

SAFE CLEAN WATER PROGRAM

Lower San Gabriel River Watershed

February 13, 2024
Watershed Coordinator
Update



PRESENTED BY:

OhanaVets, Inc. Lower San Gabriel River Watershed Coordinator



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







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

VISION:

By modernizing our 100-year-old water system, we can better protect public health and our environment, and maximize a cleaner, locally controlled water supply.

HOW?

Through the funding of:

multi-benefit stormwater & urban runoff capture projects

WHO?







Workshops/Meetings

Community Engagement

SPEAKER SERIES

LSGR Watershed Community Small Scale Program Concept

- June, July, August, and September

- Neighborhood Small Scale Stormwater Projects in Long Beach - 8/28
- Downey School District School Site Stormwater Upgrades - 9/21
- Infrastructure Justice for LA 9/22
- Stormwater Speaker Series 2/7





ON IN THE WORLD OF STORMWATER IN SOUTHERN CALIFORNIA.

- FREE ADMISSION
- Professional Development Hours (PDH)
- Current/Relevant Stormwater Topics
- Network with industry professionals
- Continental Breakfast

stormwater by providing a place to share relevant, timely, and accurate information. While these events are primarily geared toward civil engineers and stormwater professionals, it is a great event for anyone looking to get engaged in the discussion about stormwater and how its managed.

The Stormwater Speaker Series is a forum for those interested in stormwater. With the main

goal of furthering the conversation about





WEDNESDAY, FEBRUARY 7Th PRESENTATIONS 10:20 – 1:45

EVENT SPEAKERS

Oliver Galang, P.E., ENV. SP Craftwater Engineering | Principal

Kekoa Anderson, P.E., QSD OhanaVets | Principal Engineer

recon Products | Stormwater Director

Michael Scaduto, P.E., ENV. SP LASAN | Principal Engineer



Bruce Reznik, J.D. LA Waterkeeper | Executive Director

LIMITED SEATING AVAILABLE. REGISTER TODAY (602) 499-5881 | sss@pre-conproducts.g

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Education Events

Groundwater Festival at WRD - 5/6

✓ Touch-a-Truck at Whittier City Hall – 5/20

Earth Walk City of Lakewood – 3/16

Earth Day LA County Sanitation Districts (Tentative) – 4/13







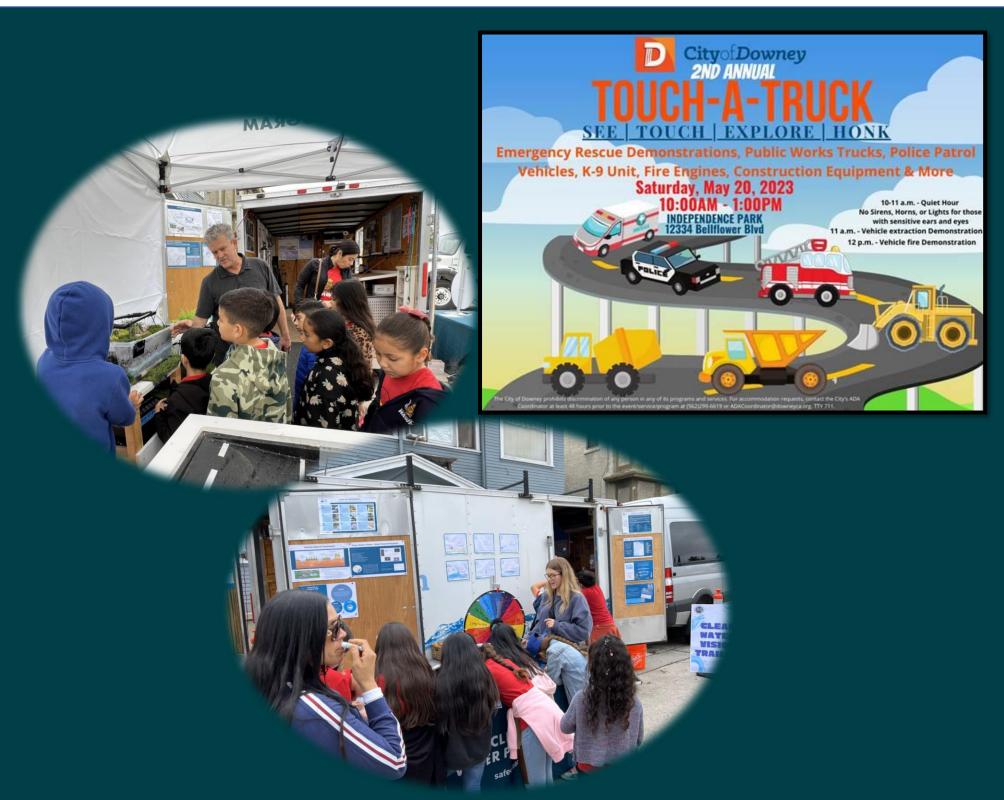
Photos of Educational Events







Photos of Educational Events







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.

