

Safe, Clean Water Program

Upper San Gabriel River

Watershed Area Steering Committee (WASC)



Meeting Minutes:

Monday, February 10, 2020

1:30pm-3:30pm

Sanitation Districts of Los Angeles County

1955 Workman Mill Road, Whittier, CA 90601

Attendees:

Committee Members Present:

Julian Juarez (LA County Flood Control District)

Tom Love (Upper San Gabriel District)

Kelly Gardner (Main San Gabriel Basin)

Kristen Ruffell (Sanitation Districts)

Mark Glassock* (Los Angeles County Parks and Recreation)

Bob Huff (Huff Strategies)

Debbie Enos (Watershed Conservation Authority)

David Diaz (Active SGV)

John Beshay (Baldwin Park)

Amanda Hamilton (Bradbury)

Alison Sweet (Glendora)

Joshua Nelson (Industry)

Fernando Villaluna* (LA County)

Julie Carver (Pomona)

Lisa O'Brien (La Verne)

Committee Members Not Present:

Brian Urias (Former USGVMWD Board Member)

Ed Reyes (Ed P. Reyes & Associates)

*Committee Member Alternate

See attached sign-in sheet for full list of attendees

1. Welcome and Introductions

Mr. Diaz, the Vice-Chair of the Upper San Gabriel River WASC, called the meeting to order.

All committee members made self-introductions and quorum was established.

2. Approval of Meeting Minutes from January 30, 2020

The Los Angeles County Flood Control District (District) provided a copy of the meeting minutes from the previous meeting. Mr. Diaz asked the committee members for comments or revisions. The committee had no comments.

The Committee voted to approve the meeting minutes from January 30, 2020 (unanimous).

3. Committee Member and District Updates

Ms. Melissa Turcotte (District) provided a summary of the scoring progress so far by the Scoring Committee (SC), and an update on the Watershed Coordinators and Fund Transfer Agreement.

4. Public Comment Period

No public comment



5. Discussion Items:

a. Updates summaries of Infrastructure Program, Technical Resources Program and Scientific Studies Program Project submittals (USGR).

Ms. Melanie Morita (District) provided an Overview of Scored Projects for WASC Consideration and noted the inclusion of the 5-year expenditure projections and the final scores. The District also provided a copy of the Scoring Rubric, which includes the final score and the Scoring Committees comments, for each project.

Ms. Morita provided a preview of a planning tool developed by the District to assist in programming the Stormwater Investment Plan (SIP).

b. Presentations:

a. Infrastructure Program

i. Barnes Park Project (City of Baldwin Park)

Presentation by David Lopez (Associate Engineer, City of Baldwin Park) and David Marquez (California Consultant). The Project will feature an underground stormwater vault that would capture and infiltrate runoff from an 81-inch storm drain that collects stormwater from the residential area northeast of Barnes Park. Discussion followed.

The committee noted that the water in the region is largely being captured already and that benefits may be primarily associated with water quality rather than water supply. The committee also asked about potential conflicts with nearby projects. Mr. Lopez noted that the project would not be affected by upstream projects.

Mr. Diaz asked how workforce development would be addressed. Mr. Lopez noted that there are local ordinances in place to address workforce development and that the city typically works with the LA Conservation Corps and Amigos de los Rios.

Ms. Ruffell asked about the planting plan. Mr. Lopez stated that the city has an existing tree palette and will be targeting planting of approximately 100 new trees.

ii. Finkbiner Park Multi-Benefit Stormwater Capture Project (City of Glendora)

Presentation by Oliver Galang (Craftwater Engineering) and Derek Wieske (Assistant Director, City of Glendora). The proposed project consists of a regional multi-benefit stormwater capture facility that will divert stormwater and urban runoff from a local storm drain and from Little Dalton Wash. Discussion followed.

Ms. Gardner asked if water reuse for irrigation was considered. Mr. Galang stated they are working with the Metropolitan Water District to add a stormwater harvesting component to provide irrigation.

Mr. Huff asked about potential siltation concerns. Mr. Galang stated that the design would incorporate baffles, pre-treatment, and manholes to address siltation issues.

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Ms. Enos asked about water quality benefits and capture area. Mr. Galang stated that they could enhance performance at the discharge point to enhance overall performance. The capture area includes the park and the adjacent city-owned alley.

Mr. Diaz asked about community engagement and workforce development. Mr. Galang stated that initial outreach efforts were conducted as part of the EWMP process and workforce development will be incorporated into the specifications. They are considering phasing the projects such that 2 fields can always be open.

Mr. Villaluna & Mr. Juarez stressed the importance of leveraging funds. Mr. Galang stated that they are looking into all grant opportunities.

b. Technical Resources Program:

i. None

c. Scientific Studies

i. San Gabriel Valley Regional Confirmation of Infiltration Rates (East San Gabriel Valley Watershed Management Group)

Presentation by Alexis Holmdal and Ed Othmer (Stantec). This scientific study proposes to identify field measured infiltration rates across the Upper San Gabriel River Watershed Area by utilizing standard methods of practice in order to optimize project design and prioritize project implementation for water quality enhancement and water supply augmentation. Discussion followed.

The committee noted their concerns with sequencing in relation to the development of the Technical Resources Program. Mr. Othmer stated that the data collected could feed into the Technical Resources Program. The District stated that Technical Resources Program will conduct the analysis necessary to develop a Feasibility Study, which may or may not include infiltration analysis, depending on the scope of the project.

d. Discussion of Watershed Area Priorities and the Evaluation Process to develop the Stormwater Investment Plan

Ms. Tori Klug (Stantec) reviewed the GIS mapping data available online to assist in the discussion of watershed area priorities.

The committee noted several additional datasets that may be useful. Stantec will work with the District and the appropriate entity to acquire these datasets.

Mr. Diaz noted workforce development, increased recreational access, and DAC benefits as potential watershed area priorities.

The committee noted that most of the water in the region is already captured and infiltrated. Therefore, the committee may consider prioritizing water quality benefits over water supply benefits.

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Ms. Enos would like to consider the development of new parks rather than the rehabilitation of existing parks. Ms. Sweet noted that parks are typically city owned therefore bypassing challenges associated with land acquisition.

The committee noted a focus on MS4 compliance but also acknowledged the need to look beyond MS4 at other watershed area priorities.

6. Voting Items

None.

7. Items for next agenda

The District recommends the following items for the next agenda:

- Presentations from Infrastructure Program Project applicants.

Mr. Diaz solicited additional recommendations from the committee for the next agenda.

8. Adjournment

Mr. Diaz thanked the committee members and public for their time and participation and adjourned the meeting.

Upper San Gabriel River
 Watershed Area Steering Committee Meeting
 COMMITTEE MEMBER AND ALTERNATE SIGN-IN



Member Name	Municipality/ Organization	Email Address		Signature
Julian Juarez	FCD	JJUAREZ@dpw.lacounty.gov	P	<i>Julian Juarez</i>
Carolina Hernandez	FCD	CHERNANDEZ@dpw.lacounty.gov	A	
Tom Love	Upper San Gabriel District	tom@usgvmwd.org	P	
Robert O. Tock	Upper San Gabriel District	robert@usgvmwd.org; christy@usgvmwd.org	A	
Kelly Gardner	Main San Gabriel Basin	kelly@watermaster.org	P	<i>K Gardner</i>
Tony Zampielo	Main San Gabriel Basin Watermaster	tony@watermaster.org	A	
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Mark Glassock	Los Angeles County Parks and Recreation	mglassock@parks.lacounty.gov	A	<i>Mark Glassock</i>
Bob Huff	Huff Strategies	bobhuff99@gmail.com	P	<i>Bob Huff</i>
Bryan Urias	Former USGVMWD Board Member	b.urias@yahoo.com	P	
Brian Villagomez	SGV Habitat For Humanity	bdv8@humboldt.edu	A	
Debbie Enos	Watershed Conservation Authority	denos@wca.ca.gov	P	
Jane Tsong	Watershed Conservation Authority	jtsong@wca.ca.gov	A	

Upper San Gabriel River
 Watershed Area Steering Committee Meeting
 COMMITTEE MEMBER AND ALTERNATE SIGN-IN



Member Name	Municipality/ Organization	Email Address		Signature
Ed Reyes	Ed P. Reyes & Associates	ed.p.reyesla@gmail.com	P	
David Diaz	Active SGV	david@activesgv.org	P	
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Julie Carver	Pomona	Julie_Carver@ci.pomona.ca.us	P	

Upper San Gabriel River
Watershed Area Steering Committee Meeting
COMMITTEE MEMBER AND ALTERNATE SIGN-IN



Member Name	Municipality/ Organization	Email Address		Signature
Fabian Aoun	Diamond Bar	faoun@diamondbarca.gov	A	
Lisa O'Brien	La Verne	lobrien@cityoflaverne.org	P	<i>Lisa O'Brien</i>
Shari Garwick	San Dimas	SGarwick@sandimasca.gov	A	

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 PUBLIC SIGN-IN



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KATHLEEN	MCGOWAN	MCGOWAN CONSULTING	KATHLEEN@MCGOWANCONSULTING
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DREW READY		CWH	DREW@WATERSHEDHEALTH.ORG


*Signing or completing this form is voluntary for members of the public

Upper San Gabriel River
 Watershed Area Steering Committee Meeting
 PUBLIC SIGN-IN



First Name	Last Name	Municipality/Organization	Email Address
Elizabeth	Ruedas	Michael Baker Intl.	Elizabeth.Ruedas@mbakerintl.com
DEBRA	WIESKE	GLENDORA	Dwieske@cityofglendora.org
José Rodriguez		IEC	InlandEngineer@gmail.com

