Safe, Clean Water Program

South Santa Monica Bay
Watershed Area Steering Committee (WASC)

Meeting Minutes:
Wednesday, February 5, 2020
1:00pm - 3:00pm
Edward C. Little Water Recycling Facility,
1935 S. Hughes Way, El Segundo, CA 90245

Attendees

Committee Members Present:

Cung Nguyen (LA County Flood Control District)
Kristen Ruffell (Sanitation Districts)
Craig Cadwallader (Surfrider Foundation South Bay)
Diane Gatza (Water Replenishment District)
Alex Heide* (West Basin)
Heecheol Kwon (Hawthorne)
John Dettle (Torrance)
Susie Santilena (LA)
TJ Moon* (LA County)
Ken Rukavina (Palos Verdes Estates)
Wendy Butts (LA Conservation Corps)
Darryl Ford* (Los Angeles Rec & Park)
Stephanie Katsouleas (Manhattan Beach)
Julio Gonzalez (Carson)

Committee Members Not Present:

Alison Suffet-Diaz (Environmental Charter School)
Guang Yu Wang (SMB Restoration Commission)
Hany Fangary (Fangary Law Group)

*Committee Member Alternate

See attached sign-in sheet for full list of attendees

1. Welcome and Introductions

Diane Gatza, Chair of the South Santa Monica Bay WASC, called the meeting to order.

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

2. Approval of Meeting Minutes from January 22, 2020

The District provided a copy of the meeting minutes from the previous meeting. Diane Gatza asked the committee members for comments or revisions.

Kristen Ruffell made a motion to approve the meeting minutes. Susie Santilena seconded the motion. The Committee voted to approve the meeting minutes from January 22, 2020 (unanimous).

3. Committee Member and District Updates

a) Regional Watershed Coordinator Updates

Kirk Allen provided an update on the Watershed Coordinator Solicitation Process.

b) Scoring Committee Update

Kirk Allen provided an update on the Scoring Committee (SC) and their progress, noting that a revised score sheet would be available after the SC finalized all scores on February 18.

Diane Gatza noted that if re-scored projects did not meet the threshold score that they would not be eligible for consideration in the SIP.

Susie Santilena encouraged project applicants to attend the SC meetings.

c) Follow-up discussion from previous meeting

4. Public Comment Period

No public comments received

5. Discussion Items:

a) Ex Parte Communication Disclosures

Darryl Ford noted that he had a discussion with LA County regarding his project.

Kirk Allen provided further clarification on expectations for ex parte disclosures.

b) Presentations

i) Harbor City Greenway O&M, (Los Angeles)

John Dettle inquired how the $75k requested funds would be used. The City noted that funds would be used for annual landscaping maintenance costs, and that the City plans to work with a local youth group for this work.

Stephanie Katsouleas inquired what percent of Municipal funds the City plans to use for this project. Wendy Butts requested there be a cost breakdown for the $75k. The City noted that they would include these details in their resubmission.

Stephanie Katsouleas inquired if the applicant had or will apply for park grant funding. The City noted that they were unaware of any specific park grant funding.

TJ Moon and Diane Gatza inquired how the project is currently being funded. The City noted that the project maintenance is currently deferred and covered by LA Sanitation.

John Dettle inquired if there was a rule for O&M costs. Kirk Allen clarified that costs prior to the election would not be eligible for funding.

Diane Gatza inquired how the project would succeed if funds could not be provided in full. The City noted that they would seek grants and other funding to help cover costs. Diane Gatza further inquired if O&M was part of the plan with the project was first constructed. The City noted that O&M was part of the plan, but that plan only covered the infrastructure and did not cover landscaping.

Kristen Ruffell requested that the City's resubmission should include a nexus to water quality benefits.

Ken Rukavina noted that all cities are receiving municipal funding, and requested that the City provide clarification for how they plan to use these funds for O&M.

Julio Gonzalez suggested that the City show if there have been any changes to O&M costs since construction. The City noted that costs have stayed the same.

ii) Wilmington Q Street Local Urban Area Flow Management Project (LA)

Wendy Butts requested the full funding request. The City clarified that the application would be amended to show an ask of $5.1M.

Stephanie Katsouleas inquired if there is a higher rate of pollution at this site and why this area was prioritized over other areas. The City clarified that this area has a high levels of pollutants in this area.

Diane Gatza inquired if any community outreach has been conducted. The City noted that they have a plan for community outreach but it had not yet started on that process.

Craig Cadwallader requested the City solicit letters of support and commitment from project proponents such as the school.

Diane Gatza inquired if the City is requesting SCW funding for O&M for after construction. The City noted that SCW funds would be requested for O&M post construction. Diane Gatza further inquired if the project O&M was not funded, how the City would cover these costs. The City noted that could not be answered at this time.

Kristen Ruffell requested that the applicant provide a Geotech report, details for the dry well, and additional reports be provided to support the resubmission.

TJ Moon requested clarification for the cost breakdown. The City noted that for 2020, only $500k is being requested, with the presentation providing the remaining annual breakdown for this project.

iii) Eastview Park (Rancho Palos Verdes)

Presentation held by applicant due to recently discovered land ownership and property issue. Diane Gatza suggested that the project present on the next SSMB WASC meeting.

iv) Harbor City Park Multi-Benefit Stormwater Capture Project (LA County)

Ken Rukavina noted that this project bill benefit the City of LA. Kirk Allen clarified that this would not be a COI since the project developer is the County, and that a COI disclosure is only applicable if there is a direct personal financial benefit.

Stephanie Katsouleas noted that County reached out to the City of LA to discuss the sewer force main. The Proposed sewer line will be able to take flow from Torrance Airport and Walteria Detention Projects, and it would be more cost effective to send it to this project.

Diane Gatza inquired on the total SCW funding being requested. Kirk Allen noted that it is approximately $300k for the District to complete a feasibility study. TJ Moon inquired who would pay if a project is over $300k to develop. Kirk Allen further clarified that the District will use District Program funds to pay, but he would need to confirm since this project is more complex.

Cung Nguyen inquired if County is partnering with other cities on this project. The County noted that partnerships will help with design, construction, and O&M.

Susie Santilena suggested that TRP funding should be prioritized for smaller agencies. Stephanie Katsouleas noted that it may be easier for larger agencies such as County to manage a larger project. Kristen Ruffell noted that County makes up a small portion of this project compared to the cities.

Ken Rukavina noted that modeling will be complex for the detention basin and inquired if $800k could cover the modeling effort. John Dettle noted that it would be feasible to connect the Torrance Airport Project with this project for additional benefits. County clarified that $800k would cover the entire feasibility Study, and that a consultant would be used for this work.

Ken Rukavina requested the expected schedule for this process. County clarified that the technical aspects of the project would take between 16 and 18 months, with additional time needed for outreach.

v) Manhattan Beach Infiltration Trench Project (Manhattan Beach)

Kristen Ruffell thanked the applicant for submitting this water quality project for consideration.

John Dettle inquired if TRP funding would be used by the District to complete the project. Kirk Allen confirmed that the District would use TRP funding for the project.

John Dettle and Diane Gatza inquired if community outreach could be funded through the TRP funding. Kirk Allen clarified that community outreach would not be part of the TRP and would need to be performed by the local jurisdiction.

Kristen Ruffell noted that this project is well into development and inquired what components remained unfinished to finalize the feasibility study. Manhattan Beach clarified that it still required a geotechnical investigation, updates to its 10-percent plans, and additional technical research and reports.

Ken Rukavina inquired if the project was using existing or planned future storm drain capacity. Manhattan Beach clarified that they are basing their project on future storm drain capacity.

6. Voting Items:

None

7. Items for next agenda

Diane Gatza recommended including the three scientific studies for the SSMB WASC, the Eastview Project, a second public comment period after presentations, and to begin the SIP development Process as follows:

February 19 – Remaining Presentations
March 4 – SIP Development
March 18 – SIP Development
April to June – Convert to a single monthly meeting (3rd Wednesday)

Diane Gatza requested that the District request all project applicants to attend the March WASC meetings to answer any questions the committee may have.

8. Adjournment

Diane Gatza thanked the committee members and public for their time and participation and adjourned the meeting.

South Santa Monica Bay
Watershed Area Steering Committee Meeting
COMMITTEE MEMBER AND ALTERNATE SIGN-IN

SAFE CLEAN WATER

Member Name	Municipality/ Organization	Email Address		Signature
Cung Nguyen	FCD	CUNGUYEN@dpw.lacounty.gov	P	
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	
Cathie Santo Domingo	Los Angeles Recreation & Parks	cathie.santodomingo@lacity.org	P	
Darryl Ford	Los Angeles Recreation & Parks	Darryl.Ford@lacity.org	A	✓
Kristen Ruffell	Sanitation Districts	kruffell@lacsd.org	P	
Mike Sullivan	Sanitation Districts	msullivan@lacsd.org	A	
E.J. Caldwell	West Basin	edwardc@westbasin.org	P	
Alex Heide	West Basin	alexanderh@westbasin.org	A	
Alison Suffet-Diaz	Environmental Charter School	alison@ecsonline.org	P	
Craig Cadwallader	Surfrider Foundation South Bay Chapter	craigc@surfrider-southbay.org	P	
Mary Simun	Surfrider Foundation South Bay Chapter	entamoebatrex@hotmail.com	A	
Hany Fangary	Fangary Law Group	hany@fangarylaw.com	P	
Justin Massey			A	

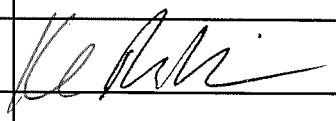
South Santa Monica Bay
Watershed Area Steering Committee Meeting
COMMITTEE MEMBER AND ALTERNATE SIGN-IN

SAFE CLEAN WATER

Member Name	Municipality/ Organization	Email Address		Signature
Wendy Butts	Los Angeles Conservation Corps	wbutts@lacorps.org	P	Wendy A. Butts
Bo Savage	Los Angeles Conservation Corps	bsavage@lacorps.org	A	
Guang Yu Wang	Santa Monica Bay Restoration Commission	Guangyu.wang@waterboards.ca.gov	P	
Julio Gonzalez	Carson	JGonzalez@carson.ca.us	P	
Maria E. Williams-Slaughter	Carson	MSlaughter@Carson.ca.us	A	
Susie Santilena	Los Angeles	susie.santilena@lacity.org	P	✓
Alfredo Magallanes	Los Angeles - Sanitation	alfredo.magallanes@lacity.org	A	
Paul Alva	Los Angeles County	PALVA@dpw.lacounty.gov	P	
Mark Lombos	Los Angeles County	MLOMBOS@dpw.lacounty.gov	A	
TJ Moon	Los Angeles County	TMOON@dpw.lacounty.gov	A	
John Dettle	Torrance	jdettle@torranceca.gov	P	✓
Wilson Mendoza	Torrance	Wmendoza@TorranceCA.Gov	A	
Stephanie Katsouleas	EWMP: Beach Cities (Manhattan Beach)	skatsouleas@citymb.info	P	
Shawn Igoe	EWMP: Beach Cities (Manhattan Beach)	sigoe@citymb.info	A	
Heecheol Kwon	EWMP: Dominguez (Hawthorne)	HKwon@cityofhawthorne.org	P	

