



# **SAFE CLEAN WATER PROGRAM**

**Lower San Gabriel  
River Watershed**

**February 11, 2025  
Watershed Coordinator  
Update**



PRESENTED BY:

**OhanaVets, Inc.  
Lower San Gabriel River  
Watershed Coordinator**

# PASSED AS 'MEASURE W' IN 2018



## CAPTURE IT

Increase water supply



## CLEAN IT

Reduce volume of trash that reaches waterways and the ocean



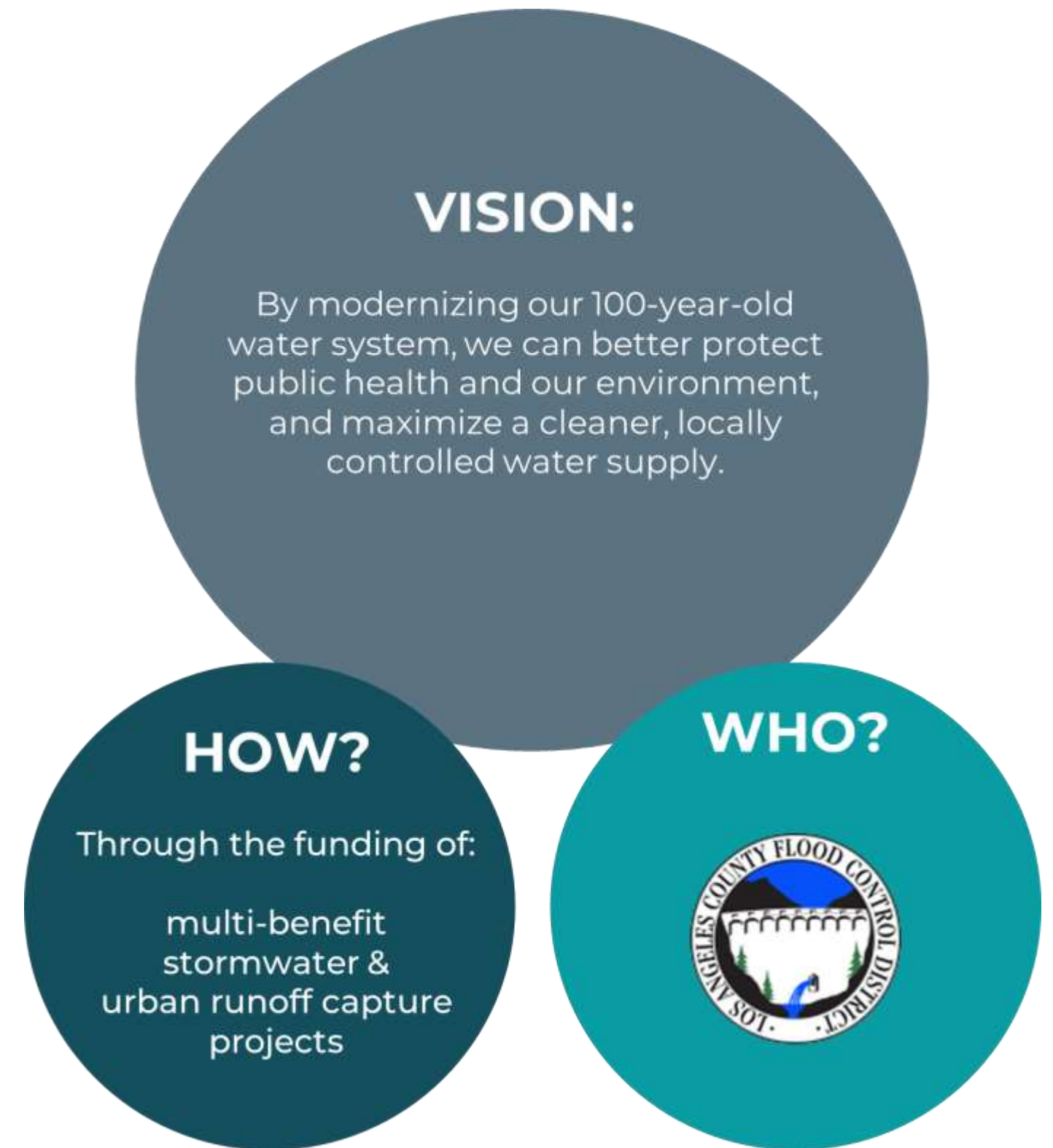
## MAKE IT SAFE

Eliminate toxins and chemicals from our waterways



## MAKE IT FOR EVERYONE

Provide community benefits

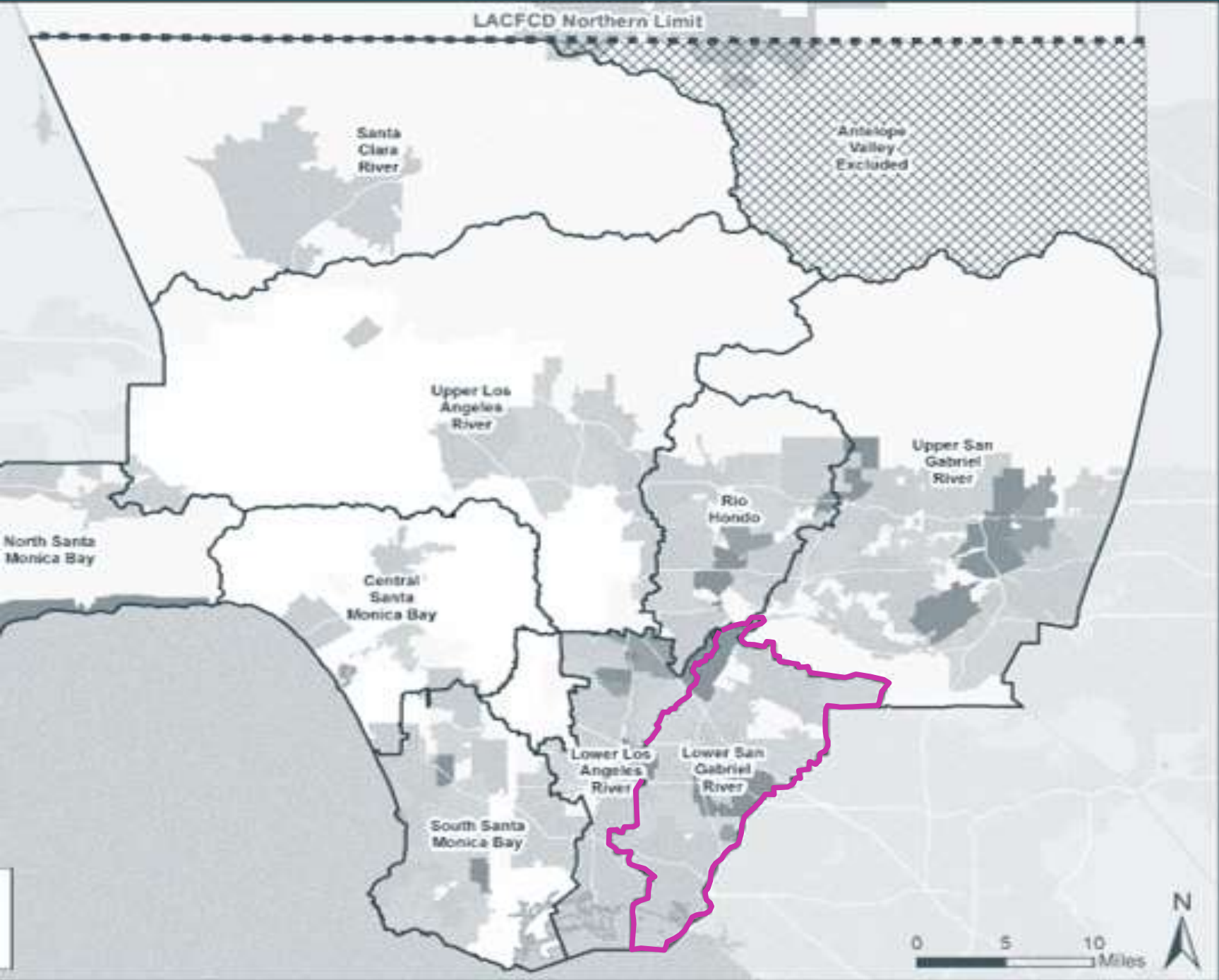


SAFE CLEAN WATER L.A.



