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TRANSMITTAL

TO	DATE	COUNCIL FILE NO.
City Council	06/10/24	
FROM		**COUNCIL DISTRICT**
Measure W - Safe, Clean Water Program, Administrative Oversight Committee		All

At its regular meeting held on May 30, 2024, the Measure W – Safe, Clean Water Program Administrative Oversight Committee approved the recommendations of the attached Bureau of Sanitation report, which is hereby transmitted to Council for consideration. Adoption of the report recommendations will allow the current Watershed Investment Strategic Plan to be updated.

Fiscal Impact Statement: There is no fiscal impact to the General Fund from approval of the recommendations in this report as the action is administrative only.

Matthew W. Szabo
City Administrative Officer

Attachment – May 30, 2024 Report from the Bureau of Sanitation regarding the Proposed City of Los Angeles FY 23-24 Watershed Investment Strategic Plan

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CAO 649-d

CITY OF LOS ANGELES
INTERDEPARTMENTAL CORRESPONDENCE

Date: May 20, 2024

To: Measure W: Safe, Clean Water Program Administrative Oversight Committee
Matthew W Szabo, City Administrative Officer
Sharon M. Tso, Chief Legislative Analyst
Ryan Jackson, Office of the Mayor

From: Michael Scaduto, PE, ENV SP
Principal Engineer
Safe, Clean Water Implementation Division
LA Sanitation & Environment

Subject: Proposed City of Los Angeles FY 23-24 Watershed Investment Strategic Plan (WISP)

RECOMMENDATIONS

1. Approve the City of Los Angeles FY 23-24 Watershed Investment Strategic Plan.

2. Direct LA Sanitation and Environment to publish and implement the City of Los Angeles FY 23-24 Watershed Investment Strategic Plan and distribute the plan to other City of Los Angeles departments implementing Safe Clean Water Program projects.

BACKGROUND

In November 2018, Los Angeles County voters approved Measure W, which created the Safe Clean Water Program (SCWP) administered by the Los Angeles County Flood Control District (LACFCD). The SCWP was developed in collaboration with public health, environmental groups, cities, business, labor, and community-based organizations to protect water quality and provide new sources of water for the Los Angeles community. The SCWP generates an estimated $280 million annually from a countywide property tax assessment. These funds are utilized by LA Sanitation and Environment (LASAN), as well as other city departments, for the development of regional and municipal stormwater projects and programs.

As directed in the City of Los Angeles' (City) Safe, Clean Water Ordinance, LASAN has prepared the FY 23-24 Watershed Investment Strategic Plan (WISP) to provide program strategy, policy guidance, and project planning tools to manage the City's SCWP. Each annual WISP represents an organized, methodological, and strategic project management approach that will enable the City to meet the County's SCWP program requirements and the City's sustainability, equity, organizational, and other related objectives. The FY 23-24 WISP, the second WISP to have been prepared, was developed by LASAN in coordination with input and review by the City's Upper Los Angeles, Central Santa Monica Bay, and South Santa Monica Bay WASC members; other City departments; and a CBO project partner.

CONSIDERATIONS AND CONCLUSIONS

LASAN's Safe Clean Water Implementation Division (SCWID) is responsible for managing and overseeing the City's SCWP and project implementation. SCWID is tasked with managing the City's Stormwater Capital Improvement Program (CIP) that will guide the planning and implementation of the City's water quality, flood protection, and water supply projects utilizing Municipal, Regional, and outside leverage funding sources. To help achieve the SCWP requirements and goals, LASAN has developed the FY 23-24 WISP to include:

- Citywide priority projects from various Departments / Bureaus to maximize water quality, water supply, flood protection, transportation improvements and community benefits.
- The current financial outlook for the three watersheds (Upper Los Angeles River, Central Santa Monica Bay, and South Santa Monica Bay) the City participates in and recommendations for securing additional funding for existing projects, as well as Citywide strategies to consider to remain competitive future funding applications.
- Annual recommendations on future policy and program funding for the Safe Clean Water (SCW) Administrative Oversight Committee (AOC) consideration and/or approval.
- Updated program administration and adaptive management activities such as the Regional Oversight Committee (ROC's) Biennial Report, the County's Metric and Monitoring Study (MMS) and the new Project Modification Request (PMR) Process.
- Methods for interagency collaboration (e.g., LAUSD, CBO's, NGO's).
- A proactive look ahead at potential grant opportunities for proposed SCW Projects.
- Projected Stormwater Operation and Maintenance (O&M) obligations.
- Job creation potential and workforce development opportunities.

The WISP is a living document and will be updated annually to reflect progress on projects and on meeting regulatory compliance, as well as changes in the SCWP program goals and objectives, requirements, environmental regulations, new technologies, best management practices, and available funding sources. To facilitate an efficient and impactful annual update of the WISP each year, LASAN recommends that the SCWP Administrative Oversight Committee (AOC) approve the FY 23-24 WISP. As directed, LASAN would publish the WISP and distribute the document to other City departments implementing SCWP projects for further coordination.

Attachment 1: City of Los Angeles FY 23-24 Watershed Investment Strategic Plan

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LA Sanitation & Environment (LASAN)

Safe Clean Water Program

Watershed Investment Strategic Plan

Fiscal Year 2023-2024
May 2024

LA Sanitation & Environment
CITY OF LOS ANGELES
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SAFE CLEAN WATER

Table of Contents

Executive Summary ES-1

Section 1 Introduction 1-1

Section 2 Regulatory Context and Compliance 2-1

2.1 MS4 Permit 2-1

2.1.1 Total Maximum Daily Loads 2-2

2.1.2 Watershed Management Programs 2-4

2.2 Regulatory Compliance and Project Identification 2-5

2.2.1 SiteSAN Scoring Criteria 2-6

2.2.2 Priority Projects for Safe, Clean Water Program Funding 2-7

Section 3 Safe Clean Water Program 3-1

3.1 Project Scoring 3-2

3.1.1 Municipal Scoring Criteria 3-2

3.1.2 Regional Scoring Criteria 3-9

3.2 Interagency and City Department Collaboration 3-11

3.2.1 Program Governance and Collaboration 3-11

3.2.2 Community Partnership on School Greening and Green Space 3-13

3.2.3 Non-Governmental Organizations 3-18

3.3 Community Engagement and Collaboration 3-19

3.3.1 Stakeholder Engagement Process 3-20

3.4 SCW Funding 3-22

3.4.1 Municipal Program Funding 3-22

3.4.2 Regional Program Funding 3-23

3.5 Adaptive Management 3-26

3.5.1 Project Modifications 3-26

3.5.2 Metrics and Monitoring Study 3-29

3.5.3 Regional Oversight Committee Biennial Progress Report 3-29

Section 4 Program and Project Implementation 4-1

4.1 Municipal CIP 4-2

4.2 Regional Program and Capital Improvement Plan 4-6

4.2.1 Upper Los Angeles River 4-7

4.2.2 ULAR FY 23-24 (Round 5) Stormwater Investment Plan 4-10

4.2.3 Central Santa Monica Bay 4-16

4.2.4 CSMB FY 23-24 (Round 5) Stormwater Investment Plan 4-18

4.2.5 South Santa Monica Bay 4-20

4.2.6 SSMB FY 23-24 (Round 5) Stormwater Investment Plan 4-22

Section 5 Project Delivery 5-1

Section 6 Operation and Maintenance 6-1

6.1 O&M Obligations 6-1

6.2 O&M Funding 6-2

Section 7 Financial Planning and Outlook 7-1

Section 8 Conclusions 8-1

Appendices

Appendix A TMDL Compliance Schedule
Appendix B Regulatory Compliance Steps
Appendix C Master List of Projects for Each Watershed
Appendix D Design Summaries for Priority Projects for SCW Funding
Appendix E SCW Projects Funding Opportunities

List of Figures

Figure ES-1. City of LA Boundaries within SCWP Watersheds ES-2
Figure 1-1. Regulatory Compliance 1-2
Figure 1-2. Project Prioritization Process 1-3
Figure 2-1. Map of MS4 Permitted Area 2-1
Figure 2-2. City of LA Boundaries within SCWP Watersheds 2-2
Figure 2-3. Estimated Total WMP Implementation Cost 2-5
Figure 3-1. City's Municipal Scoring Criteria for SCWP Municipal Program Funding 3-3
Figure 3-2. SCWP Regional Scoring Criteria Categories 3-10
Figure 3-3. LASAN SCWP Dashboard 3-13
Figure 3-4. Example of SCWP Public Outreach 3-21
Figure 3-5. Breakdown of Recent and Projected Municipal Program Returns 3-22
Figure 3-6. Outline of Regional Program Process for Regional Project to be Approved 3-25
Figure 3-7. Overview of the PMR Process 3-28
Figure 6-1. Estimated Annual O&M Expenditure Summary 6-1

List of Tables

Table ES-1. Comparison of 2023 and 2024 WISP Guiding Principles ES-5
Table 2-1. Summary of TMDLs 2-3
Table 2-2. Criteria Weighting 2-7
Table 3-1. LASAN's SCWP Potential Projects Prioritization List for Municipal Program Funding 3-4
Table 3-2. Top Potential Safe Clean Water Projects Located on School Properties (As of 9/26/23) 3-16
Table 3-3. Active Partnership Projects with NGOs and CBOs 3-18
Table 3-4. NGO / CBO Projects Within the City of Los Angeles in which the City has Supported the NGO / CBO in Submission of a Regional SCW Application 3-19
Table 3-5. Regional Tax Return Estimates for the City by Watershed Area 3-24
Table 4-1. LASAN Planned Construction Expenditure Summary 4-2
Table 4-2. Municipal CIP Program: Municipal Program Projects 4-4
Table 4-3. Regional Program Projects Supported by Municipal Program Funding 4-5
Table 4-4. City of LA Regional Program Infrastructure, O&M, and Scientific Studies Funding Summary 4-6
Table 4-5. Upper LA River Regional Program Revenue to the City by Round 4-8
Table 4-6. City of LA Proportional Funding Contribution and Programmed ULAR Funds 4-10
Table 4-7. ULAR WASC Available Regional Program Funding 4-10
Table 4-8. City of LA ULAR WASC Priority for Regional Program Funding as part of the FY 24-25 (Round 5) SIP 4-12
Table 4-9. ULAR Proposed Regional Projects for Future Rounds Funding Consideration 4-15
Table 4-10. Central Santa Monica Bay Regional Revenue by Round 4-17
Table 4-11. City of LA SCWP Regional Program Proportional Funding Contribution and Programmed CSMB Funds 4-18
Table 4-12. CSMB WASC Regional Program Available Funding 4-18
Table 4-13. City of LA CSMB Priority for SCWP Regional Program Funding as part of the FY 24-25 (Round 5) SIP 4-19
Table 4-14. CSMB Proposed Regional Projects for Future Rounds Funding Consideration 4-20
Table 4-15. South Santa Monica Bay Regional Revenue by Round 4-21
Table 4-16. City of LA Regional Program Proportional Funding Contribution and Programmed SSMB Watershed Funds 4-22
Table 4-17. SSMB WASC Regional Program Available Funding 4-22
Table 4-18. City of LA SSMB Watershed Regional Program Priority for Funding as part of the FY 24-25 (Round 5) SIP 4-23
Table 4-19. SSMB Watershed Proposed Projects for Future Rounds of Regional Program Funding Consideration 4-24
Table 5-1. Successful Design-Build Projects by LASAN 5-2
Table 5-2. Existing Stormwater CIP Projects that Would Benefit from DB Delivery Approach 5-3
Table 5-3. Examples of Potential Future Design-Build Projects 5-4
Table 6-1. LASAN Estimated Annual O&M Expenditure Summary 6-1
Table 6-2. City of LA Secured Funding for O&M of Prop O Funded Projects 6-3
Table 7-1. City of LA SCWP Projects with Secured (or Pending) Leverage Funding 7-2
Table 7-2. City of LA SCWP Projects Submitted for Grants but not Awarded in 2023 7-5

List of Acronyms

Acronym/Abbreviation	Definition
AOC	Administrative Oversight Committee
APN	Assessor's Parcel Number
B	Billion
BC	Ballona Creek
BMP	best management practice
BOE	Bureau of Engineering
CBO	Community-Based Organization
CD	Council District
CIP	Capital Improvement Program
City	City of Los Angeles
County	Los Angeles County
CSMB	Central Santa Monica Bay
DB	design-build
DC	Dominguez Channel
DDT	Dichlorodiphenyltrichloroethane
DAC	Disadvantaged Communities
FY	fiscal year
GIS	Geographic Information System
LACFCD	Los Angeles County Flood Control District
LADWP	Los Angeles Department of Water and Power
LAR	Los Angeles River
LASAN	Los Angeles Sanitation & Environment
LAUSD	Los Angeles Unified School District
LID	Low Impact Development
M	million
MdR	Marina del Rey
MOA	Memorandum of Agreement
MOU	Memorandum of Understanding
MS4	Municipal Separate Storm Sewer System
NGO	Non-Governmental Organization
NOV	Notice of Violation

Acronym/Abbreviation	Definition
NPDES	National Pollutant Discharge Elimination System
O&M	operation and maintenance
PCB	polychlorinated biphenyl
Prop O	Proposition O
RAA	Reasonable Assurance Analysis
RAP	Department of Recreation and Parks
Regional Board	Los Angeles Regional Water Quality Control Board
RWL	receiving water limitations
SCAG	Southern California Association of Governments
SCW	Safe Clean Water
SCWID	Safe Clean Water Implementation Division
SCWP	Safe, Clean Water Program
SEP	Supplemental Environmental Project
SIP	Stormwater Investment Plan
SiteSAN	Site Selection Analysis
SMB	Santa Monica Bay
SMB J2/3	Santa Monica Bay Jurisdictions 2 and 3
SMB J7	Santa Monica Bay Jurisdiction 7
SSMB	South Santa Monica Bay
StreetsLA	Bureau of Street Services
SWRCB	State Water Resources Control Board
TMDL	Total Maximum Daily Load
TRP	Technical Resource Program
ULAR	Upper Los Angeles River
USEPA	United States Environmental Protection Agency
WASC	Watershed Area Steering Committee
WBPC	Waterbody-Pollutant Combination
WISP	Watershed Investment Strategic Plan
WLA	waste load allocation
WMG	Watershed Management Group
WMP	Watershed Management Program
WPD	Watershed Protection Division
WQBEL	water quality-based effluent limit

Executive Summary

Los Angeles Sanitation & Environment (LASAN) is designated as the lead agency for implementing the Los Angeles County (County) Measure W Safe, Clean Water Program (SCWP) within the City of Los Angeles (City). In June 2020, recognizing the differences between Proposition O (Prop O) and the SCWP, City Council reaffirmed and acknowledged LASAN's role as the lead agency in overseeing the City's Municipal Separate Storm Sewer System (MS4) Permit, stormwater infrastructure, watershed management and water quality compliance programs; and designated LASAN as the Program Manager and Fund Administrator for the City's SCWP and its Special Funds (CF 18-0384-S1)[1]. As directed in the City's Safe, Clean Water Ordinance, LASAN has been tasked to prepare a Watershed Investment Strategic Plan (WISP) to provide program strategy, policy guidance and project planning tools to manage the City's SCWP. The first WISP was approved by the City Council on April 25, 2023, and this document is the first annual update.

This 2024 WISP outlines a strategy for the City to achieve Los Angeles County Flood Control District (LACFCD) SCWP goals, as well as sustainability, equity, and organizational objectives, by addressing the following:

- The regulatory context for the SCWP, including the MS4 permit and project identification processes for compliance.
- Project evaluation criteria based on the County's SCWP goals, including the following City-specific policy objectives:
    - Balance water supply, resilience, and water quality compliance obligations of the City.
    - Provide equity in terms of Citywide funding and support multi-benefit project approaches.
    - Prevent/mitigate project selection conflicts and/or internal City department competition for funding.
    - Assess the LACFCD's annual Stormwater Investment Plans (SIPs) to determine the available funding for each watershed and strategically plan for the submission of Regional projects each funding round.
- A description of the SCWP project prioritization process, department collaboration, and LASAN's funding commitment.
- A rolling five-year Capital Improvement Program (CIP) for each of the City's watersheds.
- Proposed and planned operation and maintenance (O&M) expenditures and the department(s) responsible for project implementation and O&M.

[1] Council File 18-0384-S1. Ordinance 186612 added Chapters 187 and 188 to Division 5 of the Los Angeles Administrative Code to establish the Measure W Safe, Clean Water **Regional** Projects Special Fund and Measure W Safe, Clean Water - **Municipal** Program Special Fund.

- The current financial outlook of each of the regional watershed areas and recommendations for securing additional funding for existing projects, as well as strategies of how to competitively package future funding applications.

- Annual recommendations on future policy and program funding for Safe Clean Water (SCW) Administrative Oversight Committee (AOC) for consideration and/or approval.

Regulatory Compliance and Project Identification

The Watershed Protection Division (WPD) within LASAN is responsible for implementing the National Pollutant Discharge Elimination System (NPDES) MS4 permit throughout the City. The NPDES MS4 Permit includes provisions for the development and implementation of Watershed Management Programs (WMPs) that allow permittees to achieve compliance by customizing their stormwater programs through a Reasonable Assurance Analysis (RAA). The WMPs also allow MS4 permittees to address water quality issues more effectively through interagency collaboration on a watershed-wide basis. The City's four primary regulatory watersheds are grouped into the three SCWP watershed areas as follows (**Figure ES-1**):

- Upper Los Angeles River (ULAR) Watershed Area

- Central Santa Monica Bay (CSMB) Watershed Area (includes the City's portion of the Ballona Creek Watershed, Santa Monica Bay Jurisdictions 2 and 3, and Marina del Rey Watershed)

- South Santa Monica Bay (SSMB) Watershed Area (includes the City's portion of the Dominguez Channel Watershed and Santa Monica Bay Jurisdiction 7)

The WMPs identify stormwater capture volume targets. Each member agency was tasked with developing specific projects to manage the required stormwater volume generated from their jurisdiction. Compliance strategies include a combination of smaller distributed projects such as green stormwater infrastructure corridors (green streets and alleys) and large Regional projects. The total capital cost for all projects identified in the WMPs for the City to achieve compliance is estimated to be $9.9 billion (B), discussed further in **Section 2**. LASAN's WPD identifies projects within each watershed and sends the list to the Safe Clean Water Implementation Division (SCWID) to further develop the projects through development of concept reports and identification of potential funding.

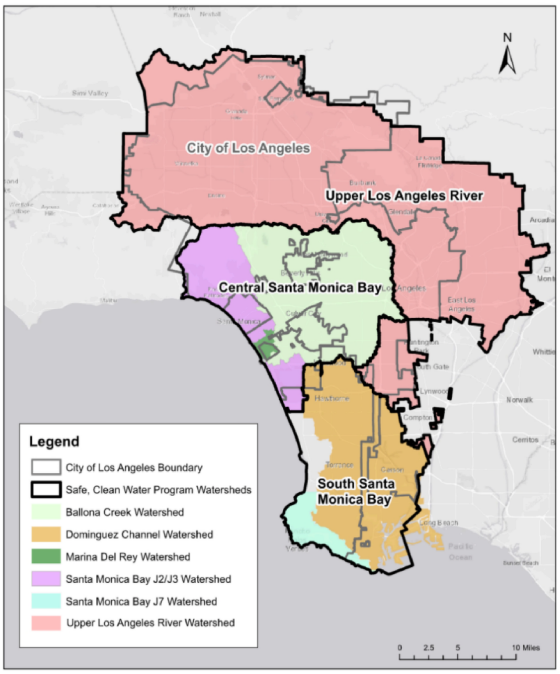


Figure ES-1. City of LA Boundaries within SCWP Watersheds

Status of the City's Safe, Clean Water Program

Measure W generates approximately $280 million per year County-wide, of which approximately $36 million is returned to the City of Los Angeles through the Municipal Program, and an average of around $46.1 million through the competitive Regional Program. In total, the City of Los Angeles receives approximately $82.1 million annually.

LASAN leads the City's implementation of the SCWP and is responsible for managing the approximately $36 million (M) Municipal Program annual share. LASAN's current Municipal CIP has a fiscal year budget of $23.94 million allocated towards funding 11 prioritized infrastructure projects.

LASAN also successfully secured an additional $167.6 million in Regional funding, from the SCWP funds, for the implementation of green stormwater infrastructure, O&M, and special studies throughout the City over the next five years. In addition, the Bureau of Streets Service (StreetsLA), Los Angeles Department of Water and Power (LADWP), and Community-Based Organizations (CBOs) secured an additional $161.3 million in regional funding for City-based water supply and stormwater infrastructure elements for their proposed projects. While the City has been successful in the first four rounds of the SCW Regional Program, this dynamic program is in its infancy and is working through some challenges.

Funds awarded from the SCW Regional Program are competitive and uncertain. Based on the City's proportional contribution to the Regional Program, the City's goal is to secure $46.1 million annually, consisting of the City's available proportional share in the ULAR ($29.2 million), Central Santa Monica Bay ($13.6 million), and South Santa Monica Bay ($3.3 million) Watershed Area Steering Committee (WASC) annual budgets. To provide continued success to the program, future Citywide requests should consider the respective WASC funding as well as the City's previously secured funding from the program[2]. Funding is competitive, and future Regional Program project applications should collectively strive to achieve a goal of up to 120 percent of the City's anticipated Regional Program return (totaling $46.12 million) for each of the respective watersheds to provide sufficient funds.

The County's SCWP will continue to provide the funding for projects approved and programmed in the County's FY 23-24 SIP; however, the cost of design and construction has increased significantly over the past few years as the projects were developed. Many of the funded infrastructure projects in the first three rounds were packaged and submitted during a global pandemic and did not account for the current cost increases (supply chain issues and inflation) that many of the countywide capital improvement projects are experiencing today.

In September 2023, LACFCD released Project Modification Guidelines that initiated new procedures for addressing project modifications for funded activities. A discussion of the guidelines and project modification process is provided in **Section 3.6.1** and is visually presented in a flowchart in **Figure 3-1**. The procedures require applicants and fund recipients to notify the SCWP of all proposed modifications. In addition, if any proposed modifications are anticipated to change a project scope, project concept, or study in a significant and material way, the project scope, project concept, or study must be re-evaluated and approved by the respective WASC

[2] Non-City Council-controlled departments should seek approval from their own board.

through the annual adoption process of the SIP before any future funds are spent or any action is taken to implement the proposed modification.

The Project Modification Request (PMR) Guidelines discussed in **Section 3.6** require the submission of a PMR form. According to the SCWP, utilizing the new PMR form will facilitate more timely and transparent resolution of proposed modifications (and allow more streamlined quarterly reports since PMRs can simply be referenced in the applicable sections of the reports that are submitted and reviewed at distinct points in the process). Further details on the City's PMR form submissions is included in **Section 3.6**.

LASAN's Clean Water Division (North and South) will take on the responsibility of operating and maintaining facilities within the City's Stormwater CIP[3]. Currently, there are over 70 completed stormwater water quality projects that require O&M and at least another 45 projects in LASAN's current Stormwater CIP that will require O&M within the next five years. Projects delivered under Prop O have an estimated O&M cost of $8 million per year. With the addition of new SCW projects, another $8 to $10 million per year is projected to be needed beginning in FY 27-28. LASAN will continue to evaluate O&M costs annually to adaptively manage projected costs compared with available budgets and determine the need for additional funding sources.

To balance the various priorities with the limited funding and the existing state of the Regional Program, it is recommended that the City implement the 2024 WISP guiding principles summarized in **Table ES-1** over the next year. **Table ES-1** also compares the 2024 WISP guiding principles with the 2023 WISP guiding principles and provides a status update, where applicable.

[3] O&M of infrastructure projects led by third parties (NGOs, CBOs, etc.) or other City Departments / Bureaus will be the responsibility of the respective party unless a project-specific Memorandum of Agreement (MOA) is established with LASAN prior to design initiation on a project.

Table ES-1. Comparison of 2023 and 2024 WISP Guiding Principles

2023 WISP Guiding Principles	2024 WISP Guiding Principles and Status Update
–	**Submit strategic competitive regional funding applications:** Recognizing the limited funding within the various regional watersheds and the strain on the City's Municipal Program, future regional infrastructure project applications are strongly encouraged: ● Submit applications for project funding in two stages: first for design-only funding; second, upon completion of 30% Design plans and class "B" budget, submit for project construction funding. ● Limit O&M funding requests to one year in construction funding applications to maximize funds for construction in the near term and increase requests for maintenance funding later as maintenance needs increase. ● One year prior to construction completion, prepare and submit a Regional five-year O&M funding request.
Appropriate funds for program planning and project development: Commit to the development of future projects by appropriating $3M (eight percent) of the annual Municipal return for the planning and development of future project development and program planning efforts (i.e., concept reports and feasibility studies).	**Appropriate funds for program planning and project development:** Reduce future Municipal Program funding commitment from $3 million (eight percent of Municipal Program) to $1.5 million (four percent of Municipal Program) for the planning and development of future project development and program planning efforts (i.e., concept reports and feasibility studies).
Implement a five-year Municipal stormwater CIP: Commit to investing $15M (40 percent) in Municipal annual return toward continued implementation of stormwater water quality projects for the next five years.	**Implement a five-year Municipal stormwater CIP:** Support investing $20 million (55 percent) of the SCWP Municipal Program annual funds of $36 million, toward continued implementation of stormwater water quality projects for the next five years. If the FY 24-25 Mayor's approved budget allocates less than the requested amount, certain project schedules will have to be reevaluated to align with available funding.
Prioritize current Regional funding needs before investing in new Municipal projects: CIP funding shall prioritize Regional funded projects that have unfunded shortfalls to satisfy the City's commitments and compliance per project transfer agreements before investing in new Municipal stormwater infrastructure projects.	**Prioritize current Regional funding needs before investing in new Municipal projects:** CIP funding will prioritize Regional funded projects that have unfunded shortfalls to satisfy the City's commitments and compliance per existing project transfer agreements. The $20 million allocated to stormwater projects from the Municipal Program will fulfill the unsatisfied funding needs in the Regional Program (if a project is committed and funded under the Regional Program, and the project requires additional funds which cannot be secured from the Regional Program due to lack of additional resources, the Municipal Program funding will be used to complete the project).

2023 WISP Guiding Principles	2024 WISP Guiding Principles and Status Update
–	**Develop SCWP Call for Project applications in accordance with the proposed Round 6 pause:** Due to current cost increases and budget constraints within the Regional SCWP, the ROC is considering implementing a pause on accepting new infrastructure and O&M applications for the upcoming Round 6, FY 25-26, Call for Projects. The Call for Projects for all applications types will resume in Round 7, FY 26-27. LASAN has modified the Round 6 and 7 application recommendations accordingly.
Fill voids in the Regional program with Municipal funds: The $15M from the Municipal program will be responsible for filling voids in the Regional program (if a project is committed under the Regional program, and the Regional program lacks funds, the Municipal program will be used to finish the project).	–
Develop and utilize on-call design-build (DB) contracts: The City will implement a DB delivery mechanism to deliver projects more efficiently and quickly. LASAN, in coordination with the Bureau of Engineering (BOE), requested that the AOC recommend that the City Council request the City Attorney to prepare and present an ordinance allowing the Board of Public Works and its Bureaus to establish and utilize on-call DB contracts for the delivery of the SCWP, pursuant to a competitive, sealed-proposal method.	**Develop and utilize on-call design-build (DB) contracts:** The City will implement a DB delivery mechanism to deliver projects more efficiently and quickly. City Council approved Council file #18-0384-S5, requesting the City Attorney to prepare and present an ordinance allowing the Board of Public Works and its Bureaus to establish and utilize on-call DB contracts for the delivery of the SCWP, pursuant to a competitive, sealed-proposal method. The proposed ordinance has been prepared and is expected to be considered by the City Council in Spring 2024. Upon adoption, LASAN will release a Request for Qualifications (RFQ) to develop an on-call DB list.
Appropriate funds for O&M of constructed water quality projects: Commit to an initial annual investment of $4M (11 percent) in Municipal annual return towards the O&M of existing eligible constructed water quality projects.	**Appropriate funds for O&M of constructed water quality projects:** Support ongoing annual investment of $3.5 million (nine percent) in Municipal annual return towards the O&M of existing eligible constructed water quality projects.
Develop green stormwater infrastructure O&M contracts: Implement on-call landscape maintenance contracts specific to the needs of green stormwater infrastructure; (i.e., bioswales, green alleys, green streets, lakes, and wetlands).	
Provide watershed regulatory support: Commit $1M (two percent) in Municipal annual return to the ongoing regulatory watershed efforts and MS4 Permit compliance support / Minimum Control Programs.	**Provide watershed regulatory support:** Commit $0.5 million (one percent) in Municipal annual return to the ongoing regulatory watershed efforts and MS4 Permit compliance support / Minimum Control Measures programs.

2023 WISP Guiding Principles	2024 WISP Guiding Principles and Status Update
Appropriate funds for LASAN and BOE SCWP Administration and Implementation support staff: Commit $16M (44 percent) in Municipal annual return to SCWP Administration and Implementation support staff from LASAN and BOE to successfully secure Regional funding, implement projects, and provide proactive O&M.	**Appropriate funds for LASAN and BOE SCWP Administration and Implementation support staff:** Commit $15 million (41 percent) in Municipal annual return to SCWP Administration and Implementation support staff from LASAN and BOE to successfully secure Regional funding, implement projects, and provide proactive O&M.
Verify the Municipal SCWP manages and budgets for the priorities of the City's existing obligations before taking on additional outside obligations: Failure to do so can lead to the City not meeting its regulatory compliance milestones, receiving Notice of Violations (NOVs) and risking not meeting the intent outlined in the terms of the Municipal Transfer Agreement with the SCWP.	
–	**Complete the inaugural Municipal Program audit:** As required by the Municipal Transfer Agreement, LASAN is required to obtain an independent audit to determine Funded Activity compliance with the terms and conditions of the Transfer Agreement. Results and recommendations of the audit will provide the City with findings and recommendations to adaptively manage and improve administration of the City's Municipal Program.

