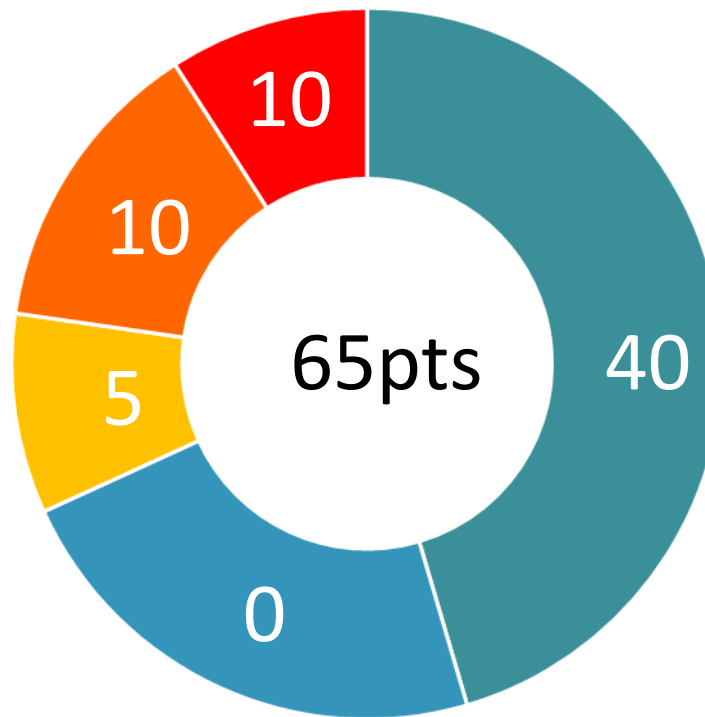
Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	\$241,800	Design	Design and Permitting (half the expected cost)
2	\$1,117,500	Design	Anticipated acquisition costs to be refined during design and negotiation (half the expected cost)
3	\$726,390	Construction	Construction and Construction Management (25% of expected cost)
4	\$726,390	Construction	Construction and Construction Management (25% of the expected cost)
TOTAL	\$2,812,080		

- Leveraged funding: 50% (existing MOU)
- May request annual costs in the future (to be determined)



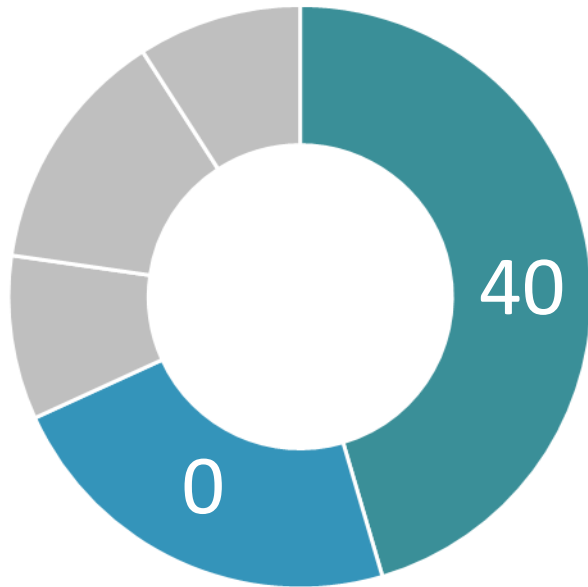
Preliminary Score

- Water Quality
- Water Supply
- Community Investment Benefits
- Nature Based Solutions
- Leveraged Funds and Community Support





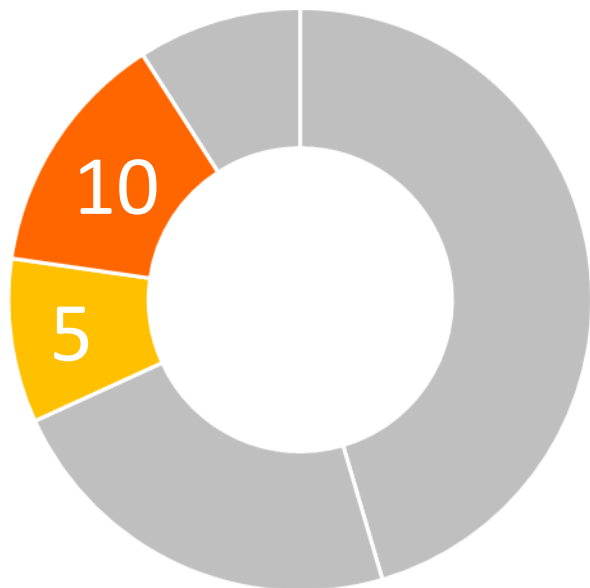
Water Quality & Water Supply Benefits



- Diversion, pretreatment, advanced treatment (UV), and discharge back to channel
- Dry-weather capture (100%) = 20 points
- Over 9,000 acres of tributary area = 20 points
- 1.78 cfs flow rate capacity
- 0.58 cfs estimated average inflow
- 100% pollutant reduction in dry-weather
- No recharge or water supply benefits



Community Investment Benefits and Nature Based Solutions



- Community Investment Benefits

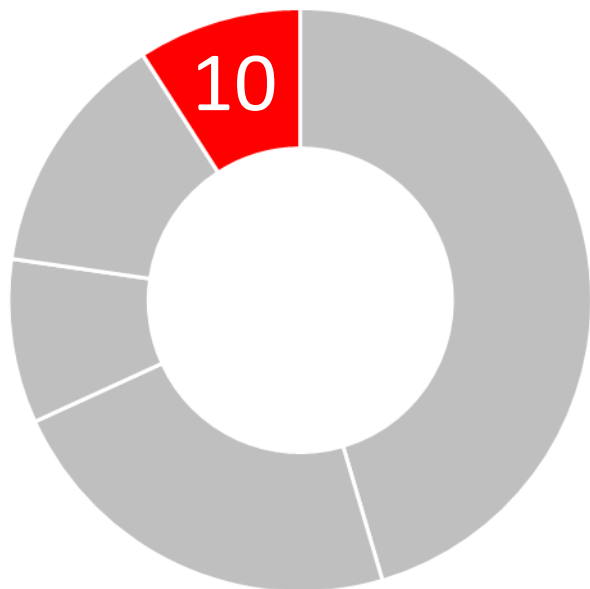
- Install 6 trees and 8,000 SF of bioswale
- Include educational signage and outreach
- Enhances recreational activities/walking
- Increase shade for pedestrians/improve walkability
- Reduce heat island effect

- Nature Based Solutions

- Perforations in pump housing will allow infiltration to continue to occur, mimicking the natural process
- A bioswale will also support the natural process of treatment through biological process



Leveraging Funds and Community Support



- Leveraging Funds
 - MOU, funding agencies have paid for the planning phase of the project, including the feasibility study
 - 50% funding matched
- Community Support
 - Project partners include SGVCOG, LADPW, and Cities of Pasadena and San Marino
 - Local support from Amigos De Los Rios
 - On-going outreach with government agencies and stakeholders
 - Plan for outreach at various project milestones



Questions?



Overview of Pathogen Reduction Study

Presented by Richard Watson, Richard Watson & Associates, Inc. (RWA)

Project Lead: Gateway Water Management Authority

Presentation to the Rio Hondo WASC

20 April 2021

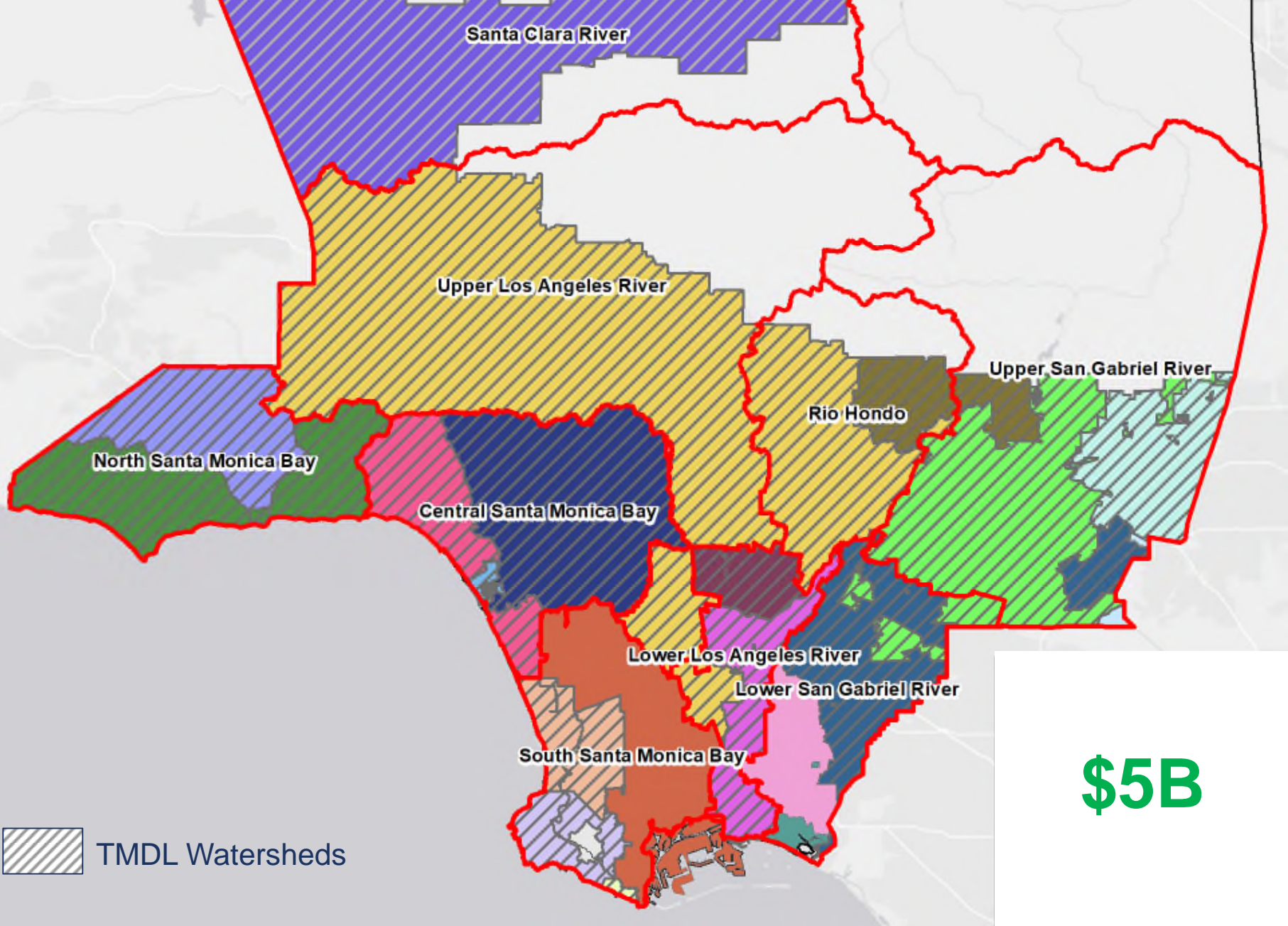
Summary of Study

- 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
- USEPA and academia agree not all sources of bacteria are equally risky, but we do not have the information we need to focus limited resources on the riskiest sources first.
- Objectives of Study
 - Leverage recent USEPA, academic, and stakeholder driven research
 - Produce strategies for incorporation into Program Plans
 - Support informed decisions that help us protect more people sooner

Study Overview

- 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 could reduce need to capture stormwater for bacteria compliance purposes while improving the protection of human health
 - Study may lead to partnering with various parties, such as wastewater agencies and homeless services agencies, to address human sources of pathogens.