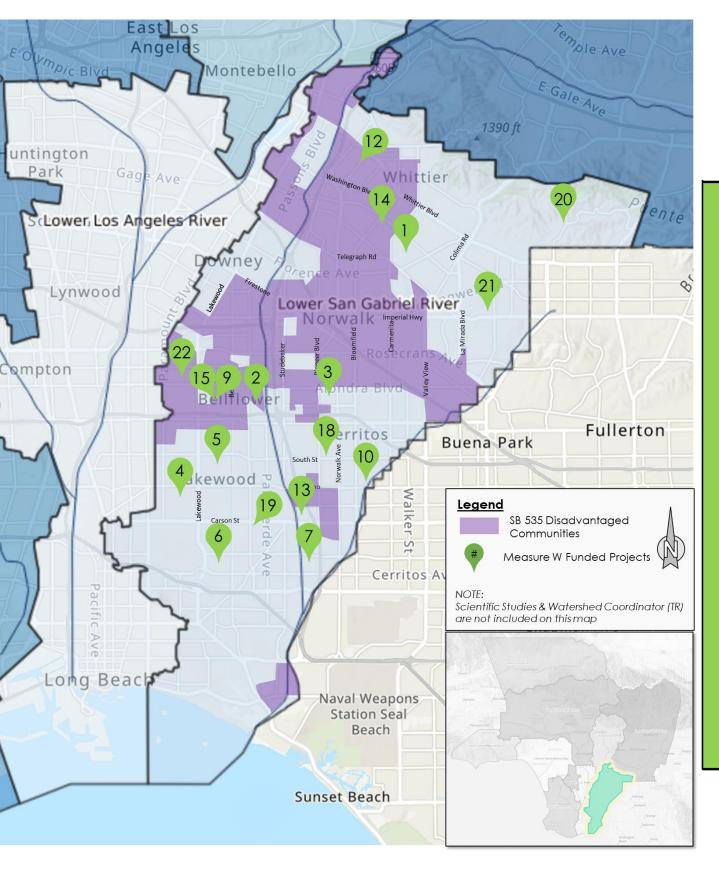
Lower San Gabriel River Watershed Area Steering Committee "LSGR WASC" Prioritization Criteria

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	E 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 FUN	NDING 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		
j	RESERVI	NG 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.		
	FUNDIN	G 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	. Techncial 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	Ν	D		\$ 13.5			\$ 15.0	\$ 13.5	20-21	Unincorp. County Area of Whittier
	2 Caruthers Park	Υ	1			\$ 0.9		\$ 13.0	\$ 0.9	20-21	Bellflower
	3 Hermosillo Park	Y	1	\$ 4.1	\$ 16.0				\$ 20.1	20-21	Norwalk
	4 Bolivar Park 5 Mayfair Park	Y	T			\$ 1.3 \$ 1.3		\$ 11.0 \$ 15.0	\$ 1.3 \$ 1.3	20-21	Lakewood Lakewood
	, Skylinks Golf Course at Wardlow					φ1.3		φ 10.U			
	Stormwater Capture Project	N	T	\$ 2.7	\$ 7.8				\$ 10.4	20-21	Long Beach
	7 El Dorado Regional Project	Υ	T	\$ 3.0				\$ 0.1	\$ 3.0	20-21	Long Beach
	8 Watershed Coordinator	N/A	TR				\$ 1.0		\$ 1.0	20-21	LACFCD
	9 Bellflower Simms Park Stormwater Capture	Υ	T	\$ 2.1				\$ 5.6	\$ 2.1	21-22	Bellflower
	10 Cerritos Sports Complex	Υ	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	Υ	TR				\$ 0.3		\$ 0.3	21-22	LA County PW
Funded	13 Lakewood Equestrian Center	Υ	T	\$ 1.1				\$ 0.4	\$ 1.1	22-23	Lakewood
Š	14 York Field Stormwater Capture	Υ	- 1	\$ 1.9				\$ 0.6	\$ 1.9	22-23	Whittier
Œ.	15 Bellflower Simms Park Stormwater Capture	Υ	T		\$ 13.7			\$ 0.9	\$ 13.7	22-23	Bellflower
	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	Υ	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 Treament and Reuse	Υ	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	Υ	1	\$ 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 Strateav	N/A	SS				\$ 0.5		\$ 0.5	23-24	GWMA
	Total			\$22.6	\$ 59.3	\$ 3.4	\$ 3.3		\$ 88.6		

