

# Safe, Clean Water Program

## Upper Los Angeles River

### Watershed Area Steering Committee (WASC)

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#### **Meeting Minutes:**

Thursday, March 18, 2021

2:00pm - 5:00pm

WebEx Meeting

#### **Attendees**

##### Committee Members Present:

Genevieve Osmena (Los Angeles County Flood Control District)

Art Castro\* (LA Dept of Water and Power)

Paul Lui (LA Dept. of Water and Power)

Alfredo Magallanes (Los Angeles - Sanitation)

Cathie Santo Domingo (LA Recreation & Parks)

Ernesto Pantoja (Laborers Local 300)

Miguel Luna (Urban Semillas)

John Luker (Santa Susana Mountain Park Association)

Veronica Padilla-Campos (Pacoima Beautiful)

Yazdan Emrani (Glendale)

Patrick DeChellis (La Cañada Flintridge)

Teresa Villegas (Los Angeles)

Max Podemski (Los Angeles)

Rafael Prieto (Los Angeles)

Paul Alva (Los Angeles)

Kris Markarian (Pasadena)

##### Committee Members Not Present:

Jacob Lipa (Lipa Consulting)

\*Committee Member Alternate

See attached sign-in sheet for full list of attendees

### **1. Welcome and Introductions**

Teresa Villegas, Chair of the Upper Los Angeles River WASC, welcomed Committee Members and called the meeting to order.

CJ Caluag (District) facilitated the roll call of Committee Members. All committee members made self-introductions and a quorum was established.

### **2. Approval of Meeting Minutes from March 18, 2021**

The District provided a copy of the meeting minutes from the previous meeting. The District noted that the three Los Angeles Unified School District presentations were updated to reflect the funding requested in the original application to the Infrastructure Program. Teresa Villegas asked the committee members for comments or revisions, there were none.

Veronica Padilla-Campos motioned to approve the minutes. Patrick DeChellis seconded the motion. The Committee voted to approve the March 18, 2021 meeting minutes. (Approved, see vote tracking sheet).

### **3. Committee Member and District Updates**

The District provided the District updates, noting: The beta version of the Stormwater Investment Plan (SIP) Tool is located in the Safe, Clean Water Program (SCWP) website to help the committee members develop the SIP. The District gave an overview of the SIP Tool and let the committee members know to ask the District if they have any questions. For the Municipal Program Transfer Agreements (TA), the Annual Plans are posted on the SCWP website under the Municipalities page. Over half the Cities have been cleared to receive their local return funds. For Cities that have not returned their Annual Plans, executed TAs, and

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Authorizations are requested to turn them in as soon as possible as they are due in April. For Regional Program TAs, the District has received 38 of the 48 scopes of works and 14 have been cleared to receive SCWP funds. There have been discussions between the project applicants and the District regarding changes to the scope of works.

Partial Funding Guidelines are available on the SCW Program website under Regional Program. This allows flexibility for committee members to negotiate partial funding to the project applicants. If partial funding is pursued, the project applicants will need to sign an agreement that they can leverage funds from another source. Partial funding awards should not result in any reduction to the scope of work or benefits as that would change the score assigned to the project as identified in the application.

For the SIP timeline, WASCs are encouraged to finalize SIPs by May. The Regional Oversight Committee (ROC) may meet in early June to review the SIPs and could provide recommendations to the WASCs or provide recommendations to advance the SIP to the Board of Supervisors.

For Call for Projects round three, the current deadline is July 31, 2021. For projects that need Los Angeles County Flood Control District approval it is requested to seek approval at least two months in advance.

For Tax relief options, they are due May 1, 2021.

For Watershed Coordinators (WC), they are working out the insurance requirements and letters of intent. There is one contract fully executed at the North Santa Monica Bay (NSMB) WASC. Mike Antos from Stantec will continue the role of the regional coordination and WC onboarding.

For the Technical Resources Program (TRP), 14 TRPs were approved in the SIP. 13 Notice to Proceeds have been issued. Many TRPs are aiming to apply for the Infrastructure Program in the upcoming Call for Projects (round 3). There is no set deadline to complete those.

Miguel Luna asked for a reminder of which WCs are for the ULAR Watershed Area. District said two WCs from Council of Watershed Health and one WC from Environmental Outreach Strategies.

Max Podemski suggested that there be a cap on the number of presentations for each meeting. The District indicated that it is the WASC's decision but that this was last of meeting at such length for presentations.

Veronica Padilla-Campos appreciated the transparency of the information brought forth by the District and the accessibility of the online resources.

#### **4. Ex Parte Communications**

No Ex Parte Communications

#### **5. Public Comment Period**

No Public Comment

#### **6. Discussion Items**

a) Infrastructure Program (IP) Presentations ([ULAR Scoring Rubric](#) and [SCW Portal](#)):

i) North Hollywood High School Comprehensive Modernization Project – Los Angeles Unified School District.

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Presented by Mitra Nehorai and Gerald Barrera. The project includes modernization and new construction including fields, Utilities, Storm Water Retention Tanks and Pretreatment System.

Ernesto Pantoja asked if the Project falls under LAUSD's or the City's Project Labor Agreement. Mitra Nehorai replied that she would have to get back to the committee on the response.

Veronica Padilla-Campos asked if the school has a problem with flooding and if the operations and maintenance (O&M) funding would be necessary during construction. Gerald Barrera replied that the school does not have a problem with flooding. Mitra Nehorai responded that each completed phase would have O&M associated with it while other phases are in construction.

Paul Alva asked if the Project would be taking in any offsite water. Gerald Barrera replied that they did not consider taking any offsite water.

ii) Thomas Jefferson High School Comprehensive Modernization Project – Los Angeles Unified School District.

Presented by Scott Singletary. The project includes New Construction, Modernization, Utilities, new fields, and underground Storm Water Retention, Pretreatment and Infiltration System.

Ernesto Pantoja asked if the Project is using union labor and local hire positions. Scott Singletary replied that they will follow LAUSD local hire requirements and Union Stabilization Agreement.

Max Podemski asked if there was currently a joint use agreement for the School's open space to be used by the public after hours. Scott Singletary replied that there is currently no joint use agreement, but the campuses are open for the public via civic center permit to use the any District facility during non-school hours.

Veronica Padilla-Campos thanked the presenter and commented in favor of the Project.

Sean Singletary added that their properties include 6,400 acres of public land and every project is providing low impact development and meeting stormwater requirements. They have 1,000 acres of turf, 60 million square feet of roofs that capture water with rain barrels.

b) Scientific Studies (SS) Presentations ([SCW Portal](#)):

i) LAUSD Living Schoolyards Program Pilot Study – TreePeople with LAUSD and Studio-MLA  
Presented by Ariel Whitson.

Teresa Villegas asked for clarification on the funding request. Ariel Whitson confirmed the request was just under one million dollars within an 18-month time span.

Veronica Padilla-Campos commented that it was nice to see a non-profit organization apply for funds and is in favor of the proposal.

ii) Fire Effects Study in the ULAR Watershed Management Area – San Gabriel Valley Council of Governments on behalf of the ULAR Watershed Management Area.

Presented by Katie Ward, Dawn Petschauer (LA Sanitation), Matt Rich and Brenda Stevens (Wood), and Brianna Datti (Craftwater).

Teresa Villegas asked if City planners would be involved in this Project. Brianna Datti replied that they will be working with a broad range of agencies and that city planning would be involved. Dawn Petschauer

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added that they intend on engaging a wide network of stakeholders such as the Regional Water Quality Control Board and meetings addressed with LADWP and Metro within the City.

John Luker commented that his community was affected by contaminants that entered the Watershed from a laboratory affected by the Woolsey Fire and asked if the project would be sampling for industrial chemicals or if they will be relying on the Regional Water Quality Control Board. Matt Rich replied that the monitoring plan is not prepared and that they can consider incorporating this in their plan.

Genevieve Osmena asked if there were funds committed from the Rio Hondo Watershed Area. Project proponents replied that they are requesting funding from both WASCs. Dawn Petschauer clarified that this is the only Enhanced Watershed Management Plan that spans across two WASCs that is inclusive of multiple agencies.

iii) Regional Pathogen Reduction Study – Gateway Water Management Authority  
Presented by Richard Watson.

Veronica Padilla-Campos asked who was on the study's advisory committee. Richard Watson replied that the committee has not been formed yet but that it would involve a broad range of groups including academics, non-profit organizations, and community-based organizations. He clarified that they are requesting funding from 8 of the 9 WASCs, not NSMB because they do not have a lot of impervious areas.

Paul Alva asked how Municipalities should use the information once the studies are completed and about the feedback received from other WASCs. Richard Watson responded that the information would allow agencies to focus on the human sources of the pathogens, not fecal indicator bacteria, that is causing illnesses. The study has not received a lot of feedback but what has been provided is generally positive.

#### **7. Public Comment Period**

Francisco Romero, from Promesa Boyle Heights, spoke in support of the Thomas Jefferson High School Project and is providing simultaneous translation of the WASC meetings to five community members. Francisco added that Promesa Boyle Heights is a Social Justice Collaborate of over 20 partners, schools, and residents.

Jae Koh, a community member, asked TreePeople which school is capturing offsite water because they could collaborate with LAUSD that is not capturing offsite water for their proposed projects at schools. Paul Alva replied that Bassett Unified High School in the City of Industry is capturing offsite water where the County partnered with multiple agencies.

Veronica Padilla-Camps expressed that she appreciates that there are translation services in Boyle Heights for Spanish-speaking residents.

#### **8. Voting Items**

a) None

#### **9. Items for Next Agenda**

a) Scientific Studies Presentation on April 7, 2021.

b) Discussion of the Stormwater Investment Plan on April 7, 2021. A project ranking sheet will be shared with the committee members after the meeting in April for SIP discussions on May 5, 2021. Thursday, May 20 will be a tentative meeting date to vote for the SIP. District highly recommended that the committee



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members review the project applications, review the projects in the SCW Portal, review the project presentations memorialized in the previous meeting minutes, and gain familiarity with the SIP Tool (beta version). District gave an overview of the SIP Tool (beta version). Paul Alva asked if projects approved for funding in the last round are in the SIP Tool (beta version). District confirmed.

#### **10. Adjournment**

Teresa Villegas thanked WASC members and the public and adjourned the meeting.

**Upper Los Angeles River  
March 18, 2021**

Upper Los Angeles River March 18, 2021					
	Quorum Present				Voting Items
Member Type	Member	Voting?	Alternate	Voting?	Meeting Minutes
Agency	Genevieve Osmena	x	Carolina Hernandez		y
Agency	Delon Kwan		Art Castro	x	y
Agency	Paul Liu	x	Rafael Villegas		y
Agency	Alfredo Magallanes	x	Michael Scaduto		y
Agency	Cathie Santo Domingo	x	Javier Solis		y
Community Stakeholder	Ernesto Pantoja	x	Sergio Rascon		y
Community Stakeholder	Miguel Luna	x	Yvette Lopez-Ledesma		y
Community Stakeholder	John Luker	x	Wendi Gladstone		y
Community Stakeholder	Jacob Lipa				
Community Stakeholder	Veronica Padilla-Campos	x	Felipe Escobar		y
Municipal Members	Yazdan Emrani	x			y
Municipal Members	Patrick DeChellis	x			y
Municipal Members	Teresa Villegas	x	Barbara Romero		y
Municipal Members	Max Podemski	x	Ackley Padilla		y
Municipal Members	Rafael Prieto	x			y
Municipal Members	Paul Alva	x	TJ Moon		y
Municipal Members	Kris Markarian	x			a
Total Non-Vacant Seats	17			Yay (Y)	15
Total Voting Members Present	16			Nay (N)	0
Agency	5			Abstain (A)	1
Community Stakeholder	4			Total	16
Municipal Members	7				Approved

## Attendees

### Upper Los Angeles River WASC Meeting - March 18, 2020

Alfredo Magallanes	Itzel FCW	Mitra Nehorai	Wendi Gladstone
Alvin Cruz - LACFCD	Jae Ko	mohammad baig	Wendy Dinh
Ariel Lew Ai Le Whitson	Jason Casanova	Name	Yaz Emrani
Art Castro	Joe Venzon - LA County	Nayiri Vartanian	Yvana Hrovat
Blake Whittington	Joe Venzon Venzon - LA County	Oliver Galang (Craftwater)	
Brad Wardynski	John Luker	Pamela Ku	
Brenda Stevens	Joyce Amaro	Patrick DeChellis	
Brianna Datti	Julia Hawkinson	Paul Alva	
Call-in User_3	Justin Jones - LACFCD	Paul Liu	
Call-in User_5	Karen Lee	Pauline Nguyen	
Call-in User_6	Katie Harrel	Rafael Prieto	
Cameron McCullough	Katie Ward	Ricard Watson	
Carlos Moran	Kevin Chang	ron canedy	
Carmen Andrade	Kirk Allen	ruben valenzuela	
Cathie Santo Domingo	kris	Safe Clean Water LA	
Christine McLeod	Lauro Alvarado	Sarai Bhaga	
Christos Chrysiliou	Limor Horowitz	Scott Singletary	
Cindy Montanez	Manny Gonez	shahram kharaghani	
CJ Caluag - LACFCD	Maritsa DRA INC	Sheila Brice	
Clarasophia Gust	Maritsa DRA Inc.	Susie Santilena	
Conor Mossavi	Matt Rich	Tara Liampetchakul	
Dawn Petschauer	Matt Romero	Taraneh Nik-Khah	
Dorothy Wong	Mauricio Castro	taraneh.nik-khah	
ernesto pantoja	max Podemski	Teresa Villegas	
Francisco Romero	Mayra Cabrera - LACFCD	Thom Epps, Craftwater	
Genevieve Osmena	Melissa Levitt	TJ Moon	
Gerald Barrera	Miguel Luna	Tracey Chavira	
Gus Orozco	Mike	Veronica Padilla	
ilene Ramirez	Mike Antos	Vik Bapna - CWE	





# LOS ANGELES UNIFIED SCHOOL DISTRICT



## NORTH HOLLYWOOD HIGH SCHOOL COMPREHENSIVE MODERNIZATION PROJECT

Safe, Clean Water Infrastructure Program FY21-22

Project Lead: Los Angeles Unified School District

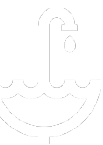
Presenter: Mitra Nehorai, Senior Project Development Manager



# Project Overview

The N. Hollywood HS Comprehensive Modernization includes demolition of (35) existing buildings, modernization of (3) buildings, construction of (3) new buildings, new outdoor PE stations, combo baseball/softball field, and site improvements.