Study Location



\$5B

Scientific 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)

Expected Outcomes

- Completion of a needed regional study in LA County to identify the sources of pathogens and the most effective BMPs to address them. Studies have been completed elsewhere identifying human sources of pathogens as the highest driver of risk to human health.
- The latest science will be used to support the reduction of human pathogens and protect human health.
- Combined with scientific advancements, the results will provide an opportunity to improve the current bacteria strategy using source-specific indicators, improved viral detection methods, and risk modeling frameworks.
- The study results will facilitate meaningful, appropriate, productive actions by Permittees that will effectively reduce human health risks.

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

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 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

Cost & Schedule

Phase	Description	Cost	Schedule
Task 1	Stakeholder Process	\$484,000	7/21 – 6/26
Task 2	Health Risk Assessment	\$5,816,208	7/21 – 9/25
Task 3	Risk Management	\$1,702,100	4/22 – 3/26
Task 4	Application of Study Findings	\$484,000	1/25 – 6/26
TOTAL		\$8,486,308	

Funding Request

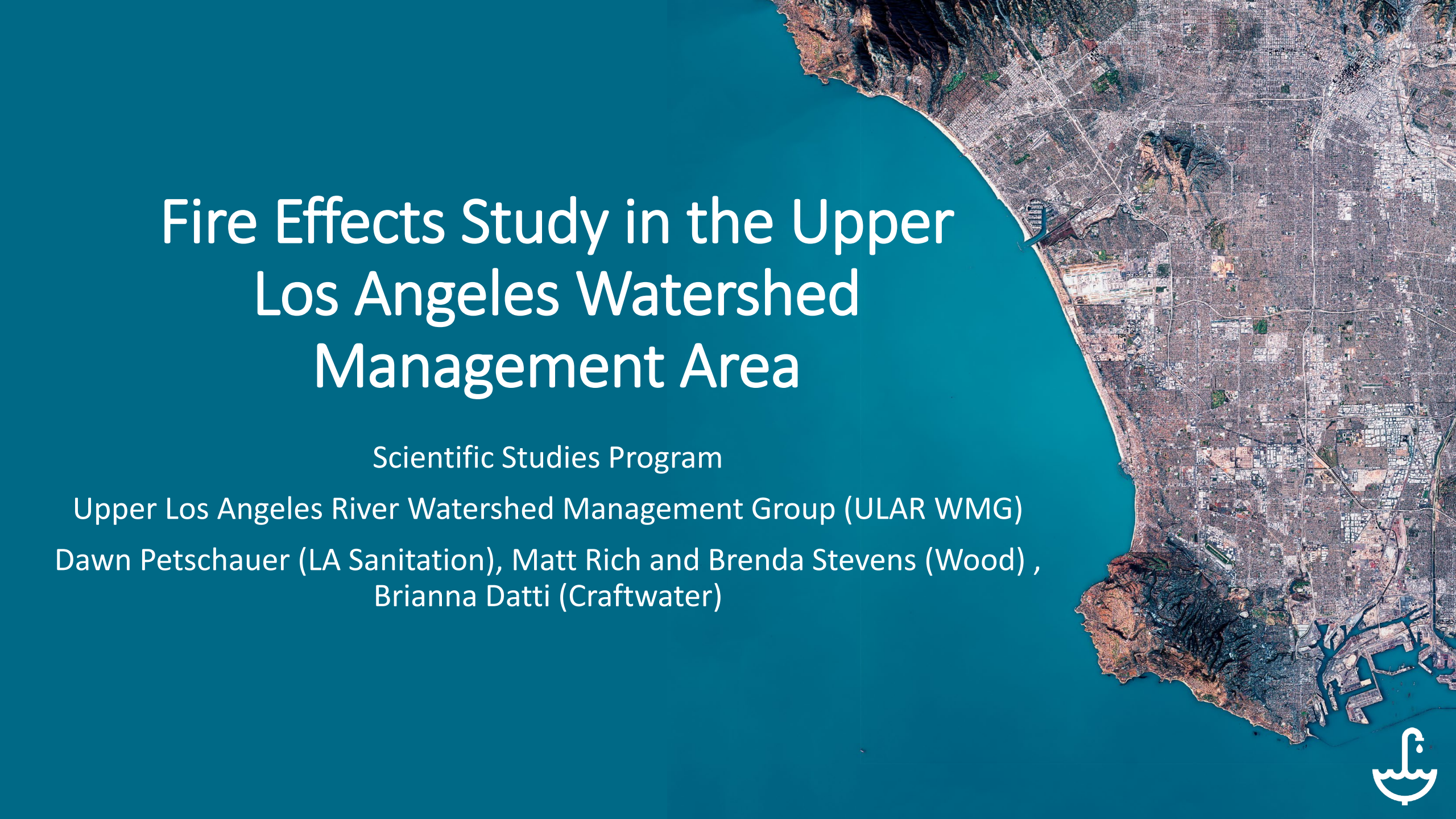
WASC	Year 1	Year 2	Year 3	Year 4	Year 5
CSMB	\$45,659	\$333,041	\$322,298	\$319,612	\$53,716
LLAR	\$32,801	\$239,256	\$231,539	\$229,609	\$38,590
LSGR	\$42,810	\$312,259	\$302,186	\$299,668	\$50,364
NSMB	NA	NA	NA	NA	NA
RH	\$29,477	\$215,011	\$208,075	\$206,341	\$34,679
SCR	\$15,378	\$112,168	\$108,550	\$107,645	\$18,092
SSMB	\$47,156	\$343,964	\$332,869	\$330,095	\$55,478
ULAR	\$98,952	\$721,766	\$698,483	\$692,663	\$116,414
USGR	\$48,435	\$353,290	\$341,893	\$339,044	\$56,982
TOTAL	\$360,668	\$2,630,755	\$2,545,893	\$2,524,677	\$424,315

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 and Thank You

Richard Watson
Richard Watson & Associates
rwatson@rwaplanning.com
(949) 394-8495

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.

Fire Effects Study in the Upper Los Angeles Watershed Management Area

Scientific Studies Program

Upper Los Angeles River Watershed Management Group (ULAR WMG)

Dawn Petschauer (LA Sanitation), Matt Rich and Brenda Stevens (Wood) ,
Brianna Datti (Craftwater)



Study Overview

Summary:

Targeted data collection and subsequent modeling can be used to characterize fire-related impacts and help plan more resilient management program under these conditions and address impending TMDL milestones.

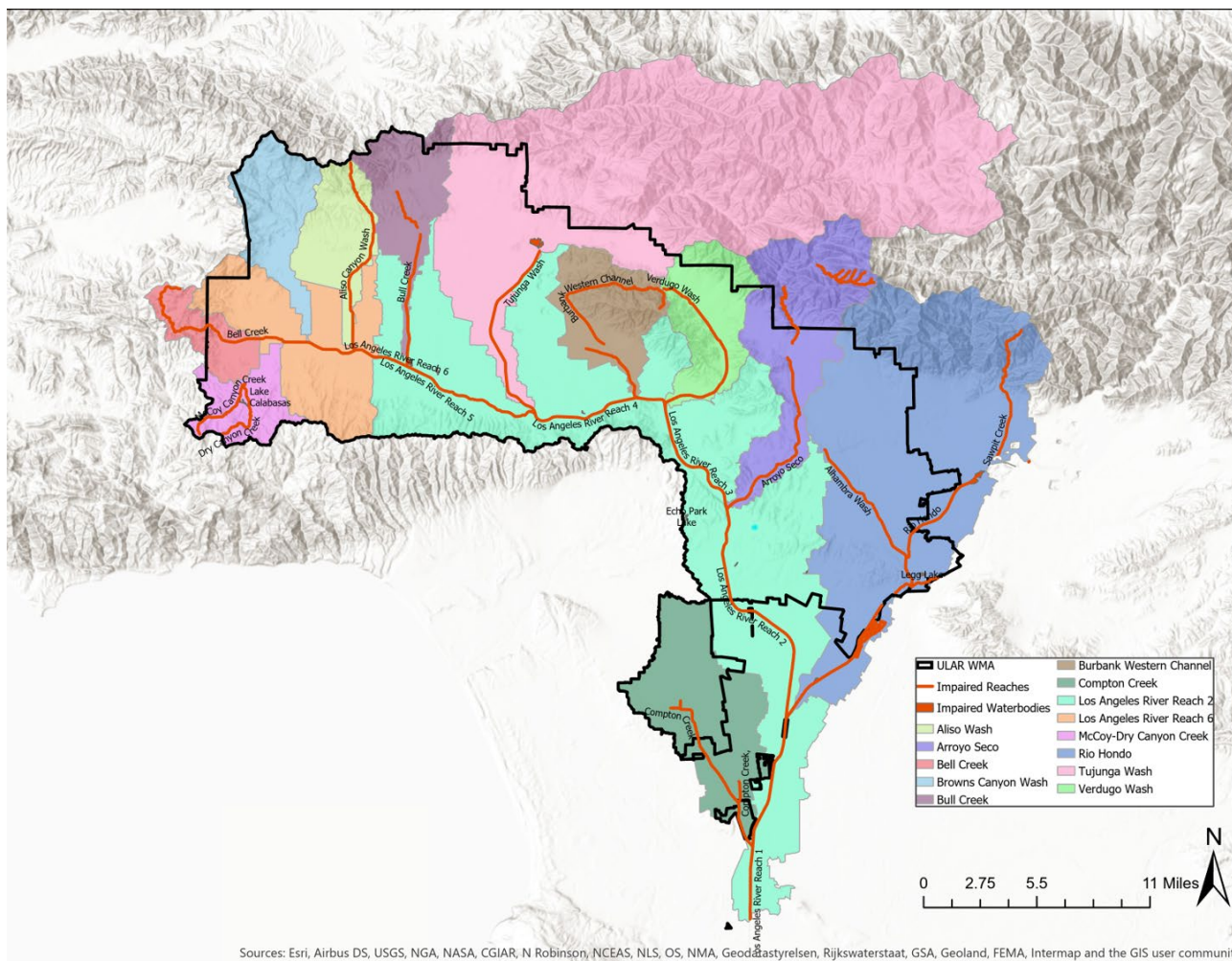
Nexus to Stormwater and Urban Runoff capture and pollution reduction:

- Post-fire data collection, analysis, and watershed modeling will be used to evaluate impacts of fire on stormwater and urban runoff and to help develop effective strategies to address water quality impacts from fires.





