

Safe, Clean Water Program

Lower San Gabriel River

Watershed Area Steering Committee (WASC)



Meeting Minutes:

Tuesday, February 11, 2020

9:00am-11:00am

Burns Community Center, 2nd floor

5510 Clark Ave. Lakewood, CA

Attendees:

Committee Members Present:

Julian Juarez (LA County Flood Control District)
Lyndsey Bloxom* (Water Replenishment District)
Meredith Reynolds (City of Long Beach)
Kristen Ruffell (Sanitation Districts)
Kayla Slatten* (Conservation Corps of Long Beach)
Adam Galia (Resident)

Joseph Gonzalez* (Rivers Mountains Conservancy)
Mike O'Grady (Cerritos)
Delfino Consunji (Downey)
Lisa Ann Rapp (Lakewood)
Melissa You (Long Beach)
Noe Negrete (Santa Fe Springs)
Vicki Smith (Whittier)

Committee Members Not Present:

Michelle Yanez (San Gabriel Valley Economic Partnership)
Glen Kau (Norwalk)

Marissa Christiansen (Friends of the LA River)
Kevin Wattier (Central Basin)

*Committee Member Alternate

See attached sign-in sheet for full list of attendees

1. Welcome and Introductions

Ms. Rapp, the Chair of the Lower San Gabriel River WASC, called the meeting to order.

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

2. Public Comment Period

No public comment.

3. Approval of Meeting Minutes from January 28, 2020

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

The Committee voted to approve the meeting minutes from January 28, 2020 (unanimous)

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4. Committee Member and District Updates

Ms. Kevin Kim (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.

Ms. Rapp noted that the cost of construction for O&M projects was not considered as leveraged funds and would like clarification from the District and/or the scoring committee.

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. Stormwater Treatment and Reuse System (STAR System) Hacienda Park (City of La Habra Heights)

Presentation by Christopher Rochfort (STAR Water Group), The project aims to capture, treat and store stormwater runoff from the Park and nearby catchment for beneficial reuse. Permeable trench system, underground stormwater storage modules and water-efficient landscaping of the STAR System are able to provide long-term cost-efficient stormwater reuse option, including onsite irrigation, and reduce heat island effects for the local community. The system also effectively manages and treats soluble pollutants in the storm runoff, which protects nearby water assets and environment. Discussion followed.

Ms. Rapp noted that if the project is using the water for spray irrigation that it will need to meet the regulations set by the LA County Department of Health.

Mr. Negrete asked for clarification of the municipality benefits. Mr. Rochfort stated that the tributary area is primarily within the parking lot area and would benefit the city of La Habra Heights.

Ms. Ruffell asked for information about the horse arena. Mr. Rochfort clarified that it is a day use practice area. No horses are kept in the horse arena.

The committee asked for clarification on several project components. Mr. Rochfort clarified that the project is a wet weather project and the filtration system is about 3 feet deep. A pipe will run under the garden to connect the components and infiltration can occur in the garden and the grassy areas. The project is not located in a DAC. Landscaping will be city maintained and city funds will be utilized to

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conduct general maintenance efforts not specifically associated with the Safe, Clean Water Program.

ii. **Skylinks Golf Course at Wardlow Stormwater Capture Project (City of Long Beach)**

Presentation by Oliver Galang (Craftwater Engineering) and Richard Watson (Richard Watson & Associates). The proposed project consists of a regional multi-benefit stormwater capture facility that will divert stormwater and urban runoff from the Wardlow Channel into an undeveloped area on the NE of the Skylinks Golf Course. This Project was identified for implementation in the Los Cerritos Channel Watershed Management Program. Discussion followed.

Ms. Rapp asked about coordination with upstream projects. Mr. Watson stated that the other projects in the region are associated with a separate tributary and efforts will be coordinated.

Ms. Ruffell asked about how the treatment system would meet TMDLs. Mr. Watson stated that sediment reduction and runoff reduction would reduce bacteria and pollutants and that additional space is available to expand the project, if needed.

Ms. Rapp asked about spray irrigation. Mr. Watson stated that there is currently no treatment for spray irrigation, but they are considering drip irrigation for landscaped areas.

Ms. Slatten expressed her concerns with lack of community support and multi-use benefits. She recommends incorporating more wetlands, trails, etc.

Mr. Juarez noted that there is a large park to the north of the project area so there may be opportunity to increase the capacity of the project. However, it is important to consider the cost-effectiveness.

Ms. Slatten asked about the O&M plan. Mr. Watson stated that the plan would be developed as part of the design process and that the city would obtain permits from the District.

iii. **Hermosillo Park (City of Norwalk)**

Presentation by John Hunter (John L. Hunter and Associates). Hermosillo Park is located in the City of Norwalk near two major storm drains. New soccer/multi-use fields are anticipated to be constructed soon and this is an opportunity to install a stormwater capture and treatment system under the fields.

Ms. Rapp asked about Proposition 68 funding. Mr., Hunter stated that the Proposition 68 funding would be used to cover other improvements and that funding would need to be supplemented with Safe, Clean Water funds.

Mr. O'Grady asked about overlap with the Cerritos Sports Complex. Mr. Hunter stated that the tributary areas overlap but Cerritos Sports Complex was sized in consideration of Hermosillo Park to maximize efficiency.

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Mr. Gonzales asked about community outreach efforts. Mr. Hunter stated that they have conducted 7 outreach events. They are also in consultation with the Conservation Corps of Long Beach.

Ms. Rapp asked if the captured water would be used for irrigation. Mr. Hunter stated that the system would be similar to systems installed by the City of Lakewood.

Mr. Juarez requested a breakdown of the anticipated planning costs.

iv. Cerritos Sports Complex Project (City of Cerritos)

Presentation by John Hunter. The project will entail the construction of a regional stormwater capture and infiltration facility and enhancements to the play surface of the park.

Ms. Rapp asked about the dead vegetation on site. Mr. O'Grady clarified that the presence of landfill material results in depressions and areas of puddling.

Ms. Ruffell asked about coordination with CalRecycle and noted potential concerns. Mr. O'Grady stated that the funding request is higher in order to conduct groundwater analysis and address CalRecycle's concerns. The committee discussed the option of phasing the project to ensure landfill issues are addressed before allocating funds for construction.

b. 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 discussed MS4 compliance, cost effectiveness, DAC benefits, community inclusivity and outreach, regional benefits, and new construction as potential priorities.

Ms. Ruffell recommend applicants provide a table of municipality benefits that the cities are in agreement with. Ms. Ruffell also proposed each committee member advocate for their recommended project, then the committee votes to prioritize projects and allocate funding.

Ms. Bloxom recommended funding planning only for specific projects so that the WASCs can review the results before allocating funds for construction.

6. Voting Items:

None.

7. Items for next agenda

The District recommends the following items for the next agenda:

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- Presentations from Infrastructure Program Project applicants.

Ms. Rapp solicited additional recommendations from the committee for the next agenda.

The Chair and Vice-Chair are unavailable for the March 10, 2020 meeting. The committee rescheduled the meeting for March 3, 2020 from 9:00am – 11:00am in Lakewood.

8. Adjournment

Ms. Rapp thanked the committee members and public for their time and participation and adjourned the meeting.

DRAFT

Lower 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	
Diane Gatza	Water Replenishment District	dgatza@wrd.org	P	
Lyndsey Bloxom	Water Replenishment District	lbloxom@wrd.org	A	<i>Lyndsey Bloxom</i>
Stephen Scott	City of Long Beach Parks and Recreation	Stephen.Scott@longbeach.gov	P	
Meredith Reynolds	City of Long Beach Parks and Recreation	Meredith.Reynolds@longbeach.gov	A	<i>Meredith Reynolds</i>
Kristen Ruffell	Sanitation Districts	kruffell@lacsd.org	P	<i>Kristen Ruffell</i>
Mike Sullivan	Sanitation Districts	msullivan@lacsd.org	A	
Kevin Wattier	Central Basin	kevinw@centralbasin.org	P	
Dan Knapp	Conservation Corps of Long Beach	dknapp@cclb-corps.org	P	
Kayla Slatten	Conservation Corps of Long Beach	kkellyslatten@cclb-corps.org	A	<i>Kayla Slatten</i>
Adam Galia	Resident	agaliam81@gmail.com	P	<i>Adam Galia</i>
Thalia Campos	Center for Asian Americans United for Self Empowerment	thalis887@gmail.com	A	
Michelle Yanez	San Gabriel Valley Economic Partnership	myanez@sgvpartnership.org	P	
Marissa Christiansen	Friends of the LA River	marissa@folar.org	P	
Mark Stanley	Rivers Mountains Conservancy	mstanley@rmc.ca.gov	P	

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



Member Name	Municipality/ Organization	Email Address		Signature
Joseph Gonzalez	Rivers Mountains Conservancy	Jgonzalez@rmc.ca.gov	A	
Mike O'Grady	Cerritos	mograd@cerritos.us	P	
Rebecca Scott	Cerritos	rscott@cerritos.us	A	
Delfino Consunji	Downey	dconsunji@downeyca.org	P	
Dan Mueller	Downey	dmueller@downeyca.org	A	
Lisa Ann Rapp	Lakewood	lrapp@lakewoodcity.org	P	
Konya Vivanti	Lakewood	kvivanti@lakewoodcity.org	A	
Melissa You	Long Beach	Melissa.You@longbeach.gov	P	
Alvin Papa	Long Beach	Alvin.Papa@longbeach.gov	A	
Glen Kau	Norwalk	gkau@norwalkca.gov	P	
Noe Negrete	Santa Fe Springs	noenegrete@santafesprings.org	P	
Marlin Munoz	La Mirada	mmunoz@cityoflamirada.org	A	
Vicki Smith	Whittier	vsmith@cityofwhittier.org	P	
Kyle Cason	Whittier	kcason@cityofwhittier.org	A	

Lower San Gabriel River
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 PUBLIC SIGN-IN



First Name	Last Name	Municipality/Organization	Email Address
TORI	KLUG	Stantec	tori.klug@stantec.com
CHRIS	ROCHFORD	STAR	chris@star-water-group.com
YALE	WILLIAMS	STAR	" "
DIVER	GALANG	CRAFTWATER INC.	diver.galang@craftwaterinc.com
Bryce	Lee	JCHA	blee@jlha.net
John	Hunter	"	JLHANTER@JCHA.NET
Courtney	Bonilla	Council for Watershed Health	courtney@watershedhealth.org
Fred	Gonzalez	LACFCO	fgonzel@pw.lacounty.gov
Richard	Watson	RWA	rwatson@rwaplanning.com
Robert Gomez	Gomez	LA C F C O	rjgomez@pw.lacounty.gov
Ivan Tseng		LACPW	

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

Stormwater Treatment And Reuse System (STAR System), Hacienda Park La Habra Heights

Project lead: City of La Habra Heights

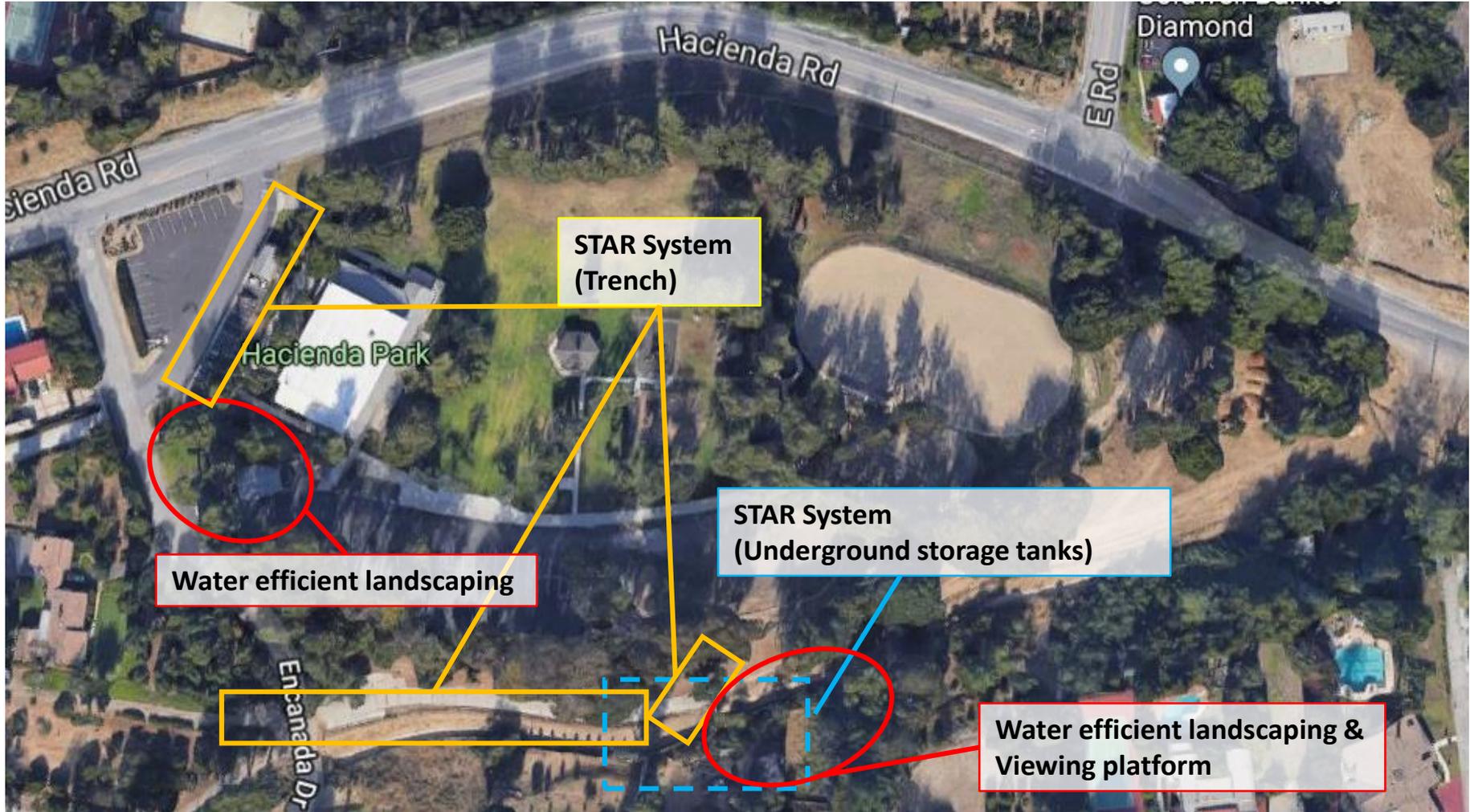
Presented by: Christopher Rochfort (STAR Water Group)

Total funding requested: \$1,882,354 (over project lifespan)



Project Introduction

SCW WATERSHED AREA: Lower San Gabriel River



Municipality Benefits - Environment

- Capture stormwater for;
 - Treatment – Metals, Nutrients, Compounds & Micro-Plastics
 - Storage – Underground reducing evaporation loss and,
 - Reuse – Replace potable water used for irrigation
- Protect nearby La Mirada Crk from runoff pollutants
- Provide onsite water reuse e.g. irrigation
- Reduce local flooding risks
- Improve shade area and reduce heat island effects

Municipality Benefits - Community

- Upgrade the park with access to the nearby La Mirada Crk
- Encourage the use recycled materials in construction
- Reduced impact on landfills
- Build water efficient landscaping for aesthetics purpose
- Increase awareness of stormwater reuse through signage and education

Feasibility Study

Water Quality	
BMP Type	Biofiltration
Storage volume	0.1297 ac-ft (130 m3 storage tank +30 m3 trench)
Module-generated 24-hr Capacity	1.2897 ac-ft (stored and treated runoff)
Construction Cost	0.902 million
Cost Effectiveness	1.286