South Santa Monica Bay
Watershed Area Steering Committee Meeting
COMMITTEE MEMBER AND ALTERNATE SIGN-IN

SAFE CLEAN WATER

Member Name	Municipality/ Organization	Email Address		Signature
Akbar Farokhi	EWMP: Dominguez (Hawthorne)	AFarokhi@cityofhawthorne.org	A	
Lauren Amimoto	EWMP: Dominguez (Inglewood)	lamimoto@cityofinglewood.org	A	
Barmeshwar Rai	EWMP: Dominguez (Inglewood)	brai@cityofinglewood.org	A	
Ken Rukavina	EWMP: Peninsula (Palos Verdes Estates)	krukavina@pvestates.org	P	
Elias K. Sassoon	EWMP: Peninsula (Rancho Palos Verdes)	esassoon@rpvca.gov	A	

Scoring Committee Meeting

PUBLIC SIGN-IN

SAFE CLEAN WATER

First Name	Last Name	Municipality/Organization	Email Address
CRISTIAN	HERNANDEZ	CORDOBA CORP.	CRISTIAN.HERNANDEZ@CORDOBACORP.COM
Kate	Mute	LA	
~~TAFFAT~~	NIKFAR	LA	Taraneh.Nik-Khah@lacity.org
Jonathan	Abelson	Stantec	jonathan.abelson@stantec.com
Thuan	Nguyen	LA County	
Ariel	Flores	LA	ariel.flores@lacity.org
Tammy	Takigawa	CWE	ttakigawa@cwecorp.com
Jacqueline [redacted]	McMillen	Alta/NVS	jacqueline.mcmillen@altaenviron.com
Jennifer ~~Walk~~	Walker	Wateartk	jwalker@wateartk.com
Stefan J	Torres	"	Storres@wateartk.com
Susan Re	Robinson	McGowan	Susan@mcgowan.Consulting
Michelle ~~staffied~~	Staffield	JLHA	mstaffield@JLHA.net
Jacqueline ~~Mak~~	Mak	JLHA	jmak@jlha.net.
Aaron ~~Chiang~~	Chiang	LA County	achiang@dpw.lacounty.gov
Mercedes	Passanisi	LA County	mpassanisi@dpw.lacounty.gov

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

February 5, 2020

Scoring Committee Meeting

PUBLIC SIGN-IN

SAFE CLEAN WATER

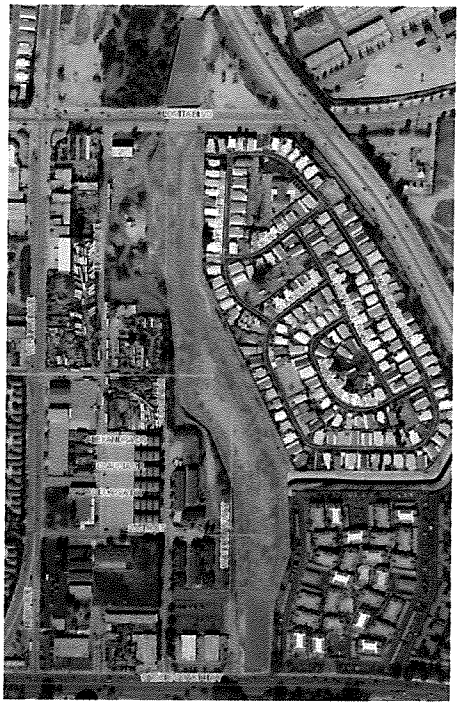
First Name	Last Name	Municipality/Organization	Email Address
Seth	Carr	City of LA	seth.carr@lacity.org
Nancy	Shrader	Heal the Bay	nshrader@healthebay.org
Jim	Burton	Ecokai	JBURTON@ECOKAI.COM
Mercedes	Passanisi	LA County	mpassanisi@dpw.lacounty.gov

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

Harbor City Greenway (Wilmington Drain)

Project Location

Harbor City Greenway is located adjacent to Wilmington Drain, north of Pacific Coast Highway (PCH) and west of the 110 Freeway in an urbanized neighborhood of the City of Los Angeles. A tributary area of 12,800 acres within the Dominguez Channel watershed drains runoff from the City of Los Angeles, Los Angeles County, City of Torrance, City of Torrance and other jurisdictions to the receiving waters of Machado Lake and Los Angeles Harbor.

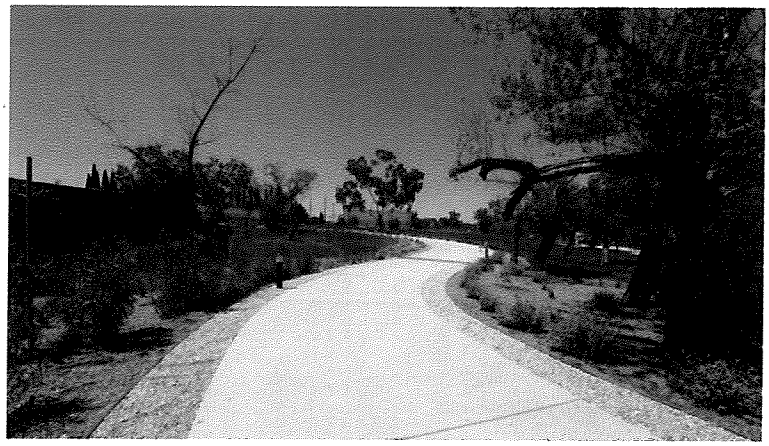


Project Description

The elements of the project that contribute to water quality improvements and community benefits include:

- Trash netting system (O&M needed to ensure up to 50 tons per year of trash and sediment continue to be removed from channel); sediment forebay, underdrain culverts, rip rap energy dissipaters and access ramps
- Greenway open space and recreation area: 4.5 acres of walking paths adjacent to the Channel, with native plantings with invasive plant control, protected and restored sensitive habitat in and alongside the Channel, educational and directional signage, seating, trash receptacles, multiple entry gates, parking lot and lighting, decorative gates and security fencing. (O&M performed daily by Gang Alternatives Program to maintain Greenway and provide community access)
- Sensitive Habitat established and Environmental Permitting completed: EIR, SBAA, ITP permits (4.4 acres of habitat for Least Bell's Vireo); removed invasive species to promote biodiversity and reduce urban heat island effect
- Restored flood control capacity by removing accumulated sediment along 3,300 long soft-bottom channel

Completed in June 2015, Harbor City Greenway aids the City in meeting water quality regulations, known as Total Maximum Daily Loads (TMDLs), enacted by the Regional Water Quality Control Board for the Dominguez Channel watershed. The project improves water quality by removing trash and sediment which would otherwise wash through Wilmington Drain downstream to Machado Lake, LA Harbor, and San Pedro Bay. The project also restored flood control capacity in the Drain by removing accumulated sediment and the channel re-contouring and alignment protects existing sensitive habitats.



Project Funding

The total project cost of $25.1 million, front funded by City of LA Clean Water Bond (Prop O), with reimbursement of $4.9 million from the State Water Resources Control Board (Prop 50 IRWMP Grant), and a Los Angeles County Public Works contribution of $8.16 million.

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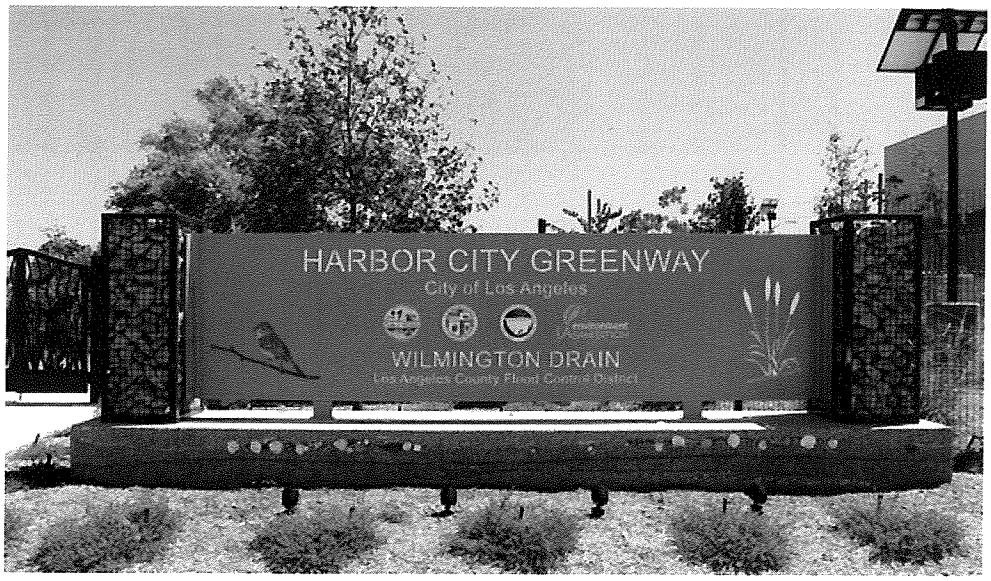
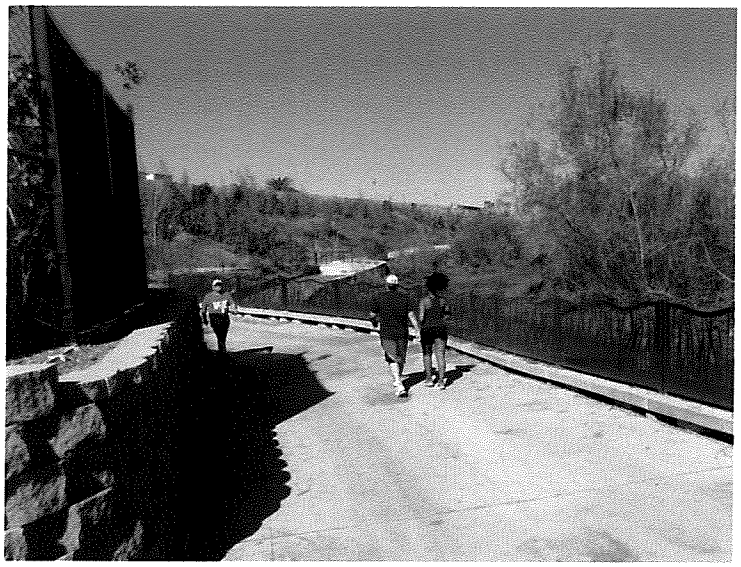