# REGIONAL PROGRAM ANNUAL FUNDING DISTRIBUTION

The percentage of funds received by each Watershed Area is proportional to the tax revenues collected within its boundaries



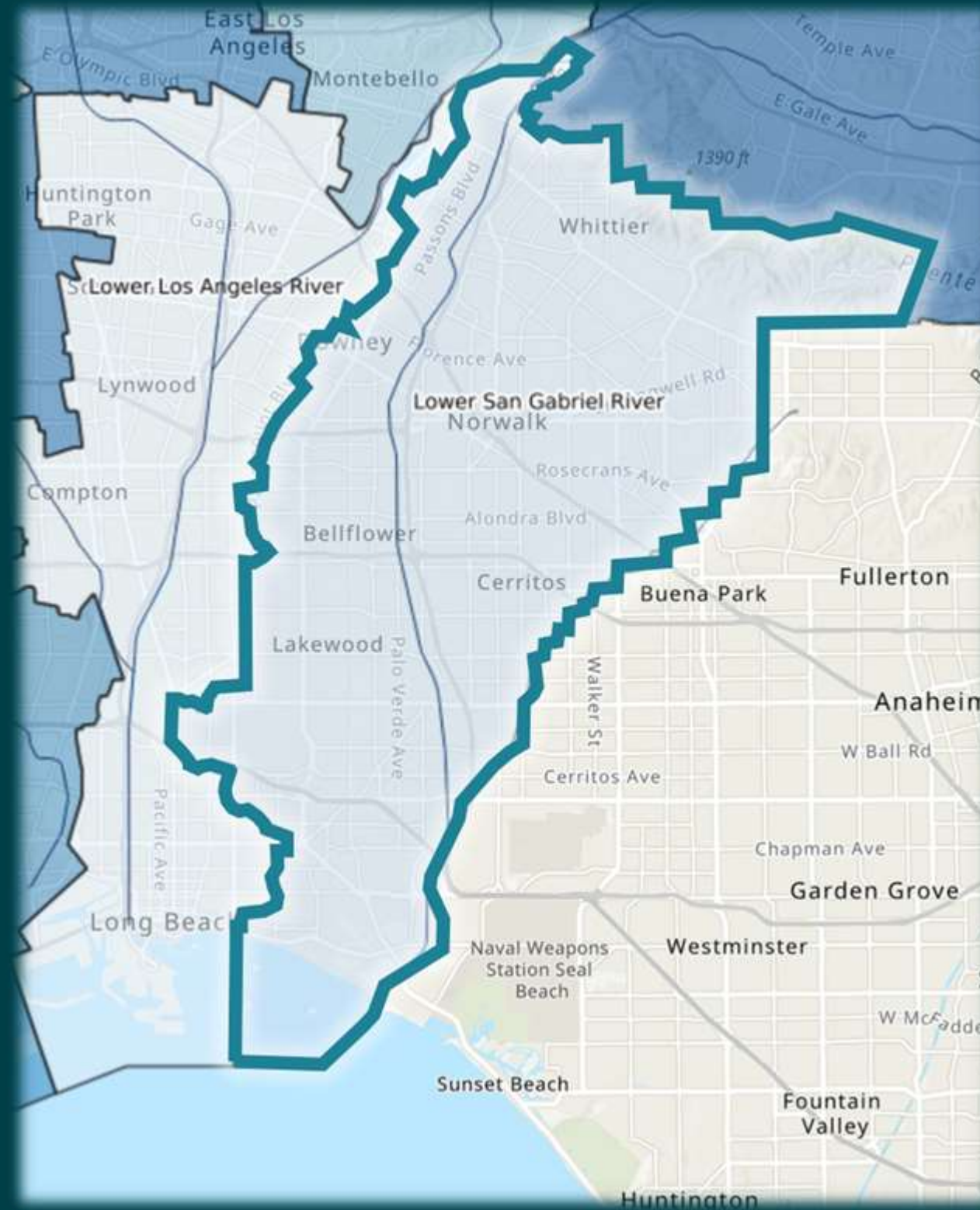
WATERSHED NAME	2022-23 REGIONAL TAX RETURN ESTIMATES
Central Santa Monica Bay	\$17.42M
Lower Los Angeles River	\$12.72M
Lower San Gabriel River	\$16.7M
North Santa Monica Bay	\$1.83M
Rio Hondo	\$11.49M
Santa Clara River	\$5.87M
South Santa Monica Bay	\$17.58M
Upper Los Angeles River	\$38.44M
Upper San Gabriel River	\$18.78M
ANNUAL REGIONAL TOTAL:	\$140.6M



# LSGR – Watershed & Member Agencies

The Lower San Gabriel River “LSGR” Watershed Area represents the lower portion of the San Gabriel River starting at Whittier Narrows. It extends 20 miles ending at the Pacific Ocean.

LSGR is in the Gateway Region of Los Angeles County and includes 15 cities and unincorporated LA County in whole or in part.



- **Artesia**
- **Bellflower**
- **Cerritos**
- **Downey**
- **Hawaiian Gardens**
- **La Habra Heights**
- **La Mirada**
- **Lakewood**
- **Long Beach**
- **Norwalk**
- **Paramount**
- **Pico Rivera**
- **Santa Fe Springs**
- **Signal Hill**
- **Whittier**
- **Unincorporated LA County**

# PROJECT DEVELOPMENT PROCESS:



Anticipated Total Time Elapsed: 26 - 40 Months



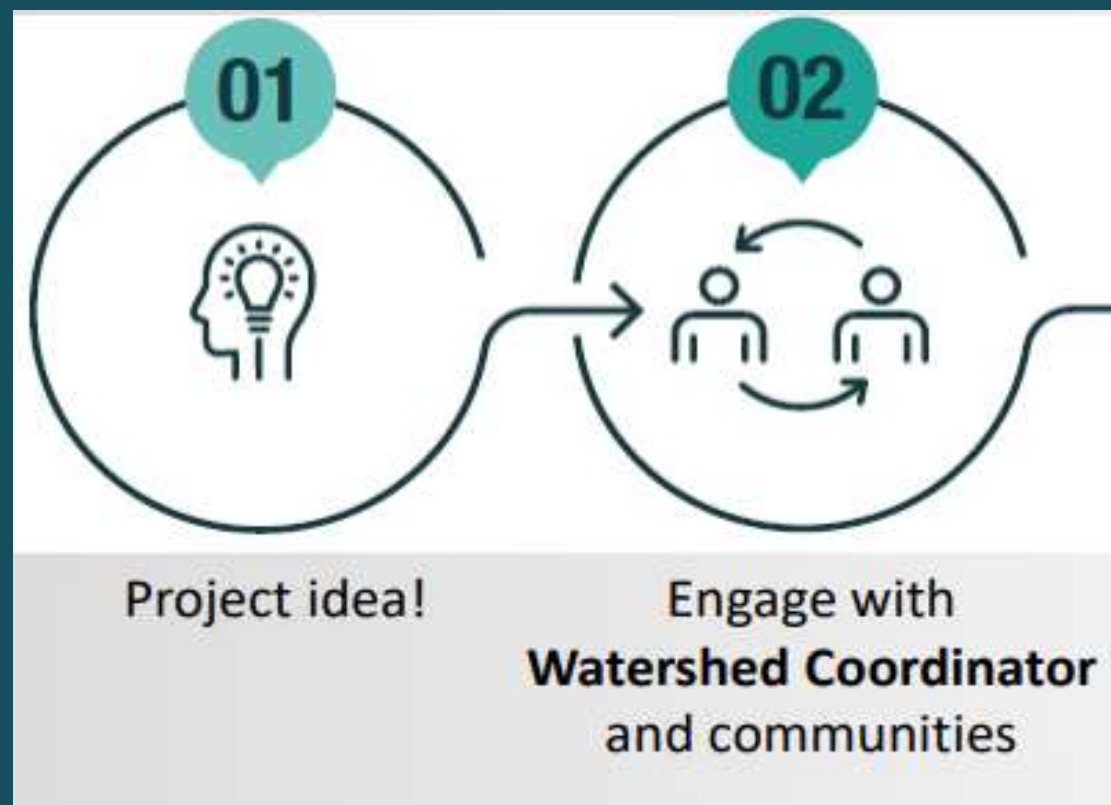
If project is deemed infeasible or does not meet Safe, Clean Water Program requirements for Infrastructure Program funding, project proponent should not apply for Infrastructure Program funding.