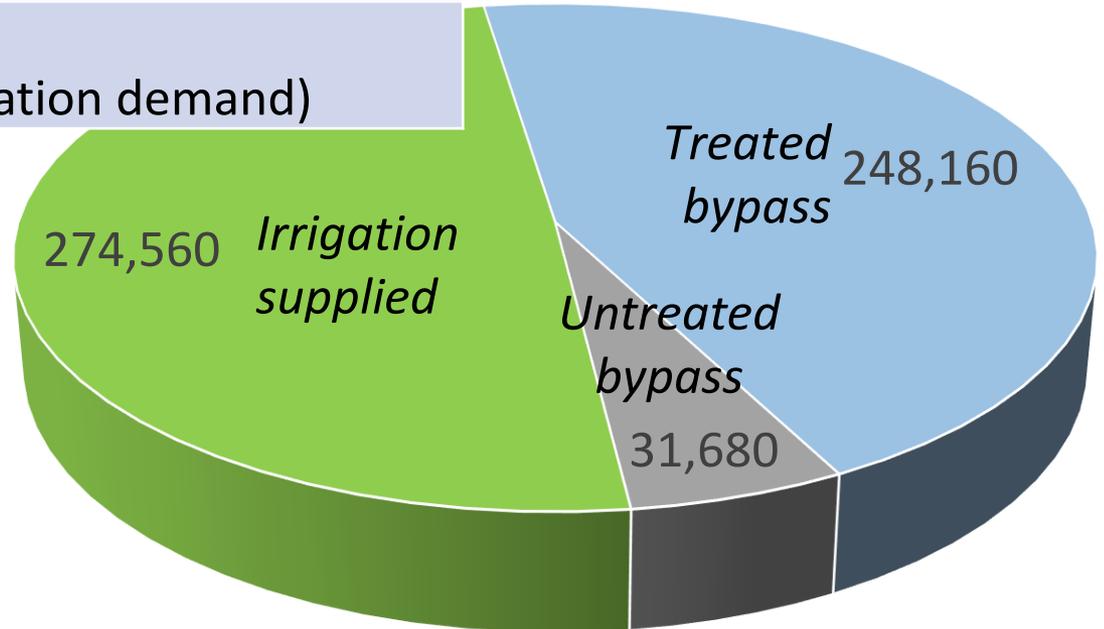
Long-term performance		
Primary pollutant	Toxics (Hydrocarbons, Cu, Pb, Zn, Fe, Al, TSS)	90% removal
Secondary pollutant	Nutrients (TN, TP)	63.5 % removal

Note: The pollutants removal is modelled by MUSIC (V6.3) using field test data on organic biofiltration media treating storm runoff



Feasibility Study

Water Supply	
Onsite Storage	33,500 gallons tank
Annual reuse volume	1.61 ac-ft (Irrigation + Treated bypass)
Annual irrigation supply	0.84 ac-ft (≈20% irrigation demand)



Total Annual Runoff : 554,761 gallons

Feasibility Study - Community Investment Benefits

Improve flood management, flood conveyance, or flood risk mitigation

- The trench, underdrain channel and underground storage tank reduce runoff and provide additional rain water detention/retention on site to reduce the flood risks

Create and enhance park space

- Two sets of new water efficient landscaping constructed with new plantings. Reused stormwater will keep grassy area watered during dry season

Improve public access to waterways

- The viewing platform provides the link with La Mirada Creek. Currently the steepness of the terrain stops community from reaching the waterways.



Feasibility Study - Community Investment Benefits cont'd

Enhance recreational opportunities

- Provide irrigation supply for grassy area that is used for regular community events. Additional shade trees provide extra aesthetics and natural beauty to the site.

Reduce heat island effect and increase shade

- Water efficient landscaping will reflect the heat and reduce heat island effect

Increase the number of trees and other vegetation

- New water efficient landscaping with additional trees, shrubs and herbaceous plants being planted.



Feasibility Study - Nature Based Solutions

Natural Processes

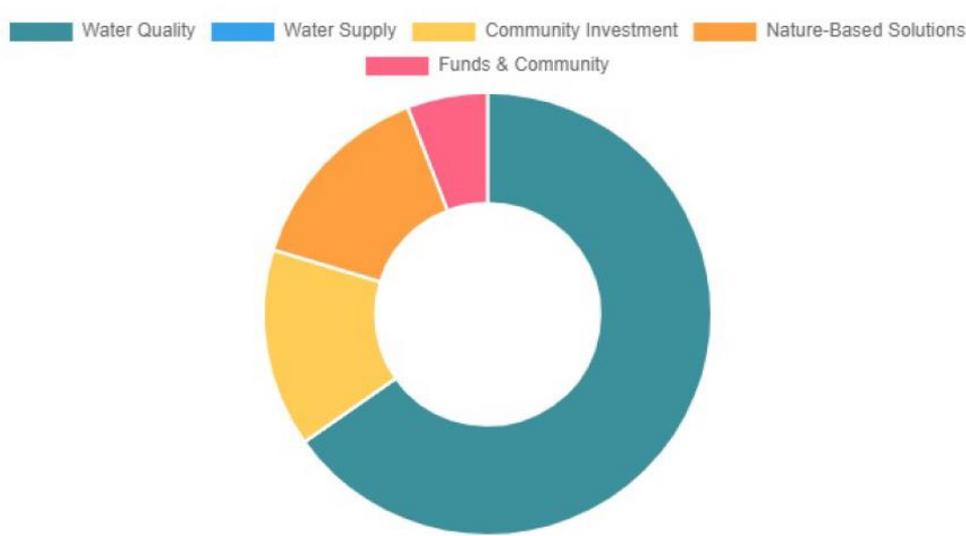
- The STAR System is based on Advanced Bio-Filtration Infiltration Technology.
- The treatment and reactive mechanisms of ABIT are all natural chemical, physical and biological processes.
- STAR System to be “optimized” by adjusting each mechanism through component selection and grading to maximize its efficacy to target specific pollutants. Kalkulus computer design system.
- The natural gravitational method of operation does not need any external power source to treat the polluted storm water to a high level.

Natural Materials

- The system uses all natural and recycled materials for treatment including organics, carbon, silica glass sand and selected natural reactive minerals.



Feasibility Study - scores



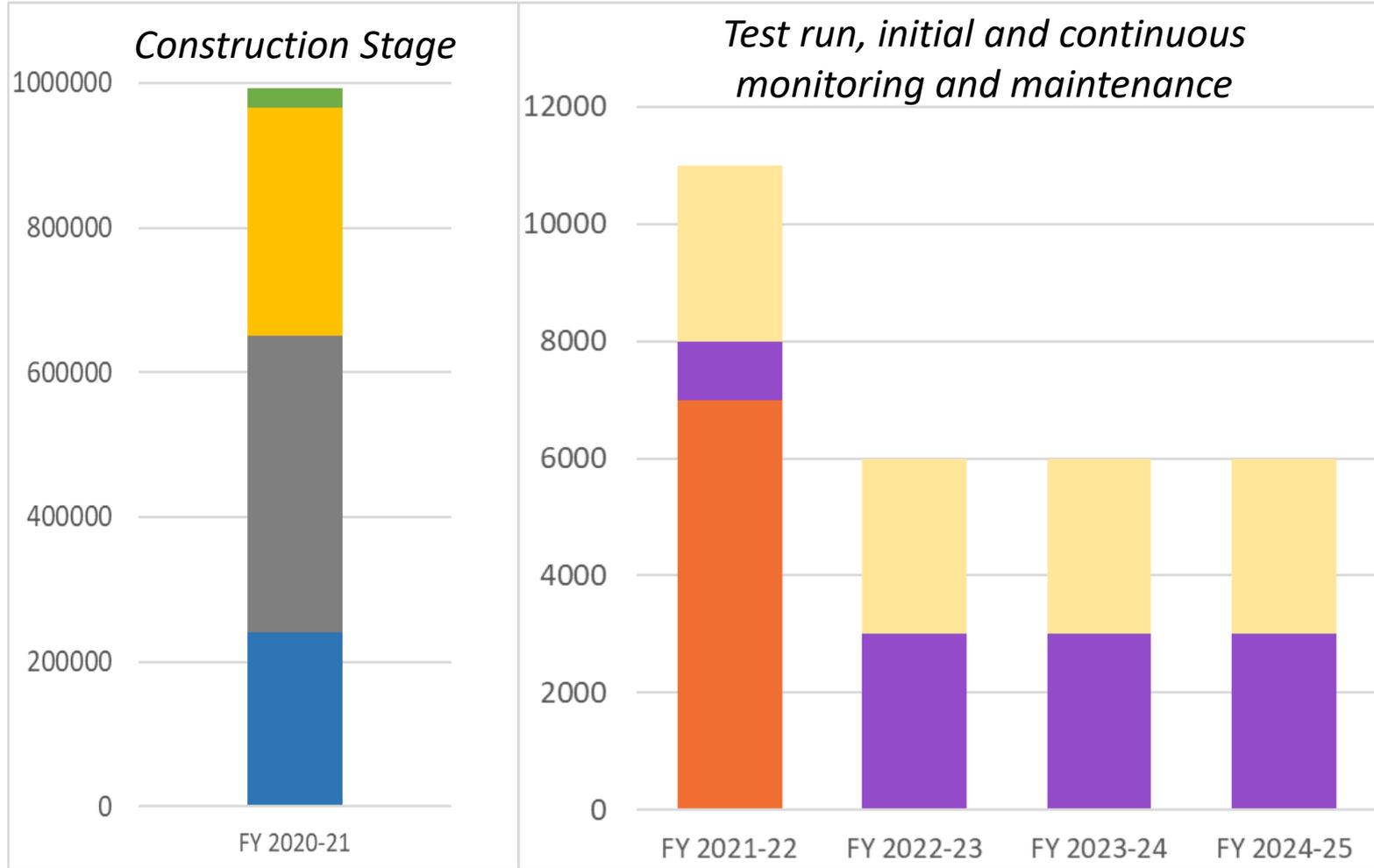
Water Quality Part 1	Water Quality Part 2	Community Investment	Nature Based Solutions	Leveraging Funds Part 2	Total
20	25	10	10	4	69



5 Year Budget

- Milestone 1
- Milestone 2
- Milestone 3
- Milestone 4

- Milestone 5
- Milestone 6 (Annual monitoring)
- Milestone 6 (Annual maintenance)



Milestones & Tasks

- 2.1 Removal of concrete and asphalt – 11/Feb/2021
- 2.2 Bulk excavation for linear drainage and stockpile for backfill – 28/Feb/2021
- 2.3 Locate and expose potential service conflicts – 11/Mar/2021
- 2.4 Power supply for pump and control, irrigation connection – 30/Mar/2021

- 4.1 Excavate Water-efficient landscaping site - 27/Aug/2021
- 4.2 Install growing media for the water-efficient landscaping - 12/Sep/2021
- 4.3 Plant vegetation for water-efficient landscaping - 19/Sep/2021
- 4.4 Construct viewing platform – 21/Sep/2021
- 4.5 Reinstate permanent asphalt sealed pavement - 28/Sep/2021



- 1.1 Planning and design - 18/Nov/2020
- 1.2 Preparation of a Project Specific Management Plan and Procedures - 31/Dec/2020
- 1.3 Raw material characterisation and specification - 31/Dec/2020
- 1.4 Liaison with local product manufacturer, supplier and construction team - 30/Jan/2021
- 1.5 Community consultation - 30/Jan/2021

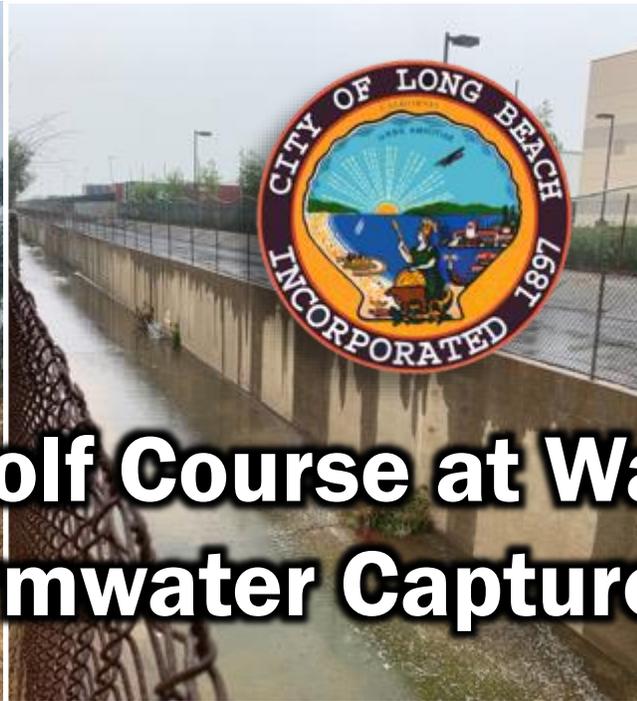
- 3.1 Supply and install liner system and Rigofill ST and backfill for trench grate system - 20/Apr/2021
- 3.2 Supply and install liner system and Rigofill ST and backfill for storage tank - 30/May/2021
- 3.3 Install inspection shafts, hydraulic connection pipe for trench grate system and storage tank - 30/May/2021
- 3.4 Supply and install filter cartridges to suit - 15/Jun/2021
- 3.5 Construct concrete surroundings including barrier kerb - 15/Jul/2021
- 3.6 Intersection crossing of hydraulic connection – 31/Jul/2021

- 5.1 Monitor rain garden vegetation for establishment period - 31/Mar/2022
- 5.2 Monitor trench and storage system performance under a medium rainfall event – 31/Mar/2022

Thank you

Q & A





Skylinks Golf Course at Wardlow Channel Stormwater Capture Project



PRESENTED BY
Oliver Galang, PE | Craftwater Engineering
Richard Watson, Richard Watson & Associates, LCC Watershed Group

LOWER SAN GABRIEL RIVER WATERSHED AREA STEERING COMMITTEE

SAFE, CLEAN WATER PROGRAM INFORMATION

DESCRIPTION	DATA/INFORMATION
PROJECT NAME	Skylinks Golf Course at Wardlow Channel Stormwater Capture Project
PROJECT LEAD	City of Long Beach Los Cerritos Channel Watershed Group
PRESENTERS	Oliver Galang , Craftwater Engineering Project Manager Richard Watson , Consultant to the Los Cerritos Channel Watershed
TOTAL FUNDING REQUEST	TOTAL PROJECT COST: \$10.5 Million <ul style="list-style-type: none">• Planning, Design, Construction Mgt: \$2 Million• Construction: \$8.4 Million



PROJECT LOCATION



Skylinks Golf Course at
Wardlow Channel

REGIONAL WATER MANAGEMENT PROGRAM Los Cerritos Channel Watershed

Los Cerritos Channel Watershed is a **17,711-acre self-contained watershed**

Highest **priority pollutants** include metals, with zinc as the limiting pollutant, and bacteria

Los Cerritos Watershed Management Plan, approved on 04/28/15

The watershed has **10 sub-basins** that influence the plan and monitoring locations