*Signing or completing this form is voluntary for members of the public

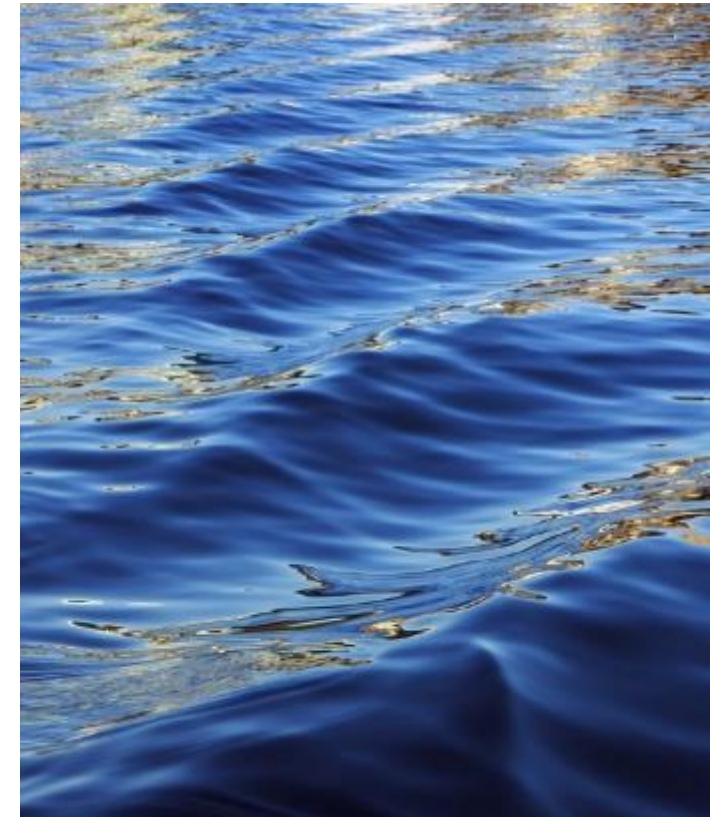


City of Baldwin Park Barnes Park Project

Total Funding Request: \$ 14,700,000

Presented By:
David Marquez (California Consulting)
David Lopez (City of Baldwin Park)

Presented to:
Safe, Clean Water Program Watershed Area
Steering Committee Upper San Gabriel River
(WASC)



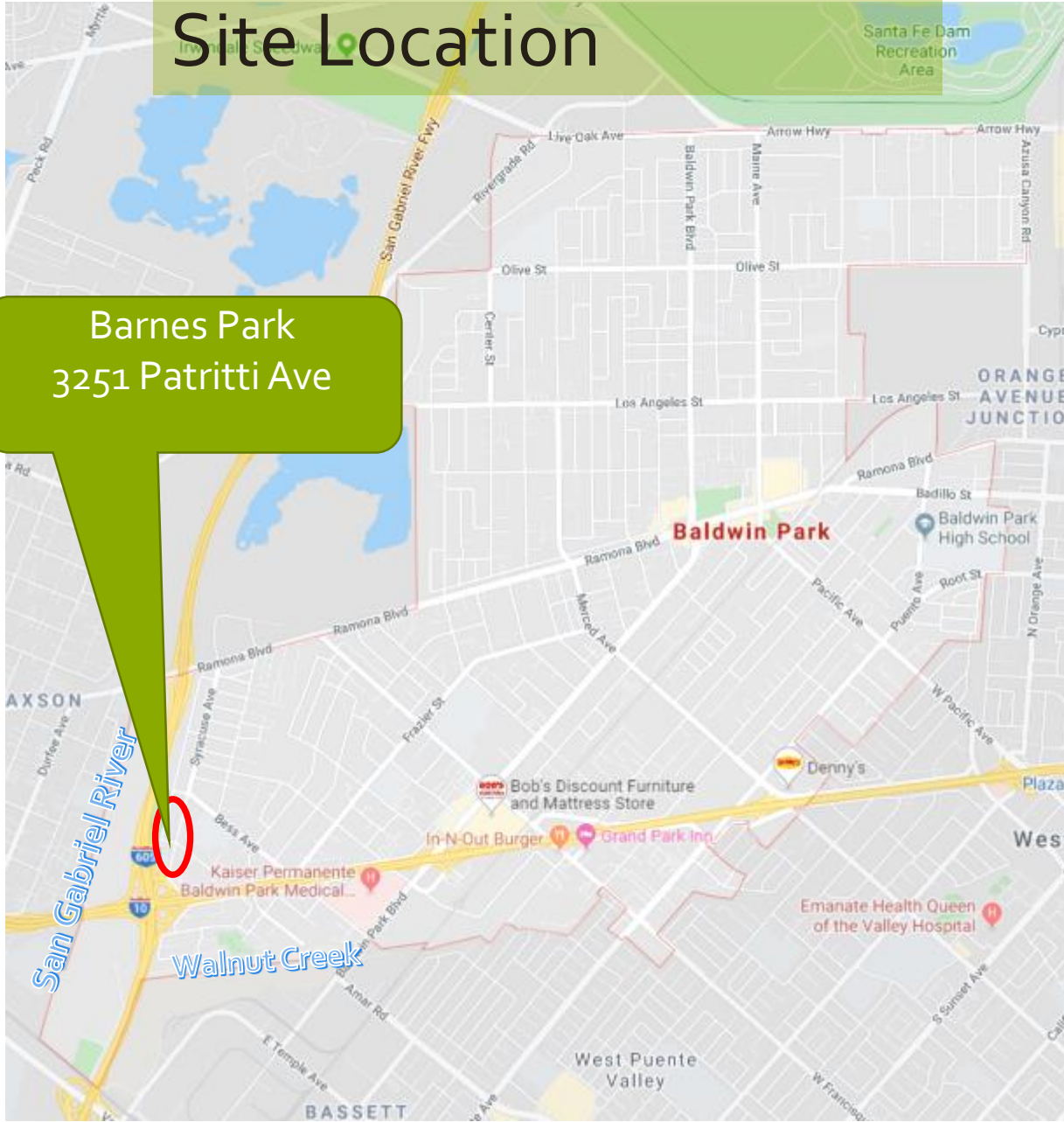
Site Selection Process

- The City is Built Out and is Park Poor
- Inside DAC Area
- Has a Great Infiltrative Soil Condition 12"/hr.
- Gravity Fed System - no pumps
- Near a Large Drain 81"RCP with 99 % residential Upstream
- Within Reach 4 of the San Gabriel River Spreading Grounds
- Large Park Demand and Regional Programs



Site Location

Barnes Park
3251 Patritti Ave



PORTION OF THE
GEOLOGIC MAP OF THE EL MONTE & BALDWIN PARK QUADRANGLES, LOS ANGELES COUNTY, CALIFORNIA
By THOMAS W. DIBBLEE, JR., 1999