Trash rack



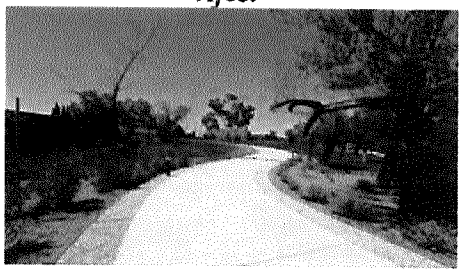
PROPOSITION O PROJECTS VISUAL TOUR

CITY OF LOS ANGELES

WILMINGTON DRAIN-HARBOR CITY GREENWAY

Before

After



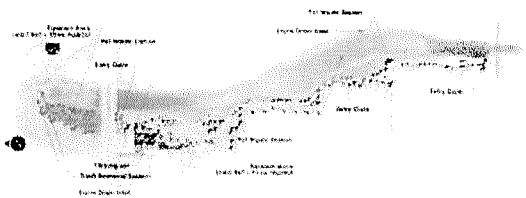
Benefits:

- Trash capture and removal
- Open space, habitat and recreational benefits
- Reduce "heat island" effects, flooding

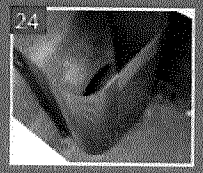
Water Quality/Pollutant Removal:

- Trash and debris 100%
- Citywide Trash TMDL compliance met
- Preserve aquatic marine/plant habitat

- Total Cost $25.1M (Prop O, Prop 50, LA County)
- Completed June 2015
- Located at PCH & Vermont Ave. (CD 15)



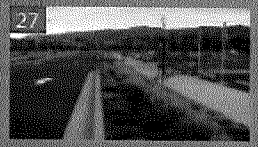
Wilmington Drain-Harbor City Greenway



24 Catch Basin Inserts

25 Catch Basin Opening Screen Covers

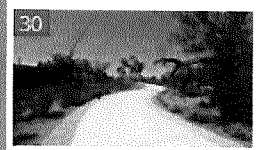
26 Temescal Canyon Park Stormwater BMP Phase I



27 Los Angeles Zoo Parking Lot

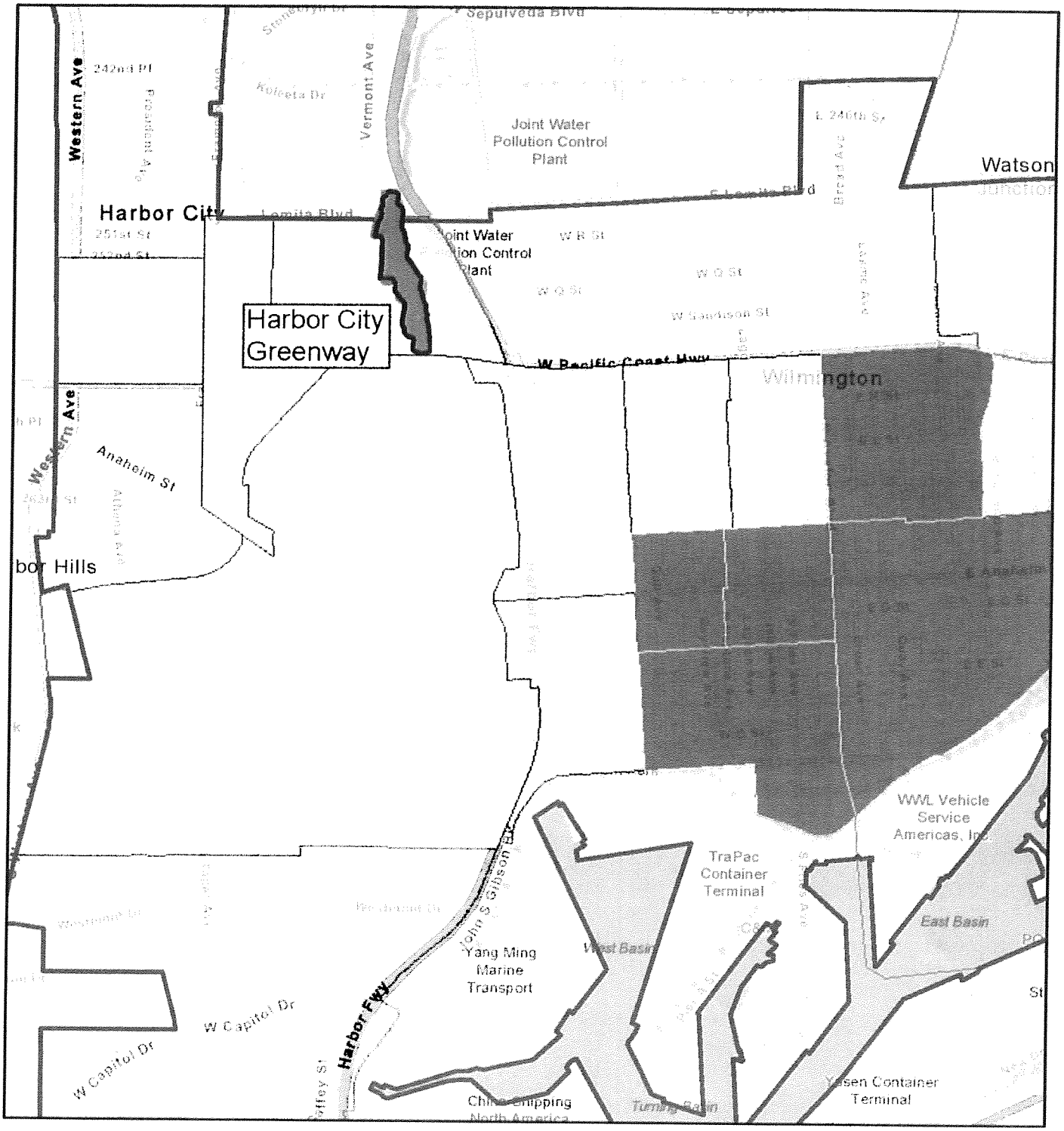
28 Westminster Dog park Stormwater BMP

29 Argo Drain Sub-Basin Facility



30 Wilmington Drain-Harbor City Greenway

LASAN - Harbor City Greenway - DACs



2/3/2020, 11:19:44 AM

1:36,112

0 0.25 0.5 1 mi

0 0.4 0.8 1.6 km

Los Angeles City Boundary

Disadvantaged Communities - Tract 2016

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

U.S. Census Bureau, Contact: gis@water.ca.gov, Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Web AppBuilder for ArcGIS

U.S. Census Bureau, Contact: gis@water.ca.gov | Department of Water Resources, Division of Integrated Regional Water Management (IRWM), Financial Assistance Branch, Integrated Regional

LOS ANGELES

BOARD OF PUBLIC WORKS

Wilmington Q Green Street

City of Los Angeles, LASAN

Seth Carr, Environmental Engineering Associate

seth.carr@lacity.org, (213) 847-5181

Funding Requested: $5,173,700

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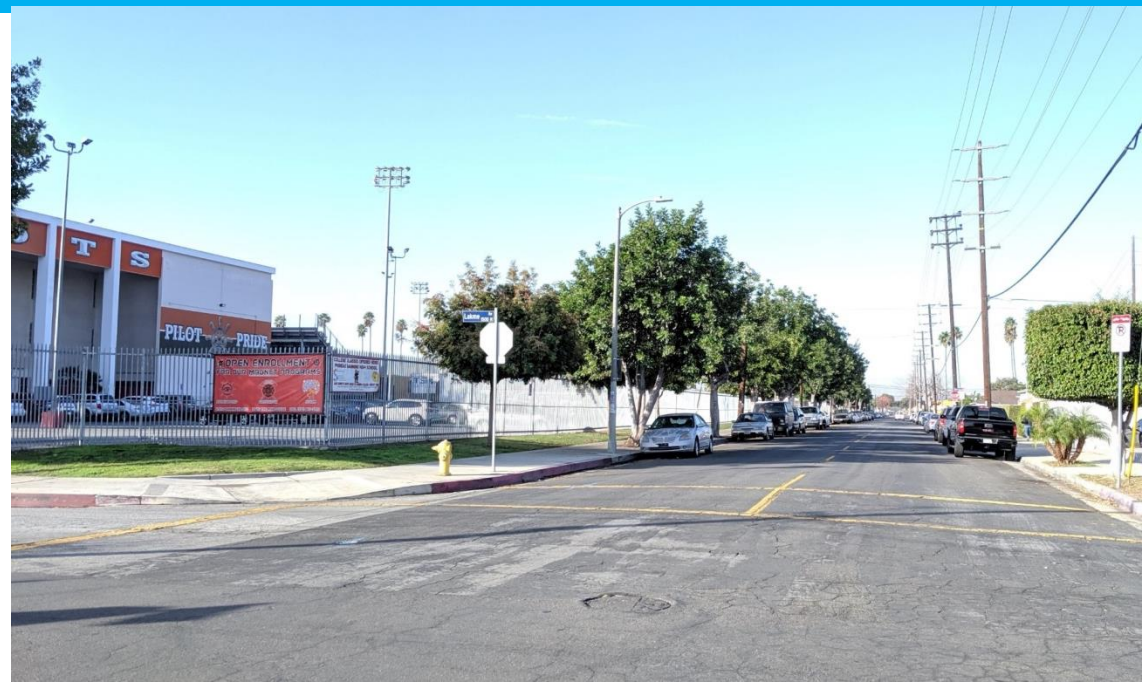
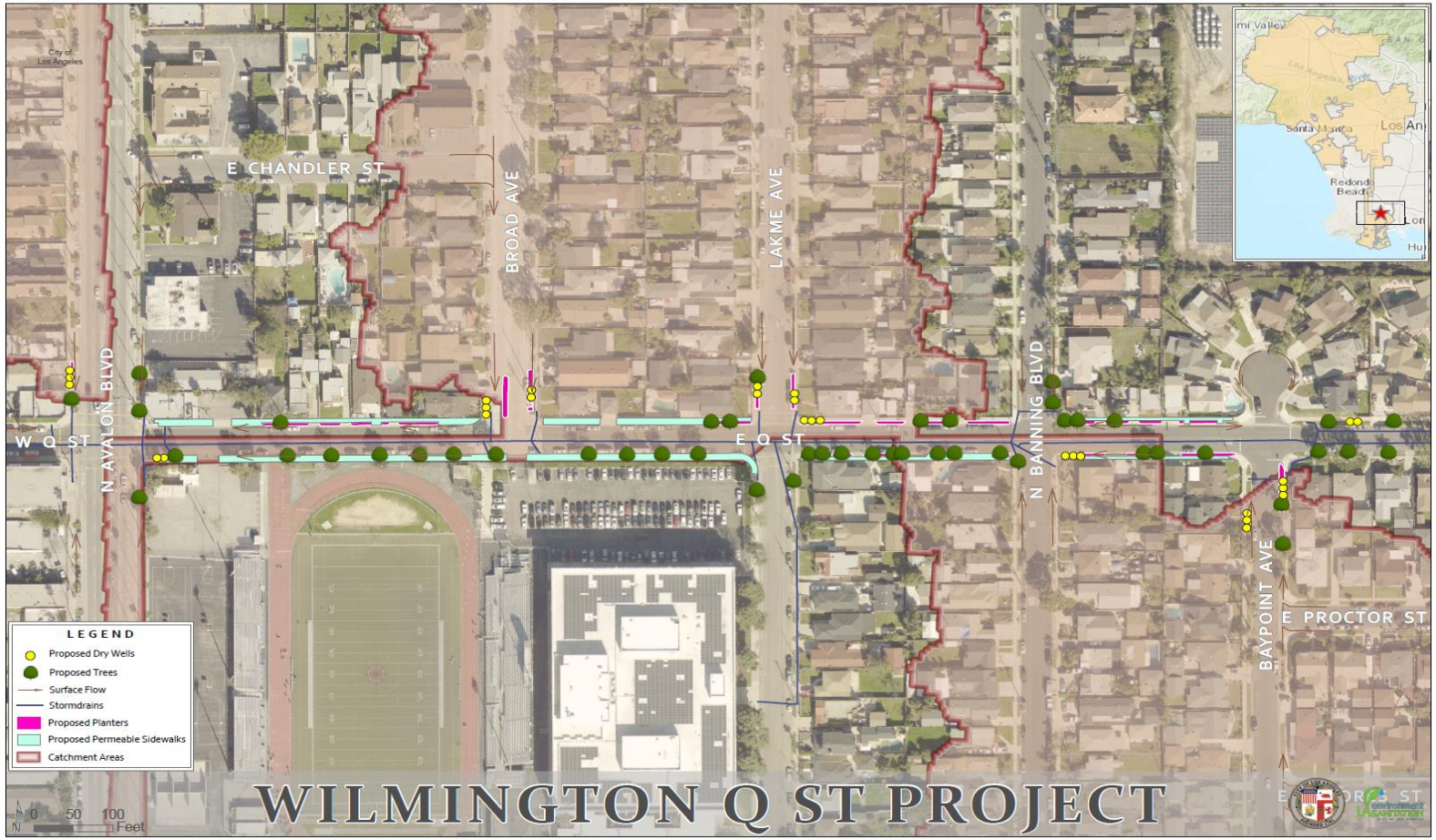
Storm Animation