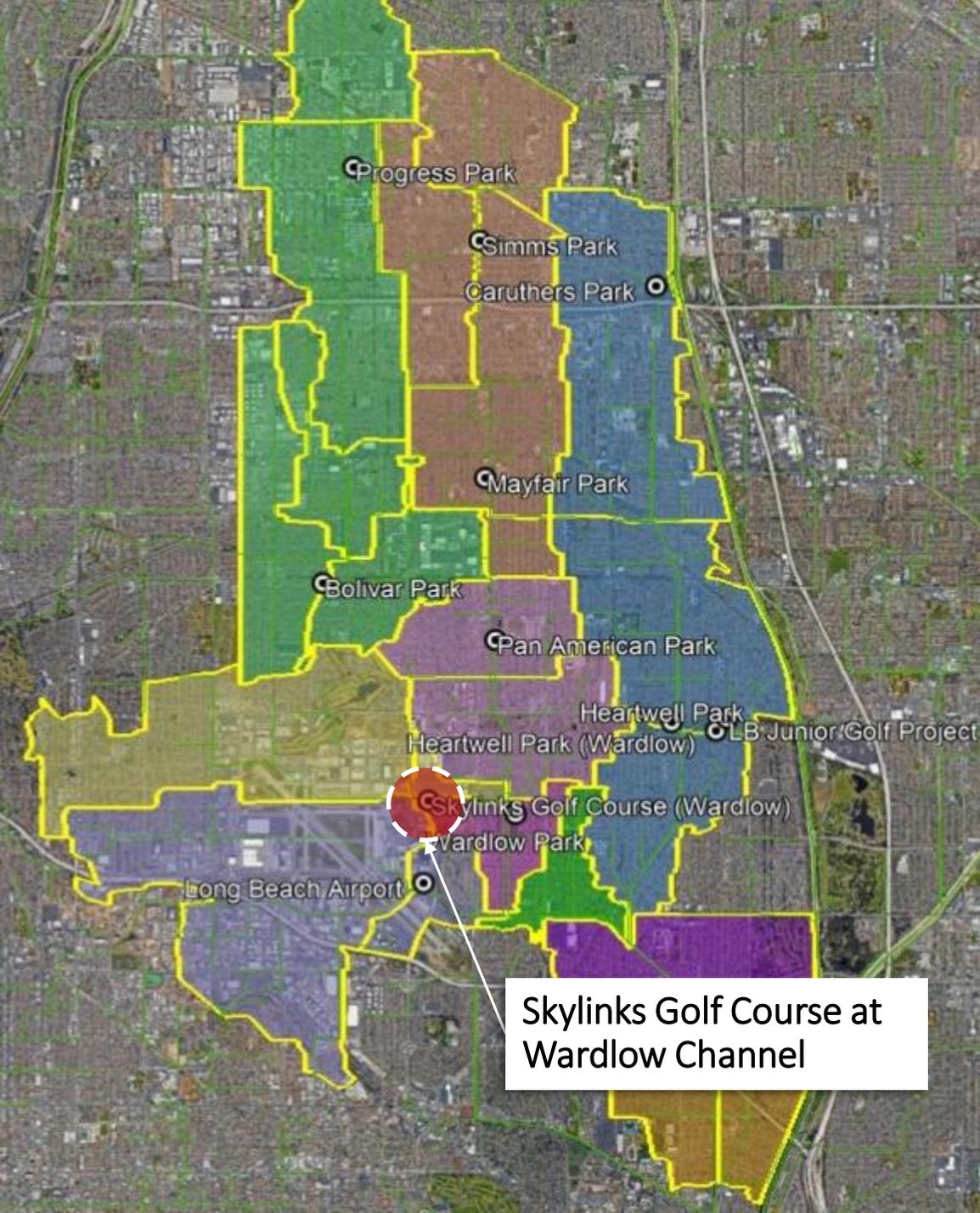
The **compliance strategy** emphasizes runoff reduction, TSS Reduction, and Stormwater Capture

LOS CERRITOS CHANNEL WMP Priority Water Capture Projects

Thirteen first-priority potential water capture sites were identified

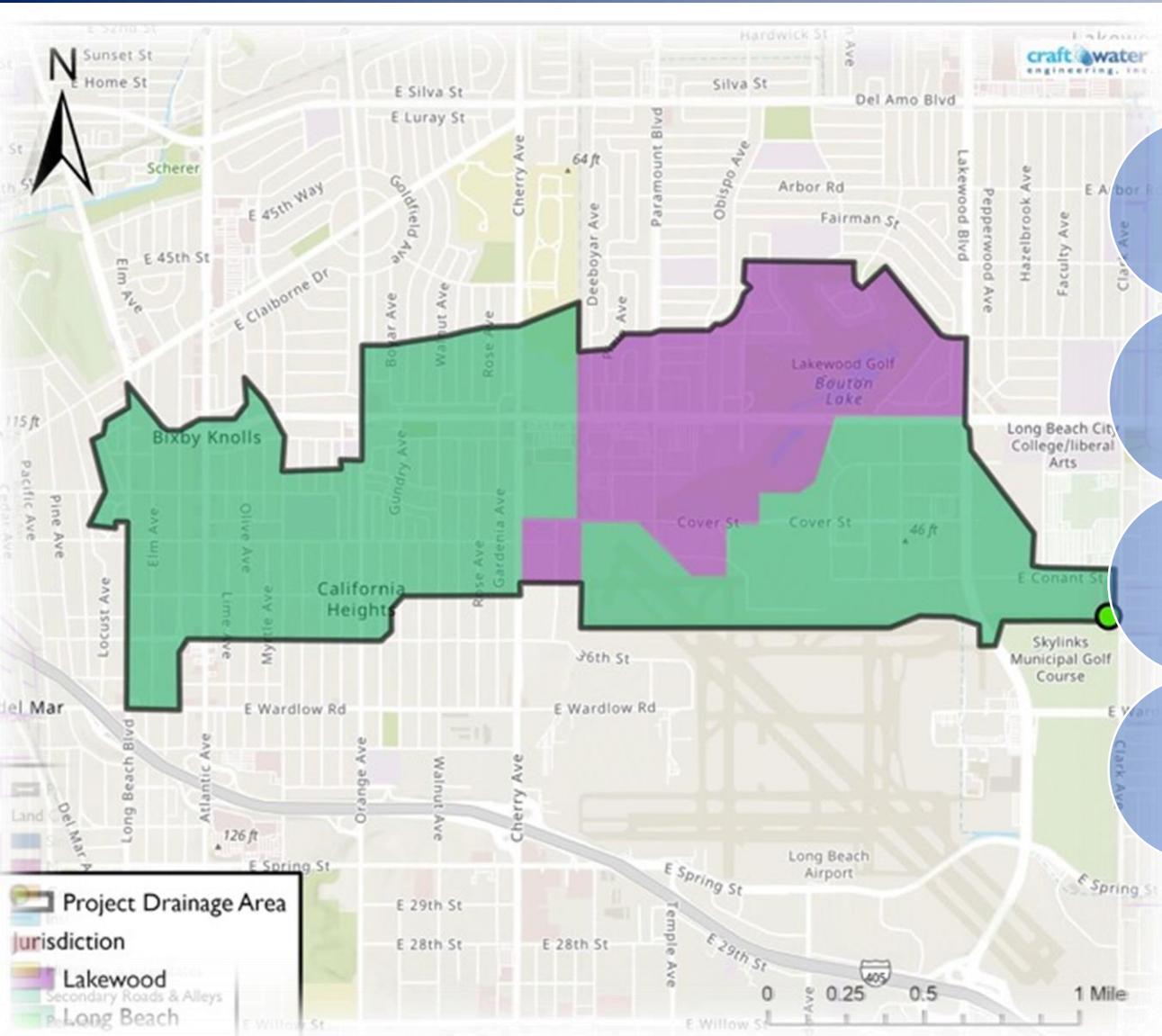
Skylinks Golf Course (Wardlow) is one of the priority water capture projects for the LCC WMP

There were **21 Modeled Sub-Watersheds**



Skylinks Golf Course at
Wardlow Channel

Skylinks Golf Course at Wardlow Channel DRAINAGE AREA

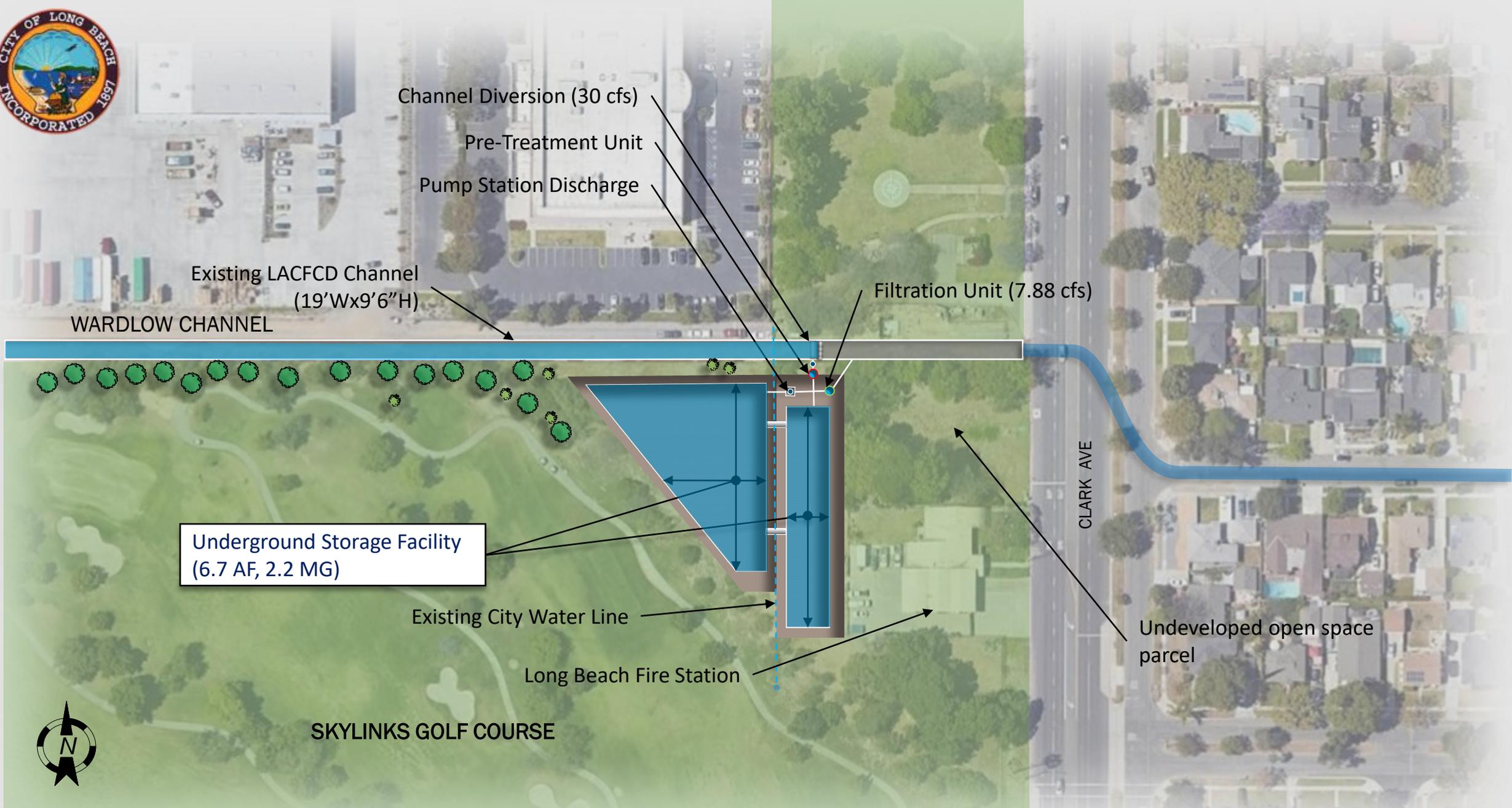


Watershed Drainage Area of **1,655 acres**

Drainage area consists of the **City of Long Beach** (1,164 acres, 70%) and the **City of Lakewood** (491 acres, 30%)

Collaborative implementation with the **LCC WMP Group** to address **regulatory requirements** for water quality

Potential **water recharge** benefits for the region



Channel Diversion (30 cfs)

Pre-Treatment Unit

Pump Station Discharge

Existing LACFCD Channel
(19'Wx9'6"H)

WARDLOW CHANNEL

Filtration Unit (7.88 cfs)

Underground Storage Facility
(6.7 AF, 2.2 MG)

