Culver City Stormwater Quality Plan – TRP Applications 2024

Lindberg and Fox Hills Parks

July 22, 2024

City of Culver City Sustainability Subcommittee
Presenter: Sean Singletary, Environmental Programs & Operations Manager, City of Culver City Department of Public Works

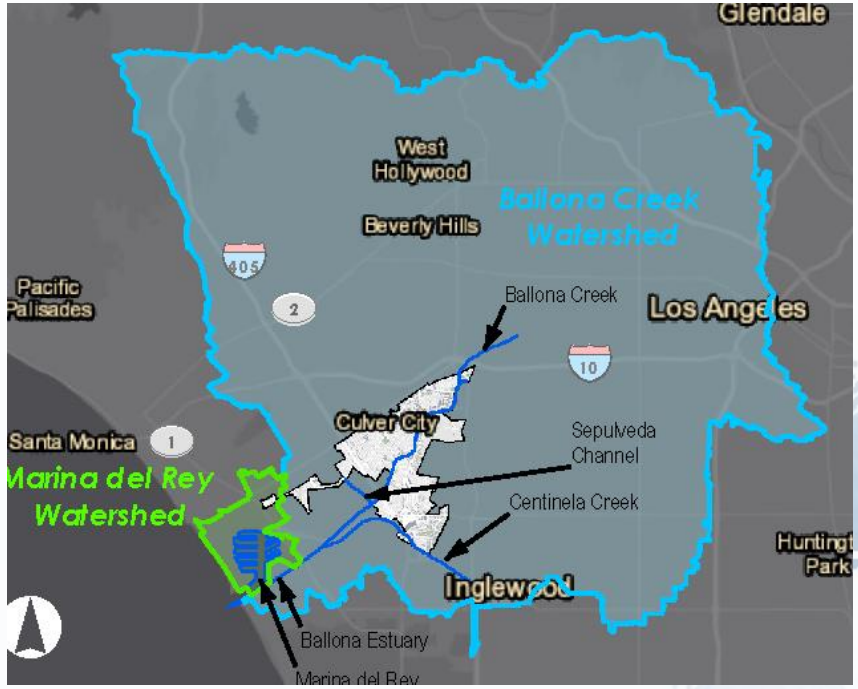
BACKGROUND

- Urban runoff from rainfall or dry-weather water waste flows into Ballona Creek and eventually the ocean through the Municipal Separate Storm Sewer System.
- During this process, pollutants can mix with urban runoff, causing damage to aquatic life and potential health risks to humans.

COMPLYING WITH REGULATIONS

Multiple entities regulate and provide oversight on stormwater management, including:

- National Pollutant Discharge Elimination System permit program
- Ballona Creek Watershed Management Group
- Santa Monica Bay Restoration Commission
- Santa Monica Bay Groundwater Sustainability Agency
- Los Angeles Regional Water Quality Control Board (MS4 Permit)
- Central Santa Monica Bay Watershed Area Steering Committee (Measure W)



STORMWATER QUALITY PLAN

COMPLIANCE

Identify pathways toward stormwater quality regulatory compliance

FUNDING

Identify project and partnering opportunities to supplement and leverage Measure CW and Measure W revenue

DECISION TOOLS

Develop priority scenarios for project implementation and spending

PRIORITIZING PROJECTS

441 project opportunities were identified: Regional, Green Street and Low Impact Development Projects

69 acre-feet of potential project storage

Adopted by City Council in August 2021

Of the Top Ten proposed projects, 7 were cited at City Parks.