The CIP offers a five-year outlook for each watershed. While the long-term perspective of the CIP horizon is critical for planning, a five-year CIP outlook is the desired product of this WISP. A five-year outlook provides sufficient resolution of the SCWP's current condition and allows structured implementation. As the WISP will be updated on an annual basis, the five-year CIP outlook will regularly evolve with updated information. The extensive process described in the WISP document has numerous decision points and assumptions, each with sound technical reasoning, that will continue to be refined in future years.

The WISP is a living document and will be updated annually at the start of each fiscal year to reflect progress on projects and on meeting regulatory water quality compliance requirements, as well as changes in the SCWP goals and objectives, environmental regulations, new technologies, best management practices, and available funding sources.

Section 1
Introduction

In November 2018, Los Angeles County (County) voters approved the Measure W Safe, Clean Water Program (SCWP), a parcel tax of 2.5 cents per square foot of impermeable surface, to support the costs of stormwater-related projects and activities. The SCWP generates approximately $280 million per year County-wide, with approximately $82 million per year currently going to projects in the City of Los Angeles (City). Los Angeles Sanitation & Environment (LASAN) developed this Watershed Investment Strategic Plan (WISP) to provide program strategy and policy guidance, as well as capital project planning tools, to manage City SCWP projects. The WISP represents an organized, methodological, and strategic project management approach that will enable the City to meet the County's SCWP program requirements.

The November 2019 Governance Structure for Measure W Report, issued by the City Administrative Officer (CF 18-0384-S1), defines two purposes of a WISP:

1. Provide policy guidance that encompasses the County's requirements and addresses the City's specific interests; and

2. Serve as a capital projects management tool to organize, prioritize, and manage both Municipal and Regional Programs.

LASAN is committed to planning and developing a Municipal and Regional Capital Improvement Program (CIP) that meets the objectives of the Municipal Separate Storm Sewer System (MS4) Permit. LASAN will sustain these programs through Measure W funding equal to $20 million out of the annual Municipal return total of $36 million.

Funds awarded from the SCWP Regional Program are competitive and uncertain. Based on the City's proportional contribution to the SCWP Regional Program, it is the City's goal to secure $46.1 million annually, consisting of the City's proportional contributions in the Upper Los Angeles River (ULAR) ($29.2 million), Central Santa Monica Bay (CSMB) ($13.6 million), and South Santa Monica Bay (SSMB) ($3.3 million) Watershed Area Steering Committee (WASC) annual budgets. To provide continued success to the program, future Citywide requests should consider the respective WASC funding as well as the City's secured funding from the Regional Program. Future Regional Program project applications should collectively strive to achieve a goal of up to 120 percent of the City's anticipated Regional Program return (totaling $46.12 million) for each of the respective watersheds.

This WISP identifies the regulatory context for project selection (**Section 2**). As outlined in **Figure 1-1,** the WISP builds on the Watershed Management Program (WMP) efforts with a focus on Municipal Separate Storm Sewer System (MS4) Permit compliance and the Reasonable Assurance Analysis (RAA), which identifies Total Maximum Daily Load (TMDL) milestones and the stormwater capture volume necessary for regulatory compliance in each of the City's four primary watersheds. As outlined in **Figure 1-1** and **Figure 1-2,** this WISP also describes the processes used to select projects, including the methodology used to prioritize the projects.

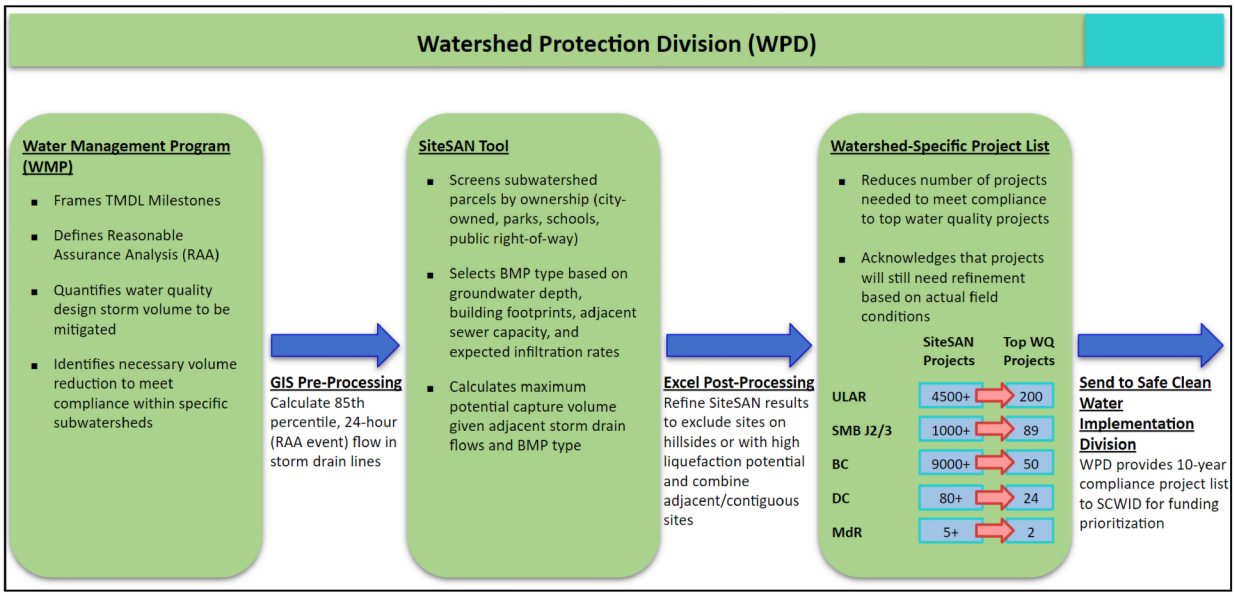


Figure 1-1. Regulatory Compliance

As shown in **Figure 1-1**, project identification is accomplished through the Geographic Information System (GIS)-based Site Selection Analysis (SiteSAN) tool. The SiteSAN tool is used Citywide to identify and evaluate project opportunity sites based on a defined set of parameters and criteria, including runoff volume to the site, the maximum runoff that could be captured on the site, liquefaction potential, depth to groundwater, and proximity to storm drains and sanitary sewers. The resulting master list of projects presents a path for the City to achieve compliance with regulatory requirements in each watershed. The City watersheds listed in **Figure 1-1** are:

- ULAR: Upper Los Angeles River
- SMB J2/J3: Santa Monica Bay Jurisdictions 2 and 3
- BC: Ballona Creek
- DC: Dominguez Channel
- MdR: Marina del Rey

Figure 1-2 illustrates the SCWP project prioritization process, department collaboration, and LASAN's funding commitment, and outlines how funds are secured for stormwater regulatory compliance projects. Following the project definition and prioritization efforts by the Watershed Protection Division (WPD), and considering proposed projects from City partner agencies and organizations, the Safe Clean Water Implementation Division (SCWID) further develops the project list through the project concept reports and prepares the projects' funding applications.

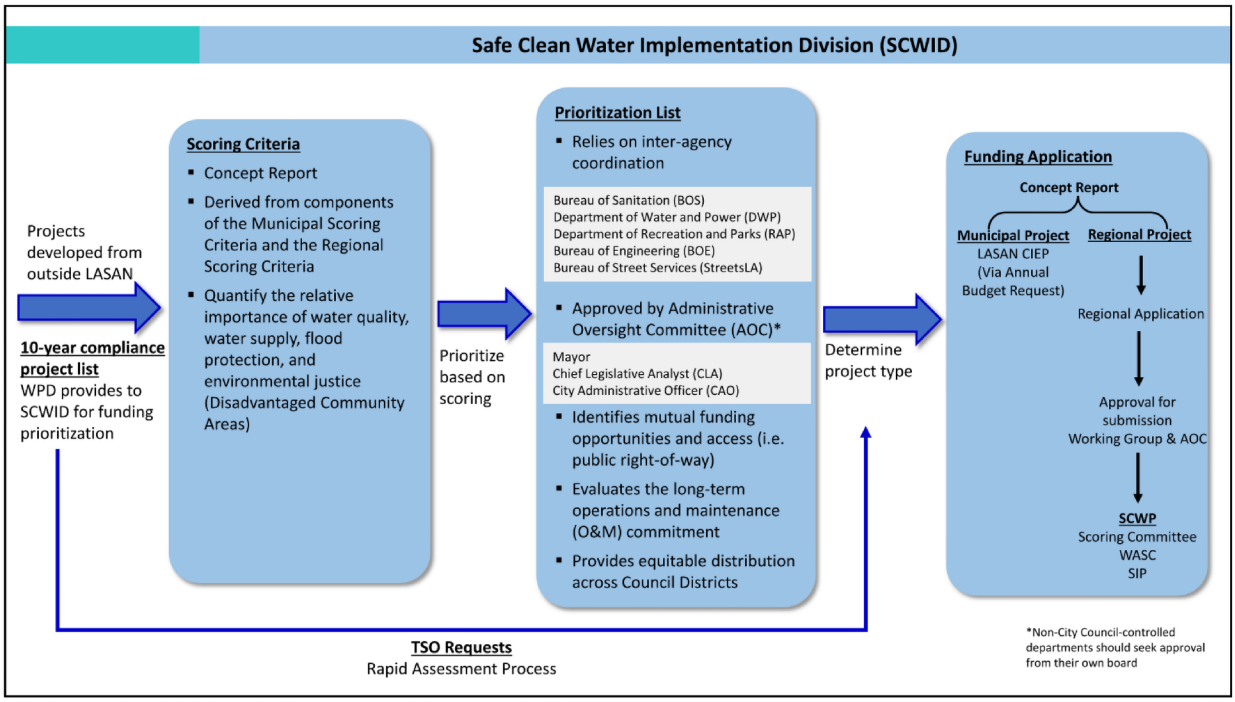


Figure 1-2. Project Prioritization Process

Section 2
Regulatory Context and Compliance

One of the primary objectives of the Safe Clean Water Program (SCWP) is to provide funding for projects required to meet the regulatory requirements of the Municipal Separate Storm Sewer System (MS4) Permit. This section includes a discussion of the MS4 permit, a summary of watershed-level planning efforts, and a description of procedures Los Angeles Sanitation & Environment (LASAN) is following towards compliance.

2.1 MS4 Permit

The National Pollutant Discharge Elimination System (NPDES) MS4 Permit Order No. R4-2021-0105 establishes the waste discharge requirements for stormwater and non-stormwater discharges within the watersheds of Los Angeles County. This NPDES MS4 Permit was adopted by the California Regional Water Quality Control Board, Los Angeles Region (Regional Board), on July 23, 2021, and became effective on September 11, 2021. The permittees are the City of Los Angeles (City), the County of Los Angeles (County), Los Angeles County Flood Control District (LACFCD), 83 other cities within the County of Los Angeles, County of Ventura, and the incorporated cities within Ventura County. **Figure 2-1** maps the permitted area.

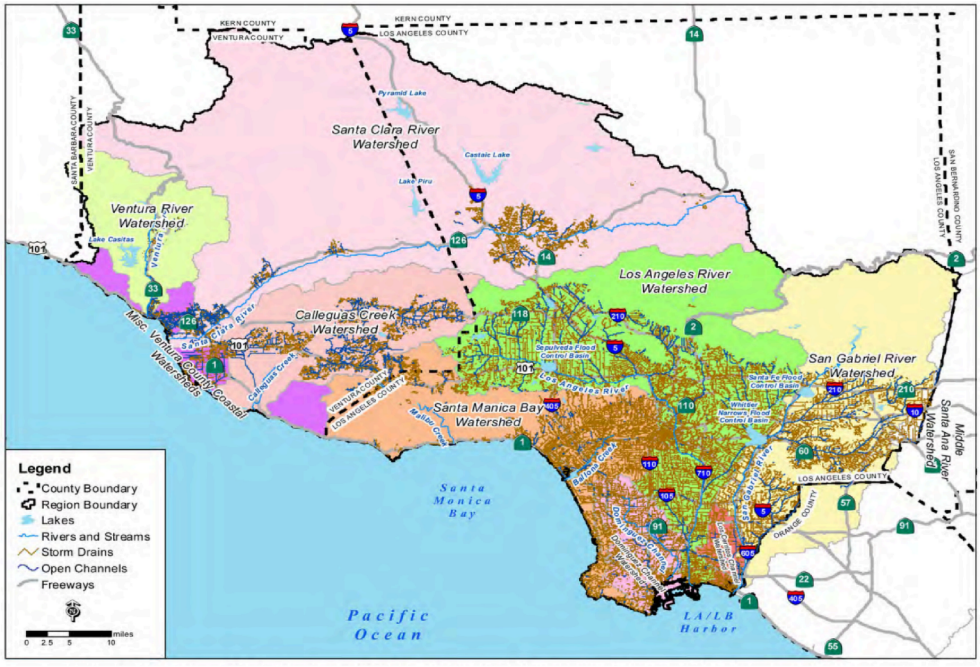


Figure 2-1. Map of MS4 Permitted Area[4]

The current NPDES MS4 Permit is the most recent of five consecutive permits (issued in 1990, 1996, 2001, 2012, and 2021). This MS4 Permit includes the most stringent requirements to date as it establishes numeric water quality limits for receiving waters in Los Angeles County and

[4] Source: 2021 MS4 NPDES Permit (https://www.waterboards.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/#2)

effluent limitations for discharges of stormwater and urban runoff from the MS4. The new NPDES MS4 Permit includes increased permittee responsibilities for inspections, land development and monitoring, and requires that permittees comply with all Total Maximum Daily Load (TMDL) water quality requirements.

The MS4 Permit contains effluent limitations, receiving water limitations (RWLs) and TMDL provisions, and outlines the process for developing Watershed Management Programs (WMPs). It incorporates the TMDL waste load allocations (WLAs) applicable to dry- and wet-weather conditions as water-quality-based effluent limits (WQBELs) and/or RWLs. Section V.A of the Permit requires compliance with the WQBELs and RWLs as outlined by the respective TMDLs.

2.1.1 Total Maximum Daily Loads

The fundamental stormwater regulatory standards to be met are referred to as TMDLs. Urban stormwater runoff picks up various pollutants, including trash, oil, bacteria, fertilizers, pesticides and toxics, which eventually end up in receiving waters. A TMDL is a limit on the amount of a pollutant that a specific waterbody can receive from all sources (including urban runoff) and still meet water quality standards.

Table 2-1 provides a summary of the TMDLs for watersheds within the City. The City's four primary regulatory watersheds are grouped into the three SCWP watershed areas as follows (**Figure 2-2**):

- Upper Los Angeles River (ULAR) Watershed Area
- Central Santa Monica Bay (CSMB) Watershed Area (includes the City's portion of the Ballona Creek Watershed, Santa Monica Bay Jurisdictions 2 and 3, and Marina del Rey Watershed)
- South Santa Monica Bay (SSMB) Watershed (includes the City's portion of the Dominguez Channel Watershed) and Santa Monica Bay Jurisdiction 7

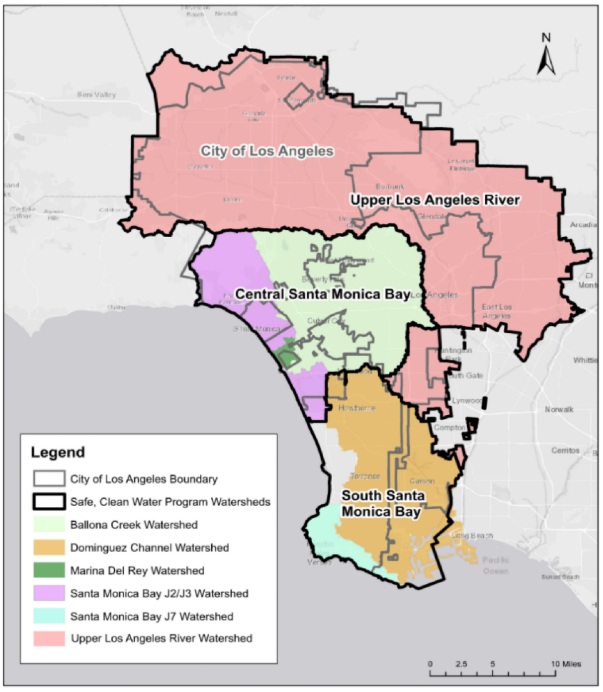


Figure 2-2. City of LA Boundaries within SCWP Watersheds

The City continues to assume a leadership role in protecting the quality of its waters and is currently subject to the TMDLs listed in **Table 2-1**. These TMDLs address multiple water quality impairments in the Los Angeles River (LAR), Ballona Creek (BC), Santa Monica Bay shoreline (SMB), Dominguez Channel (DC), and several lakes within the City. TMDL details, including the implementation timeline, are provided in **Appendix A**.

Table 2-1. Summary of TMDLs

Regulatory Watershed	Trash and Debris	Nutrients	Metals	Bacteria	Toxic Pollutants	Pesticides and PCBs	Others
Upper Los Angeles River SCW Watershed Area							
Upper Los Angeles River	LAR Watershed Trash; Legg Lake Trash; Echo Park Lake Trash	LAR Nitrogen Compounds and Related Effects; Echo Park Lake Nutrient; Lake Calabasas Nutrient; Legg Lake Nutrient	LAR Metals; Tributaries Metals	LAR Watershed Bacteria	DC Toxic Pollutants; Greater LA Toxic Pollutants; Long Beach Harbor Waters Toxic Pollutants	Echo Park Lake PCBs	Echo Park Lake Chlordane; Echo Park Lake Dieldrin
Central Santa Monica Bay SCW Watershed Area							
Ballona Creek	SMB Debris; BC Trash	-	BC Metals	BC Bacteria; BC Estuary Bacteria; Sepulveda Channel Bacteria	BC Estuary Toxic Pollutants	SMB DDTs and PCBs	BC Wetlands Sediment and Invasive Exotic Vegetation
Santa Monica Bay J2 and J3	SMB Debris	-	-	SMB Beaches Bacteria	-	SMB DDTs and PCBs	-
Marina Del Rey	SMB Debris	-	-	-	-	-	-
South Santa Monica Bay SCW Watershed Area							
Dominguez Channel	Machado Lake Trash	Machado Lake Nutrient	-	LA Harbor Bacteria	DC Toxic Pollutants; Greater LA Toxic Pollutants; Long Beach Harbor Waters Toxic Pollutants	Machado Lake Pesticides and PCBs	-
Santa Monica Bay J7	-	-	-	-	-	-	-

2.1.2 Watershed Management Programs

The NPDES MS4 Permit includes provisions for the development and implementation of WMPs that allow permittees to customize their stormwater programs to achieve compliance with Permit requirements, including the TMDL water quality regulations and other Clean Water Act mandates. Development of a WMP encompasses the prioritization of water-quality issues, identification of implementation strategies, control measures, and best management practices (BMPs) to meet water quality standards and other MS4 Permit requirements, integrated water quality monitoring, and a process for stakeholder input.

The WMPs also allow MS4 permittees to address water quality issues more effectively through interagency collaboration on a watershed-wide basis. The City is located in four major watersheds: Santa Monica Bay, Los Angeles River, Ballona Creek, and Dominguez Channel. LASAN is responsible for implementing the MS4 Permit within the City through the Watershed Protection Division (WPD). LASAN has partnered with other MS4 permittees in the City's four watersheds for collaborative approaches to the development of the WMPs. Accordingly, four Watershed Management Groups (WMGs) led by LASAN have been established, consisting of the City, County, LACFCD, and many of the municipalities that are located within the City's four watersheds.

The WMP for each watershed outlines a path to developing control measures that address Waterbody-Pollutant Combinations (WBPCs) that have been observed to exceed water quality objectives within the receiving waterbodies. The WMP provides an overarching framework from which to build the stormwater quality compliance program. While the WMP does identify several regional projects that could manage a portion of the required volume of flow for each of the member agencies, much of the framework of the WMP is based on a high-level assessment with stormwater capture volume targets that are general in nature and not linked to specific project sites. Each member agency was subsequently tasked with identifying and developing specific projects which, when implemented, would manage the required volume of stormwater flow generated from their jurisdiction.

Each WMP uses hydraulic modeling to vet various scenarios like treatment processes, land use and pollutant data to determine the amount of stormwater required to be treated to meet regulatory milestones. Compliance strategies include a combination of smaller distributed projects such as green stormwater infrastructure corridors (green streets and alleys) and large regional projects. One of the most significant products of the WMPs are lists of project opportunities that can be implemented to address the water quality requirements of the MS4 Permit. The WMP implementation strategy uses computer modeling, RAA, to assist in selecting subwatersheds/subbasins that would provide the greatest pollutant removal. The WMP identifies project locations and the volume of stormwater that needs to be treated at each identified site to meet the City's compliance requirements.

At the present time, the total capital cost for all projects identified in the WMPs for the City to achieve compliance is estimated to be $9.9 billion (B) as shown in **Figure 2-3**.

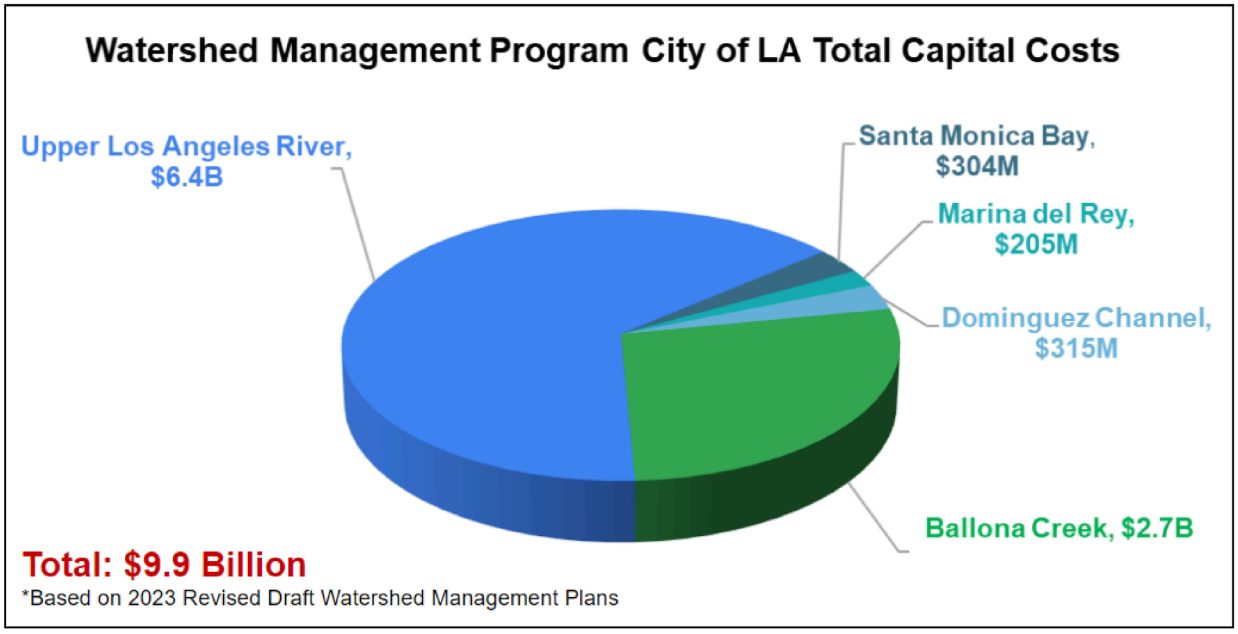


Figure 2-3. Estimated Total WMP Implementation Cost

Over the past decade, the City implemented a significant number of projects focused on improving water quality and meeting permit requirements. The City's 2004 Proposition O (Prop O) program, a ballot measure approved by the City's residents, provided $500 million to fund water quality projects. The City also received funding from various other sources and many signature stormwater projects were successfully implemented. However, funding insecurity limited the speed at which projects could be implemented.

With the passage of Measure W and establishment of the SCWP, the City has been able to expand the stormwater program. LASAN will continue to develop a stormwater CIP that aligns with the SCWP allocated funds while continuing to seek additional outside funding. **Section 2.2** discusses the SCWP structure as well as the regulatory framework for the City's four watersheds.

2.2 Regulatory Compliance and Project Identification

The City faces numerous regulatory requirements set forth to provide protection of receiving waters from urban pollution conveyed via urban runoff. As an operator of an MS4, the City manages discharges from its system to improve water quality and achieve regulatory compliance. One component of the City's compliance strategy involves implementation of water quality improvement projects throughout the City where site conditions allow. **Appendix B** summarizes the WPD's effort to develop a master list of wet-weather infrastructure projects designed to capture and treat stormwater and provide a long-term path to regulatory compliance as outlined in **Figure 1-1**. The three principal components of the regulatory compliance steps include: 1) the WMP and the RAA stormwater volume required for capture, 2) project identification and analysis through the SiteSAN tool, and 3) assembling watershed-specific project lists.

2.2.1 SiteSAN Scoring Criteria

The Municipal and Regional Programs Scoring Criteria establish a numerical score for each project based on benefits to water quality, water supply, local flooding, and the community. The scores also consider project cost-effectiveness. Prioritizing projects at a preliminary stage of project development using the Municipal and/or Regional Programs' Scoring Criteria is difficult given the lack of site-specific technical information and project-specific specifications to differentiate among projects . For example, costs are determined based on a unit cost related to stormwater capture volume, so cost-effectiveness would be uniform across all projects for the same capture volume. To address this concern, LASAN WPD established simplified SiteSAN ranking criteria to evaluate project opportunity sites relative to one another.

The simplified SiteSAN ranking criteria facilitated a reasonable comparison among projects to provide the Safe Clean Water Implementation Division (SCWID) a basis to evaluate the strength of a project with the SCWP goals and objectives. The first step in developing the simplified SiteSAN criteria was to compare the regional and municipal scoring criteria to determine areas of overlap. The next step was to determine which criteria could be used to differentiate among projects. This evaluation resulted in the following six criteria:

Schedule reliability: Higher priority is given to projects within LASAN's jurisdiction. These projects have the potential for an accelerated start date as land acquisition and access agreements are not required.

Water quality: An analysis conducted during the development of the WMPs provided location-based scores that indicate relative pollutant loading, where areas with high pollutant loading are prioritized. Another feature of the WMP RAA modeling effort was a determination of the percent load reduction required for each of the subwatersheds within the four City watersheds. The required load reduction is based on the modeled pollutant loading from a given subwatershed. Subwatersheds with land uses associated with higher pollutant loading would require a higher stormwater volume capture than those with lower pollutant loadings. For example, drainage areas with less development tend to have a lower load reduction factor than dense urban areas. Load reduction factors are the targeted percent of the associated subwatershed that must be managed to achieve compliance based on WMP modeling. The higher the load reduction factor, the higher the priority of the area. By targeting sites with a high load reduction factor, the City would manage the most critical locations first.

Disadvantaged community benefits: Projects that directly benefit a disadvantaged community (DAC) are prioritized.

Flood control: Higher priority is given to areas where historical flood control complaints exist.

Water supply benefit: Higher priority is given to projects that are located in areas of the City where infiltration results in groundwater recharge (namely the San Fernando Valley) or on a land use such as a park where on-site reuse is anticipated to be a feature of the project.

Community benefits: Projects that have the potential to benefit the community are given higher priority. This was determined based on land use type, where any project where the public would

have access to the land was assumed to provide a community benefit. Although community benefit features will be established during conceptual design, it is assumed that those features will be considered and included where possible. All sites should have the potential to incorporate community benefits, including beautification, greenscaping, and low impact development (LID)-type surface features providing City residents and others with improved water quality and a more aesthetically pleasing environment.

Based on these key factors, a scoring matrix was developed, and weighting factors were established where the weight of all factors sums to 100 (**Table 2-2**).

Table 2-2. Criteria Weighting

Schedule Reliability	Water Quality	DAC Benefit	Flood Control	Water Supply Benefit	Community Benefit	Total Score
25	15	15	15	15	15	100

Schedule reliability was assigned the highest weight, equal to 25, because a higher schedule reliability score (driven by accessibility and type of ownership) indicates that LASAN will have better control of the projects and can implement them with greater ease and in a timelier manner. All other factors were assigned a weight of 15. Projects can score from zero to the max score (15 or 25) for each category depending on the potential benefits.

LASAN's SCWID uses the list of projects provided by the WPD, and partner agencies and organizations, to draw upon projects for both the Municipal Program and Regional Program funding. SCWID leads and vets additional project studies, planning, or modeling efforts for the City. The annual selection of projects is based on meeting the water quality objectives (i.e., upcoming TMDL compliance milestones in each watershed) of the MS4 permit.

2.2.2 Priority Projects for Safe, Clean Water Program Funding

The SiteSAN tool further assisted LASAN in taking potential projects identified in the WMPs and further screened them to highlight which projects may be feasible and should be further investigated to move the City towards compliance. **Appendix D** contains the short-listed priority projects that resulted from this selection process, including site-specific data and design summaries for each project. These initial sets of projects will be used for initial consideration in identifying projects for SCWP funding consideration. LASAN's SCWID will investigate the site-specific conditions and technical feasibility of each project and assign a municipal score to each of the projects.

Section 3
Safe Clean Water Program

On November 6, 2018, Los Angeles County (County) voters approved Measure W, the Safe, Clean Water Program (SCWP), a parcel tax of 2.5 cents per square foot of impermeable surface to support the costs of stormwater-related projects and activities.[5] Measure W generates approximately $280 million per year County-wide, of which approximately $36 million is returned to the City of Los Angeles (City) through the Municipal Program, and an average of around $46.1 million through the competitive Regional Program. The SCWP designates three watershed areas within the City's jurisdiction (**Figure 2-2**) for funding purposes:

- the Upper Los Angeles River (ULAR) Watershed Area: includes the City's portion of the Upper Los Angeles River Watershed.
- the Central Santa Monica Bay (CSMB) Watershed Area: includes the City's portion of the Ballona Creek Watershed, Santa Monica Bay (Jurisdictions 2 and 3, and Marina del Rey) Watershed.
- the South Santa Monica Bay (SSMB) Watershed Area: includes the City's portion of the Dominguez Channel Watershed and Santa Monica Bay (Jurisdiction 7).

Los Angeles Sanitation & Environment (LASAN) is responsible for managing, overseeing, and coordinating Measure W activities for the City of Los Angeles. LASAN's Safe Clean Water Implementation Division (SCWID) coordinates LASAN's responsibilities in managing the City's stormwater program (flood protection, watershed management, and water quality compliance) allowing it to work effectively with City departments, community partners, and regional agencies. This collaboration, including stakeholder interaction, helps prioritize projects within the City and identify opportunities for leveraging funding.