# HAVE A PROJECT IDEA?

- ENGAGE WATERSHED COORDINATOR
- DEVELOP COMMUNITY ENGAGEMENT APPROACH
- DEVELOP PROJECT BENEFITS SUCH AS:



## STEPS: 1 & 2



Improving flood management



Enhancing natural habitat and wetlands



Increasing public access to waterways



Creating new recreational opportunities



Enhancing green spaces at schools



Reducing local heat island effect



Increasing vegetation and tree cover



SAFE CLEAN WATER L.A.

- ☒ **CalFire Natural Resource Management - December 2025**
- ☒ **Strategic Funding Planning – December 2025**
- ☐ LSGR Watershed Community Small Scale Program – March 2025
- ☐ LSGR Watershed Strategic Funding Plan (Pilot Project?) – April 2025
- ☐ CalFire / SCWP - Stormwater/Collection/Detention Opportunities – April/May 2025

# Education Events



- ☒ **Earth Walk City of Lakewood – 3/16**
- ☐ *Earth Day LA County Sanitation Districts – April ?*
- ☒ **Touch-a-Truck City of Whittier – 5/21**
- ☐ *Groundwater Festival at WRD – May ?*

# Education Events

Station 1 – Information & Sign-in



Station 3 – Nature Based Solutions Treatment Train



Station 5 – Design Contest & Prizes

Station 2 – Runoff Model



Station 4 – Mechanical Treatment Systems



# Nature-Based Treatment Model

## Bio-swale

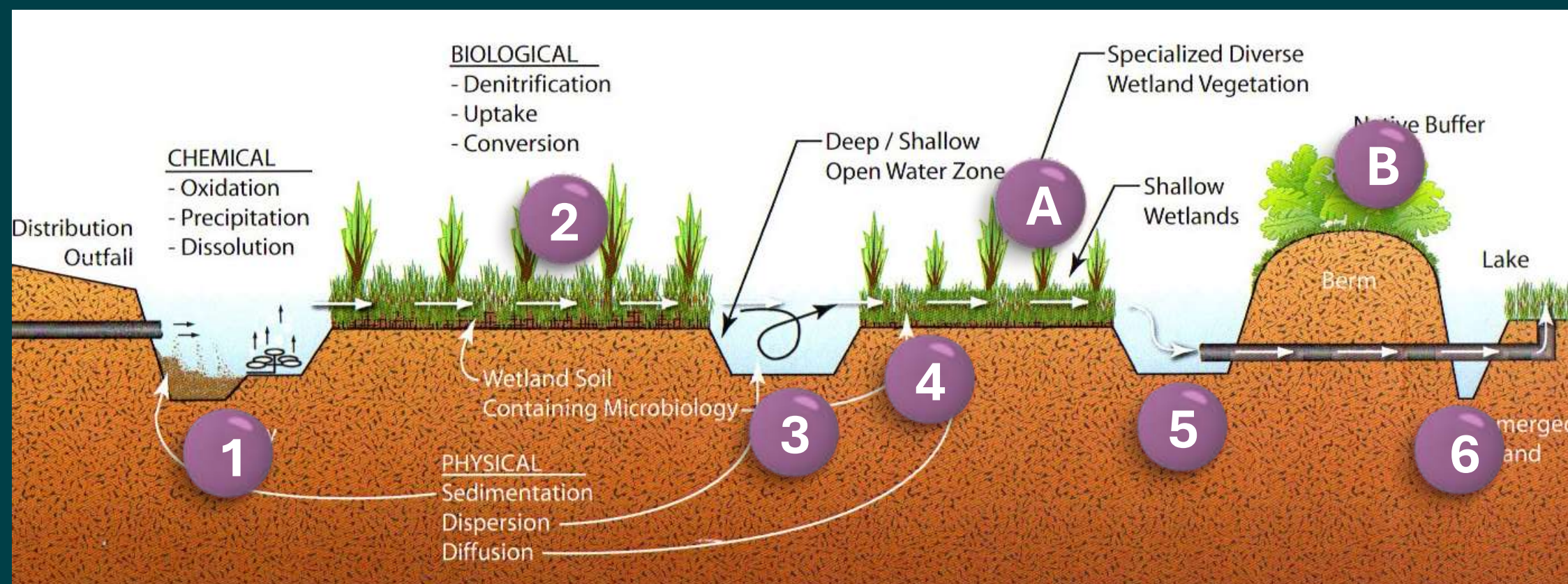


### Nature-Based Treatment Elements:

1. Forebay
2. Bio-Swale
3. Bio-swale Affluent
4. Separated Affluent
5. Infiltration Settling Pond
6. Finishing and Infiltration Pond