- A project at Syd Kronenthal Park is currently undergoing the TRP process. The TRP kicked off in April 2022
- In order to gear up our next projects, the City will apply for TRP (Feasibility Study) funding for projects at Lindberg Park and Fox Hills Park.
- Outreach for Parks Plan at all City Parks is currently underway

COUNTY SAFE CLEAN WATER PROGRAM (MEASURE W)

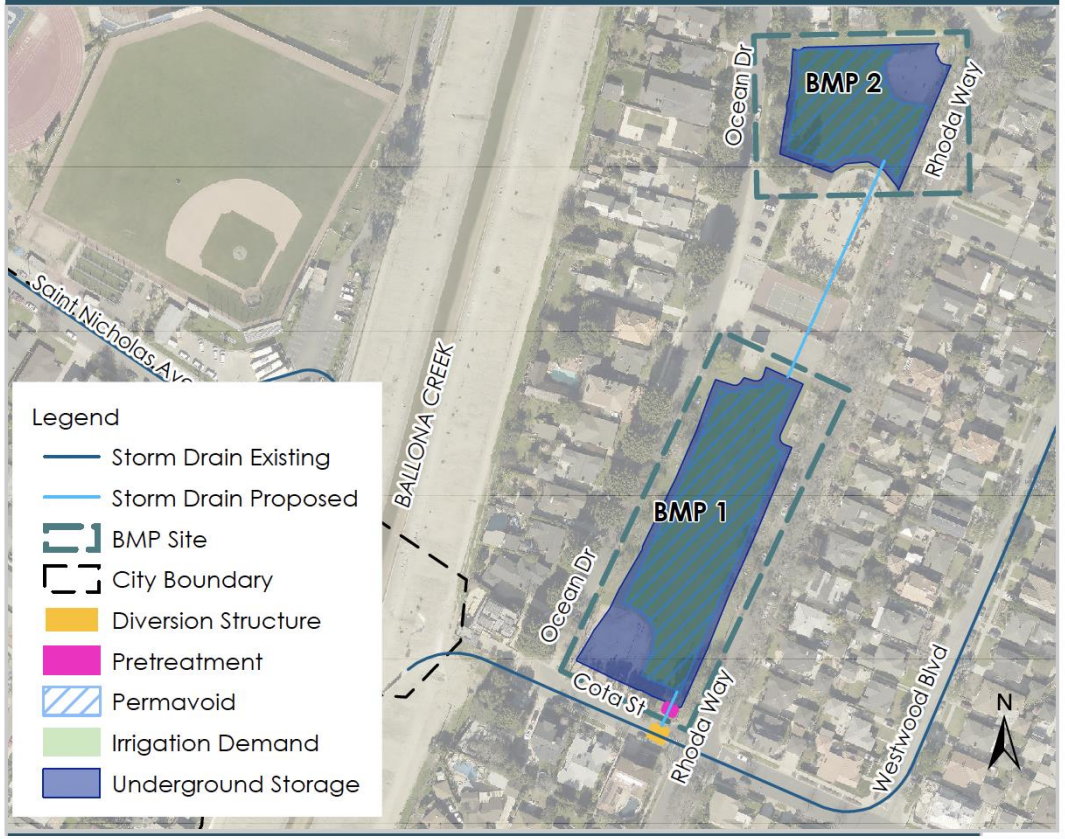
- Taxpayer approved parcel tax to fund stormwater projects with a local return and competitive funds.
- Competitive funds are given to Infrastructure Projects (IP), Scientific Studies, and Technical Resource Program (TRP) projects.
- For FY 25, the IP is on hold, so Culver City will apply for two TRP projects to create feasibility studies for stormwater projects.

SAFE CLEAN WATER PROGRAM

Lindberg Park

- Park is adjacent to Ballona Creek
- Two separate galleries – total of 6.7 acre feet of treatment
- Within 0.5 mile of DAC

CONCEPT SCHEMATIC



DESIGN CRITERIA		
Precipitation, 85th percentile, 24-hr storm (in)	1.1	
Runoff Volume, 85th percentile, 24-hr storm (ac-ft)	4.40	
Peak Discharge, 85th percentile, 24-hr storm (cfs)	10.50	
Infiltration Rate (in/hr)	0.25	
PROJECT CHARACTERISTICS	**BMP1**	**BMP2**
Stormwater Capture Process	Infiltration / Harvest & Use	
Footprint (acres)	1.27	0.68
Design Height (ft)	2.5	2.5
Depth of Excavation (ft)	6.5	14.25
Depth to Groundwater (ft)	24	25
EWMP Equivalent Volume (acft)	0.17	1.53
Est.Water Use / Capture Vol. (acft)	1.14/0.83	0.60/0.44
Design Volume (acft)	2.85	1.53
24-hr Infiltration Volume (acft)	0.63	0.38
Total Treatment Volume (acft) [1]	**4.32**	**2.35**
Percent Treated [2]	**98%**	**53%**