Study Location



Map of Study Area

The study will include various MS4 outfalls and receiving water locations in the ULAR and Rio Hondo Watersheds.

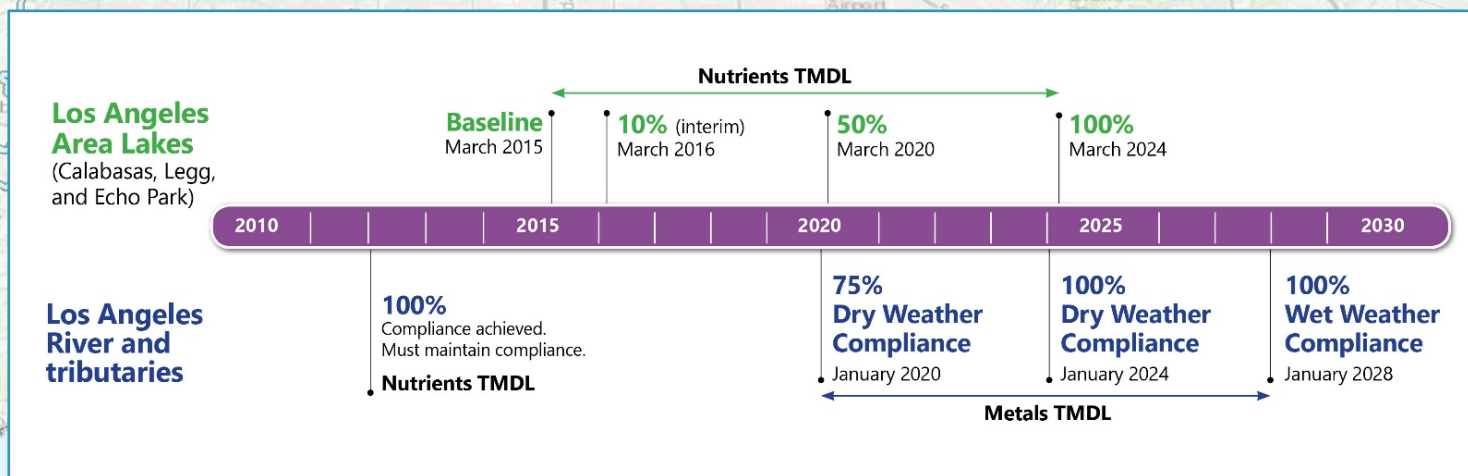
ULAR Watershed Management Area (WMA) and impaired reaches.



Study Details

Problem Statement:

Wildfires produce pollutants including aerially-deposited particulates, fire retardants/suppression, sediment, and ash. An increase in nutrients and metals has also been documented, which is critical for the ULAR WMG due to existing impairments and approaching TMDL compliance deadlines.





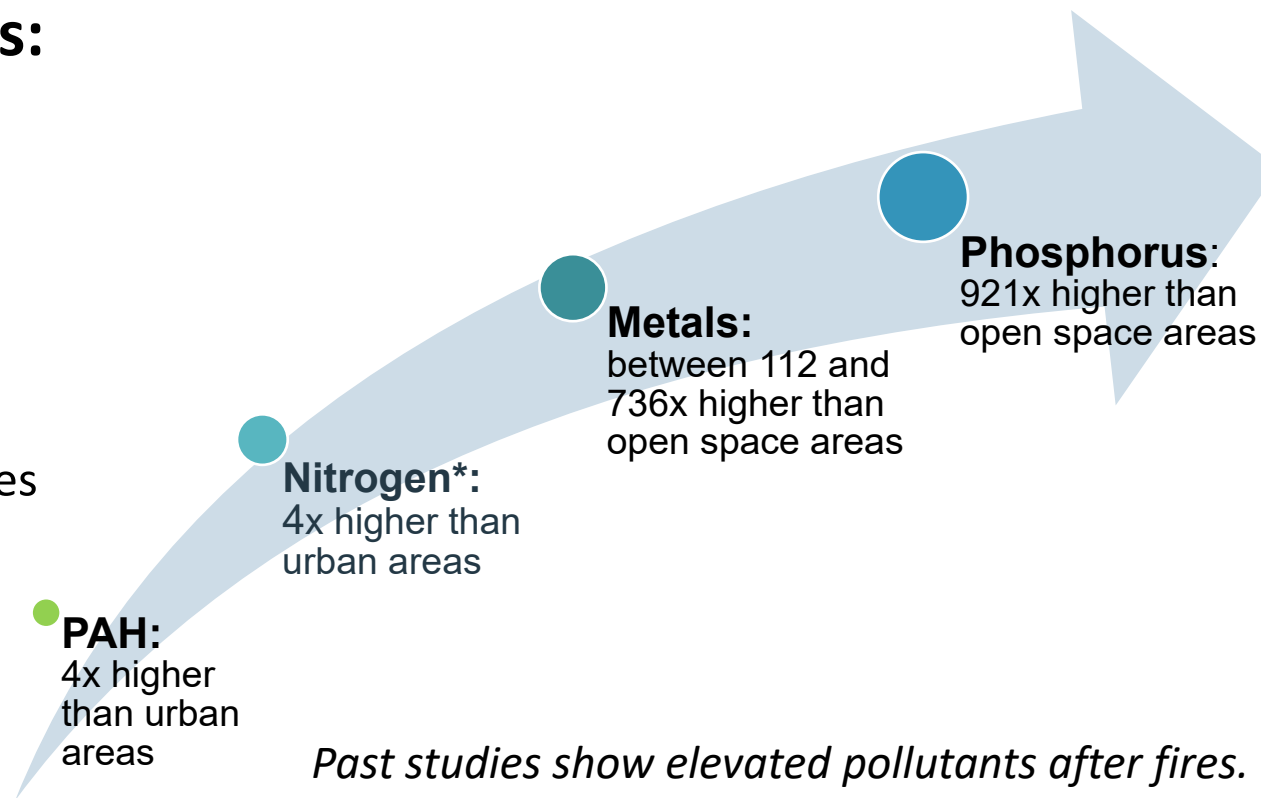
Study Details (continued)

- **Study Objectives and Outcomes:**

- Objectives:
 - Collaborate with regulators and stakeholders,
 - Address water quality data gaps,
 - Model fate and transport.
- Outcomes:
 - Understand the impacts of wildfires and develop strategies to protect water quality.

- **Past studies:**

- Effects of Post-fire Runoff on Surface Water Quality, SCCWRP (2009).
- Water Quality Impacts of Forest Fires, Tecle and Neary, J. (2015).



*Nitrogen as Nitrate+Nitrite

— Baseline = Unburned areas —



Study Details (continued):

Study Methodology/Approach:



Historical data review



Coordination with Regulatory Updates



Design a monitoring plan



Regional Board collaboration throughout



Conduct new monitoring



Technical advisory and data analysis



Modeling fire effects and climate change



Study Details (continued):

Monitoring Plan:



Sites

- Burned/reference
- Outfall/receiving water



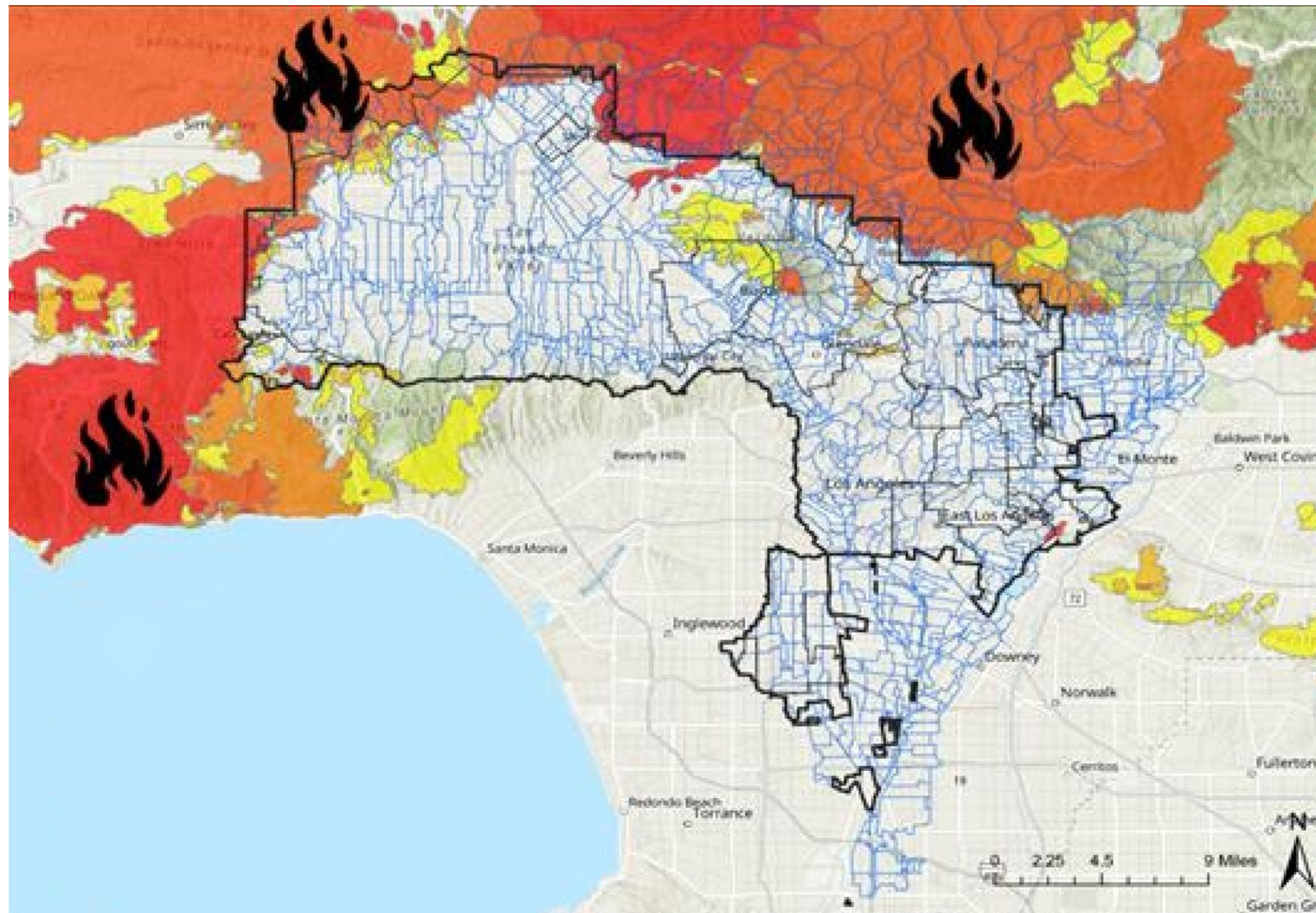
Timeframe

- Two years sampling
- Wet and dry weather



Pollutants

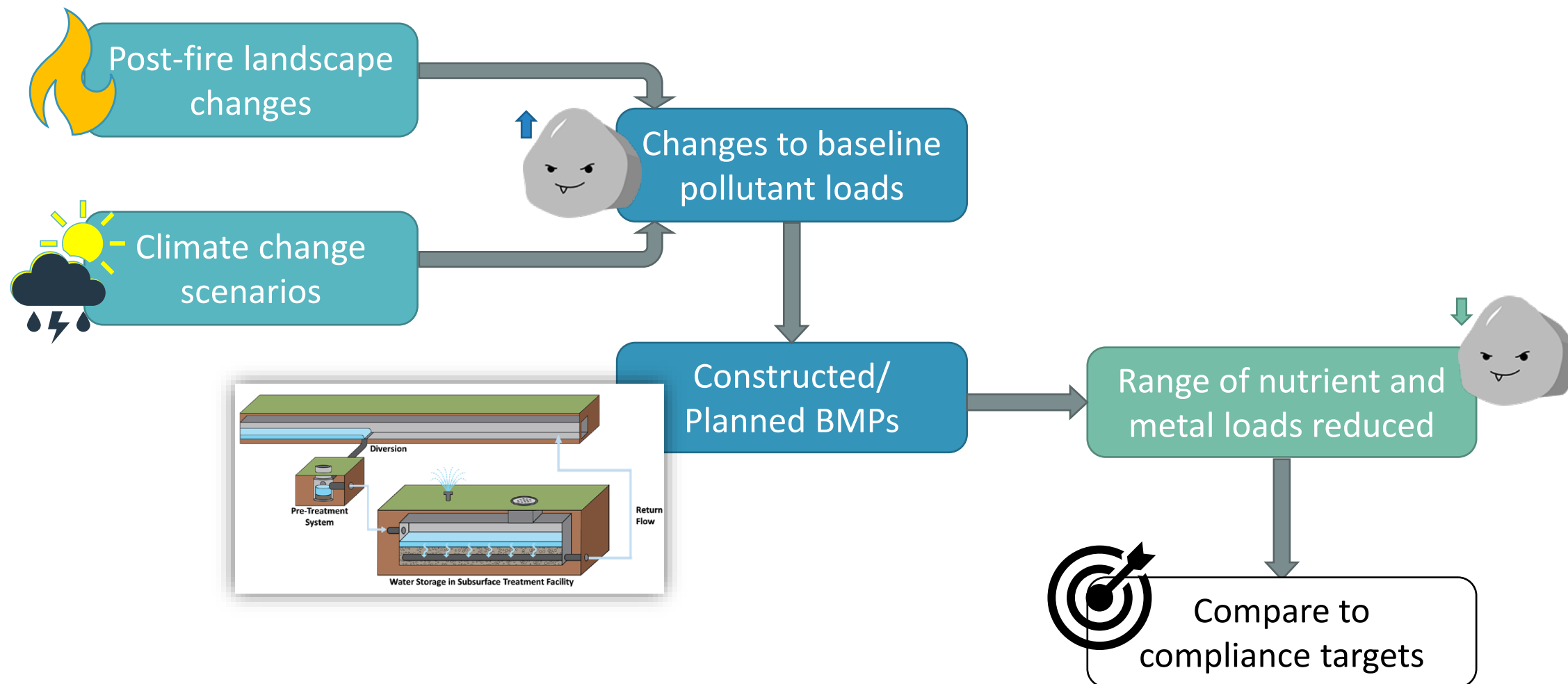
- Nutrients
- Metals
- Sediment





Study Details (continued):

Modeling Fire Effects and Climate Change:

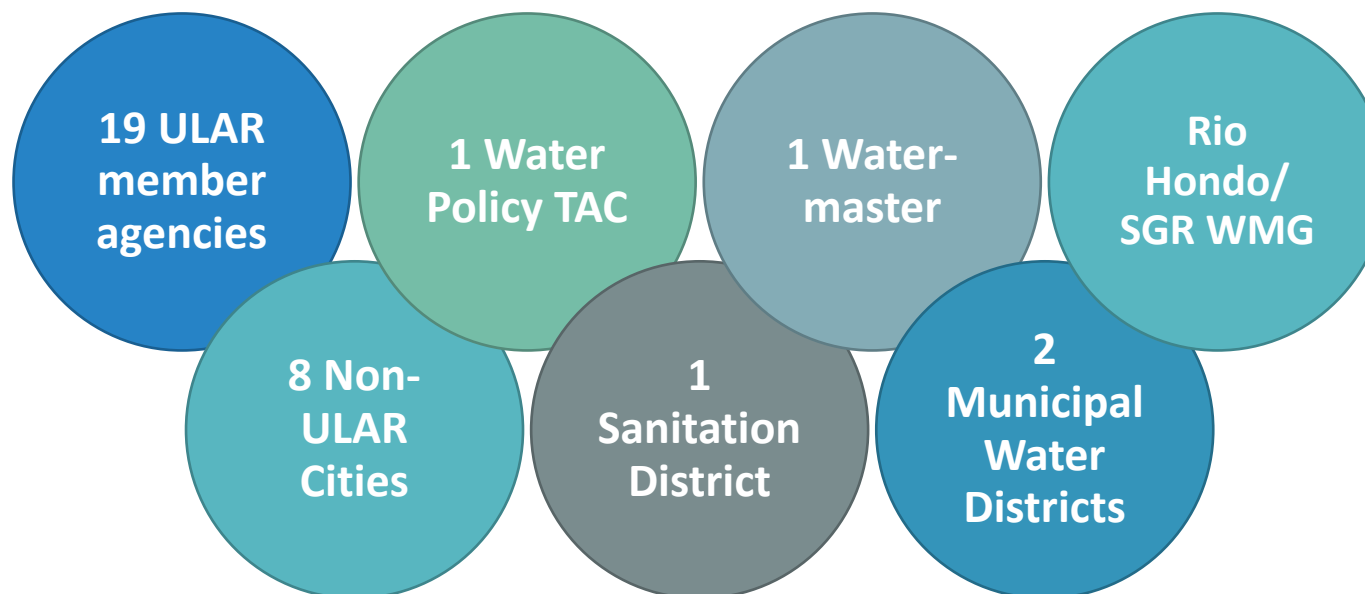




Study Details (continued):

Regional collaboration efforts:

- San Gabriel River Regional Monitoring Program collaboration
- Regional Water Quality Control Board coordination
- Additional interest from the agencies below:



An overview of this study was presented to the LARWQCB on August 19, 2020 and was received in a spirit of cooperation and support.



Cost & Schedule

Annual Cost for Fire Effects Study

Phase	Description	Cost	Completion Date
1	Source Characterization and Contaminant Fate	\$264,436	June 2021
2	Data Collection	\$257,161	September 2022
3	Modeling and Prediction	\$283,403	June 2023
Total		\$805,000	



Funding Request

Requested Funding from each WASC

WASC	Year 1	Year 2	Year 3
CSMB	--	--	--
LLAR	--	--	--
LSGR	--	--	--
NSMB	--	--	--
RH	\$60,820	\$59,147	\$65,183
SCR	--	--	--
SSMB	--	--	--
ULAR	\$203,616	\$198,014	\$218,220
USGR	--	--	--
TOTAL	\$264,436	\$257,161	\$283,403



Summary of Benefits

Study Benefits to Water Quality, Water Supply and Community:

This study will model post-fire water quality and help inform better BMP design to provide a more resilient environment.

Benefits of this Fire Effects Study include:



Identifying and designing effective management strategies;



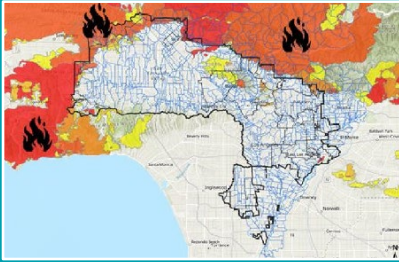
Informing the community on the impacts of wildfire on water quality; and



Predicting impacts on water quality from future wildfires and other climate change scenarios



Questions?



SAFE, CLEAN WATER PROGRAM REGIONAL SCIENTIFIC STUDY

Fire Effects Study for the ULAR Watershed Management Group

Study Lead: San Gabriel Valley Council of Governments on behalf of the ULAR WMG (19 Agencies)

OBJECTIVE



Characterize the effects of wildfires on water quality and model the potential future effects in order to develop effective strategies and comply with upcoming TMDLs.

BACKGROUND AND SCOPE



The frequency and intensity of wildfires has drastically increased in southern California and is expected to continue increasing due to climate change and human activities in and near natural forest and foothill areas. Previous studies have indicated wildfires in the region are impacting the water quality of stormwater runoff and in receiving waters. To improve water quality strategies, to address the impacts of post-fire runoff on downstream receiving waters, and to better protect public health and beneficial uses, the Fire-Effects Study will help better understand how post-fire runoff affects contaminant flux, the effect of post-fire runoff on downstream receiving waters and the factors that influence how long post-fire runoff effects persist. These data will support the development of watershed models that will help predict how land use and other environmental changes from fires impact baseline pollutant loading and how climate change scenarios may further exacerbate these impacts. In addition, best management practices (BMP) models will help plan for a more resilient management program that meets water quality objectives and supports beneficial use goals under these conditions, and addresses impending interim and final TMDL milestones.