### Nature-Based Treatment Elements:

- A. Shallow Wetlands
- B. Native Buffer



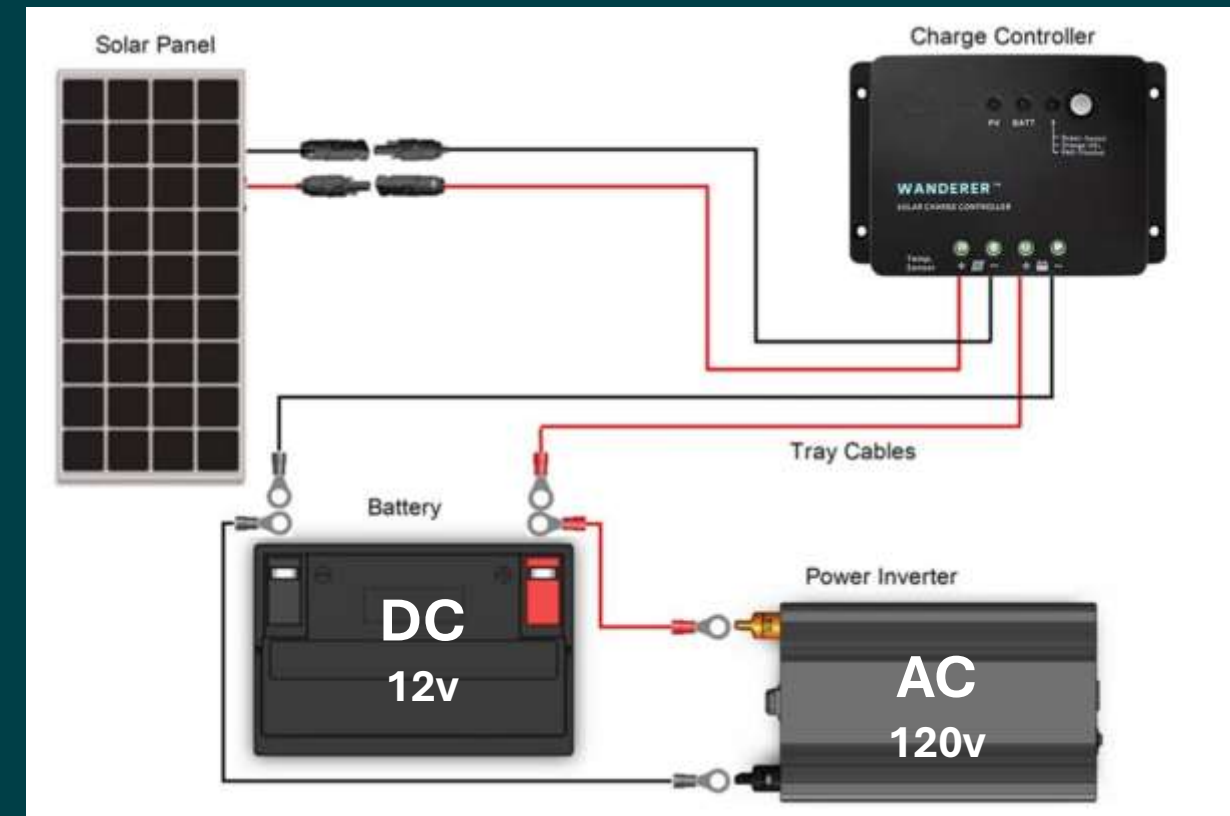
# Clean Water Vision – Solar Powered System

## Why our CWV Trailer use solar energy....

- ❑ Renewable Energy Source
- ❑ Safe Clean option
- ❑ Long Lasting Solution
- ❑ Return on Investment
- ❑ Improved Efficiencies Installation
- ❑ Low Maintenance Costs
- ❑ Most abundant source of energy
- ❑ Cheapest source of energy

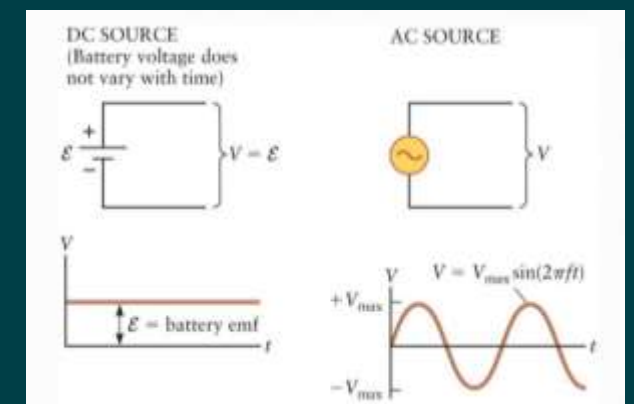


The sun provides more than enough energy to meet the whole world's energy needs, and unlike fossil fuels, it will not run out. As a renewable energy source, the only limitation of solar is storage during the nighttime when its energy can not be harvested.



## There are two types of electricity....

- ❑ Alternating Current (AC)
- ❑ Direct Current (DC)





# SCWP Ordinance – Regional Program Highlights

“Shall be programmed, to the extent feasible, such that **each Municipality receives benefits in proportion to the funds generated** within their jurisdiction...”

“Shall be allocated such that funding for Projects that provide **a DAC Benefit is not less than one hundred ten percent (110%) of the ratio of the DAC population** to the total population in each Watershed Area;” (*Ordinance Definition: "Disadvantaged Community (DAC) Benefit" means a Water Quality Benefit, Water Supply Benefit, and/or Community Investment Benefit **located in a DAC or providing benefits directly to a DAC population**.*)

“Shall be programmed, to the extent feasible, such that **a spectrum of project types and sizes are implemented** throughout the region;”

“Shall be programmed, to the extent feasible, such that **Nature-Based Solutions are prioritized;**”

“Shall be disbursed to a non-municipal Infrastructure Program Project Applicant only after the Infrastructure Program **Project Applicant has secured a letter of support from the Municipality** in which the Project is located;”

“Shall be prioritized and spent on Projects that, to the extent feasible, **assist in achieving compliance with [MS4 Permit]...**”

# LSGR WASC Prioritization Criteria

- In 2022 LSGR WASC requested WC help to develop consensus on how to define certain SCWP elements not otherwise defined.
- Goal: Assist LSGR WASC in decision-making to help meet the priorities of the LSGR and SCWP.

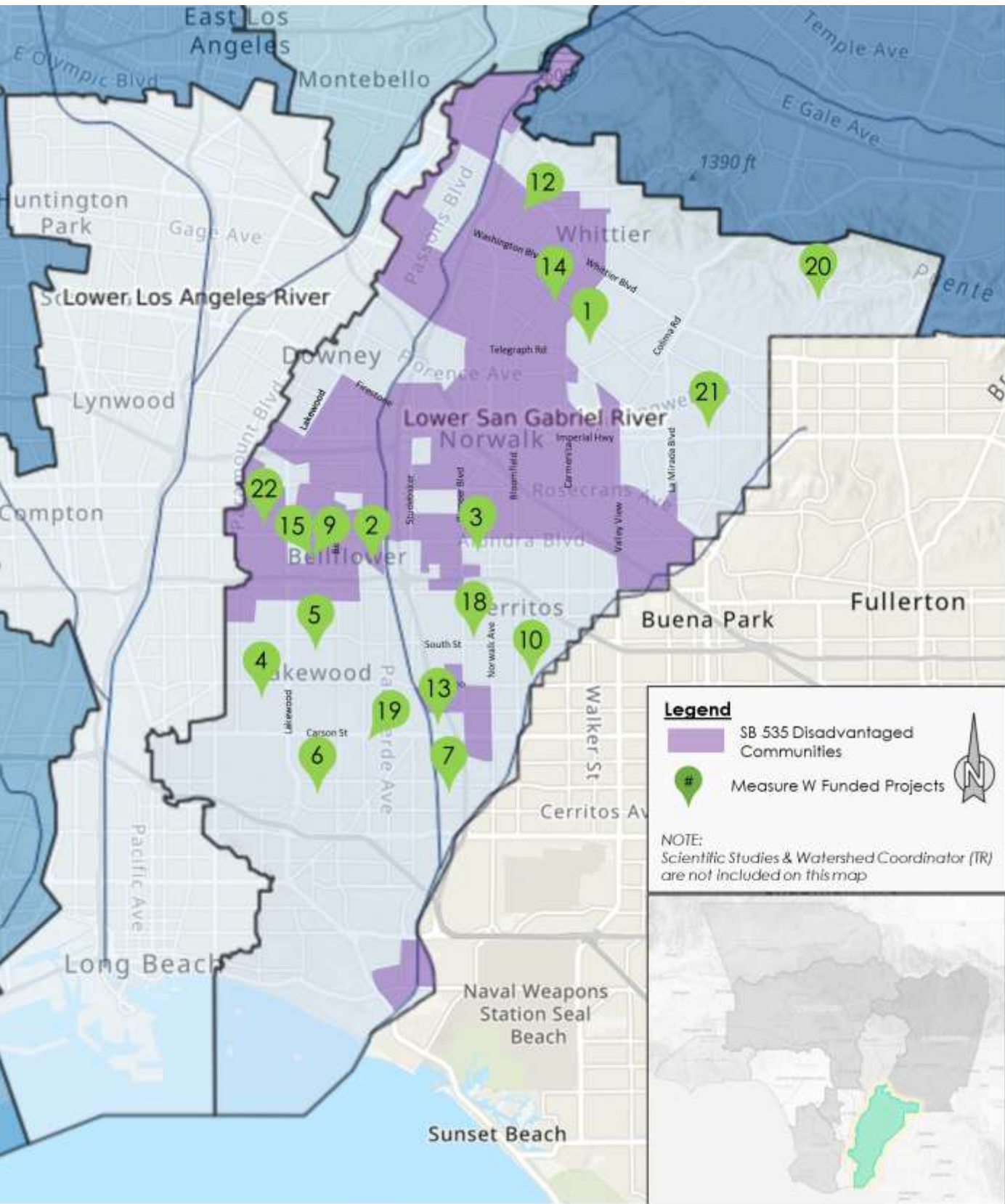
Lower San Gabriel River Watershed Area Steering Committee  
“LSGR WASC”  
Prioritization Criteria