As shown in **Figure 1-1**, prioritizing projects is a multi-step process with different scoring criteria in each step. As described in **Section 2.2.1**, LASAN's SCWID uses the SiteSAN tool to prioritize the list of projects provided by the Watershed Protection Division (WPD). Weighting factors applied to each criterion in this tool sum to 100. LASAN draws upon the SiteSAN output to identify projects to be considered for both the Municipal Program and Regional Program funding.

Prior to applying the Municipal and Regional Programs Scoring Criteria to a project, SCWID investigates the projects' technical feasibility and elaborates on the proposed concepts by conducting in-depth site investigations and preparing project concept reports.

The development of a concept report can take six to nine months and should be completed prior to a Safe Clean Water (SCW) technical feasibility application being prepared for Regional funding consideration. A concept report outlines the practicality of the site to meet water quality

[5] Los Angeles County Code of Ordinances, Flood Control District Code, Chapter 16 – Los Angeles Safe Clean Warder Program, Section 16.08 – Special Parcel Tax Rate. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=FLCODICO_CH16LOANRESACLWAPRSPPATAPRSTURRUCARESTURRUPO_16.08SPPATARA

objectives of the Municipal Separate Storm Sewer System (MS4) Permit (i.e., upcoming Total Maximum Daily Load (TMDL) compliance milestones in each watershed), validates geotechnical assumptions, investigates utility coordination of right-of-way issues, and establishes a refined scope, schedule, and a class "O" budget.

Upon completion of a project's technical feasibility and concept report, each project will be given a municipal score based on the SCWP Administrative Oversight Committee (AOC)s adopted scoring criteria. Projects that will assist the City in meeting TMDL requirements and deadlines, leveraging funding equitability throughout the City, and interdepartmental and/or community project collaboration are also considered in determining which projects will move forward for funding consideration.

For projects seeking funding from the Regional Program, it is recommended that Departments begin the process of developing a SCW application and feasibility report approximately 12 months prior to the call for projects for the Regional Program at the beginning of each fiscal year.

Other Bureaus and City Departments seeking to secure SCWP funding are highly encouraged to participate in the SCW Working Group and AOC, which aid in deciding on the Municipal or Regional Program for the projects.

3.1 Project Scoring

3.1.1 Municipal Scoring Criteria

The SCW Working Group and AOC approved the City's "Municipal Program Scoring Criteria" shown in **Figure 3-1** to objectively score projects based on County SCWP goals and City policy objectives. The City's Municipal Program Scoring Criteria follow the same general categories as the County Regional Program Scoring Criteria and include additional criteria that prioritize the City-specific policy objectives (citywide equitability, flood protection needs, resiliency, biodiversity, and operation and maintenance (O&M) cost-effectiveness). A project scored using the City's Municipal Program Scoring Criteria can receive a maximum of 110 points.

All City projects requesting funding through the Municipal Program will be scored and prioritized based on these criteria. **Table 3-1** provides a summary of projects that have a completed concept report and/or regional feasibility study and have been assigned a municipal score and ranked for future funding consideration through the City's budget process. Projects listed without a ranking and municipal score are already partially or fully funded and are in LASAN's 5-year Capital Improvement Plan (CIP).

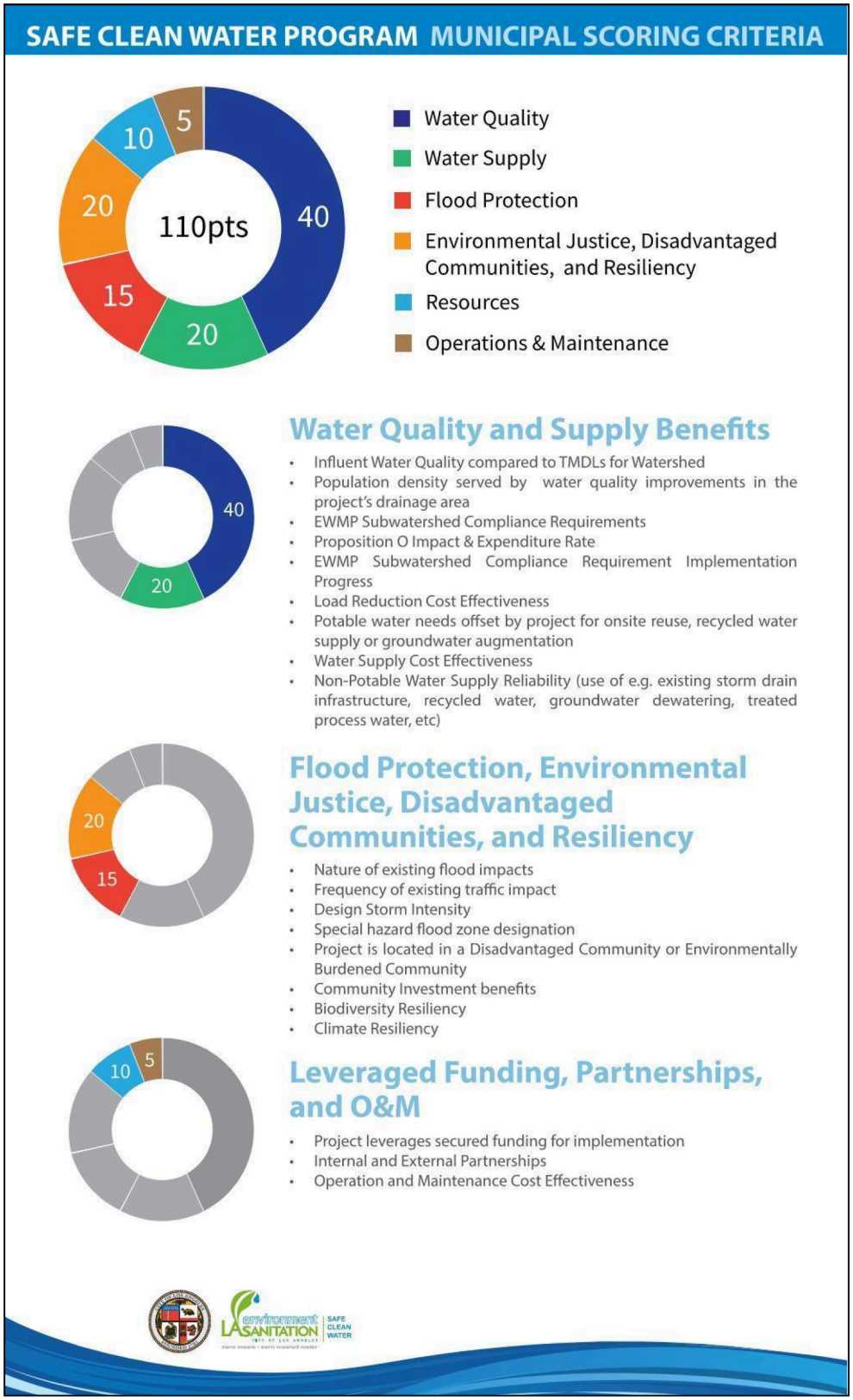


Figure 3-1. City's Municipal Scoring Criteria for SCWP Municipal Program Funding

Table 3-1. LASAN's SCWP Potential Projects Prioritization List for Municipal Program Funding

Rank	Project Name	Council District	SCWP Watershed	Estimated Construction Cost	Date of Cost Estimate	Status	Municipal Score	Driver of Analysis
-	Arroyo Seco Low Flow Diversion (Hermon Dog Park, LFD#2)	14	ULAR	$2.3M	7/2021	Post-Construction	-	ULAR Bacteria Segment B TMDL (Deadline 2023)
-	Arroyo Seco Low Flow Diversion (Sycamore Grove Park, LFD#1)	1	ULAR	$2.5M	7/2021	Post-Construction	-	ULAR Bacteria Segment B TMDL (Deadline 2023)
-	LA River LFD (Palmetto, LFD#2, R2-J)	14	ULAR	$3.0M	7/2021	Post-Construction	-	ULAR Bacteria Segment B TMDL (Deadline 2023)
-	LA River LFD (2nd St & Sante Fe, LFD#1, R2-02)	14	ULAR	$3.6M	7/2021	Post-Construction	-	ULAR Bacteria Segment B TMDL (Deadline 2023)
-	LA River LFD (Mission Rd, LFD#3, R2-G)	14	ULAR	$3.9M	7/2021	Post-Construction	-	ULAR Bacteria Segment B TMDL (Deadline 2023)
-	Haynes Street Greenway Project (Phase 1)	3	ULAR	$0.4M	8/2023	Construction	-	ULAR EWMP
-	Ballona Creek TMDL Project	11	CSMB	$75.9M	8/2023	Construction	-	BC Dry Weather Bacteria TMDL (Deadline 2019)
-	North Sepulveda Pedestrian Island (Sepulveda Green Median)	6	ULAR	$1.8M	8/2023	Bid & Award	-	ULAR EWMP
-	Reseda Blvd Alley Green Streets	12	ULAR	$3.0M	8/2023	Bid & Award	-	ULAR EWMP
-	Oro Vista Local Area Urban Flow Management Project	7	ULAR	$26.5M	8/2023	Bid & Award	-	ULAR EWMP
-	E 6th St Green Infrastructure Corridor	14	ULAR	$4.0M	8/2023	90% Design	-	ULAR EWMP
-	La Cienega Blvd Green Infrastructure Corridor	11	CSMB	$3.9M	8/2023	90% Design	-	BC EWMP
-	MacArthur Park Rehabilitation Project	1	CSMB	$31.1M	8/2023	90% Design	-	CSMB EWMP
-	LA River Low Flow Diversion (Compton Creek, 1 LFD)	8	ULAR	$3.9M	8/2023	50% Design	-	ULAR Bacteria Segment A TMDL Deadline (2025)
-	Lankershim Blvd Local Area Urban Flow Management Network	6	ULAR	$78.5M	8/2023	50% Design	-	ULAR EWMP

Rank	Project Name	Council District	SCWP Watershed	Estimated Construction Cost	Date of Cost Estimate	Status	Municipal Score	Driver of Analysis
-	Wilmington Neighborhood Greening Project	15	SSMB	$22.5M	8/2023	50% Design	-	DC EWMP
-	Wilmington Q Street Local Area Urban Flow Management Project	15	SSMB	$75.9M	8/2023	10% Design	-	DC EWMP
-	Lincoln Park Neighborhood Green Street Network	1	ULAR	$31.7M	8/2023	Pre-Design	-	ULAR EWMP
-	Angeles Mesa Green Infrastructure Corridor Project	8	ULAR	$12.6M	7/2021	Pre-Design	-	CSMB EWMP
-	Hollenbeck Park Lake Rehabilitation Project	14	ULAR	$29.6M	7/2022	Pre-Design	-	ULAR EWMP
-	Imperial Highway Green Infrastructure Project	11	CSMB	$8.7M	7/2022	Pre-Design	-	CSMB EWMP
-	Sylmar Channel Project	7	ULAR	$6.6M	7/2022	Pre-Design	-	ULAR EWMP
-	Wilmington-Anaheim Green Infrastructure Corridor Project	15	SSMB	$7.5M	7/2022	Pre-Design	-	DC EWMP
1	Sun Valley Green Neighborhood Infrastructure Project*	2	ULAR	$10.9M	7/2023	Feasibility Study	80 (Regional Score)	ULAR EWMP
2	Canoga LFD (LAR-E-110)*	3	ULAR	$4.5M	7/2023	Feasibility Study	70 (Regional Score)	ULAR Bacteria Segment E TMDL Deadline (2025)
3	DeSoto LFD (LAR-E-096)*	3	ULAR	$4.7M	7/2023	Feasibility Study	70 (Regional Score)	ULAR Bacteria Segment E TMDL Deadline (2025)
4	Wilber LFD (LAR-E-058)*	3	ULAR	$10.9M	7/2023	Feasibility Study	70 (Regional Score)	ULAR Bacteria Segment E TMDL Deadline (2025)
5	Baldwin Vista Green Streets Project*	10	CSMB	$7.1M	7/2023	Feasibility Study	68 (Regional Score)	CSMB EWMP

Rank	Project Name	Council District	SCWP Watershed	Estimated Construction Cost	Date of Cost Estimate	Status	Municipal Score	Driver of Analysis
6	Cochran Ave Green Infrastructure Corridor	10	CSMB	$0.6M	2017	Concept Report	75	Existing Report
7	Richardson Family Park Stormwater Capture Project	8	CSMB	$2.2M	2022	SiteSAN Priority	75	MS4 Priority
8	Martin Luther King Jr. Neighborhood Greening Project	8	CSMB	$46.4M	2023	Feasibility Study	74	Existing Report
9	Mission & Jesse Green Parking Lot	14	ULAR	$2.3M	2022	Concept Report	74	Existing Report
10	Stormwater Pump Plant 621 (7805 Van Nuys Blvd)	6	ULAR	$3.0M	2015	Concept Report	73	Existing Report
11	Sepulveda Channel Water Quality Improvement - LFTF 2 Greening and Bike Path	11	CSMB	$2.8M	2022	Alternatives Study	72	CD Priority
12	W. 48th Street Green Infrastructure Corridor	9	CSMB	$2.0M	2019	Concept Report	70	Existing Report
13	Pico Union Vest Pocket Park Stormwater Capture Project	1	CSMB	$4.5M	2022	SiteSAN Priority	70	MS4 Priority
14	Toberman Recreation Center Stormwater Capture Project	1	CSMB	$13.7M	2022	SiteSAN Priority	70	MS4 Priority
15	Stormwater Pump Plant 647 (1600 Main St)	6	CSMB	$13.1M	2015	Concept Report	69	Existing Report
16	Tujunga Canyon Blvd Green Streets Project	7	ULAR	$2.5M	2019	Concept Report	69	Existing Report
17	Pacific Coast Highway Stormwater Project (Senator Ave to S. Normandie Ave)	15	SSMB	$6.1M	2022	SiteSAN Priority	68	MS4 Priority
18	Westchester Pkwy / Emerson Ave Green Infrastructure Corridor	11	CSMB	$6.9M	2022	SiteSAN Priority	68	MS4 Priority
19	Venice Boulevard Stormwater Capture Project (between 405 and National Blvd)**	5	CSMB	$ TBD	2022	SiteSAN Priority	67	MS4 Priority

Rank	Project Name	Council District	SCWP Watershed	Estimated Construction Cost	Date of Cost Estimate	Status	Municipal Score	Driver of Analysis
20	Slauson and Wall Stormwater Capture Project	9	ULAR	$26.9M	2022	Initial Analysis	67	CD Priority
21	W. 54th St Green Infrastructure Corridor Project	8	CSMB	$1.6M	2019	Concept Report	66	Existing Report
22	Hatteras Green Street Project	4	ULAR	$1.9M	2019	Concept Report	65	Existing Report
23	Stormwater Pump Plant 622 (15266 Cabrito Rd)	6	ULAR	$2.9M	2015	Concept Report	65	Existing Report
24	Rosecrans Recreation Center**	15	SSMB	$2.8M	2022	SiteSAN Priority	64	MS4 Priority
25	Sunset Blvd / Barrington Ave Green Infrastructure Corridor	11	CSMB	$5.5M	2022	SiteSAN Priority	64	MS4 Priority
26	Oakwood / Venice Neighborhood Greening Project	11	CSMB	$17.2M	2020	Feasibility Study	63	Existing Report
27	Poinsettia Park Neighborhood Greening Project	5	CSMB	$12.6M	2020	Feasibility Study	63	Existing Report
28	Wilshire Blvd Green Street Project	1	CSMB	$2.5M	2019	Concept Report	62	Existing Report
29	Marina del Rey Triangle Area Park Project**	11	CSMB	$0.8M	2015	Concept Report	61	MS4 Priority
30	Rosa Parks Learning Center Stormwater Capture Project	6	ULAR	$0.6M	2022	SiteSAN Priority	61	Existing Report
31	Arminta Street Green Infrastructure Project	6	ULAR	$2.4M	2019	Concept Report	60	Existing Report
32	Sepulveda Blvd Green Infrastructure Corridor	5	CSMB	$1.5M	2019	Concept Report	60	Existing Report
33	Eldridge Harding Storm Drain (Mission College)**	7	ULAR	$15.9M (flood protection only)	2022	Initial Analysis	60	Leveraged Funding

Rank	Project Name	Council District	SCWP Watershed	Estimated Construction Cost	Date of Cost Estimate	Status	Municipal Score	Driver of Analysis
34	South Occidental Boulevard Stormwater BMP	1	CSMB	$6.7M	2016	Concept Report	57	Existing Report
35	Rampart Village Stormwater Infrastructure	13	CSMB	$4.1M	2019	Concept Report	57	Existing Report
36	Rustic Canyon Landscaping & Accessibility Project	11	CSMB	$2.6M	2020	Feasibility Study	50	Existing Report

* Projects submitted for respective watershed WASC for Round 5 funding consideration and inclusion into the SCWP FY 24-25 Stormwater Investment Plans.
** Project concept report / feasibility study being developed for potential future funding applications.

3.1.2 Regional Scoring Criteria

Infrastructure projects submitted to the County SCWP Regional Infrastructure Program will be scored by the Scoring Committee and those that meet the minimum score (60 pts) will then be sent to the respective WASC for funding consideration. The SCWP criteria were published on September 2019[6] and consist of eight criteria and two alternate criteria for dry-weather projects. These criteria are contained in five groups consisting of:

- Water Quality
- Water Supply
- Community Investment Benefits
- Nature Based Solutions
- Leveraging Funds and Community Support

Regional Program infrastructure projects are required to meet the threshold score of 60 points or more out of a maximum 110 points to be eligible for funding consideration. **Figure 3-2** shows the scoring criteria based on the Infrastructure Program Project Scoring Criteria.

In June 2023, as part of the adaptive management of the SCWP, the SCWP issued Guidance for Alternate Water Supply Scoring Pilot for the fiscal year (FY) 2024-25 Call for Projects[7]. The Alternate Water Supply Scoring Pilot provides additional point scale flexibility so that project scores can be tallied in one-point increments (as compared to the current stepwise criteria), enabling projects managing smaller drainage areas to earn points. This approach better aligns the cost-effectiveness and magnitude scoring with the true range of multi-benefit project efficiencies and performance, and inherently accounts for County-wide opportunities, constraints, and economic changes over time.

Since this effort is only a pilot, the scoring is intentionally separated from the original Water Supply Benefits score within the SCWP project module application and the module will still show estimated Water Supply Benefit scores based on the original criteria. Scores for LASAN's projects benefited from this alternative scoring pilot. LASAN has advocated for the Los Angeles County Flood Control District (LACFCD) to utilize similar scoring pilots for other categories of the Regional Scoring Criteria, such as Water Quality.

[6] LA County Safe, Clean Water Program Feasibility Study Guidelines, Exhibit A - Infrastructure Program Project Scoring Criteria, September 19, 2019
https://safecleanwaterla.org/wp-content/uploads/2019/09/Feasibility-Study-Guidelines-20190917-FINAL-1.pdf

[7] Implementation of the Alternate Water Supply Scoring Pilot in Fiscal Year 2024-25 Call For Projects
https://safecleanwaterla.org/wp-content/uploads/2023/06/Alternate-WS-Scoring-Pilot-202306.pdf

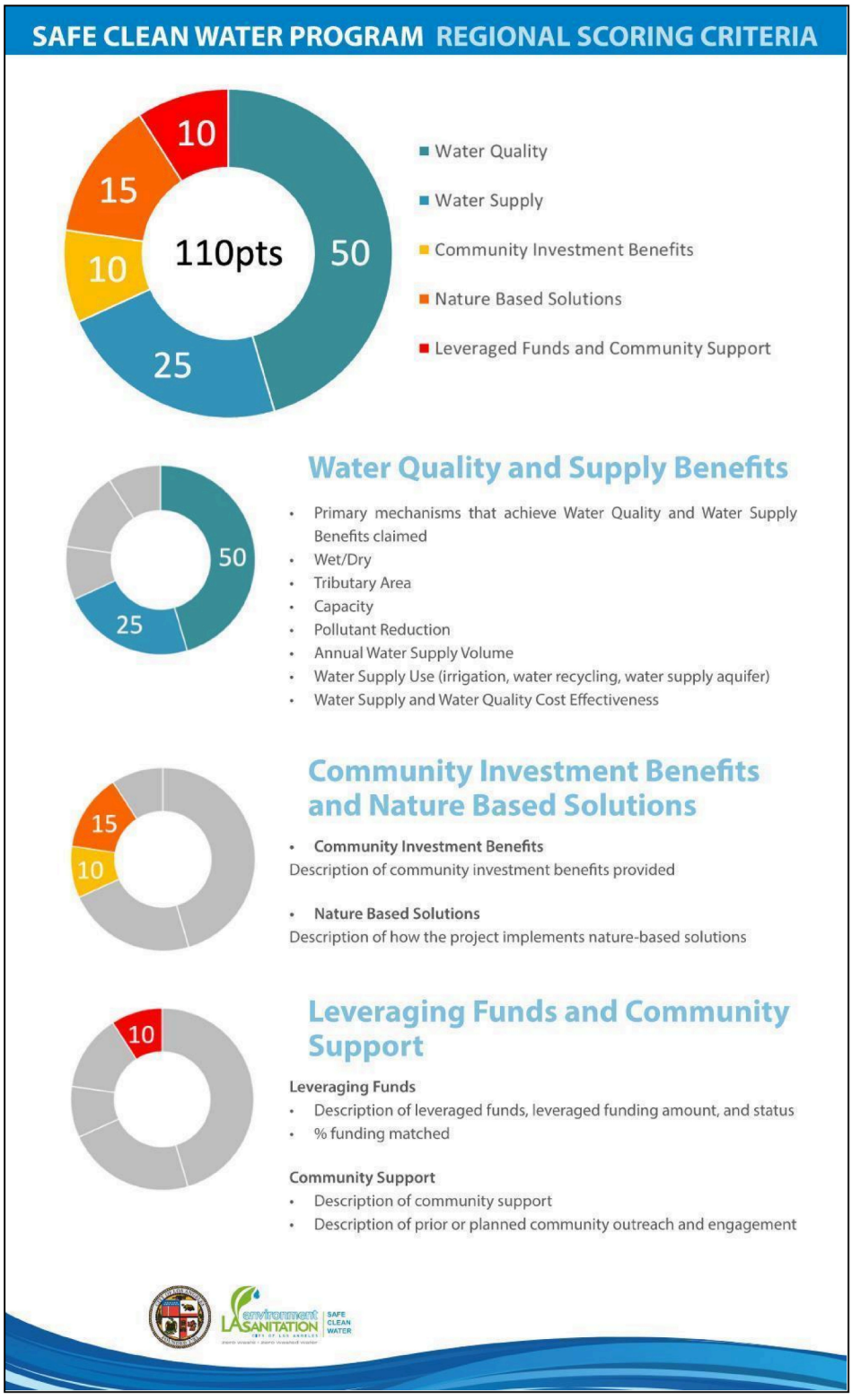


Figure 3-2. SCWP Regional Scoring Criteria Categories

3.2 Interagency and City Department Collaboration

3.2.1 Program Governance and Collaboration

On October 2, 2019, the City Council approved a collective governance model for both the Regional and Municipal Programs. In addition to LASAN, program governance involves participation from the Los Angeles Department of Water and Power (LADWP), Department of Recreation and Parks (RAP), Bureau of Engineering (BOE) and Bureau of Street Services (StreetsLA). LASAN was designated as the City's lead agency to work with County staff to support Steering Committee activities and efforts associated with Central Santa Monica Bay, Upper Los Angeles River, and South Santa Monica Bay Watersheds.

On November 27, 2019, the City Council adopted a Governance Structure for Measure W.[8] The Governance Structure established a SCWP AOC and a Working Group within LASAN to develop the WISP. The SCWP AOC oversees all City projects and programs funded with proceeds from Measure W and provides proper administration of the City's SCWP. Any actions or recommendations by the AOC are subject to approval by the City Council and the Mayor.

The Mayor and City Council provide oversight of both the SCWP Municipal and Regional Programs through existing administrative processes or those established under the ordinance. Annual project selections under both programs require approval from the Mayor and City Council. LASAN is the program manager, fund administrator, and custodian of projects seeking Measure W funding for City projects. LASAN confirms that projects adhere to the County's funding criteria and shepherds projects through the City's annual administrative process.

Prior to starting the development of feasibility reports for Regional Program consideration each year, LASAN presents a list of recommended regional projects (based on the developed concept reports) to the SCWP Working Group for consensus. The Working Group consists of staff from the Mayor's office, City Administrative Officer (CAO) office, City Legislative Analyst (CLA) office, RAP, LADWP, BOE, StreetsLA, other City staff that hold seats on WASCs, interested departments, and Council District representatives. This group meets monthly to check that recommended projects are moving forward to meet the County's annual call for projects deadline. LASAN, with the concurrence of the Working Group, then moves the regional projects into feasibility report development.

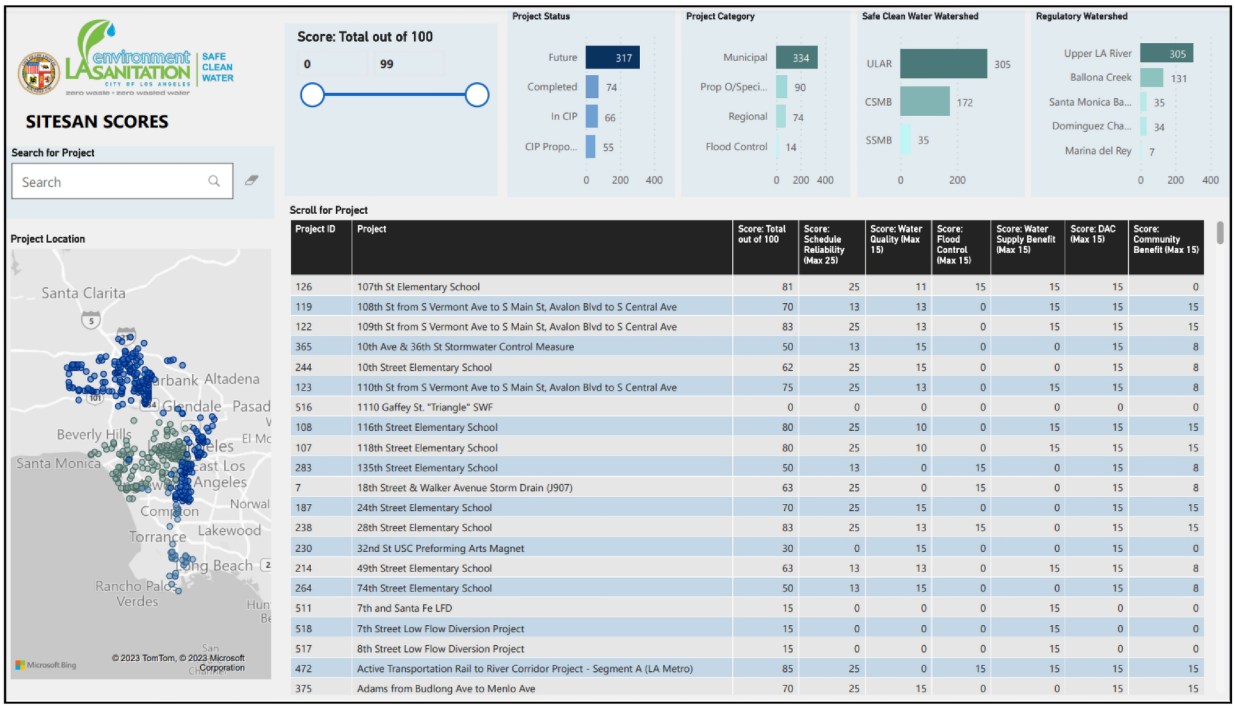
Other City departments seeking SCWP funding (Municipal and/or Regional) have an opportunity to participate in the Working Group. Given the competitiveness and limited funding within the Regional Program, it is important that all City departments anticipate and coordinate with LASAN on potential upcoming proposals so that these projects can be considered for inclusion in the WISP. Each cycle, prior to the submission of a project to the Regional Program, all City departments will present their proposal to the Working Group and AOC for consideration. Final recommendations for approval of Regional project submission will then be sent to the City Council. Proprietary departments should seek approval from their own board.

[8] Governance Structure for Measure W – Safe, Clean Water Program (CF 18-0384-S1), November 27, 2019

Many Regional projects may involve other City departments and agencies and require coordination in their development. This effort is performed in parallel with the project outreach efforts. Depending on the City departments or agencies involved, various forms of agreements, including easements and memoranda of agreement (MOA), may be needed to enable construction of the projects.

Citywide initiatives, such as the Interagency Memorandum of Understanding (MOU): Improving Project Planning and Delivery in the Public Right-of-Way, are intended for City departments to coordinate on project scoping, agency coordination, data sharing, and joint work program development to deliver more holistic projects in the Public Right-of-Way. In addition, LASAN is a partner with StreetsLA's One Infrastructure Plan. Through this effort, StreetsLA seeks to identify and implement high-priority projects that integrate multiple benefits into street improvement projects. To maximize infrastructure investment and interdepartmental collaboration, the One Infrastructure effort takes a holistic design approach that incorporates "gray" (hardscape), "green" (landscaping), and "blue" (water) infrastructure as "one infrastructure" to create streets that are safe, sustainable, and equitable. The One Infrastructure Plan is informed by a streets improvement planning tool (Resilient Streets Planning Assessment), which prioritizes corridors where the City can increase active transportation accessibility and safety, improve shade and biodiversity, mitigate urban heat, improve water quality, and reduce flooding. This effort will be finalized in early 2024. The outcomes of this effort will be referenced in LASAN's strategic planning for future projects. LASAN's SCWID provided the project team information about City flood priorities and SiteSAN project outputs to inform this effort with LASAN's stormwater priorities.

The City's SCWID dashboard (**Figure 3-3**) supports a centralized citywide presentation of various projects within LASAN's Stormwater Program. The dashboard allows LASAN to view project parameters as they fit into the overall SCWP and the financial impacts they have on the program. Results of the dashboard help LASAN management decide which projects to move forward to concept and feasibility report development. Project-specific parameters such as capture volume, Council District, disadvantaged community benefit, expenditures, and O&M costs are considered.