- The goal of the Project is to modernize and replace aging school facilities to provide safe and updated schools for 21<sup>st</sup> century learning.
- This project is funded by local bonds will be completed in 2025. SCW funding is requested for the Construction cost of the project's storm water quality portion, and for Monitoring, Operation and Maintenance of the storm water system.
- \$ 3,154,945.03 Total Funding Requested

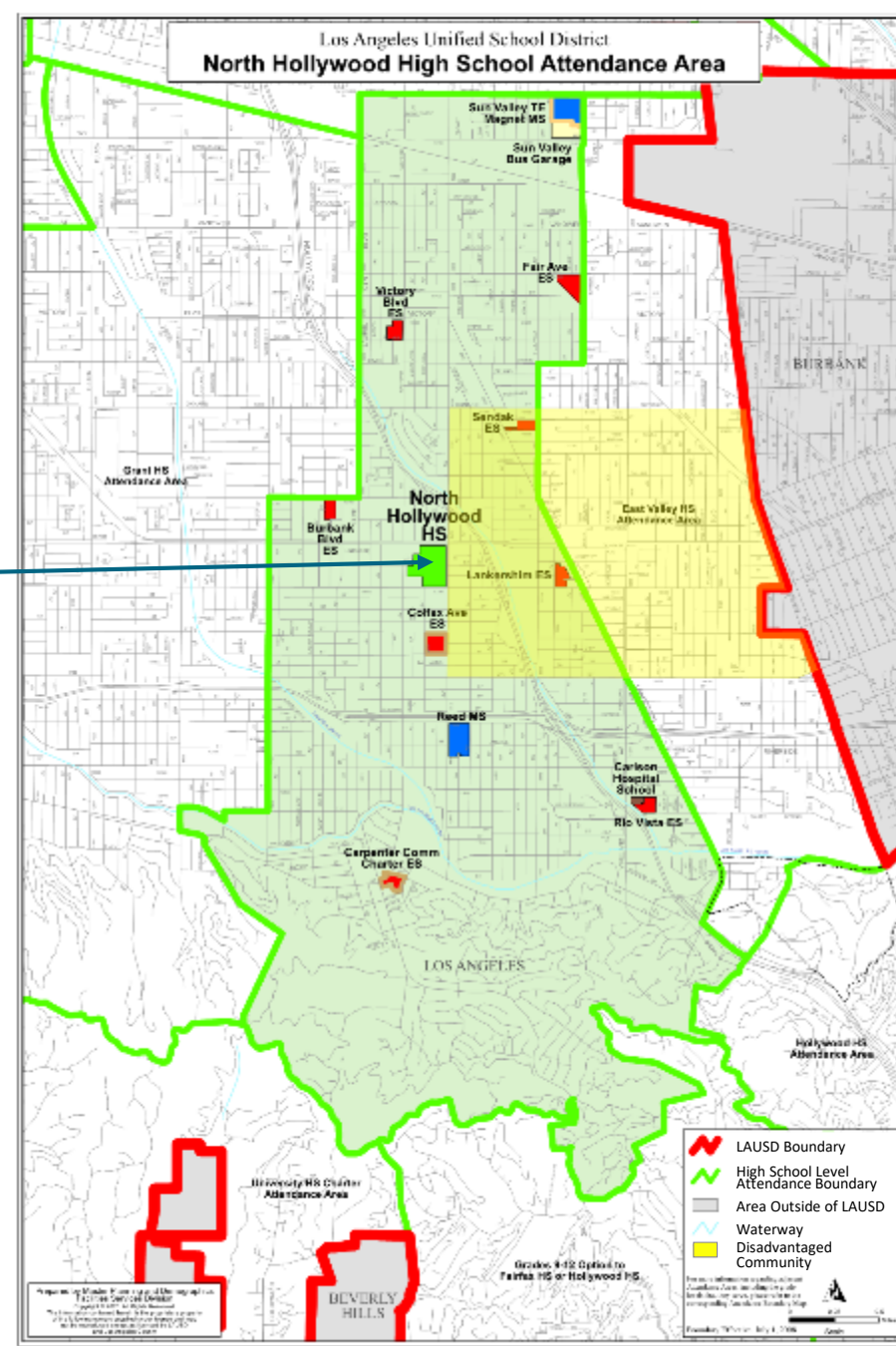






# Project Location

- North Hollywood High School is located in the Upper Los Angeles River Watershed.
- This School serves students from an adjacent Disadvantaged Community.

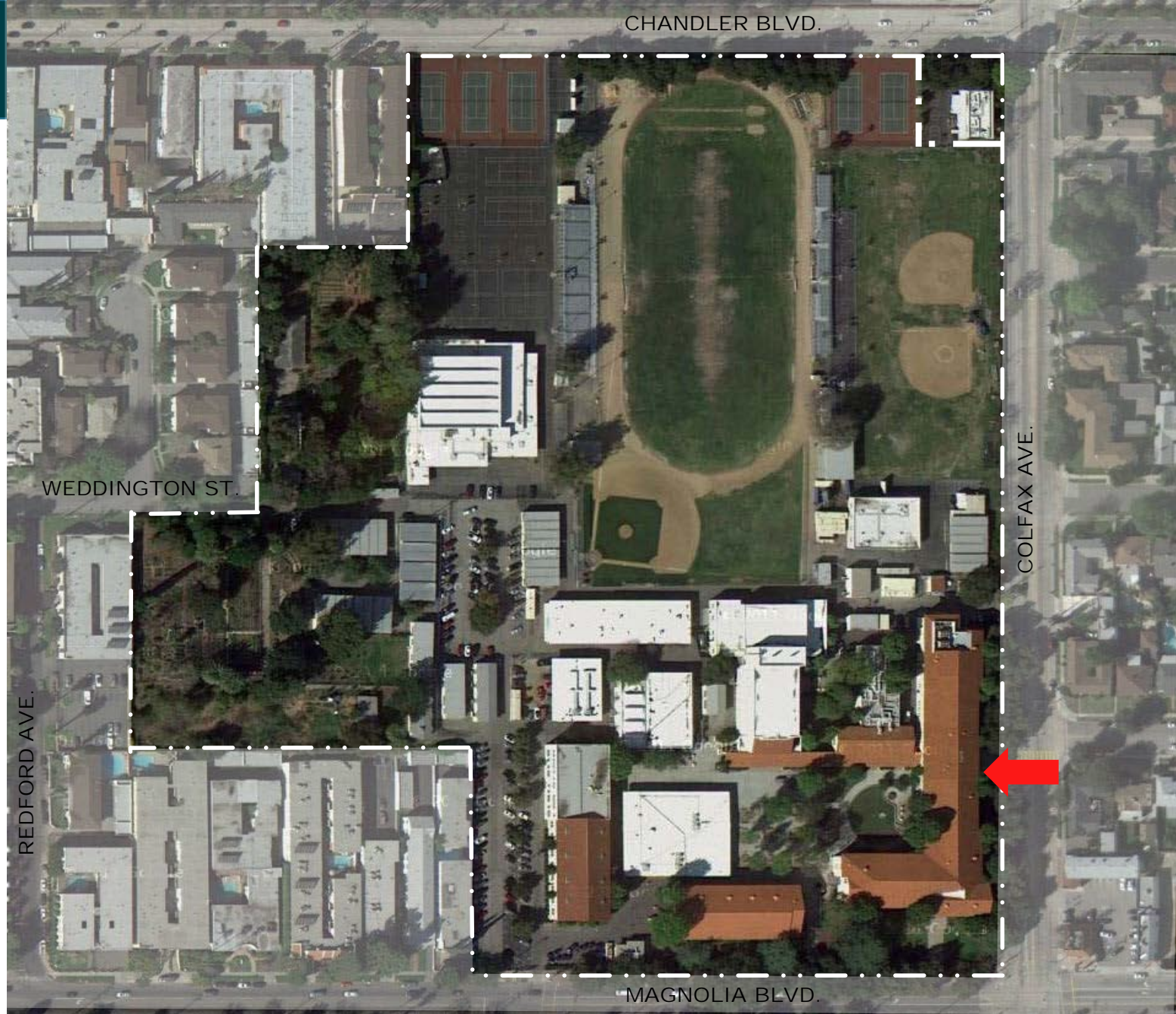






# Project Background

- North Hollywood High School, originally called Lankershim High School, was built in 1927 on a peach and apricot orchard
- Campus Core Historic Buildings Designed by Myron Hunt & HC Chambers in Spanish Colonial Revival style
- North Hollywood HS was identified for a Comprehensive Modernization Project to address the most critical physical conditions of the school buildings and grounds of the 25.38 acre site.
- The Project was developed with a focus on student safety and bringing core indoor and outdoor educational facilities to adequate sizes and 21<sup>st</sup> century learning.







# Project Details

- Existing Building Modernization / Seismic Retrofit:

- Administration/Classroom
- Classrooms
- Library

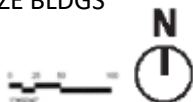
- New Buildings:

- Classrooms
- Gymnasium
- Auditorium/Performing Arts

- Site improvements include:

- Utilities Infrastructure, Underground Storm Water Retention Tanks and Pretreatment Systems
- Accessibility
- Landscape and hardscape amenities which are also used by the community outside of school hours
- 153 new trees (total 365 trees)

- SCOPE LIMITS
- EXISTING MODERNIZE BLDGS
- NEW BUILDINGS
- NOT IN SCOPE







# Project Details

- The Project will enhance the School's learning environments in continued support of their educational programs including Biological Sciences/Zoom Magnet, STEM Magnet, Highly Gifted Magnet, School for Advanced Studies, Home Engineering Academy, Career Technical Education programs, Robotics, Music, Athletics, Academic Decathalons and Cyberpatriots championships.
- The School has a robust History of Animal Science and Agriculture programs including Ornamental Horticulture and Plant & Soil Science.
- A portion of the school is set aside for the use by the North Hollywood Community Garden, and independent 501(c)3 entity and Future Farmers of America Chapter.
- The Project's proposed post-development storm water treatment system has been designed to include storm water retention, treatment and infiltration, to reduce storm water run-off to the surrounding residential neighborhood, and replenish the ground water table in the community.