The LSGR WASC has developed the following prioritization criteria to guide decisions that will help meet the priorities for the LSGR watershed area in its annual Stormwater Investment Plan (SIP). The criteria below applies only to LSGR WASC and will be used to evaluate projects deemed eligible by the Safe Clean Water Program (SCWP) scoring criteria. The prioritization criteria below is considered a guidance tool and is not binding. It may be modified as needed by the LSGR WASC at any time.

MINIMUM CATCHMENT AREA?		
1.	Should Minimum Catchment Area for Projects be Considered?	Consideration will be on a case-by-case basis.
PROJECT SIZE DEFINITIONS?		
2.	Small-sized Project Definition?	Construction Costs less than \$1M
3.	Medium-sized Project Definition?	Construction Costs between \$1M to \$10M
4.	Large-sized Project Definition?	Construction Costs over \$10M
MINIMUM FUNDING MATCH?		
5.	Projects which prioritize Nature-Based Solutions	Consideration will be on a case-by-case basis; WASC requests good faith effort to find funding match.
6.	Projects with DAC benefits	Consideration will be on a case-by-case basis; WASC requests good faith effort to find funding match.
7.	Small-sized Projects (less than \$1M)	Request 10% minimum funding match
8.	Medium-sized Projects (\$1M to \$10M)	Request 15% minimum funding match
9.	Large-sized Projects (>\$10M)	Request 20% minimum funding match
RESERVING FUNDS?		
10.	Reserving funds for Small-sized Projects	Reserve up to \$1.5M for Small-sized Projects each year; if reserved funds are not needed in any given year, they will be applied to other eligible projects.
11.	Reserving funds for O&M Funding	If a project intends to utilize SCWP regional funding to support ongoing O&M, the SCWP construction funding application should identify the intent and need prior to construction award. This will allow for the project's O&M funding needs to be prioritized and considered for future O&M funds. Additional funds may also be reserved annually for non-SCWP funded construction projects.
FUNDING CAPS?		
12.	Funding Award Caps for Construction Project requests?	No maximum funding cap.
13.	Funding Award Cap for O&M requests?	Consideration will be on a case-by-case basis.



# LSGR WATERSHED SCWP PROJECTS APPROVED FOR MEASURE W FUNDING



	Project Name	DAC Benefit	BMP Type	Planning /Design	Construction	O&M	Technical Resource/ Scientific Study	Cost Share	Measure W Funding	SIP Year	Project Developer
				\$M	\$M	\$M	\$M	\$M	\$M		
★  ★	1 Adventure Park Multi-Benefit Stormwater Capture	N	D		\$ 13.5			\$ 15.0	\$ 13.5	20-21	Unincorp. County Area of Whittier
	2 Caruthers Park	Y	I			\$ 0.9		\$ 13.0	\$ 0.9	20-21	Bellflower
	3 Hermosillo Park	Y	I	\$ 4.1	\$ 16.0			★ \$ 20.1		20-21	Norwalk
	4 Bolivar Park	Y	I			\$ 1.3		\$ 11.0	\$ 1.3	20-21	Lakewood
	5 Mayfair Park	Y	T			\$ 1.3		\$ 15.0	\$ 1.3	20-21	Lakewood
	6 Skylinks Golf Course at Wardlow Stormwater Capture Project	N	T	\$ 2.7	\$ 7.8			★	\$ 10.4	20-21	Long Beach
Funded	7 El Dorado Regional Project	Y	T	\$ 3.0				\$ 0.1	\$ 3.0	20-21	Long Beach
	8 Watershed Coordinator	N/A	TR				\$ 1.0		\$ 1.0	20-21	LACFGD
	9 Bellflower Simms Park Stormwater Capture	Y	T	\$ 2.1				\$ 5.6	\$ 2.1	21-22	Bellflower
	10 Cerritos Sports Complex	Y	T	\$ 2.4					\$ 2.4	21-22	Cerritos
	11 Gateway Area Path Finding Analysis	N/A	SS				\$ 0.1		\$ 0.1	21-22	GWMA
	12 Sorensen Park Multi-Benefit	Y	TR				\$ 0.3		\$ 0.3	21-22	LA County PW
	13 Lakewood Equestrian Center	Y	T	\$ 1.1				\$ 0.4	\$ 1.1	22-23	Lakewood
	14 York Field Stormwater Capture	Y	I	\$ 1.9				\$ 0.6	\$ 1.9	22-23	Whittier
	15 Bellflower Simms Park Stormwater Capture	Y	T		\$ 13.7			\$ 0.9	\$ 13.7	22-23	Bellflower
	16 Gateway Area Path Finding Analysis Ph 2	N/A	SS				\$ 0.2		\$ 0.2	22-23	GWMA
	17 Microplastics in LA County Stormwater	N/A	SS				\$ 0.2	\$ 0.1	\$ 0.2	22-23	Dr. A. Gray, UC Riverside
	18 Artesia Park Urban Runoff Capture	Y	T	\$ 1.6					\$ 1.6	23-24	Artesia
	19 Heartwell Park at Palo Verde Channel Stormwater Capture	N	T	\$ 1.5	\$ 1.8				\$ 3.3	23-24	Long Beach
	20 La Habra Heights Stormwater Treatment and Reuse	Y	BF		\$ 0.7				\$ 0.7	23-24	La Habra Heights
	21 La Mirada Creek Park	N	BR		\$ 5.8			\$ 1.0	\$ 5.8	23-24	La Mirada
	22 Progress Park Stormwater Capture	Y	I	\$ 2.2				\$ 2.2	\$ 2.2	23-24	Paramount
	23 Regional Pathogen Reduction	N/A	SS				\$ 1.0		\$ 1.0	23-24	GWMA
	24 Targeted Human Waste Source Reduction Strategy	N/A	SS				\$ 0.5		\$ 0.5	23-24	GWMA
	Total			\$22.6	\$ 59.3	\$ 3.4	\$ 3.3		\$ 88.6		

### LEGEND

BMP Type: BF=Biofiltration; BR=Bioretention; D= Diversion to Sanitary Sewer; I = Infiltration Facility; T = Treatment Facility; TR = Technical Resource; SS = Scientific Study

Located in SB 535 Disadvantaged Communities

Small Sized Project

# Clean Water Vision

Get Involved! Share your ideas with us!

Sign up for Lower San Gabriel River  
Watershed Area Information and Events!

Visit us at:

**[cleanwatervision.com](https://cleanwatervision.com)**

Email us at:

**[LSGR\\_WC@pw.lacounty.gov](mailto:LSGR_WC@pw.lacounty.gov)**

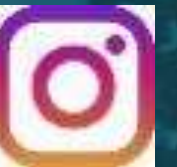
Follow us on social media!