Project ID	Project	Score: Total out of 100	Score: Schedule Reliability (Max 25)	Score: Water Quality (Max 15)	Score: Flood Control (Max 15)	Score: Water Supply Benefit (Max 15)	Score: DAC (Max 15)	Score: Community Benefit (Max 15)
126	107th St Elementary School	81	25	11	15	15	15	0
119	108th St from S Vermont Ave to S Main St, Avalon Blvd to S Central Ave	70	13	13	0	15	15	15
122	109th St from S Vermont Ave to S Main St, Avalon Blvd to S Central Ave	83	25	13	0	15	15	15
365	10th Ave & 36th St Stormwater Control Measure	50	13	15	0	0	15	8
244	10th Street Elementary School	62	25	15	0	0	15	8
123	110th St from S Vermont Ave to S Main St, Avalon Blvd to S Central Ave	75	25	13	0	15	15	8
516	1110 Gaffey St. "Triangle" SWF	0	0	0	0	0	0	0
108	116th Street Elementary School	80	25	10	0	15	15	15
107	118th Street Elementary School	80	25	10	0	15	15	15
283	135th Street Elementary School	50	13	0	15	0	15	8
7	18th Street & Walker Avenue Storm Drain (J907)	63	25	0	15	0	15	8
187	24th Street Elementary School	70	25	15	0	0	15	15
238	28th Street Elementary School	83	25	13	15	0	15	15
230	32nd St USC Preforming Arts Magnet	30	0	15	0	0	15	0
214	49th Street Elementary School	63	13	13	0	15	15	8
264	74th Street Elementary School	50	13	15	0	0	15	8
511	7th and Santa Fe LFD	15	0	0	0	15	0	0
518	7th Street Low Flow Diversion Project	15	0	0	0	15	0	0
517	8th Street Low Flow Diversion Project	15	0	0	0	15	0	0
472	Active Transportation Rail to River Corridor Project - Segment A (LA Metro)	85	25	0	15	15	15	15
375	Adams from Budlong Ave to Menlo Ave	70	25	15	0	0	15	15

Figure 3-3. LASAN SCWP Dashboard

3.2.2 Community Partnership on School Greening and Green Space

LASAN is proactively working to establish partnerships with the community to pursue opportunities to leverage additional funding sources, while evaluating the feasibility of creating new green space in park poor communities through community partnerships, especially with local schools. LASAN strives to encourage the development of multi-benefit projects with significant water quality improvements that also include school greening and new green space within the City. LASAN staff has met with Los Angeles Unified School District (LAUSD) staff, including the Chief Eco-Sustainability Officer, to better understand where LAUSD's priority areas of stormwater capture and greening projects are located, as well as to discuss challenges and opportunities for initiating a Memorandum of Agreement (MOA) for a future joint project where schools might accept offsite runoff to assist the City in meeting water quality and capture goals.

In 2019, LASAN identified the Rosa Park Learning Center, owned by LAUSD and located in the East San Fernando Valley of the City of Los Angeles (Council District [CD] 6) as a potential stormwater capture site to pilot partnership with LAUSD. The project site, approximately two acres in size, is located on the south side of the facility and is currently an underutilized vacant parcel. The goal of the LAUSD Rosa Park Learning Center's two-acre project site is to capture runoff from the surrounding 25-acre drainage area and to infiltrate up to 18 acre-feet of runoff per year. The proposed stormwater best management practices (BMPs) include curb inlet structures, a cross gutter, a pre-treatment system, and a conveyance system with underground infiltration chambers.

The primary objectives of this project are to improve water quality (enabling the City to meet the requirements of the stormwater MS4 Permit), increase the supply of groundwater in the San Fernando Groundwater Aquifer (LADWP Class I Aquifer), increase beneficial and recreational uses

of receiving water bodies, reduce potential for human safety and health risk, preserve aquatic and plant habitat and benefit the tourism industry. Additionally, this project will help establish a relationship between the City and LAUSD that can pave the way for future stormwater capture projects on LAUSD properties.

The total project cost estimated in 2019 (pre-pandemic) was $2.5 million, and if the project were to move forward, the cost estimate would need to be updated based on final scope and budget. In 2021 LASAN successfully secured $1.5 million in Proposition O (Prop O) funding for the pilot project located at Rosa Park Learning Center. To date LASAN and LAUSD have been unable to successfully enter into an MOA to move the project forward.

To move the City toward compliance, LASAN built upon the potential projects identified in the City's Enhanced Watershed Management Plans (EWMPs) and further assessed which projects may be feasible and should be further investigated. With respect to LAUSD projects, this effort resulted in identifying 20 potential LAUSD school sites that could manage surrounding area stormwater runoff and mitigate it onsite (**Table 3-2**). This would assist in moving the City and LAUSD closer to meeting their respective stormwater mandates. This list was shared with the Watershed Coordinators of the Upper Los Angeles, Central Santa Monica Bay, and South Santa Monica Bay WASCs, who noted overlap between these 20 priority projects and eight projects that were awarded California Department of Forestry and Fire Protection (CalFire) Schoolyard Greening grant funding to plan projects for school greening on campus. LASAN and the Watershed Coordinators continue to collaborate as those planning efforts continue.

Developing projects that increase green space does have challenges. The cost of acquiring land drives up project costs to the projects, decreasing the ability to fund the projects. In the case of the Regional Program, higher costs per unit of water treated decrease the score of a project, and thus the likelihood of passing the scoring threshold of 60 to be considered for funding by the WASCs. To overcome this issue, SCWID will be looking strategically at underutilized City-owned parcels in the coming year in an effort to identify those situated in ideal locations for multi-benefit stormwater capture projects.

LASAN is also coordinating with other entities in order to further partner on increasing green space within the City. LASAN organizes monthly coordination meetings with RAP to discuss existing projects and new opportunities for green space and stormwater capture, especially in park poor communities. LASAN also holds a seat on the LA River Cooperation Committee and Santa Monica Bay Restoration Commission Governing Board, which provide venues for project partnership and collaboration. Pursuant to the City of Los Angeles Policies and Procedures for Safe Clean Water Program Community-Proposed Projects, LASAN annually releases an invitation to collaborate for CBOs and other external organizations to communicate to the City their desired projects so the City can assist in providing a Letter of Support or Letter of No Objection necessary for them to apply to the Regional Program. The City engages and coordinates through regular meetings with the Watershed Coordinators to communicate this invitation and policy to interested community groups.

The City incentivizes its own projects to provide community benefits and greening through application of the Municipal Scoring Criteria described in **Section 3.1**, which includes points for flood protection, environmental justice, benefits to disadvantaged communities, and resiliency. In the coming year, LASAN will be undertaking an effort to update this scoring to further reflect the City's priorities, such as the need for new green space.

Finally, the City has been an active commenter and reviewer of the adaptive management efforts the Program is undergoing at the District level to encourage improvement of the Program. For example, the City submitted comments on the Regional Oversight Committee's Biennial Review and Report, a City representative sat on the Stakeholder Advisory Committee of the LACFCD's Metrics and Monitoring Study, and LASAN commented on the most recent draft Scoring Memo to give input to help the Program advance, such as how LASAN advocated for comprehensive strategic planning and reasonable reporting requirements.

Table 3-2. Top Potential Safe Clean Water Projects Located on School Properties (As of 9/26/23)

Project	Regulatory Watershed	Capture Volume (acre-feet)	Benefits a DAC	City Council District	Site San Score	Project Summary Sheet Available	Latitude	Longitude
Rosa Parks Learning Center	Upper LA River	1.5	Yes	6	-*	Yes	34.2308146	-118.46176
Griffin Ave Elementary School	Upper LA River	18.7	Yes	1	96	No	34.0686757	-118.2127652
California Children's Academy	Upper LA River	3.1	Yes	1	96	No	34.078693	-118.215703
Animo Lake Charter High School #2	Upper LA River	4.9	Yes	8	90	No	33.9345153	-118.2689987
West Adams Preparatory High School	Ballona Creek	8.3	Yes	1	85	No	34.0391209	-118.2899353
Belmont Community Adult School	Ballona Creek	3.9	Yes	1	85	No	34.052334	-118.270585
Berendo Middle School	Ballona Creek	10.7	Yes	1	84	No	34.050136	-118.294582
Robert F. Kennedy Community School	Ballona Creek	36.1	Yes	10	84	No	34.0601129	-118.2966047
Ascot Avenue Elementary School	Upper LA River	9.5	Yes	9	84	No	34.003204	-118.249112
Nevin Ave Elementary School	Upper LA River	8.9	Yes	9	84	No	34.012786	-118.246533
Samuel Gompers Middle School	Upper LA River	7.4	Yes	8	83	No	33.932778	-118.270432
Clover Ave Elementary School	Ballona Creek	81.8	Yes	5	70	Yes	34.026351	-118.424576
Gardena Elementary School	Dominguez Channel	39.8	Yes	15	70	Yes	33.882288	-118.286561
Johnnie L. Cochran and Arlington Heights Elementary School	Ballona Creek	5.4	Yes	10	70	Yes	34.0431983	-118.3279983
Normont Elementary School	Dominguez Channel	13.1	Yes	15	70	Yes	33.796085	-118.293245
Wilton Place Elementary School	Ballona Creek	18	Yes	5	69	Yes	34.058564	-118.315186

Project	Regulatory Watershed	Capture Volume (acre-feet)	Benefits a DAC	City Council District	Site San Score	Project Summary Sheet Available	Latitude	Longitude
Ramona Elementary School	Ballona Creek	11.8	Yes	13	65	Yes	34.091524	-118.299987
Gulf Avenue STEAM Elementary School and Magnet Center	Dominguez Channel	16.4	Yes	15	50	Yes	33.78533	-118.272744
Verdugo Hills High School	Upper LA River	13.4	Yes	7	48	Yes	34.2615932	-118.2984759
Mark Twain Middle School	Marina del Rey	4.7	No	11	20	Yes	33.9998229	-118.4480037

3.2.3 Non-Governmental Organizations

This 2024 WISP provides a comprehensive prioritized list of stormwater projects that have a concept report (scope, schedule, and budget), meet the minimum Municipal and Regional scoring criteria of 60 points (refer to **Section 3.5** for scoring process), and are unfunded. The priority project list will be actively updated and projects added or deleted based on various factors such as funding, need for projects based on watershed assessment and activities and MS4 Permit requirements. During the annual WISP updates, the list of priority projects will be updated.

The list has been shared with Regional Watershed Coordinators (Upper LA River, Central Santa Monica Bay, South Santa Monica Bay), Heal the Bay, LA WaterKeeper, Trust for Public Land (TPL), Mountains Recreation and Conservation Authority (MRCA) and Council Offices with the intent that one of the projects can be identified as an opportunity to have a Non-Governmental Organization (NGO) lead in the delivery of the project. Ultimately, the Department of Recreation and Parks may maintain open park spaces above BMPs and LASAN will operate and maintain the stormwater elements of the projects.

Building off the recent success of the South LA Green Alleys Project (CD 9) where LASAN partnered with the Trust for Public Lands on delivering the Project, LASAN has several ongoing projects with NGOs and Community-Based Organizations (CBOs) that are being supported by the City's Safe Clean Water Program utilizing Municipal returns. **Table 3-3** provides a summary of active partnership projects with NGOs and CBOs. **Table 3-4** represents NGO / CBO Projects within the City of Los Angeles in which the City has supported the NGO / CBO in submission of a Regional SCW application.

Table 3-3. Active Partnership Projects with NGOs and CBOs

#	Project	CD	NGO / CBO Lead	Total Project Cost	Estimated Completion Date
1	Inell Woods Park	9	Heal the Bay	$1.3M	July 2024
2	Caballero Creek Park Project	3	MRCA	$5.5M	Oct 2025
3	Reseda River Loop Phase II	3	TPL	$5.6M	Dec 2025
4	El Dorado Park	7	MRCA	$2.5M	Dec 2025
5	Slauson Connect Clean Water Project	9	Corvias	$4.9M	Jun 2023
6	Watts Civic Center Serenity Greenway	15	East Side Riders	$2.7M	Jan 2026
7	Water Wheel Project (aka Bending Back the River)	1	Metabolic Studios	$9.0M	Sept 2024
8	Bowtie Wetland Demonstration Project	1	The Nature Conservancy	$11.3M	Dec 2025

Table 3-4. NGO / CBO Projects Within the City of Los Angeles in which the City has Supported the NGO / CBO in Submission of a Regional SCW Application

#	Project	CD	NGO / CBO Lead	Total Project Cost	Estimated Completion Date
1	Fern Dell Restoration and Stormwater Capture Project (Round 4)	4	Friends of Griffith Park	$300k	TBD
2	Blackwelder Tract Community Greenbelt BMPs and Landscape Improvement (Round 5)	10	California Greenworks	$300k	TBD
3	Bowtie Demonstration Project O&M Request (Round 5)	1	Nature Conservancy	$11.3M	Jan 2024
4	Elephant Hill Open Space and Stormwater Infrastructure Project (Round 5)	14	Save Elephant Hill	$300k	TBD
5	Western Gage Green Alleys (Proposed for Round 6)	8	Los Angeles Neighborhood Initiative	$300k	TBD

LASAN will continue to coordinate and engage with the regional watershed coordinators and various NGOs and CBOs in an effort to explore future partnership opportunities.

3.3 Community Engagement and Collaboration

Development and implementation of community outreach and engagement activities are requirements for projects funded by both the SCWP Regional Program and Municipal Program, as well as O&M activities associated with funded projects. The SCWP defines community outreach as activities that include online media outreach, local media outreach and grassroots outreach, as appropriate, and defines community engagement as activities that include council, commission or committee meetings, where public input is invited, or festivals, fairs, or open houses. The SCWP requires community outreach and engagement activities at the onset, during the design phase, and throughout the construction of funded projects to solicit, address, and seek input from community members. Emphasis is placed on activities that create two-way communication.

These County SCWP requirements are consistent with the City's values and commitment to meaningful engagement with local communities and stakeholders. LASAN is developing the City's SCW Program Community Outreach and Engagement Strategic Plan which reflects these core values and demonstrates how the City's SCWP will be conducted in accordance with the County SCWP requirements. The City's SCW Program Community Outreach and Engagement Strategic Plan is being developed in collaboration with other City Departments and Bureaus and will be submitted to the SCW AOC for approval in FY 23-24.

The Plan includes:

- Communication goals and objectives
- A three-pronged approach (programmatic outreach, Regional Program project-specific outreach, and Municipal Program project-specific outreach)
- Strategies, methods, and materials for community outreach and community engagement
- Reporting requirements mandated by the County SCWP
- Coordination with WASC Watershed Coordinators to align with their watershed-specific Outreach Plans.

3.3.1 Stakeholder Engagement Process

LASAN's SCWID will outreach and engage community stakeholders, as described in the City's Safe Clean Water Program Community Outreach and Engagement Strategic Plan. The ongoing support and engagement with the SCWP Watershed Coordinators are key for the City to identify and incorporate projects from entities and partners outside of the City into the WISP. The goals of the Watershed Coordinators include facilitating community engagement, identifying priorities within the watershed's communities, identifying and developing project concepts, integrating priorities through partnerships and stakeholder networks, leveraging funding, educating local stakeholders and collaborating with municipal partners and other Watershed Coordinators on a broader regional basis. The Watershed Coordinators bring community-developed projects involving the City to the attention of LASAN SCWID. These projects can then be included in the City's project prioritization and scoring processes to determine if they are beneficial projects for the City and represent opportunities for collaboration.

It is LASAN's intent to engage the project's surrounding community with culturally relevant outreach that considers the present needs of the community and those of future residents that will enjoy the outcome of the project. The outreach will offer interested stakeholders an opportunity to provide input on the overall product design and inform/educate the community on the benefits of these water quality projects (per flyers and internet sites; an example is shown in **Figure 3-4**). Outreach includes virtual meetings, in-person workshops, and impromptu site gatherings with project stakeholders.



Figure 3-4. Example of SCWP Public Outreach

3.4 SCW Funding

The SCWP includes two primary sources of funding: the Municipal Program and the Regional Program. Agencies within the County are allocated a certain amount of funding through the Municipal Program; this is a non-competitive process. A separate Regional Program awards funds to applicants within each SCWP watershed area on a competitive basis. Both of these funding sources are available to the City, as discussed below.

Proceeds of the Municipal and Regional Programs are focused on funding only water quality and water supply projects. There will be instances that flood control projects may be funded through Measure W if significant water quality and water supply elements are incorporated into the design of the project.

3.4.1 Municipal Program Funding

Municipalities receive direct funding via the SCW Municipal Program proportional to the Measure W revenues generated within their boundaries. The City expects to receive approximately $36 million per year through the Municipal Program. Municipal funds can be used for a variety of purposes related to the SCWP, including CIP projects, staff salaries, O&M, project development, and related water quality efforts. The Municipal Program funds are expected to vary year-to-year as the SCWP approves and denies the tax credit, exemption, and appeal applications, as outlined in the approved Measure W. **Figure 3-5** plots recent and projected SCWP Municipal Program returns to the City.

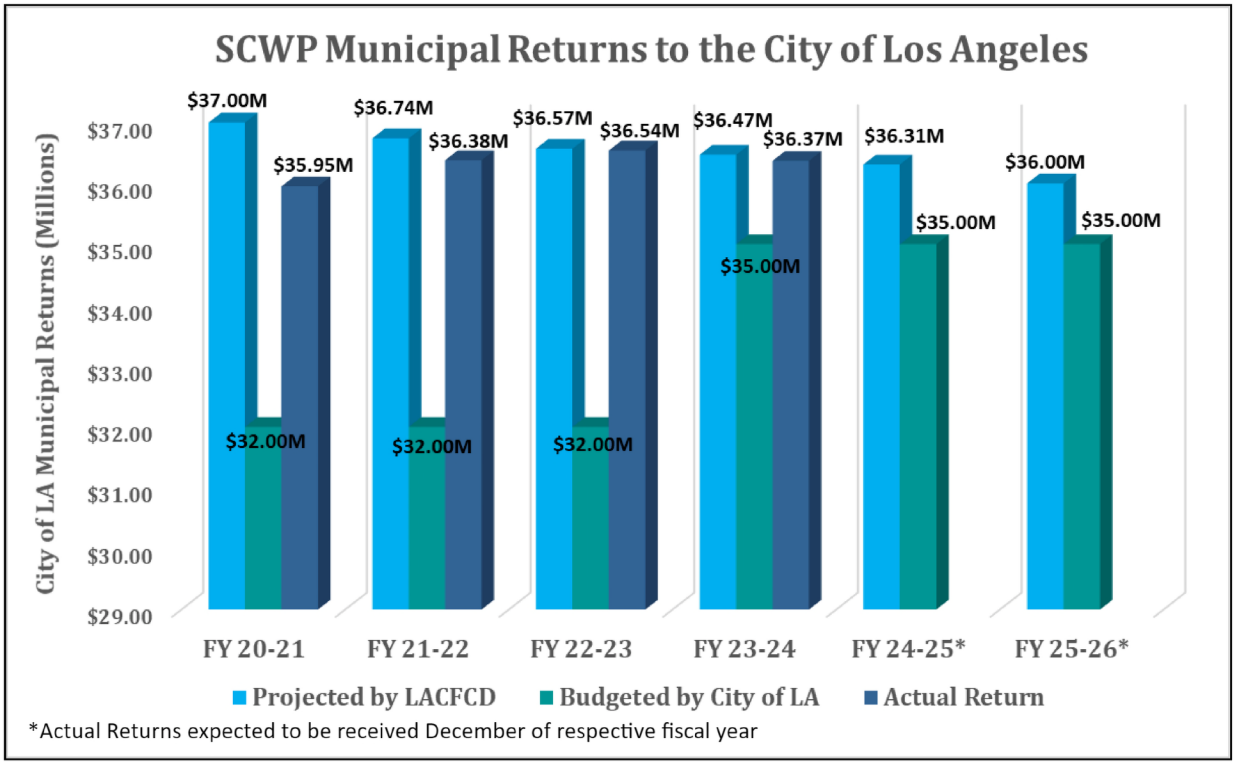


Figure 3-5. Breakdown of Recent and Projected Municipal Program Returns

The Mayor's FY 23-24 adopted budget (Schedule 55)[9] anticipated approximately $36.5 million from the local tax return to be allocated to the City through the Municipal Program. As of December 2023, the County projected an estimated $36.47M in local tax return for the City. The City received its FY 23-24 municipal disbursement on Jan 9, 2024 in the amount of $36,366,641.74. LA County projects the FY 24-25 local tax return to the City will be $36.31 million.

While the City adopts its Fiscal Year budget by July 1st of each year, it should be expected that the County will not provide the City with their municipal funding disbursements until January of the subsequent calendar year. Therefore, LASAN as part of their annual budget request will be requesting adequate funding for its program and projects assuming it will need to secure the funds to cover half to the next FY until the next funding disbursement is received.

It is critical that the City budget provides adequate funding towards the infrastructure projects that will begin construction in the following year. To give assurance that the City can continue to demonstrate progress in implementing stormwater water quality projects throughout the City to meet its regulatory requirements, LASAN recommends the City annually support funding a $15 - $20 million CIP program for the next five years. The Municipal Program funds, to the best of LASAN's ability, will be distributed proportionally among the various watersheds such that the City can demonstrate progress towards achieving the required target capture volumes in each watershed.

3.4.2 Regional Program Funding

The City must compete for Regional Program funding each round through submission of applications to one of the following two programs: Infrastructure and O&M and/or Special Studies and Technical Resource Program (TRP). At least 85 percent of the Regional Program revenue is used for infrastructure and O&M projects. Not more than 10 percent of the Regional Program revenue can be used for the TRP, and not more than five percent of the Regional Program revenue can be used for the Special Studies Program.

Regional Program funding is further distributed to projects within the watershed areas in proportion to the revenue received from those areas, after accounting for allocation of the 110 percent return to disadvantaged communities to the extent feasible. The Regional Program tax return estimates (program revenue) expected to be available for program funding in FY 23-24 for the three SCW watersheds (ULAR, SSMB, and CSMB) that the City participates in is estimated at $74.00 million. **Table 3-5** summarizes the FY 23-24 program revenue by watershed and the City's proportional contribution to each of the watersheds.

[9] City of Los Angeles Adopted Budget for FY 23-24, May 24, 2023. budgets/2023-24 Adopted Budget Compiled - Final Electronic Version.pdf (firebasestorage.googleapis.com)

Table 3-5. Regional Tax Return Estimates for the City by Watershed Area

SCW Watershed Area	Watershed Area's FY 23-24 Regional Tax Return Estimates	City Percent of Total Watershed Impervious Area	City's Proportional Amount in Return
Upper Los Angeles River	$38.90M	75%	$29.18M
Central Santa Monica Bay	$17.70M	77%	$13.63M
South Santa Monica Bay	$17.40M	19%	$3.31M
Total:	**$74.00M**	**--**	**$46.12M**

Regional funding secured by the City varies from year to year as this funding is programmed through a competitive process by the WASCs. If funding is equitably distributed to agencies based on their proportional tax contributions, the City should have a goal of securing $46.12 million per year ($29.18 million for ULAR, $13.63 million for CSMB and $3.31 million for SSMB) in funding from the Regional Program.

The $46.12 million includes projects implemented by the City as well as projects within the City that are implemented by other entities such as Los Angeles Unified School District (LAUSD), Los Angeles Metropolitan Transportation Authority (LA Metro), or community-based organizations (CBO). Regional returns to the City also include funded O&M, Special Studies, and TRP applications that are funded by the respective WASC and benefit the City.

It should be noted that while the expected revenue to the three watersheds is estimated to be $74.00 million, each watershed has programmed and approved a portion of that funding in the FY 23-24 Stormwater Investment Plan (SIP). A watershed-specific assessment is provided in **Section 4.**

As mentioned in **Section 3.1.3** (Interagency and City Department Collaboration), it is important and critical that City Departments, Bureaus and third-party applicants seeking SCW Regional Program Funding coordinate given the competitiveness and limited funding within the Regional Program.

Each cycle, prior to the submission of a regional project application to the Regional Program, all City Departments will present their proposal to the City's Working Group and AOC for consideration. Final recommendations for approval of a Regional Program application submission will then be sent to the City Council. Proprietary departments shall participate in the SCW Working Group and provide Department updates to the Working Group and AOC but should seek approval from their own board.

Figure 3-6 outlines each type of project approval through the SCW Regional Program selection process.

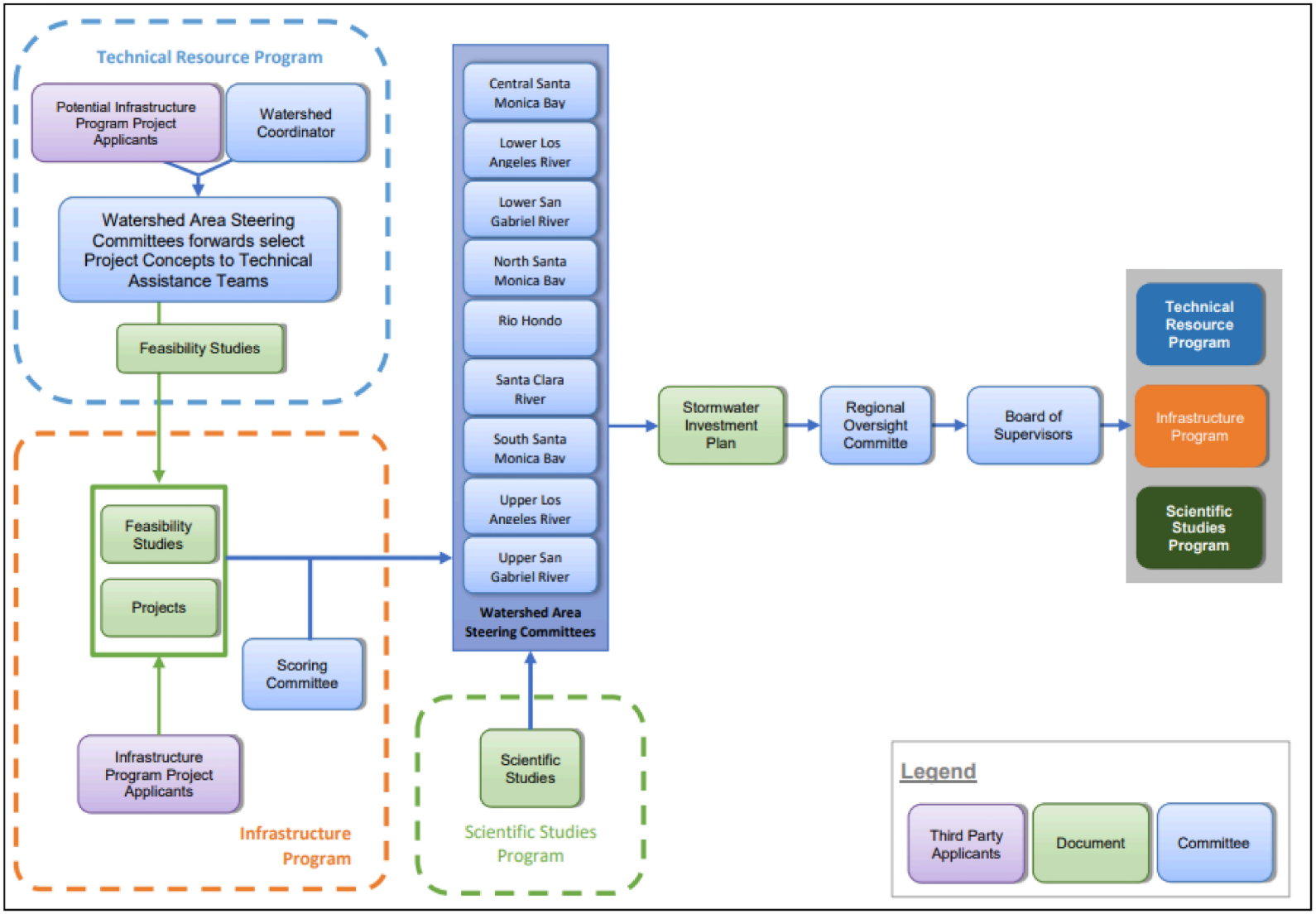


Figure 3-6. Outline of Regional Program Process for Regional Project to be Approved[10]

[10] Source: SCW Development (https://safecleanwaterla.org/)

3.5 Adaptive Management

3.5.1 Project Modifications

In September 2023, LA County initiated a new process for addressing project modifications for funded activities in the FY 23-24 SIP. The process requires applicants and funds recipients to promptly notify the SCWP of all proposed modifications. Proposed modifications anticipated to change a project, project concept, or study in a significant and material way, must be evaluated and approved by the respective WASC through the annual adoption of the SIP before any future funds are spent or any action is taken to implement the proposed modification.

The new process requires the submission of a Project Modification Request (PMR) form[11]. The PMR form is intended to provide more specific guidance to WASCs, applicants, funds recipients, and other interested stakeholders when modifications to a project are proposed during a typical fiscal year. According to the SCWP, utilizing the new PMR form will facilitate more timely and transparent resolution of proposed modifications allowing for more streamlined quarterly reports since PMRs, that are submitted and reviewed at distinct points in the process, can be referenced in the applicable sections of the reports. However, projects, project concepts, and studies may experience delays because of timeframes for reviewing projects and timing of the applicable WASC SIP deliberations. Further, the approval of projects, project concepts, and studies funding applications may be at risk if the WASC does not agree to the PMR and declines to include the updated project in the SIP.

In addition to reporting changes in project scopes and schedules, the PMR process also allows project applicants to request additional funding for projects which are experiencing projected shortfalls. The City submitted a PMR Form for the projects it had approved as part of the FY 20-21 (Round 1) and FY 21-22 (Round 2) SIPs. The City's Round 1 and 2 Projects, which were prepared in FY 19-20 and FY 20-21, have experienced budget increases as a result of unprecedented inflation, which has been further compounded due to project delays from the Covid-19 pandemic and the extended length of time to receive funding disbursements. These factors resulted in project cost increases beyond what was awarded.