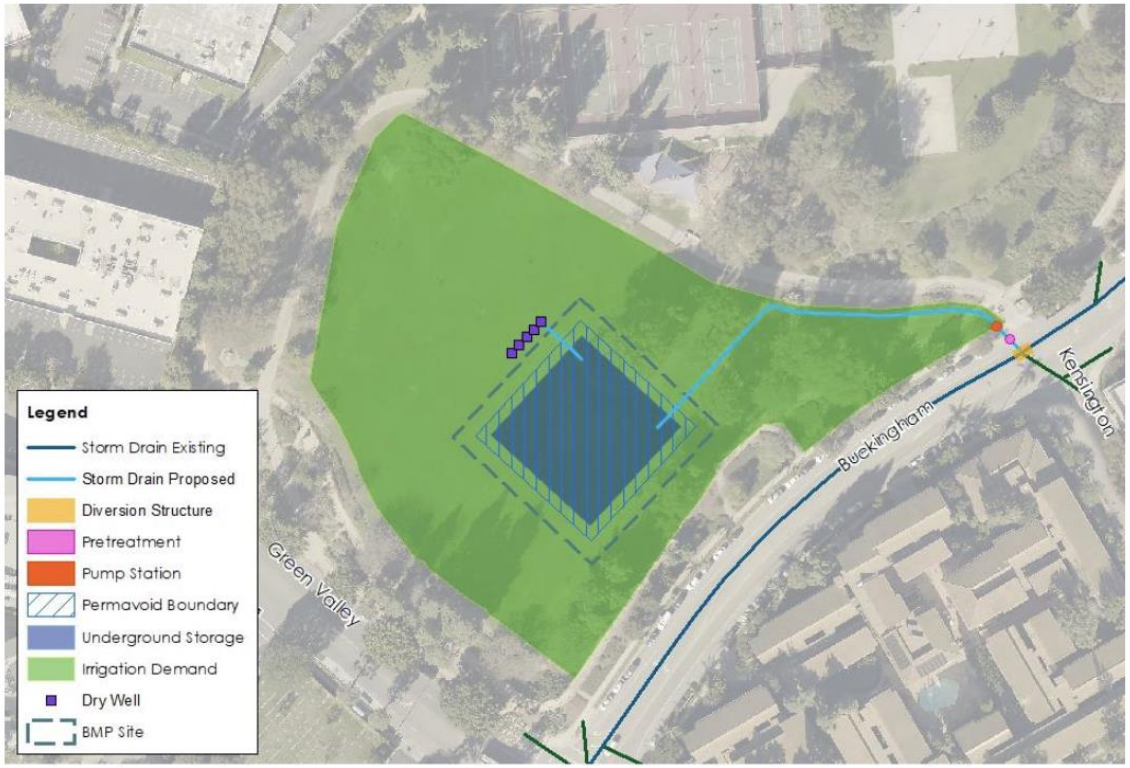
1 - Sum of the Design Volume, 24-hr Infiltration Volume, and reuse capture venture
2 - Percentage the 85th percentile 24-hr Runoff Volume that is treated

CONCEPT DESIGN EXAMPLES

Fox Hills Park

- Runoff would be diverted from large City owned storm drain in Buckingham Parkway
- One gallery –1.3 acre feet of treatment
- Within 0.5 mile of DAC