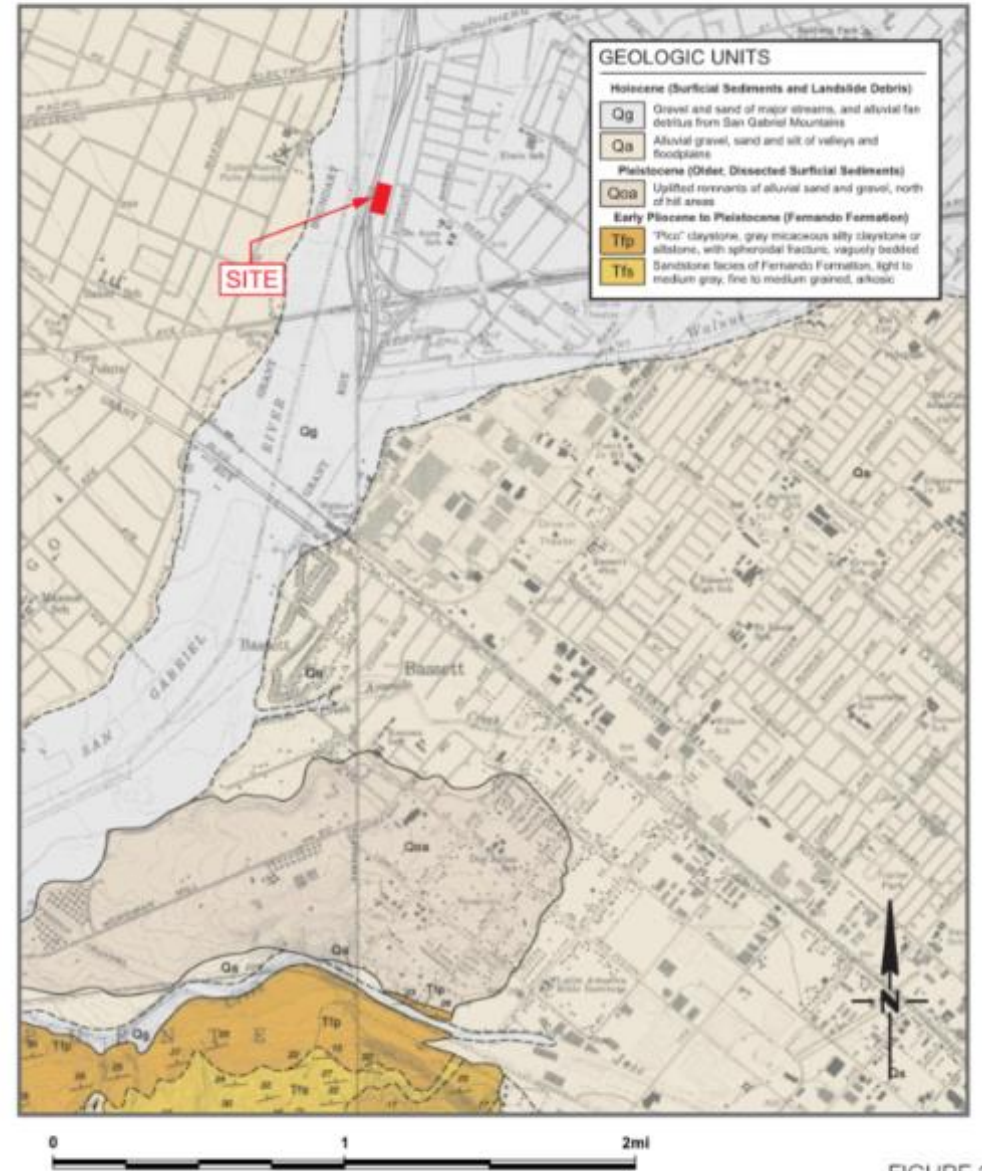
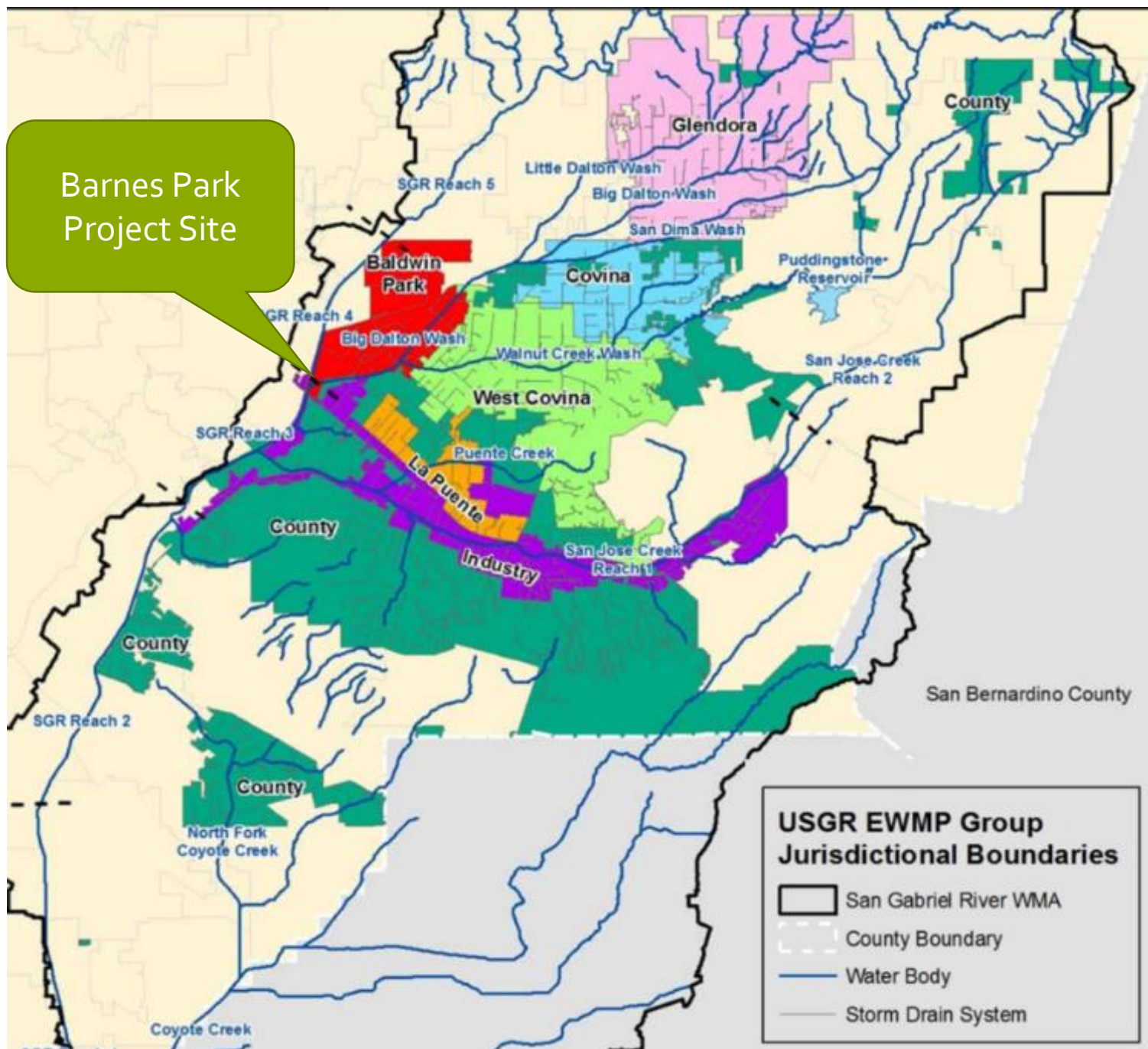


FIGURE 3

Watershed

- City Water Supply primary from Aquifers and a Regional 73" MWD Trunk line
- Near Confluence of San Gabriel River and Walnut Creek



Watershed

- Upper San Gabriel River Watershed EWMP Approved Project
- Drainage Area 440 acres
- Park is 6.44 acres
- 1.18 acre Infiltration Gallery
- Gravity Flow 50 cfs
- GWT over 105 feet below surface



Figure 1-1. Barnes Park Drainage Area and Location

Project Benefit and Uses

- Groundwater recharge in the Upper San Gabriel Valley
- TMDL Metals Capture Zinc, Nutrients, Selenium, and Bacteria
- Trash Capture before entering San Gabriel River
- Dry weather capture
- On site Bio Swales and plantings
- Measured Infiltration rate is 12"/hr. but to be conservative the 30 % design criteria used 5"/hr. for the design of the rain capture, storage and infiltration
- Infiltration gallery 1.18 acre and with a capacity of 10 ac-ft of storage.
- According to the Feasibility Study with Conservative Infiltration fate will capture about 60% of an average rain fall year
- Add Drought Tolerant Trees, with High CO₂ capture- local Green House Gas Reduction

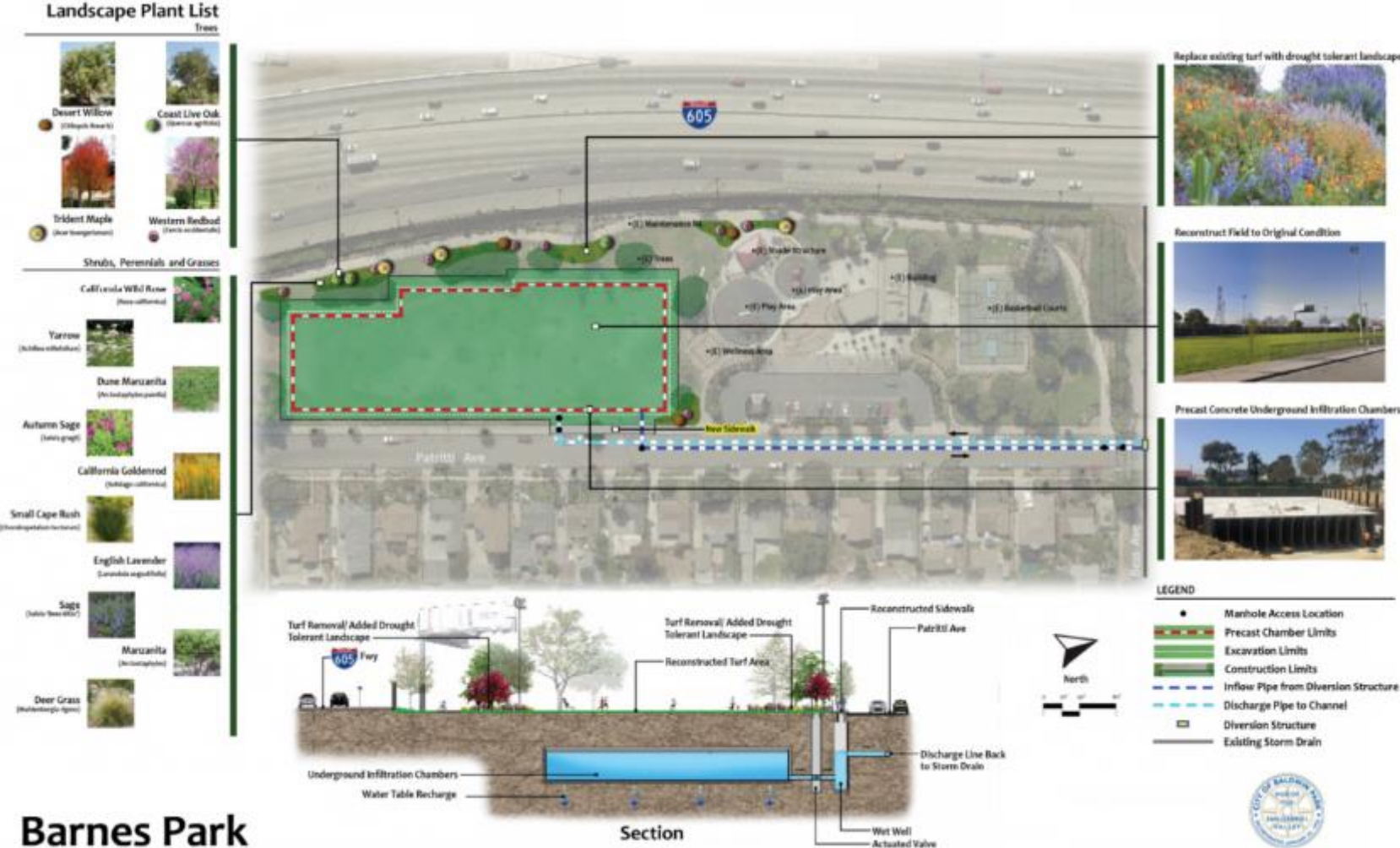
Project Benefit and Uses



Source: Conoth Engineered Solutions
 Figure 2-5. Typical Hydrodynamic Separator

<p>TETRA TECH</p> <p><small>WWW.TETRA-TECH.COM 5475 E. PUEBLO BLVD PUEBLO, CO 81002</small></p>	NO.	REVISION	REVISED BY	APPROVED BY	DATE	30% DESIGN - 9/7/2018 COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS BARNES PARK MULTI-BENEFIT STORMWATER CAPTURE PROJECT SITE PLAN

Multi-Benefits



Barnes Park

Multi-Benefit Stormwater Capture Project Above Ground Improvements

October 31, 2018



Anticipated Long Term and Baseline Hydrology

Table 1-2. Long-term baseline hydrology and zinc loading at Barnes Park diversion

Drainage Area	Impervious Cover	Avg. Annual Runoff	Avg. Annual Zn Load
440 acres	59%	282.9 ac-ft	128.9 lbs

Table 1-3. Design Storm and Critical Storm baseline hydrology and water quality loading.