GOALS OF STUDY



Source Characterization

Do fires contribute to loading of nutrients and metals into waterbodies in the ULAR Watershed? (Existing studies and monitoring)

Fate

Where do these pollutants go? How do they migrate? (Monitoring)

Prediction

How does the data gathered from this study help anticipate future impacts to water quality? (Data Analysis and Modeling)

How do land use changes from fires impact baseline pollutant loading? (Modeling)

How do climate change scenarios impact baseline pollutant loading? (Modeling)

Regulatory Change

How can this study help understand how to achieve compliance metrics? (Regulatory Interface)



SCHEDULE

Develop monitoring and assessment plan

Implement MAP

Data evaluation and modeling

Reporting

April/May 2021

July 2021—Sept 2022

Sept 2022—April 2023

April—June 2023

KEY OUTCOMES



- Characterize fate and transport of pollutants from fires
- Address data gaps in water quality data
- Model future effects due to increased fires and climate change
- Possibly leverage region-wide
- Coordinate with Stakeholders and Regional Board

MULTI-FACETED APPROACH



- Historical data review
- Coordination with Biotic Ligand Model
- Design a monitoring plan
- Conduct new monitoring
- Technical advisory and data analysis
- Modeling fire effects and climate change

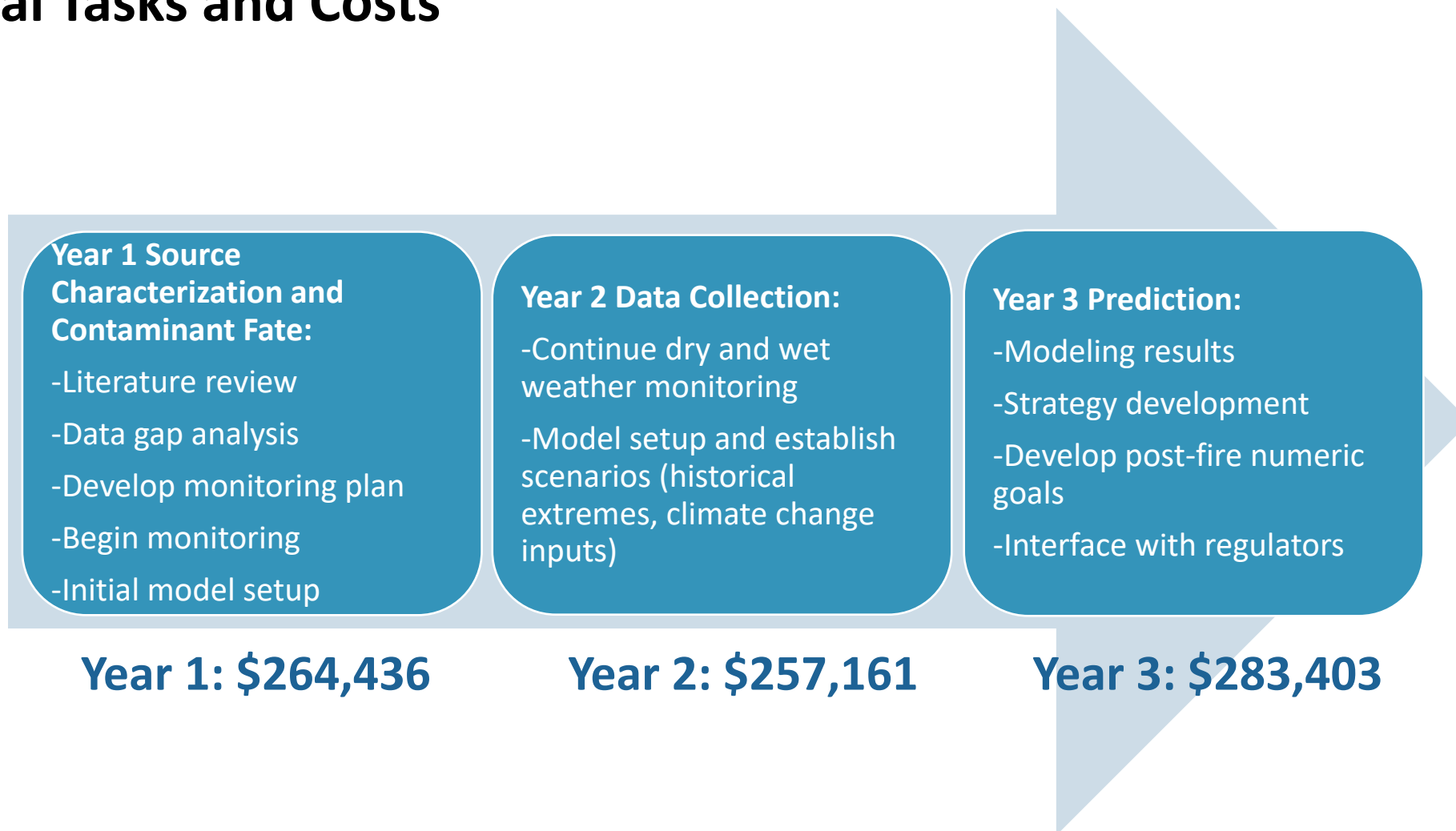
COST

WASC	Year 1	Year 2	Year 3
RH	\$60,820	\$59,147	\$65,183
ULAR	\$203,616	\$198,014	\$218,220
TOTAL	\$264,436	\$257,161	\$283,403



Cost & Schedule (continued)

Annual Tasks and Costs



Rio Hondo Ecosystem Restoration Project

Safe, Clean Water Infrastructure Program Project

Fiscal Year 2021-2022 Call for Projects

Project Lead: City of Monrovia on behalf of the RH/SG Water Quality Group

Presenters: Alex Tachiki, City of Monrovia

Merrill Taylor, Craftwater Engineering

Project Overview

Regional stormwater capture and surface infiltration facility located within the open space at the Sawpit Wash and Peck Road Park Lake.

- **Phases used from SCW funding:** Design
- **Total Funding Requested:** \$2,329,375

Project Objectives

PRIMARY OBJECTIVES

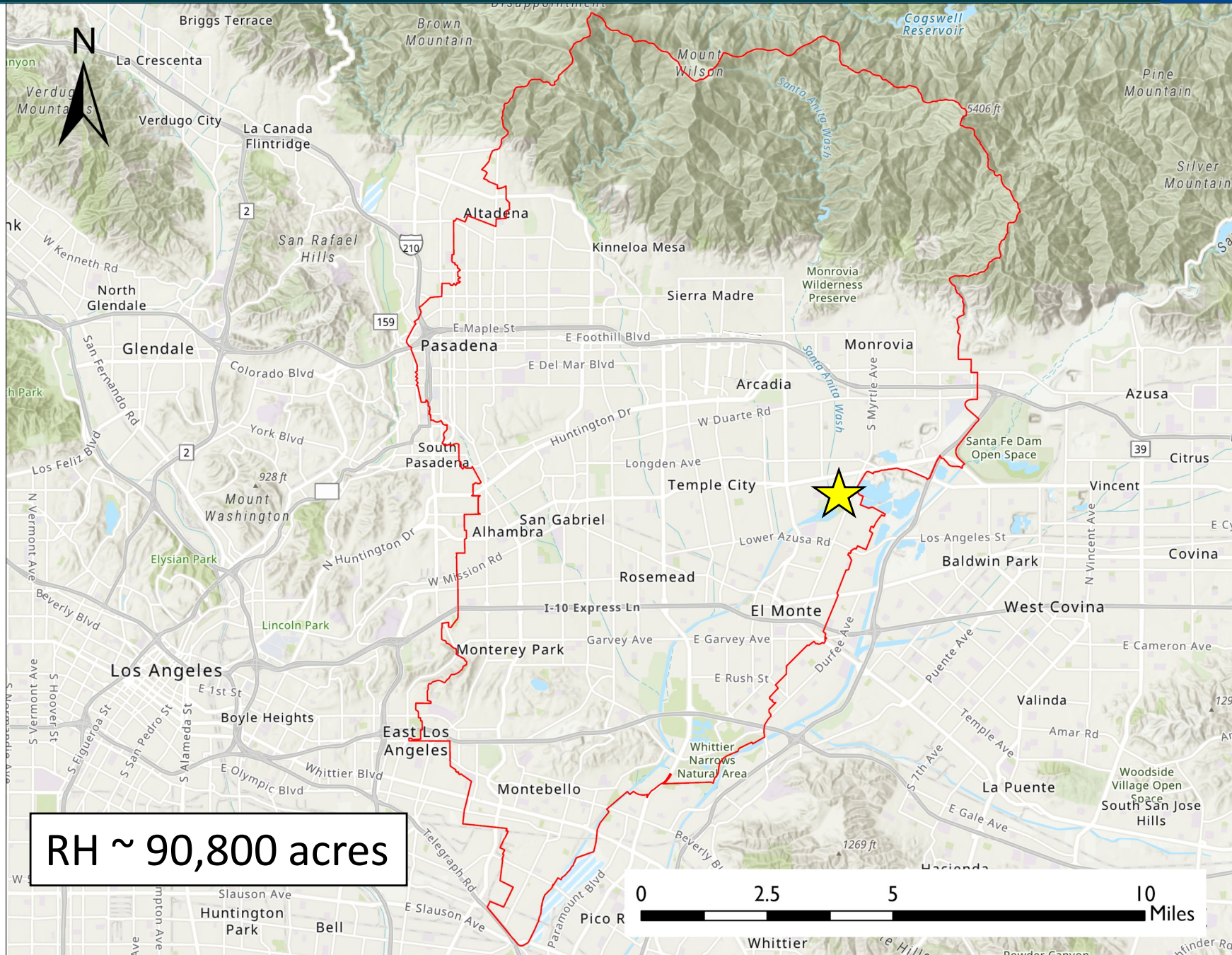
- Improve the water quality within the Rio Hondo and Los Angeles River
- Recharge the local groundwater basin to increase water supply
- Create new park facilities & install new surface wetlands

SECONDARY OBJECTIVES

- Provide habitat, education opportunities, and diverse vegetation to the space
- Offset potable water demand
- Educate the public on the local water supply and demands