IEGEND

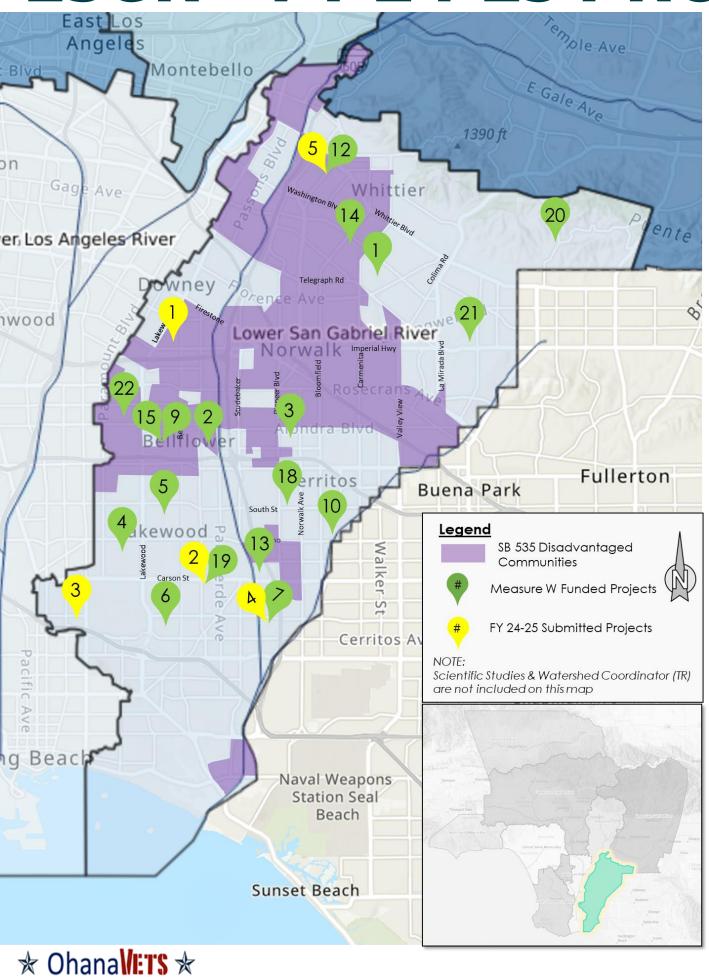
BMP Type: BF=Biofiltration; BR=Bioretention; D= Diversion to Sanitary Sewer; I = Infiltration Facility; T = Treatment Facility; TR = Technical Resource: SS = Scientific Study Located in SB 535 Disadvantaged Communities

Small Sized Project



LSGR – FY 24-25 PROJECTS APPLICATIONS

FY 24-25 Project Applications



	Project Name	DAC Benefit	BMP Type	ال Planning/Design	\$ Construction	W80 \$M	Techncial Resource/ Scientific Study	Cost Share Cost Share	∴ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓	Estimated Score	Project Developer
1	Independence Park Runoff Capture Facility	Υ	- 1	\$ 1.3					\$ 1.3	72	Downey
2	Heartwell Park at Clark Channel Stormwater Capture	Ν	i	\$ 2.9					\$ 2.9	66	Long Beach
3	Project	Z	- 1	\$ 1.0	\$ 5.7				\$ 6.7	69	Signal Hill
4	Capture Project	Z	BF/D		\$ 37.4				\$ 37.4	64	Long Beach
5	Stormwater Capture Project	Υ	- 1	\$ 1.6					\$ 1.6	67	LA County PW
6	Microbiological Testing in LCC	N/A	SS				\$ 1.3		\$ 1.3		TBD
7	Identify Best Practices for Maintaining Stormwater Drywell Capacity	N/A	SS				\$ 0.5		\$ 0.5		CSU Pomona
	Total			\$ 6.8	\$43.1	\$ -	\$ 1.8		\$ 51.7		

EGEND

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

HEARTWELL PARK AT CLARK CHANNEL STORMWATER CAPTURE PROJECT



Regional stormwater capture and filtration/sewer diversion facility located at Heartwell Park beneath the

open space of the existing park.

PROJECT LEAD: City of Long Beach

BMP TYPE: Treatment Facility

LOCATED IN

DISADVANATED
COMMUNITY(DAC)?

Yes

No

BENEFITS DAC?

PRELIMINARY SCORE: 66

TOTAL MEASURE W
FUNDING REQUEST:

\$2,864,4725

FUNDING YEAR

<u>AMOUNT</u>

Year 1

\$2,864,472 (Design)

COST SHARE?