The additional funding request to the Regional Program will be considered by each of the respective WASCs concurrently with the project applications submitted in July 2023 as part of the FY 24-25 (Round 5) SIP deliberations and for inclusion into the FY 24-25 SIPs. To be competitive in the request for additional Regional funding, LASAN provided additional leverage funds from the Municipal Program share and, in some cases, secured additional funds from grants, projects partners (e.g. Ballona Creek TMDL responsible parties), Proposition O, General Funds and California Department of Transportation. Despite these additional funds, projected funding shortfalls for the construction phases of projects affected by the prevailing circumstances are still anticipated.

[11] SCW Adaptive Management, Project Modifications Form: https://safecleanwaterla.org/wp-content/uploads/2023/09/Project-Modification-Guidelines-20230925.pdf

Funding requests have been spread into multiple years due to the limited funding available for programming by the WASCs. The PMR requests submitted to each WASC are summarized within the watershed-specific discussion in **Section 4**. **Figure 3-7** outlines the standard process for consideration of a PMR under the Regional Program.

Several of the WASCs have programmed much of their future funding to support the activities approved in the FY 23-24 WISP (Round 1 - 4). As a result of the limited funding available, there may not be the necessary resources to submit for new or additional funds in FY 25-26 (Round 6) or FY 26-27 (Round 7). Nonetheless, the City will work to develop quality concept reports for projects that could be considered for future Regional Program funding once funding becomes available. Moving forward, in an effort to remain competitive, LASAN is recommending that future City funding requests, on a project by project basis, consider submitting applications for project funding in three stages:

- Design-only funding applications: Prepare and submit applications upon completion of a concept / feasibility report.
- Infrastructure (Construction) funding applications: Prepare & submit applications upon completion of 30% design plans and class "B" budget.
- Operation and Maintenance (O&M) funding applications: Prepare and submit applications one year prior to construction completion.

Considering separate applications may maximize competitiveness for funding for construction in the near term and maintenance funding later to reflect when funding is anticipated to be needed.

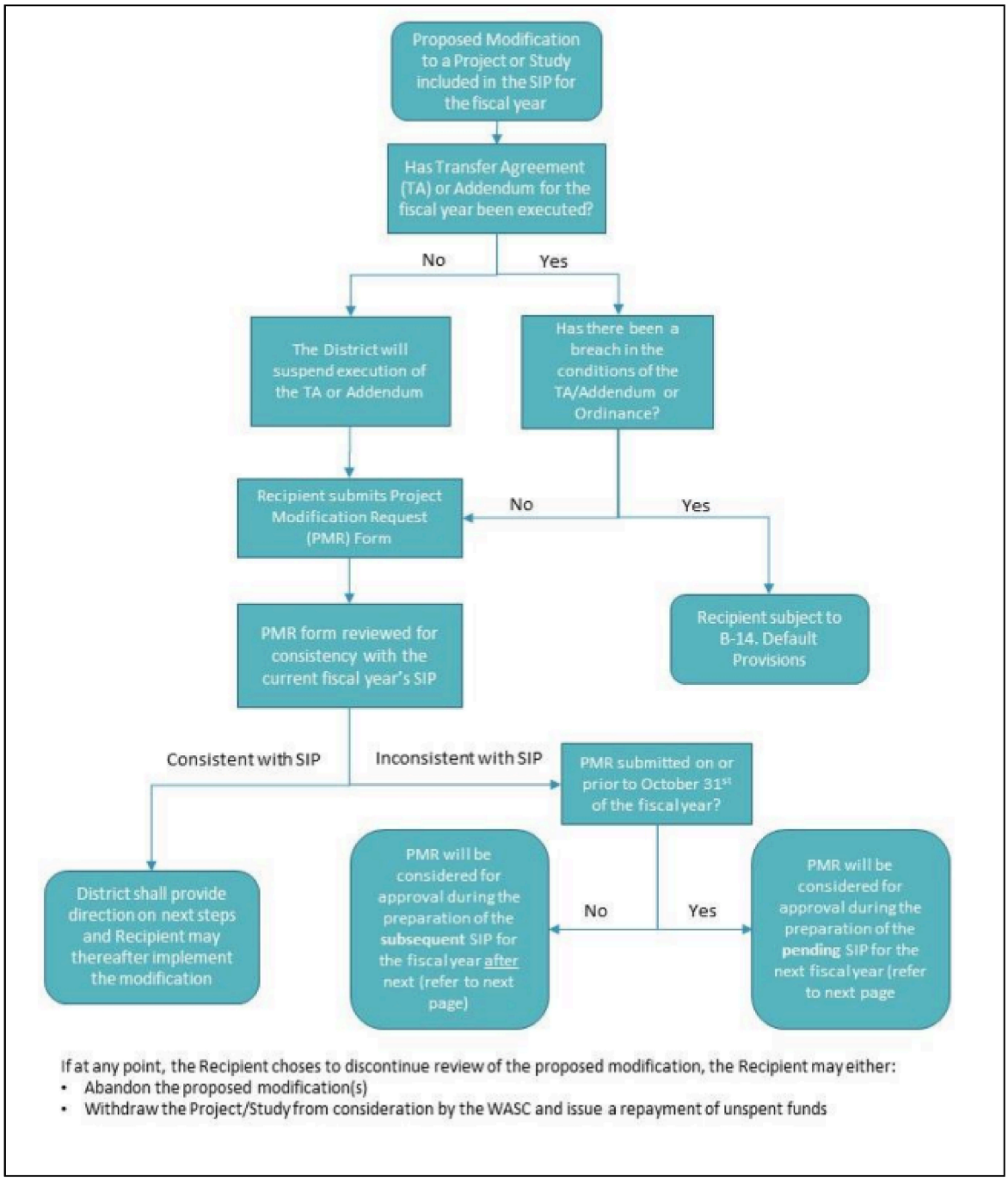


Figure 3-7. Overview of the PMR Process

3.5.2 Metrics and Monitoring Study

The SCWP Metrics and Monitoring Study (MMS)[12], being led by the LACFCD, is designed to develop program methods, metrics and monitoring criteria to inform tracking, planning, reporting, and decision making within specific areas of the SCWP. The SCWP is a complex and nuanced program. Thus, there is a need to establish additional strategies, tools, and methodologies at the many levels of the program to support decision-making in pursuit of program goals, to measure the success of efforts undertaken, and to inform the adaptive management process. The MMS is being conducted by an interdisciplinary consultant team with expertise in both the technical and socio-political elements of metrics-setting, in coordination with the LACFCD, and informed by extensive stakeholder involvement. Recommendations from the MMS will help inform adaptive management of the SCWP, potentially including updates from the LACFCD to guidance documents, scoring criteria, monitoring, and project development. The MMS is currently scheduled to conclude in early 2024 and will be used to shape the Regional Program.

3.5.3 Regional Oversight Committee Biennial Progress Report

The Draft Biennial SCWP Progress Report (Biennial Report)[13] was developed by the SCWP Regional Oversight Committee (ROC) to provide an update on SCWP progress and provide recommendations to the Los Angeles County Board of Supervisors (Board). It summarizes all Regional Program Watershed Area Regional Program Progress (WARPP) reports, Municipal Program annual progress and expenditure reports, and LACFCD's Program annual reports. The Biennial Report includes both findings regarding whether SCWP goals are being achieved and specific recommendations from the ROC for program improvements. The report marks the first Biennial Report compiled since the establishment of the SCWP, covering the substantial efforts of the SCWP's initial four years. Much of this Biennial Report details the program's functions, processes, and progress to date; it also highlights areas that are already being adaptively managed and refined. It includes observations and recommendations developed by the ROC, along with feedback from stakeholders and the public. Given the SCWP's complexity and scope, the recommendations outlined in the Biennial Report represent the ROC's highest-priority and most time-sensitive issues. The Final Biennial Report will be conveyed to the Los Angeles County Board of Supervisors via a Board Memo in early 2024 following a ROC vote to finalize and submit the report.

[12] Metrics and Monitoring Study - Safe Clean Water Program (safecleanwaterla.org)
[13] SCWP Draft Biennial Progress Report. December 8, 2023. SAFE CLEAN WATER PROGRAM (safecleanwaterla.org)

Section 4
Program and Project Implementation

Based on its jurisdiction, the City of Los Angeles (City) is estimated to receive $36 million annually in Municipal Program funds. As the lead agency for watershed management and water quality compliance programs, the Safe Clean Water Implementation Division (SCWID) has been partnering with other City departments, municipalities, regional agencies, and community-based organizations to coordinate the City's implementation of the Safe Clean Water Program (SCWP). The annual operating budget for the Municipal Program is comprised of salary appropriations to support the program[14], future project development, project development, capital improvement projects, and operation and maintenance (O&M).

SCWID is tasked with managing the City's Stormwater Capital Improvement Program (CIP) that will guide the implementation of the City's water quality, flood protection, and water supply projects utilizing Municipal Program, Regional Program, and outside leverage funding sources. The Stormwater CIP is comprised of projects within four categories:

- Municipal Safe, Clean Water
- Regional Safe, Clean Water
- Flood Protection
- Prop O and Third-Party Partnership Projects (Other)

The Stormwater CIP offers a five-year outlook for each watershed. While the long-term perspective of the CIP horizon is critical for planning, a five-year CIP outlook is the desired product of this Watershed Investment Strategic Plan (WISP). A five-year outlook provides sufficient resolution of the SCWP's current condition and allows structured implementation. As the WISP will be updated on an annual basis, the five-year CIP outlook will regularly evolve with updated information. The extensive process described in the WISP document has numerous decision points and assumptions, each with sound technical reasoning, that will continue to be refined in future years. For the proposed FY 23-24 WISP, the focus will be on the status and outlook of Municipal and Regional Programs CIP funding.

A summary of the CIP for the four LASAN stormwater program categories is provided in the following tables. **Table 4-1**. includes planned construction expenditures.

[14] The Municipal Safe, Clean Water Fund is not dependent on the General Fund and budgets for reimbursement of General Fund costs annually.

Table 4-1. LASAN Planned Construction Expenditure Summary

Program Name	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	Total
Municipal	$33.91M	$13.84M	$4.18M	$1.38M	$0.56M	$53.87M
Regional	$25.57M	$55.32M	$69.26M	$37.23M	$33.59M	$221.00M
Flood Control	$14.88M	$26.17M	$8.50M	$8.00M	$2.00M	$59.55M
Prop O / Other	$18.64M	$19.50M	$7.65M	$ -	$ 7.80M	$53.59M
Total:	**$93.00M**	**$114.83**	**$89.59M**	**$46.61M**	**$43.95M**	**$388.01M**

Although the Municipal and Regional Program are two distinct programs, the funding associated with each are interdependent. Municipal Program funds used for the project development (concept and feasibility reports) and geotechnical work can all be used as leverage funding for a Regional Program application. All Regional Program applications submitted by LASAN are packaged with Municipal Program share as a matching contribution towards the project. Municipal Program funds also fund Regional Program funded project shortfalls that have occurred as a result of project cost increases due to the administrative process to receive the projects' first year disbursement and current economic factors (supply chain and inflation) challenges that many of our City capital improvement projects are experiencing today. Under the terms of the project-specific transfer agreements, the City has an obligation to construct the project and to demonstrate completion of the project scope of work.

The County's SCWP will continue to provide the Regional Program funding associated with projects that are approved and programmed in the County's Stormwater Investment Plan (SIP). While many of these projects are experiencing cost increases, the County has initiated the Project Modification Request (PMR) Forms as a mechanism to request additional Regional Program funding. Until this inaugural process is completed, and additional regional funding requests are approved in the FY 24-25 SIP (Round 5), LASAN recommends a portion of the $20 million funding from the Municipal Program share be used to fulfill the shortfalls of the unanticipated cost increase for existing Regional Program funded projects. In other words, LASAN will use the Municipal Program funds for existing partially funded projects identified in the Municipal CIP and will program the remaining Municipal Program funds for the Regional Program projects that are experiencing cost increases. The funding shortfalls may also require O&M expenses for existing stormwater projects be scaled down or deferred for the future years.

4.1 Municipal CIP

Although Measure W was approved by voters in November 2018, LASAN did not receive its first Municipal Program disbursement of local return funds until December 2021. To date, 13 Municipal Program projects and four Regional Program projects have been funded by the SCW Municipal Program.

With post-pandemic economic inflation, project budgets for many of the infrastructure projects throughout the City have been subject to escalation. While all 14 Municipal Program projects within LASAN's CIP are fully funded, many of the Regional Program funded projects have experienced projected project cost increases, resulting in shortfalls in their funding. For FY 24-25,

LASAN has submitted a Municipal Program funding CIP request of $36.7 million, in anticipation of not securing any additional Regional Program funding.

On November 30, 2023, LASAN, Bureau of Streets Services (StreetsLA) and Los Angeles Department of Water and Power (LADWP) submitted additional budget requests to the SCW Regional Program through the PMR submission process. These requests are intended to assist in closing project budget shortfalls and to ease the financial burden on the Municipal Program of closing these shortfalls. The budget request to the Municipal Program assumes the City will not receive any additional funds from the Regional Program. LASAN will know if the Regional Program funding requests in these PMRs will be approved in July 2024.

To fully fund all current projects, LASAN strongly recommends the following:

- Increase the Municipal Program CIP budget to $20 million annually for the next five years to provide funding for anticipated Regional Program project funding shortfalls.
- Coordinate with the County and respective WASCs to amend the project-specific transfer agreements allowing for scope modifications.
- Until the Regional Program projects from Rounds 1 through 4 are fully funded and project shortfalls are addressed, no new Municipal Program projects will be added to the current CIP.

Table 4-2 summarizes the Municipal Program projects. **Table 4-3** summarizes the current Regional Program projects supported by Municipal Program funding.

Table 4-2. Municipal CIP Program: Municipal Program Projects

Project	CD*	Total Municipal Appropriations	Previous Funding	FY 23-24	FY 24-25**	FY 25-26**	FY 26-27**	FY 27-28**
Arroyo Seco Low Flow Diversion (Sycamore Grove Park, LFD#1, AS-15)	1	$2.77M	$2.77M	$ -	$ -	$ -	$ -	$ -
Arroyo Seco Low Flow Diversion (Hermon Dog Park, LFD#2, AS-21)	14	$4.22M	$4.22M	$ -	$ -	$ -	$ -	$ -
LA River LFD (2nd St & Rose, LFD#1, R2-02)	14	$5.18M	$5.18M	$ -	$ -	$ -	$ -	$ -
LA River LFD (Palmetto, LFD#2, R2-J)	14	$5.54M	$5.54M	$ -	$ -	$ -	$ -	$ -
LA River LFD (Mission Rd, LFD#3, R2-G)	14	$5.92M	$5.92M	$ -	$ -	$ -	$ -	$ -
Haynes St Greenway (Phase I of Haynes St LFD)	3	$0.75M	$0.25M	$0.50M	$ -	$ -	$ -	$ -
Reseda Blvd Alley Green Streets	12	$3.36M	$ 0.86M	$2.50M	$ -	$ -	$ -	$ -
North Sepulveda Pedestrian Island (Sepulveda Green Median)	6	$1.50M	$0.90M	$0.60M	$ -	$ -	$ -	$ -
La Cienega Blvd Green Infrastructure Corridor	11	$4.00M	$1.84M	$1.00M	$1.16M	$ -	$ -	$ -
LA River Low Flow Diversion (Compton Creek, 1 LFD)	15	$5.25M	$2.75M	$2.50M	$ -	$ -	$ -	$ -
E 6th St Green Infrastructure Corridor	14	$4.77M	$1.75M	$1.75M	$1.27M	$ -	$ -	$ -
Mission and Jesse Green Parking Lot	14	$2.30M	$0.25M	$2.05M	$ -	$ -	$ -	$ -
Complete Street Program	VR***	$1.67M	$1.67M	$ -	$ -	$ -	$ -	$ -
Stormwater Control System Upgrade and Integration	VR***	$7.00M	$ -	$ -	$2.57M	$2.55M	$1.38M	$0.59M
	Total:	**$54.33M**	**$33.91M**	**$10.90M**	**$5.00M**	**$2.55M**	**$1.38M**	**$0.59M**

* Council District

** Proposed FY 24-25 Measure W Request

*** Various

Table 4-3. Regional Program Projects Supported by Municipal Program Funding

Project	CD*	Total Municipal Appropriations	Previous Funding	FY 23-24	FY 24-25**	FY 25-26**	FY 26-27**	FY 27-28**
Ballona Creek TMDL Project	11	$28.0M	$7.00M	$10.0M	$7.00M	$4.00M	$ -	$ -
Oro Vista Local Area Urban Flow Management Project	7	$7.70M	$ -	$ -	$3.60M	$3.60M	$0.50M	$ -
MacArthur Lake Stormwater Capture Project	1	$17.0M	$ -	$ -	$4.60M	$9.20M	$3.20M	$ -
Lankershim Boulevard Local Area Urban Flow Management Project	2 & 6	$37.3M	$ -	$ -	$10.0M	$14.0M	$13.3M	$ -
Wilmington Q Street Local Area Urban Flow Management Project	15	$7.58M	$ -	$ -	$1.00M	$4.00M	$2.58M	$ -
Wilmington Neighborhood Greening Project	15	$14.32M	$ -	$1.00M	$5.50M	$5.50M	$2.32M	$ -
Lincoln Park Neighborhood Green Street Network Project	14	$16.77M	$ -	$ -	$ -	$4.00M	$8.33M	$4.44M
Angeles Mesa Green Infrastructure Project	8	$1.00M	$ -	$1.00M	$ -	$ -	$ -	$ -
Wilmington-Anaheim Green Infrastructure Project	15	$3.71M	$ -	$0.04M	$ -	$1.72M	$1.95M	$ -
Imperial Highway Green Infrastructure Project	11	$1.24M	$ -	$ -	$ -	$ -	$1.24M	$ -
Hollenbeck Lake Rehabilitation Project	14	$2.20M	$ -	$ -	$ -	$ -	$ -	$2.20M
	Total:	**$136.82M**	**$7.00M**	**$12.04M**	**$31.70M**	**$46.02M**	**$33.42M**	**$6.64M**

* Council District
** Proposed FY 24-25 Measure W Request
*** Various

4.2 Regional Program and Capital Improvement Plan

The Regional Program process has been refined with lessons-learned over the last four cycles. With that, the program itself remains highly competitive, with many jurisdictions, partner agencies, and community-based organizations competing for funding their priority projects. The City participates in Upper LA River watershed, Central Santa Monica Bay watershed, and South Santa Monica Bay watershed projects and initiatives. With each watershed effort moving independently, it is notable that stakeholder dynamics and challenges in projects and initiatives selection are unique to each of the watersheds.

The City has been successful in the first four rounds of the Regional Program. **Table 4-4** provides a summary of all the Regional Program funds within the City. Over the past four rounds of the SCWP Regional Program funding, the City has been successful in procuring $328.88 million for Regional Program-funded projects.

Table 4-4. City of LA Regional Program Infrastructure, O&M, and Scientific Studies Funding Summary

SCWP Round	Infrastructure	O&M	Scientific Study	Total
1	$100.80M	$0.40M	$0.41M	$101.61M
2	$148.00M	$ -	$ -	$148.00M
3	$19.76M	$2.40M	$ -	$22.16M
4	$53.91M	$3.20M	$ -	$57.11M
Total:	**$322.47M**	**$6.00M**	**$0.41M**	**$328.88M**

An in-depth analysis for each of the watersheds in which the City participates is performed to evaluate if the funds awarded in each of the watersheds is proportional to the funds collected by the City. As the Regional Program continues to approve their annual SIPs, LASAN will continue to track and assess the program's progress. An annual evaluation of each WASC will give insight to how much funding has been programmed and how much funding is available for each watershed to program new projects. The City will strategically consider future funding requests to each of the watersheds in order to confirm that the City is receiving its proportionate share and not overextending the WASC distribution to the City. In addition, future project applications being submitted to the Regional Program should strive to represent equitable project distribution throughout the City. Proposed projects are presented below in **Table 4-5**, **Table 4-8, Table 4-9,** and **Table 4-10** for each of the SCWP watershed areas. LASAN will regularly provide updates to the Working Group and AOC throughout the year. In May of each year, LASAN will evaluate all the projects being considered for submission and provide a recommendation to the AOC for approval.

Many of the WASCs have programmed their available funding for the next two to three cycles. Given the current cost increases and budget constraints within the Regional SCWP, the ROC is considering implementing a pause on accepting new infrastructure and O&M applications for the upcoming Round 6 (FY 25-26) call for Projects. The Call for Projects for all applications types may resume in Round 7 (FY 26-27). LASAN has modified the Round 6 and 7 application

recommendations accordingly. The proposed recommendations are presented below in **Table 4-9**, **Table 4-14**, and **Table 4-19**.

4.2.1 Upper Los Angeles River

There are currently 21 Upper Los Angeles River (ULAR) Regional Program applications funded that are within the City boundaries (18 infrastructure projects, 2 O&M applications, and 1 special study). The ULAR SIP has programmed $246 million towards these applications since FY 20-21.

Table 4-5 provides a summary of Regional Program funded applications within the City limits.

Table 4-5. Upper LA River Regional Program Revenue to the City by Round

Project	CD*	Total Programmed SCWP Funding	Previous FY Funds Secured	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	Future Funding
Round 1 (FY 20/21)									
Lankershim Blvd Local Area Urban Flow Management Network (**LASAN**)	2 & 6	$25.70M	$15.42M	$ -	$5.14M	$5.14M	$ -	$ -	$ -
Oro Vista Local Area Urban Flow Management Project (**LASAN**)	7	$10.60M	$6.36M	$ -	$2.12M	$2.12M	$ -	$ -	$ -
Echo Park Lake Rehabilitation O&M (**LASAN**)	13	$0.40M	$0.40M	$ -	$ -	$ -	$ -	$ -	$ -
Recalculation of Wet Weather Zinc Criterion ULAR (**LASAN**)	VR**	$0.35M	$0.35M	$ -	$ -	$ -	$ -	$ -	$ -
Fernangeles Park Stormwater Capture Project (**LADWP**)	6	$8.36M	$7.52M	$0.84M	$ -	$ -	$ -	$ -	$ -
Strathern Park North Stormwater Capture Project (**LADWP**)	2	$9.28M	$8.35M	$0.93M	$ -	$ -	$ -	$ -	$ -
Valley Village Park Stormwater Capture Project (**LADWP**)	2	$3.18M	$2.86M	$0.32M	$ -	$ -	$ -	$ -	$ -
Active Transportation Rail Corridor Project - Segment A (**LA Metro**)	8 & 9	$8.43M	$7.50M	$0.43M	$0.13M	$0.13M	$0.12M	$0.12M	$ -
Rory M. Shaw Wetlands Park (**LACFCD**)	6	$10.00M	$6.00M	$2.00M	$2.00M	$ -	$ -	$ -	$ -
Round 2 (FY 21-22)									
Lincoln Park Neighborhood Green Street Network (**LASAN**)	1 & 14	$18.63M	$7.44M	$ -	$3.73M	$3.73M	$3.73M	$ -	$ -
Broadway–Manchester Multi-modal Green Street Project (**StreetsLA**)	8	$11.72M	$4.89M	$ -	$4.00M	$2.83M	$ -	$ -	$ -
David M. Gonzales Recreation Center Stormwater Capture Project (**LADWP**)	7	$19.36M	$0.96	$1.55M	$2.13M	$3.10M	$4.07M	$3.87M	$3.68M

Project	CD*	Total Programmed SCWP Funding	Previous FY Funds Secured	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	Future Funding
Valley Plaza Park Stormwater Capture Project (**LADWP**)	2	$26.45M	$1.33M	$ -	$2.91M	$4.23M	$7.67M	$5.29M	$5.02M
LA Pierce College Northeast Campus Stormwater Capture and Use and Biofiltration Project (**LA Community College District**)	3	$5.24M	$5.24M	$ -	$ -	$ -	$ -	$ -	$ -
Metro Orange Line - Water Infiltration and Quality Project (**LA Metro**)	6	$34.52M	$6.68M	$6.00M	$7.28	$0.82M	$0.82M	$0.83M	$12.09M
Round 3 (FY 22-23)									
Echo Park Lake Rehabilitation O&M (**LASAN**)	13	$2.40M	$0.48M	$0.48M	$0.48M	$0.48M	$0.48M	$ -	$ -
Whitsett Fields Park North Stormwater Capture Project (**LADWP**)	2	$8.40M	$0.85M	$1.67M	$1.68M	$1.68M	$2.52M	$ -	$ -
Watts Civic Center Serenity GreenWay (**East Side Riders Bike Club**)	15	$2.67M	$0.26M	$0.25M	$1.51M	$0.65M	$ -	$ -	$ -
Round 4 (FY 23-24)									
Hollenbeck Park Lake Rehabilitation Project (**LASAN**)	14	$25.16M	$ -	$0.48M	$1.66M	$1.69M	$9.25M	$12.08M	$ -
Sylmar Channel Project (**LASAN**)	7	$5.01M	$ -	$0.79M	$0.70M	$1.65M	$1.87M	$ -	$ -
Eagle Rock Boulevard: A Multi-Modal Stormwater Capture Project (**StreetsLA**)	14	$7.63M	$ -	$1.09M	$0.15M	$3.21M	$3.18M	$ -	$ -
	Total:	**$243.49M**	**$82.89M**	**$16.83M**	**$35.62M**	**$31.46M**	**$33.71M**	**$22.19M**	**$20.79M**

* Council District

** Various

Assessing the success that the City and community-proposed applicants within the City have had in securing Regional Program funds on the first four rounds, the City is receiving its proportionate share of returns from the ULAR watershed SCWP Regional Program funds. **Table 4-6** provides a summary of collected revenue versus programmed disbursements for the ULAR.

Table 4-6. City of LA Proportional Funding Contribution and Programmed ULAR Funds

	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
City Proportional Funding Contribution	$29.18M	$29.18M	$29.18M	$29.18M	$29.18M
City Program Return*	$16.83M	$35.62M	$31.46M	$33.71M	$22.19M
Percentage	58%	122%	108%	116%	76%

* Five (5) Round 1-3 projects reprogrammed their FY 23-24 disbursements to align with project schedules

4.2.2 ULAR FY 23-24 (Round 5) Stormwater Investment Plan

The ULAR WASC is experiencing the most acute budgeting limitations. **Table 4-7** provides a summary of available funds for the ULAR WASC to program for the Regional Program new applications and additional project funding being requested via the PMR process.

Table 4-7. ULAR WASC Available Regional Program Funding

	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29
Funding available for programming	$7.5M	$8.5M	$11.0M	$25.6M	$42.5M

The City submitted three new infrastructure and two special studies applications for funding and inclusion into the FY 24-25 SIP. In addition, the City submitted nine PMRs[15] because all of the City's Rounds 1 and 2 projects have a projected shortfall or change in initial schedule/scope. PMRs and new Round 5 project applications face competition from other applicants seeking Regional Program funding. Understanding that the WASC has limiting funding available, the Mayor outlined the following priorities in a December 1, 2023 letter to the ULAR WASC Chair and its members:

- To reduce environmental injustices, the City prefers funding for projects located in Disadvantaged Communities (DAC), as defined by the County Regional Program's Disadvantaged Community Policies.
- To fulfill our prior commitments to the ULAR WASC and our neighbors, the City prefers gap funding for previously awarded Regional Program projects over new awards requested in Round 5 applications, which will ensure awarded projects have sufficient funds in order to come to fruition.

15 City of Los Angeles Council File XXXXX

- To deliver near-term environmental and community benefits, the City prefers funding for fully-designed projects without scope changes that are expected to break ground during FY 24-25 and FY 25-26; such projects are near certain and will deliver immediate results upon completion.
- To be accountable to our partners and grantors, the City prefers funding for projects that leverage match funding from external partners beyond the City and County.
- To attenuate the ULAR WASC's SIP decision-making process for FY 24-25, the City prefers to be considered for funding for new projects beginning in FY 25-26 over competing for the extremely limited budget available for FY 24-25, except in cases where projects leverage deadline-dependent match funding from external partners beyond the City and County.

Table 4-8 provides the City's request for PMRs and new applications funding in the FY 24-25 (Round 5) SIP in prioritized order.