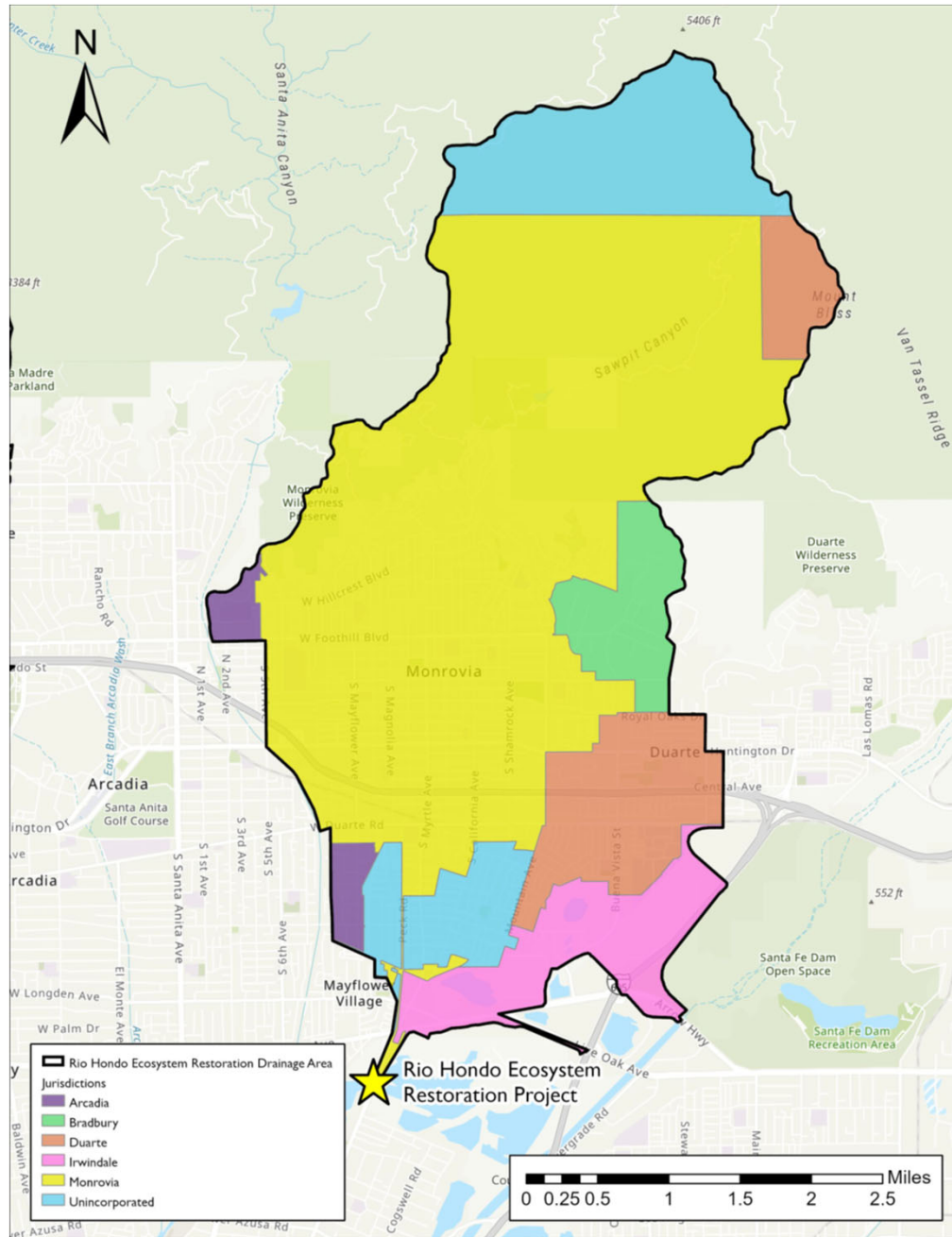


Project Location-Watershed Map





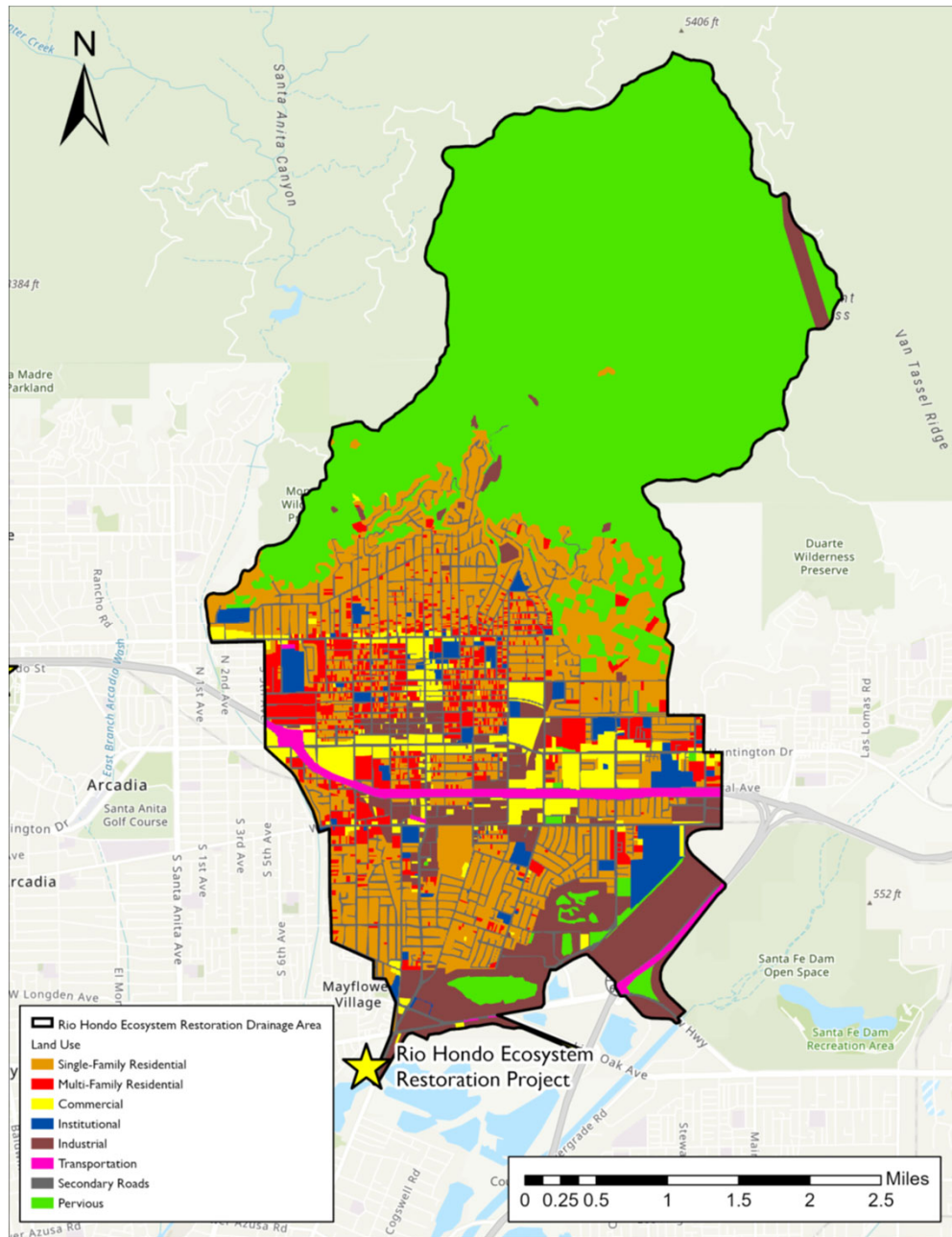
Project Location-Total Capture Area



Jurisdiction	Area (acres)	% Watershed
Monrovia	6,478.4	60.7%
Unincorporated LA County	1,602.2	15.0%
Duarte	1,100.1	10.3%
Irwindale	801.1	7.5%
Bradbury	491.3	4.6%
Arcadia	202.9	1.9%
TOTAL	10,681.5	100%



Project Location-Land use Map



- **Capture area:**
 - Impervious: 2,765 acres
 - Pervious: 7,916 acres

Land-use	Area (acres)	% of Impervious
Single Family Residential	868.4	31.4%
Multi-Family Residential	347.9	12.6%
Commercial	335.9	12.2%
Institutional	162.6	5.9%
Industrial	379.4	13.7%
Highway & Interstates	128.0	4.6%
Secondary Roads & Alleys	542.8	19.6%
TOTAL	2,765	100%



Project Location – Parcel Maps



The Rio Hondo Ecosystem Restoration Project site, Peck Road Park Lake, is governed by the County of Los Angeles.



Project Background



- Site was identified in Rio Hondo/San Gabriel River (RHSGR) Water Quality Group's Revised Watershed Management Program (rWMP) in March of 2018
- **Project Selected due to:**
 - Significant drainage area size (10,681 acres)
 - Improvements integrated into Sawpit Wash flow path
 - Opportunity to revitalize and introduce new public spaces
 - Pollutant treatment capacity



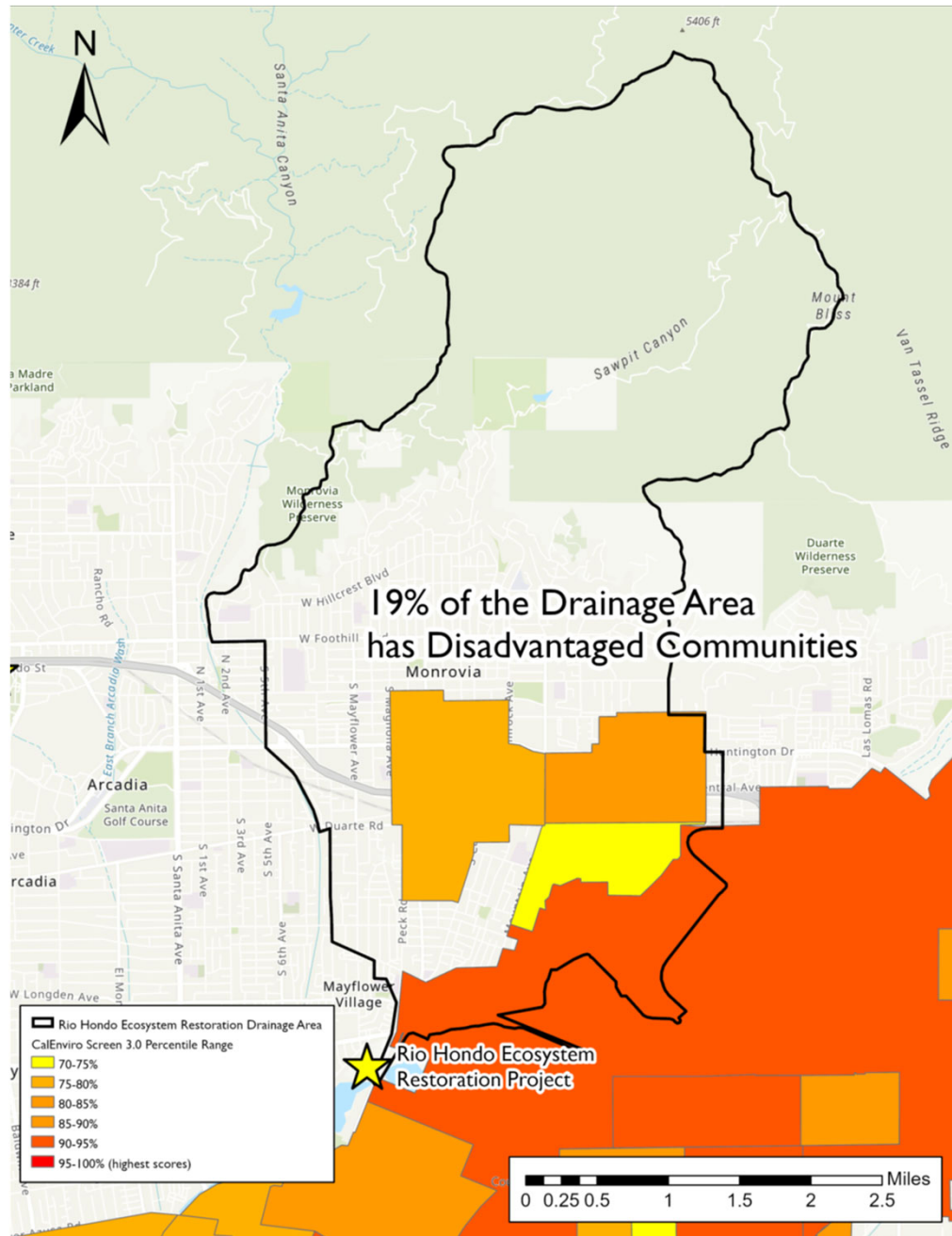
Project Benefits



- **Water Quality** improvement in the Sawpit wash and Peck Road Park Lake by removing trash, metals, and nutrients in stormwater
- **Nature-Based** treatment wetlands and recharge basins with sustainable native landscaping and lake storage
- **Park Recreational Enhancements** with a wetland/habitat area and a lake restoration
- **Public Access to Waterways** with new public access to natural treatment wetlands and pedestrian pathways