Existing City Water Line

Long Beach Fire Station

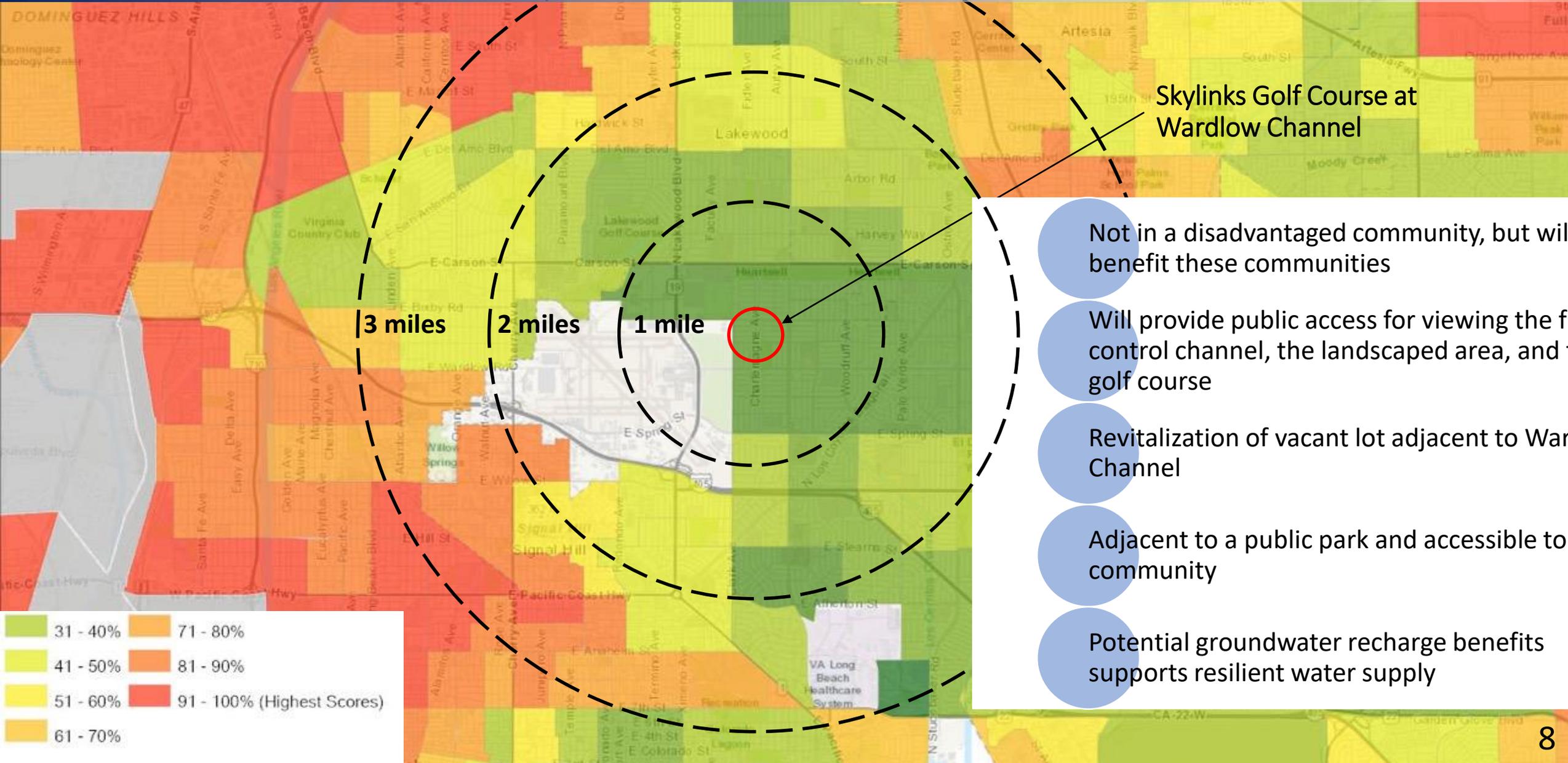
SKYLINKS GOLF COURSE

CLARK AVE

Undeveloped open space
parcel

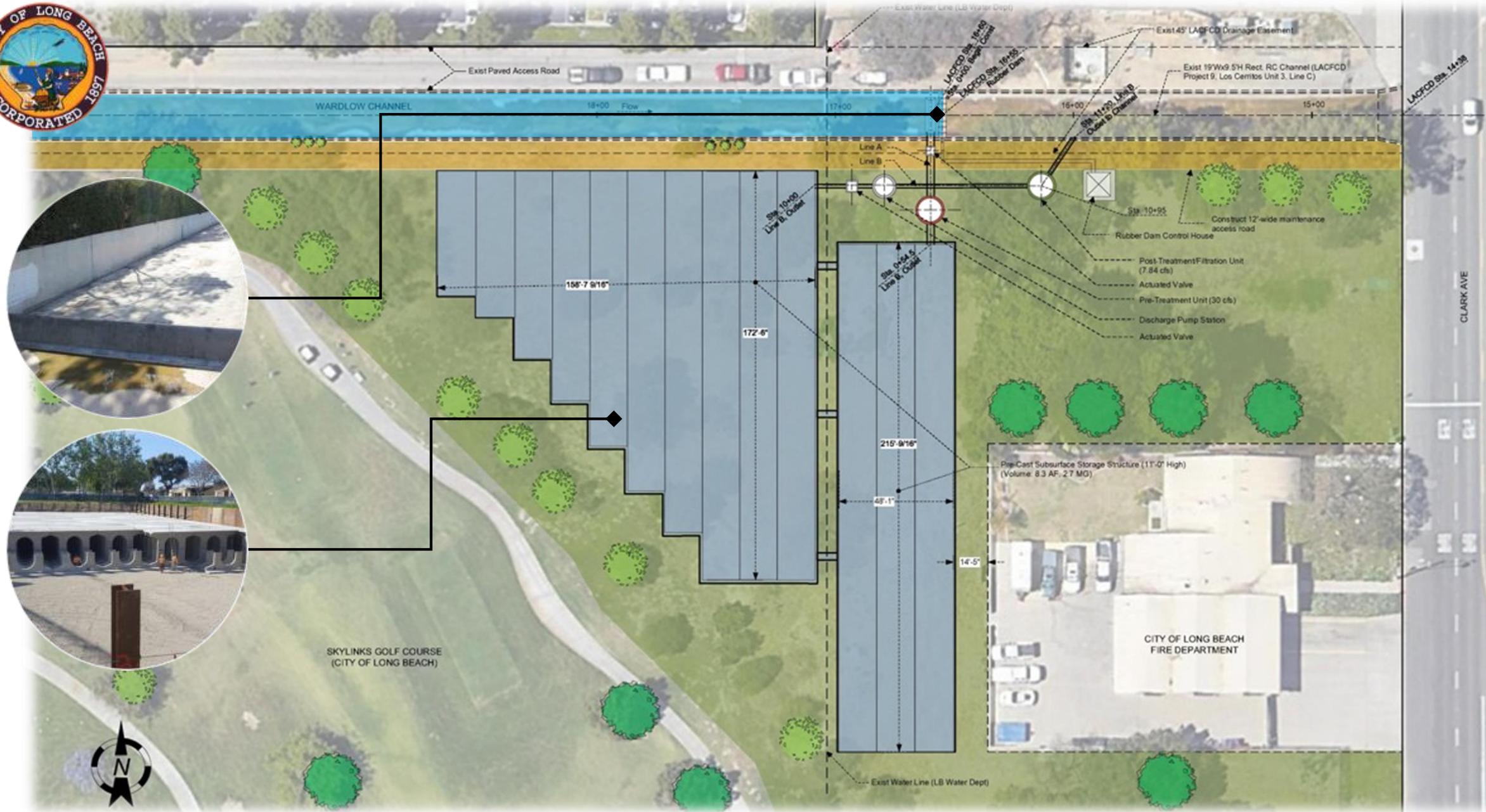


Disadvantaged Community Benefits



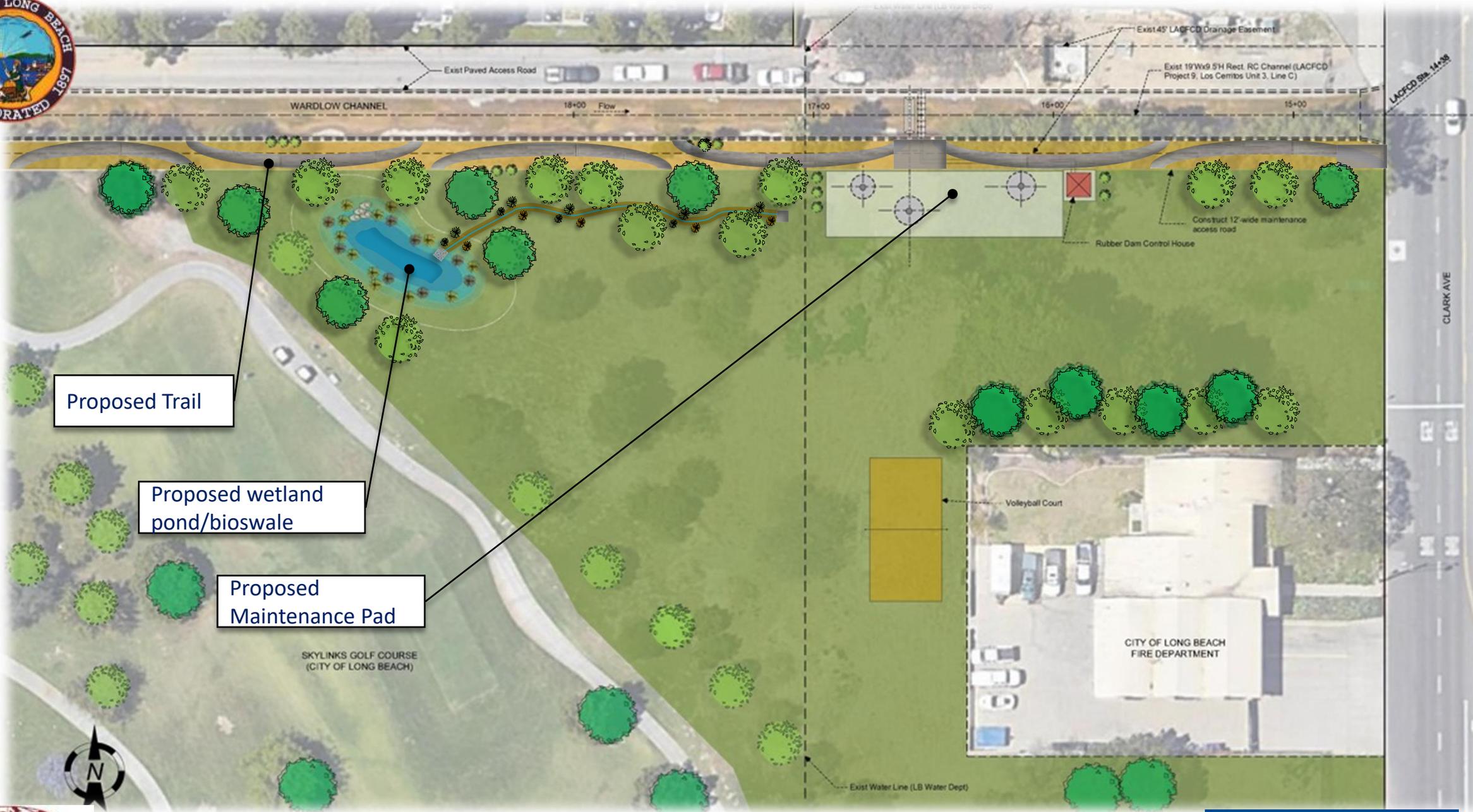


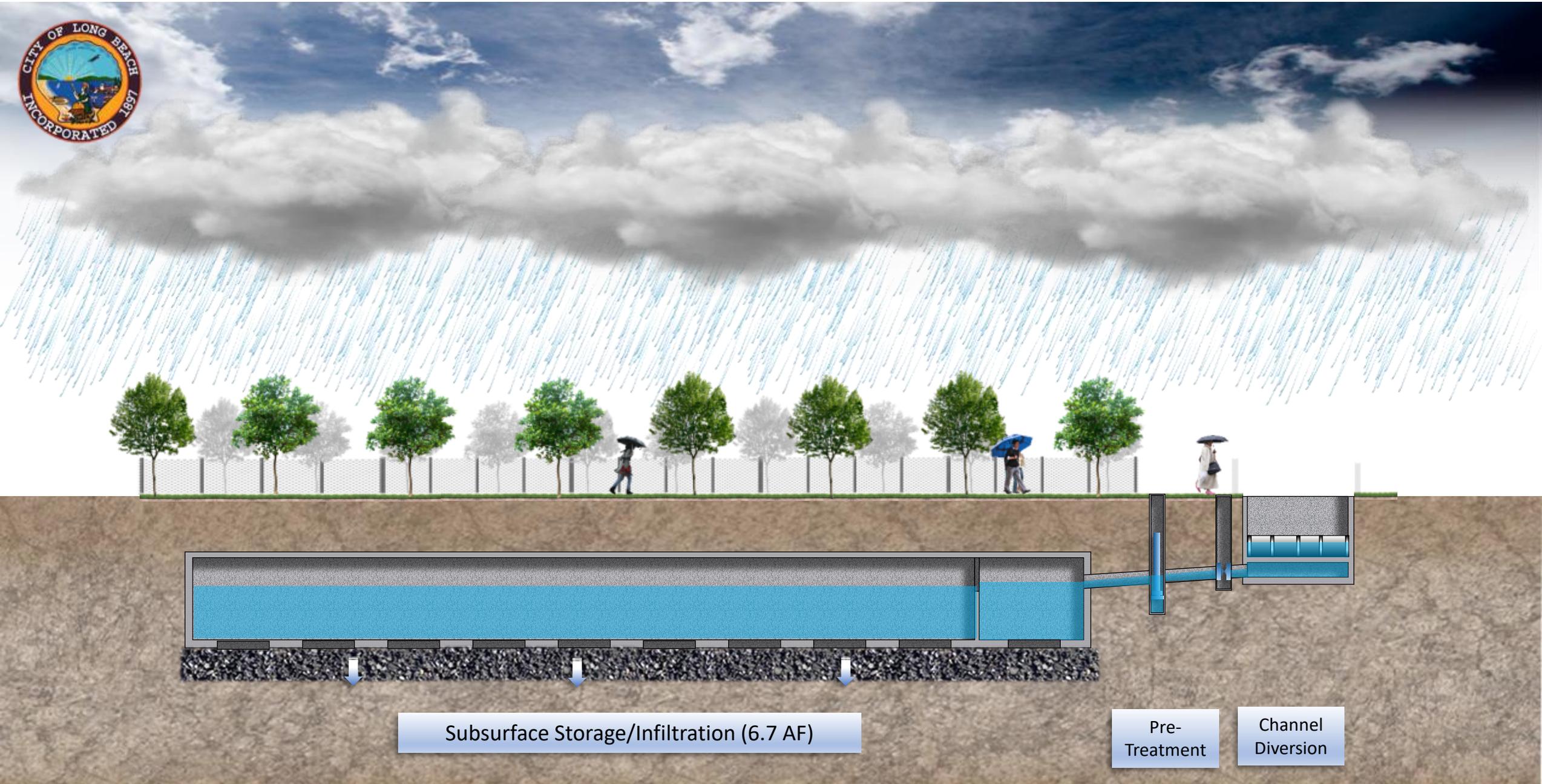
PROJECT DETAILS



Skylinks Golf Course at Wardlow Channel | SITE PLAN







Subsurface Storage/Infiltration (6.7 AF)

Pre-Treatment

Channel Diversion



SKYLINKS GOLF COURSE AT WARDLOW CHANNEL

Schedule and 5 Year Look Ahead

TASK NAME	Start	Finish
PHASE 1. PERMITTING & APPROVALS	September 2020	September 2021
PHASE 2. CONSTRUCTION DRAWINGS	September 2020	September 2021
PHASE 3. CONSTRUCTION	January 2022	September 2023
OPERATION AND MAINTENANCE	October 2023	June 2025+

SKYLINKS GOLF COURSE AT WARDLOW CHANNEL

Expenditure Projections of SCW Program Funds

YEAR	FISCAL YEAR	SCW FUNDS	DESCRIPTION
1	FY 20-21	\$ 1,050,000	Planning and Design
2	FY 21-22	\$ 1,640,000	Design, Permitting, Construction Bid, and mobilization
3	FY 22-23	\$ 2,793,000	Construction
4	FY 23-24	\$ 2,793,000	Construction
5	FY 24-25	\$ 2,175,000	Construction



Summary of Benefits for a Feasibility Study

SKYLINKS GOLF COURSE AT WARDLOW CHANNEL STORMWATER CAPTURE PROJECT WATER QUALITY AND WATER SUPPLY BENEFITS



Subsurface Storage: 6.7 AF

24-Hour Treatment: 37 AF

Primary Pollutant: Zinc (63%)

Secondary Pollutant: E. Coli
(64%)

Potential Annual Water
Supply/Recharge Benefit: 238 AF

SKYLINKS GOLF COURSE AT WARDLOW CHANNEL STORMWATER CAPTURE PROJECT COMMUNITY INVESTMENT and NATURE-BASED SOLUTIONS



Enhanced access road with native vegetation and DG public trail

Enhancements to the existing undeveloped vacant lot

Creation of wetland basin/bioswales and passive open space area

Flood risk mitigation from subsurface storage detention basin

Safe, Clean Water Scoring Review

Preliminary Score

69

Scoring Committee

TBD

Section	Score Range	Scoring Standards	MAX SCORE	Skylinks Golf Course at Wardlow Channel		COMMENT
				Data	Score	
A.1 Wet Weather Water Quality Benefits -OR-	50 points max	The project provides water quality benefits				
	20 points max	<p>A.1.1: For Wet Weather BMPs Only: Water Quality Cost Effectiveness Cost Effectiveness) = (24-hour BMP Capacity) / (Life-Cycle Cost in \$Millions)</p> <ul style="list-style-type: none"> - <0.4 (AF / \$-Million) = 0 points - 0.4 - 0.6 (AF / \$-Million) = 7 points - 0.6 - 0.8 (AF / \$-Million) = 11 points - 0.8 - 1.0 (AF / \$-Million) = 14 points - >1.0 (AF / \$-Million) = 20 points <p>1. Management of the 24-hour event is considered the maximum capacity of a Project for a 24-hour period. For water quality focused Projects, this would typically be the 85th percentile design storm capacity. Units are in acre-feet (AF)</p>	20	3.79	20	24-Hour BMP Capacity/Life-Cycle Cost \$M
	30 points max	<p>A.1.2: For Wet Weather BMPs Only: Water Quality Benefit - Quantify the pollutant reduction (i.e. concentration, load, exceedance day, etc.) for a class of pollutants using a similar analysis as the E/WMP which uses the Districts Watershed Management Modeling System (WMMS). The analysis should be an average percent reduction comparing influent and effluent for the class of pollutant over a ten-year period showing the impact of the Project. Modeling should include the latest performance data to reflect the efficiency of the BMP type.</p> <p>Primary Class of Pollutants</p> <ul style="list-style-type: none"> - <50% = 15 points - > 80% = 20 points (20 points max) <p>Second or More Classes of Pollutants</p> <ul style="list-style-type: none"> - <50% = 5 points - > 80% = 10 points (10 points max) 	20	63%	15	Primary Pollutant modeled is Metals (Lead, Copper, Zinc) with estimated reduction
			10	64%	5	Secondary Pollutant modeled for bacteria load reduction

Safe, Clean Water Scoring Review

Preliminary Score

69

Scoring Committee

TBD

Section	Score Range	Scoring Standards	MAX SCORE	Skylinks Golf Course at Wardlow Channel		COMMENT
B. Significant Water Supply Benefits	25 points max	The project provides water supply benefits				
	13 points max	<p>B1. Water Supply Cost Effectiveness. The total life-cycle cost per unit of acre foot of stormwater and/or urban runoff volume captured for water supply is:</p> <ul style="list-style-type: none"> - > \$2,500 / ac-ft = 0 points - \$2,000 - \$2,500 / ac-ft = 3 points - \$1,500 - \$2,000 / ac-ft = 6 points - \$1,000 - \$1,500 / ac-ft = 10 points - < \$1,000 / ac-ft = 13 points <p>2. Total Life-Cycle Cost: The annualized value of all Capital, planning, design, land acquisition, construction, and total life O&M costs for the Project for the entire life span of the Project (e.g. 50-year design life span should account for 50-years of O&M). The annualized cost is used over the present value to provide a preference to Projects with longer life spans.</p>	13	\$ 2,091	3	<i>Assumes Annualized cost for Construction (based on 50-year service life) and annual operation and maintenance costs over average annual water supply benefits</i>
	12 points max	<p>B2. Water Supply Benefit Magnitude. The yearly additional water supply volume resulting from the project is:</p> <ul style="list-style-type: none"> - < 25 ac-ft / year = 0 points - 25 - 100 ac-ft / year = 2 points - 100 - 200 ac-ft / year = 5 points - 200 - 300 ac-ft / year = 9 points - > 300 ac-ft / year = 12 points 	12	235	9	<i>Modeled average Annual Water Supply benefit over 20 years.</i>

Safe, Clean Water Scoring Review

Preliminary Score

69

Scoring Committee

TBD

Section	Score Range	Scoring Standards	MAX SCORE	Skylinks Golf Course at Wardlow Channel		COMMENT
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	15	5	10	<i>Incorporates surface wetlands, native habitat area, and improvements to adjacent access road</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		0		
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	6	0%	0	<i>None</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.	4	Yes	4	<i>Public Outreach efforts for LCC WMP, City Support Letters, etc</i>
Total	Total Points All Sections: 110		110		71	

Questions?