Project Overview



- **Location:** Adjacent to Banning High School along Q Street from Avalon Blvd to Baypoint Avenue
- **Project Scope:**
  - Improve water quality
  - Remove pollutants affecting local water bodies by capturing, treating, and infiltrating stormwater runoff (capture and infiltrate 17.2 acres feet (AF) of stormwater per year (0.02 MGD)
  - Provides pedestrian and vehicular safety improvements
  - Located in a Disadvantaged Community (2018 block)
- **Project Features:**
  - Stormwater infiltration features (drywell systems)
  - Greening elements such as parkway planters, permeable sidewalk, vegetated medians and street trees

Project Location



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Drainage Area Map

59 acres- 60% low density residential, 30% roads, 5% high density residential, 5% commercial and within a DAC (2018)

Drainage areas based on coarse desktop analysis. No field verification performed.

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Objectives

- The proposed project will use Best Management Practices (BMPs) to capture the 85th percentile, 24-hour storm event, runoff
- It will treat the water using flow-through infiltration systems
- It will perform a combination of treat-and-release with water diversion strategies during wet weather conditions
- It will transform traditionally designed streets into Green Streets

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BOARD OF PUBLIC WORKS

Fact Sheet

CITY SCORE
Safe Clean Water (SCW) Program = **71** points

WATER QUALITY BENEFITS	SIGNIFICANT WATER SUPPLY BENEFITS	COMMUNITY BENEFITS	NATURE BASED SOLUTIONS	LEVERAGING FUNDS AND COMMUNITY SUPPORT
83.5 % Zinc Removal	17.2 AF Captured	Flood Risk Mitigation	Installation of Trees and Native Drought Tolerant Landscaping	Strong Community Support
100 % Trash Removal	11 Dry Well Systems	Installation of Trees to Reduce Heat Island Effect	Drywell Installation for the Capture an Infiltration of Storm Water	
		Installation of 13,000 sq feet of Permeable Sidewalk		
50 Pts	0 Pts	5 Pts	12 Pts	4 Pts

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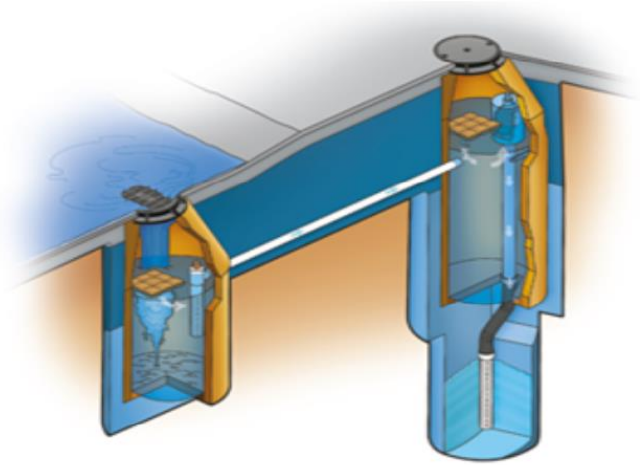
Scope

Before

After

Scope – BMP Features

- High-efficiency drywell systems
- Street trees
- Permeable sidewalk
- Drought-tolerant landscaping
- Additional crosswalks and a median



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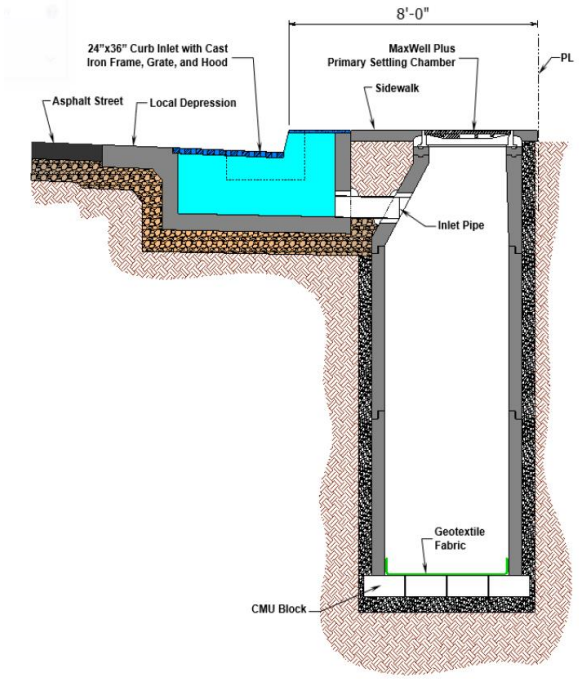
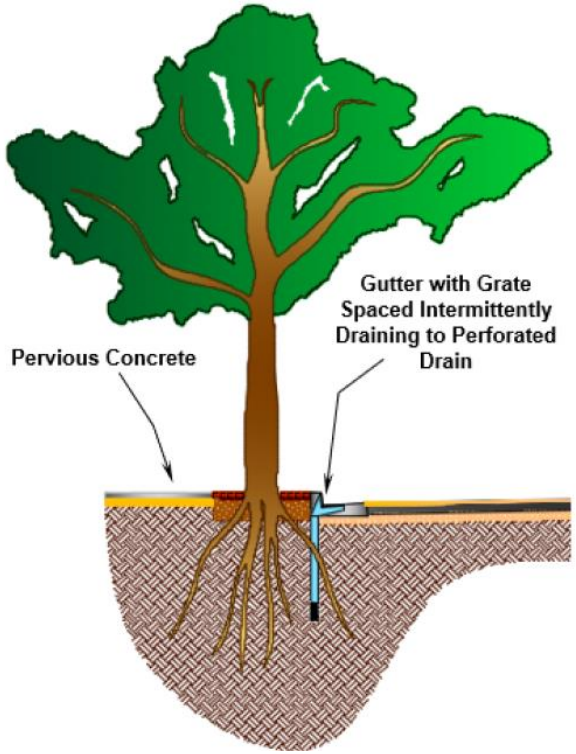
Scope - BMPs

- Curb inlets with grating in the local depressions will be installed as an element in the drywell system to increase the amount of stormwater and runoff water captured



- Street trees are bioretention BMPs that capture and treat stormwater runoff through a variety of physical and biological treatment processes



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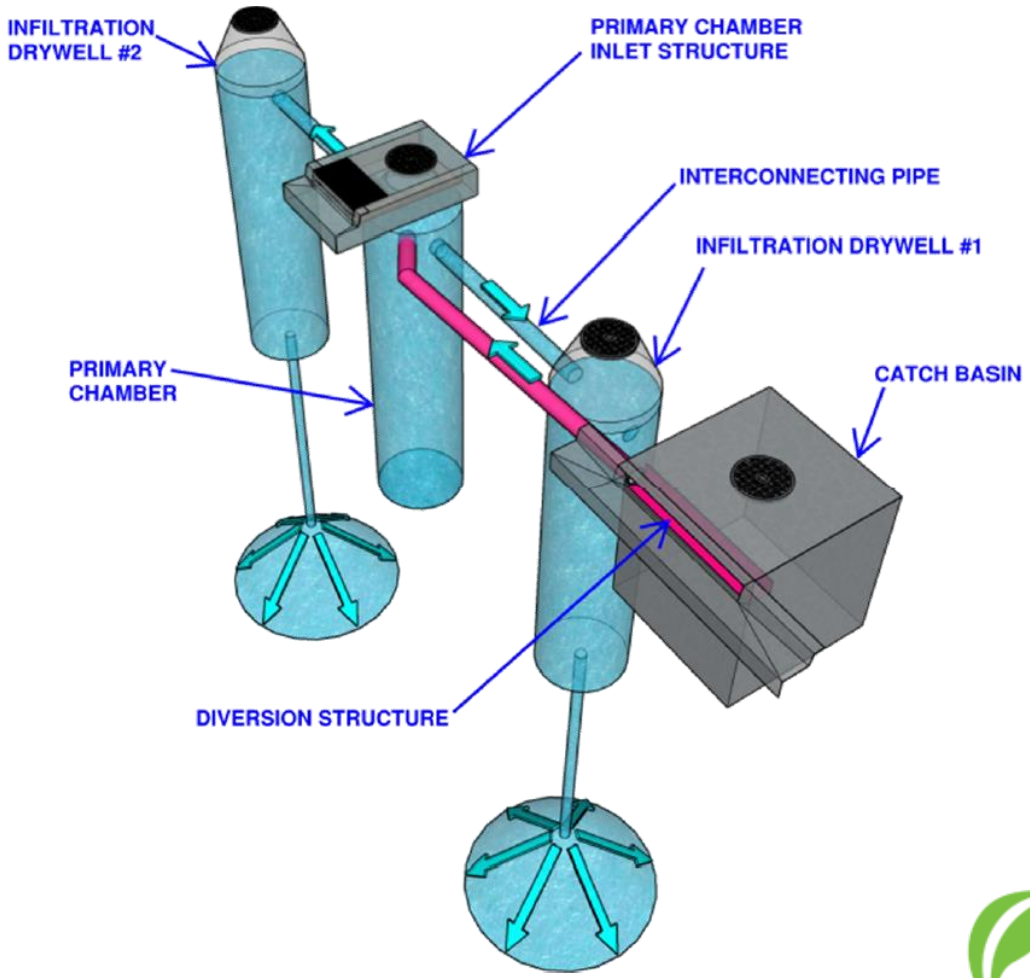
Scope – Dry wells BMPs