85 th Percentile Design Storm		10 Year Design Storm		Critical Storm Metals Compliance	Critical Storm Bacteria Compliance
Peak Flow	Runoff Volume	Peak Flow	Runoff Volume	Zinc Load	Runoff Volume
35.2 cfs	13.4 ac-ft	167 cfs	85.3 ac-ft	13.2 lbs	16.1 ac-ft

- Help achieve compliance with MS₄ Permit
 - Removal of metals, nutrients, bacteria, trash
 - Removal of Dry weather pollutants

Project Water Supply Benefits

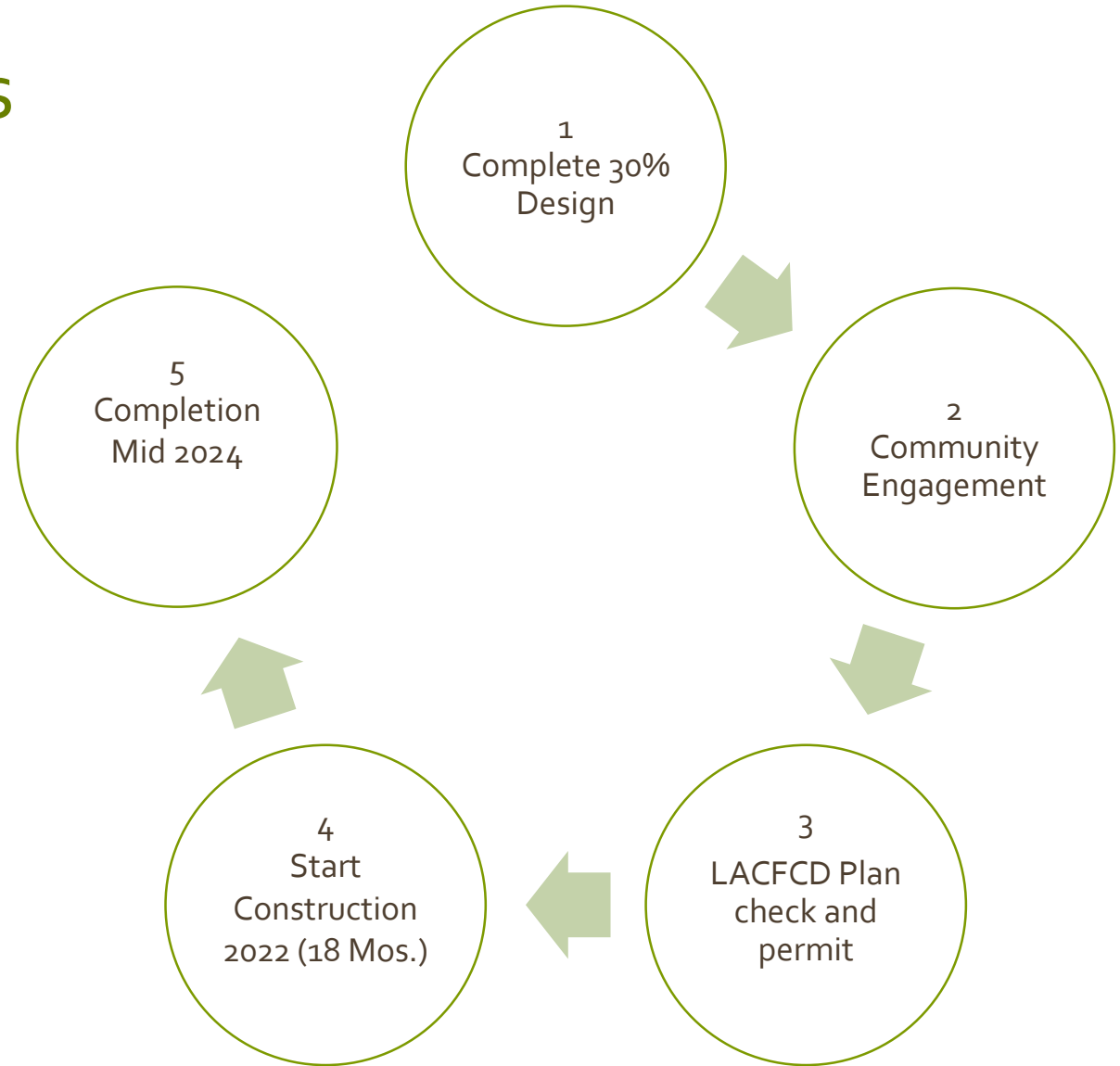
Metric	Runoff from Capture Area	Minimally Treated Outflow from Project	Inflow into Project Inlet	Outflow from Project Outlet	Reduction by Project	% Reduction by Project
Runoff Volume (ac-ft)	208.894	17.966	190.350	17.966	172.384	90.561 %
Total Zinc (ug/L)	223.540	99.750	226.470	99.750	126.720	55.954 %
Total Zinc (lbs)	126.986	4.874	117.228	4.874	112.354	95.843 %
Total Copper (ug/L)	73.750	40.060	73.380	40.060	33.320	45.407 %
Total Copper (lbs)	41.894	1.957	37.986	1.957	36.028	94.847 %
Total Lead (ug/L)	51.750	24.370	52.200	24.370	27.830	53.314 %
Total Lead (lbs)	29.399	1.190	27.018	1.190	25.828	95.594 %
Total Nitrogen (mg/L)	3.049	2.230	3.053	2.230	0.822	26.943 %
Total Nitrogen (lbs)	1732.121	108.961	1580.165	108.961	1471.204	93.104 %
Total Phosphorous (mg/L)	0.480	0.351	0.480	0.351	0.129	26.884 %
Total Phosphorous (lbs)	272.462	17.148	248.478	17.148	231.330	93.099 %
E.coli (#/100mL)	1.271E+005	9.149E+004	1.276E+005	9.149E+004	3.608E+004	28.282 %
E.coli (#)	3.275E+014	2.027E+013	2.995E+014	2.027E+013	2.792E+014	93.231 %
Toxics	N/A	N/A	N/A	N/A	N/A	N/A
Chloride	N/A	N/A	N/A	N/A	N/A	N/A
Trash	N/A	N/A	N/A	N/A	N/A	N/A

Community Investment and Multi-Benefits

- Multi-Benefits
 - ✓ Family Recreation Center- In-door play and activities
 - ✓ Multi-age play equipment (School Age and Tot-Lot)
 - ✓ Nighttime activities with sports lighting
 - ✓ Running/Walking path (ADA compliant)
 - ✓ Exercise Cluster with Shade sails
 - ✓ Basketball, soccer/play field
 - ✓ Picnic opportunities
 - ✓ Surveillance
 - ✓ Splash pad
- Additional Amenities
 - Educational Interpretive signage, including Project benefits
 - Natural Based solutions- bio-swales, dry well
 - Bicycle way station with “Fix-It stations”
 - Solar LED Lighting
 - 100 new Trees and native plants
 - Ball fence
 - Dog Park

Schedule and Expenditures

- Design
- Community Engagement
- Obtain Permit
- Construction Management
- Inspection and Testing
- Project Delivery Mid. 2024



Schedule and Expenditures

Schedule		
Milestones	Completion Date	Funds Requested
Feasibility Study	Completed	\$0
Complete Environmental Documentation	11/29/2020	\$470,000
30% Design	Completed	\$0
Design Remain, planning, and Permit	10/1/2021	\$ 854,000
Construction including Contingencies	7/16/2022	\$ 12,813,644
Construction Management, inspection and testing	7/16/2022	\$ 1,922,047
Park enhancements	7/16/2022	\$1,640,000
City Contribution	7/16/2022	- \$ 3,000,000
Total		\$ 14,700,000

- The City will be leveraging \$3,000,000 in Local funds, Grants (Prop 68 & Other) and Local Measure W

Multiple Benefits to a Disadvantaged Community

18% Poverty Rate in area, 1.99 Park Acres per 1,000 residents, Pollution Burden at 90th percentile

- Increased recreational play in a park poor community and improve public health
- Planting of drought tolerant trees and native plants, and installation of pervious pavement will help reduce urban heat island effect and increase carbon sequestration
- Increase quality of recreational play area and passive use green space
- Improved flood management
- Educational Benefits through collaboration of community partners

Partnerships

Community Partners

- Active SGV
- Amigos de Los Rios and the Emerald Necklace Group
- Nature for All
- San Gabriel Valley Conservation Corp

Municipal Partners

- City of Industry
- Covina
- El Monte
- Glendora
- La Puente
- West Covina
- Los Angeles County
- Los Angeles County Flood Control District