Oliver Galang, PE | Craftwater Engineering
Richard Watson, Richard Watson & Associates, LCC Watershed Group

Hermosillo Park Regional Stormwater Project

(Total Funding Requested: \$20,200,000)

City of Norwalk | Presented by John Hunter

Lower San Gabriel River Watershed Area Steering Committee

February 11, 2020

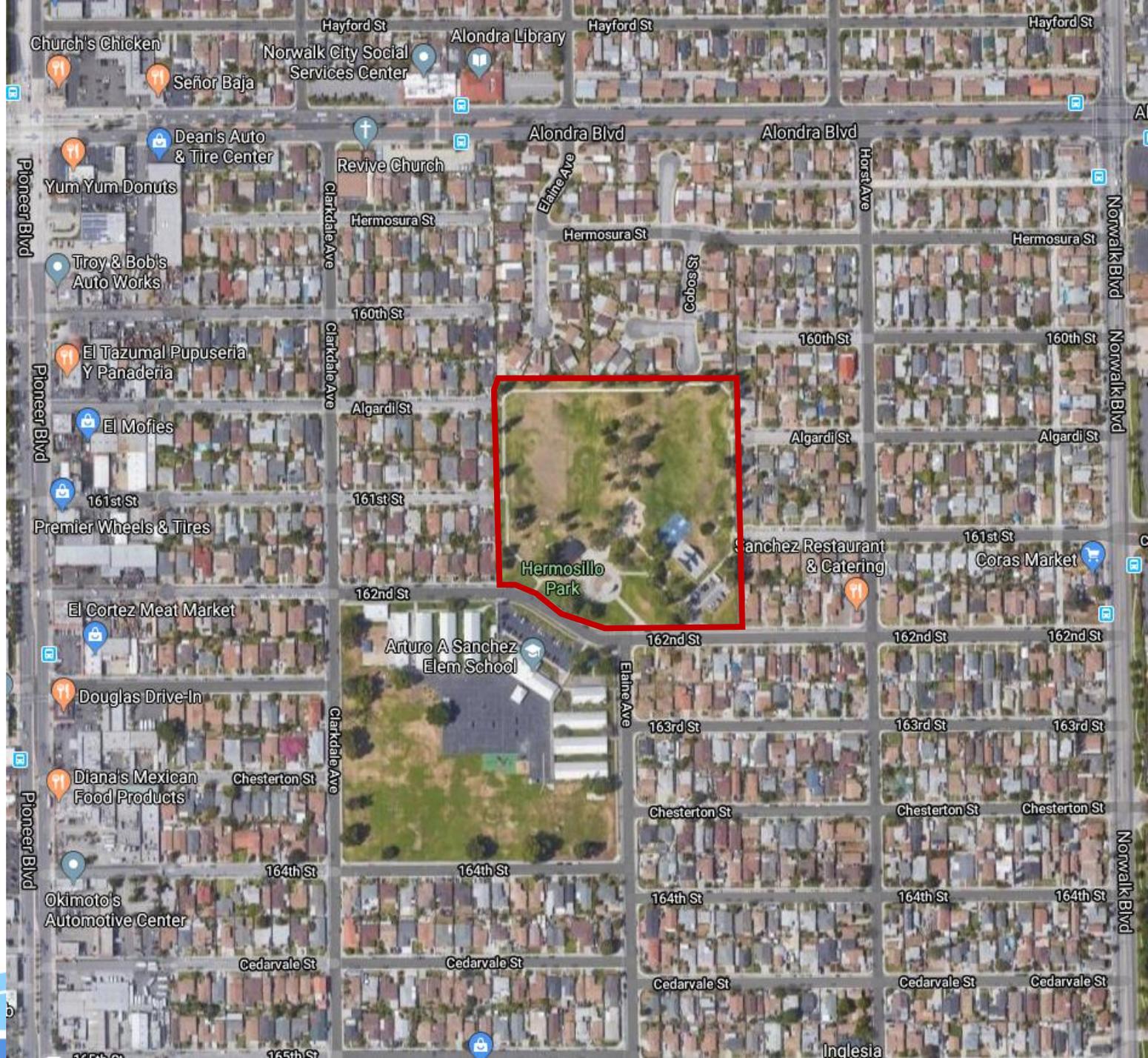


Overview

- Project Lead: City of Norwalk
 - Hermosillo Park is a community park in the City of Norwalk
 - The City has imminent plans to rehabilitate park facilities and other surface features; if the project is delayed, this opportunity may not be available in the future
 - The City applied for Prop 68 funding
 - The project will take the opportunity of pending park rehabilitation to install an 11.8 acre-foot capacity regional stormwater infiltration gallery with water reclaim abilities
 - A new soccer field will be constructed over the surface of the treatment system
 - The project has a drainage area of 2,580 acres
- 

Primary Goals

- Groundwater recharge
- Improve water (runoff) quality
- Enhance recreational opportunities
- Utilize opportunity of surface renovation of the park



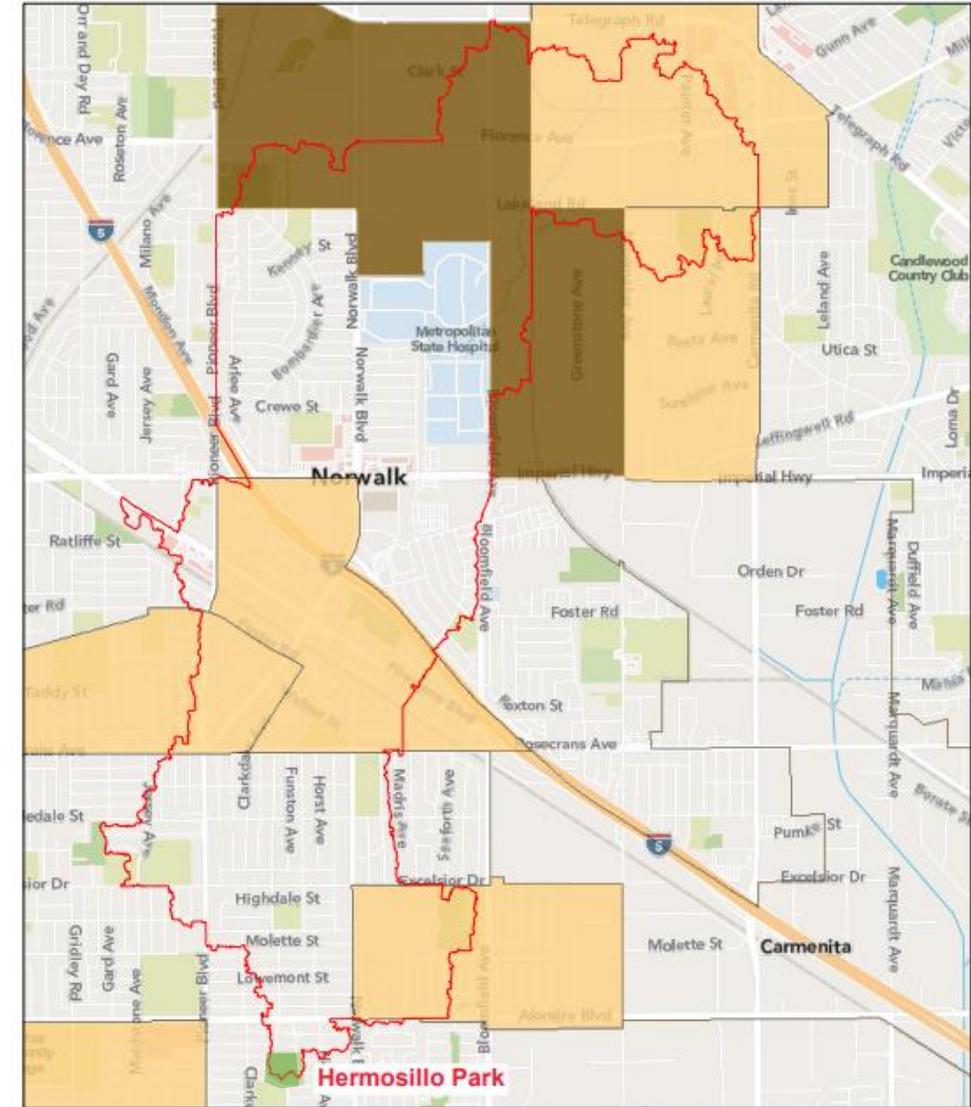
City-developed Park Design for Surface Features



DAC Benefits

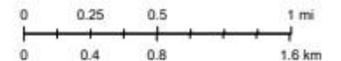
- The City Parks and Recreation Department has solicited significant input from the community
- Increased recreational opportunities (two new multi-sport fields)
- Enhanced park space
- Located adjacent to an elementary school (Arturo A. Sanchez Elementary School) and residential neighborhoods

Hermosillo Park Disadvantaged Communities (DAC)



Disadvantaged Communities - Tract 2016

- Data Not Available
- Severely Disadvantaged Communities (MHI < \$38,270)
- Disadvantaged Communities (\$38,270 > MHI < \$51,026)



Hermosillo Park Drainage Area

- Drainage Outline

Lower San Gabriel River Watershed Management Program

June 12, 2015

*1st Adaptive Management
Revisions: August 25, 2017*



Prepared For:

Lower San Gabriel River Watershed Group

Prepared By:

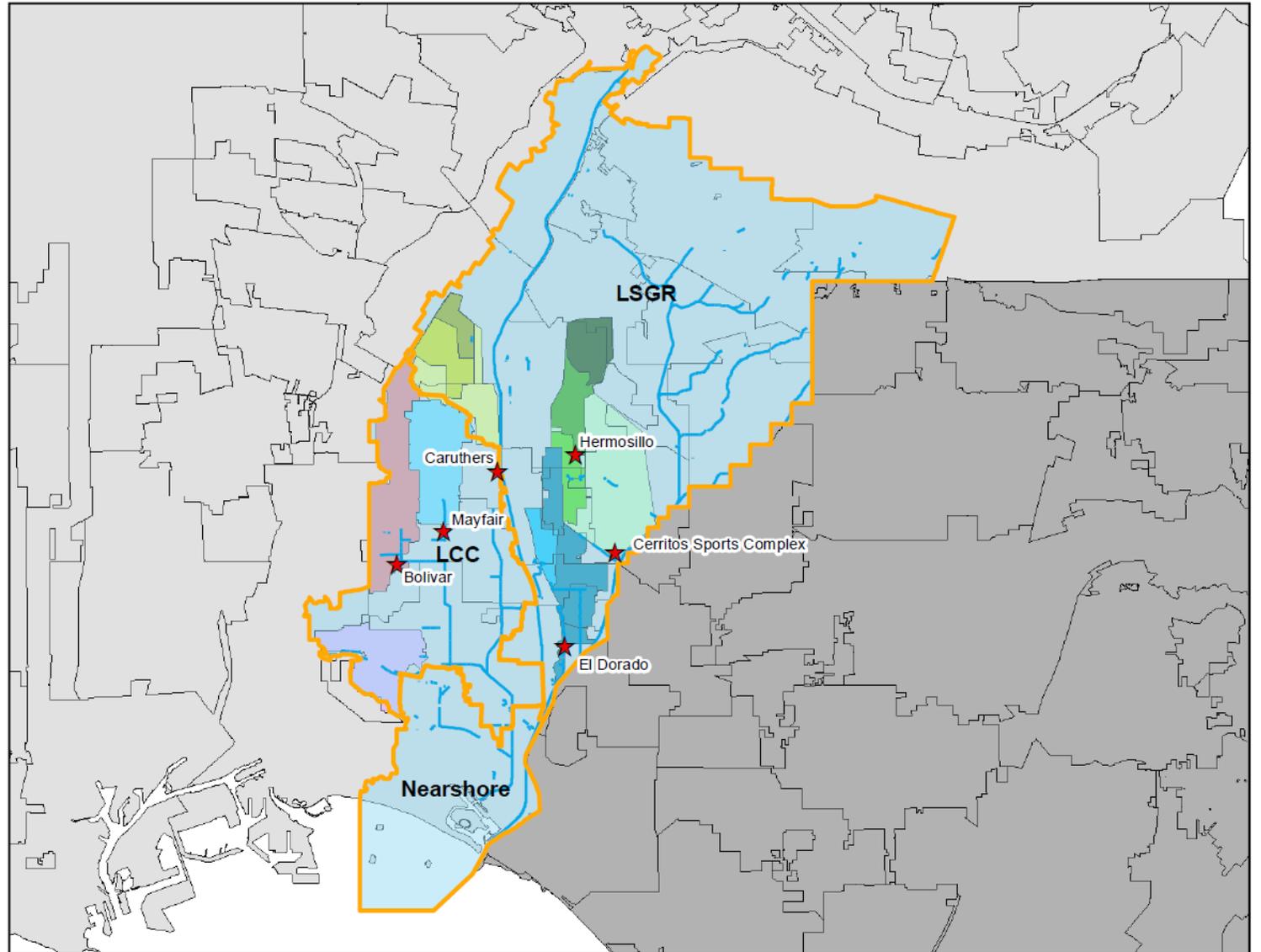


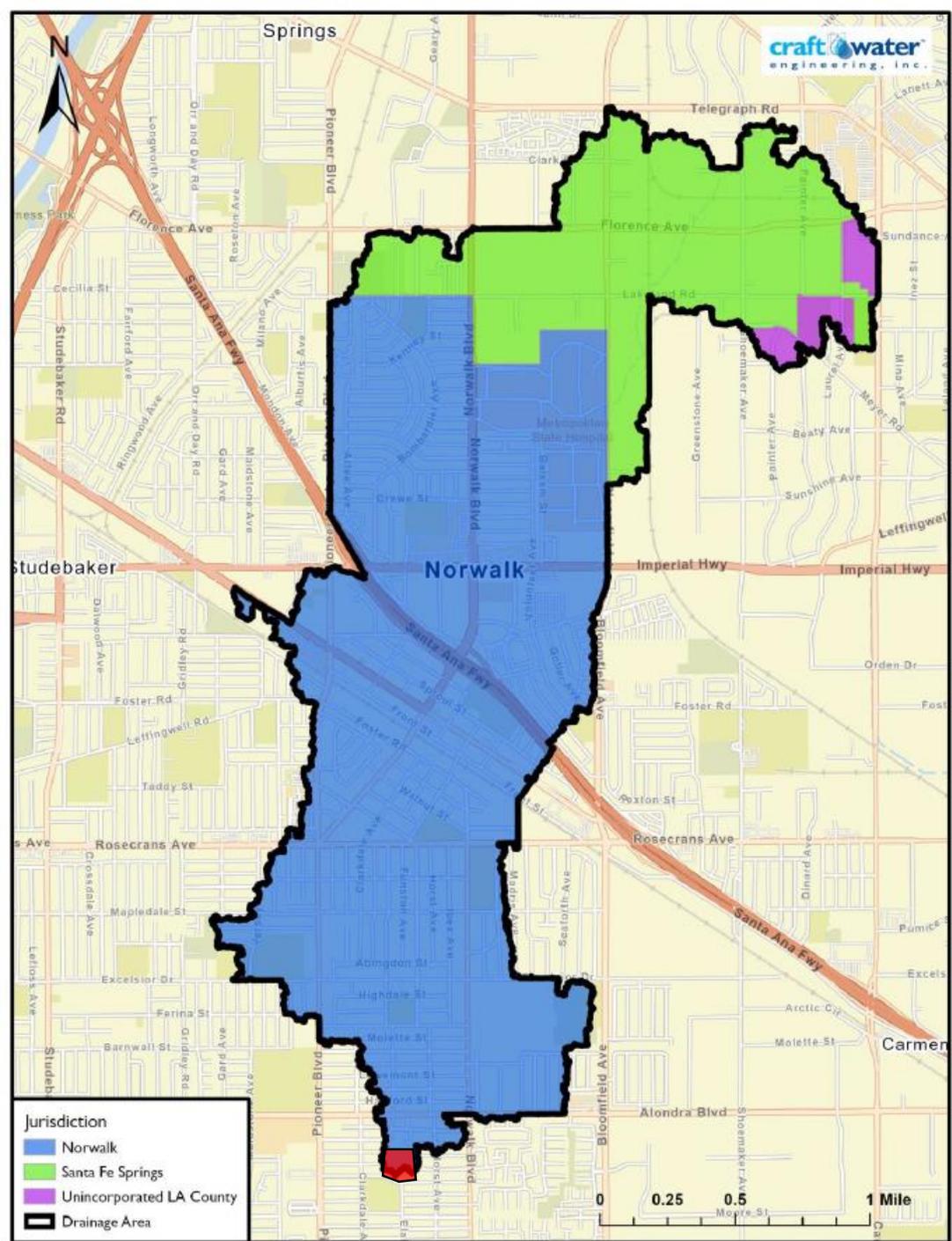
Lower San Gabriel River Watershed Management Program (LSGR WMP)