**[@lsgrowthed](https://www.instagram.com/lsgrowthed)**

Community Outreach  
Ideas?

Project Ideas?

Partnership  
Ideas?



SAFE CLEAN WATER L.A.



**QUESTIONS? DISCUSSION?**



# LSGR WATERSHED AREA FY25-26 SCIENTIFIC STUDY PROJECT APPLICANT

## MAXIMIZING IMPACT OF MINIMUM CONTROL MEASURES



Refine tools to quantify the effectiveness of minimum control measures (MCM) and optimally align MCM activities with watershed goals.

PROJECT LEAD:	To Be Determined (GWMA)
WATERSHED AREAS:	Lower SGR, Lower LAR
TOTAL MEASURE W FUNDING REQUEST FOR ALL WATERSHED:	\$630,000
MEASURE W FUNDING REQUEST FROM LSGR WATERSHED:	\$ 360,000
FUNDING YEAR	AMOUNT
Year 1	\$360,000
COST SHARE:	None



### PROJECT BENEFITS

- Emphasizes the importance of MCMs (Minimum Control Measures) for effective implementation tracking and evaluation.
- Provides a scientific approach to quantify water quality and supply/conservation benefits.
- Aims to identify necessary adjustments to MCMs for improving water quality, supply, equity, and community benefits.
- Supports continued investment in community programs related to MCMs.
- Promotes equitable investment in MCM programs across different communities.
- Highlights the integration of MCMs in neighborhoods through various initiatives (e.g., street sweeping, residential incentives, education campaigns).
- Offers less expensive and faster strategies to achieve water quality goals, reducing the reliance on structural projects.
- Increases availability of SCW Municipal and Regional Program funds for multi-benefit structural projects that leverage nature-based solutions.

# LSGR WATERSHED AREA FY25-26 SCIENTIFIC STUDY PROJECT APPLICANT

## NEXT GEN BIORETENTION: TOWARDS LIVING AND ADAPTIVE STORMWATER SYSTEMS FOR A RESILIENT LOS ANGELES COUNTY



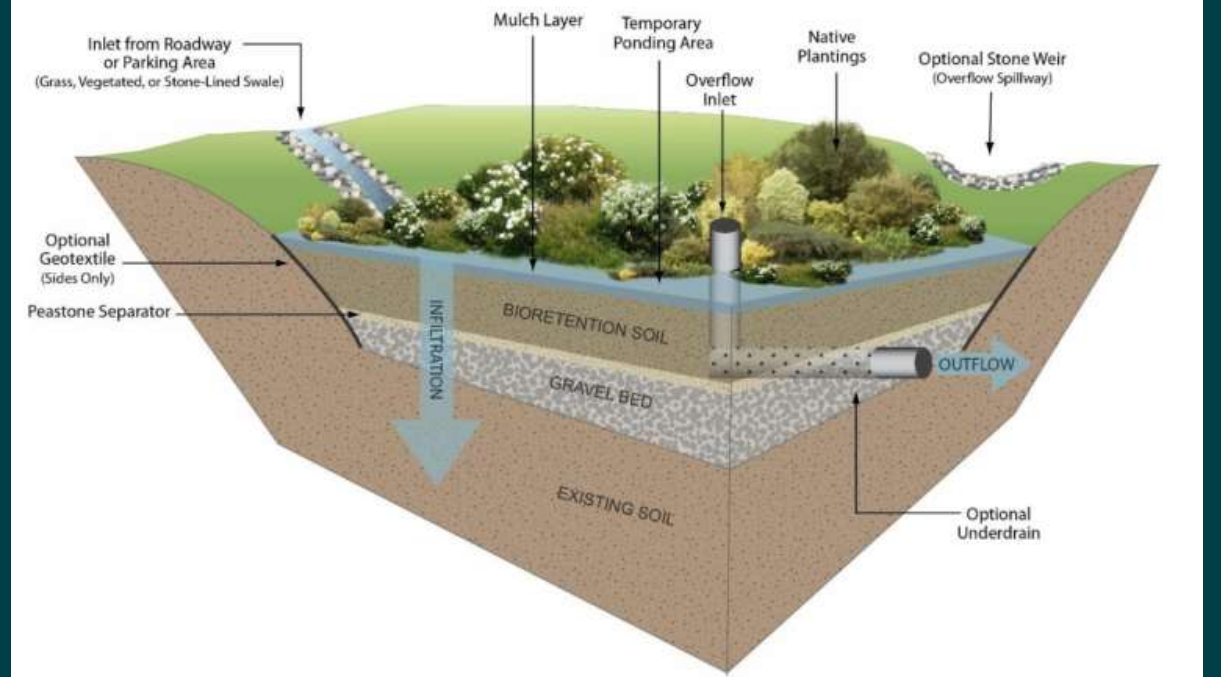
A study assessing existing systems and delivering modeled next generation designs for resilient, multi-benefit bioretention systems.

PROJECT LEAD:	Tree People
WATERSHED AREAS:	Lower SGR
TOTAL MEASURE W FUNDING REQUEST FOR ALL WATERSHED:	\$466,248
MEASURE W FUNDING REQUEST FROM LSGR WATERSHED:	\$ 466,248
<u>FUNDING YEAR</u>	<u>AMOUNT</u>
Year 1	\$227,807
Year 2	\$238,441
COST SHARE:	None

### PROJECT BENEFITS:

- Increased Water Storage and Supply: Enhancements in bioretention system design improve infiltration and storage of plant-available water, boosting overall water supply and groundwater recharge.
- Improved Water Quality: Optimized systems enhance stormwater infiltration, reducing polluted runoff and transforming harmful pollutants into beneficial ecological resources.
- Enhanced Air Quality: Well-functioning bioretention systems capture particulate matter and improve air quality, particularly when located near roadways.
- Urban Heat Island Reduction: Bioretention systems, with their higher plant-available water and evapotranspiration rates, are more effective in mitigating urban heat compared to other vegetated landscapes.
- Support for Biodiversity: These systems function as biodiversity corridors, offering refuge for pollinators and birds in urban environments, especially near impervious surfaces.
- Reduced Maintenance Costs: A well-maintained and appropriately designed bioretention system minimizes disruptions, leading to lower maintenance expenses and improved long-term performance.

**Figure 1 (Ref. in 2.1):** Bioretention system profile demonstrating defining engineered features such as overflow inlets, underdrains, gravel beds and specially formulated bioretention soil. Bioretention systems developed for mediterranean climates utilize different plant palettes and may use gravel ground cover instead of mulch but contain similar engineered features.  
**Source:** Massachusetts Clean Water Toolkit



# LSGR WATERSHED AREA FY25-26 SCIENTIFIC STUDY PROJECT APPLICANT DATA-DRIVEN RESOURCE OPTIMIZATION AND PLANNING SYSTEM (DROPS) FOR LOS ANGELES COUNTY



Implement the DROPS tool that integrates advanced data analytics with artificial intelligence to site distributed stormwater capture and filtration projects throughout Los Angeles County.