Table 4-8. City of LA ULAR WASC Priority for Regional Program Funding as part of the FY 24-25 (Round 5) SIP

Project	Start of Construction	Leverage Funding	Regional Program Funding	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	Total
Project Modification Requests													
Broadway-Manchester Multi-Modal Green Street Project (Rd 2)	12/2024	$15.8M State	Approved FY 23-24 SIP	$ -	$ 886,000	$ 4,000,000	$ -	$ 4,000,000	$ 2,833,000	$ -	$ -	$ -	$ 11,719,000
			Additional Request	$ -	$ -	$ -	$ -	$ 626,116	$ -	$ -	$ -	$ -	$ 626,116
			PMR SIP Recommendation	$ -	$ 886,000	$ 4,000,000	$ -	$ 4,626,116	$ 2,833,000	$ -	$ -	$ -	$ 12,345,116
David M. Gonzales Recreation Center Stormwater Capture Project (Rd 2)	9/2024	$19.8M Local $2.3M State	Approved FY 23-24 SIP	$ -	$ 388,000	$ 581,000	$ 1,550,000	$ 2,130,000	$ 3,099,000	$ 4,067,000	$ 3,873,000	$ 3,675,000	$ 19,363,000
			Additional Request	$ -	$ -	$ -	$ -	$ 4,669,238	$ 4,669,238	$ 4,669,238	$ 4,669,238	$ 4,669,238	$ 23,346,190
			PMR SIP Recommendation	$ -	$ 388,000	$ 581,000	$ 1,550,000	$ 6,799,238	$ 7,768,238	$ 8,736,238	$ 8,542,238	$ 8,344,238	$ 42,709,190
Lankershim Blvd LAUFM (Rd 1)	7/2025	$48.3M Local	Approved FY 23-24 SIP	$ 5,139,380	$ 5,139,380	$ 5,139,380	$ -	$ 5,139,380	$ 5,139,380	$ -	$ -	$ -	$ 25,696,900
			Additional Request	$ -	$ -	$ -	$ -	$ -	$ 6,000,000	$ 5,000,000	$ -	$ -	$ 11,000,000
			PMR SIP Recommendation	$ 5,139,380	$ 5,139,380	$ 5,139,380	$ -	$ 5,139,380	$ 11,139,380	$ 5,000,000	$ -	$ -	$ 36,696,900
Lincoln Park Neighborhood Green Street (Rd 2)	12/2025	$6.3M Local	Approved FY 23-24 SIP	$ -	$ 3,726,916	$ 3,726,916	$ -	$ 3,726,916	$ 3,726,916	$ 3,726,916	$ -	$ -	$ 18,634,580
			Additional Request	$ -	$ -	$ -	$ -	$ -	$ 3,250,000	$ 4,750,000	$ 4,000,000	$0	$ 12,000,000
			PMR SIP Recommendation	$ -	$ 3,726,916	$ 3,726,916	$ -	$ 3,726,916	$ 6,976,916	$ 8,476,916	$ 4,000,000	$ -	$ 30,634,580
Valley Village Park Stormwater Capture Project (Rd 1)	7/2024	$3.1M Local	Approved FY 23-24 SIP	$ 1,112,070	$ 1,270,938	$ 476,602	$ 317,734	$ -	$ -	$ -	$ -	$ -	$ 3,177,344
			Additional Request	$ -	$ -	$ -	$ -	$ -	$ 6,470,533	$ 6,470,533	$0	$0	$ 12,941,066
			PMR SIP Recommendation	$ 1,112,070	$ 1,270,938	$ 476,602	$ 317,734	$ -	$ 6,470,533	$ 6,470,533	$ -	$ -	$ 16,118,410

Project	Start of Construction	Leverage Funding	Regional Program Funding	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	Total
Strathern Park North Stormwater Capture Project (Rd 1)	1/2025	$9.2M Local	Approved FY 23-24 SIP	$ 3,247,512	$ 3,711,442	$ 1,391,791	$ 927,861	$ -	$ -	$ -	$ -	$ -	$ 9,278,606
			Additional Request	$ -	$ -	$ -	$ -	$ -	$11,921,049	$11,921,049	$0	$0	$ 23,842,098
			PMR SIP Recommendation	$ 3,247,512	$ 3,711,442	$ 1,391,791	$ 927,861	$ -	$ 11,921,049	$ 11,921,049	$ -	$ -	$ 33,120,704
Fernangeles Park Stormwater Capture Project (Rd 1)	11/2024	$8.1M Local	Approved FY 23-24 SIP	$ 2,926,262	$ 3,344,299	$ 1,254,112	$ 836,075	$ -	$ -	$ -	$ -	$ -	$ 8,360,748
			Additional Request	$ -	$ -	$ -	$ -	$ -	$ 14,233,533	$ 14,233,533	$0	$0	$ 28,467,066
			PMR SIP Recommendation	$ 2,926,262	$ 3,344,299	$ 1,254,112	$ 836,075	$ -	$ 14,233,533	$ 14,233,533	$ -	$ -	$ 36,827,814
Whitsett Fields Park North Stormwater Capture Project (Rd 3)	3/2026	$8.6M Local	Approved FY 23-24 SIP	$ -	$ -	$ 840,000	$ 1,679,000	$ 1,679,000	$ 1,679,000	$ 2,516,000	$ -	$ -	$ 8,393,000
			Additional Request	$ -	$ -	$ -	$ -	$ -	$ 4,502,466	$ 4,502,466	$ 4,502,466	$ 4,502,466	$ 18,009,864
			PMR SIP Recommendation	$ -	$ -	$ 840,000	$ 1,679,000	$ 1,679,000	$ 6,181,466	$ 7,018,466	$ 4,502,466	$ 4,502,466	$ 26,402,864
Valley Plaza Park Stormwater Capture Project (Rd 2)	1/2026	$27.0M Local	Approved FY 23-24 SIP	$ -	$ 529,000	$ 794,000	$ -	$ 2,910,000	$ 4,232,000	$ 7,670,000	$ 5,290,000	$ 5,022,000	$ 26,447,000
			Additional Request	$ -	$ -	$ -	$ -	$ -	$ 8,622,253	$8,622,253	$ 8,622,253	$ 8,622,254	$ 34,489,013
			PMR SIP Recommendation	$ -	$ 529,000	$ 794,000	$ -	$ 2,910,000	$ 12,854,253	$ 16,292,253	$ 13,912,253	$ 13,644,254	$ 60,936,013
Round 5 Projects submitted for consideration													
Osborne Street: Path to Park Access	7/2026	$4.9M State $2.8M Local	Requesting	$ -	$ -	$ -	$ -	$ 150,000	$ 1,194,780	$ 3,262,088	$ 4,893,132	$ -	$ 9,500,000

Project	Start of Construction	Leverage Funding	Regional Program Funding	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	Total
LA River Green Infrastructure	7/2026	$3.1M Local	Requesting	$ -	$ -	$ -	$ -	$ 938,214	$ 1,340,306	$ 4,467,683	$ 4,802,759	$ 5,504,850	$ 17,053,812
Sun Valley Green Neighborhood Infrastructure	1/2027	$2.6M Local	Requesting	$ -	$ -	$ -	$ -	$ 763,363	$ 708,836	$ 381,681	$5,725,221	$5,865,220	$ 13,444,321
Pollutant Source Characterization Study	N/A	$ -	Requesting	$ -	$ -	$ -	$ -	$ 98,840	$ 766,010	$ 617,750	$ 617,750	$ 370,650	$ 2,471,000
Street Sweeping Study	N/A	$105k Local	Requesting	$ -	$ -	$ -	$ -	$ 282,400	$ 321,230	$ 84,720	$ -	$ -	$ 688,350

Table 4-9 provides a list of potential projects the City is currently considering for future Regional Program funding applications to the ULAR WASC. The list is subject to change depending on future financial conditions of the Regional Program for ULAR WASC.

Table 4-9. ULAR Proposed Regional Projects for Future Rounds Funding Consideration

Project	CD*	Type	Source / Status
Round 6 (FY 25-26)			
Street Sweeping Study (**LASAN**)	ULAR	Special Study	Submitted Round 5 Applications not recommended for funding by the WASC
Round 7 (FY 26-27)			
LA River Green Infrastructure Project (**LASAN**)	3	Infrastructure	Submitted Round 5 Applications not recommended for funding by the WASC
Sun Valley Green Neighborhood Infrastructure Project (**LASAN**)	2	Infrastructure	
Osborne Street Stormwater Capture Green Street Project (**StreetsLA**)	7	Infrastructure	
Mission College Multi-Benefit Stormwater Capture Project (**LASAN**)	7	Infrastructure	Feasibility Study
Branford Park Stormwater Capture Project (**LADWP**)	6	Infrastructure	Feasibility Study
Devonwood Park Stormwater Capture Project (**LADWP**)	7	Infrastructure	Feasibility Study
North Hills Community Park Stormwater Capture Project (**LADWP**)	6	Infrastructure	Feasibility Study
Sepulveda Recreation Center Stormwater Capture Project (**LADWP**)	6	Infrastructure	Feasibility Study
Van Nuys Recreation Center Stormwater Capture Project (**LADWP**)	6	Infrastructure	Feasibility Study
Future Projects			
Slauson and Wall Stormwater Capture Project (**LASAN**)	9	Infrastructure	Concept Report being developed
Rosa Parks Learning Center Stormwater Capture Project (**LASAN**)	6	Infrastructure	Concept Report being developed
Stormwater Pump Plant 621(7805 Van Nuys Blvd) (**LASAN**)	6	Infrastructure	Concept Report
Tujunga Canyon Blvd Green Streets Project (**LASAN**)	7	Infrastructure	Concept Report
Hubert H. Humphrey Memorial Recreation Center Stormwater Capture Project (**LADWP**)	7	Infrastructure	Concept Report
Mid-Valley Intergenerational Multipurpose Center Stormwater Capture Project (**LADWP**)	6	Infrastructure	Concept Report
North East Valley Multipurpose Center Stormwater Capture Project (**LADWP**)	7	Infrastructure	Concept Report

Project	CD*	Type	Source / Status
Panorama City Recreation Center Stormwater Capture Project (**LADWP**)	6	Infrastructure	Concept Report
Ritchie Valens Park Stormwater Capture Project (**LADWP**)	6	Infrastructure	Concept Report
Roger W. Jessup Park Stormwater Capture Project (**LADWP**)	7	Infrastructure	Concept Report
LFD Site W01 - Victory Blvd and Woodley Ave (**LASAN**)***	6	Infrastructure	Concept Report
LFD Site W06 - Victory Blvd and Etiwanda Ave (**LASAN**)***	3	Infrastructure	Concept Report
LFD Site W08 - Vanowen St and Crebs Ave (**LASAN**)***	3	Infrastructure	Concept Report
Additional High-Scoring SiteSAN Project Opportunities shown in **Appendix C**	VR**	Infrastructure	SiteSAN

* Council District
** Various
*** Project locations identified as a priority site by LASAN and LADWP

4.2.3 Central Santa Monica Bay

There are currently eight Central Santa Monica Bay (CSMB) Regional Program applications funded that are within City boundaries (five infrastructure projects and three TRPs). The CSMB SIP has programmed $54.8 million towards these applications since FY 20-21.

Table 4-10 provides a summary of Regional Program funded applications for projects within the City limits.

Table 4-10. Central Santa Monica Bay Regional Revenue by Round

Project	CD*	Total Programmed SCWP Funding	Previous Funding	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	Future Funding
Round 1 (FY 20-21)									
MacArthur Park Rehabilitation Project (**LASAN**)	1	$20.04M	$13.39M	$4.70M	$1.95M	$ -	$ -	$ -	$ -
Round 2 (FY 21-22)									
Ballona Creek TMDL Project (**LASAN**)	11	$15.00M	$6.00M	$3.00M	$3.00M	$3.00M	$ -	$ -	$ -
Slauson Connect Clean Water Project (**Community-Proposed**)	9	$4.90M	$0.73M	$1.97M	$1.97M	$0.22M	$ -	$ -	$ -
Round 3 (FY 22-23)									
Angeles Mesa Green Infrastructure Corridor Project (**LASAN**)	8	$8.40M	$0.57M	$0.53M	$3.60M	$3.60M	$0.10M	$ -	$ -
Fern Dell Restoration and Stormwater Capture Project (**Community-Proposed**)	4	$0.30M	$0.30M	$ -	$ -	$ -	$ -	$ -	$ -
Round 4 (FY 23-24)									
Imperial Highway Green Infrastructure Project (**LASAN**)	11	$5.23M	$ -	$0.17M	$0.22M	$0.34M	$4.50M	$ -	$ -
Blackwelder Tract Community Greenbelt BMPs and Landscape Improvement (**Community-Proposed**)	10	$0.30M	$ -	$0.30M	$ -	$ -	$ -	$ -	$ -
Hollywood Bowl Stormwater Quality Improvement and Sustainability Project (**Community-Proposed**)	4	$0.30M	$ -	$0.30M	$ -	$ -	$ -	$ -	$ -
	Total:	**$54.47M**	**$20.99M**	**$10.97M**	**$10.74M**	**$7.16M**	**$4.60M**	**$ -**	**$ -**

* Council District

Assessing the success that the City and community-proposed applicants within the City have had in securing Regional Program funds on the first three rounds, the City is receiving its proportionate share of returns from the CSMB watershed Regional Program funds. **Table 4-11** provides a summary of the Regional Program collected revenue versus programmed disbursements for the CSMB watershed.

Table 4-11. City of LA SCWP Regional Program Proportional Funding Contribution and Programmed CSMB Funds

	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
City Proportional Funding Contribution	$13.63M	$13.63M	$13.63M	$13.63M	$13.63M
City Program Return	$10.97	$10.74M	$7.17M	$4.60M	$ -
Percentage	81%	79%	53%	34%	-

4.2.4 CSMB FY 23-24 (Round 5) Stormwater Investment Plan

Table 4-12 provides a summary of available funds for the CSMB WASC to program for new Regional Program applications and additional project funding requested via the PMR process.

Table 4-12. CSMB WASC Regional Program Available Funding

	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29
Funding available for programming	$11.5M	$21.0M	$33.0M	$49.8M	$66.7M

The City submitted one new infrastructure and two special studies applications for Regional Program funding and inclusion into the FY 24-25 SIP. In addition, the City submitted two PMRs[16] for City projects approved in Rounds 1 and 2 that have a projected shortfall or change in initial schedule/scope. Both PMRs and new Round 5 project applications face competition from other applicants seeking Regional Program funding. The CSMB WASC has less financial hardship than other watersheds and has the capacity to fund all the City's current requests. The PMRs and new applications are listed in **Table 4-13.**

[16] City of Los Angeles Council File 18-0384-S10

Table 4-13. City of LA CSMB Priority for SCWP Regional Program Funding as part of the FY 24-25 (Round 5) SIP

Project	Start of Construction	Leverage Funding	Regional Program Funding	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	Total
Project Modification Requests													
MacArthur Lake Rehabilitation Project (Rd 1)	1/2025	$6.0M Local $550k State	Approved FY 23-24 SIP	$ 2,000,000	$ 2,000,000	$ 9,397,900	$ 4,697,900	$ 1,947,918	$ -	$ -	$ -	$ -	$ 20,043,718
			Additional Request	$ -	$ -	$ -	$ -	$ 4,000,000	$ 4,000,000	$ 3,000,000	$ -	$ -	$ 11,000,000
			PMR SIP Recommendation	$ 2,000,000	$ 2,000,000	$ 9,397,900	$ 4,697,900	$ 5,947,918	$ 4,000,000	$ 3,000,000	$ -	$ -	$ 31,043,718
Ballona Creek TMDL Project (Rd 2)	9/2022	$21.0M Local $34.0M Other	Approved FY 23-24 SIP	$ -	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ -	$ -	$ -	$ 15,000,000
			Additional Request	$ -	$ -	$ -	$ -	$ 3,500,000	$ 3,500,000	$ -	$ -	$ -	$ 7,000,000
			PMR SIP Recommendation	$ -	$ 3,000,000	$ 3,000,000	$ 3,000,000	$ 6,500,000	$ 6,500,000	$ -	$ -	$ -	$ 22,000,000
Round 5 Projects Submitted for Consideration													
Baldwin Vista Green Street	7/2024	$1.9M Local	Requesting	$ -	$ -	$ -	$ -	$ 500,328	$ 464,591	$ 4,109,841	$ 1,822,625	$ 2,179,262	$ 9,076,647
Pollutant Source Characterization Study	N/A	$ -	Requesting	$ -	$ -	$ -	$ -	$ 24,920	$ 193,130	$ 155,750	$ 155,750	$ 93,450	$ 623,000
Street Sweeping Study	N/A	$105k Local	Requesting	$ -	$ -	$ -	$ -	$ 71,200	$ 80,990	$ 21,360	$ -	$ -	$ 173,550

Table 4-14 provides a list of potential projects the City is currently considering for future Regional Program funding applications to the CSMB WASC. The list is subject to change depending on the Regional Program financial condition for the CSMB WASC.

Table 4-14. CSMB Proposed Regional Projects for Future Rounds Funding Consideration

Project	CD*	Type	Source / Status
Round 6 (FY 25-26)			
-	-	-	-
Round 7 (FY 26-27)			
Venice Boulevard Stormwater Capture Project (between 405 and National Blvd) (**LASAN**)	5	Infrastructure	Concept Report being developed
Marina Del Rey Triangle Area Park Project (**LASAN**)	11	Infrastructure	Concept Report being developed
Ballona Creek TMDL Project O&M Application (**LASAN**)	11	O&M	Developing Application
Future Projects			
Richardson Family Park Stormwater Capture Project (**LASAN**)	8	Infrastructure	SiteSAN
Sepulveda Channel Water Quality Improvement - LFTF 2 Greening and Bike Path (**LASAN**)	11	Infrastructure	Concept Report being developed
Pico Union Vest Pocket Park Stormwater Capture Project (**LASAN**)	1	Infrastructure	SiteSAN
Toberman Recreation Center Stormwater Capture Project (**LASAN**)	1	Infrastructure	SiteSAN
Stormwater Pump Plant 647 (1600 Main St) (**LASAN**)	6	Infrastructure	Concept Report
Westchester Pkwy / Emerson Ave Green Infrastructure Corridor (**LASAN**)	11	Infrastructure	SiteSAN
Wilshire Boulevard Green Street (**LASAN**)	1	Infrastructure	SiteSAN
Additional High-Scoring SiteSAN Project Opportunities shown in **Appendix C**	VR**	Infrastructure	SiteSAN

* Council District

** Various

4.2.5 South Santa Monica Bay

There are currently six South Santa Monica Bay (SSMB) Regional Program applications funded that are within the City boundaries (five infrastructure projects and one TRP). The SSMB SIP has programmed $30.94 million towards these applications since FY 20-21.

Table 4-15 provides a summary of Regional Program funded applications within the City limits.

Table 4-15. South Santa Monica Bay Regional Revenue by Round

Project	CD*	Total Programmed SCWP Funding	Previous Funding	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	Future Funding
Round 1 (FY 20-21)									
Wilmington Q Street Local Urban Area Flow Management Project (**LASAN**)	15	$4.92M	$4.92M	$ -	$ -	$ -	$ -	$ -	$ -
Recalculation of Wet Weather Zinc Criterion SSMB (**LASAN**)	VR**	$0.06M	$0.06M	$ -	$ -	$ -	$ -	$ -	$ -
Harbor City Park Multi-Benefit Stormwater Capture Project (**Community-Proposed**)	15	$0.30M	$0.30M	$ -	$ -	$ -	$ -	$ -	$ -
Round 2 (FY 21-22)									
Wilmington Neighborhood Greening Project (**LASAN**)	15	$12.18M	$1.16M	$3.39M	$4.82M	$2.81M	$ -	$ -	$ -
Round 3 (FY 22-23)									
-	-	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Round 4 (FY 23-24)									
Wilmington-Anaheim Green Infrastructure Corridor Project (**LASAN**)	15	$10.27M	$ -	$0.51M	$1.36M	$2.01M	$5.76M	$0.63M	$ -
Machado Lake Ecosystem Rehabilitation (MLER) O&M (**LASAN**)	15	$3.20M	$ -	$0.28M	$0.80M	$0.73M	$0.79M	$0.60M	$ -
Total:		**$30.93M**	**$6.44M**	**$4.18M**	**$6.98M**	**$5.55M**	**$6.55M**	**$1.23M**	**$ -**

* Council District

** Various

Assessing the success that the City and community-proposed applicants within the City have had in securing Regional Program funds in the first three rounds, the City is receiving its proportionate share of returns from the SSMB watershed. **Table 4-16** provides a summary of collected SCWP Regional Program revenue versus programmed disbursements for the SSMB.

Table 4-16. City of LA Regional Program Proportional Funding Contribution and Programmed SSMB Watershed Funds

	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
City Proportional Funding Contribution	$3.31M	$3.31M	$3.31M	$3.31M	$3.31M
City Program Return	$4.18M	$6.98M	$5.55M	$6.55M	$1.23M
Percentage	127%	211%	168%	198%	37%

4.2.6 SSMB FY 23-24 (Round 5) Stormwater Investment Plan

Table 4-17 provides a summary of available Regional Program funds for the SSMB WASC to program for Regional Program project new applications and additional project funding via the PMR process.

Table 4-17. SSMB WASC Regional Program Available Funding

	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29
Funding available for programming	$3.4M	$10.5M	$20.8M	$36.2M	$53.2M

Realizing that the funding available to the Regional Program is limited, the City did not submit any new infrastructure applications for FY 24-25. Two special studies applications were submitted for funding and inclusion into the FY 24-25 SIP. In addition, the City submitted two PMRs[17] for City projects in Rounds 1 and 2 that have a projected shortfall or change in initial schedule/scope. Both PMRs and new Round 5 project applications face competition from other applicants seeking regional funding. The SSMB WASC has less financial hardship than other watersheds and has the capacity to fund all the City's current requests. The PMRs and new applications that will be considered are listed in **Table 4-18**.

[17] City of Los Angeles Council File 18-0348-S10

Table 4-18. City of LA SSMB Watershed Regional Program Priority for Funding as part of the FY 24-25 (Round 5) SIP

Project	Start of Construction	Leverage Funding	Regional Program Funding	FY 20-21	FY 21-22	FY 22-23	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28	FY 28-29	Total
Project Modification Requests													
Wilmington Q Street Local Urban Area Flow Management (Rd 1)	8/2025	$2.0M Local	Approved FY 23-24 SIP	$ 2,668,325	$ 2,255,375	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 4,923,700
			Additional Request	$ -	$ -	$ -	$ -	$ 750,000	$ 3,250,000	$ 3,576,300	$ -	$ -	$ 7,576,300
			PMR SIP Recommendation	$ 2,668,325	$ 2,255,375	$ -	$ -	$ 750,000	$ 3,250,000	$ 3,576,300	$ -	$ -	$ 12,500,000
Wilmington Neighborhood Greening Project (Rd 2)	6/2025	$9.8M Local	Approved FY 23-24 SIP	$ -	$ 662,727	$ 504,673	$ 3,387,700	$ 4,818,700	$ 2,809,200	$ -	$ -	$ -	$ 12,183,000
			Additional Request	$ -	$ -	$ -	$ -	$ 1,000,000	$ 1,000,000	$ 2,500,000	$ -	$ -	$ 4,500,000
			PMR SIP Recommendation	$ -	$ 662,727	$ 504,673	$ 3,387,700	$ 5,818,700	$ 3,809,200	$ 2,500,000	$ -	$ -	$ 16,683,000
Round 5 Projects submitted for consideration													
Pollutant Source Characterization Study	N/A	$ -	Requesting	$ -	$ -	$ -	$ -	$ 16,240	$ 125,860	$ 101,500	$ 101,500	$ 60,900	$ 406,000
Street Sweeping Study	N/A	$105k Local	Requesting	$ -	$ -	$ -	$ -	$ 46,400	$ 52,780	$ 13,920	$ -	$ -	$ 113,100

Table 4-19 provides a list of potential projects the City is currently considering for future Regional Program funding applications to the SSMB WASC. The list is subject to change depending on the Regional Program financial condition for the SMB WASC.

Table 4-19. SSMB Watershed Proposed Projects for Future Rounds of Regional Program Funding Consideration

Project	CD*	Type	Source / Status
Round 6 (FY 25-26)			
-	-	-	-
Round 7 (FY 26-27)			
Rosecrans Recreation Center Stormwater Capture Project (**LASAN**)	15	Infrastructure	Concept Report being developed
Future Projects			
Pacific Coast Highway Stormwater Project (Senator Ave to S. Normandie Ave) (**LASAN**)	15	Infrastructure	SiteSAN
Additional High-Scoring SiteSAN Project Opportunities shown in **Appendix C**	VR**	Infrastructure	SiteSAN

***** Council District

** Various

Section 5
Project Delivery

Los Angeles Sanitation and Environment (LASAN) is the owner and operator of the City of Los Angeles' (City) stormwater infrastructure system and is responsible for financial management and operation and maintenance (O&M) of this system. In addition, LASAN is the Stormwater National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer System (MS4) Permit holder on behalf of the City and all of its departments; thus, LASAN is responsible and accountable for regulatory compliance with the MS4 Permit. LASAN faces an increasingly complex and rapidly changing regulatory, technical, and financial landscape, particularly in the area of water and waste processing. The City is required to meet State regulations and the Federal Clean Water Act to improve water quality in the Los Angeles River, Santa Monica Bay, Ballona Creek, and the Dominguez Channel watersheds. The Los Angeles Regional Water Quality Control Board (Regional Board) has promulgated 22 Total Maximum Daily Load (TMDL) regulating the discharges of trash, bacteria, nutrients, metals, toxic sediment, and other pollutants into the City's receiving waters and watersheds. Many of the TMDL deadlines are in 2026.

LASAN led the development of five Watershed Management Programs (WMPs) in collaboration with 30 other cities and agencies in local and regional watersheds to determine compliance with the TMDLs interim and final milestones, in which the implementation cost is expected to exceed $9.9 billion over the next 25 years. Non-compliance with TMDL interim and final milestones may expose the City to third-party lawsuits as well as fines and penalties from the State.

To verify that the City is implementing projects to support compliance with the regulatory requirements and the pending TMDL compliance milestones, it is imperative that the most efficient and appropriate project delivery methods are used. Establishing a list of on-call design-build (DB) contracts, to be managed by LASAN, will allow the City to solicit proposals based upon feasibility reports that have been prepared as part of the funding application, and award the design and construction scope in a cost-effective manner that significantly reduces the overall project delivery schedule and cost.

The City Charter permits the letting of contracts pursuant to a competitive sealed proposal method, in accordance with criteria established by ordinance adopted by at least two-thirds of the City Council (Section 371(b)). This process also allows for the use of DB or other appropriate project delivery systems when justified by the type of project and approved by the contracting authority.

In the past five years, LASAN has piloted the DB approach to deliver smaller, less complex green stormwater infrastructure projects. **Table 5-1** lists projects that demonstrate LASAN's success in utilizing the DB method to deliver projects quickly and efficiently, while seeing that all LASAN's O&M needs are addressed.

Table 5-1. Successful Design-Build Projects by LASAN

Project	Project Cost	Construction Cost	Traditional Delivery	Design Build Delivery
Kitty Hawk Green Stormwater Project*	$0.94M	$0.83M	42 months	9 months
Slauson Green Alley*	$0.69M	$0.63M	42 months	9 months
Ben and Victory Green Stormwater Project	$2.50M	$2.10M	48 months	18 months
Van Nuys Blvd Green Stormwater Project	$3.36M	$2.73M	48 months	18 months
Garvanza Park Stormwater Project	$3.80M	$3.20M	60 months	24 months
San Fernando Valley - North Hollywood Green Streets Projects ▪ Victory and Goodland ▪ Agnes Ave ▪ Glenoaks and Filmore ▪ McCormick and Vineland ▪ Lankershim Blvd Great St	$14.20M	$11.20M	60 months	24 months

* Projects implemented to meet Supplemental Environmental Project (SEP) deadlines by the Regional Board.

The FY 22-23 Watershed Investment Strategic Plan (WISP) recommended that LASAN, in coordination with the Bureau of Engineering (BOE), recommend that City Council requests the City Attorney to prepare and present an ordinance allowing the City's Board of Public Works and its Bureaus to allow DB contracts for the delivery of projects in the Safe Clean Water Program (SCWP), pursuant to a competitive, sealed-proposal method. BOE would remain responsible for designing and implementing complex projects and LASAN would use the DB contract to deliver smaller, less complex green stormwater infrastructure projects. These water capture and/or treatment projects have become more prevalent as part of the City's response to water quality issues and are typically focused on green stormwater infrastructure (e.g., curb cuts, bioswales, dry wells and tree planting). The DB approach will:

1. Maximize the use of LASAN's experience with small-scale designs that maximize opportunities within small footprints over a short delivery timeframe;
2. Acknowledge the volume of work that must be delivered quickly and efficiently; and
3. Optimize the workforce employed by LASAN and BOE.

On June 21, 2023, City Council approved LASAN's recommendation (CF 18-0384-S5) and requested the City Attorney to prepare and present an Ordinance allowing the Board and its Bureaus to utilize a competitive, sealed-proposal method for the delivery of projects in the SCWP, and to subsequently establish and execute Design/Build contracts for the expeditious delivery of specific SCWP projects. The proposed Ordinance was drafted and approved on consent by the council committee on February 9, 2024 and was forwarded to City Council for consideration.

Upon adoption, LASAN plans to release a Request for Qualifications (RFQ) to establish an on-call list of qualified DB firms and contractors.

The existing Stormwater Capital Improvement Program (CIP) projects identified in **Table 5-2** are being developed using a traditional design-bid-build approach. Had a DB contracting mechanism been in-place, LASAN would have recommended these projects be considered for DB delivery method. Each year the WISP is updated, LASAN will identify projects that have the potential to be delivered using a DB delivery method.

Table 5-2. Existing Stormwater CIP Projects that Would Benefit from DB Delivery Approach

Project	CD*	Project Type	Construction Cost
Haynes St Greenway (Phase I of Haynes St LFD)	3	Municipal CIP	$0.5M
North Sepulveda Pedestrian Island (Sepulveda Green Median)	6	Municipal CIP	$1.6M
Reseda Blvd Alley Green Streets	12	Municipal CIP	$3.2M
La Cienega Blvd Green Infrastructure Corridor	11	Municipal CIP	$4.0M
E 6th St Green Infrastructure Corridor	14	Municipal CIP	$2.9M
Angeles Mesa Green Infrastructure Project	8	Regional CIP	$12.7M
Imperial Highway Green Infrastructure Corridor Project	11	Regional SIP	$8.7M
Lincoln Park Neighborhood Green Street Network Project	1	Regional CIP	$31.8M
Oro Vista Local Area Urban Flow Management Project	7	Regional CIP	$26.5M
Slauson Connect Clean Water Project	9	Regional CIP	$4.9M
Sylmar Channel Project	7	Regional CIP	$8.5M
Wilmington Neighborhood Greening Project	15	Regional CIP	$22.5M
Wilmington Q Street Local Area Urban Flow Management Project	15	Regional CIP	$9.5M

* Council District

To control costs, manage City risk, and provide timely delivery of high-quality products, LASAN proposes the DB delivery method for the SCWP projects. Time is of the essence, and it is in the City's best interest to expedite similar scope and size projects as part of the SCWP implementation to meet water quality goals and regulatory compliance deadlines and minimize risk to the City. **Table 5-3** lists future projects that may be considered for a DB contracting mechanism.

Table 5-3. Examples of Potential Future Design-Build Projects

Project	CD*	Estimated Construction Cost
Sun Valley Green Neighborhood Infrastructure Project	2	$11.0M
Rosecrans Recreation Center Stormwater Project	15	$3.0M
Baldwin Vista Green Streets Project	10	$8.0M
Mission & Jesse Green Parking Lot	14	$2.3M
Cochran Ave Green Infrastructure Corridor	10	$0.6M
Richardson Family Park Stormwater Capture Project	8	$2.2M
Sepulveda Channel Water Quality Improvement - LFTF 2 Greening and Bike Path	11	$2.8M
W. 48th Street Green Infrastructure Corridor	9	$2.0M
Pacific Coast Highway Stormwater Project (Senator Ave to S. Normandie Ave)	15	$6.1M

* Council District

A request for qualifications will be prepared by LASAN and issued to DB firms. All firms that submit a Statement of Qualifications (SOQ) will be evaluated, and those that meet the required qualifications will be included in the proposed DB on-call list. Contracts with each firm will be presented for approval and execution to the City's Board of Public Works and City Council. Once the contracts are executed and the list of on-call DB contractors is approved, proposals will be solicited for individual projects. Upon evaluation and review of the proposals, a report will be presented to the Board of Public Works, recommending award of the task order for each project. It is intended that any of the Bureaus that deliver projects for the SCWP will be able to utilize the list of on-call DB contracts.