Barnes Park Community Engagement

- May 5, 2014: Informed stakeholders of EWMP process
-
- March 9, 2015: Updated stakeholders on EWMP progress
- Jan 13, 2019: Updated stakeholder on park improvements and investments as part of Prop 68 Community Engagement Process
- June 14, 2019: Park update and community input as part of Prop 68 community engagement process
- June 21, 2019: Park update as part of Prop 68 Community Engagement Process
- June 28, 2019: Park update as part of Prop 68 Community Engagement Process

Questions and Answers

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UPPER SAN GABRIEL RIVER WATERSHED AREA STEERING COMMITTEE
February 10, 2020 | Sanitation Districts of LA County



Finkbiner Park Multi-Benefit Stormwater Capture Project

PRESENTED BY
Oliver Galang, PE | Craftwater Engineering
Derek Wieske, Assistant Director of Public Works, City of Glendora



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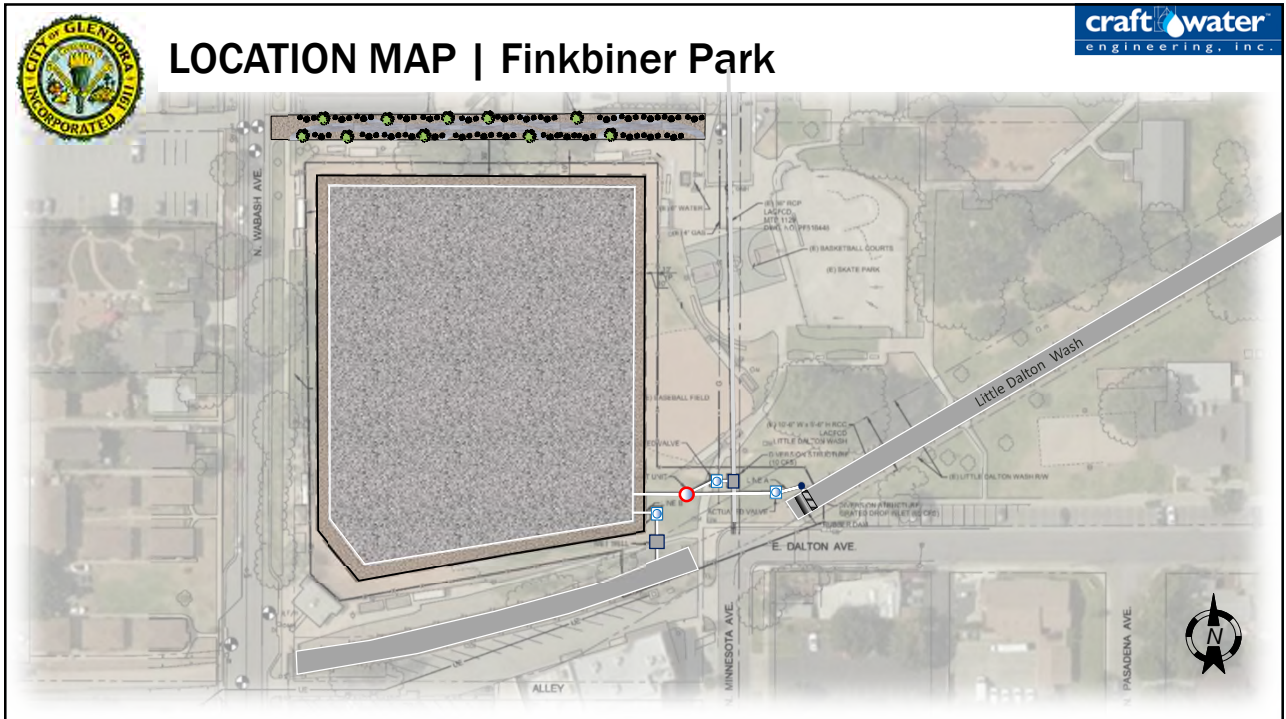
UPPER SAN GABRIEL RIVER WATERSHED AREA STEERING COMMITTEE
SAFE, CLEAN WATER PROGRAM INFORMATION

DESCRIPTION	DATA/INFORMATION
PROJECT NAME	Finkbiner Park Multi-Benefit Stormwater Capture Project
PROJECT LEAD	City of Glendora
PRESENTER	Oliver Galang , Craftwater Engineering Project Manager Derek Wieske , Assist. Director of Public Works, City of Glendora
TOTAL FUNDING REQUEST	TOTAL PROJECT COST: \$25 Million <ul style="list-style-type: none"> Planning, Design, Construction Mgt: \$6.6 Million Construction: \$18.4 Million

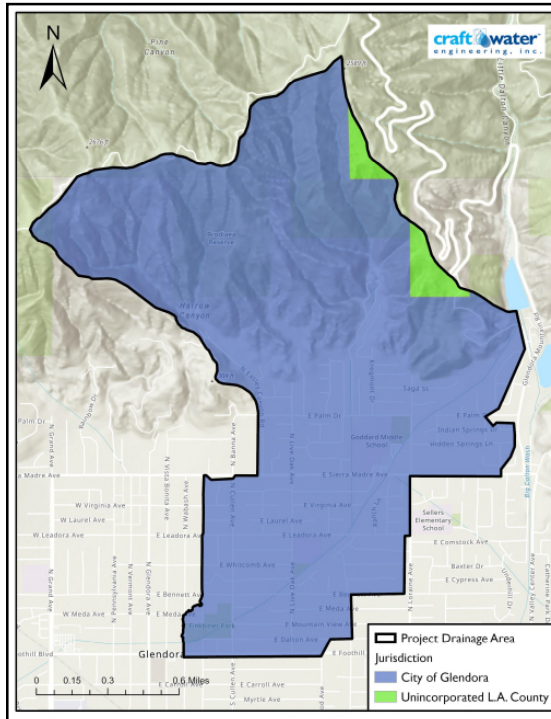
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Finkbiner Park WATERSHED OVERVIEW

Watershed Drainage Area of **1,638 acres**

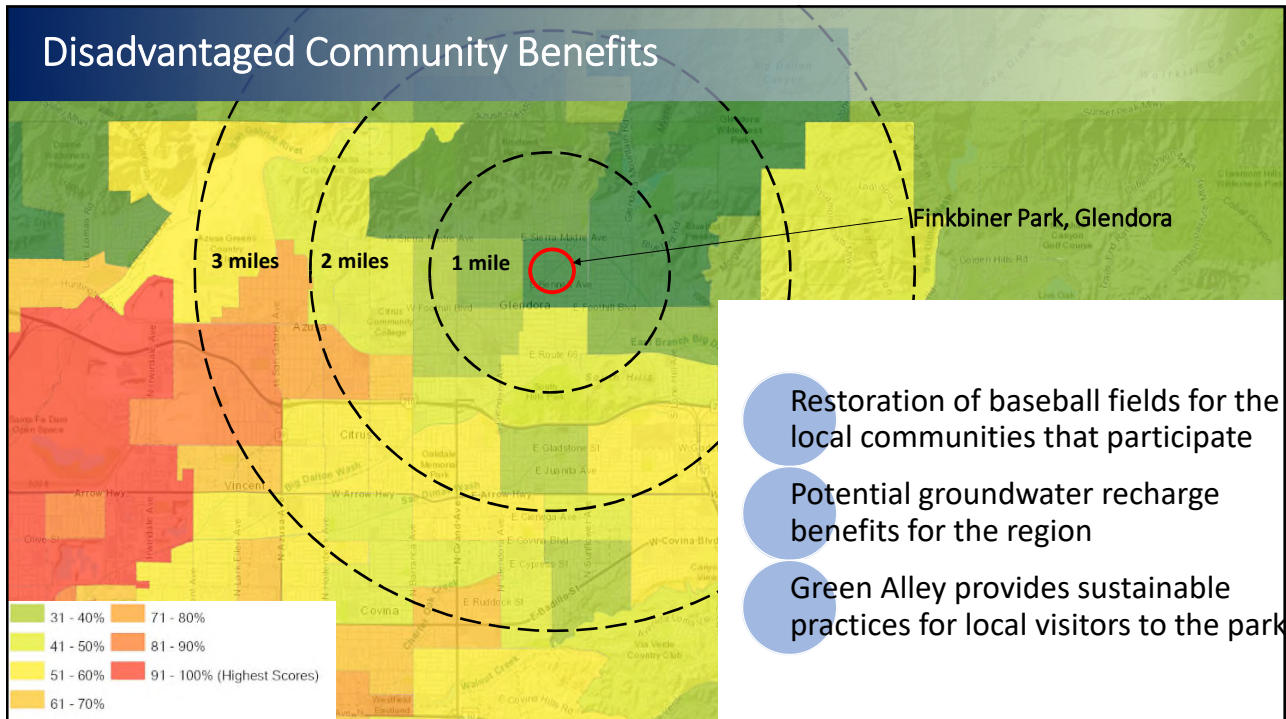
Land use primarily residential

Drainage area consists of the **City of Glendora** (1,595 acres, 97%) and the **County Unincorporated area** (43 acres, 3%)

Collaborative implementation with the **USGR EWMP Group** to address regulatory requirements for water quality