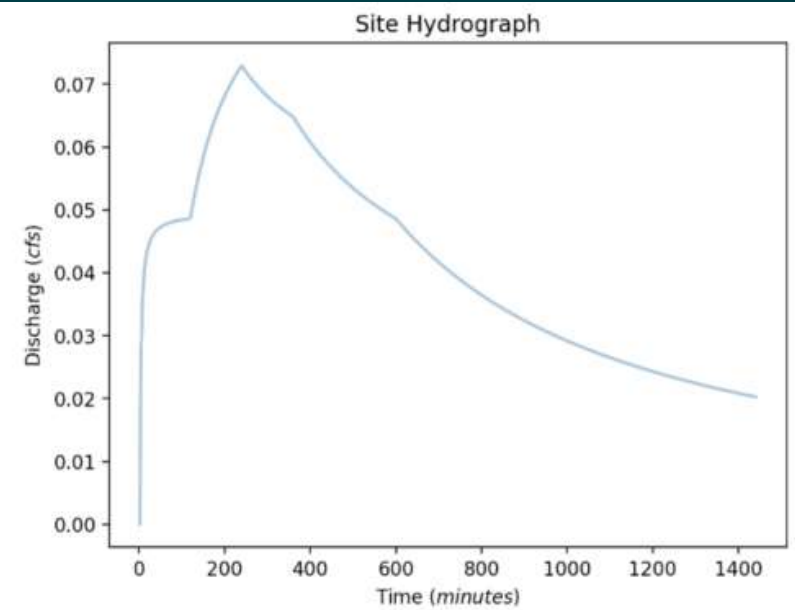
PROJECT LEAD:	Foothill Municipal Water District
WATERSHED AREAS:	Lower SGR, Lower LAR, Central Santa Monica Bay, North Santa Monica Bay, South Santa Monica Bay, Rio Hondo, Santa Clara River, Upper LA River, Upper SGR
TOTAL MEASURE W FUNDING REQUEST FOR ALL WATERSHED:	\$442,000
MEASURE W FUNDING REQUEST FROM LSGR WATERSHED:	\$ 49,111
<u>FUNDING YEAR</u> Year 1	<u>AMOUNT</u> \$49,111
COST SHARE:	\$109,800

PROJECT BENEFITS:

- Stormwater Management: Identify sites for distributed low impact development (LID) projects that effectively manage stormwater and control flood.
- Water Supply: Identify sites for efficient groundwater recharge in basins throughout LA County.
- Water Quality: Primary pollutants of concern can be treated and identified LID project sites.
- Meeting TMDL Requirements: Stormwater captures for groundwater infiltration reduces the total amount of pollutants entering the stormwater system.
- Offset Potable Irrigation Demands: Align the creation of distributed LID projects with the removal of nonfunctional turf grass irrigated by potable water.
- Disadvantaged Communities: Siting projects in DAC areas can help both to alleviate potential inequalities in access to municipal services as well as allow projects to tap into sources of state and federal funding that might not otherwise be accessible.
- Increased Collaboration: Providing Access to shared pool of data fostering partnership to collectively analyze, understand, and respond to water management challenges.

Below is a preliminary research project that provides some of the functionality envisioned in DROPS. This example examines the stormwater capture potential at CVWD's Eagle Canyon reservoir by the Rosemont Preserve. The code for this [pre-alpha tool](#) can be accessed at this [link](#). The tool ingests high resolution satellite imagery (60cm) to determine impervious areas, OpenStreetMaps building footprints, rainfall depth provided by the city of LA and climate projection information in order to provide an automated approach to estimate runoff potential both under present and future climate conditions.

The screenshot shows the DROPS tool interface. At the top, there's a dropdown menu labeled 'Entire site'. Below it, a section 'Select the slope of your site:' has a dropdown menu with 'Gently Sloping' selected. Underneath, it says 'Draw your polygon on the map below:'. The main part of the interface is a map with a blue polygon drawn on it. To the left of the map is a toolbar with various icons for map manipulation. To the right of the map is a search bar with the text 'Search...'. The map shows a residential area with streets and buildings.



# LSGR WATERSHED AREA FY25-26 SCIENTIFIC STUDY PROJECT APPLICANT

## DEPAVE LA: PRIORITIZING PARKING LOTS FOR GREEN RETROFITTING

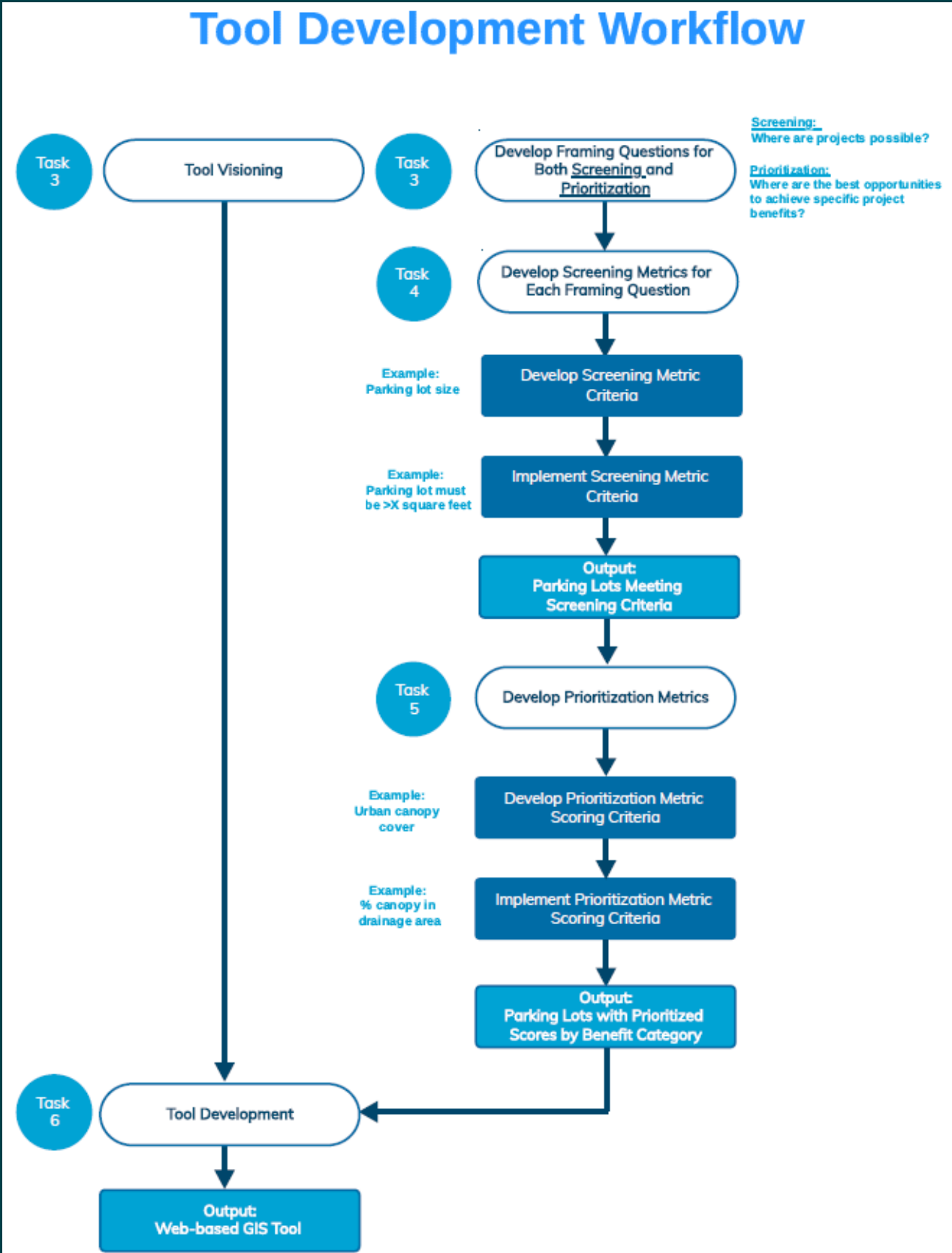


Create a tool to identify, rank and prioritize parking lots for greening, water quality, and/or water supply focus retrofits.