# North Hollywood HS – Aerial







# North Hollywood HS – Green Spaces, Recreational Areas



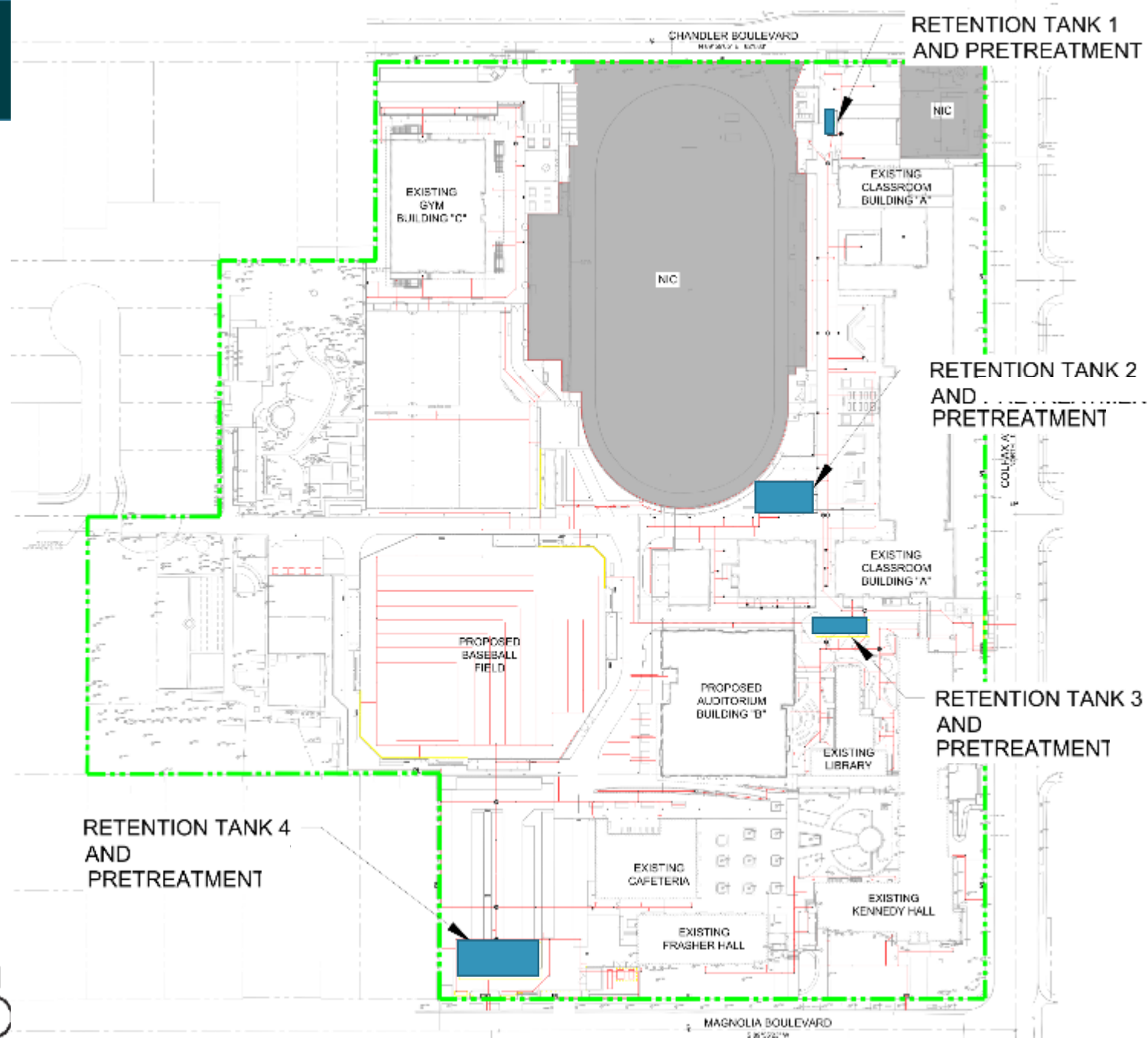




# Project Details

- Locations of Retention Tanks and Pretreatment Systems

- SCHOOL PROPERTY LIMITS
- STORM DRAIN LINE
- RETENTION TANK & PRETREATMENT
- NOT IN PROJECT SCOPE

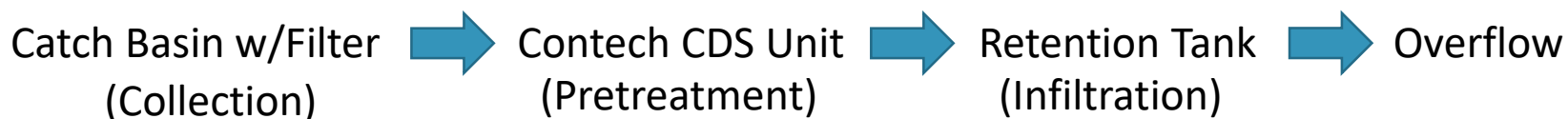








## Storm Water Conveyance System



## Metrics

- Infiltration Footprint Area = 0.223 acres <sup>1</sup>
- Ponding Depth = 6.05 ft <sup>2</sup>
- Stormwater Runoff Capture Area = 17.01 acres
- Impervious area = 12.63 acres
- Pervious Area = 4.38 acres
- Effective Draw Down Rate = 4.28 in/hr <sup>3</sup>
- 24-hour Storm Capacity = 3.2580 ac-ft
- Total Inflow Volume during 85<sup>th</sup> Percentile Design Event = 1.09 ac-ft
- Average Annual Storm Water Capture = 9.105 ac-ft
- Calculated Water Storage volume = 1.3492 ac-ft

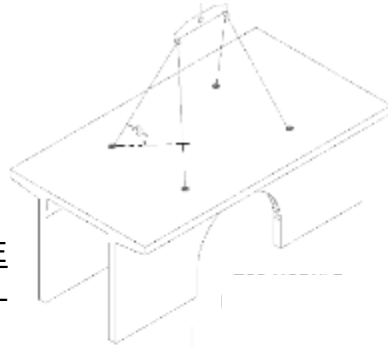
### FOOTNOTES:

1. Includes footprint area of all Retention Tanks.
2. Ponding Depth is a weighted average based on Ponding Depth and infiltration footprint area of all retention tanks.
3. Effective Draw Down Rate is a weighted average based on infiltration rates provided in Geotechnical Report and infiltration footprint area of all retention tanks.

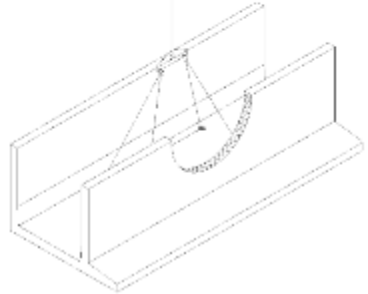


# Project Details – Retention Tank Detail

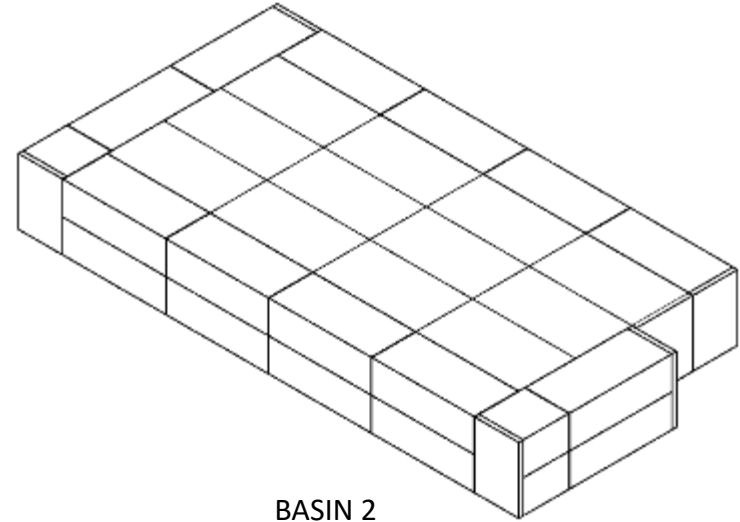
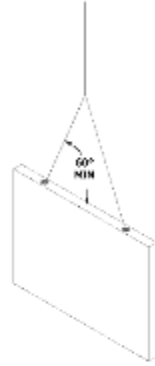
TOP MODULE  
LIFTING DETAIL



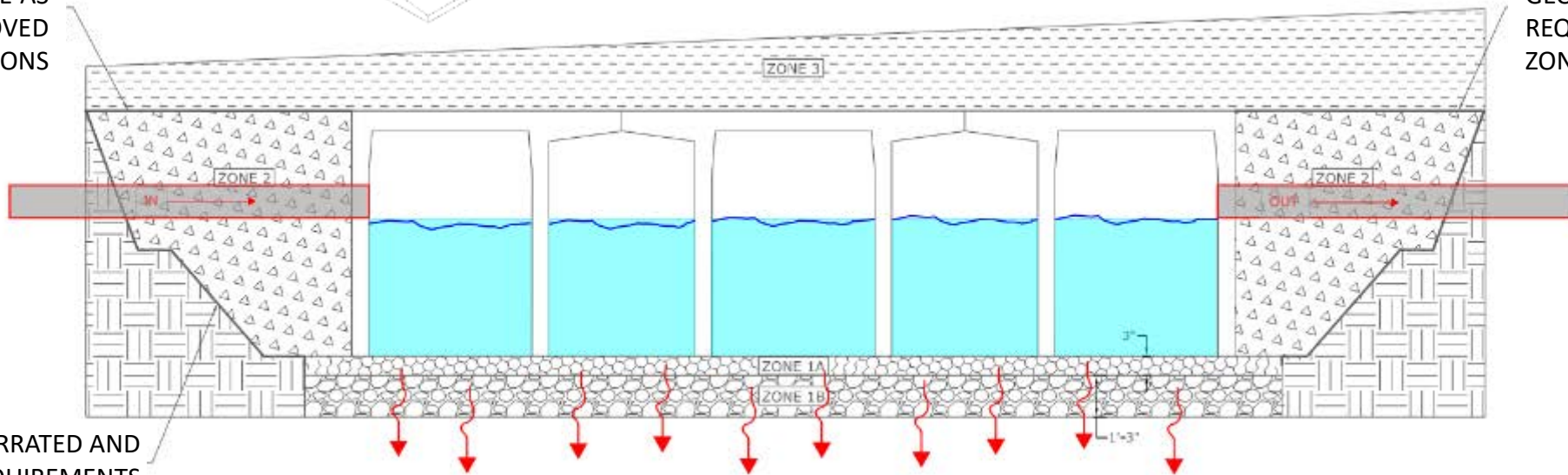
BASE MODULE  
LIFTING DETAIL



END PANEL  
LIFTING DETAIL



GEOFABRIC/GEOTEXTILE AS  
REQUIRED PER APPROVED  
ZONE 2 BACKFILL OPTIONS



GEOFABRIC/GEOTEXTILE AS  
REQUIRED PER APPROVED  
ZONE 2 BACKFILL OPTIONS

STEPPED OR SERRATED AND  
APPLICABLE OSHA REQUIREMENTS  
(SEE INSTALLATION SPECIFICATIONS)



# Cost & Schedule

Phase	Description	Cost	Completion Date
Construction	Construction	\$ 3,044,545.03	12/2025
<b>TOTAL</b>		<b>\$ 3,044,545.03</b>	

- \$ 283.3M Total Cost of Construction for Comprehensive Modernization Project
- Annual Costs comprised of Operations & Maintenance, Monitoring
- 30-year Project Lifespan, \$ 3,560,209.66 Lifecycle Cost



# Funding Request

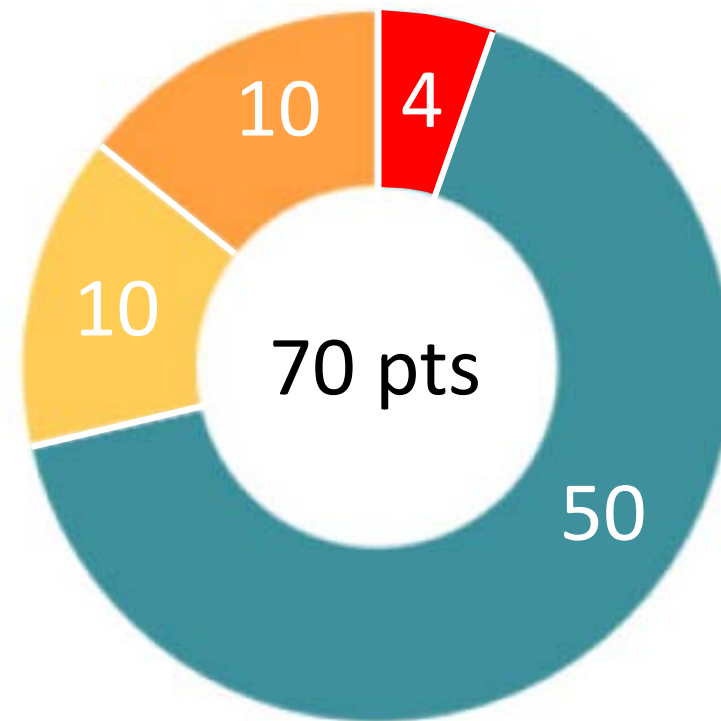
Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	\$ 758,692.99	Construction	Construction Phase 1 (2021)
2	\$ 758,692.98 \$ 24,000.00 \$ 3,600.00    Total Yr 2: \$ 786,292.98	Construction O&M Monitoring	Construction Phase 1 (2022) Phase 1 Phase 1
3	\$ 509,053.02 \$ 24,000.00 \$ 3,600.00    Total Yr 3: \$ 536,653.02	Construction O&M Monitoring	Construction Phase 2 (2023) Phase 1 Phase 1
4	\$ 509,053.02 \$ 24,000.00 \$ 3,600.00    Total Yr 4: \$ 536,653.02	Construction O&M Monitoring	Construction Phase 2 (2024) Phase 1 Phase 1
5	\$ 509,053.02 \$ 24,000.00 \$ 3,600.00    Total Yr 4: \$ 536,653.02	Construction O&M Monitoring	Construction Phase 2 (2025) Phase 1 and 2 Phase 1 and 2
<b>TOTAL</b>	<b>\$ 3,154,945.03</b>		

- Future potential SCW funding requests would include Operations and Maintenance and Monitoring costs.



# Preliminary Score

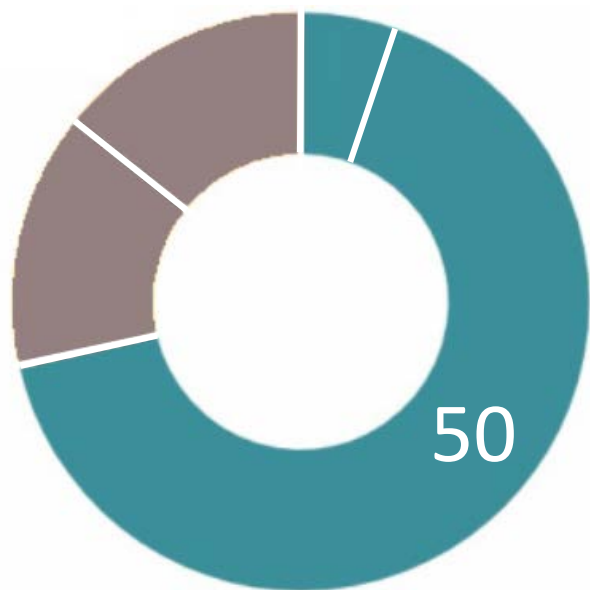
- Water Quality
- Community Investment Benefits
- Nature Based Solutions
- Leveraged Funds and Community Support







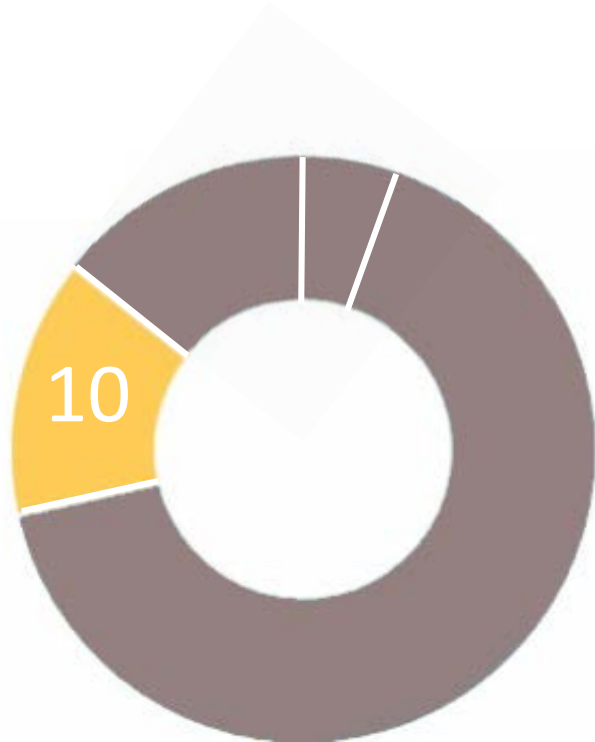
# Water Quality Benefits



- The new storm drain system will be designed to collect all surface runoff from the project site and from roof drainage.
- The project encompasses a 17.01 ac capture area with a 12.63 ac impervious area.
- The project will decrease the impervious area through additional planted areas and is therefore anticipated to decrease storm water runoff.
- The project infiltration facility has a 0.223 ac footprint and a 6.05 sf ponding depth. The module generated storage volume is 1.9500 ac-ft.
- Site is divided into four capture areas, each with its own retention tank. The underground soils will further clean and treat the conveyed runoff and naturally recharge the ground water table. The reduction in the runoff as a result of infiltration will decrease the pollutants and the overall runoff discharged to the public right-of-way thus reducing the potential of ponding and flooding of local streets, neighborhoods, and the local water shed.