Drywells are a type of infiltration BMP designed to store and infiltrate stormwater runoff

11
UNITS



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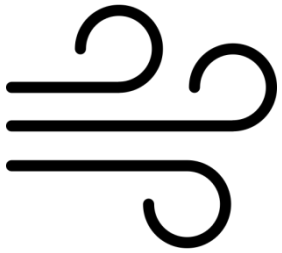
CITY OF LOS ANGELES

Scope – Social and Community Benefits:

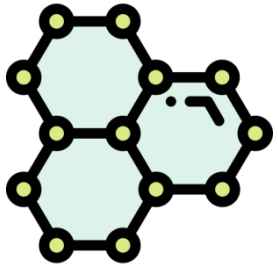


Reduce heat island effect and improve air quality

Increase shade trees and other vegetation

Improve storm flow management

Increase carbon sequestration

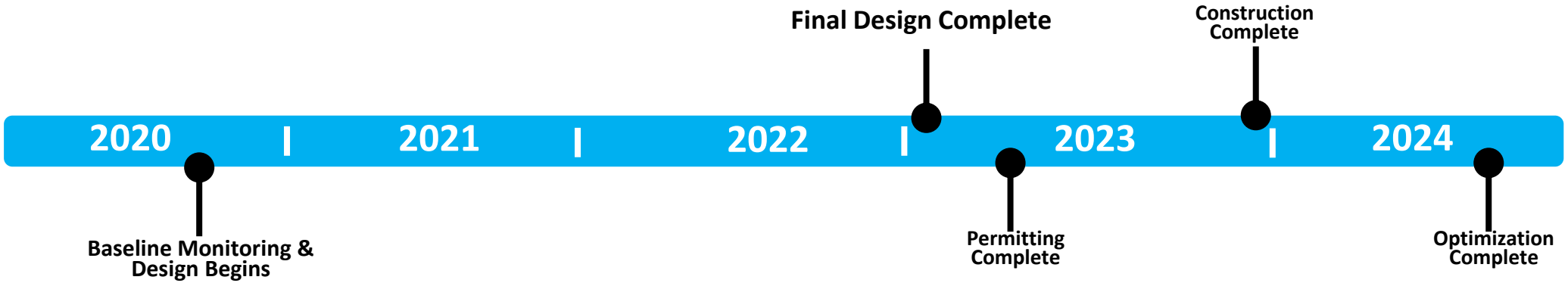


environment LASANITATION CITY OF LOS ANGELES

Scope – System Performance for Stormwater and Pollutant Capture:

Metric	Stormwater inflow (AF/yr)	Stormwater infiltrated (AF/yr)	Zinc Removed
20-year simulation (1999 – 2018)	21.6	17.2	83.8%
10-year simulation (2009 – 2018)	16.6	12.4	84.4%

Schedule



Project Phase	2020				2021				2022				2023				2024			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Baseline Monitoring																				
Design																				
Permitting																				
Construction																				
Utility Relocation																				
Optimization																				

environment LA SANITATION CITY OF LOS ANGELES

Cost Estimate

Cost Component	Total Cost	2020	2021	2022	2023	2024
Soft Cost (Design, Construction Mgmnt, etc)	$1,020,200	$500,000	$520,000			
Construction Cost	$4,153,500		$2,153,500	$2,000,000		
Capital Project Cost	$5,173,700	$500,000	$2,673,500	$2,000,000		


THANK
YOU

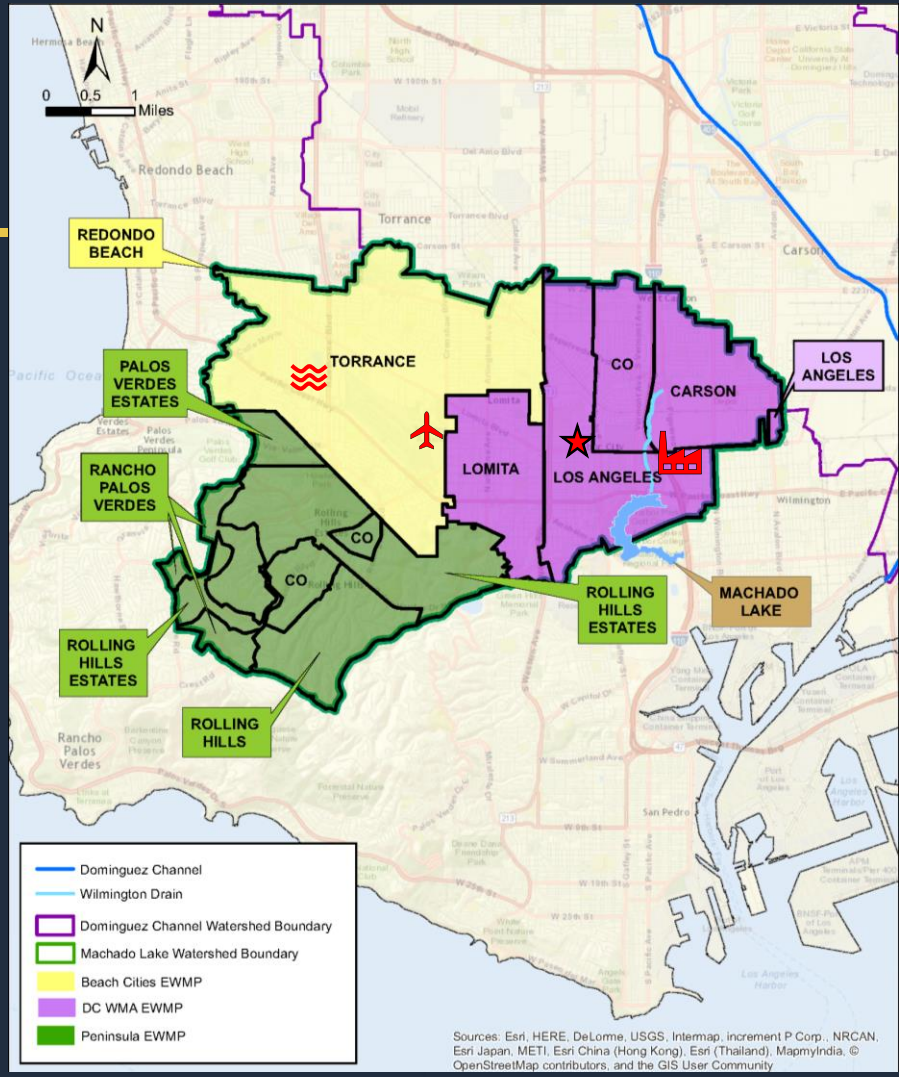
Public Works
LOS ANGELES COUNTY

Harbor City Park Multi-Benefit Stormwater Capture Project

Harbor City Park Multi-Benefit Stormwater Capture Project

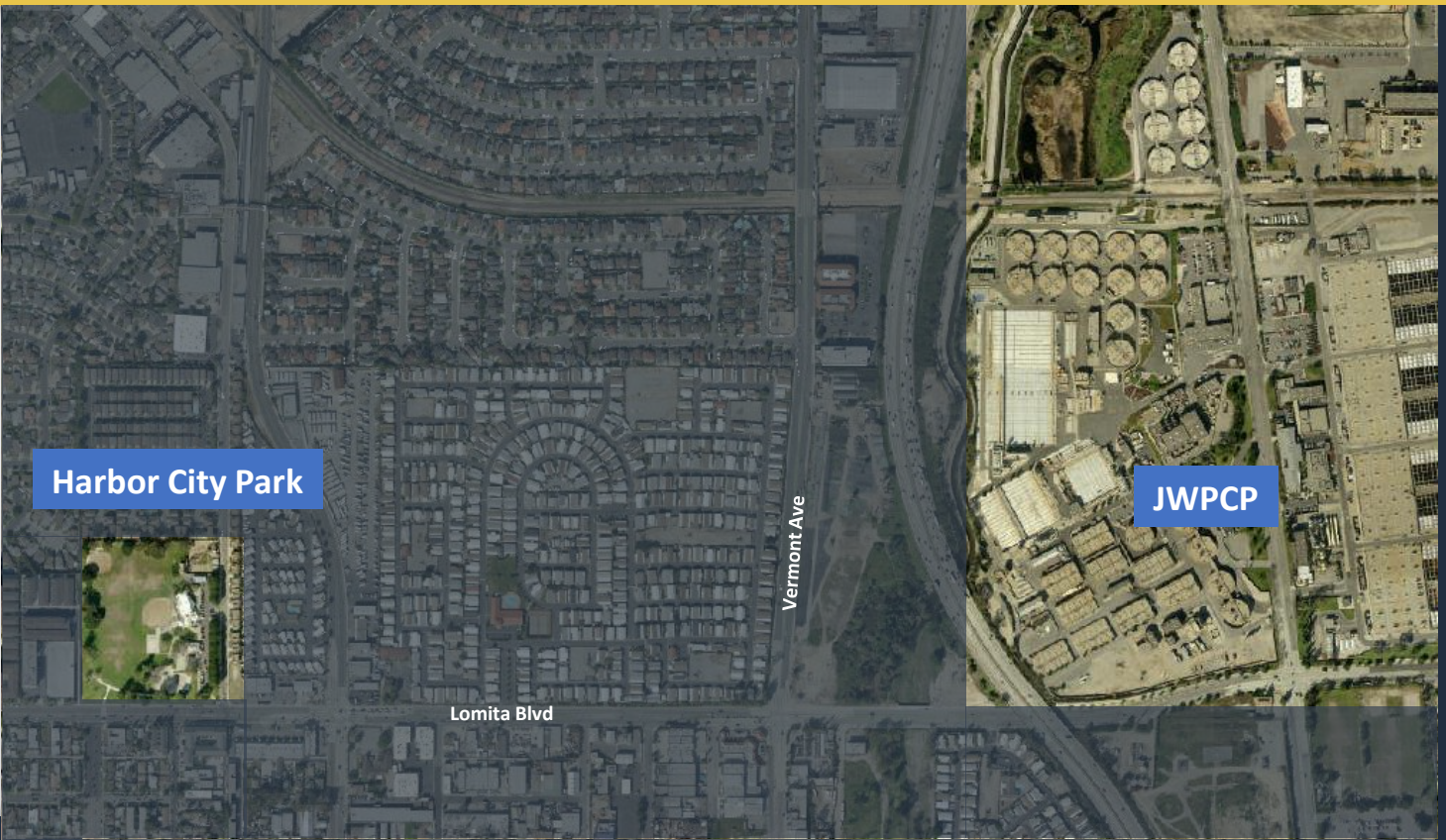
Goal: Address nutrients and toxics TMDLs, bacteria, and other pollutants discharged to Wilmington Drain and Machado Lake