Potential **water recharge** benefits for the region

5



Restoration of baseball fields for the local communities that participate

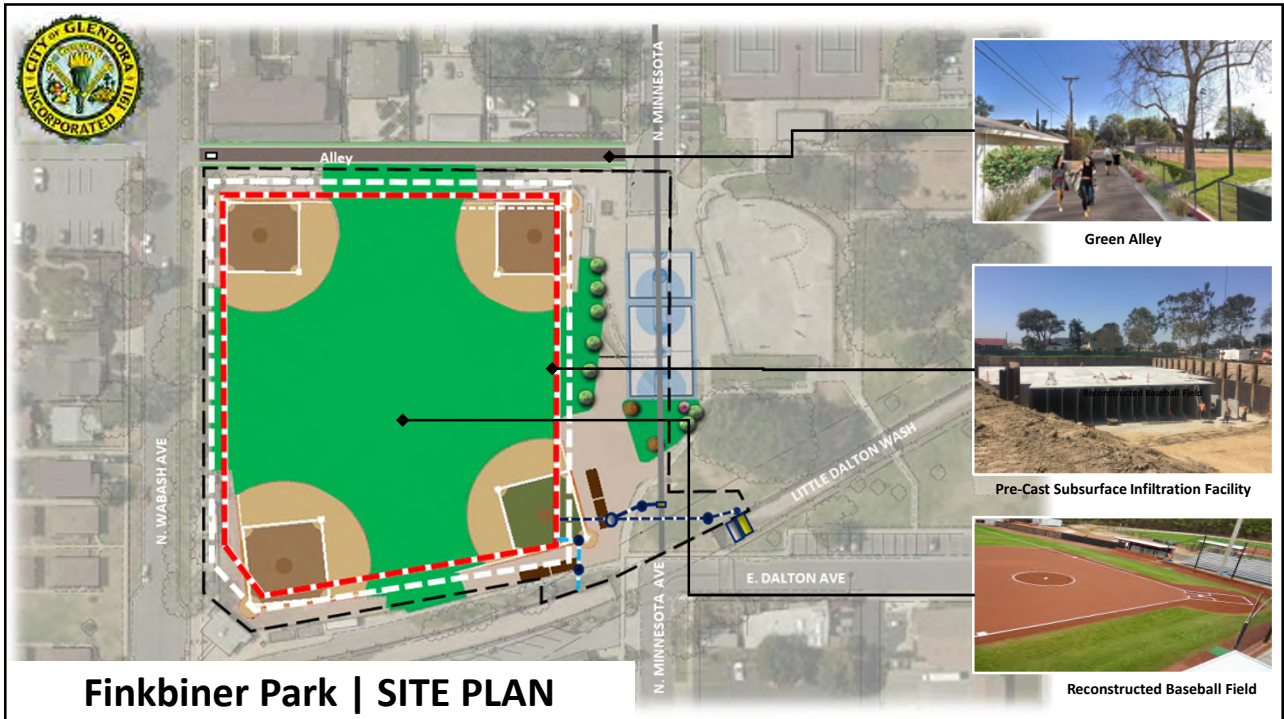
Potential groundwater recharge benefits for the region

Green Alley provides sustainable practices for local visitors to the park

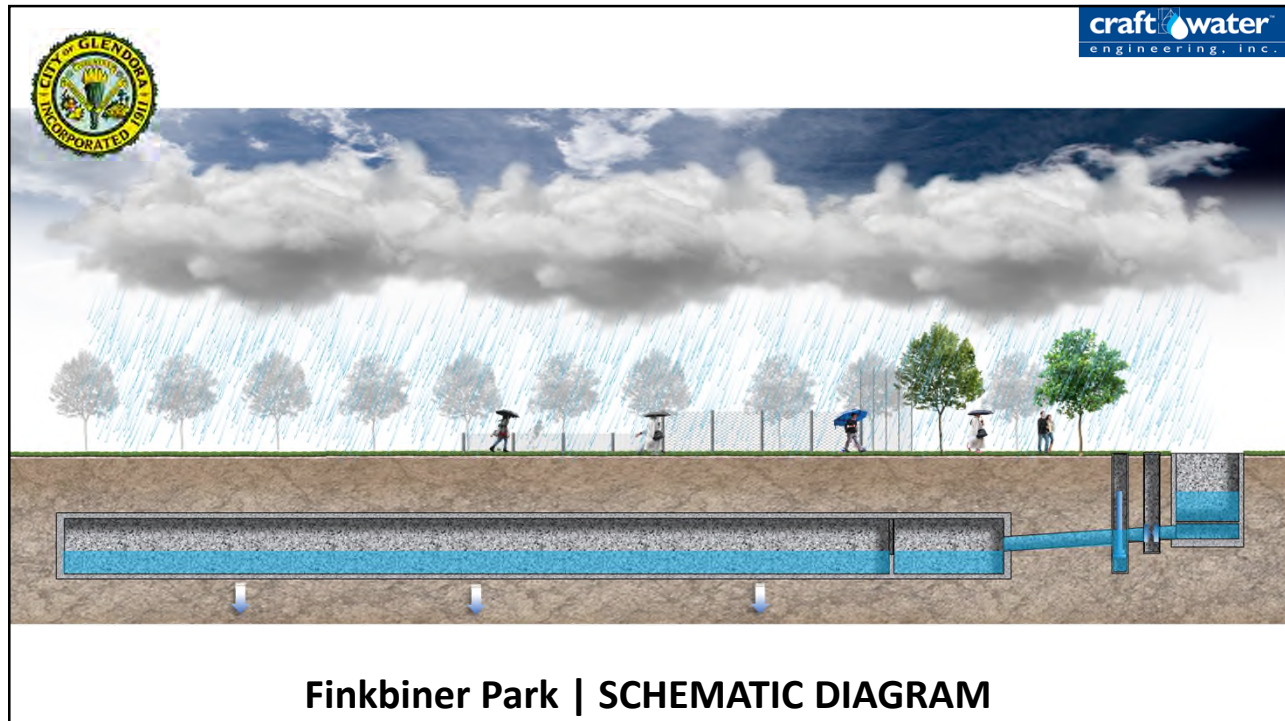
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8



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FINKBINER PARK | Schedule and 5 Year Look Ahead

TASK NAME	Start	Finish
FINKBINER PARK MULTI-BENEFIT SW CAPTURE PROJECT		
PHASE 1. PERMITTING & APPROVALS	July 2020	March 2022
PHASE 2. CONSTRUCTION DRAWINGS	July 2020	June 2022
PHASE 3. CONSTRUCTION	July 2022	February 2024
OPERATION AND MAINTENANCE	March 2024	June 2025

craft water engineering, inc.

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FINKBINER PARK | Expenditure Projections of SCW Funds

YEAR	FISCAL YEAR	SCW FUNDS	DESCRIPTION
1	FY 20-21	\$ 3,320,000	Planning and Design
2	FY 21-22	\$ 3,310,735	Planning and Design
3	FY 22-23	\$ 4,800,000	Construction
4	FY 23-24	\$ 6,800,000	Construction
5	FY 24-25	\$ 7,287,813	Construction

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REGIONAL PROGRAM WATER MANAGEMENT PROGRAM

Upper San Gabriel River EWMP Project Site



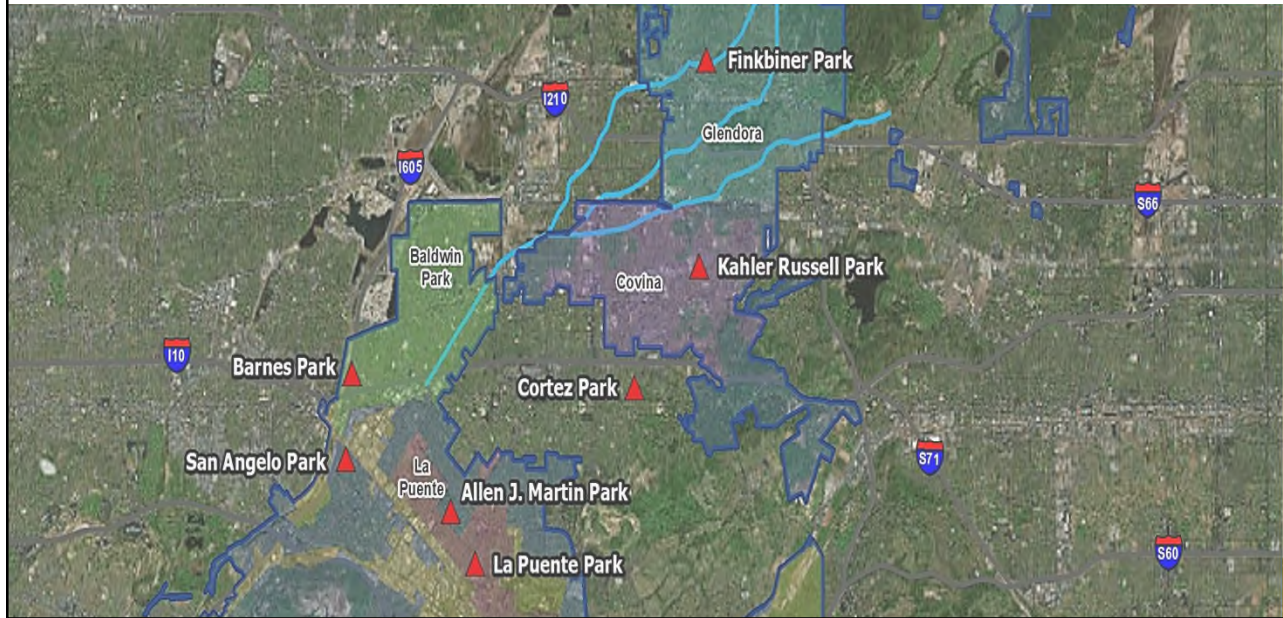
The Upper San Gabriel River **EWMP** was developed to address water quality effluent limits with control measures for improving water quality

Zinc is the primary pollutant and **E. coli bacteria** is the longer-term pollutants driving the development of runoff capture criteria

Pollutant control measures include Low Impact Development, Green Streets, Minimum Control Measures, and **Regional BMP Projects**

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USGR EWMP: Multi-Benefit Regional BMP Projects



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Safe, Clean Water Scoring Review