Section 6
Operation and Maintenance

6.1 O&M Obligations

Proposition O (Prop O) funded $500 million in stormwater quality projects, which made significant progress toward the Municipal Separate Storm Sewer Systems (MS4) Permit compliance. However, this was a one-time bond program that did not provide operation and maintenance (O&M) spending for the projects that it funded. Therefore, a backlog of deferred maintenance is growing.

Annual O&M costs vary by type of stormwater infrastructure; for budget planning purposes, the annual O&M cost is assumed to be three percent of the construction cost and is assumed to begin once construction is complete. **Table 6-1** and **Figure 6-1** provide an estimate of LASAN's projected O&M expenditures. The estimates for O&M for each project assume an annual expenditure of three percent of total capital cost.

Table 6-1. LASAN Estimated Annual O&M Expenditure Summary

Program Name	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
Municipal	$ -	$0.73M	$1.05M	$1.26M	$1.44M
Regional	$ -	$ -	$ -	$0.21M	$6.07M
Prop O / Other	$6.26M	$8.11M	$8.13M	$8.18M	$9.28M
Total:	**$6.26M**	**$8.84M**	**$9.18M**	**$9.65M**	**$16.79M**

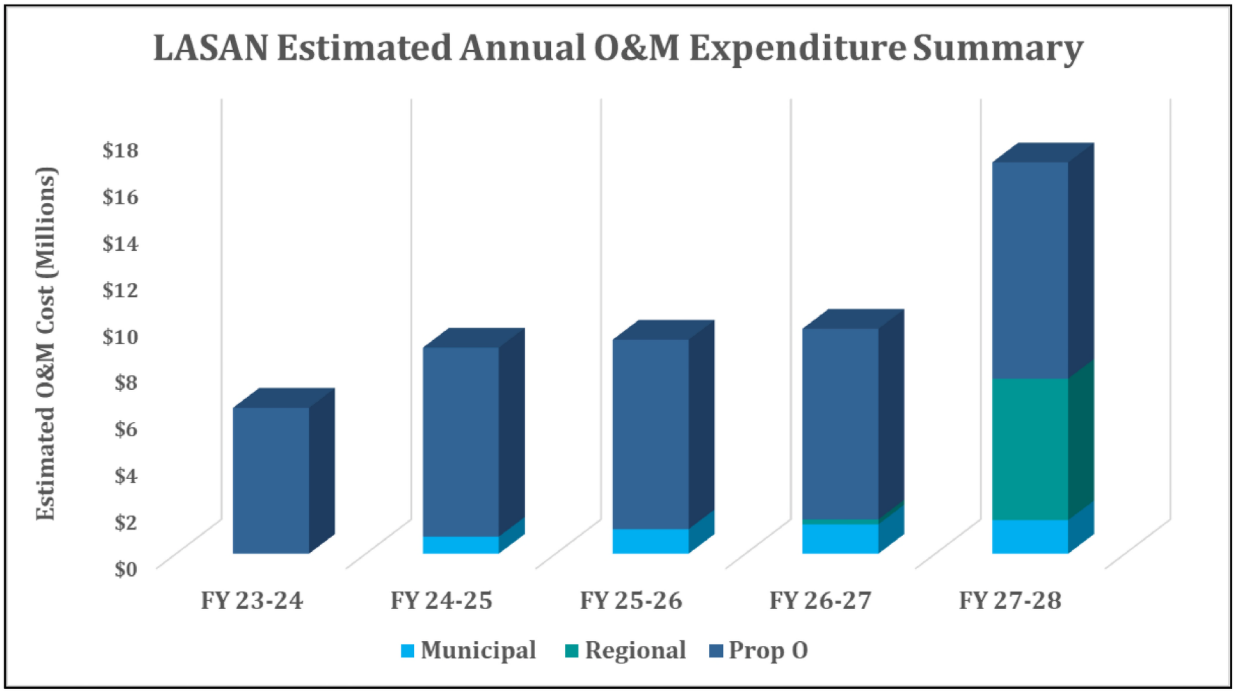


Figure 6-1. Estimated Annual O&M Expenditure Summary

LASAN's Clean Water Division (North and South) will take on the responsibility of operating and maintaining the facilities. Currently, there are over 70 completed stormwater water quality projects that require O&M and at least another 45 projects in the current Stormwater Capital Improvement Plan (CIP) that will require O&M within the next five years. Projects delivered under Prop O have an estimated O&M cost of $8 million per year. With the addition of new Safe Clean Water Program (SCWP) projects it is expected that another $8 million to $10 million per year will be needed beginning in FY 27-28.

6.2 O&M Funding

The SCWP Municipal Program allows the use of funds for O&M on projects built prior to the implementation of the SCWP. Municipalities can spend up to 30 percent of local funds (up to approximately $10.5 million per year for LASAN) for O&M expenditures on projects or programs completed prior to November 6, 2018.

The current municipal O&M budget does not reflect actual current O&M needs because, until the passage of Measure W, there were limited funds to establish contracts to help support O&M efforts. Currently about $3.5 million to $4.5 million per year of the annual Municipal Program funds is used for O&M expenses on existing projects. Of this, approximately $2 million is used for catch basin replacement, and $1.5 million to $2.5 million is used for Prop O projects.

Throughout the design and construction stages of each stormwater project, LASAN will assess the project's O&M needs and begin to identify the resources (staffing and contracts) to establish the annual O&M costs. As LASAN begins to increase staffing and establish contracts to support existing and new projects, it is expected that the annual budget request to support O&M activities will increase.

O&M needs for existing and new projects will exceed the Municipal Program budget within nine years. Over time, this will reduce revenue for new projects and O&M expenses will eventually total more than the entire revenue from the Measure W parcel tax. To minimize the cost of O&M, LASAN will partner with community-based organizations (CBOs) to provide maintenance for as many projects as feasible. LASAN will provide maintenance for gray infrastructure, including pumps, wet wells, and pipes. However, due to the specialized nature of some project components, maintenance for more complex projects will need to be contracted out.

O&M expenses for new SCWP Regional Program projects will need to be funded by the Regional Program. The Regional Program does allow for applications to be submitted for long term O&M funding so that it can be programmed as part of the five-year Stormwater Investment Plan (SIP). LASAN has successfully secured funds for the O&M of some of the Prop O Regional Projects. **Table 6-2** provides a summary of regional funding secured for O&M of Prop O projects.

Table 6-2. City of LA Secured Funding for O&M of Prop O Funded Projects

	FY 23-24	FY 24-25	FY 25-26	FY 26-27	FY 27-28
Echo Park Lake	$0.48M	$0.48M	$0.48M	$0.48M	$ -
Machado Lake	$0.28M	$0.79M	$0.73M	$0.73M	$0.60M
Total:	**$0.76M**	**$1.27M**	**$1.21M**	**$1.21M**	**$0.60M**

LASAN recommends that all infrastructure projects funded by the Regional Program prepare and submit a five-year O&M funding request application one year prior to construction completion.

Section 7
Financial Planning and Outlook

Safe, Clean Water Program (SCWP) project proponents are strongly encouraged to explore leverage funding opportunities when proposing projects for SCWP funding. Such funding, including grants and funding partnerships with other local, state and federal agencies, as well as non-profit, community, and private organizations, represent collaboration and support for the proposed project, but are also critically important for addressing project funding gaps. LASAN is strategically incorporating grant funding opportunities into its SCWP project planning for current and future projects, as well as for projects funded by the SCWP in early rounds that are experiencing cost escalation.

Table 7-1 provides a summary of projects that have secured or are working to secure leverage funding to further assist in the implementation of water quality projects. **Table 7-2** provides a summary of projects that applied for various grants in 2023 but were not selected. **Appendix E, Table E-1,** provides a list of Federal and State funding opportunities that should be considered for existing and new projects being considered under the SCWP. **Appendix E, Table E-2** provides a list of potential funding opportunities matched with SCWP Municipal and Regional Programs projects.

Table 7-1. City of LA SCWP Projects with Secured (or Pending) Leverage Funding

Project	Municipal / Regional	Additional Funding Source	Amount	Status
Arroyo Seco / LA River Low Flow Diversions (LASAN)	Municipal	Proposition 84	$2.5M	Grant Agreement Executed
North Sepulveda Pedestrian Island (LASAN)	Municipal	Community Development Block Grant (CDBG) National Environmental Policy Act-Housing Urban Development Dept	$0.9M	Agreement Executed
E 6th St Green Infrastructure Corridor (LASAN)	Municipal	City of LA Supplemental Environmental Project (SEP)	$1.5M	Pending approval from Regional Board
MacArthur Park Rehabilitation Project (LASAN)	Regional (Rd 1)	Proposition K CA Natural Resources Agency Urban Greening Grant	$0.55M $16.9M	Secured Announcement of Award Dec '24
Lankershim Boulevard Local Area Urban Flow Management Network (LASAN)	Regional (Rd 1)	SB 1 FY 23-24 Caltrans 2026 SHOPP SB 1 FY 24-27	$3.0M $15.0M $19.0M	Secured Pending approval, expected March '24 Requested
Oro Vista Avenue Urban Flow Management Network (LASAN)	Regional (Rd 1)	General Funding CA Natural Resources Agency Urban Greening Grant SB 1 Funding	$3.0M $10.2M $8.2M	Secured Announcement of Award Dec '24 Requested
Fernangeles Park Stormwater Capture Project (LADWP)	Regional (Rd 1)	LADWP	$8.4M	Secured
Strathern Park North Stormwater Capture Project (LADWP)	Regional (Rd 1)	LADWP IRWM Prop 1	$9.5M $0.8M	Secured Pending

Project	Municipal / Regional	Additional Funding Source	Amount	Status
Valley Village Park Stormwater Capture Project (LADWP)	Regional (Rd 1)	LADWP	$3.2M	Secured
		SWGP Prop 1	$3.0M	Secured
		BOR WaterSMART Drought Response Program	$5.0M	Pending
Ballona Creek TMDL Project (LASAN)	Regional (Rd 2)	General Funding	$11.2M	Secured
		Proposition O	$12.4M	Funding Approved
		Caltrans Partnership	$1.4M	Agreement Executed
		Agencies MOU	$8.9M	Pending MOA Execution
Lincoln Park Neighborhood Green Street Network (LASAN)	Regional (Rd 2)	Proposition O	$1.6M	Funding Approved
Wilmington Neighborhood Greening Project (LASAN)	Regional (Rd 2)	CA Natural Resources Agency Urban Greening Grant	$13.3M	Announcement of Award Dec '24
Broadway-Manchester Multi-Modal Green Streets Project (StreetsLA)	Regional (Rd 2)	Active Transport Program Cycle	$3.9M	Secured
		Caltrans Partnership	$11.9M	Agreement Executed
David M. Gonzales Recreation Center Stormwater Capture Project (LADWP)	Regional (Rd 2)	LADWP	$19.8M	Secured
Valley Plaza Park Stormwater Capture Project (LADWP)	Regional (Rd 2)	LADWP	$27.0M	Secured
Whitsett Fields Park North Stormwater Capture Project (LADWP)	Regional (Rd 3)	LADWP	$8.6M	Secured
		IRWM Prop 1	$1.0M	Pending

Project	Municipal / Regional	Additional Funding Source	Amount	Status
Hollenbeck Park Lake Rehabilitation Project (LASAN)	Regional (Rd 4)	California State Water Resources Board 22-23 Enacted California State Budget, State Specified Grant Number D22180007, Earmark Funding, Direct Assistance Grant	$7.0M	Agreement Executed
		Proposition O	$5.0M	Funding Approved
		Caltrans 2024 SHOPP	$15.1M	Pending Approval, expected March '24
Imperial Highway Green Infrastructure Project (LASAN)	Regional (Rd 4)	LA World Airport	$4.0M	Pending MOA Execution
		City of El Segundo	$0.5M	Pending MOA Execution
Sylmar Channel Project (LASAN)	Regional (Rd 4)	LADWP	$3.3M	Pending MOA Execution
		Caltrans 2026 SHOPP	$5.0M	Pending Approval, expected March '24
Eagle Rock Blvd Multi-Modal Stormwater Capture Project (StreetsLA)	Regional (Rd 4)	Caltrans 710 MIP	$16.4M	Commitment Received
Tota:l	**-**	**-**	**~ $287.95M**	**-**

Table 7-2. City of LA SCWP Projects Submitted for Grants but not Awarded in 2023

Project	Municipal / Regional	Additional Funding Request (Date Submitted)	Amount
Reseda Boulevard Alley Green Street	Municipal	Caltrans Clean California Local Grant Program (Cycle 2)(4/23)	$3.0M
Lankershim Boulevard Local Urban Flow Management Network	Regional (Rd 1)	NOAA Climate Resilience Regional Challenge (8/2023)	$41.3M
Oro Vista Urban Flow Management Network	Regional (Rd 1)	NOAA Climate Resilience Regional Challenge (8/2023)	$21.2M
MacArthur Lake Stormwater Capture Project	Regional (Rd 1)	NOAA Climate Resilience Regional Challenge (8/2023)	$17.5M
Ballona Creek TMDL Project	Regional (Rd 2)	NOAA Climate Resilience Regional Challenge (8/2023)	$16.4M
Wilmington Neighborhood Greening Project	Regional (Rd 2)	NOAA Climate Resilience Regional Challenge (8/2023) Caltrans 2024 SHOPP (11/2023)	$15.0M $15.0M
David M. Gonzales Recreation Center Stormwater Capture Project (LADWP)	Regional	NOAA Climate Resilience Regional Challenge (08/2023) Urban Community Drought Relief Grant (01/2023)	$30.0M $27.2M
Whitsett Fields Park North Stormwater Capture Project (LADWP)	Regional	NOAA Climate Resilience Regional Challenge (08/2023)	$15.0M

Section 8
Conclusions

The 2024 Watershed Investment Strategic Plan (WISP) represents an organized, methodical and strategic program planning and project management approach that will enable the City of Los Angeles (City) to meet Los Angeles County's (County) Safe, Clean Water Program (SCWP) requirements and the City's sustainability, equity, organizational, and other related objectives. The Watershed Investment Strategic Plan (WISP) is led by Los Angeles Sanitation & Environment (LASAN), whose role is coordinating and managing the City's flood control and water quality compliance programs.

The WISP identifies and describes the processes used to select projects, including:

- Building upon Watershed Management Programs (WMP) efforts with a focus on Municipal Separate Storm Sewer Systems (MS4) Permit compliance.
- Summarizing the methodology used to prioritize projects.
- Securing funding for existing partially funded projects.
- Creating a list of projects to be included in the City's Stormwater Capital Improvement Program (CIP).

Annual funding from the Safe Clean Water Program (SCWP) includes $36 M of Municipal Program funds (only $15M to $20M of which is used for projects) and approximately $46.1 M of Regional Program funds. Because the SCWP funds are used for construction as well as operation and maintenance (O&M), the approximately $60 M from the SCWP will not be adequate to complete the $9.9 B of required WMPs projects within the current planning horizon but will offset some of the costs.

To facilitate an efficient and effective annual update each year, LASAN recommends inter-departmental coordination to implement the following actions:

1. Follow the prescribed sequence for SCWP project application and implementation illustrated in the latest WISP.
2. Regularly report on the progress of projects and current regulatory compliance needs, as well as changes in the SCWP program goals and objectives, environmental regulations, new technologies, best management practices, and available funding sources.
3. Continue to collaborate with one another and conduct robust public outreach following the City's Community Outreach and Engagement Strategic Plan to partner, engage, notify and receive feedback from stakeholders on SCWP projects.

LASAN identified considerations through development of the 2024 WISP that should be included in future SCWP development. These considerations encompass aspects within the purview of each annual WISP as well as the entire SCWP; they are listed below:

1. The results of the independent audit of the Municipal Program should be reviewed to improve the effectiveness of project planning and implementation.

2. The Municipal Program Scoring Criteria should be reviewed and updated to better reflect the goals and objectives of the program and provide more flexibility and creativity in the project development process. Using the current criteria results in scores that are significantly determined by the site that is selected, leaving less room for adjusting projects to meet community needs.

3. Prioritize O&M when budgeting the limited resources available. If projects are not properly maintained, they will not operate as designed and the City will not receive the anticipated compliance and community benefits from them.

4. Creative funding and cost sharing opportunities should be pursued to maximize the projects that can be constructed, operated, and maintained. In addition, new technologies should be evaluated to reduce cost and increase the effectiveness of construction and O&M.

5. The City should continue to collaborate with the County to refine and improve the SCWP. Resulting changes to the program should be considered and incorporated into each WISP.

The WISP is a living document and will be updated annually (third quarter, January through March, each fiscal year) to reflect progress on projects and regulatory compliance, as well as changes in the SCWP goals and objectives, requirements, environmental regulations, new technologies, best management practices, and available funding sources.

CIP projects will also be evaluated and updated as new information becomes available regarding administrative progress, the securing of funding, and lessons learned during the implementation of early projects.

Appendix A
TMDL Compliance Schedule

This appendix presents the TMDL compliance schedule for each watershed.

Table A-1. ULAR TMDL

Table A-2. CSMB TMDL

Table A-3. SSMB TMDL

Table A-1. ULAR TMDL

Applicable TMDL	Interim/Final Deadlines
Los Angeles River Nitrogen Compounds and Related Effects	Final deadline in 2009 (pre-2012 MS4 Permit)
Los Angeles River Watershed Trash	Phased reduction in baseline WLAs, starting from 2008 with the final deadline in 2016
Legg Lake Trash	Phased increase in drainage area covered by full capture systems, starting from 2008 with the final deadline in 2016
Echo Park Lake Trash	Final deadline of 2016
Echo Park Lake PCBs	Interim deadline of 2016
Echo Park Lake Chlordane	Interim deadline of 2016
Echo Park Lake Dieldrin	Interim deadline of 2016
Echo Park Lake Nutrient	Interim nutrients (50%) deadline of 2020, final deadline of 2024 for all constituents
Lake Calabasas Nutrient	Interim nutrients (50%) deadline of 2020, final deadline of 2024 for all constituents
Legg Lake Nutrient	Interim nutrients (50%) deadline of 2020, final deadline of 2024 for all constituents
Los Angeles River and Tributaries Metals	2012: 50% of Group's drainage area meets dry-weather WLA and 25% of Group's drainage area meets wet-weather WLA 2020: 75% of Group's drainage area meets dry-weather WLA 2024: 100% of Group's drainage area meets dry-weather WLA and 50% of Group's drainage area meets wet-weather WLA 2028: 100% of Group's drainage area meets wet-weather WLAs
Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants	Final deadline of 2032
Los Angeles River Watershed Bacteria	The following deadlines* are reflective of the LRS schedule to achieve the dry-weather WLA: Segment B Mainstem: March 23, 2022 Segment B Tributaries: Sept. 23, 2023 Segment E Mainstem: March 23, 2025 Segment A Tributaries: Sept. 23, 2025 Segment E Tributaries: March 23, 2029 Segment C/D Mainstem, Segment C/D Tributaries: Sept. 23, 2030 The final deadline to achieve the wet-weather WLA and geometric mean WLA is March 2037 for all segments and tributaries. * The Group could choose to pursue a second phase of LRS implementation which would extend the final deadline for the dry-weather WLA.

Table A-2. CSMB TMDL

Applicable TMDL	Interim/Final Deadlines
Ballona Creek Watershed Area	
Santa Monica Bay Debris TMDL	2020 100%
Ballona Creek Trash TDML	2015 100%
Ballona Creek Estuary Toxic Pollutants TMDL	Effective date of the 2021 Permit: Total PCBs 50%; All other constituents 75% July 15, 2026: Total PCBs 100%; All other constituents 100%
Ballona Creek Metals TMDL	January 11, 2016: Dry Weather 100%; Wet Weather 50% July 15, 2026: Dry Weather 100%; Wet Weather 100%
Ballona Creek, Ballona Estuary, and Sepulveda Channel Bacteria TMDL	April 27, 2013: Dry Weather 100% July 15, 2026: Wet Weather 100%
Ballona Creek Wetlands TMDL for Sediment and Invasive Exotic Vegetation	Effective date of the 2021 Permit
Santa Monica Bay DDTs and PCBs TMDL	2017 (75%) Effective date of the 2021 Permit (100%)
Marina Del Ray Watershed Area	
Santa Monica Bay Debris TMDL	100% by 2020
Santa Monica Bay Jurisdictional Group 2 and 3 Watershed Area	
Santa Monica Bay Debris TMDL	100% by 2020
Santa Monica Bay DDTs and PCBs TMDL	Effective date of the 2021 Permit
Santa Monica Bay Beaches Bacteria TMDL	Dry weather effective since the effective date of the previous MS4 Permit (Order No. R4-2012-0175). Interim (50%) WQBELs and RWLs for wet weather extended until 2023. Final WQBELs and RWLs for wet weather extended until 2026.

Table A-3. SSMB TMDL

Applicable TMDL	Interim/Final Deadlines
Dominguez Channel Watershed Area	
Dominguez Channel and Greater Los Angeles and Long Beach Harbor Waters Toxic Pollutants TMDL	Interim deadline of 2026 Final deadline of 2032
Machado Lake Trash TMDL	100% by 2016
Machado Lake Nutrient TMDL	Final deadline of 2018
Machado Lake Pesticides and PCBs TMDL	Final deadline of 2019
Los Angeles Harbor Bacteria TMDL	Interim deadline of 2026 Final deadline of 2032
Santa Monica Bay Jurisdictional Group 7	
Santa Monica Bay Debris TMDL	100% by 2020
Santa Monica Bay Bacteria TDML	Summer Dry Weather, July 2006 Winter Dry Weather, July 2009 Wet Weather, July 2013

Appendix B
Regulatory Compliance Steps

B.1 Reasonable Assurance Analysis

Extensive water quality and BMP modeling was performed during the development of the WMP, including a RAA as a permit requirement. A RAA is used to quantitatively demonstrate the degree to which implementation of the BMPs presented in the WMP can address WBPCs and associated WQBELs and/or RWLs. Flows and pollutant load concentrations predicted by RAA modeling were used to select BMPs for the WMP Implementation Strategy by considering multiple BMP scenarios while factoring in cost effectiveness and the preferences of the WMP Group.

Results from this modeling effort are presented in the WMP as a "recipe for compliance" for each jurisdiction in the watershed. These results are expressed as the volume of stormwater each jurisdiction would need to manage to achieve compliance and which control measures (i.e., low impact development (LID), green streets, or Regional BMPs) could be implemented to manage the flow under this "recipe." The primary metric for demonstrating reasonable assurance that the WQBELs and/or RWLs will be achieved is volume of flow managed; therefore, the stormwater volume managed is considered the BMP performance goal for the WMP.

As shown in **Figure B-1**, The WMP process identified thousands of subwatershed areas with respective stormwater capture volumes within the larger City watersheds.

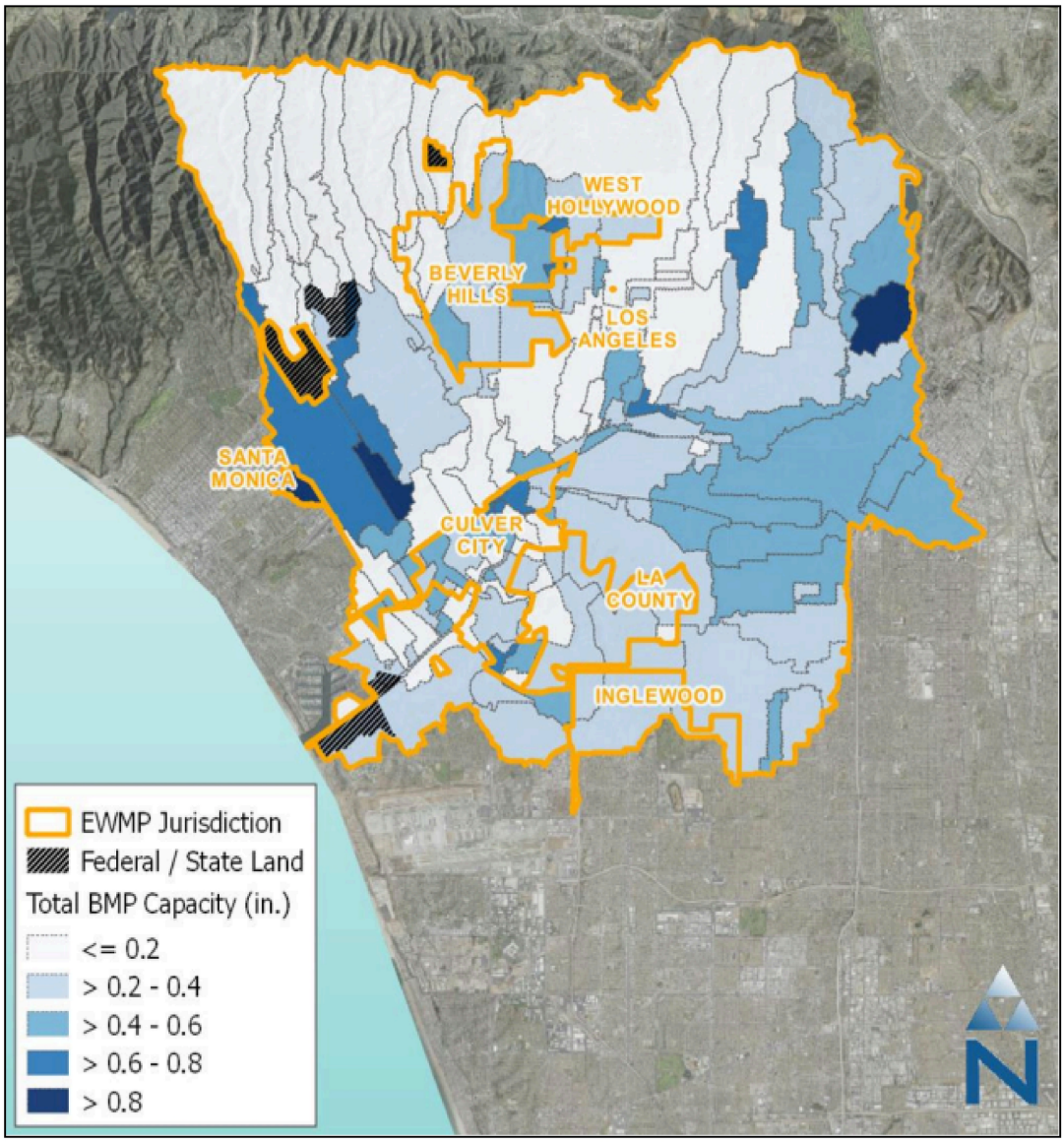


Figure B-1. Illustrative Representation of Inches of Impervious Area Runoff Capture for WMP Compliance Needs

For the City, the breakdown of structural BMP categories included in each WMP stormwater capture volume recipe is presented below. The WMP expected that the recipe of BMPs would evolve as more refined planning occurs and specific projects are implemented. Necessary stormwater capture volumes for the City by Regulatory Watershed are shown in **Table B-1**, with the exception of Santa Monica Bay Jurisdictional Group 7 (J7). Santa Monica Bay J7 is a small watershed with relatively little discharge from the MS4 to receiving waters. The existing bacteria TMDL compliance monitoring locations are all open beach and antidegradation locations per State Water Resources Control Board (SWRCB) Resolution No. 68-16, the Antidegradation Policy. Existing water quality is higher than necessary for the protection of beneficial uses. As antidegradation sites, all three locations have an implied zero load reduction as compared to the reference beach. For dichlorodiphenyltrichloroethane (DDT) and polychlorinated biphenyl (PCBs), the U.S. Environmental Protection Agency (USEPA) TMDL indicates that the current load

for Santa Monica Bay is less than the required load; therefore, a zero-load reduction is required for those parameters.

Table B-1. Target RAA Stormwater Capture Volumes

Regulatory Watershed	Target Volume (acre-feet)
Upper LA River	2,862.9
Ballona Creek	1,902.2
Santa Monica Bay J2/J3	207.6
Dominguez Channel	371
Marina del Rey	59

While the WMP RAA analysis provided valid, justifiable results, the City was interested in examining whether sufficient space could be identified for Regional BMPs to be installed primarily on public lands and to take the analysis to the next level of specificity in terms of locations for structural BMP implementation.

The process for developing specific projects begins with the identification of the objective(s) for the project. The number one priority for projects is water quality improvement. Two important considerations for water quality projects are treatment volume and constituents of concern. Current permits require that all runoff from the 85th percentile storm be treated. This rainfall is typically a little more than one inch in 24 hours for locations within the City. Treatment volume influences parameters such as size, choice of treatment processes, budget and complexity of the project. Constituents of concern can be trash, bacteria, metals, nutrients, and pesticides that must be removed to meet regulatory limitations that are included in the MS4 permit for the major water bodies in Los Angeles through TMDLs (**Table 2-1**). TMDL milestones (limitations with a compliance date) have been established for dry- and wet-weather conditions and can be expressed in concentrations for bacteria, metals, nutrients and pesticides. percentages for trash. (**Appendix A**).

B.2 SiteSAN

A key element in the development of the list of projects required for compliance is the innovation of a GIS-based tool, SiteSAN, capable of evaluating all City-owned properties, major street rights-of-way, and streets with medians. SiteSAN is intended to be used Citywide to identify, evaluate, and map project opportunity sites through automation based on a defined set of parameters and criteria. Ultimately, the stormwater volume captured for each of these sites sum to the target capture volume for the RAA event for each watershed. The SiteSAN effort is focused on wet-weather projects that are regional in nature, so the focus of the analysis is currently on larger-scale diversions from the City's network of storm drains and engineered channels. Most sites assume infiltration BMPs will be installed. The primary steps for SiteSAN project selection are outlined in **Figure B-2** and detailed in the following section.