- Conditionally approved on April 28, 2015 and subsequently approved on July 21, 2015
- Consists of the following permittees: Artesia, Bellflower, Cerritos, Diamond Bar, Downey, Hawaiian Gardens, La Mirada, Lakewood, Long Beach, Norwalk, Pico Rivera, Santa Fe Springs, Whittier, Los Angeles County Flood Control District
- Outlines the path to achieving compliance with MS4 Permit

LSGR Corridors

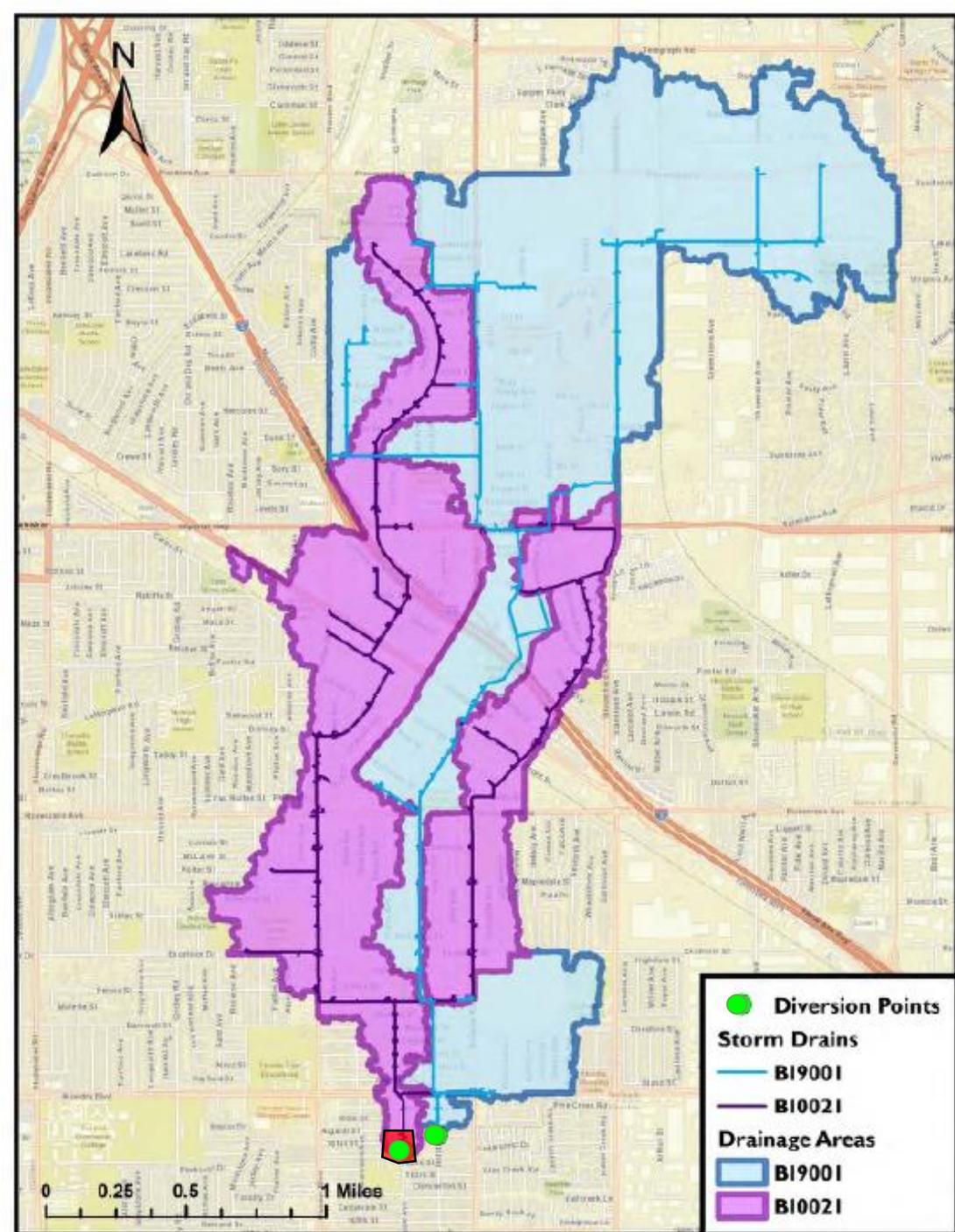
- The LSGR WMP identified ideal locations for regional projects designed to address water quality objectives, including Hermosillo Park
- Sites were assessed based on an array of factors including land use, area, tributary area, and maximum design capture volume





Multi-City Project Drainage Area

Jurisdiction	Area (acres)
Norwalk	1,872
Santa Fe Springs	653
Unincorporated LA County	55
Total	2,580



Project Intercepts Drainage From
Two Storm Drains



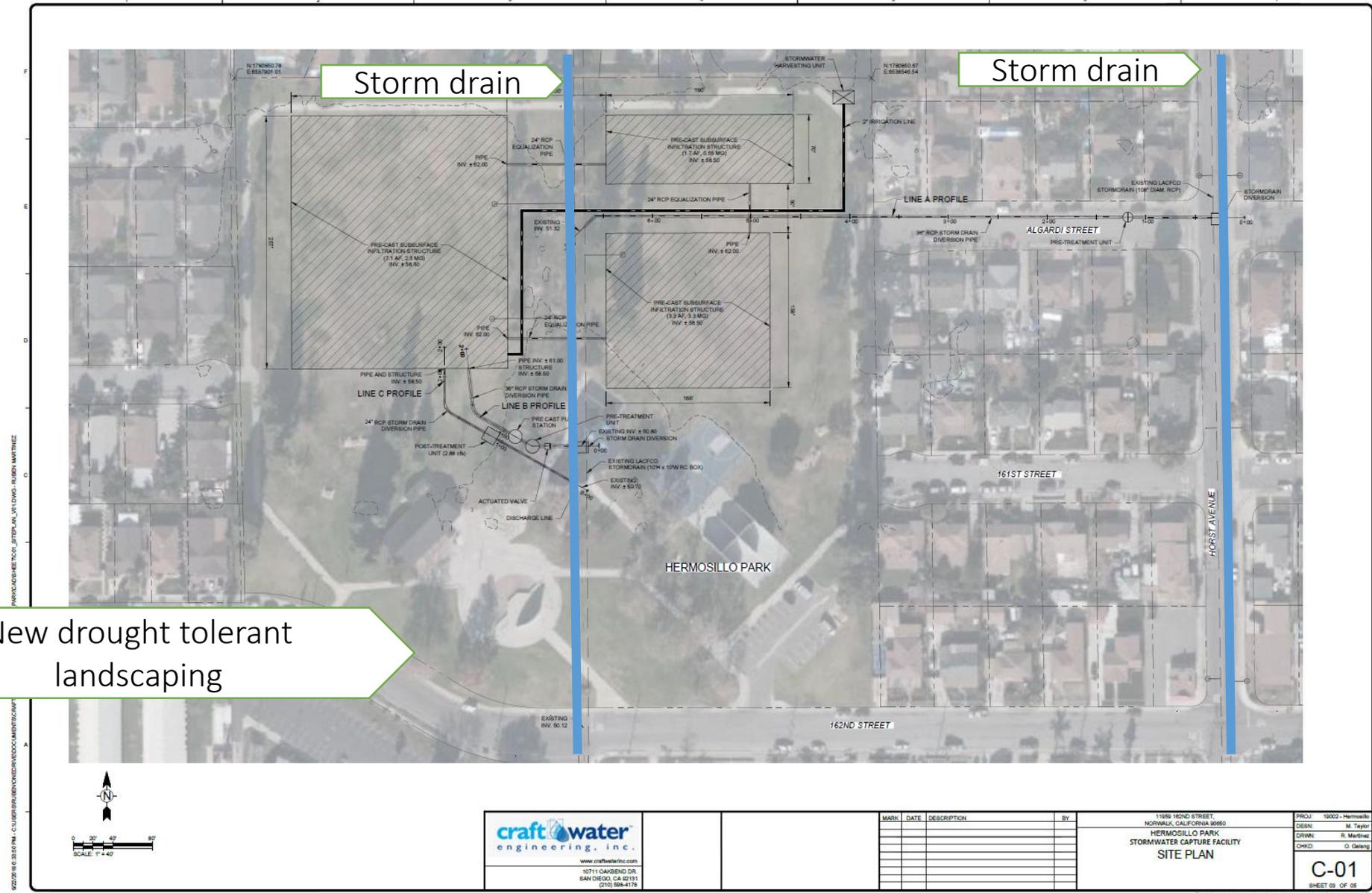
Water Quality & Supply Benefits

- The project will entail the construction of a regional stormwater infiltration gallery with a drainage area of 2,580 acres
 - The project is estimated to augment groundwater supply by 1,079 acre-feet on an average annual basis
 - The project will address total zinc as the primary pollutant and bacteria as the secondary pollutant (both identified in the LSGR WMP)
 - The project plans call for the installation of a stormwater infiltration gallery and a stormwater harvesting unit, which has capabilities to utilize captured flows for irrigation needs
 - The project will also entail the replacement of traditional pavement with permeable pavement or equivalent LID to promote on-site infiltration
- 

Conceptual Project Design

10% design for the infiltration gallery has already been completed

New drought tolerant landscaping



Community Investment Benefits & Nature Based Solutions

- Improved flood risk mitigation/management
 - Enhanced park space
 - Increased recreational opportunities (i.e. new City-owned soccer fields)
 - Permeable pavement or equivalent LID installed within the parking lot will promote on-site infiltration
 - Native trees and shrubs and the reduction of impervious surfaces will reduce the heat island effect
- 

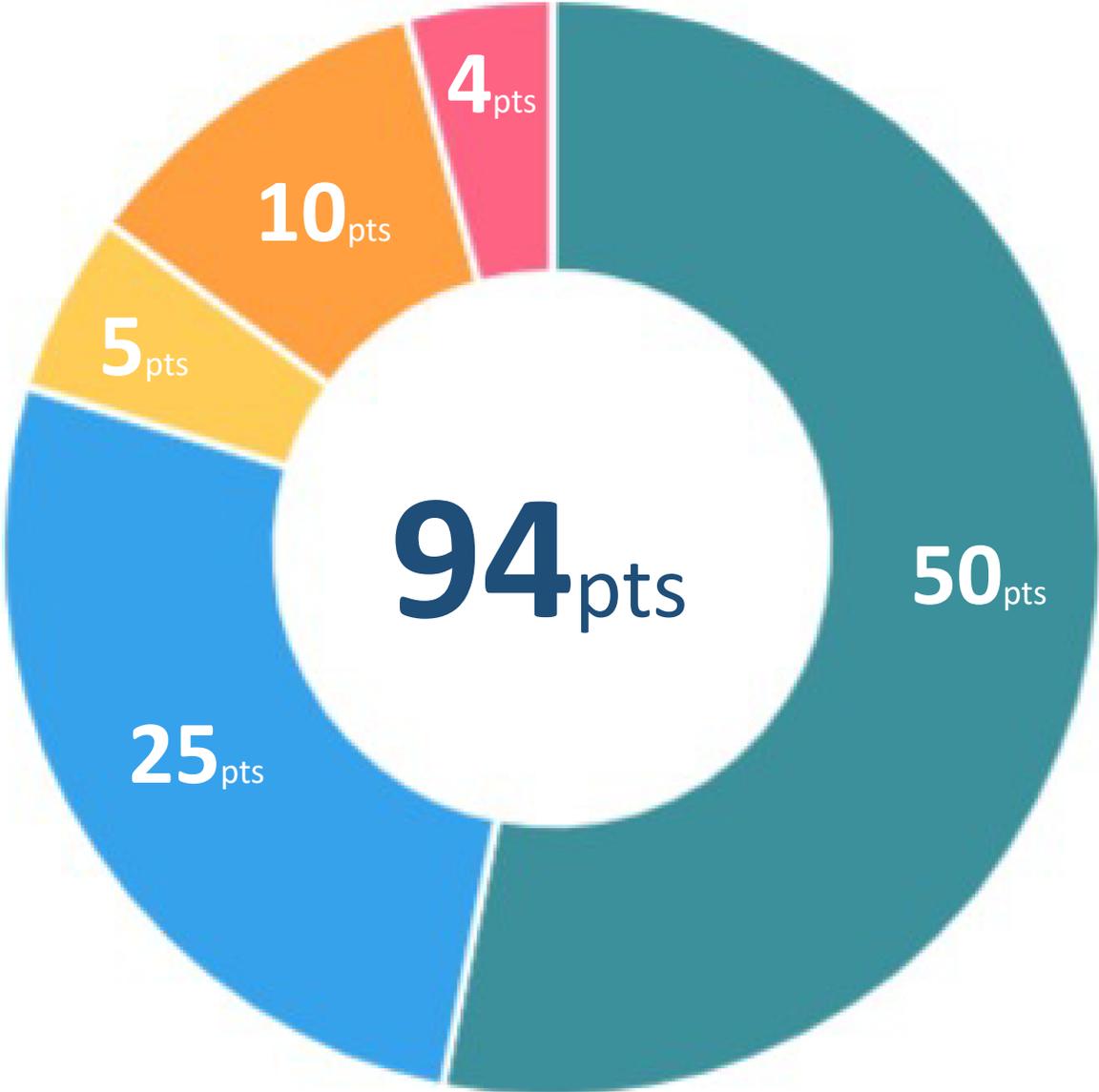
Funding Requested

- The LSGR Watershed Management Group previously contributed \$102,000 for the development of 10% design plans and a preliminary design report
- Total SCW Funding Requested: **\$20,200,000**
 - FY 20-21: \$4,000,000 for final design, permitting, and initial construction
 - FY 21-22: \$6,000,000 for construction
 - FY 22-23: \$6,000,000 for construction
 - FY 23-24: \$4,100,000 for final construction, installation of soccer fields/parking lot low impact development (LID) BMPs, and surface improvements
 - FY 24-25: \$100,000 for O&M and monitoring

(City's) Scoring Summary

- Water Quality
- Water Supply
- Community Investment
- Nature-Based Solutions
- Funds and Community

Scoring Committee's Score:
"Above Threshold"



Questions?