Preliminary Score 83 **Scoring Committee 79**

Section	Score Range	Scoring Standards	Finkbiner Park		COMMENT
			Data	Score	
C. Community Investment Benefits	10 points max	The project provides Community Investment Benefits			
	10 points	C1. Project includes: - One of the Community Investment Benefits identified below = 2 points - Four distinct Community Investment Benefits identified below = 5 points - Seven distinct Community Investment Benefits identified below = 10 points	5	5	<i>Flood Management, Enhancement of Park, enhanced recreation, reduce heat island, additional trees</i>
D. Nature-Based Solutions	15 points max	The project implements Nature-Based Solutions			
	15 points	DD1. Project: Implements natural processes or mimics natural processes to slow, detain, capture, and absorb/infiltrate water in a manner that protects, enhances and/or restores habitat, green space and/or usable open space = 5 points	5	12	<i>Reconstruct Alley with Permeable Materials</i>
		Utilizes natural materials such as soils and vegetation with a preference for native vegetation = 5 points	5		
Removes Impermeable Area from Project (1 point per 20% paved area removed) = 5 points	2				
D. Leveraging Funds and Community Support	10 points max	The project achieves one or more of the following:			
	6 points max	E1. Cost-Share. Additional Funding has been awarded for the project. - > 25% Funding Matched = 3 points - > 50% Funding Matched = 6 points	0%	0	<i>Park Improvements estimated at \$2 M, provided as local match</i>
	4 points	E2. The project demonstrates strong local, community-based support and/or has been developed as part of a partnership with local NGOs/CBOs.	Yes	4	<i>Support Letters from Main San Gabriel Basin, Covina, County of LA</i>

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FINKBINER PARK MULTI-BENEFIT STORMWATER CAPTURE PROJECT WATER QUALITY AND WATER SUPPLY BENEFITS



- Subsurface Storage: 19 AF
- 24-Hour Treatment: 26.5 AF
- Potential Annual Water Supply/Recharge Benefit: 409 AF

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FINKBINER PARK MULTI-BENEFIT STORMWATER CAPTURE PROJECT COMMUNITY INVESTMENT and NATURE-BASED SOLUTIONS



Flood risk mitigation from storage detention basin

Enhancements to the baseball fields from restoration efforts

Green Alley retrofit with permeable pavement and native vegetation

Native vegetation on east side of baseball field and planting of additional trees

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Questions?

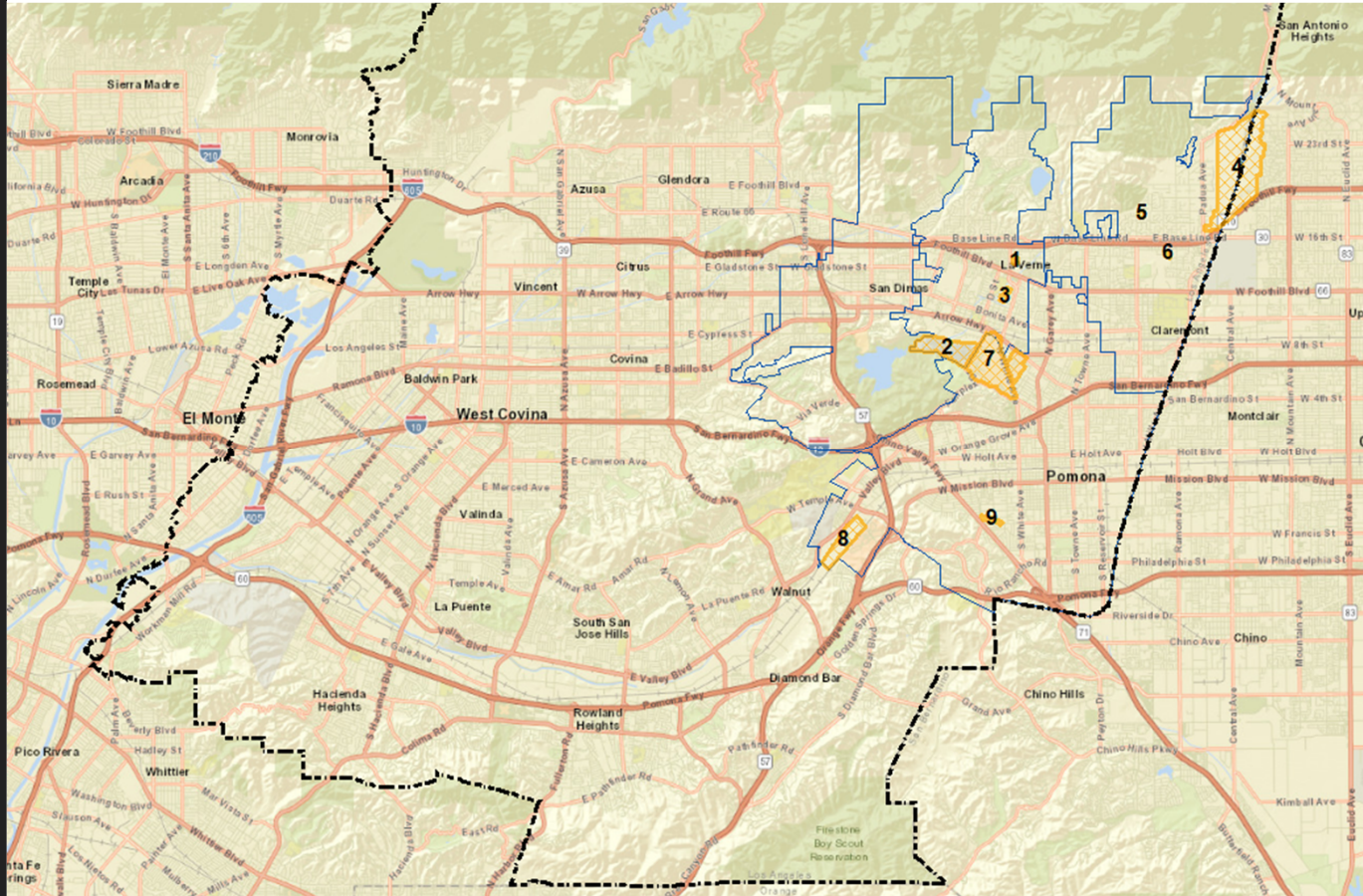
Oliver Galang, PE | Craftwater Engineering
Derek Wieske, Assistant Director of Public Works, City of Glendora

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San Gabriel Valley Regional Confirmation of Infiltration Rates (Scientific Study)

Ed Othmer PE, CPESC, CPSWQ,
QSP/D ToR, QISPToR, ENV SP, PMP,
& Alexis Holmdal PE, PMP, ENV SP
(Stantec), representing the East
San Gabriel Valley Watershed
Management Group in partnership
with Six Basins Watermaster

Upper San Gabriel River
Watershed Area Steering
Committee (WASC)
February 10, 2020





Agenda

- Nexus to Stormwater Capture
- Study Objectives
- Summary of Study

Nexus to Stormwater Capture

Confirm infiltration rates in areas of potential stormwater infiltration projects that will create additional water supply.

Objectives

- Provide field verification of infiltration rates at 12-15 sites
 - Preliminary infiltration rates based on the NRCS Web Soil Survey
- Allow for prioritization of infiltration projects
- Provide basis to adequately size and optimize infiltration projects

Current Infiltration Rate Determination

Summary by Map Unit — Los Angeles County, California, Southeastern Part (CA696)

Map unit symbol	Map unit name	K _{SAT} Rating (micrometers per second)
1003	Urban land-Palmview-Tujunga, gravelly complex, 2 to 9 percent slopes	68.0735
1006	Urban land-Soboba complex, 0 to 5 percent slopes	88.8082
1007	Urban land-Biscailuz-Pico complex, 0 to 2 percent slopes	27.6234
1138	Urban land-Azuvina-Montebello complex, 0 to 5 percent slopes	5.8602
1146	Lithic Haploxerolls-Lithic Argixerolls complex, 20 to 55 percent slopes	26.6929



Site Number	Project	City	Saturated Hydraulic Conductivity ¹ (in/hr)	Assumed Design Infiltration Rate ² (in/hr)
1	Lutheran HS	La Verne	9.66	3.22
2	Brackett Field	La Verne	3.93	1.31
3	Las Flores Park	La Verne	0.84	0.28
4	SASG	Claremont	12.6	4.20
5	La Puerta Sports Park	Claremont	12.6	4.20
6	Pedley	Claremont	12.6	4.20
7	Fairplex	Pomona	3.93	1.31
8	Cal Poly Pomona Sprada Ranch	Pomona	3.93	1.31
9	Palm Lakes Golf Course	Pomona	3.30	1.10

1: Referenced from NRCS Web Soil Map; 2: Safety Factor of 3 was applied.