Project Benefits - DAC



- **Benefits to DAC:**

- **Improved & New** park facilities with new walking paths and new water feature
 - Educational opportunities
 - Planting more trees
- **Improved** effluent water quality by decreasing sediment, metals, nutrients, and trash
- **Recharge Basins** that will supplement the local groundwater supply
- **Enhancement/Restoration** of the flood control facility



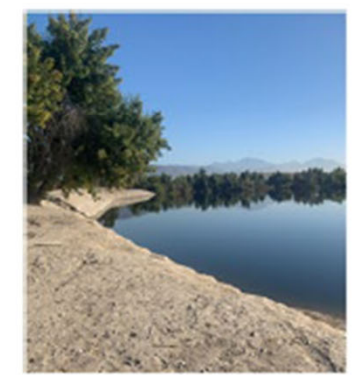
Project Details- Site Plan



Treatment Wetland



Public Access



Groundwater Recharge Basins

PLAN
Scale: 1" = 100'-0"

DATE	BY	DESCRIPTION



PROJ. NO.	20-017-RH00RFD
DESIGNER	O. GALANG
DRAFTER	O. GALANG
CHECKER	C. HELMLE

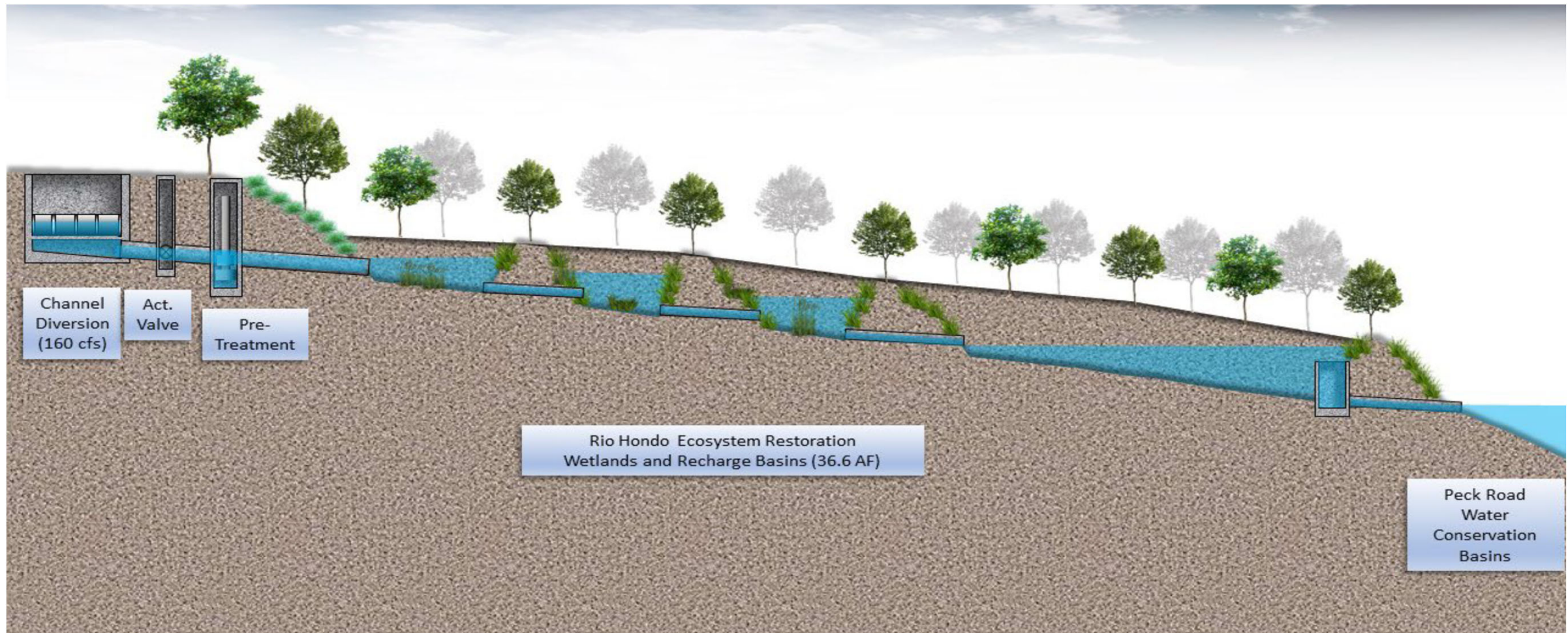


RIO HONDO SAN GABRIEL RIVER WATERSHED MANAGEMENT PROGRAM
RIO HONDO ECOSYSTEM RESTORATION PROJECT
REGIONAL STORMWATER CAPTURE PROJECT
ALTERNATIVE 1, PHASE 2B
GENERAL SITE PLAN

04812003



Project Details- Site Plan



Diversion Rate	Storage Capacity	24-Hour Capacity	Primary Pollutant Reduction (Zinc)	Secondary Pollutant Reduction (Copper)
80 cfs	76.6 ac-ft (25 MG)	41.0 ac-ft	50.2% (461 lbs)	54.4% (124 lbs)



Project Details- Existing Conditions



Existing Conditions

- Infiltration Rate: 0.3 in/hr (assumed for modeling)
- Approximate Depth to Groundwater: 54 ft BGS
- Current Use: Public Space (walking trails and lake)
- Owner: County of Los Angeles

*Conceptual Review submitted-10/2/20

*Feasibility, Stormwater Capture, Geotechnical (Desktop) review done

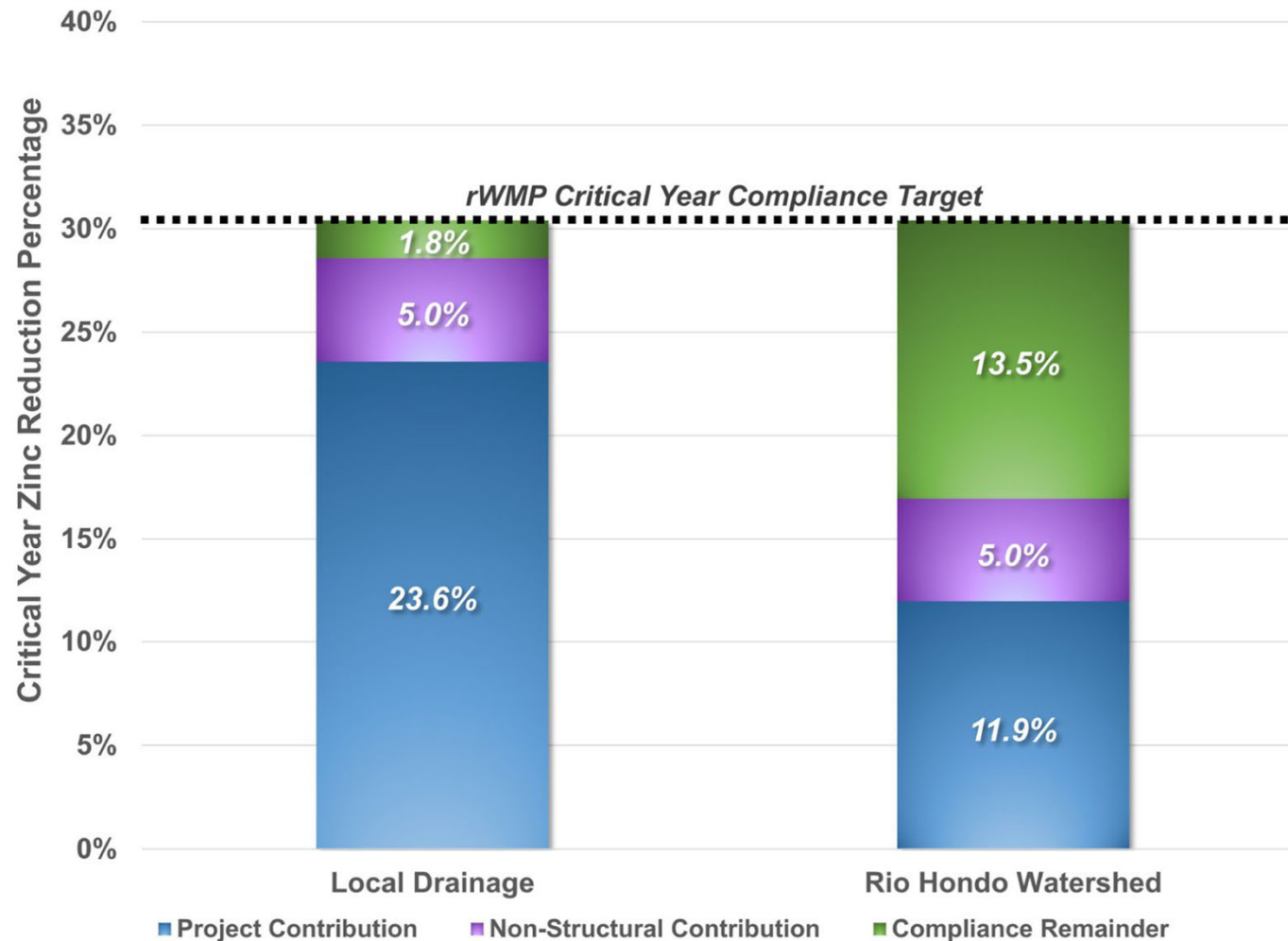
*Alternative footprint sizes and diversion rates examined



Project Details- Watershed Compliance

Table 3-1: Placing Phase 1 of the Rio Hondo Ecosystem Project in the context of the RH/SGR rWMP

	Project Drainage Area	Rio Hondo Drainage Area
rWMP Critical Year Zinc Reduction Recommendation	589 lbs.	1,163 lbs.
Project Contribution – Rio Hondo Ecosystem	457 lbs.	
Percentage Reduction	23.6%	11.9%



• Water Quality Modeling

- Potential for significant portion of rWMP compliance target
- Based on modeling and assumptions from the Reasonable Assurance Analysis (RAA)



Cost & Schedule

Phase	Description	Cost	Completion Date
Design	Final Design (30/60/90/100)	\$1,006,875	09/2022
Design	Community Outreach during Design	\$100,000	09/2022
Design	Environmental Planning (CEQA) and Permitting	\$839,063	09/2022
Design	Agency Management (Design)	\$383,438	09/2022
Construction	Construction Cost	\$8,390,625	09/2024
Construction	Construction Administration and Design Support	\$839,063	09/2024
Construction	Construction Survey	\$20,000	09/2024
Construction	Agency Management (Construction)	\$120,000	09/2024
TOTAL		\$11,699,064	

Annualized Costs

Maintenance Cost:	\$94,000
Operation Cost:	\$25,000
Monitoring Cost:	\$15,000
Project Life Span:	50

Life-Cycle Costs

Life-Cycle Cost for Project:	\$14,914,246.70
Annualized Cost for Project:	\$621,584.91