No

TOTAL CONSTRUCTION COST:

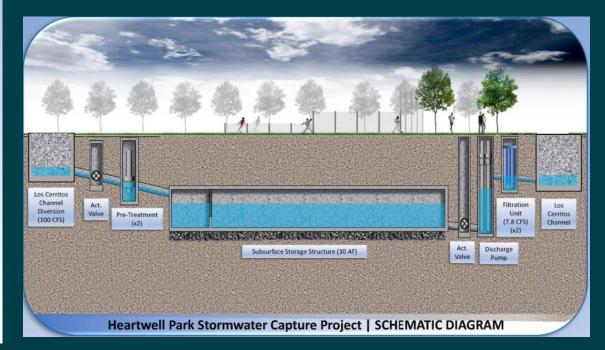
\$11,956,920

PROJECT FEATURES:

- Captures water from 1,881 acres
- Enhance/Restore Park Space
- Improves Public Access to Waterways
- Enhance Recreational Opportunities
- Reduce Heat Local Island Effect
- Increase Tree Count



Primary Pollutant Zinc Reduction Achieved (% Zn reduction)	111 lb/yr (92.5%)
Secondary Pollutant Copper Reduction Achieved (% Cu reduction)	26.6 lb/yr (90.5%)
Design Diversion Rate	100 CFS
Storage Capacity for Subsurface Storage Structure	30.0 ac-ft (9.78 MG)
24-Hour Capacity	61.10 ac-ft
Construction Cost Estimate	\$42,833,433





RESERVOIR PARK STORMWATER CAPTURE FACILITY



Regional stormwater capture, infiltration/filtration facility, and new park equipment/community garden at

Reservoir Park.

City of Signal Hill PROJECT LEAD:

Infiltration Facility BMP TYPE:

LOCATED IN

No **DISADVANATED** COMMUNITY(DAC)?

BENEFITS DAC? No

PRELIMINARY SCORE: 69

TOTAL MEASURE W **FUNDING REQUEST:**

FUNDING YEAR

Year 1

\$951,843 (Design)

\$6,676,878

AMOUNT

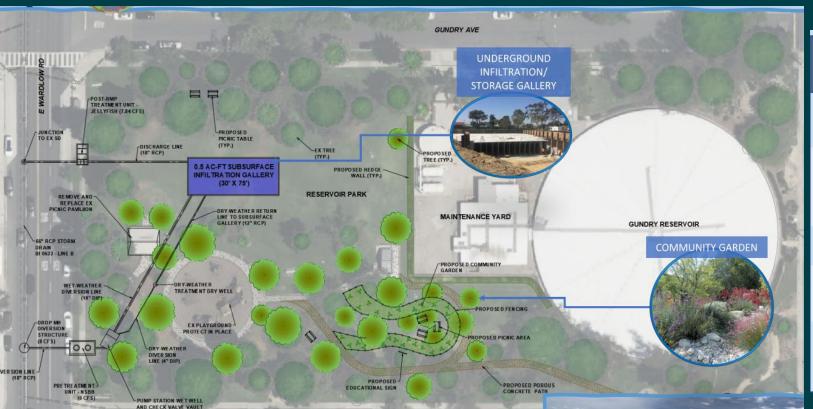
COST SHARE? No

TOTAL CONSTRUCTION COST:

\$5,725,035

PROJECT FEATURES:

- Captures water from 184 acres
- **Additional Shading**
- **Reduce Heat Island Effect**
- **Improve Water Quality**
- **Improve Park Facility**



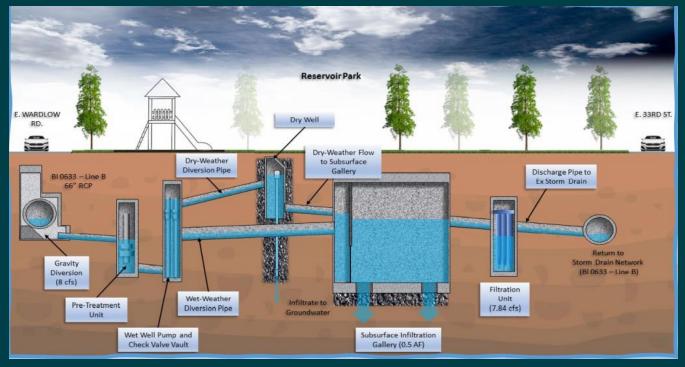
-	GUNDRY AVE	
	UNDERGROUND INFILTRATION/ STORAGE GALLERY POST-RIMP TREATMENT UNIT- FELLYFISH (7.84-0.55)	
-	JUNCTION PROPOSED PICNIC TABLE	RI MAN
B	REMOVE AND REPLACE EX PICHIC PAVILION DRY-WEATHER RETURN LINE TO SUBSURFACE GALLERY GGALLERY	Т
	G6* RCP STORM DRAW B1 0652 - LINE B	INF
N. S.	WET-WEATHER DIVERSION LINE TREATMENT DRY WELL PROPOSED FERCING	BAS
VER SION LI	DRY-WEATHER DIVES SON LINE (* DIP)	MOI A
(18° R	PROPOSED PRO	