- Proposed Harbor City Park Project
- Joint Water Pollution Control Plant
- Proposed Torrance Airport Stormwater Project
- Walteria Detention Basin



Public Works
LOS ANGELES COUNTY

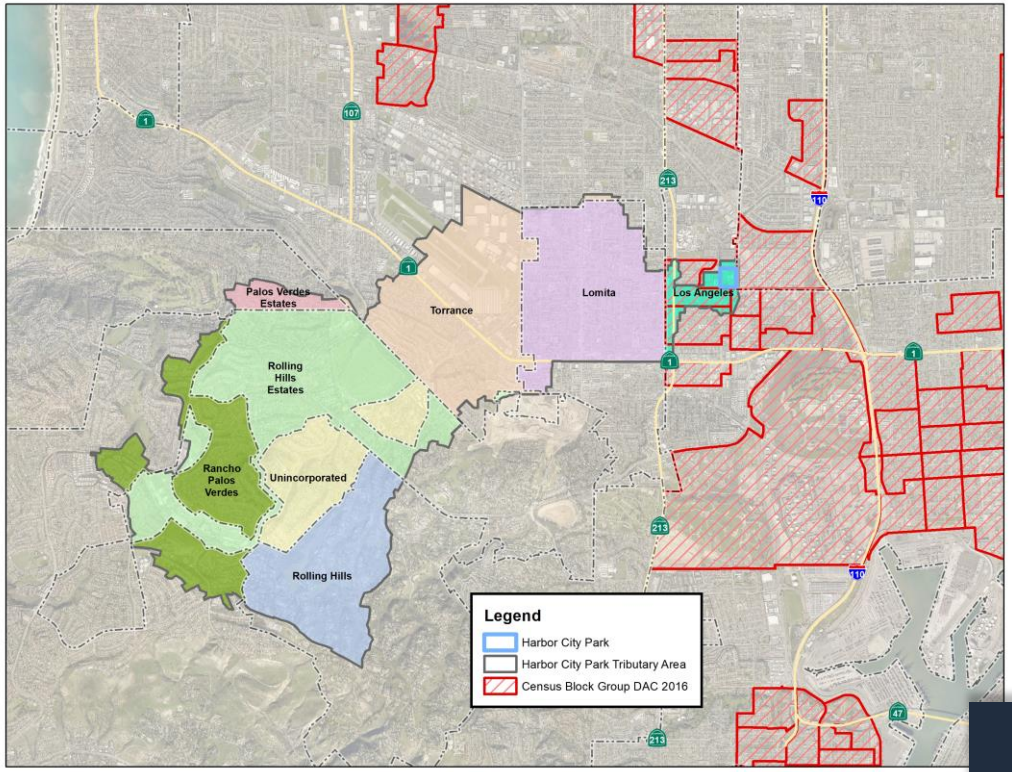
Harbor City Park Multi-Benefit Stormwater Capture Project



- ✓Space for storage
- ✓Close to storm drain
- ✓Close to treatment plant

Public Works
LOS ANGELES COUNTY

Harbor City Park Multi-Benefit Stormwater Capture Project



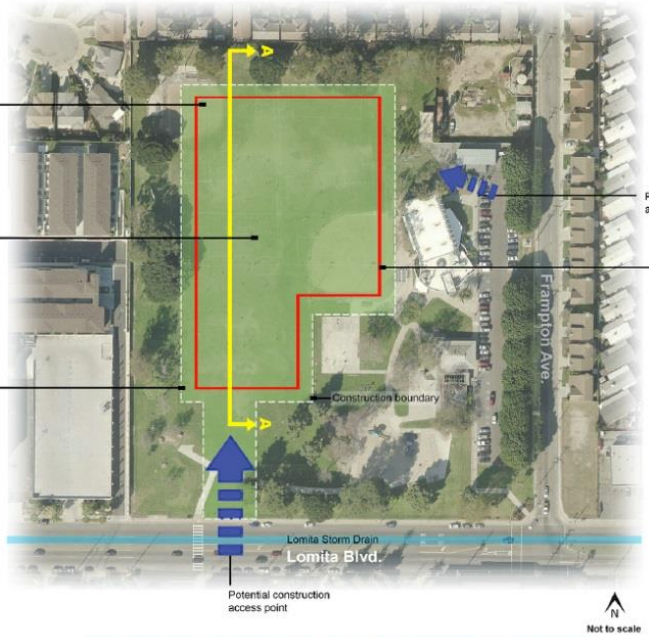
Public Works
LOS ANGELES COUNTY

Harbor City Park Multi-Benefit Stormwater Capture Project

New Baseball Fields

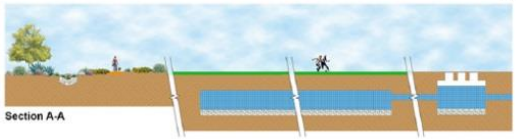
New Soccer Fields

Potential bioswales along edges of park



Footprint of Precast Concrete Underground Storage Chambers

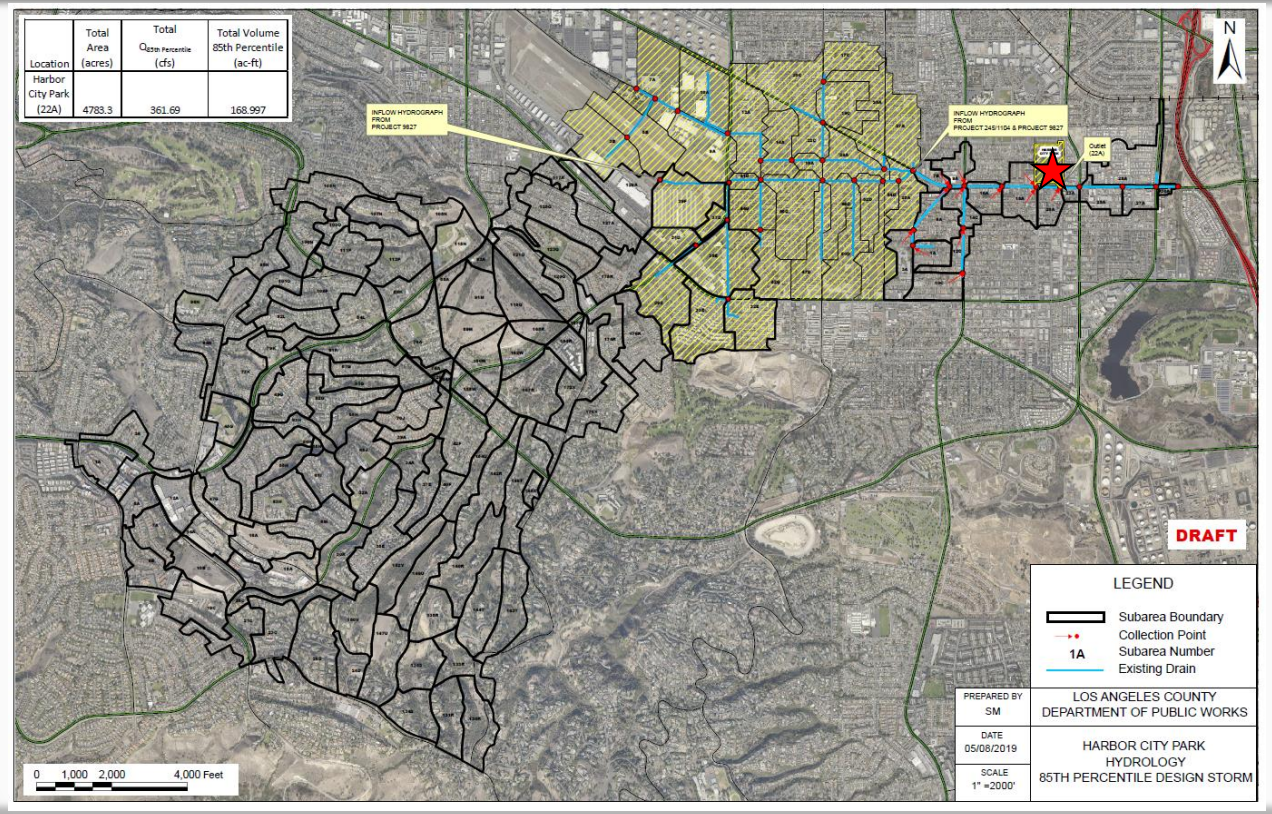
Tree replacement throughout the park



Section A-A

Public Works
LOS ANGELES COUNTY

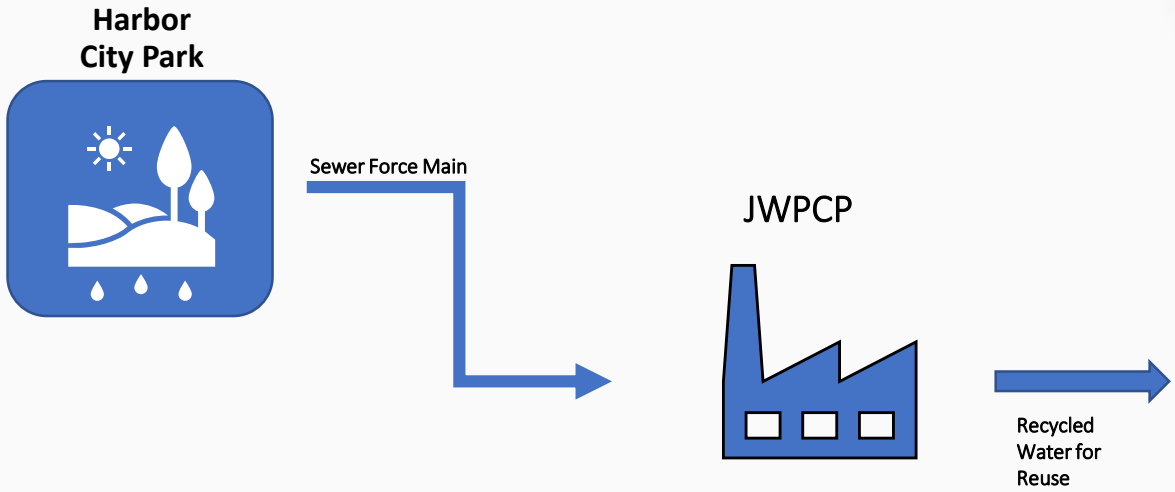
Harbor City Park Multi-Benefit Stormwater Capture Project