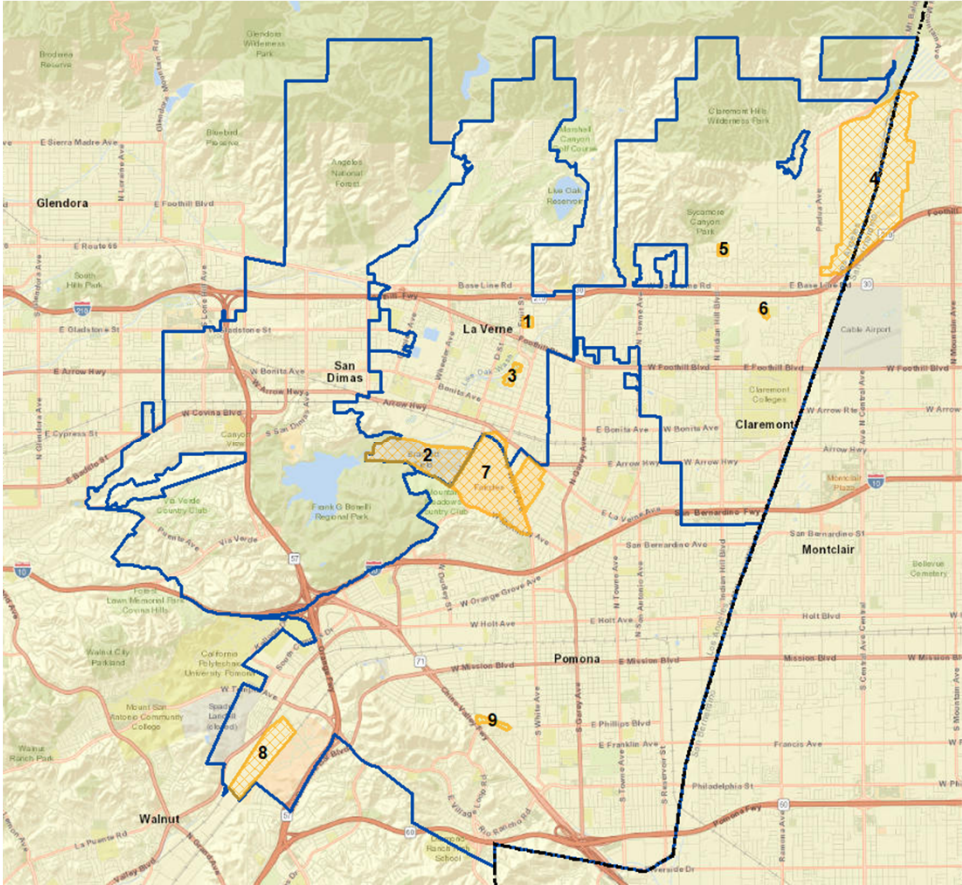
Summary of Study

- Coordinate with landowners and facility managers to schedule testing
- Obtain necessary permits
- Mark out proposed boring locations in area clear of utilities
- Core any existing pavement to provide access for drilling
- Perform subsurface evaluation, which includes drilling, logging and sampling of soils
- Perform percolation tests
- Convert percolation rate to infiltration rate
- Abandon borings and restore surface
- Prepare geotechnical report



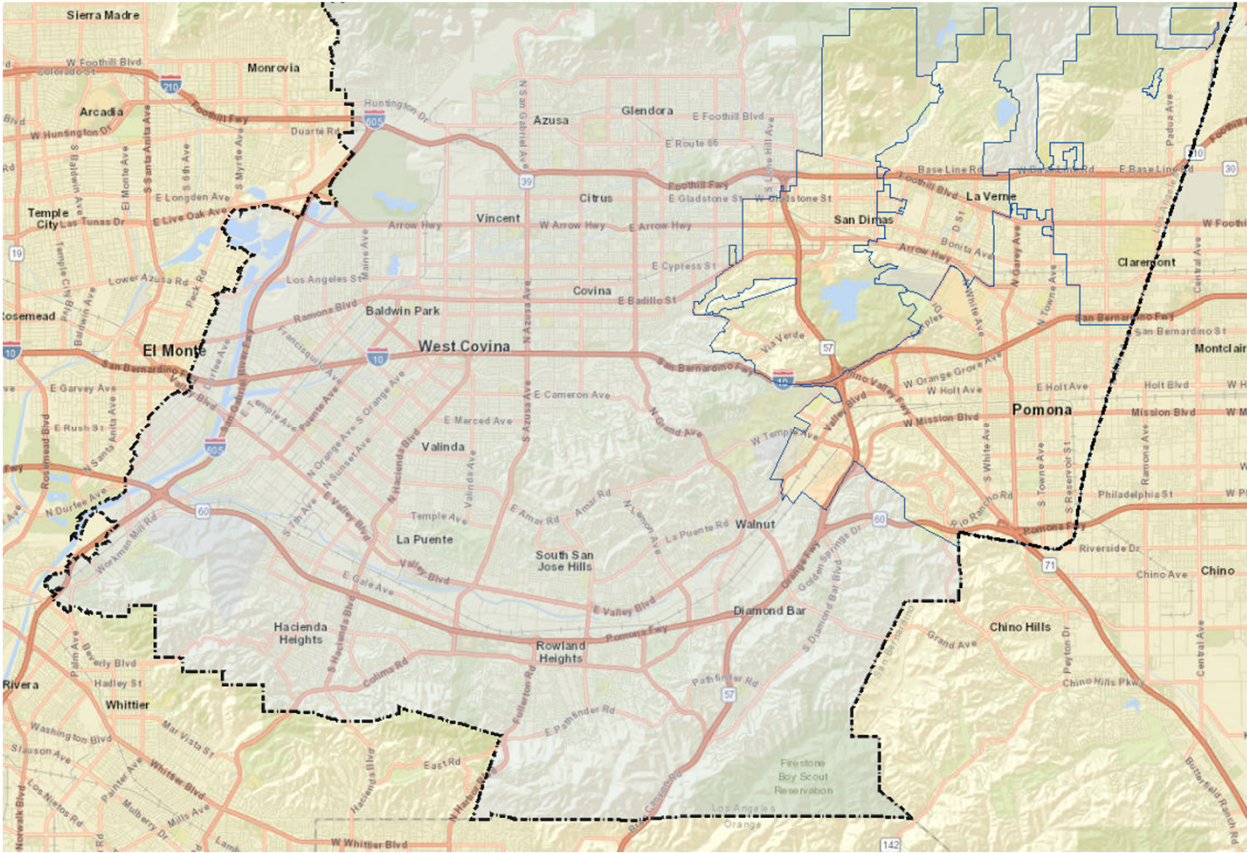
Proposed Locations

- 1. Lutheran High School
- 2. Brackett Field
- 3. Las Flores Park
- 4. San Antonio Spreading Grounds
- 5. La Puerta Sports Park
- 6. Pedley Spreading Grounds
- 7. Fairplex
- 8. Cal Poly Pomona Spadra Ranch
- 9. Palm Lakes Golf Course



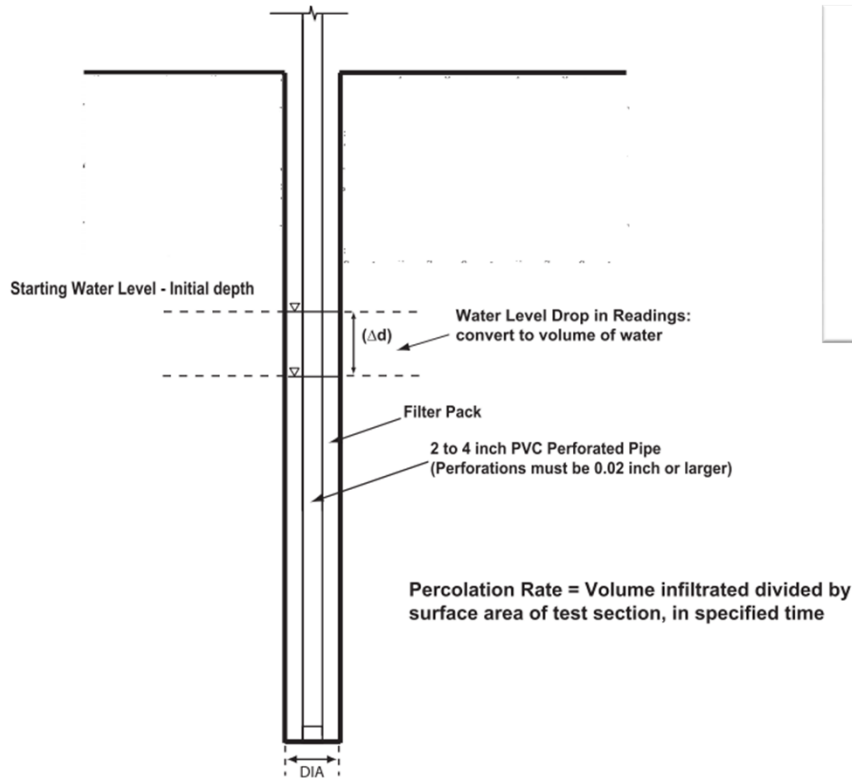
Proposed Locations

- +3-6 Sites - Locations TBD
- Upper San Gabriel River WASC to determine locations



Infiltration Testing Procedure

- Complies with Geotechnical and Materials Engineering Local Policy



ADMINISTRATIVE MANUAL
COUNTY OF LOS ANGELES
DEPARTMENT OF PUBLIC WORKS
GEOTECHNICAL AND MATERIALS ENGINEERING DIVISION









GS200.2
6/30/17

**GUIDELINES FOR GEOTECHNICAL INVESTIGATION AND REPORTING
LOW IMPACT DEVELOPMENT STORMWATER INFILTRATION**

Boring Percolation Test Procedure

This procedure is similar to the USBR 7300-89 Well Permeameter Testing Procedure and is useful for LID features that are proposed at depth, since the depth of testing can be isolated with slotted sections of PVC pipe, surrounded by a bentonite cap, and placed at any depth in the borehole. It requires the application of a reduction factor to account for non-vertical flow.

Items Included in Report

-  Existing data to help establish a regional network of infiltration rates from existing regional projects and/or spreading basins.
-  Potential geotechnical hazards
-  Boring logs
-  Laboratory results
-  Soil classifications
-  Depth to groundwater
- $t_c = \frac{\Delta H \times 60 \times r}{\Delta t (r + 2H_{avg})}$ In-situ percolation test results and summary of procedure
-  Recommended long-term infiltration rate and associated depth
-  Correlation between NRCS soil type and actual observed infiltration rates

Expenditure Projections

Project Phase	General Timeframe	Needed Funds
Planning, Field Investigation	July 2020 – June 2021	\$385,000 (~24 borings)
Field Investigation, Report Preparation	July 2021 – June 2022	



Q and A

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