STIATOT	
REGIONAL WATER MANAGEMENT PLAN	Los Cerritos Channel Watershed
TOTAL DRAINAGE AREA	183.6 AC Signal Hill (42.8%) Long Beach (57.2%)
INFILTRATION RATE	0.3 in/hr
GROUNDWATER Basin Below Site:	Central Basin
MODELED AVERAGE ANNUAL RUNOFF VOLUME	78.6 acre-ft

DRAINAGE AREA

CHARACTERISTICS

WATER QUALITY IN	IPROVEMENT
PRIMARY POLLUTANT (ZINC) POLLUTANT REDUCTION	36.34 lb/yr (80.03%)
SECONDARY POLLUTANT (COPPER) POLLUTANT REDUCTION	9.29 lb/yr (81.21%)
DESIGN DIVERSION RATE	8 CFS
STORAGE CAPACITY FOR SUBSURFACE STORAGE STRUCTRE	0.5 acre-ft (0.16 MG)
24-HOUR CAPACITY	16.08 acre-ft
CONSTRUCTION COST ESTIMATE	\$5,125,487



EL DORADO REGIONAL STORMWATER CAPTURE PROJECT



Regional stormwater capture, surface ponds, diversion to sanitary sewer, and filtration facility at El Dorado Regional Park.

PROJECT LEAD: City of Long Beach

BMP TYPE: Biofiltration, Diversion to Sanitary Sewer

No

64

\$37,386,870

AMOUNT

LOCATED IN
DISADVANATED NO

COMMUNITY(DAC)?

PRELIMINARY SCORE:

TOTAL MEASURE W FUNDING REQUEST:

BENEFITS DAC?

FUNDING YEAR

Year 1 \$9,346,718 (Const)

Year 2 \$9,346,718 (Const)

Year 3 \$9,346,717 (Const)

Year 4 \$9,346,717 (Const)

COST SHARE? No

CONSTRUCTION COST: \$37,386,870



PROJECT FEATURES:

- Captures water from 2,874 acres
- Improves Water Quality
- Increases Shade and Trees
- Reduces Heat Island Effects
- Enhance Habitat Space

REGIONAL WATER Lower San Gabriel MANAGEMENT PLAN River Watershed 2874 AC Long Beach: (15%) Artesia: (15%) **TOTAL DRAINAGE** Cerritos: (26%) **AREA** Hawaiian Gardens: (16%)Lakewood: (23%) Norwalk: (5%) APPROX. DEPTH TO 12 ft BGS **GROUNDWATER** MODELED AVERAGE **ANNUAL RUNOFF** 1211 acre-ft VOLUME

DRAINAGE AREA

CHARACTERISTICS

WATER QUALITY IMPROVEMENT

TRIBUTARY DRY WEATHER FLOWS CAPTURED (%)	100%
DRY WEATHER BMP TRIBUTARY SIZE	2,874 acres
DESIGN DIVERSION RATE	20 CFS
STORAGE CAPACITY FOR SURFACE STORAGE STRUCTRE	10.3 acre-ft (3.36 MG)
ESTIMATED AVERAGE DRY WEATHER FLOW RATE	0.04 cfs
CONSTRUCTION COST ESTIMATE	\$37,386,870

SORENSEN PARK MULTI-BENEFIT STORMWATER CAPTURE PROJECT



The project will involve construction of a stormwater storage and infiltration facility at Sorensen Park, in

unincorporated South Whittier.

PROJECT LEAD: LA County PW

BMP TYPE: Infiltration

LOCATED IN

DISADVANATED No

COMMUNITY(DAC)?

BENEFITS DAC? Yes

PRELIMINARY SCORE: 67

TOTAL MEASURE W FUNDING REQUEST: \$1,616,592

FUNDING YEAR AMOUNT

Year 1 \$1,616,592 (Design)

COST SHARE? No

TOTAL CONSTRUCTION \$32,231,833

PROJECT FEATURES:

- Captures water from 617 acres
- Increase Water Supply
- Improves Stormwater Quality
- Enhances Habitat or Park Space
- Increases Shade and Trees
- Reduces Heat Island Effects





Potential BMPs

- Infiltration Gallery
- Bioretention
- Biofiltration
- Bioswales
- Drywells
- Permeable Pavement

Proposed Feasibility Study

- Geotechnical Investigation
- Contamination Assessment
- Preliminary Design Plans
- Hydrology Analysis
- Identify suitable BMPs







INDEPENDENCE PARK RUNOFF CAPTURE FACILITY



Regional stormwater capture facility at **Independence Park.**

City of Downey PROJECT LEAD:

Infiltration Facility BMP TYPE:

LOCATED IN No **DISADVANATED** COMMUNITY(DAC)?