Funding Request

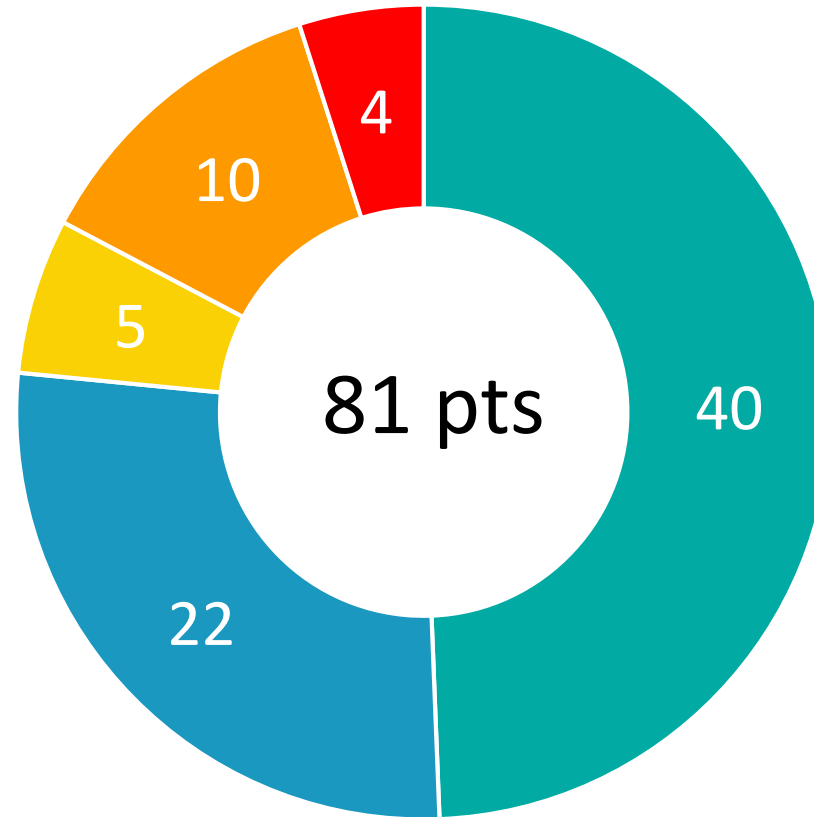
Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	\$2,329,375	Design	Environmental Planning (CEQA) and Permitting, Community Outreach during Design, Professional Design Services, and Agency Project Management (Design Phase)
TOTAL	\$2,329,375		

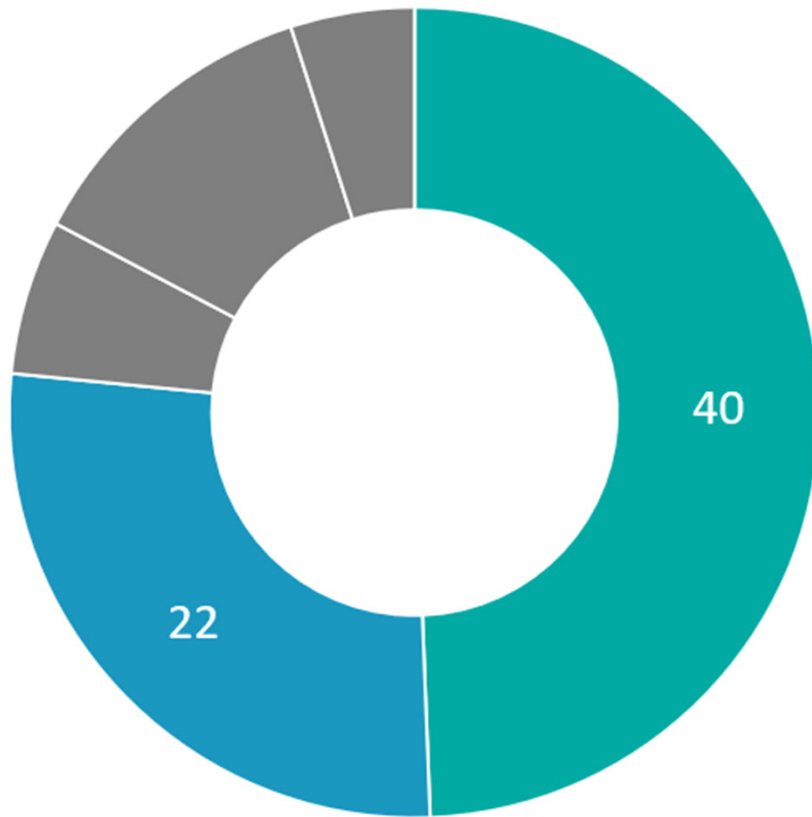
- Future funding requests
 - \$8,390,625 for Construction (2024)
 - \$839,603 for construction management and design support (2024)
 - \$20,000 for construction survey (2024)
 - \$120,000 for construction-Agency Management (2024)
 - \$134,000 for O&M and Monitoring (Year 5)



Preliminary Score

- Water Quality
- Water Supply
- Community Investment Benefits
- Nature Based Solutions
- Leveraged Funds and Community Support

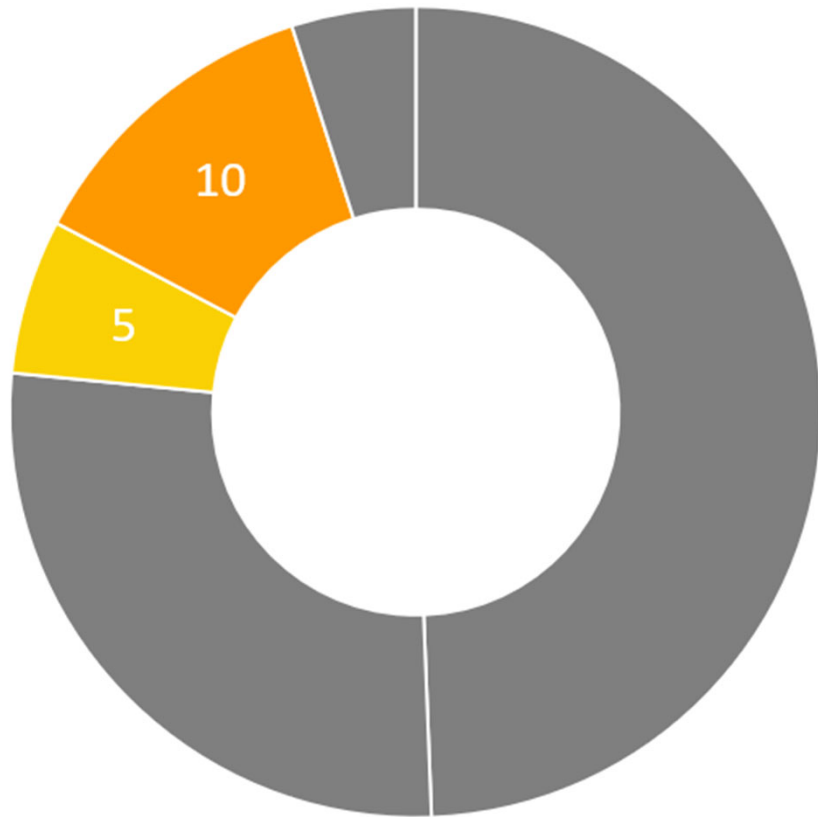




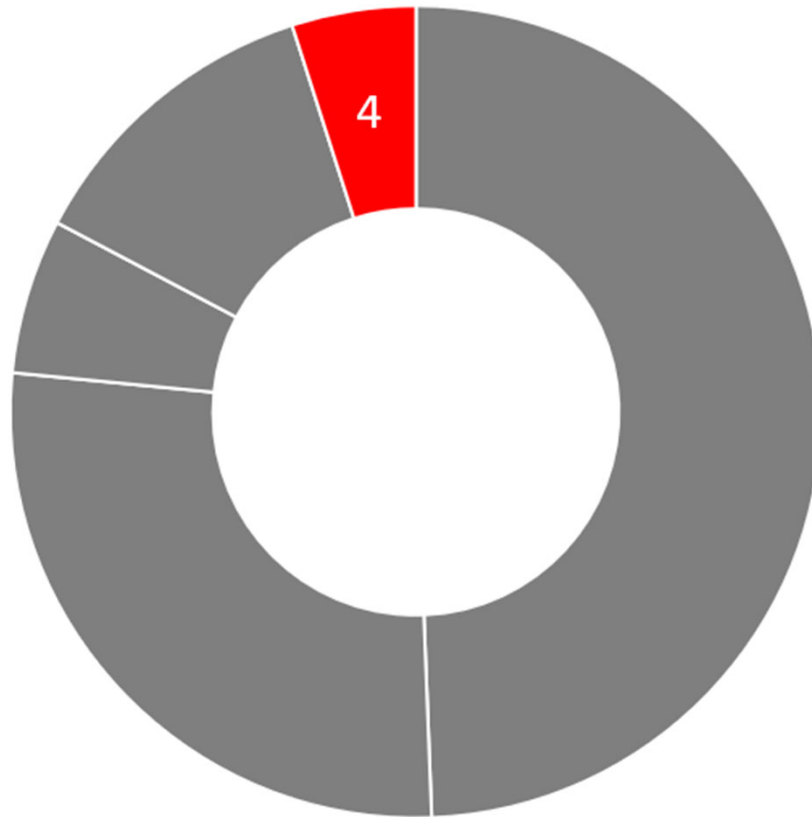
- **Primary Mechanism**
 - Runoff/pollutant capture
 - Settling in storage
 - Infiltration
- **Wet weather project**
- Tributary Area: **10,681 acres**
- 24 Hours Capacity: **27.75 ac-ft**
- Pollutant Load Reduction
 - Primary Pollutant (Zinc) – **50.2% (461 lbs-annual avg)**
 - Secondary Pollutant (Copper) – **54.4% (124 lbs-annual avg)**
- Average Annual Capture for Water supply: **3,629 ac-ft**
- Water Supply Use : **Recharge** groundwater aquifer
- Water Supply Cost Effectiveness: **\$1,132/ ac-ft**



Community Investment Benefits and Nature Based Solutions



- Community Investment Benefits
 - Improve flood management, flood conveyance, or flood risk management
 - Create, enhance, and restoration of parks
 - Enhance new recreational opportunities
 - Improve public access to waterways
- Nature Based Solutions
 - Restores and revitalizes northern side of Peck Road Park Lake
 - Introduces groundwater recharge basins, and treatment wetland
 - Post-construction landscape plans include additional native trees, shrubs, and grasses as well as utilize native soils for infiltration



- Leveraging Funds
 - **Planning:** RH/SGR Water Quality Group provided funding for the Feasibility Study and the preliminary geotechnical testing for the project
 - **Design Phase:** RH/SGR Water Quality Group will utilize some of the Municipal Share of the Safe Clean Water Program to provide their cost share of the Design Costs for the project
 - **Construction Phase:** RH/SGR Water Quality Group will pursue additional grants to help with construction of the park.
- Community Support
 - City of Monrovia and RH/SGR to lead an active community outreach effort
 - Prior Outreach Conducted- (City of Monrovia)
 - NatureForAll
 - Pasadena Audubon Society
 - Strong, local, community-Based Support
 - Audubon Society
 - Amigos de los Rios



Questions?