Cerritos Sports Complex

(Total Funding Requested: \$26,700,000)

City of Cerritos | Presented by John Hunter

Lower San Gabriel River Watershed Area Steering Committee

February 11, 2020



Overview

- Project Lead: City of Cerritos
- Cerritos Sports Complex is a recreation facility with multiple athletic fields and bikeway access
- The site is a “perfect” location at the bottom of two major drainage areas
- The project will eventually entail the installation of a 30.68 acre-foot capacity regional stormwater capture and treatment infiltration facility with engineered media, which:
 - Will offset the potable water demand at the park and restore/rehabilitate park facilities
 - Has potential for diversion to the sanitary sewer system
 - Has potential to expand or divert to the recycled water system
- The project takes flow from a drainage area of 6,472 acres

Lower San Gabriel River Watershed Management Program

June 12, 2015

*1st Adaptive Management
Revisions: August 25, 2017*



Prepared For:

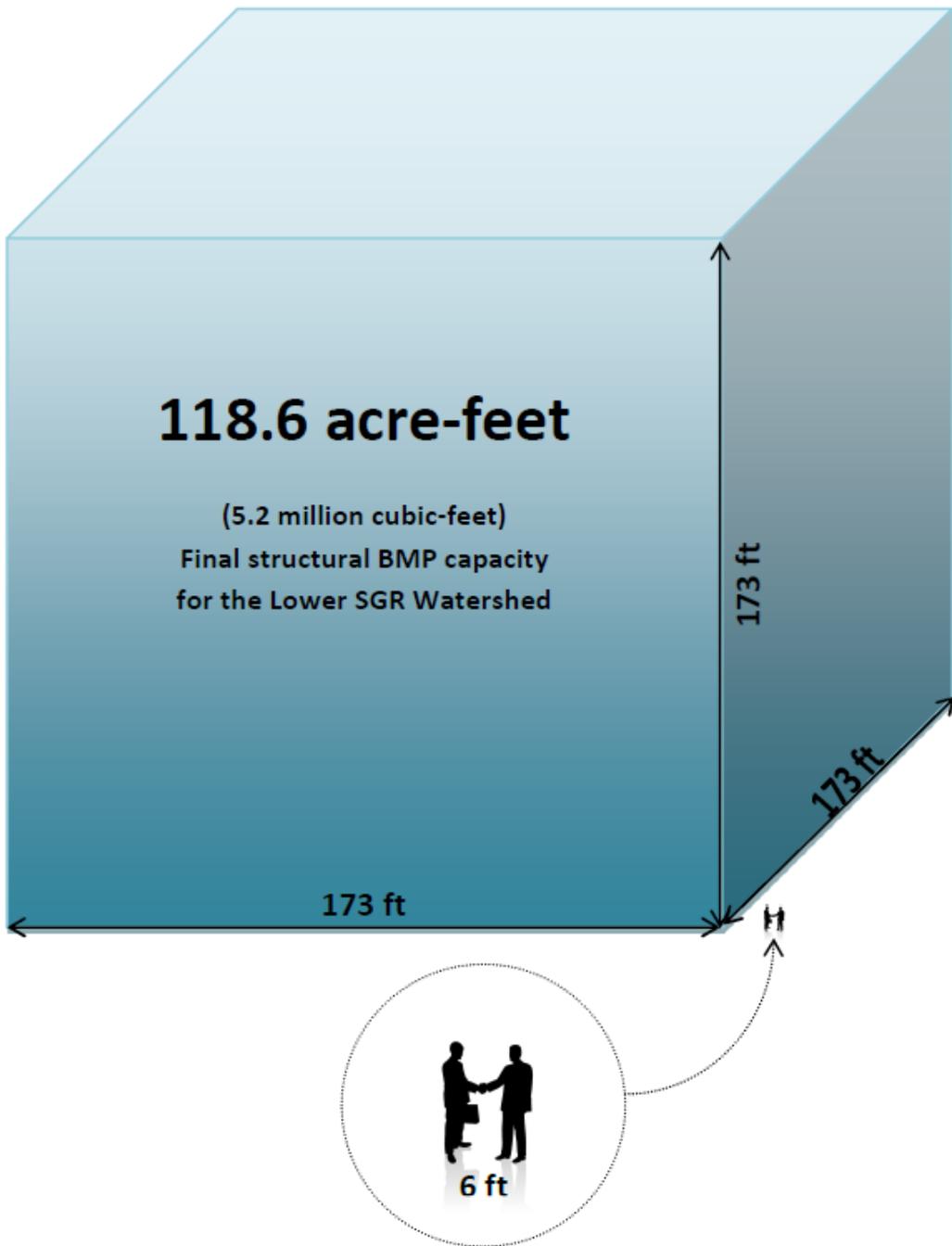
Lower San Gabriel River Watershed Group

Prepared By:



Lower San Gabriel River Watershed Management Program (LSGR WMP)

- Conditionally approved on April 28, 2015 and subsequently approved on July 21, 2015
- Consists of the following permittees: Artesia, Bellflower, Cerritos, Diamond Bar, Downey, Hawaiian Gardens, La Mirada, Lakewood, Long Beach, Norwalk, Pico Rivera, Santa Fe Springs, Whittier, Los Angeles County Flood Control District
- Outlines the path to achieving compliance with MS4 Permit

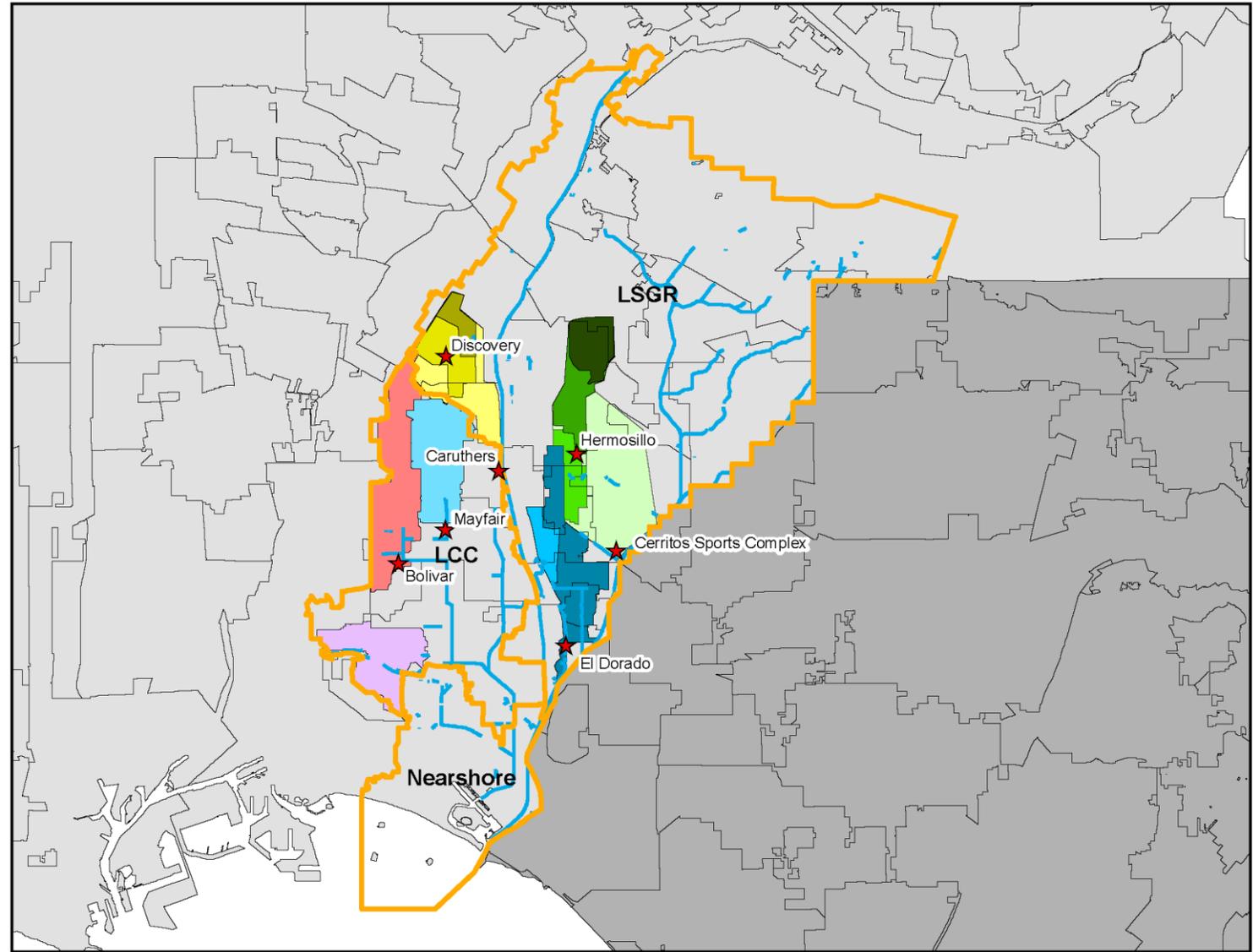


Volume Capture Milestones

- The modeling done to develop the LSGR WMP found that the total structural BMP capacity needed to comply with water quality limits in the LSGR Watershed is **118.6 acre-feet**
- This project represents **25% of the LSGR Watershed goal**
- This volume capture milestone is split between:
 - San Gabriel River
 - Coyote Creek

LSGR Corridors

- The LSGR WMP identified ideal locations for regional projects designed to address water quality objectives, including Cerritos Regional Park
- Sites were assessed based on an array of factors including land use, area, tributary area, and maximum design capture volume



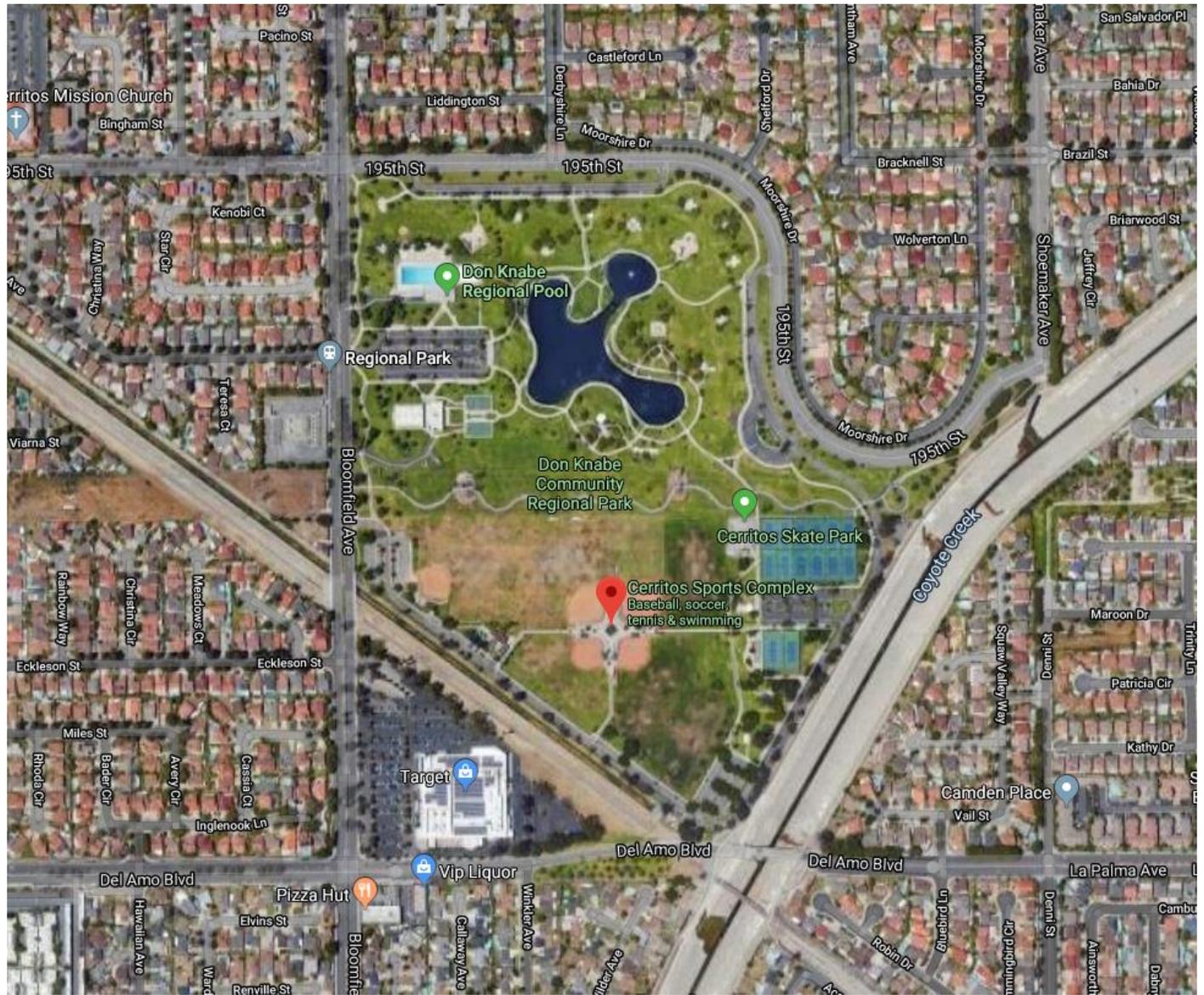


Feasibility Study (10% Design)

- Completed on November 1, 2019
- Funded by the Lower San Gabriel River Watershed Management Group (\$108,460)