PROJECT LEAD:	Council for Watershed Health
WATERSHED AREAS:	Lower SGR, Upper SGR, Rio Hondo, Central Santa Monica Bay, Upper Santa Monica Bay
TOTAL MEASURE W FUNDING REQUEST FOR ALL WATERSHED:	\$1,088,720
MEASURE W FUNDING REQUEST FROM LSGR WATERSHED:	\$ 220,432
FUNDING YEAR	AMOUNT
Year 1	\$110,216
Year 2	\$110,216
COST SHARE:	None

### PROJECT BENEFITS

- Identifies and prioritizes parking lot sites for green infrastructure retrofits.
- Facilitates funding and implementation of impactful site improvements.
- Improves stormwater runoff quality by reducing pollutant-generating impervious areas.
- Increases water supply through enhanced runoff treatment and infiltration.
- Provides a Tool and Toolkit to optimize design and operation of retrofit projects.
- Shares tips and lessons learned to maximize project impact, success, and longevity.
- Assists municipalities, community groups, and businesses in project planning.
- Streamlines and automates high-level project identification for better community investment outcomes.



# LSGR WATERSHED AREA FY25-26 SCIENTIFIC STUDY PROJECT APPLICANT

## APPLICATION OF INNOVATIVE TECHNOLOGY FOR MICRO-BIOLOGICAL TESTING IN THE LOS CERRITOS CHANNEL WATERSHED



Automated mobile analyzers and enhanced local human marker capability for rapid microbiology watershed monitoring

**PROJECT LEAD:** To Be Determined

**WATERSHED AREAS:** Lower SGR

**TOTAL MEASURE W FUNDING REQUEST FOR ALL WATERSHED:** \$1,115,882

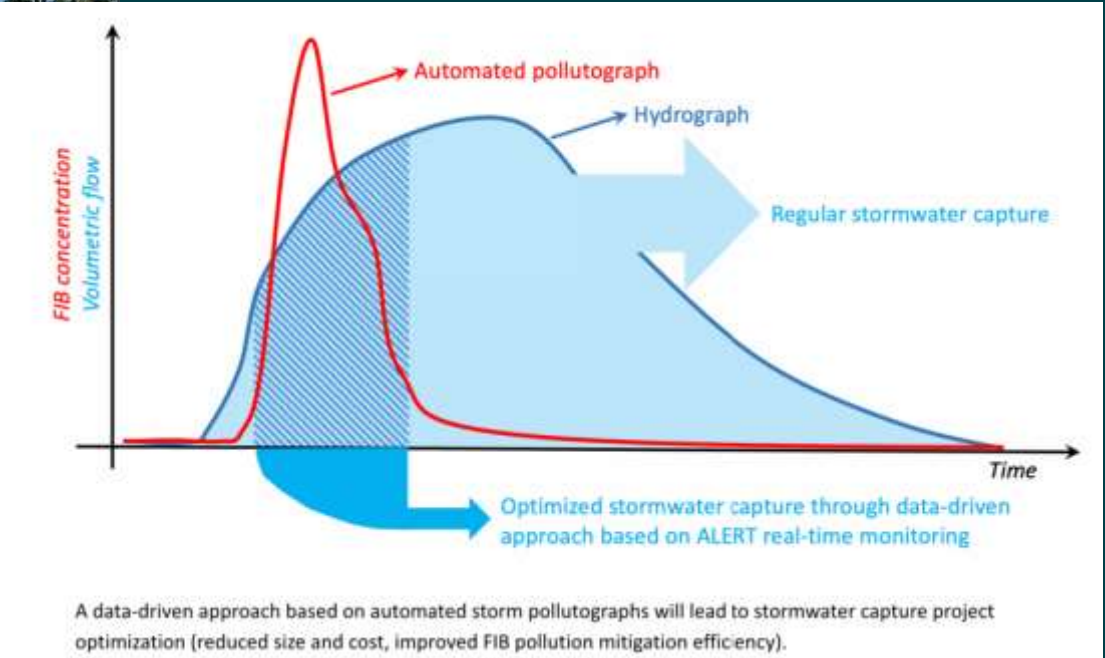
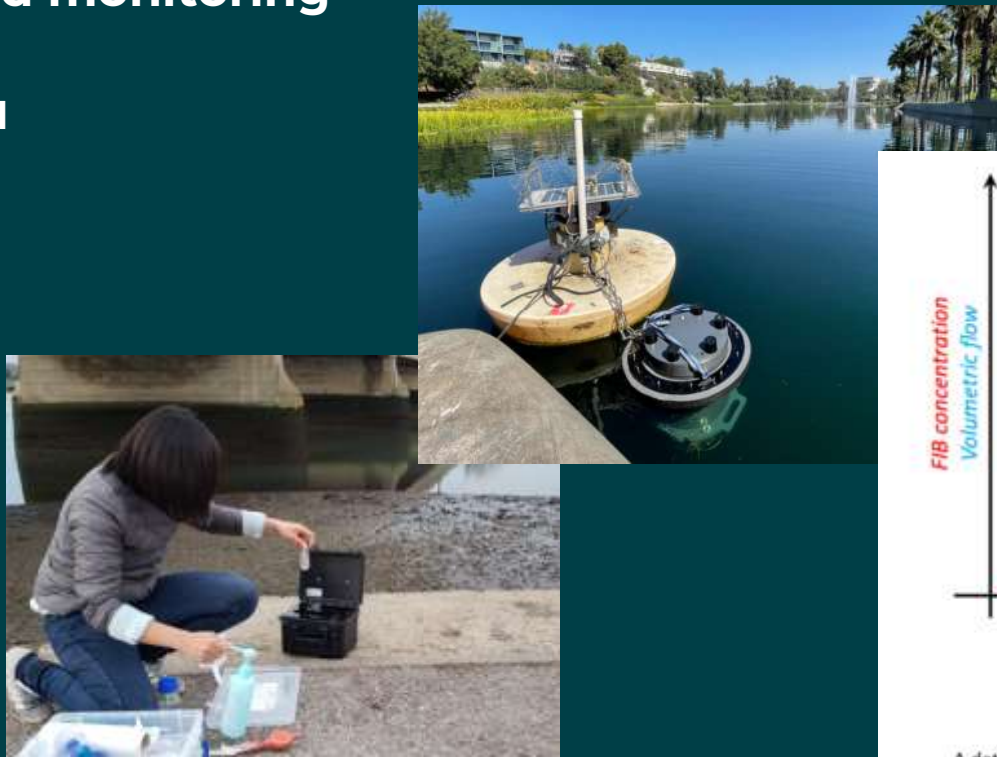
**MEASURE W FUNDING REQUEST FROM LSGR WATERSHED:** \$ 1,115,882

<u>FUNDING YEAR</u>	<u>AMOUNT</u>
Year 1	\$438,317
Year 2	\$385,369
Year 3	\$292,196

**COST SHARE:** None

**PROJECT BENEFITS:**

- Combines field and traditional sampling techniques for effective watershed management and pollution evaluation.
- Reduced logistics and lower measurement costs enable more data collection within the same budget.
- Field instrumentation minimizes sample degradation risks, enhancing data quality and reducing time-to-results.
- Provide unattainable data during key pollution events, generating comprehensive pollutographs instead of single samples.
- ALERT rapid microbiology analyzers offer critical data on bacterial fractions, improving risk assessment accuracy.
- Data-driven insights can reduce required capture volume, leading to significant project cost savings.
- Rapid microbiological monitoring can assess the effectiveness of stormwater treatment options and inform risk management for discharges.
- Monitoring stations provide alerts for microbiological pollution risks, protecting public health in recreational areas.
- Portable field instrumentation allows quick localization and remediation of dry weather pollution sources.
- Creation of a microbiological pollution assessment toolkit to enhance future pathogen reduction studies.



# THE END

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