# Community Investment Benefits



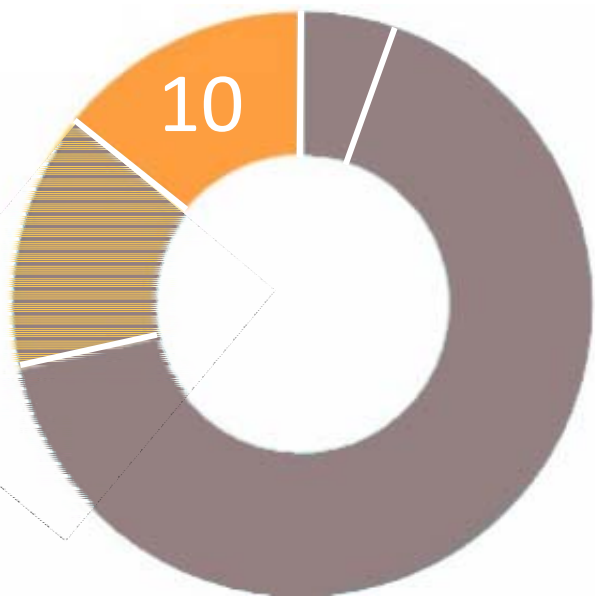
- MS4 Compliance
- Infiltration – 100% 85<sup>th</sup> Percentile Volume Storage
- Recharge Water table
- Natural Sediment Filtration & Pollutant Reduction
- Flood Management
- Flood Conveyance







# Nature Based Solutions

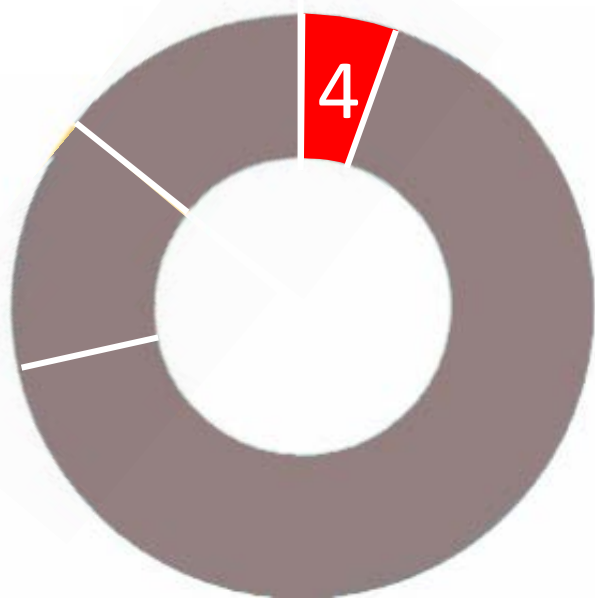


- New playfields and green spaces will positively impact the school community by providing areas for the student community and general local community to safely engage in sports activities
- 153 new trees (365 total) and vegetation creates, enhances and restores natural habitats
- Increases Shade and reduces local heat island effect
- Reduces Global warming





# Leveraging Funds and Community Support



- Leveraging Funds and Community Support

- North Hollywood HS has an active and engaged local community. The Project Advisory Board including neighborhood council members, parents, staff are in strong support of this project.
- The North Hollywood Community Gardens (NHCG) has provided a letter in strong support of this project. NHCG is a registered 501(c)3 non-profit entity operating under their own constitution and rules, completely autonomous from North Hollywood HS.

- Community Outreach

- LAUSD's outreach mission is to build greater public understanding, broader participation and productive partnerships for LAUSD projects.
- The Project's Community Relations Organizer's Community Outreach plan extends to the school community, parents, staff, neighborhood councils, community-based organizations and businesses, local elected officials and anyone in the community who expresses interest and provides contact information.
- Community meetings are held at each milestone of the project. All input is responded to and documented for follow up by the design team and LAUSD officials.
- Informational bulletins are sent out on a regular basis throughout the life of the project.





**Thank You**



**Questions?**





# LOS ANGELES UNIFIED SCHOOL DISTRICT



## JEFFERSON HIGH SCHOOL COMPREHENSIVE MODERNIZATION PROJECT

Safe, Clean Water Infrastructure Program FY21-22

Project Lead: Los Angeles Unified School District

Presenter: Scott Singletary, Senior Project Development Manager





# Project Overview

The TJHS Comprehensive Modernization project includes the construction of new buildings, Modernization of existing buildings and site improvements, new fields including underground storm water retention concrete structures for a stormwater pretreatment and infiltration system.

- The goal of the Project is to modernize and replace aging school facilities to provide safe and updated schools for 21st century learning.
- The education, safety and welfare of the students is the primary objective of this project.
- The \$187M Comprehensive Modernization project funded by local bonds and will be completed in 2025. SCW funding is requested for the construction cost of the storm water portion of the project and for operation, maintenance and monitoring of the storm water system.
- \$1,980,560 Total Funding Requested.



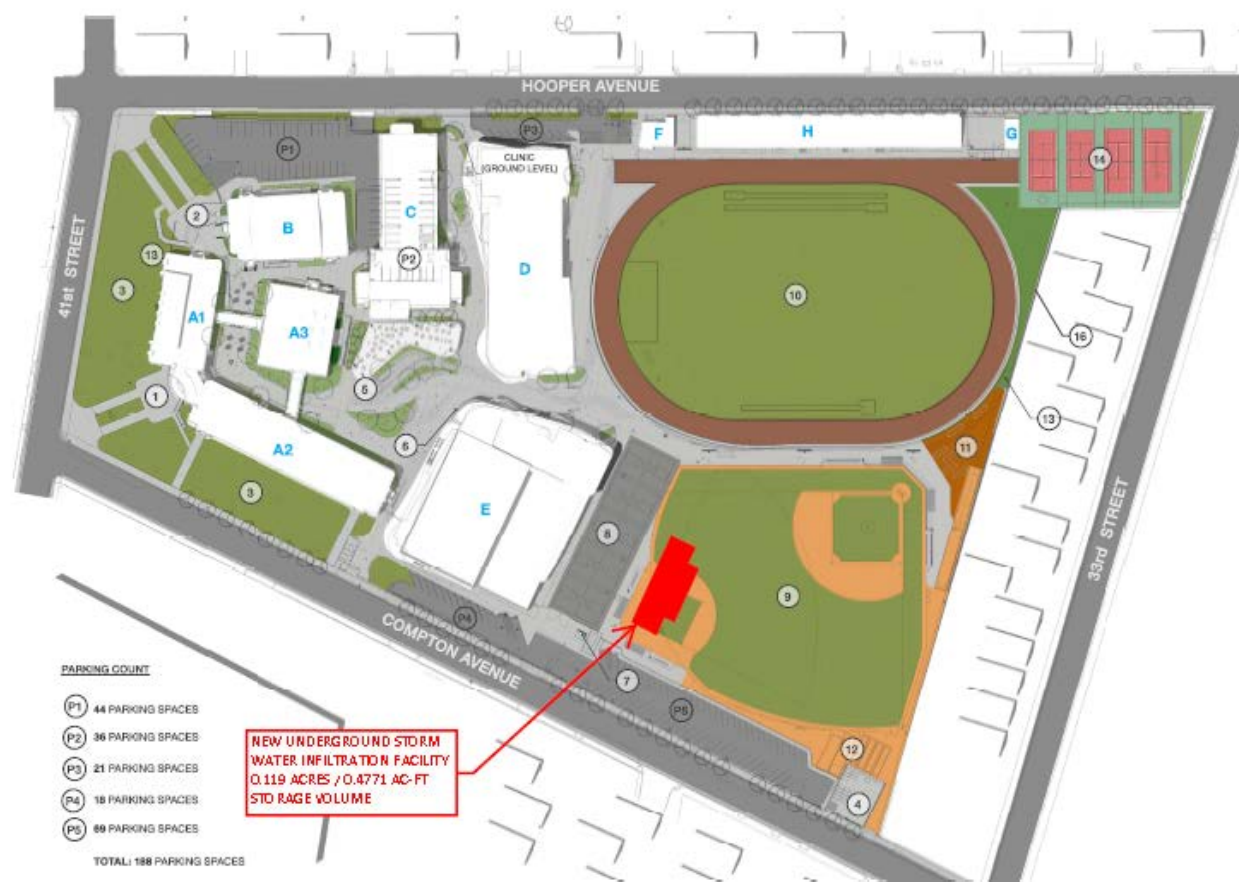
# Project Location



Watershed Area:  
Upper Los Angeles  
River



# Project Location







# Project Background

- The Historic Thomas Jefferson High School was originally built in 1917 and rebuilt after the Long Beach Earthquake of 1933 between 1935 and 1937.
- The Comprehensive Modernization Project modernizes existing buildings, builds new buildings and upgrades campus wide infrastructure.
- The campus currently has no storm water best management practices. None of the runoff is treated before it leaves the site.
- This project incorporates a pre-treatment dual vortex hydrodynamic separator (DVS), model DVS-72 by Oldcastle, which will capture up to 42 cubic feet of sediment & 49 cubic feet of oil and floatable storage space, before the storm water enters the infiltration facility.
- The project's storm water underground concrete infiltration facility is designed to capture and infiltrate 100% of the 24 hour 85th percentile storm event.
- The infiltration chamber will reduce the drainage runoff and reduce chances of flooding.
- The underground infiltration facility is designed to capture and infiltrate up to 1.90 acre feet of water in a 24 hour capacity. It will reduce the following pollutants by over 99% : zinc, copper, lead, nitrogen phosphorous and E.coli.
- Jefferson High School is located in and serves students from Disadvantaged Community (DAC). The project will provide recreational opportunities to the DAC during weekends and after school hours.



# Jefferson High School – Aerial View when Completed











# Jefferson High School – Main Quad - Greening







# Jefferson High School –Native Planting

Green open space between buildings





# Jefferson High School – Tree Plan – New Trees added

Tree Plan at Project Completion – *Plan de Árboles Existentes al Terminar el Proyecto*

**Jefferson High School**

Proposed Trees – *Plan de Árboles Propuestas*

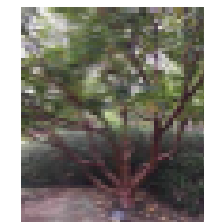


## TOTAL TREES

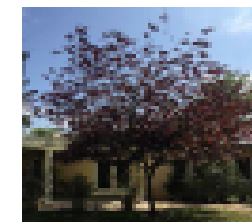
- Existing Trees: (51)
- Proposed Trees: (73)
- Protected Trees: (11)
- 4 existing
- 7 new
- Total Trees: 125



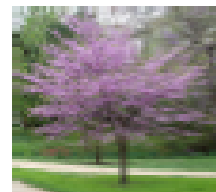
● **ALNUS RHOMBIFOLIA**  
White Alder



● **ARBUTUS UNDO**  
Strawberry Tree



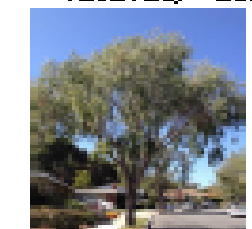
● **CERCIS OCCIDENTALIS**  
"FOREST PANSY"  
Panic Plum / Panic Redbud



● **CERCIS OCCIDENTALIS**  
Panic Redbud



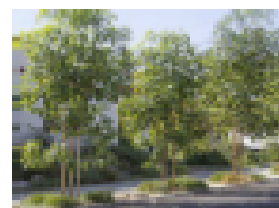
● **CEDRUS DECADARA**  
Decade Cedar



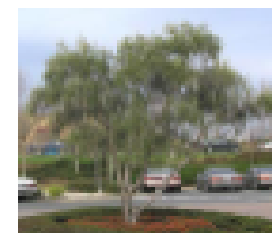
● **CELEBRA PARYPIPLORA**  
Australian Willow



○ **LARIX**  
Larix



◆ **LOPHOSTEMON**  
"SISKINCK BEE"  
Siskinck Bee



◆ **OLEA EUROPEA**  
"SWAN HILL"  
Swan Hill Olive



◆ **SCHINUS MOLLE**  
California Pepper





# Cost & Schedule

Phase	Description	Cost	Completion Date
Construction	Construction	\$1,842,560	06/2025
Design	Design	\$162,145	12/2020
Planning	Planning	\$81,625	11/2018
<b>TOTAL</b>		<b>\$2,086,330</b>	

- Total Cost of Construction for Stormwater components \$2,086,330
- Project Lifespan is 30 Years with a Lifecycle Cost of \$2,358,225.