BENEFITS DAC? No

PRELIMINARY SCORE: 72

TOTAL MEASURE W \$1,310,458 **FUNDING REQUEST:**

FUNDING YEAR

AMOUNT

Year 1

\$1,310,458 (Design)

COST SHARE?

No

TOTAL CONSTRUCTION COST:

\$11,937,061

PROJECT FEATURES:

- Captures water from 560 acres
- **Bioswale and Permeable Pavement**
- **Reduce Heat Island Effect**
- **Improve Water Quality**
- **Improve Park Facility**

DRAINAGE AREA CHARACTERISTICS			
REGIONAL WATER MANAGEMENT PLAN			
TOTAL DRAINAGE AREA			
INFILTRATION RATE	0.5 in/hr		
APPROX. DEPTH TO GROUNDWATER	52 ft BGS		
MODELED AVERAGE ANNUAL RUNOFF VOLUME	223.7 acre-ft		

WATER QUALITY IM	IPROVEMENT
PRIMARY POLLUTANT (ZINC) POLLUTANT REDUCTION	144.218 lb/yr (90.47%)
SECONDARY POLLUTANT (COPPER) POLLUTANT REDUCTION	36.158 lb/yr (89.26%)
DESIGN DIVERSION RATE	28.34 CFS
STORAGE CAPACITY FOR SUBSURFACE STORAGE STRUCTRE	4.45 acre-ft (1.45 MG)
24-HOUR CAPACITY	8.57 acre-ft
CONSTRUCTION COST ESTIMATE	\$10,670,055



No



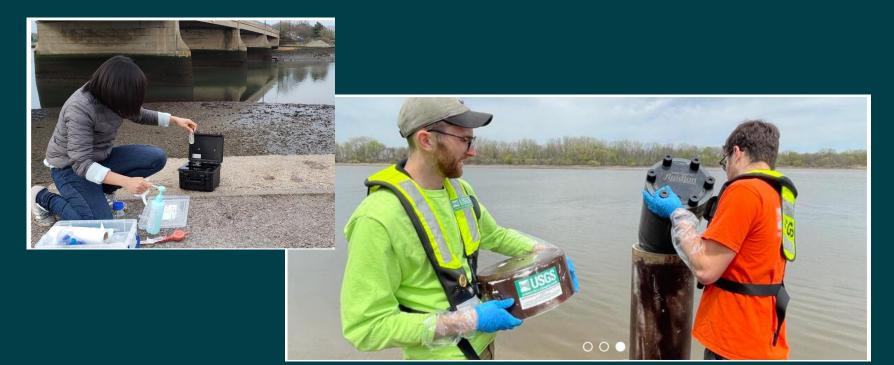
DRAFT

APPLICATION OF INNOVATIVE TECHNOLOGY FOR MICROBIOLOGICAL TESTING IN THE LOS CERRITOS CHANNEL WATERSHED

Automated mobile analyzers in the Los Cerritos Channel Watershed for timely bacterial data,

improved monitoring, and faster response time.

PROJECT LEAD:	TBD
MEASURE W FUNDING REQUEST FROM LSGR WATERSHED:	\$ 1,218,814
FUNDING YEAR	<u>AMOUNT</u>
Year 1	\$488,595
Year 2	\$366,889
Year 3	\$363,330



Study Objective:

COST SHARE:

- Conduct side-by-side studies of data collected with rapid in-situ and mobile analyzers compared with data gathered through current monitoring and analytical methods.
- Demonstrate the advantages of a whole sample approach, capable of capturing both particle-bound and planktonic microorganisms, compared to currently used MPN methods.
- Demonstrate how the use of automated, rapid, in-situ and mobile analyzers can improve the ability to conduct forensic monitoring
 to locate sources of fecal contamination.
- Demonstrate how the use of automated mobile analyzers can significantly improve the timeliness of operational responses to the discovery of pollutant discharges.
- Develop local capability (within Los Angeles County) for quantifying specific human marker DNA/RNA concentrations, using Loop-mediated isothermal AMPlification (LAMP), to support local studies and implement in future portable analyzers.
- Facilitate the collection of paired FIB and human marker data to accelerate the use of human markers for determining human health risk levels.
- Determine how the use of automated mobile analyzers could be integrated into the Regional Pathogen Reduction Scientific Study
 to help improve its accuracy and usefulness.
- Determine whether the use of automated mobile analyzers should be encouraged in SCW Scientific Study Summary

IDENTIFYING BEST PACTICES FOR MAINTAINING STORMWATER DRYWELL CAPACITY



Evaluation of alternative well designs, existing pre-treatment practices, maintenance intervals for

maintaining stormwater drywell capacity.