CONCEPT DESIGN EXAMPLE



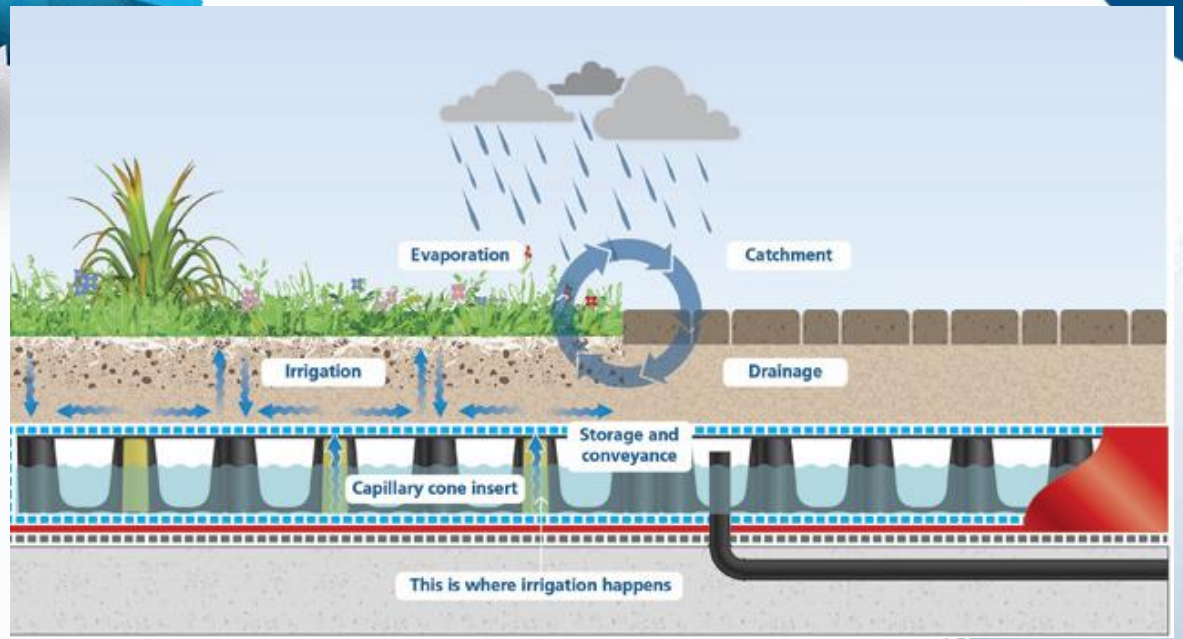
PROJECT CHARACTERISTICS

Stormwater BMP Type	Harvest & Use/ Infiltration	Infiltration
Footprint (acres)	0.37	141 sf
Design Height (ft)	2.5	20
Depth of Excavation (ft)	6.5	24
Depth to Groundwater (ft)	75	
EWMP Equivalent Volume (acft)	0.84*	
Est. Water Use/ Capture Vol (acft)	4.51/ 0.34	N/A
Design Volume (acft)	0.81	0.06
24-hr Infiltration Volume (acft)	0.18	0.99
Total Treatment Volume (acft)[1]	1.32	1.06
Percent Treated[2]	56%	45%

1 – Sum of the Design Volume, 24-hr Infiltration Volume, and Capture Volume
2 – Percent the 85th percentile, 24-hr Runoff Volume that is treated

*Disclaimer: All elements of this conceptual design are planning-level, based on desktop analysis. All assumptions are parameters must be re-evaluated during the detailed design process. Cost estimates are based on available data. Actual costs will vary.

Primary Treatment – Capture and Use



Schedule

1. Applications Due July 31, 2024
2. Presentation and Voting by Central Santa Monica Bay WASC – Fall 2024
3. TRP Agreements Finalized and Study Begins – Spring 2025
4. TRP Process Complete – Spring 2026
5. Seek Design/Construction Funds in Summer 2027
6. Construction of Projects 2029–2030

ANY QUESTIONS?

Sean Singletary, Environmental Programs & Operations Manager
Sean.singletary@culvercity.org

https://www.culvercity.org/City-Projects/Stormwater-Quality-Master-Plan-SWQMP