## Annual Cost Breakdown

Annual Maintenance Cost:	\$12,000.00
Annual Operation Cost:	\$12,000.00
Annual Monitoring Cost:	\$3,600.00
<b>Project Life Span:</b>	<b>30 years</b>



# Funding Request

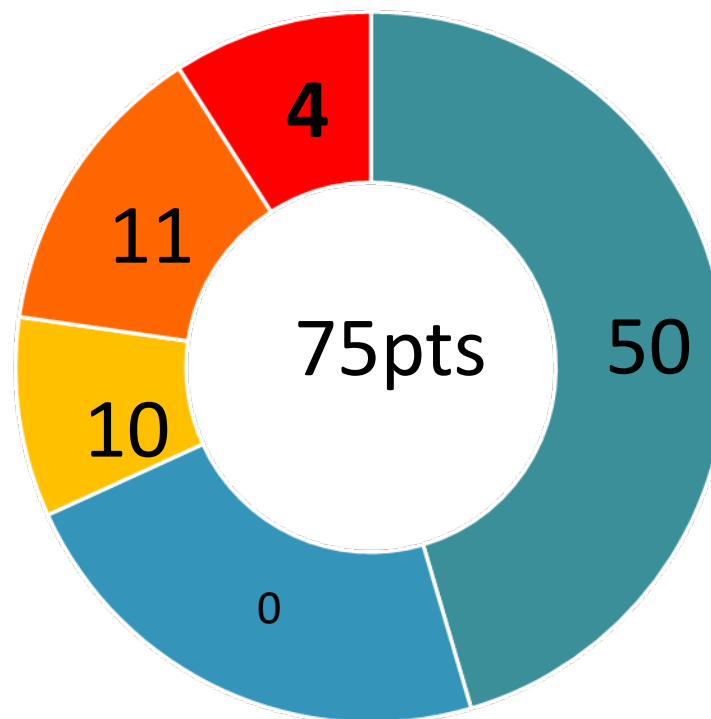
Year	SCW Funding Requested	Phase	Efforts during Phase and Year
1	\$396,112	Construction, Operations, Maintenance & Monitoring	2021-Construction, Operations, Maintenance & Monitoring
2	\$396,112	Construction, Operations, Maintenance & Monitoring	2022-Construction, Operations, Maintenance & Monitoring
3	\$396,112	Construction, Operations, Maintenance & Monitoring	2023-Construction, Operations, Maintenance & Monitoring
4	\$396,112	Construction, Operations, Maintenance & Monitoring	2024-Construction, Operations, Maintenance & Monitoring
5	\$396,112	Construction, Operations, Maintenance & Monitoring	2025-Construction, Operations, Maintenance & Monitoring
<b>TOTAL</b>	<b>\$1,980,560</b>		





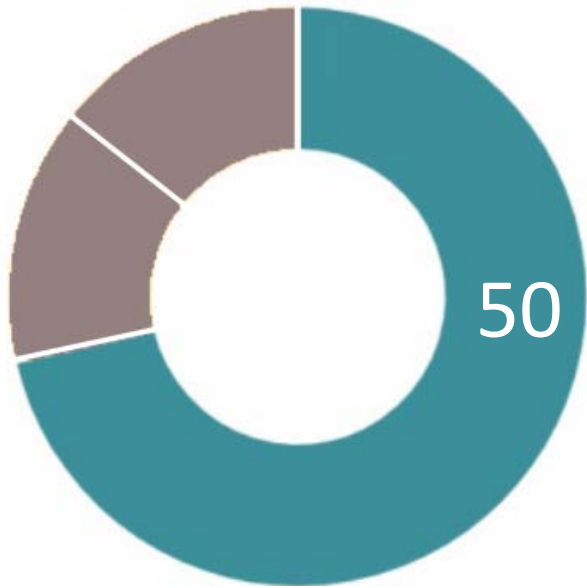
# Preliminary Score

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





# Water Quality & Water Supply Benefits

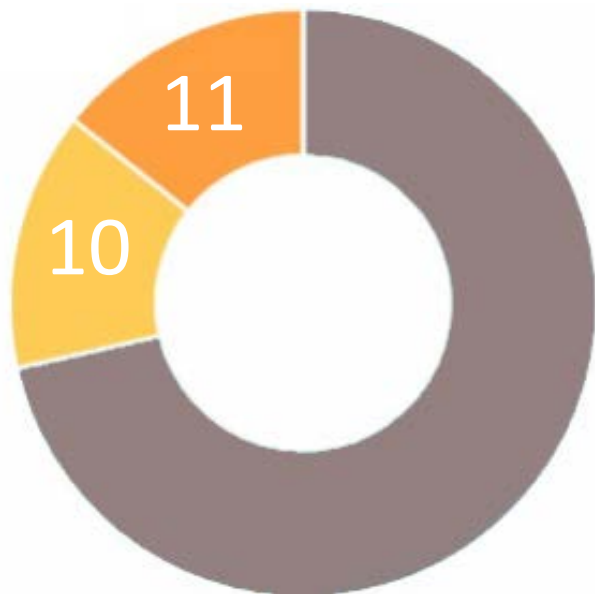


- The new storm drain system will be designed to collect all surface runoff from the project site and from roof drainage of buildings. Infiltration will recharge groundwater.
- The project encompasses a 18.51 acres and capture area is 8.09 acres and 5.24 acres impervious area.
- The project will decrease the impervious area through additional planted areas and is therefore anticipated to decrease storm water runoff.
- The project infiltration facility has a .12 ac footprint and a 4 ft ponding depth. The Infiltration capacity volume is 1.90 ac-ft in 24 hr capacity.
- The infiltration system provides stormwater runoff treatment through a pretreatment device.
- The treatment system will treat the storm removing pollutants by 99% Zinc, Copper, Lead, Bacteria.





# Community Investment Benefits and Nature Based Solutions



- Community Investment Benefits

- The Jefferson HS Stormwater system provides flood control. It is designed to collect and treat an 85<sup>th</sup> percentile storm through infiltration.
- Removes harmful pollutants from Stormwater before infiltration. Onsite storage reduces flooding in neighborhood.
- The project provides new natural turf for the baseball/softball field.
- Project provides space for Neighborhood Clinic
- Protection of existing mature trees, addition of new trees and plants, and construction of a new shade structure will increase ecological function and increase shade areas for students and teachers
- Areas of existing asphalt pavement will be replaced with natural color concrete paving to reduce heat island effect

- Nature Based Solutions

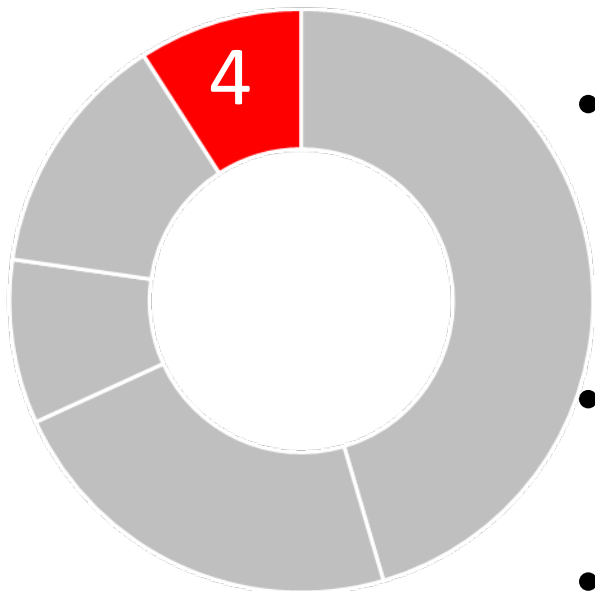
- The campus landscape design incorporates 73 new trees, green areas and planters throughout the exterior circulation spaces and in the main Quad using a California native planting pallet.



# Leveraging Funds and Community Support

- Community Support

- The mission of the outreach process for LAUSD is to build greater public understanding, broader participation and productive partnerships for LAUSD projects.
- The outreach process is initiated by assigning a LAUSD community relations point person who assembles a contact list for each project that includes parents, staff, neighbors with 500 ft of the school, neighborhood councils, community-based organizations, and local elected officials and anyone who provides contact information.
- Community meetings are held at each milestone of the project. All community input is responded to and documented for follow up by the design team and LAUSD officials.
- Informational bulletins are sent out on a regular basis throughout the life of the project.
- The TJHS Alumni Association Support letter was submitted for this Project
- The South Central Family Health Clinic Supports this Project
- The LA Conservancy Support Letter was submitted for this Project







**Questions?**



# LAUSD Living Schoolyards Program Pilot Study

Scientific Studies Program

TreePeople • LAUSD • Studio-MLA

Presenter: Ariel Lew Ai Le Whitson  
Director of Education and Community





# Study Overview

This study addresses two needs: the need for nature-based, multi-benefit stormwater capture project implementations which address the critical need to upgrade school campuses, replacing asphalt and concrete with bioswales, native plants, trees, and rain gardens; and the region-wide need to provide more land for stormwater capture.

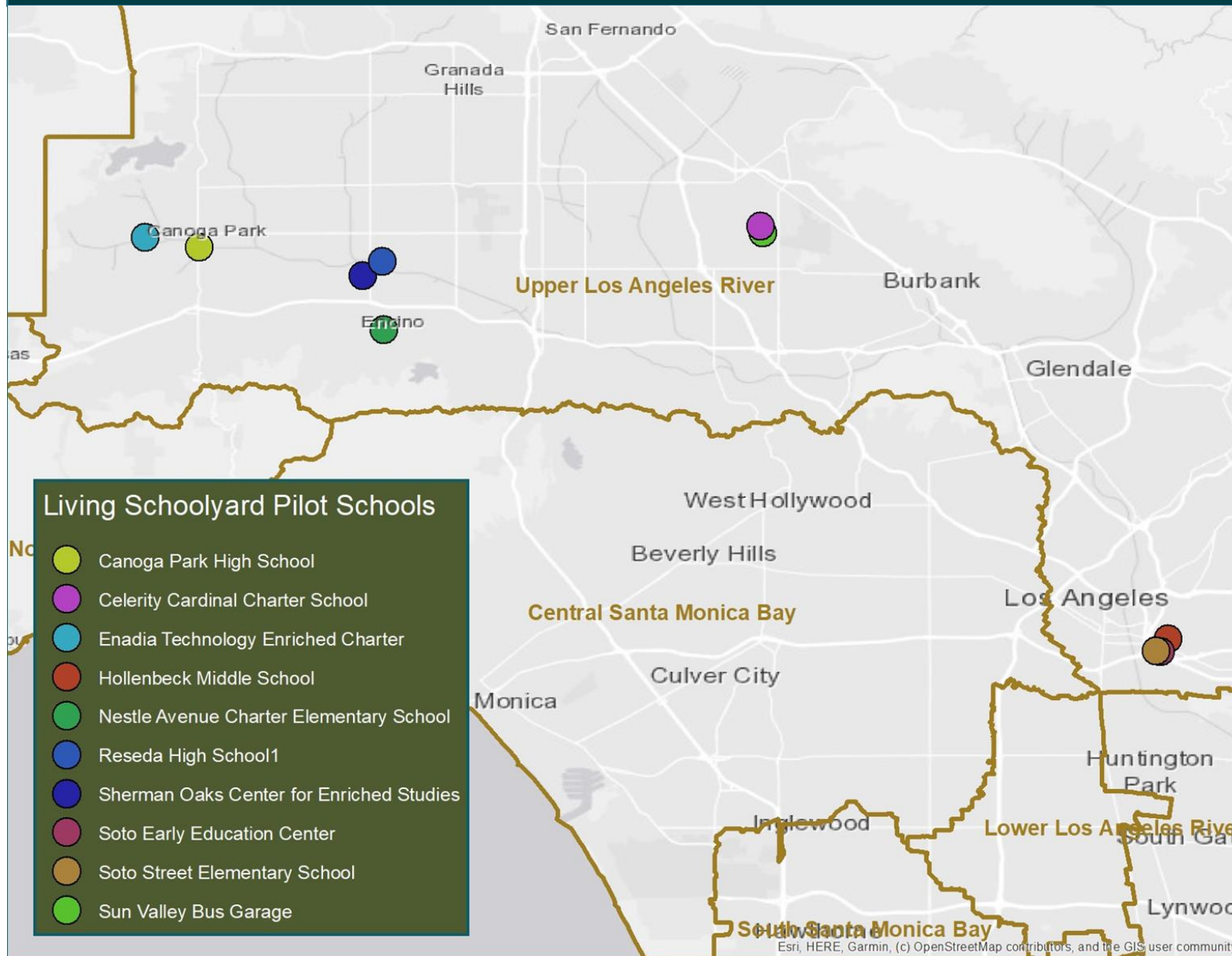
Despite their extensive coverage throughout the urban landscape, schools have long been considered “off limits” for stormwater management by regional water quality plans; this study endeavors to unlock these sites as new opportunities to support watershed-wide water quality improvement, local water resiliency, and enhanced campuses for better educational outcomes.







# Study Location



## 10 Pilot Sites

3 in Boyle Heights  
7 in San Fernando Valley

## 1 Pair Of Adjacent Sites

Celerity Cardinal Charter School (formerly Sun Valley Middle School)

Sun Valley Bus Garage



# Study Details: Problem Statement

## PROBLEMS

### SCHOOLS

A vast number of Los Angeles public schools are

- covered in asphalt,
- crowded with students,
- surrounded by freeways, landfills, dense industrial areas and commercial airports.
- lacking immediate access to parks and natural spaces

## PROBLEMS

### STORMWATER

Greater Los Angeles area has a tremendous need to infiltrate stormwater.

Greater Los Angeles area is largely built out leaving little land available for infiltration.

## INTERESTING FACTS

- LAUSD is the largest landowner in LA County.
- LAUSD has active programs for school greening and on-site stormwater capture
- LAUSD has been reluctant to accept off-site stormwater.

### Issues

- Technical/Safety
- Regulation/Bureaucratic
- Liability



# Study Details: Objectives and Outcomes

This study addresses the region-wide need to provide more land for stormwater capture and prioritizes nature-based, multi-benefit stormwater capture project implementations that address the critical need to upgrade school campuses, replacing asphalt and concrete with bioswales, native plants, trees, and rain gardens.

1.

Determine for each school campus which school greening activities can best **support the District's water quality reqmts, student learning and health;** and best **increase community engagement and partnerships.**

2.

Determine how and the degree to which each school campus can **improve water quality** and contribute to the **attainment of water-quality goals.**

3.

Determine how best to and by how much **each school campus can infiltrate stormwater** and thus **increase regional drought preparedness and resilience.**

4.