PROJECT LEAD:

WATERSHED AREAS

CA State Polytechnic Univ.

Pomona

North Santa Monica Bay, Central Santa Monica Bay, South Santa Monica Bay, Rio Hondo, Santa Clara River, Upper LA River, Lower LA River, Upper SGR,

No

Lower SGR

TOTAL MEASURE W
FUNDING REQUEST FOR ALL
WATERSHED:

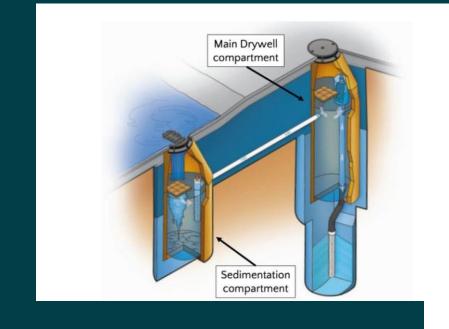
\$4,951,453.00

MEASURE W FUNDING REQUEST FROM LSGR WATERSHED:

COST SHARE:

\$ 408,871

UNDING YEAR	<u>AMOUNT</u>
Year 1	\$79,989
Year 2	\$81,181
Year 3	\$82,176
Year 4	\$80,937
Year 5	\$84,588





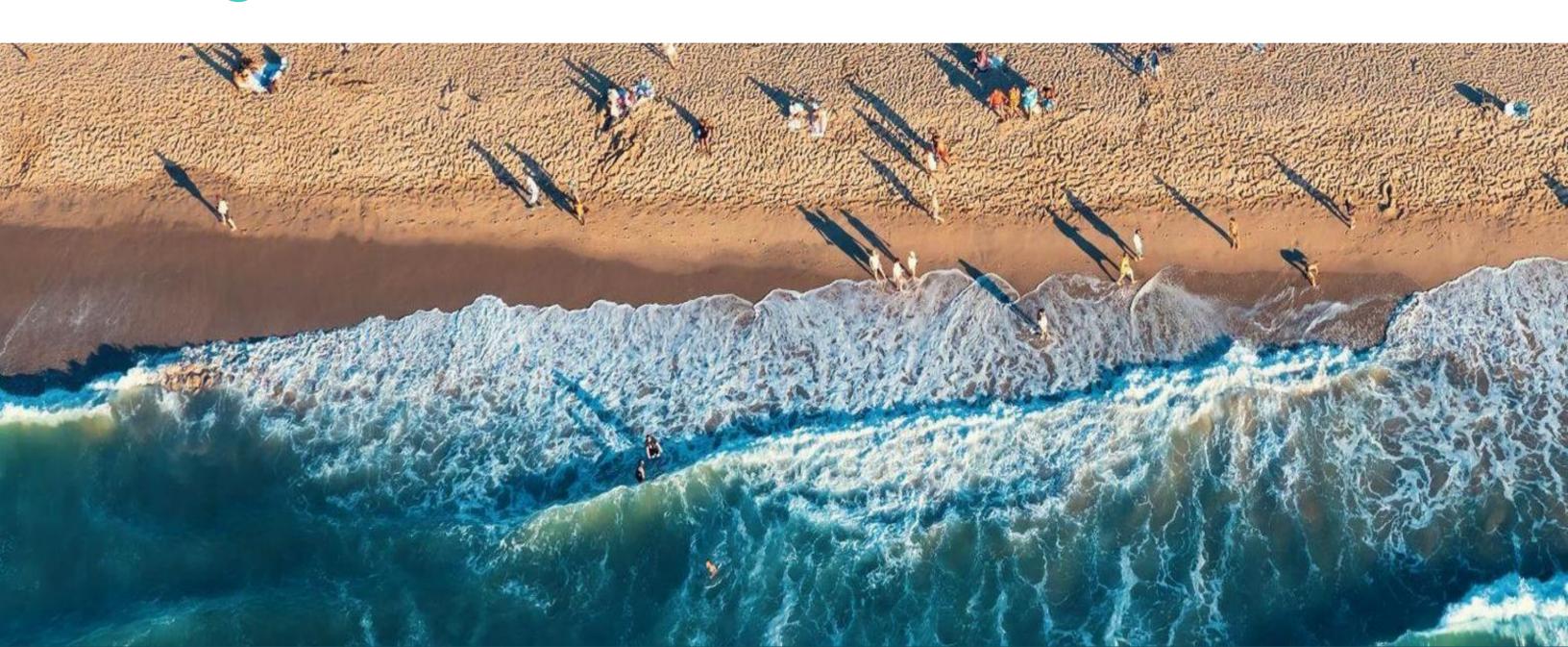
Study Objective:

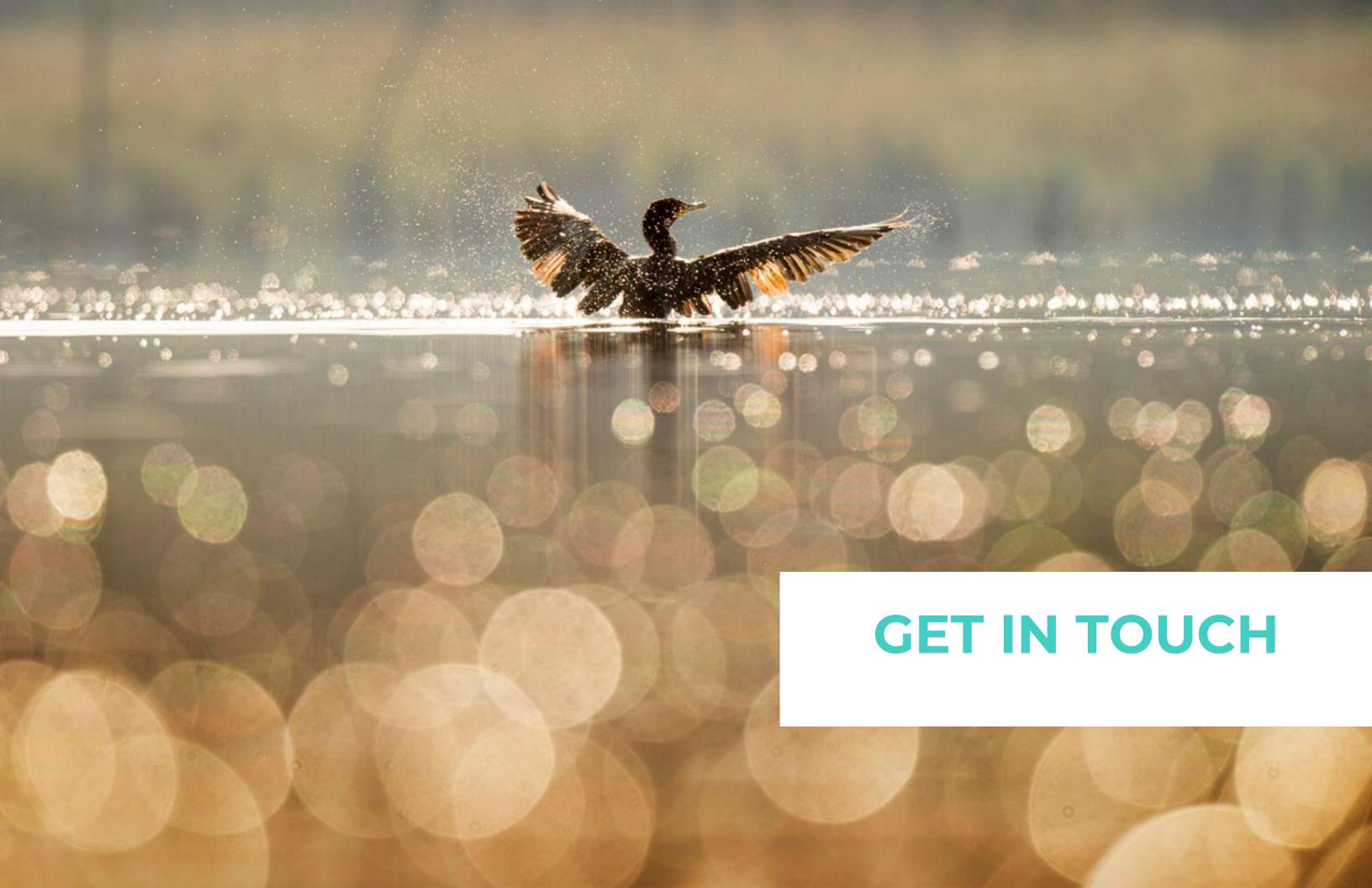
- Evaluate commonly used drywell design and construction methods and determine which method provides the best balance between cost and long-term performance
- Evaluate common pre-treatment practices and determine which methods provide the best balance between cost and long-term performance, including maintenance requirements
- Evaluate maintenance practices and frequency for different levels of land-use and traffic loading within the catchment basin and develop guidelines for maintenance based on land –use and traffic loading
- Determine how soil characteristics can impact long-term drywell performance and provide recommendation for design and maintenance to address fine grain soils.

DRAFT



QUESTIONS? DISCUSSION?







Community Outreach Ideas?

Project Ideas?

Partnership Ideas?



THE END