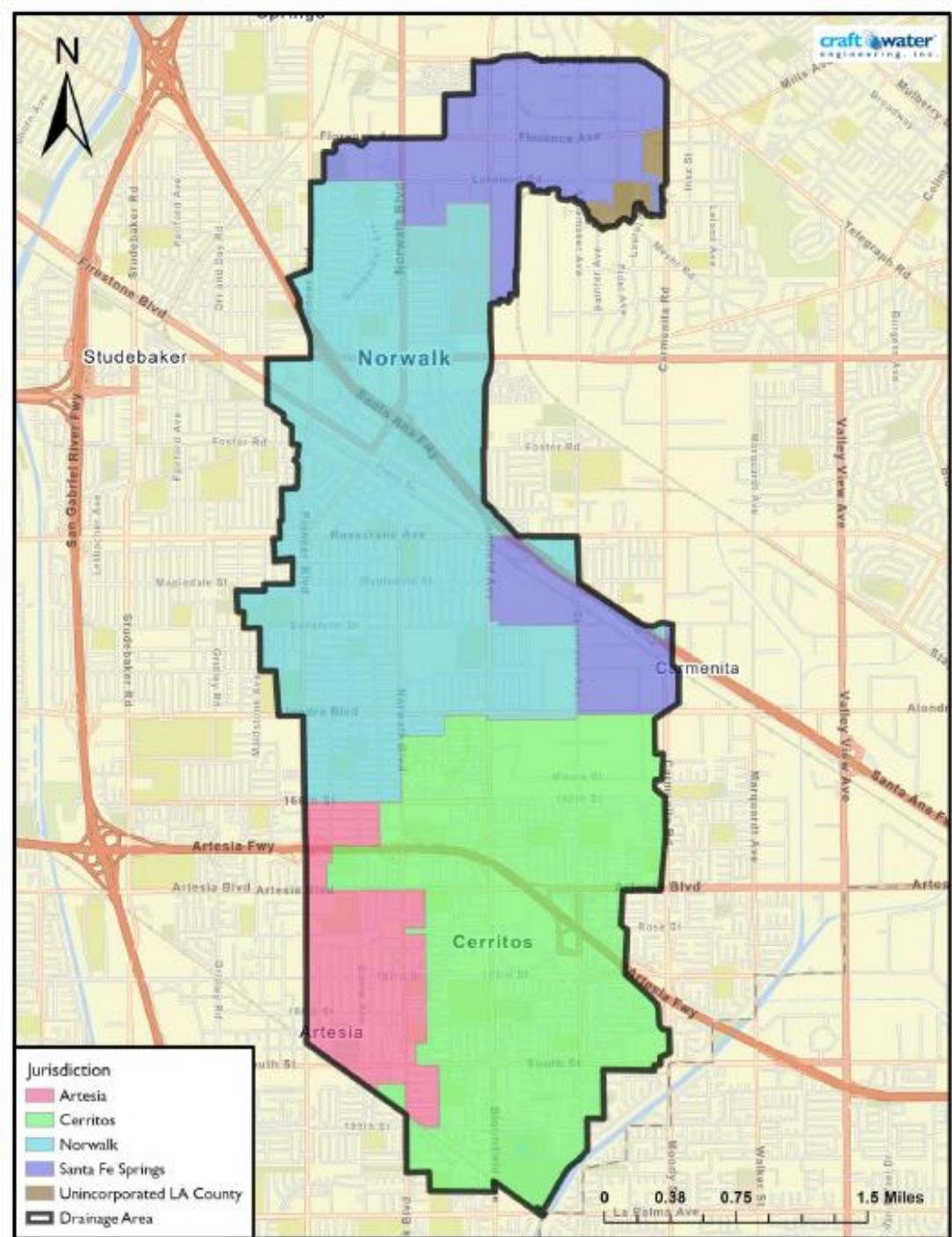
Current Conditions



Project Goals

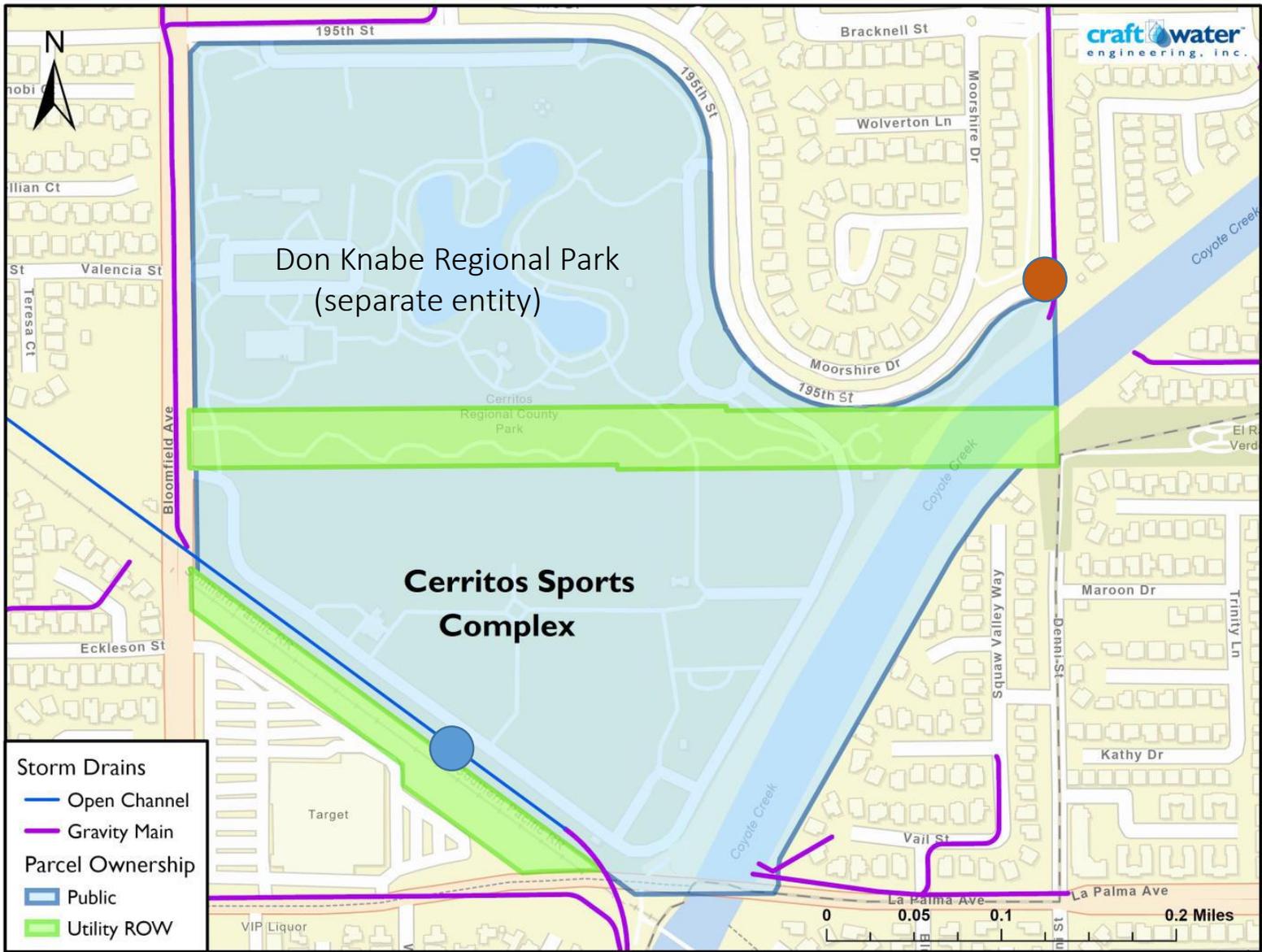
1. Capture and reclaim a significant portion of runoff
2. Improve stormwater quality
3. Improve recreational opportunities
 - Stabilize the park surface by removing old landfill materials
 - Improve sport and play surface safety





Drainage Area

Jurisdiction	Area (acres)
Cerritos	2,099
Artesia	576
Norwalk	2,622
Santa Fe Springs	1,113
Unincorporated LA County	62
Total	6,472



Ideal Location

The project intercepts drainage from two storm drains

Diversion points

- 10-foot storm drain
- 30x14 foot open channel

Water Quality & Supply Benefits

- The project will address total zinc as the primary pollutant and bacteria as the secondary pollutant (both identified in the LSGR WMP)
- The project plans call for the installation of a stormwater infiltration gallery under four existing baseball/softball fields; two fields will be disturbed at a time to allow for continued use
- The following are considered for the project:
 - Onsite irrigation use
 - Some infiltration with engineered media under the storage vaults
 - Water recycling
 - Potential for sanitary sewer diversion
 - Potential to connect to recycled water system (21 inch main)

Conceptual Layout



**CITY OF CERRITOS - RECREATION SERVICES DIVISION
2020 COMMUNITY SPORTS-BASED ORGANIZATIONS
RESIDENCY BREAKDOWN**

DAC Use

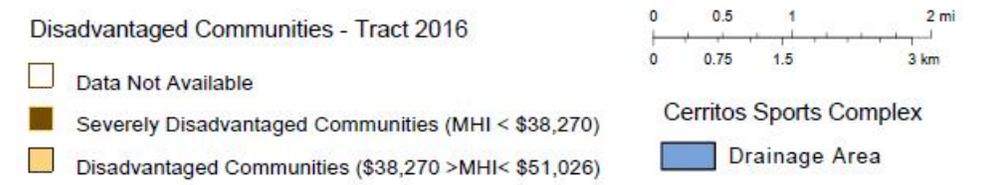
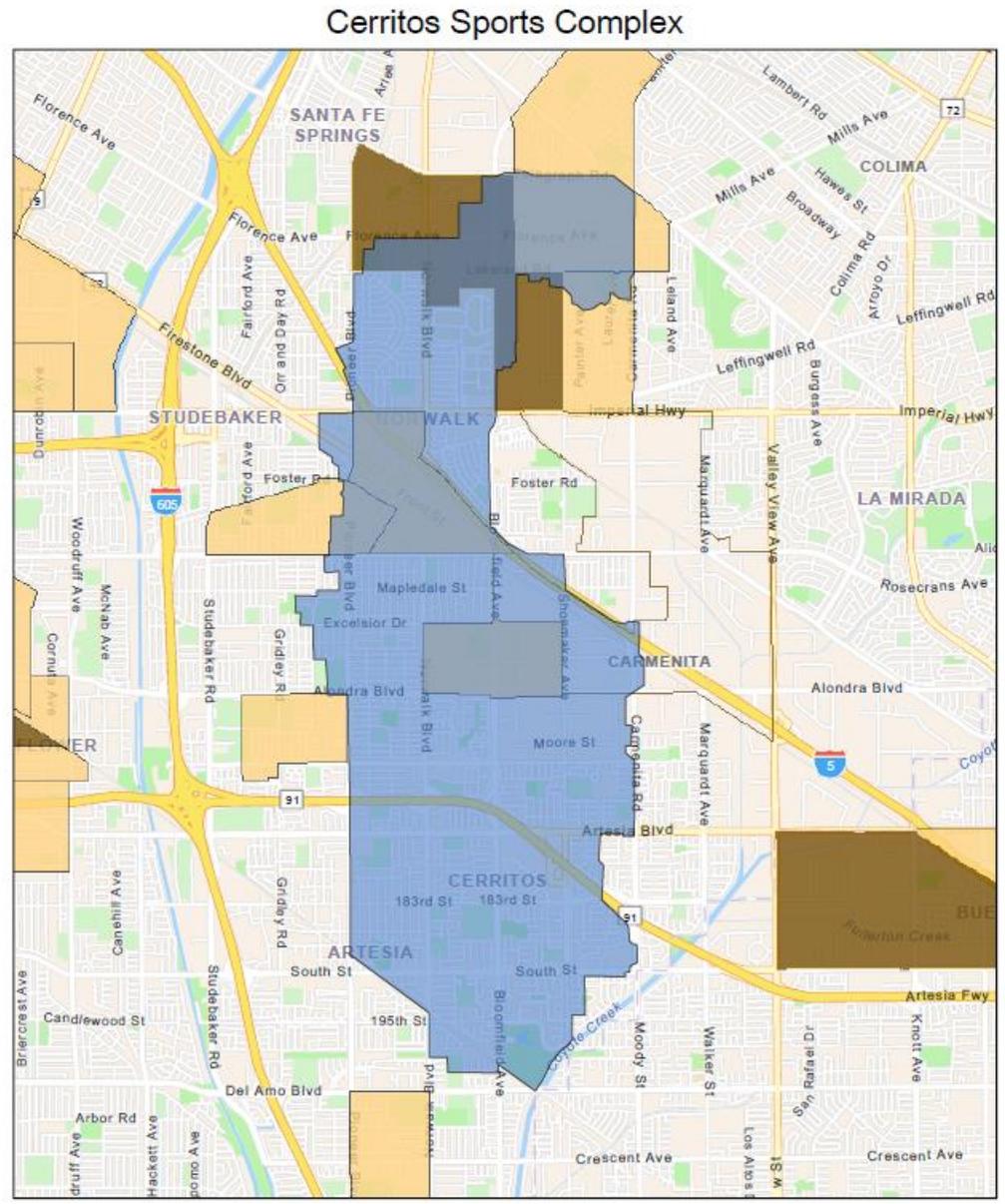
2020 residency survey for organized sports teams using Cerritos Sports Complex

Approximately 427 youths from cities with DACs utilize Cerritos Sports Complex

CITY	YOUTH	ADULT	TOTAL
Altadena	1	0	1
Anaheim	4	2	6
Arcadia	0	1	1
Artesia	46	4	50
Azusa	1	0	1
Bellflower	39	0	39
Brea	2	2	4
Buena Park	59	10	69
Carson	1	0	1
Compton	6	0	6
Corona	0	1	1
Cypress	22	2	24
Diamond Bar	0	1	1
Downey	17	0	17
Encino	2	0	2
Fountain Valley	1	0	1
Fullerton	4	21	25
Garden Grove	5	1	6
Hacienda Heights	0	1	1
Hawaiian Gardens	9	2	11
Imperial	1	0	1
Irvine	0	1	1
Lake Forest	1	0	1
Lakewood	92	1	93
Lawndale	2	0	2
La Habra	17	1	18
La Habra Heights	1	1	2
La Mirada	29	3	32
La Palma	12	4	16
Long Beach	28	0	28
Los Alamitos	2	2	4
Los Angeles	1	0	1
Lynwood	4	0	4
Norwalk	102	1	103
Ontario	1	0	1
Paramount	4	0	4
Pico Rivera	10	0	10
Placentia	1	1	2
Rowland Heights	0	1	1
Santa Ana	1	1	2
Santa Fe Springs	4	0	4
Seal Beach	2	0	2
South Gate	1	0	1
Stanton	0	1	1
Tustin	0	1	1
Westminster	2	1	3
Whittier	22	0	22
Non Resident Total	559	68	627
	YOUTH	ADULT	TOTAL
Cerritos Resident Total	448	77	525
GRAND TOTAL	1007	145	1152
	Percentage	YOUTH	ADULT
Non Residents	55%		47%
Residents	45%		53%

Community Investment Benefits & Nature Based Solutions

- Improved flood risk mitigation/management
- Improved recreational opportunities (i.e. new fields and improved facilities)
- Enhanced park space
- Native vegetation area and bioswale to be installed along bike path on east side of park
- Native trees and shrubs will reduce heat island effect



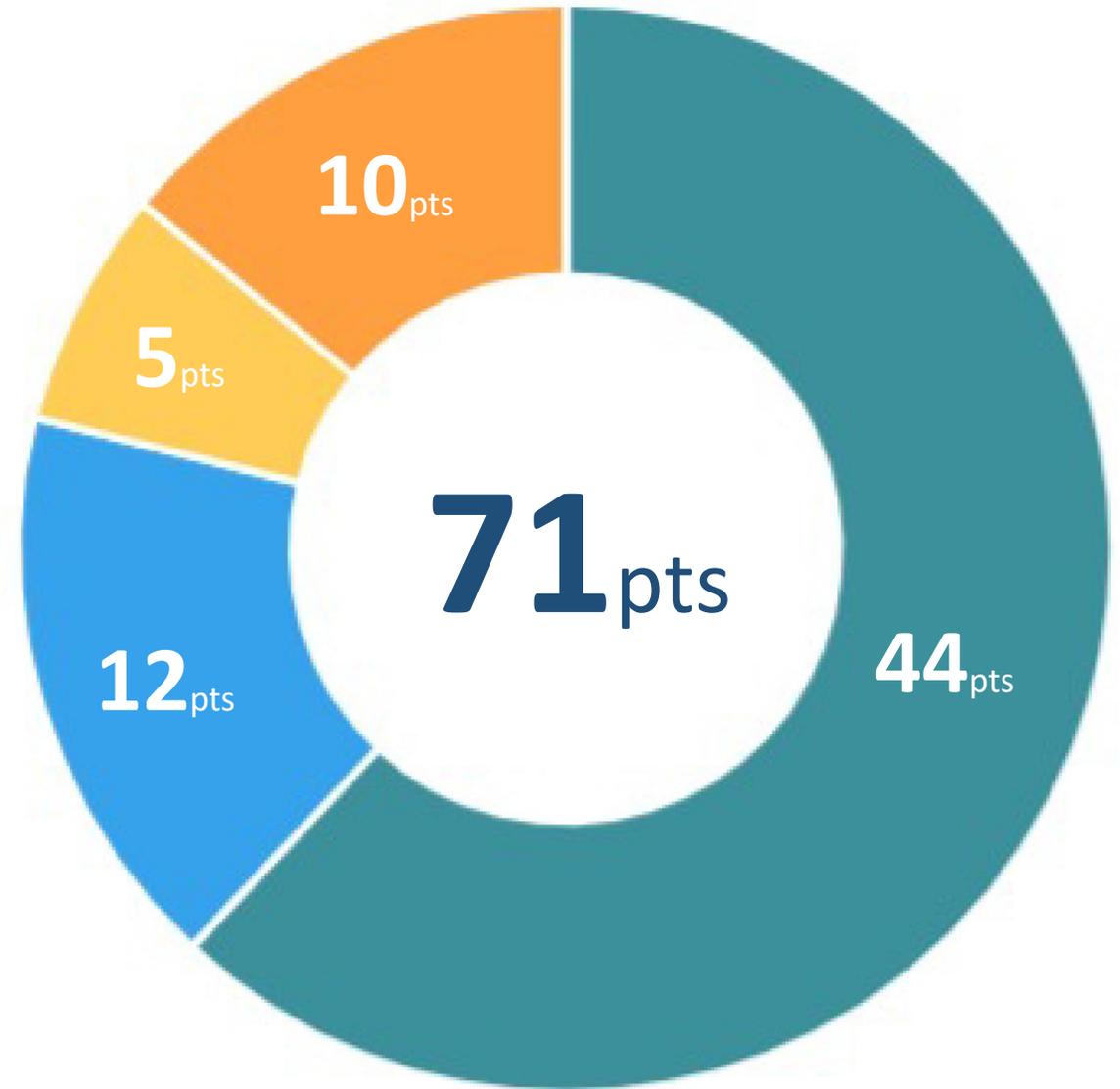
Funding Requested

- Total estimated costs: **\$45,400,000 (in two phases)**
- Phase 1
 - FY 20-21: \$5.6 million for design of both phases, environmental documentation, permitting, and initial site prep
 - FY 21-24: \$8.4 million for excavation, construction and installation of **both** diversion systems
 - FY 22-23: \$8.4 million for continued construction
 - FY 23-24: \$4.2 million for final construction
 - FY 24-25: \$0.1 million for O&M and monitoring
 - **Total requested: \$26.7 million**

(City's) Scoring Summary

- Water Quality
- Water Supply
- Community Investment
- Nature-Based Solutions

Scoring Committee's score:
Above Threshold



Questions?