Public Works
LOS ANGELES COUNTY

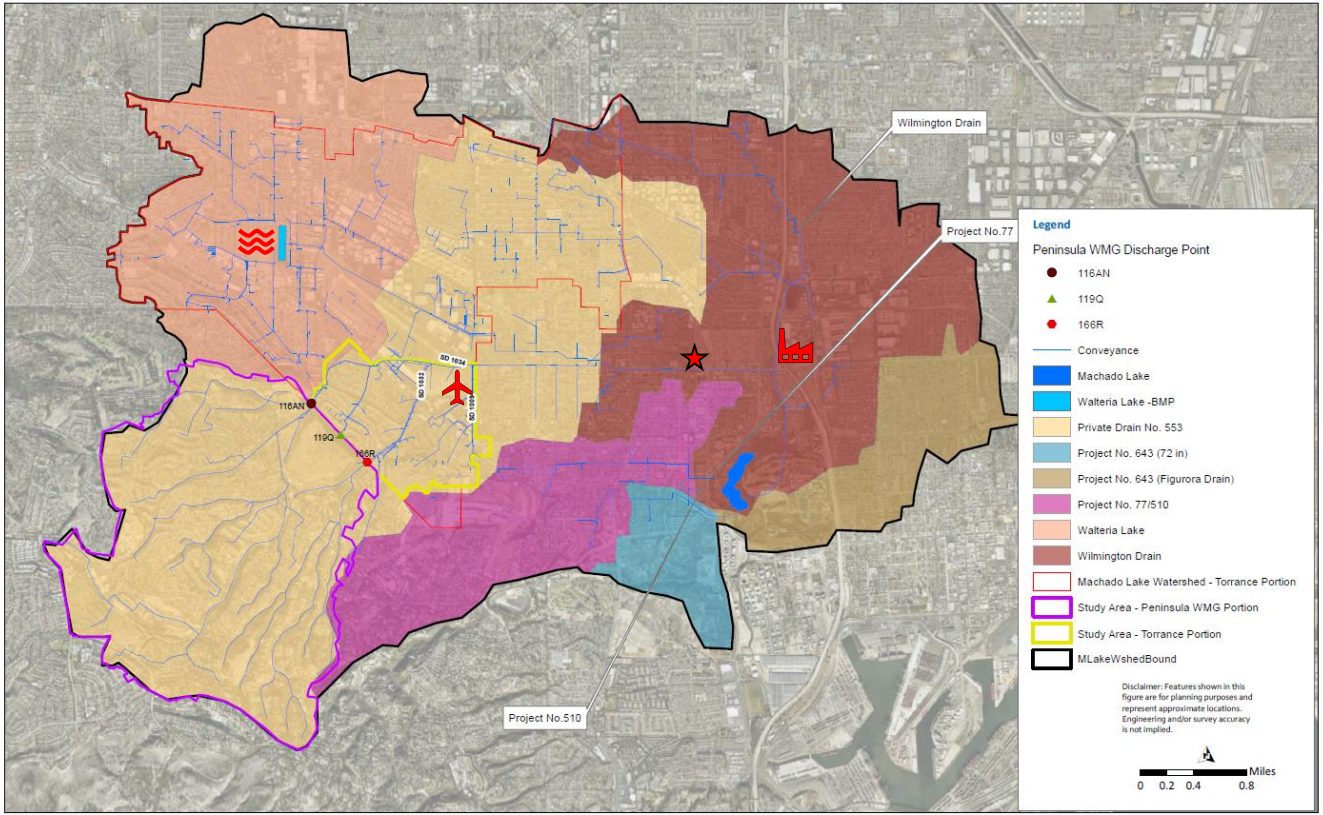
Harbor City Park Multi-Benefit Stormwater Capture Project

Storage for:
Palos Verdes Estates
Rancho Palos Verdes
Rolling Hills
Rolling Hills Estates
Torrance
UA County
Lomita
LA City



Public Works
LOS ANGELES COUNTY

Harbor City Park Multi-Benefit Stormwater Capture Project



Public Works
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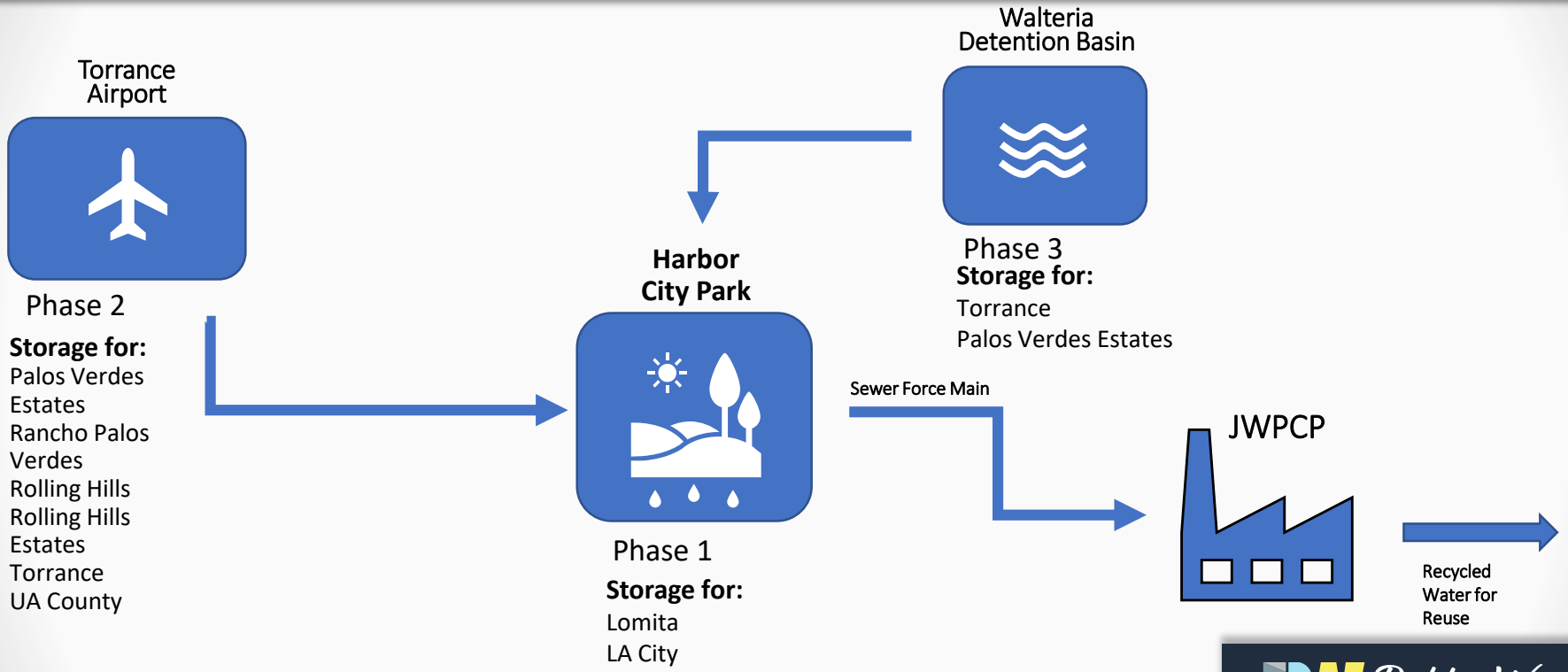
Harbor City Park Multi-Benefit Stormwater Capture Project



Public Works
LOS ANGELES COUNTY

Harbor City Park Multi-Benefit Stormwater Capture Project

Safe, Clean Water Benefits:

Water Quality

- 30 AF Storage
- 4,700 Acre+ Watershed
  - Nutrients
  - Toxics

Water Supply

- TBD

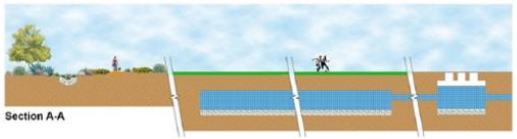
Public Works
LOS ANGELES COUNTY

Harbor City Park Multi-Benefit Stormwater Capture Project


New Baseball Fields


New Soccer Fields


Potential bioswales along edges of park



Safe, Clean Water Benefits (Cont'd):

Community Investment

- Improve Flood Management
- Enhance Park/Habitat
- Enhance Recreational Opportunities
- Reduce Heat Island Effect
- Increase Tree Canopy

Nature Based Solutions

- Natural Process
- Natural Materials

Leveraging Funds & Support

- Multi-City Partnership
- Grants
- Continued Community Outreach

Public Works
LOS ANGELES COUNTY

Harbor City Park Multi-Benefit Stormwater Capture Project

County of Los Angeles – Public Works

Mercedes Passanisi, P.E.