Determine how and the degree to which each school campus and surrounding neighborhoods can help **adapt to the effects of climate change** through increasing tree canopy and green space.

5.

Determine the best **nature-based solutions for each school campus.**

6.

Determine how school greening efforts can result in **multiple benefits.**





# Study Details: Phases

## Background Research

Barriers to Implementation

Published Guidance and Models

Case Studies

Coordinating Watershed Plans and Studies

## 10 Pilot Schools

Principal/Staff Outreach

Site Evaluation

Community Outreach

Conceptual Plans

## Planning

Prepare Pilot School Plans for Feasibility Studies

Anticipate and Report Issues for Normalizing Study Solutions



# Study Details: Regional Collaboration

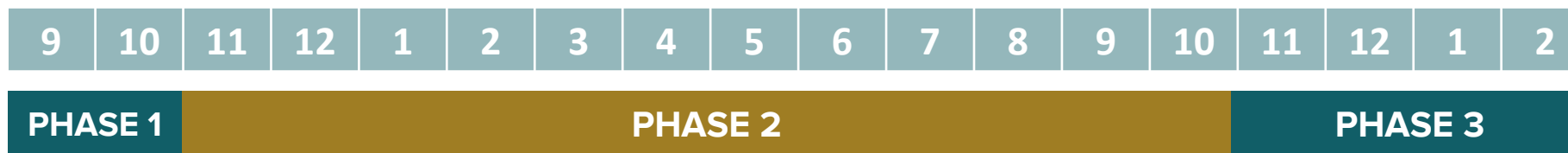
- LAUSD MOU
- Over 40 years of School Greening in LA County
- Disadvantaged Community Involvement Program (WaterTalks)
- OurWaterLA
- LA County Public Works, Bassett High School Project
- Ballona Creek Enhanced Watershed Management Plan (EWMP),
- Upper Los Angeles River EWMP,
- Stormwater Capture Master Plan, and
- Upper Los Angeles River preSIP Scientific Study



# Cost & Schedule

Phase	Description	Cost	Completion Date
<b>1</b>	Background Research	\$172,394	Start + 2 months
<b>2</b>	Develop 10 Pilot Schools	\$530,508	Phase 1 + 12 months
<b>3</b>	Plan Expansion to Other Schools	\$240,477	Phase 2 + 4 months
<b>TOTAL</b>		<b>\$943,379</b>	

Assume start 9/1/2021







# Organizational Chart and Responsibilities

## LAUSD

Operational Support

Review & Input

## TreePeople

Study Oversight

Community Engagement

Research Other Implementations

Develop Educational Materials

Develop Implementation Plan

## Studio-MLA

Research Barriers and Challenges

Community Engagement

Concept Designs

Implementation Plan

## Craftwater Engineering

Modeling Stormwater Flows

Modeling Water Quality

Modeling Water Infiltration

BMP Design

Identifying Synergies with Correlating

Activities in the Watershed



# Funding Request

WASC	Year 1	Year 2	Year 3	Year 4	Year 4
CSMB					
LLAR					
LSGR					
NSMB					
RH					
SCR					
SSMB					
ULAR	\$651,958	\$291,421			
USGR					
<b>TOTAL</b>	<b>\$651,958</b>	<b>\$291,421</b>			



# Summary of Benefits





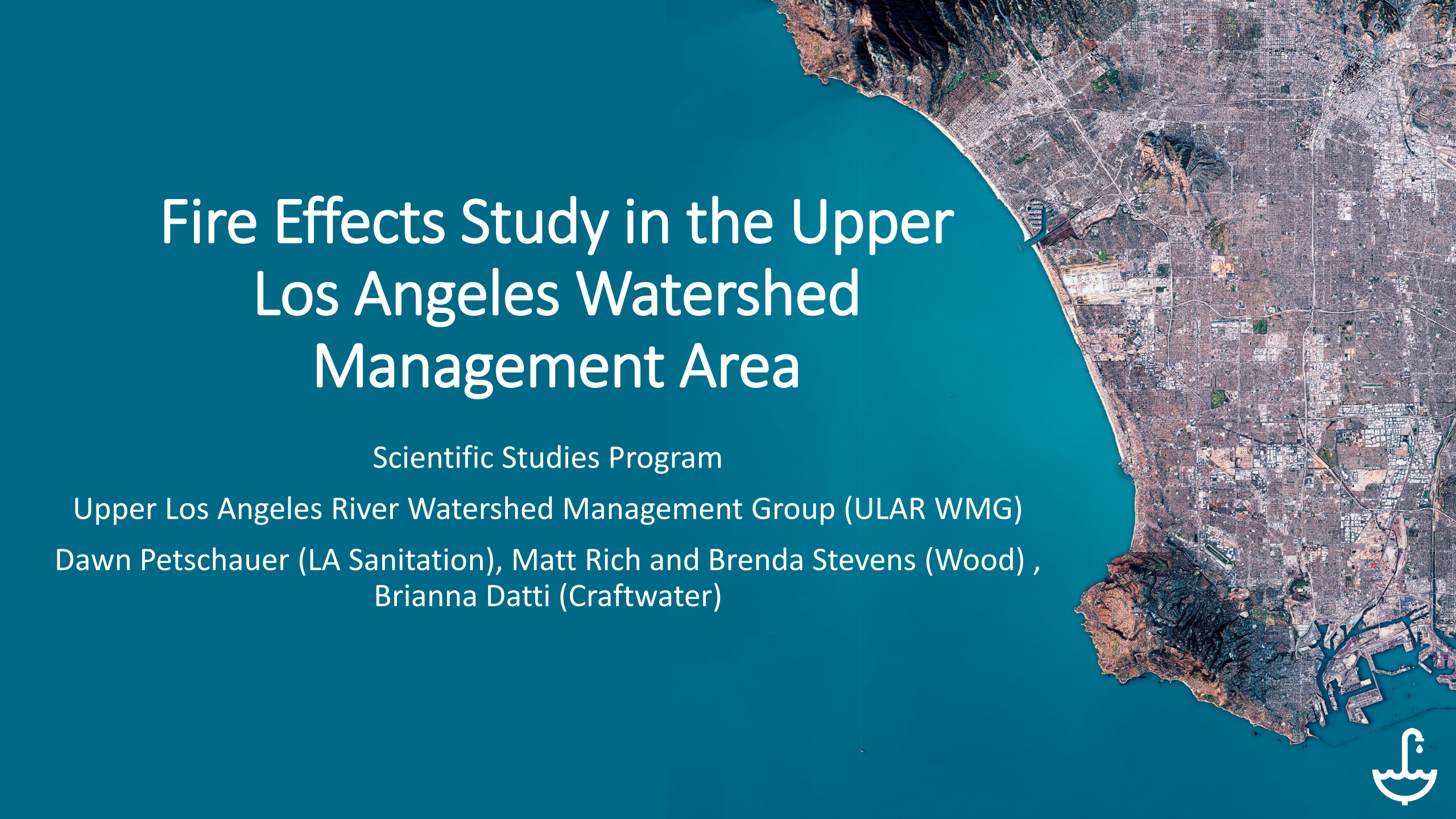


**Questions?**



# Backup Slides



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.

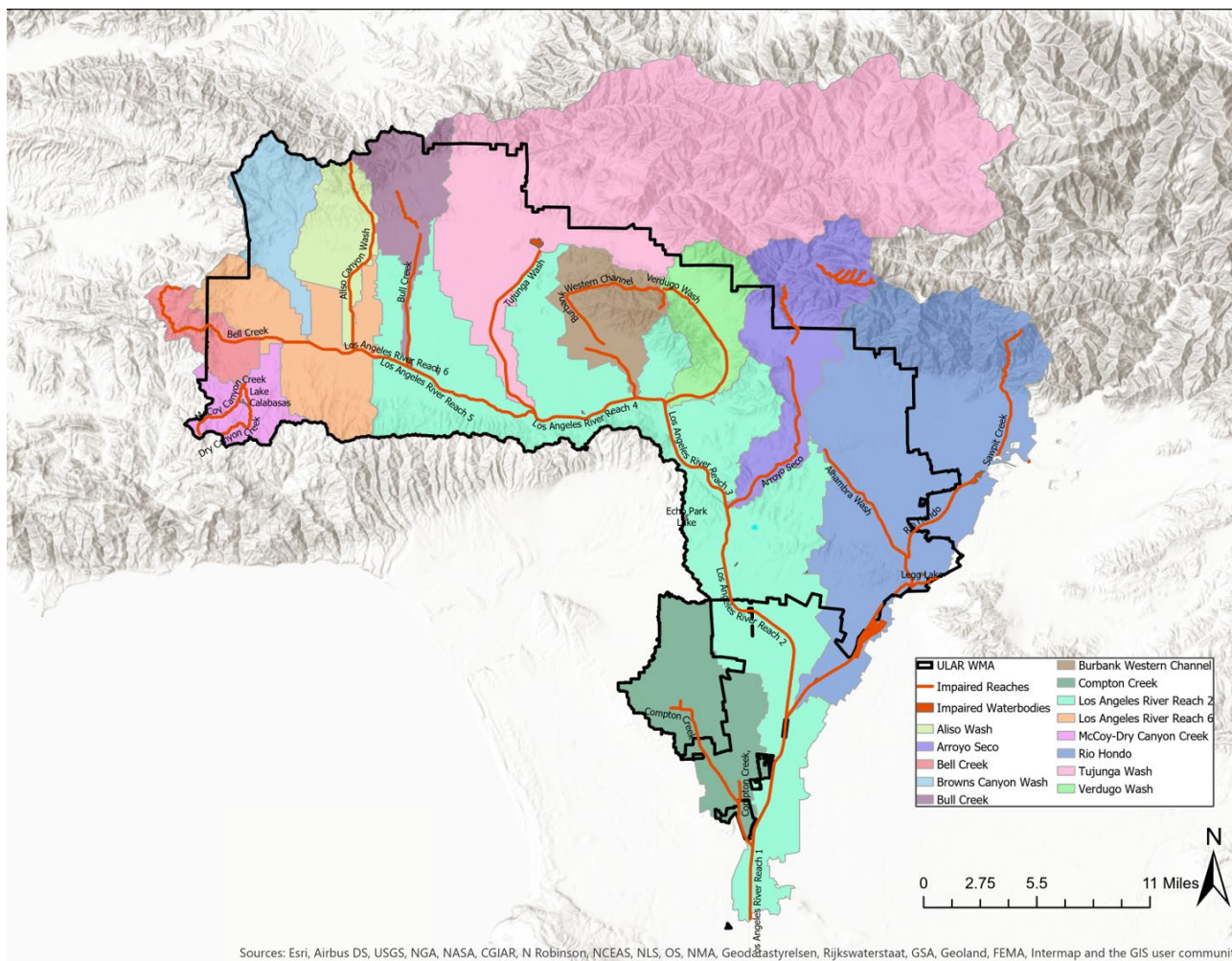
## **Nexus to Stormwater and Urban Runoff capture and pollution reduction:**

- 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.*

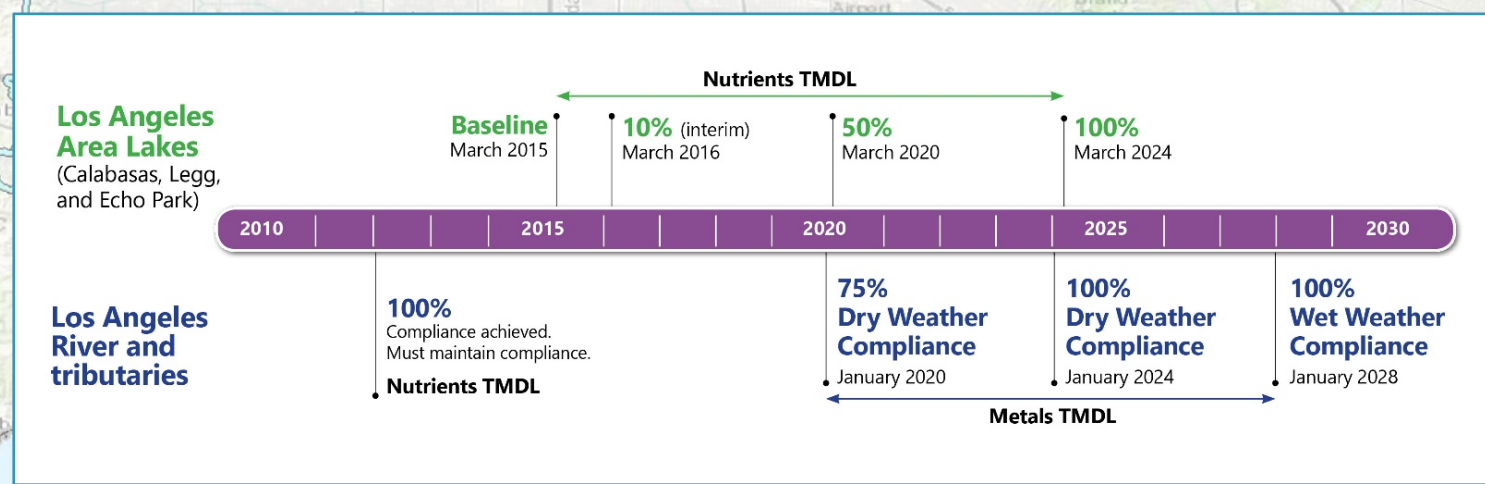




# Study Details

## 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.







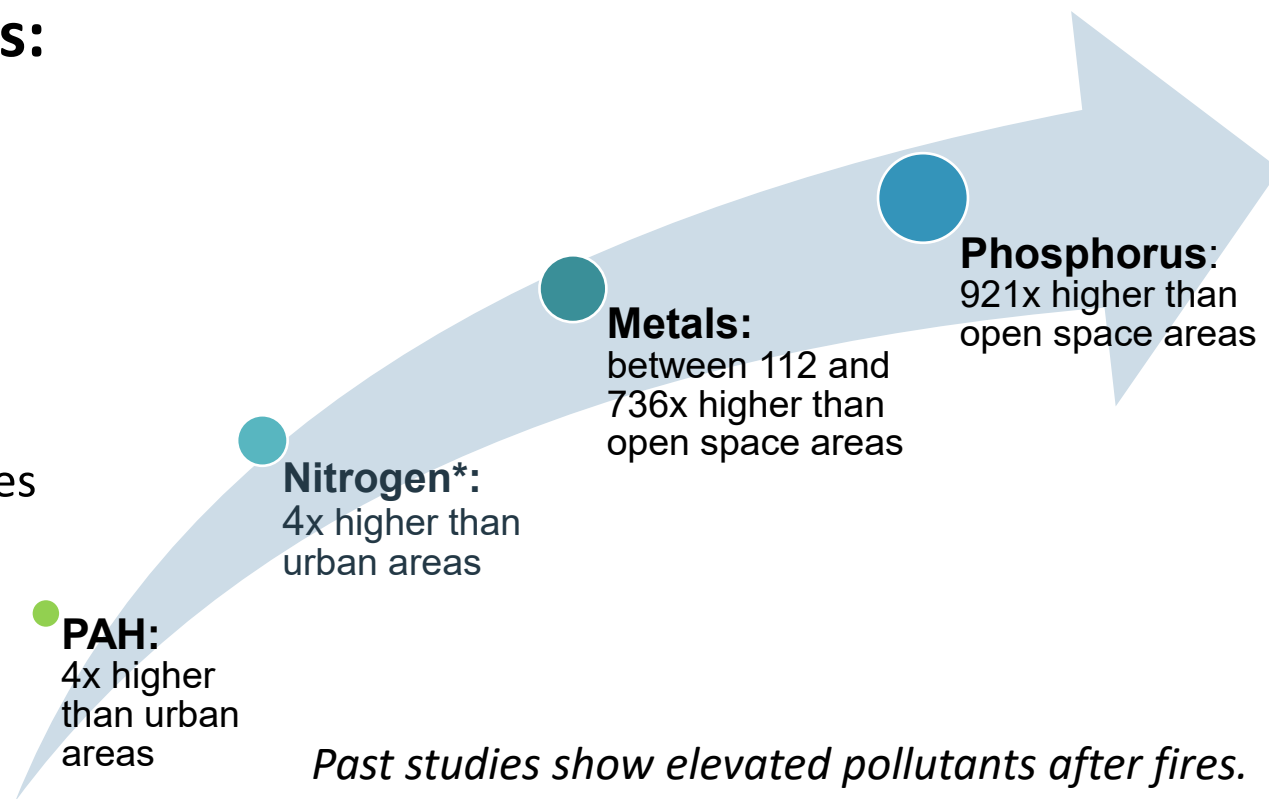
# Study Details (continued)

## • 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, Teclé and Neary, J. (2015).



\*Nitrogen as Nitrate+Nitrite

— Baseline = Unburned areas —



# Study Details (continued):

## Study Methodology/Approach:



Historical data review



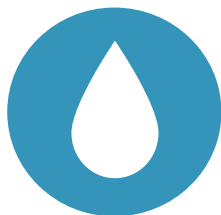
Coordination with Regulatory Updates



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



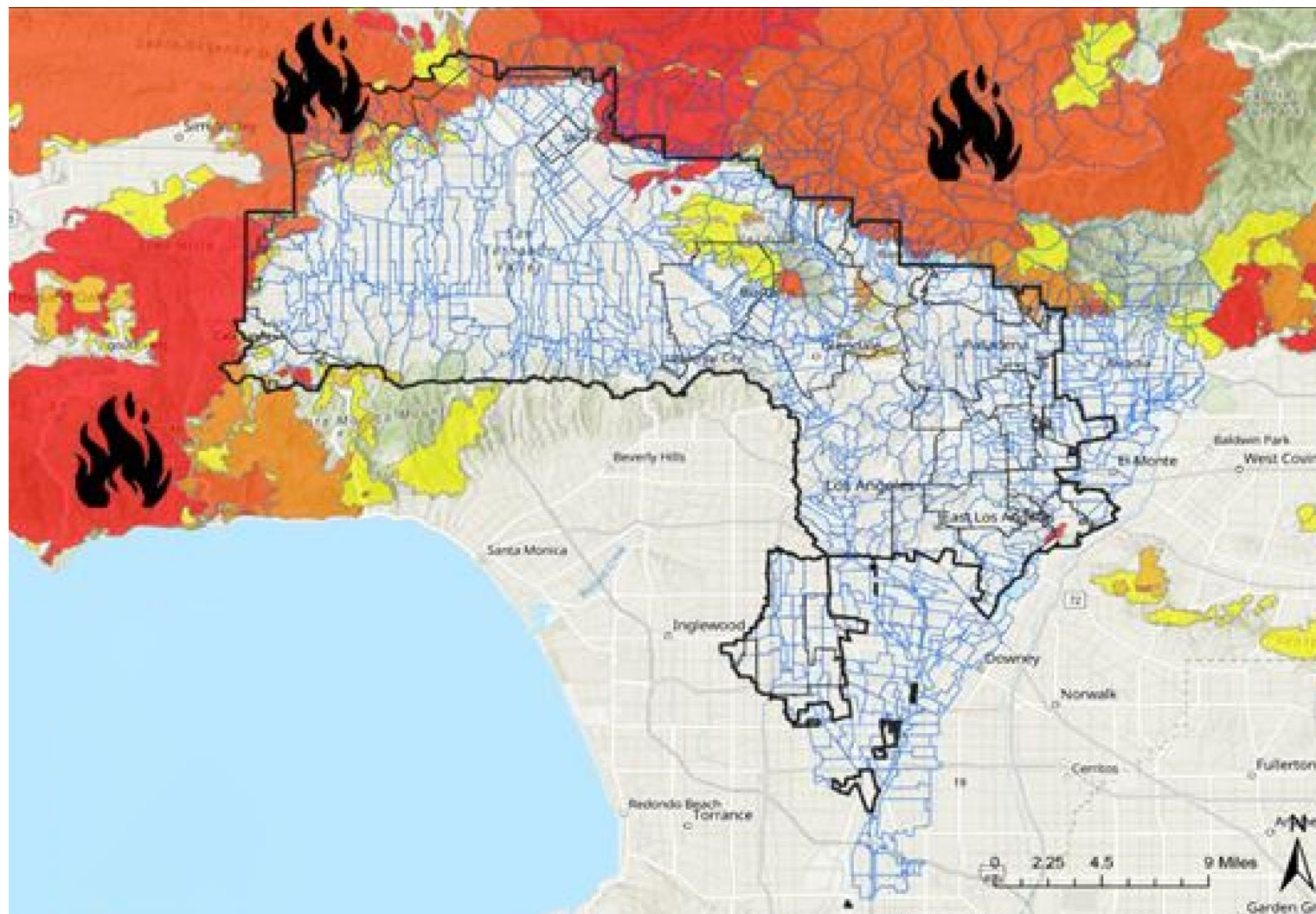
### Timeframe

- Two years sampling
- Wet and dry weather



### Pollutants

- Nutrients
- Metals
- Sediment

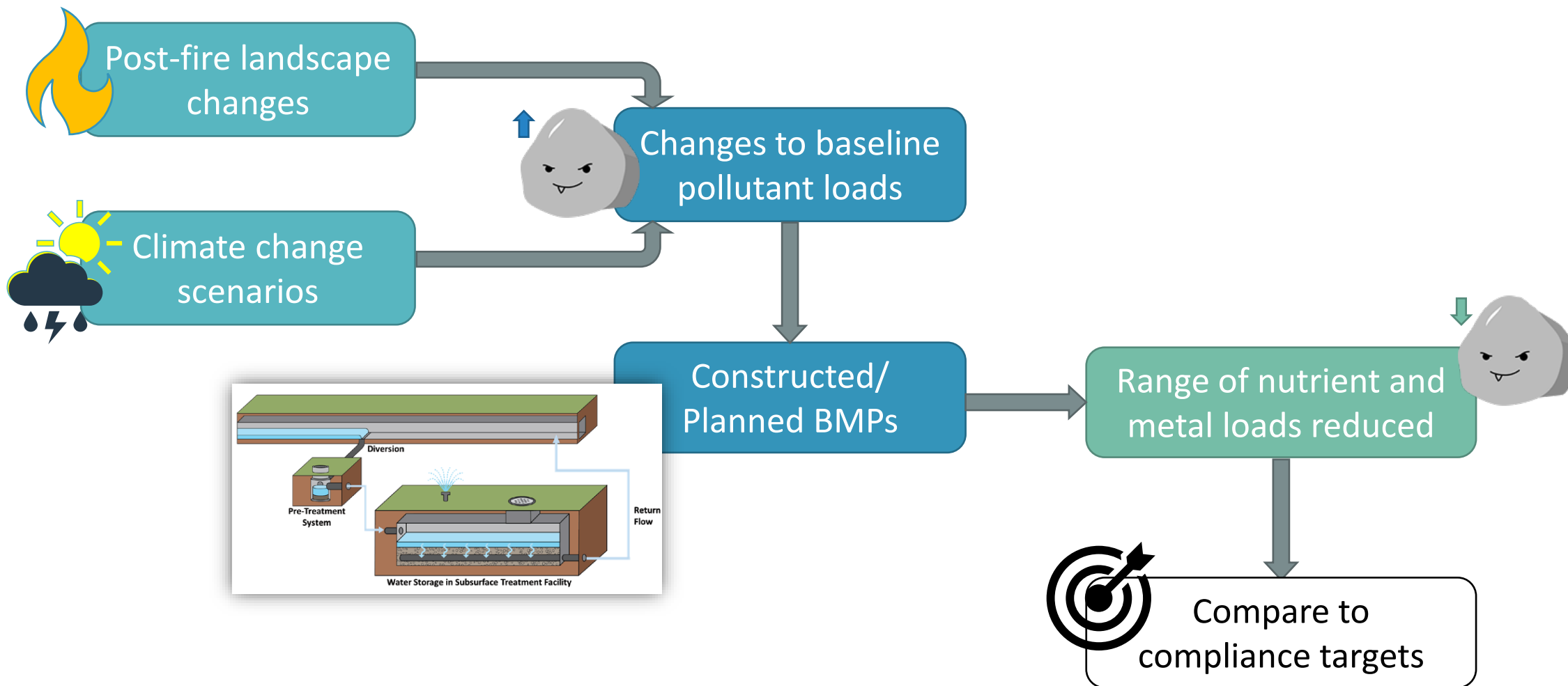






# Study Details (continued):

## Modeling Fire Effects and Climate Change:

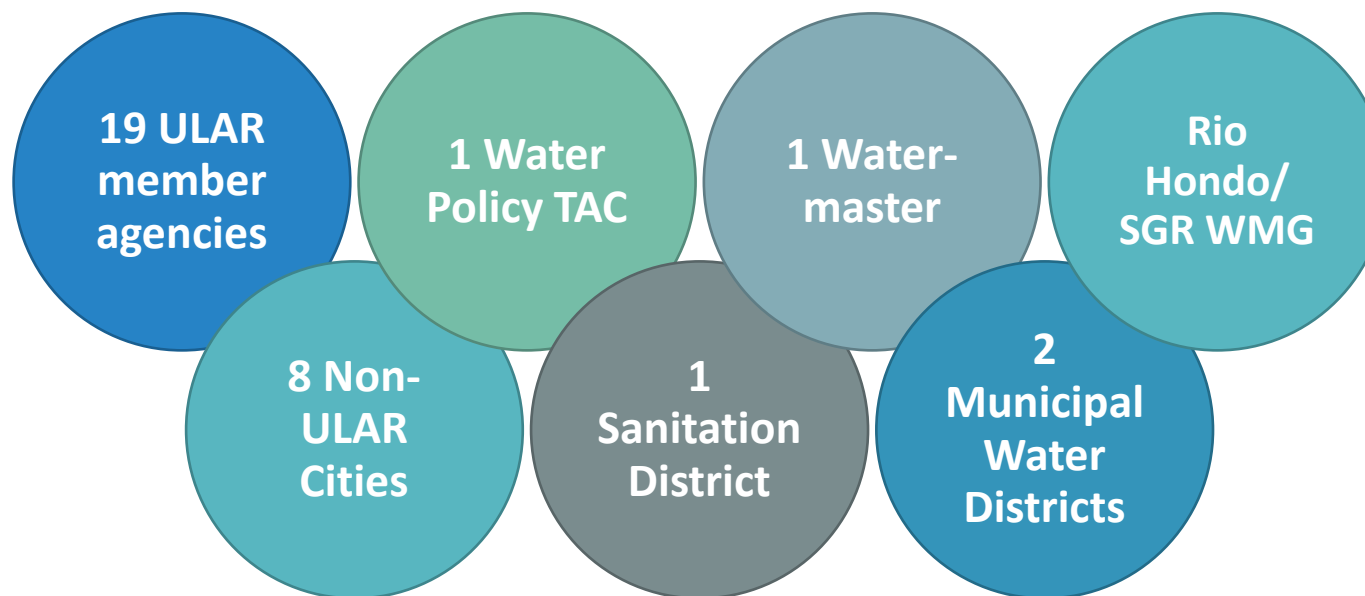




# Study Details (continued):

## 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
<b>Total</b>		<b>\$805,000</b>	





# 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	--	--	--
<b>TOTAL</b>	<b>\$264,436</b>	<b>\$257,161</b>	<b>\$283,403</b>



# 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

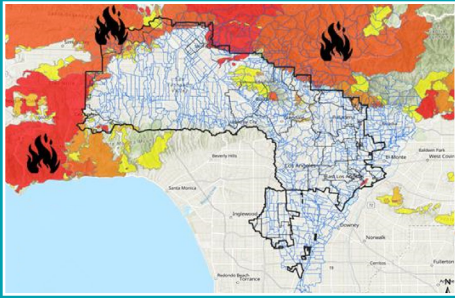


Predicting impacts on water quality from future wildfires and other climate change scenarios