mpassanisi@dpw.lacounty.gov

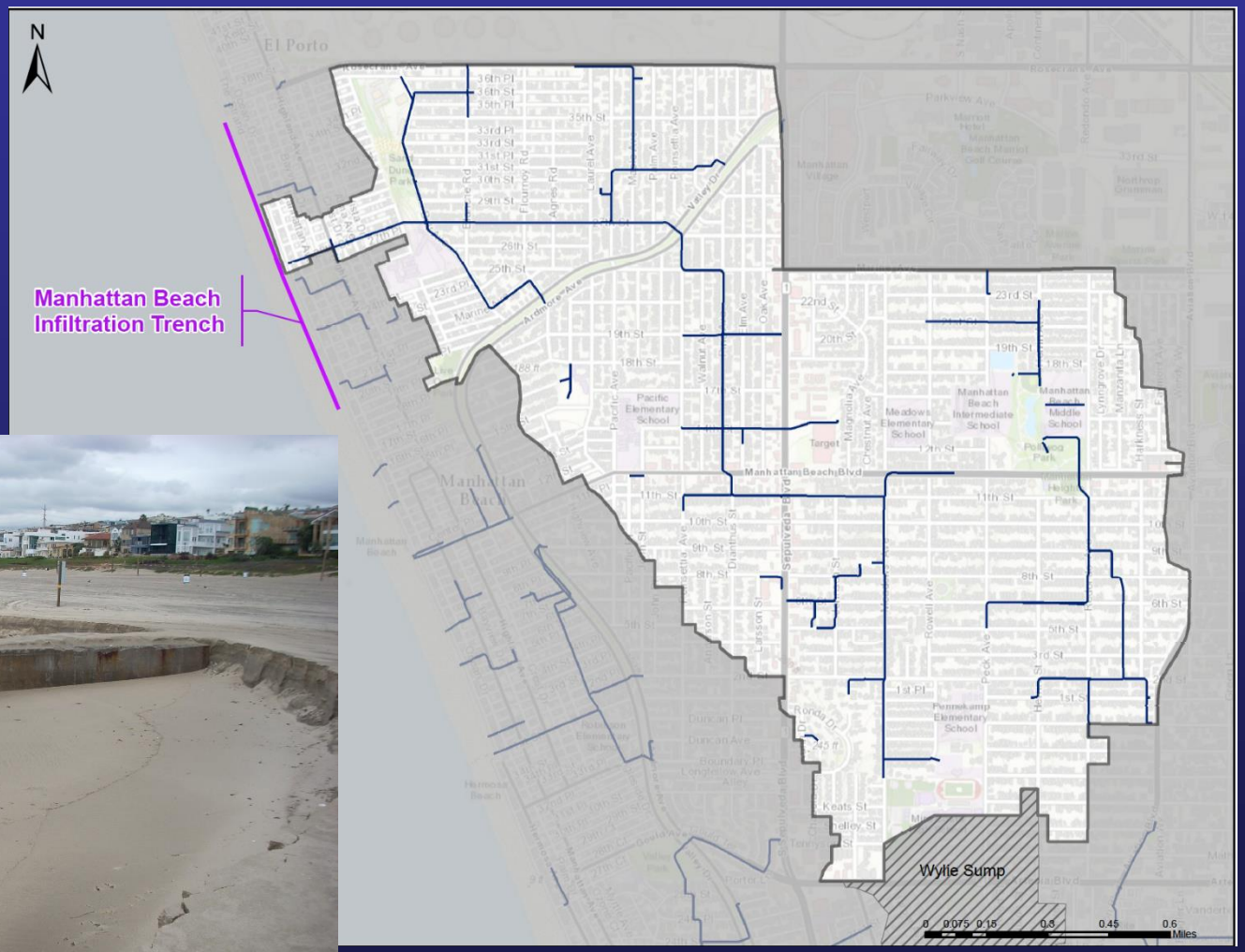
(626) 458-7121

Public Works
LOS ANGELES COUNTY

Manhattan Beach Infiltration Trench Project

City of Manhattan Beach

Manhattan Beach Infiltration Trench Project



Manhattan Beach Infiltration Trench Project

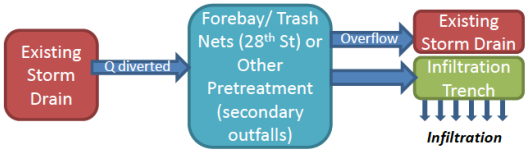
Manhattan Beach Trench Overview

A volume reduction BMP is planned along the beach within monitoring location SMB-5-2 in Manhattan Beach. Underground infiltration trenches are long, linear facilities with permeable base and sides designed to infiltrate stormwater runoff. It is usually not practical to infiltrate runoff at the same rate that it is generated; therefore, these facilities include both storage and drainage components. Infiltration trenches remove pollutants from stormwater network by infiltrating stormwater into the native soil beneath the system.

Existing Site Conditions

The site is a public beach located within Manhattan Beach. The beach is adjacent to a walking/bike path and consists of recreational open space and numerous volleyball courts.

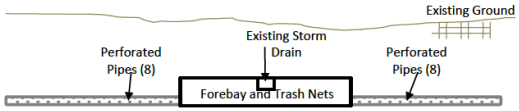
Treatment Process



The BMP will consist of pretreatment leading to an infiltration trench. Dry- and wet-weather flows from the 28th Street storm drain will enter the forebay and trash nets for pretreatment and then flow into a series of sixteen parallel perforated pipes extending laterally from both sides of the forebay. The perforated pipes will be lain amongst a bed and fill of gravel to enhance storage prior to infiltration into native soils. When persistent flows fill the system to storage capacity, additional runoff will overflow from the forebay via an overflow chute and re-enter the existing drainage system.

Site Configuration

Plan View (Preliminary Footprint – Subject to Change)



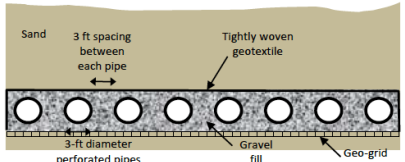
Profile (not to scale)

Design Parameters

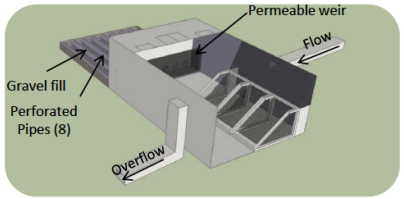
General						
Tributary Area (ac)	1481			Drawdown Time (hrs)		72
Storm Drain	4'x6' box culvert			Sat. Hyd. Cond. (in/hr)		12.5[a]
Outfall	**32nd St[b]**	**28th St**	**27th St**	**24th St**	**Marine Pl**	**21st St**
Design Criteria						
Max. Design Inflow Rate (Q_{design}) (cfs)	5.1	150	2.4	1.9	0.2	2.3
Design Storage Volume(AF)	4.6					
Cumulative Loss Rate (cfs)	48.75					
Infiltration Footprint (ft²)	93750					
Design Parameters						
Existing BMPs near outfall	Storm-ceptor	Storm-ceptor	WQ Catch Basin	-	WQ Catch Basin	-
CDS Unit required?	No	No	No	Yes	No	Yes
Forebay Footprint (ft²)	-	12,500	-	-	-	-
Forebay Length/Width (ft)	-	250/50	-	-	-	-
Forebay Ponding Depth (ft)	-	3.5	-	-	-	-
Trench Footprint (ft²)	93750					
Trench Length/Width (ft)	1875/50					

[a]Factor of safety of 10 applied to saturated hydraulic conductivity
[b]32nd Street outfall treated by 28th Street trench although it is within monitoring location SMB 5-1

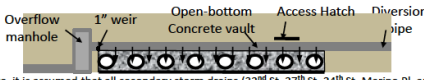
Typical Details



Infiltration Trench – Cross-section (not to scale)



In-line Forebay – Isometric view (not to scale)



Note, it is assumed that all secondary storm drains (32nd St, 27th St, 24th St, Marine Pl, and 21st St) are at an invert of at least 18' NAVD just upstream of the 28th Street infiltration trench. Invert elevation to be confirmed by survey.

Secondary Connection to Infiltration Trench – Cross-section (not to scale)

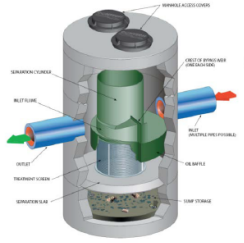


Figure Credit: Contech Stormwater Solutions
Product shown: Contech Inline CDS Unit*

CDS Unit – Isometric view (not to scale)

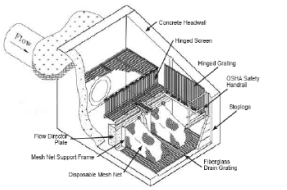


Figure Credit: Fresh Creek Technologies, Inc.
Product shown: End-of-Pipe Netting Trash Trap **

Trash Nets – Isometric view (not to scale)

DRAFT	**SMB-5-2 Subsurface Infiltration Trench Conceptual Design (10% Design): Manhattan Beach**	
March 2016	LA0298	Geosyntec consultants

Project Description

- Sited along a popular beach in the City of Manhattan Beach
- Designed to meet wet and dry weather Santa Monica Bay Beaches Bacteria TMDL.
- Will capture, pretreat and infiltrate dry and wet weather runoff from ~1500-acre drainage area tributary to the high priority 28th Street storm drain outfall on the beach.
- Full scale version of successful concept piloted by the award-winning Hermosa Strand Infiltration Trench.
- Key project elements: diversion structure, subsurface pretreatment system for trash, debris and sediment, followed by subsurface infiltration below the beach. Gravity flow.
- Native dune habitat restoration along the length of the project to remove invasive ice plant and replant with native plant community.

Project Details

- Funding:
  - Total Project Cost: $5,244,000
  - Funding Request: $100,000 for feasibility study
- Partners: The Bay Foundation, LA County Flood Control District and LA County Beaches and Harbor

Benefits

- Improved recreational water quality and surfer/swimmer health through 100% reduction of fecal indicator bacteria in captured stormwater
- Up to 570 acre-feet storm water capture during 90th% rain year
- Elimination of land-based litter conveyed through MS4
- 2-acres of native dune habitat restoration
- Infiltration of fresh storm water may assist in reducing intrusion of shallow saline groundwater due to sea level rise thus protecting subsurface infrastructure from corrosion
- Improved flood management with 4.6 acre-feet of offline storage at the outfall to alleviate tailwater effects on the tidally-influenced storm drain outfall
- Leverages local funding and partnership with The Bay Foundation and Santa Monica Bay National Estuary Program.

Estimated Budget

Category	Total Cost
Direct Project Administration	$262,000
Land Purchase/Easement	--
Planning/Design/ Engineering/ Environmental Documentation	$950,000
Construction/ Implementation	$4,032,000
Grand Total	5,244,000

Estimated Schedule

- Estimated schedule for project:
  - Start Date: 5/1/20
  - End Date: 6/30/22

Category	Start Date	End Date
Direct Project Administration	5/01/2020	8/30/2022
Land Purchase/Easement	12/05/2017	5/01/2020
Planning/Design/Engineering/ Environmental Documentation	5/01/2020	9/30/2021
Construction/Implementation	10/01/2021	6/30/2022

Additional Considerations

- Dune restoration component of the project is funded separately and has not been included in the project budget.
- Conveyance of storm water through the system is proposed to be by gravity flow, such that no pumping will be required thus avoiding GHG emissions.
- City plans to utilize the Envision framework developed by the Institute for Sustainable Infrastructure to identify and incorporate sustainable approaches to project planning, design, construction and operation.