# 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*)

## 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



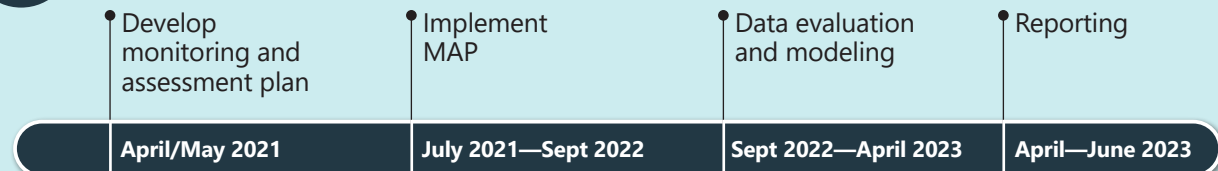
- Historical data review
- Coordination with Biotic Ligand Model
- Design a monitoring plan
- Conduct new monitoring
- Technical advisory and data analysis
- Modeling fire effects and climate change

## COST

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



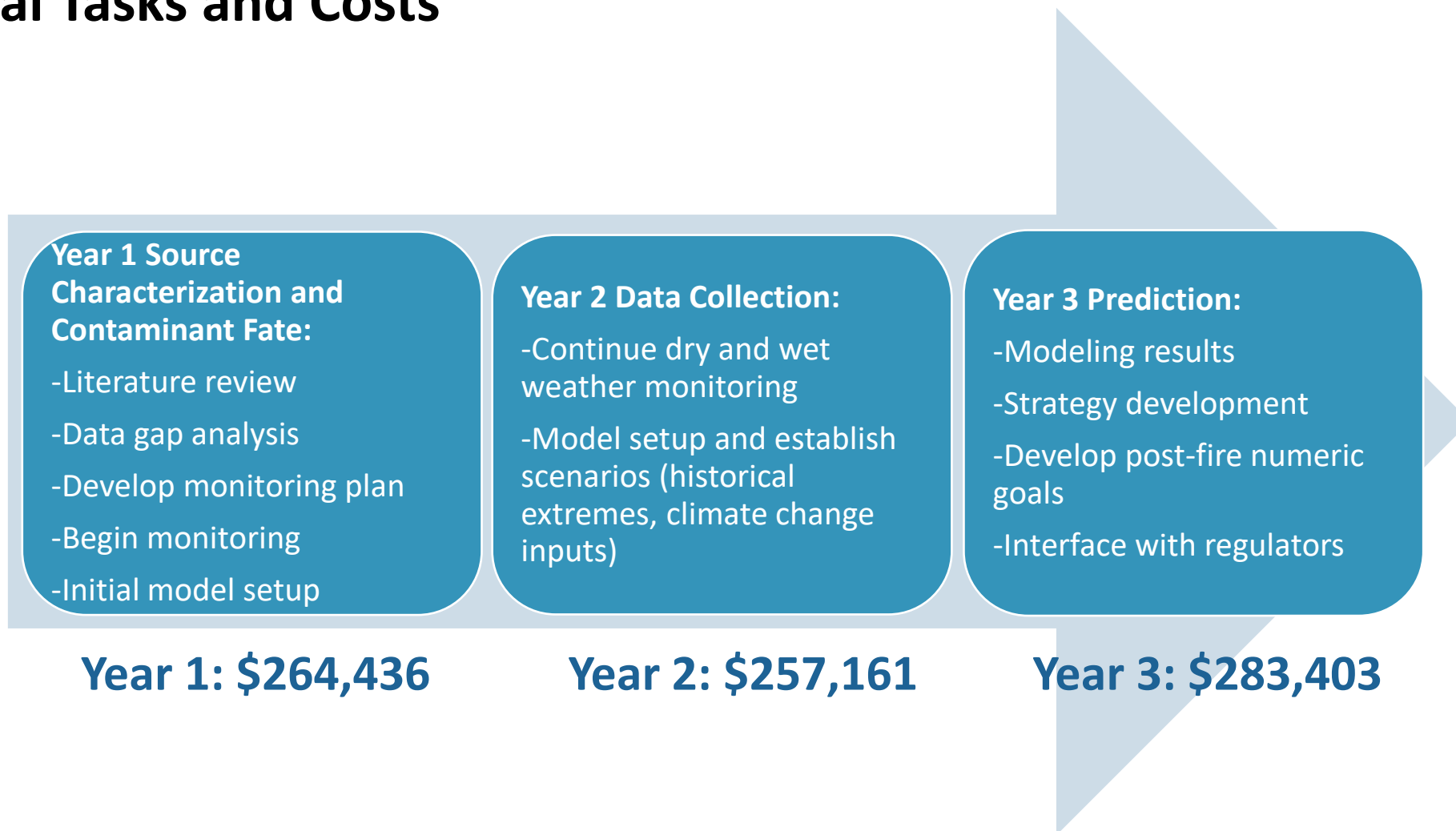
## SCHEDULE





# Cost & Schedule (continued)

## Annual Tasks and Costs



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# Overview of Pathogen Reduction Study

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

Project Lead: Gateway Water Management Authority

Presentation to the Upper Los Angeles River WASC

18 March 2021



# Summary of Study

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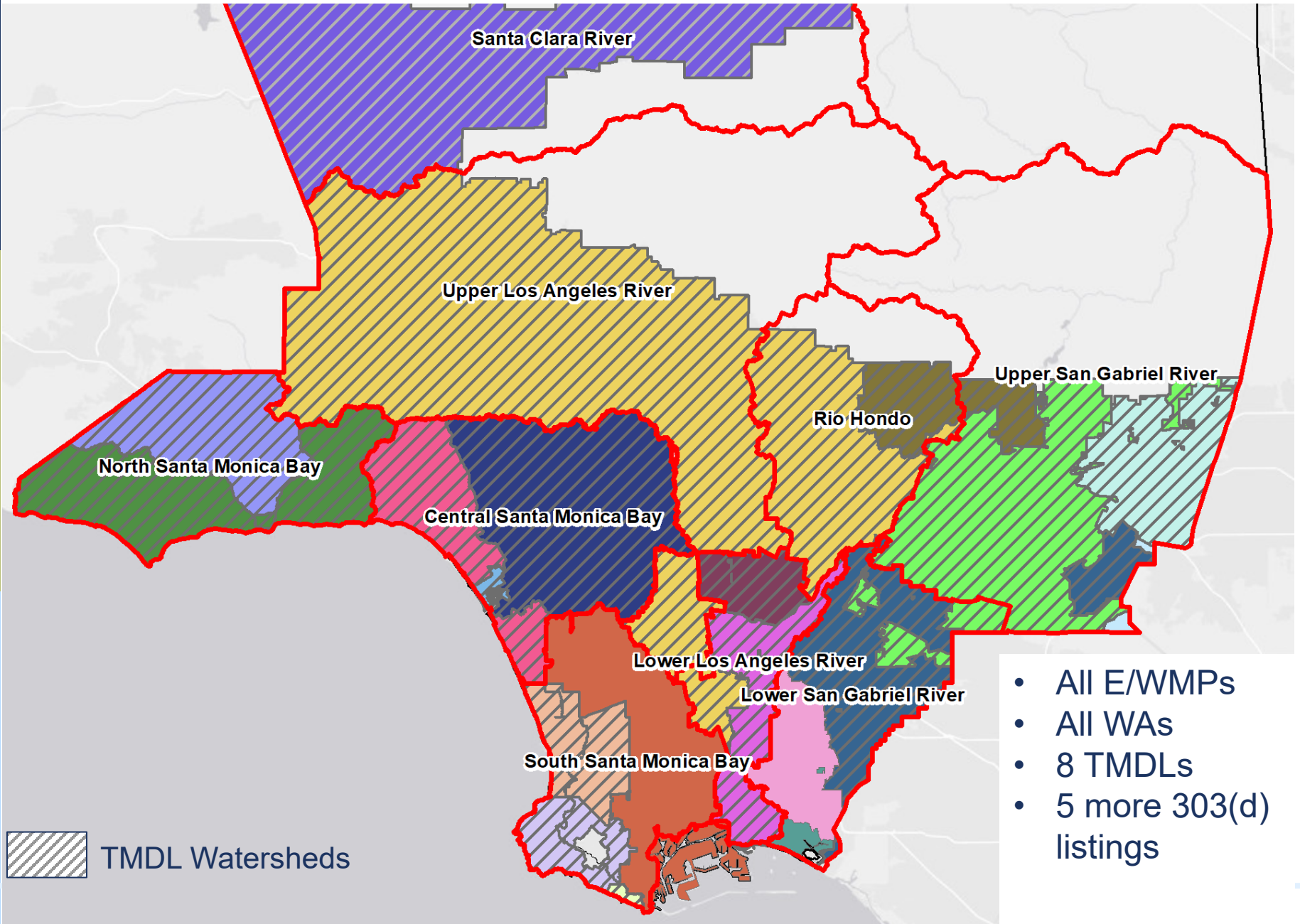
- This Study aims to use the latest available science to measure water-borne pathogens across watersheds. It will help identify key sources of human health risk, and develop cost-effective protective strategies
- USEPA and academia agree not all sources of bacteria are equally risky, but we do not have 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

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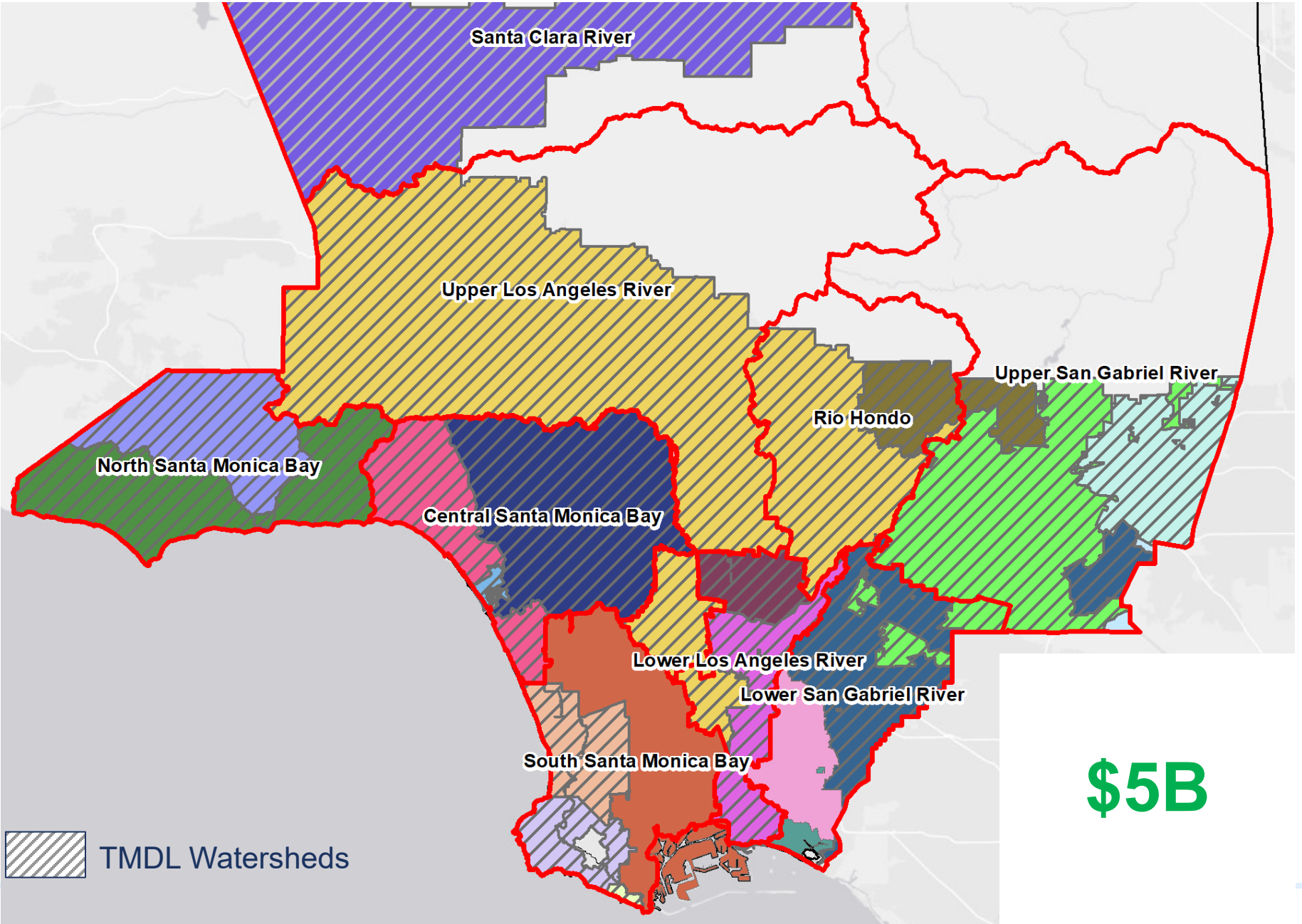
- Nexus to Stormwater and Urban Runoff Capture and Pollution Reduction
  - Study will facilitate improved targeting of pathogen sources and water to capture and/or treat
  - Study could reduce need to capture stormwater for bacteria compliance purposes while improving the protection of human health
  - Study may lead to partnering with various parties, such as wastewater agencies and homeless services agencies, to address human sources of pathogens.

# Study Location





# Study Location



# Scientific Study Details

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## *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)

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## *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)

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## *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)

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- *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

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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
<b>TOTAL</b>		<b>\$8,486,308</b>	



# 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
<b>TOTAL</b>	<b>\$360,668</b>	<b>\$2,630,755</b>	<b>\$2,545,893</b>	<b>\$2,524,677</b>	<b>\$424,315</b>

# Summary of Benefits

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- 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

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Richard Watson  
Richard Watson & Associates  
[rwatson@rwaplanning.com](mailto:rwatson@rwaplanning.com)  
(949) 394-8495