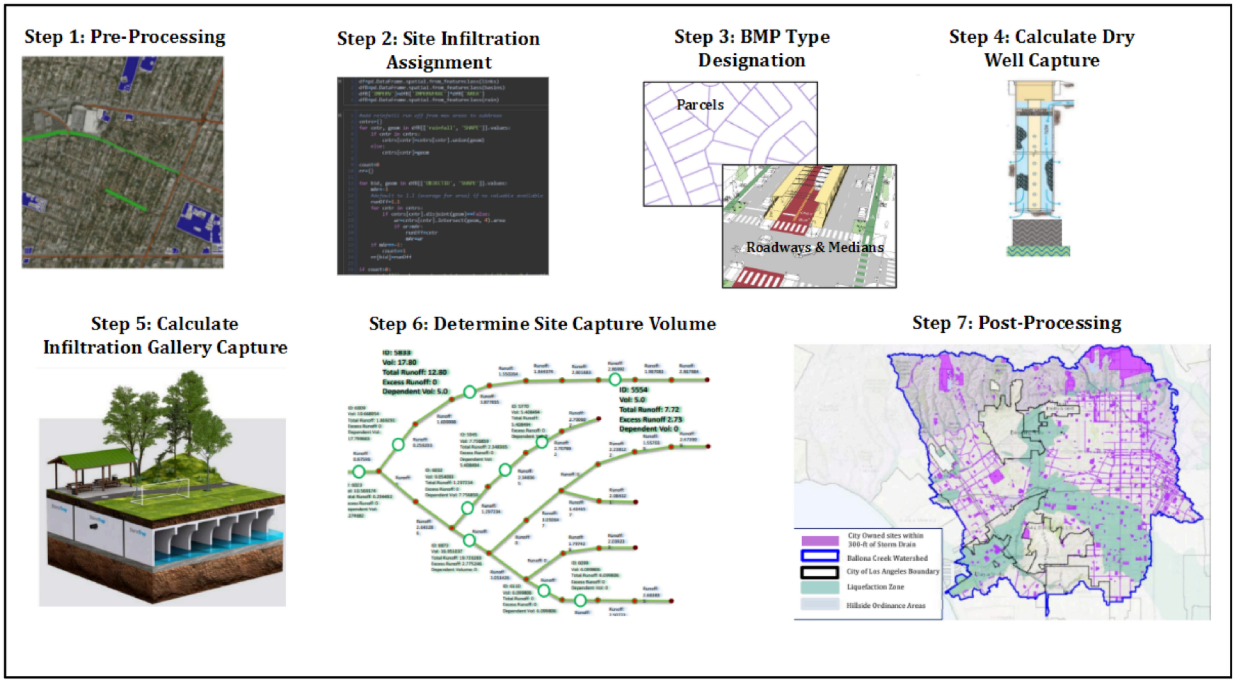


Figure B-2. SiteSAN Tool Process

The 900+ projects identified by the SiteSAN tool were filtered into the appropriate watershed for further refinement and prioritization. **Appendix C** lists the top 319 citywide projects for SCWP funding consideration. Sorting the projects into watersheds allows LASAN to more easily identify the volume achieved toward compliance as well as the funding available.

The SiteSAN tool process is outlined in the subsections below.

Step 1: Pre-Processing

The SiteSAN tool utilizes several data inputs to properly evaluate each site and determine stormwater flow volumes for subsequent calculations. Inputs include physical characteristics of the land area, such as depth to groundwater or liquefaction zones, infrastructure features, such as roadway characteristics or parcel building data, and ownership data. Once the data is assembled in ArcGIS, several pre-processing steps take place:

1. Clip spatial data to watershed boundaries (lessens SiteSAN computational time by decreasing the amount of spatial data to be processed).

2. Define potential BMP footprint at each parcel by removing square footage of existing structures as well as subtracting a five-foot buffer around each building as well as the property perimeter.

3. Calculate potential parcel stormwater runoff volume by associating each hydrologic subarea with an 85th percentile, 24-hour, rainfall depth. The total accumulated flow in each storm drain is the sum of runoff volumes from all upstream tributary sub-areas.

4. Subtract existing project capture volumes.

5. Retain only parcels that are City-owned properties and rights-of-way to achieve a goal of maximizing stormwater capture on public parcels. This step relies on two different parcel layers: the 2016 land use from Southern California Association of Governments (SCAG) GIS database[18] and a City-provided shapefile that identifies agency ownership.

6. Eliminate sites with low depth to groundwater (for sites with good infiltration) or long distance to a sanitary sewer (for sites with poor infiltration characteristics.)

The reliance on these pre-processing steps is discussed in the subsequent sections.

Step 2: Site Infiltration Assignment

The measured infiltration rate for a given site is critical to the actual design and determination of capture volume that can be expected at the site. The City provided a GIS file based on soil type and runoff coefficient data from the Los Angeles County Hydrology Manual[19]. The GIS data spatially represents areas that are poor, fair, marginal, good, and excellent for infiltration. SiteSAN assigned a soil category to each parcel based on its location: either “0” for poor infiltration, “1” for fair/marginal infiltration, and “2” for good/excellent infiltration. Any site in an area with a “0” for poor infiltration was considered infeasible for infiltration BMPs.

Vertical surficial infiltration rates for sites assigned a “1” (fair infiltration) or “2” (good infiltration) were conservatively estimated to be 0.3 inches per hour and 0.5 inches per hour, respectively. These rates were assigned to infiltration galleries.

[18] https://scag-spm-documentation.readthedocs.io/en/latest/scag_lu_codes/

[19] https://dpw.lacounty.gov/wrd/publication/engineering/2006_Hydrology_Manual/2006%20Hydrology%20Manual-Divided.pdf

Dry wells achieve a higher infiltration rate than infiltration galleries due to the fact they allow both vertical and horizontal infiltration (dry wells infiltrate along the entire shaft of the dry well as well as the bottom, while infiltration galleries infiltrate only through the bottom). The vertical configuration exposes the stormwater to a variety of soil types in the well column, allowing greater infiltration opportunities. The dry well infiltration rates are assumed to be one order of magnitude higher than conservative estimates made for infiltration galleries: fair soils are assigned a rate of three inches per hour and good infiltration soils are assigned an infiltration rate equal to five inches per hour.

The planning level infiltration values represent a conservative middle ground that likely does not significantly over or underestimate performance, and overall may average out across the watersheds. Assumptions made for the purpose of this effort should be confirmed through geotechnical investigations during a future project phase.

Step 3: BMP Type Designation

The two primary BMP types used in the SiteSAN analysis include infiltration galleries and dry wells. Infiltration galleries are large subsurface structures that can infiltrate large volumes of flow into relatively shallow soils while allowing the ground surface to remain usable. These devices are typically sturdy enough to be installed under parking lots. Dry wells can be installed under roadways or parcels with only a manhole at the surface and provide an efficient method of infiltration using a smaller footprint and greater depth than infiltration galleries. Deep infiltration dry wells can be combined with green street BMPs that include smaller volumes of surface infiltration, allowing a project to achieve regional status by capturing flows from a larger tributary area.

The potential project sites generated from SiteSAN include:

- **Infiltration Parcels:** City-owned parcels within 300 feet of a storm drain that have good infiltration rates (soil type 1 or 2) for either infiltration galleries or dry wells.
- **Storage and Diversion Parcels:** City-owned parcels within 300 feet of a storm drain that have poor infiltration rates (soil type 0) but are within 300 feet of a sanitary sewer. Stormwater is stored for diversion to the sanitary sewer system for treatment and potential recycled water use, provided a sewer capacity analysis indicates conveyance and treatment capacity within the wastewater collection and treatment systems.
- **Major Roadways and Medians:** Publicly accessible roadways within 300 feet of a storm drain that have good infiltration rates (soil type 1 or 2) are suitable for green streets, offering bioswale and dry well options for stormwater retention.

The selected maximum distance from a stormwater link or a wastewater conduit was set to 300 feet. This was selected as a reasonable diversion length to consider because it is a typical distance between storm drain manholes and is the length of a city block. These values are variables in the tool, and the user can modify this information later if design parameters change.

The core calculations of the SiteSAN Python script determine BMP capacity for each of the three types of project sites.

Parcels with fair or good infiltration, with a minimum of 13 feet to the groundwater (to account for three feet of cover and 10 feet above groundwater), had two calculations performed. The first was to determine how much flow could be managed on site in an infiltration gallery and the second how much flow could be managed on site in dry wells.

For parcels with poor infiltration, a similar calculation was made except it was limited to the storage capacity of the gallery. In this situation, the volume would be stored for diversion to the sanitary sewer for recycled water reuse. Stored flow would be slowly released to the sewer over two to three days.

For medians and roadways, the calculation was restricted to dry wells since infiltration galleries could not be installed in the roadways due to interference with utilities and other concerns. Roadway BMPs would therefore not be suitable in areas of poor infiltration since diversion to sewer would require storage capacity to detain and slowly release flow to the sewer.

Step 4: BMP Type Designation

The two primary BMP types used in the SiteSAN analysis include infiltration galleries and dry wells. Infiltration galleries are large subsurface structures that can infiltrate large volumes of flow into relatively shallow soils while allowing the ground surface to remain usable. These devices are typically sturdy enough to be installed under parking lots. Dry wells can be installed under roadways or parcels with only a manhole at the surface and provide an efficient method of infiltration using a smaller footprint and greater depth than infiltration galleries. Deep infiltration dry wells can be combined with green street BMPs that include smaller volumes of surface infiltration, allowing a project to achieve regional status by capturing flows from a larger tributary area.

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- *Infiltrating Surface Area = Circumference x Infiltrating Length*
- *Infiltration Volume = Infiltration Rate x Infiltrating Surface Area x 24 hours*
- *Storage Volume = Dry Well Depth x Dry Well Cross-sectional Area*
- *Capture Volume = Infiltration Volume + Storage Volume*
- *Number of Dry Wells at a Parcel = Site Area/Minimum Dry well Spacing (Area)*
- *Maximum Dry Well Capture Volume at a Parcel = Capture Volume x Number of Dry Wells*
- *Number of Dry Wells at a Road/Median = Length/Minimum Dry well Spacing (Length)*
- *Maximum Dry Well Capture Volume at a Road/Median = Capture Volume x Number of Dry Wells*

For dry wells in roadways, this evaluation does not consider subsurface utilities that can restrict the amount of available space to construct dry wells. Similarly, overhead utilities can also make construction of dry wells infeasible. These are factors that will need to be evaluated during subsequent phases of project development when constructability and feasibility are assessed. Subsequent screening should also remove sites with unreasonably high groundwater depths that would prohibit dry well function (even if the site exhibits a 30-foot depth to groundwater.)

Step 5: Infiltration Gallery Parameters and Capture Volume Calculations

Capture volumes are not computed for sites in liquefaction zones or with groundwater depths less than 13 feet (10-foot offset above groundwater table and three-foot required ground cover for infiltration gallery). Later screening steps removed sites with unreasonably high groundwater depths that would prohibit infiltration gallery function, but only sites meeting these parameters

were fully removed from the calculations. The infiltration gallery parameters, as currently assumed in the tool, are summarized in **Table B-2.**

Table B-2. Infiltration Gallery Assumptions

Parameter	Value
Required Ground Cover	3 feet
Required Offset from Groundwater Table	10 feet
Maximum Storage Height	15 feet
Infiltration Rate (fair, good for infiltration galleries)	0.3 inches per hour (fair), 0.5 inches per hour (good)

Note: infiltration rates for dry wells are assumed to be higher than infiltration rates for infiltration galleries due to the horizontal and vertical infiltration achieved by dry wells.

Infiltration Gallery capture volumes are computed using the following formulas (unit conversions have been omitted for clarity):

- *Infiltrating Surface Area = Site Area*
- *Infiltration Volume = Infiltration Rate x Infiltrating Surface Area x 24 hours*
- *Storage Volume = Storage Depth x Infiltrating Surface Area*
- *Infiltration Gallery Maximum Capture Volume = Infiltration Volume + Storage Volume*

The determination of the available footprint for a BMP was generalized based on the total square footage of the property minus the buildings and a buffer, and this method can in some cases overestimate the available space for BMP implementation on parcels. For example, if the property had multiple buildings with small spaces between them, that would not be an optimal situation for an infiltration gallery compared to a park that would likely have its identified space in the form of a large continuous space. In some cases, a reduced footprint could be compensated for by increasing the depth of the BMP or installing dry wells in the adjacent streets. This should be evaluated on a case-by-case basis.

Step 6: Determine Site Capture Volume

The SiteSAN pre-processing step assigned a cumulative flow to each segment of the storm drain network, and the tool assigns a potential stormwater volume that could be diverted to the site based on the largest stormwater volume from all overlapping storm drains. Multiple sites could be associated with the same link. To avoid duplicating flows, the tool will first assign as much flow as it can to the larger site (by BMP capacity). Then, any remaining flow from the link will be assigned to the next largest site until all flow has been assigned or there are no more sites associated with that link.

This process results in an available runoff volume being assigned to a site. The maximum capture volume for each site is determined by taking the larger value between the dry well and infiltration gallery maximum capture volumes (i.e., what a parcel or roadway could manage on site). The usable capture volume for each site is computed by the tool through an iterative process that considers both the available runoff volume and the maximum capture volume. Usable capture

volumes are computed using the following formulas (unit conversions have been omitted for clarity):

- *Site Maximum Capture Volume = Maximum (Dry Well Capture Volume, Gallery Capture Volume)*
- *Site Usable Capture Volume = Minimum (Site Max Capture Volume, Link Available Volume)*

It is also important to note that the tool does not remove the flow associated with a given link from downstream links. As previously discussed, the volume of flow assigned to each link is static once pre-processing is complete. Therefore, the links are no longer dynamically associated with one another. This approach was preferred because if the flow assigned to an upstream parcel was removed from downstream consideration, it would be impossible to know how much flow could have arrived at a downstream site. If the downstream site were superior to the upstream site that was assigned the flow, then the more desirable site may be omitted due to lack of flow. By reserving this analysis of sequencing and prioritization for future steps, the tool is identifying all valid opportunities.

Step 7: Project Estimates and Schedule

Project site information identified by the SiteSAN tool includes the stormwater capture volume for the 85th percentile 24-hour storm event and a preliminary cost estimate based on a formula related to capture volume. The costs were estimated based on a September 2020 construction cost for Strathern Park North Stormwater Capture Project. For this year's WISP, baseline costs are estimated as $550,000 per acre-foot captured. This construction cost is escalated five percent per year to the midpoint of construction, the start date of which varies by project. These estimates are used herein to approximate potential future funding requests to the Safe, Clean Water Program CIP.

The Los Angeles Bureau of Engineering (BOE) provides detailed examples of budgets for water quality and stormwater projects and indicates that water quality projects typically take one to four years for construction, while stormwater conveyance projects typically take one to three years for complete construction. At this planning level assessment, it is assumed projects with less than 10 acre-feet of capture require three years for completion, projects between 10 and 20 acre-feet of capture require four years, and projects with capture larger than 20 acre-feet require five years for construction completion.

Step 8: Post-Processing

A post-GIS step includes spreadsheet screening of the SiteSAN output shapefile to further refine the list of projects. The tool output generates project information which can be used in the spreadsheet analysis; **Table B-3** lists these parameters.

Table B-3. Key SiteSAN Output

Parameter	Description of Potential Use
Liquefaction or Contamination Zone	A yes to either of these options means that these parcels can be screened out in subsequent analyses
Hillside	A yes here means the site should not be considered
State Assembly District	For project distribution analysis
City Council District	For project distribution analysis
Load Reduction Factor	The targeted percent of the associated subwatershed that must be managed to achieve compliance based on WMP modeling; higher percent = higher priority areas
Street Name	For project names
Agency Name	Agency within the City that owns the land – for identification or sorting projects into portfolios (i.e. LASAN)
Link Identification Number	ID number associated with the links network; useful so user can see what sites draw from the same link
Drainage Grid Page	The City is divided into drainage grids and each site is assigned to one grid; useful for users to see what sites are near each other
Street Grid	To identify what grid the street segment is located in

First, all sites located in a liquefaction zone or on a hillside were assigned a capture volume of zero acre-feet. These sites pose a greater risk of failure during seismic events and were not considered for subsurface BMP installation. However, these sites were not entirely removed from the table because in the future, the City may choose to consider surface BMPs in these areas.

Second, each site was reviewed on the City's NavigateLA website[20], the County Assessor's office website[21], and on Google Maps. If a site was judged clearly unsuitable for BMP implementation, it was removed from the list. Examples of sites judged unsuitable include Housing Authority sites that consist of small apartment complexes with only front yards available for BMP installation, or sites where a parking structure was built in place of a surface parking lot, so the site no longer had the available space estimated by the tool.

As a third step in further evaluating the list, any parcel assigned a usable volume below 2.25 acre-feet was filtered out. Since the purpose of this exercise was to identify Regional projects, it was assumed that sites smaller than this would not be included in this category as it was estimated that the cost involved in dispatching contractors for numerous small-scale projects would not be as cost effective as mobilizing work for less numerous, but larger in capacity, sites.

The final step was to combine sites. Large properties made up of multiple parcels (i.e., the site has multiple Assessor's Parcel Numbers (APN) associated with it, as is often the case with schools and large parks) are combined into one "site." Some roadway segments are combined into one longer project. Since both parcel sites and roadway sites have been identified by the tool and are being evaluated for further consideration, there will be situations where both types of sites are adjacent to one another, and they may be assigned to the same stormwater link. When this is the case,

[20] https://navigatela.lacity.org/navigatela/
[21] https://assessor.lacounty.gov/homeowners/property-search

project options should be evaluated in conjunction with one another to determine the best scenario for managing the stormwater, which would include either one site or a combination of sites (e.g., a single site, two parcels, a roadway and a parcel, etc.).

Constructability has not been evaluated, nor has an evaluation been done to confirm that each site could manage the volume of flow determined by the tool, which would need geotechnical investigations to confirm infiltration rates and field-verified site conditions.

Appendix C
Master List of Projects for Each Watershed

This appendix contains the top 319 projects initially identified using the SiteSAN methodology.

Table C-1. Upper Los Angeles River Watershed Master List of Projects

Table C-2. Ballona Creek Watershed Master List of Projects

Table C-3. Santa Monica Bay Watershed Master List of Projects

Table C-4. Dominguez Channel Watershed Master List of Projects

Table C-5. Marina Del Rey Watershed Master List of Projects

Table C-1. Upper Los Angeles River Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
1	Parcel	2336-001-900	11117 Victory Blvd, North Hollywood, CA 91606	Victory Vineland Recreation Center	LA City	2	146	92.5	148.9	95.1	50.0	2493 and 2491	Yes	79%	Site consists of approximately 50% open field and 50% athletic courts plus a restaurant. Potential to divert from link 2491, though at 600 ft away it exceeds the target maximum of 300 ft, but appears to have a higher available volume (approximately 90 af).	$55.20
2	Parcel	2695-020-900, 2695-020- 901, 2695-021-900, 2695-021-901	10445 Balboa Blvd, Granada Hills, CA 91344	Valley Academy of Arts and Sciences	LA Unified School Dist	12	180	92.0	99.0	56.1	50.0	657	No	80%	Large grassy area and paved playground area in northern portion of site. Includes parcels to the south at Granada Hills Science Materials Center.	$55.20
3	Parcel	2321-002-900, 2321-002-902	6911 Laurelgrove Ave, North Hollywood, CA 91605	Park and Public Library	LA City	2	160	105.3	169.6	66.5	50.0	2089	Yes	63%	Large grassy area.	$55.20
4	Parcel	6063-024-900	147 E 107th St, Los Angeles, CA 90003	107th St Elementary School	LA Unified School Dist	8	68	53.2	54.6	81.2	50.0	7638	Yes	91%	Large paved yard, grassy area, and parking lot. Diversion is from Compton Channel two blocks to the south. If diversion from Compton Channel is infeasible, there is an alternate pipe (link 7626) on San Pedro St.	$55.20
5	Parcel	2215-001-910	7501 Tyrone Ave, Van Nuys, CA 91405	LADWP - Valley Service Planning	LA City	2	113	393.0	423.2	125.7	50.0	13975	Yes	63%	Large parking lots throughout property. Proposed diversion is from link across the railroad tracks to the north so should be considered for feasibility during future phases. If infeasible, there are several other links adjacent and more easily accessible to the site (links 1844, 13980). Site is located in a closed Brownfield site which will need to be evaluated during future phases.	$55.20
6	Parcel	2689-018-900	16825 Napa St, Northridge, CA 91343	Parthenia St Elementary School	LA Unified School Dist	12	113	67.5	108.6	248.9	50.0	8204 and 1356	No	90%	Large paved school yard, grassy area in northwest corner of property. Proposed diversion is from Bull Creek channel (link 1356) east of school. If diversion from Bull Creek is infeasible, there appears to be 23.3 ac-ft available in the storm drains.	$55.20
7	Parcel	2653-006-900, 2653-006-908, 2653-006-910, 2653-006-912, 2653-006-914, 2653-007-903	8825 Kester Ave, Panorama City, CA 91402	Sepulveda Recreation Center	LA City	6	125	113.9	122.6	49.3	49.3	1322 and 1321	Yes	53%	Park with large grassy areas, baseball fields, parking lots, and tennis courts. Pacoima Wash is directly easy of the property and would pose the easiest diversion, if suitable. Tool has identified a diversion from link 1342 which is further away from the site.	$54.40

Table C-1. Upper Los Angeles River Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
8	Parcel	6074-009-923	145 W 108th St, Los Angeles, CA 90061	LAPD Southeast Community Police Station	LA City	8	72	44.7	48.1	97.1	48.1	7649 and 7635	Yes	84%	Large parking lot.	$53.10
9	Parcel	2696-026-900	17170 Tribune St, Granada Hills, CA 91344	Granada Elementary School	LA Unified School Dist	12	165	50.7	54.6	43.4	43.4	6946 and 13561	No	80%	Elementary school with large parking lot on NE corner of property and paved school yard. Proposed diversion link is on eastern boundary of site on Amestoy Ave.	$47.80
10	Parcel	5171-024-902, 5171-024-904, 5171-024-905, 5171-024-910, 5171-025-900, 5171-025-901, 5171-025-902	2300 E 7th St, Los Angeles, CA 90023	Potential City yard	LA City	14	177	53.7	57.9	40.6	40.6	5495, 13910, 13911, and 5703	Yes	91%	Large industrial lot, some commercial buildings. Vehicles and machinery parked on-site. Proposing diversion from both LA River and pipe upstream, though future phases should consider the suitability of diverting from the river directly. Alternatively, several closer links that are also adjacent to the property should be considered instead.	$44.80
11	Parcel	2746-008-900	21050 Plummer St, Chatsworth, CA 91311	Aggeler Community Day School	LA Unified School Dist	12	62	59.4	77.4	34.4	34.4	992 and 956	No	95%	Parking lots and grassy areas dispersed throughout northern portion of property. Large grassy area in southern portion.	$38.00
12	Parcel	5104-002-900, 5104-004-900, 5104-004-901, 5104-004-902, 5104-004-903, 5104-004-904, 5104-004-905, 5104-004-906, 5104-004-907, 5104-004-908, 5104-004-909, 5104-004-910, 5104-004-911, 5104-004-912, 5104-004-913, 5104-004-914, 5104-004-915	1225 E 52nd St, Los Angeles, CA 90011	Hooper Avenue Elementary School and Children's Center	LA Unified School Dist	9	126	40.9	44.0	28.2	28.2	6490 and 6462	Yes	91%	Large parking lots and paved school yard across both campuses.	$31.10
13	Parcel	5108-011-909, 5108-011-910	750 E 49th St, Los Angeles, CA 90011	49th Street Elementary School	LA Unified School Dist	9	132	43.2	46.6	23.5	23.5	6445 and 13885	Yes	84%	Large paved playground area. Could consider diverting from link 13885, though the distance exceeds the target maximum of 300 ft.	$26.00
14	Parcel	2307-021-900	12201 Sherman Way, North Hollywood, CA 91605	Los Angeles Fleet Services Major Repair Facility	LA City	2	172	55.7	89.6	22.2	22.2	8264	No	63%	Large maintenance lot with vehicles on-site. Site is located in a closed Brownfield site which will need to be evaluated during future phases.	$24.50

Table C-1. Upper Los Angeles River Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
15	Parcel	2787-005-900	17960 Chase St, Northridge, CA 91325	Northridge Middle School	LA Unified School Dist	12	26	261.2	0.0	18.8	18.8	1458 and 8223	No	95%	Large open space, grass yards, parking lots. Another potential diversion from storm drain east of property on Zelzah Ave.	$20.80
16	Parcel	5210-011-900, 5210-011-907, 5210-011-905, 5210-011-902, 5210-011-901, 5210-011-904, 5210-011-903, 5210-011-906	2025 Griffin Ave, Los Angeles, CA 90031	Griffin Ave Elementary School	LA Unified School Dist	1	33	18.7	2.8	22.8	18.7	4535 and 4488	Yes	74%	Decently sized paved playground area and grassy area.	$20.70
17	Parcel	5204-011-903	2303 Workman St, Los Angeles, CA 90031	Lincoln Height Recreation Center	LA City	1	29	34.5	1.6	17.8	17.8	4488 and 4435	Yes	74%	Decent sized parking lot and grassy area separated with basketball court in between.	$19.70
18	Parcel	5105-005-900, 5105-005-901, 5105-004-900, 5105-004-901, 5105-005-901, 5105-006-900, 5105-006-901, 5105-006-902, 5105-008-901, 5105-008-903, 5105-008-905, 5106-027-900, 5106-027-901	5330 Morgan Ave #578, Los Angeles, CA 90011	Campos Residence	LA City Housing Authority	9	121	46.5	50.1	17.6	17.6	6660 and 6614	Yes	91%	Lawns, open spaces, and parking lots throughout the community.	$19.50
19	Parcel	2408-031-901	8960 Herrick Ave, Sun Valley, CA 91352	LAUSD Maintenance and Operations North 2	LA Unified School Dist	6	197	73.5	118.3	17.1	17.1	11619 and 10925	Yes	95%	Large parking areas throughout property.	$19.00
20	Parcel	2634-016-904, 2634-016-905, 2634-018-901, 2634-019-900	8501 Arleta Ave, Sun Valley, CA 91352	Robert Lewis High School, Polytechnic High School, Byrd Middle School	LA Unified School Dist	6	207	152.9	246.2	16.8	16.8	1463	No	95%	Large open spaces (baseball fields, football fields, etc.) and parking lots. Available flow is limited due to existing project (Fernangeles Recreation Center) west of the site and it's proximity to the Tujunga spreading grounds. Site is located in a closed Brownfield site which will need to be evaluated during future phases.	$18.60
21	Parcel	2519-017-900, 2519-018-900, 2519-019-900, 2522-015-901	130 N Brand Blvd, San Fernando, CA 91340	San Fernando Middle School	LA Unified School Dist	0	59	112.5	90.1	15.2	15.2	11341	Yes	84%	Large grassy areas, parking lots throughout school property. Can potentially divert flow from line on Fourth St as well.	$16.90

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
22	Parcel	2407-021-901, 2405-016-901	10153 Arminta St, Sun Valley, CA 91352	De Garmo Park	LA City	2	817	13.7	14.8	19.6	14.8	10897, 10880, and 10902	Yes	90%	Park with grassy areas and walkway.	$16.40
23	Parcel	2557-023-900, 2557-024-900, 2557-024-909, 2557-027-909, 2557-023-901	10625 Plainview Ave, Tujunga, CA 91042	Verdugo Hills High School	LA Unified School Dist	7	95	169.2	272.5	13.4	13.4	11069 and 11731	Yes	68%	Clustered buildings, outdoor track, baseball and softball field, 4 tennis courts, medium paved concrete area, small parking lot, disjointed grassy areas.	$14.80
24	Parcel	2632-026-900	8358 San Fernando Rd, Sun Valley, CA 91352	Sun Valley Metrolink Station	LA City	6	259	37.3	60.0	13.0	13.0	1515 and 10910	Yes	95%	Large parking lot for Metrolink station.	$14.50
25	Parcel	6054-029-920	419 W 98th St, Los Angeles, CA 90003	Charles W. Barrett Elementary School	LA Unified School Dist	8	61	72.8	61.9	12.3	12.3	13876 and 13881	Yes	84%	Large paved playground area, buildings are clustered, small parking lot.	$13.60
26	Parcel	5108-027-906	4410 McKinley Ave, Los Angeles, CA 90011	George Washington Carver Middle School	LA Unified School Dist	9	146	67.8	73.0	12.2	12.2	6381 and 2872	Yes	84%	Parcel is 60% buildings. Remainder is open field, paved playground area, and small garden. Could consider link 2872 for additional flow, though it is a greater distance from the site.	$13.50
27	Parcel	6037-002-909	8715 La Salle Ave, Los Angeles, CA 90047	La Salle Ave Elementary School	LA Unified School Dist	8	114	53.4	57.6	11.6	11.6	7383 and 7316	Yes	84%	50% buildings, 50% paved playground area.	$12.90
28	Parcel	2324-002-900	12544 Saticoy St S, North Hollywood, CA 91605	LADOT Branch Office	LA City	2	187	29.4	47.3	11.6	11.6	1942	No	63%	Large City-owned parking lot. Link 1942 is across the Southern Pacific RR tracks on Raymer St so feasibility will be considered in future phases.	$12.90
29	Parcel	5113-007-907, 5113-008-912	429 E 42nd Pl., Los Angeles, CA 90011	Gilbert Lindsay Community Center Park	LA City	9	148	140.1	150.9	11.5	11.5	5574, 6306, and 6229	Yes	84%	1 baseball field, 2 soccer fields, open grassy area, large parking lot, ~1/3 clustered buildings.	$12.80
30	Parcel	2680-011-900	10900 Hayvenhurst Ave, Granada Hills, CA 91344	Tulsa Street Elementary School	LA Unified School Dist	12	172	90.2	97.2	10.8	10.8	604 and 592	No	90%	Large paved playground area and grassy area.	$12.10
31	Parcel	2651-013-908, 2651-013-901,	14839 Rayen St, Panorama	Alta California Elementary	LA Unified	6	193	10.0	10.7	51.0	10.7	1315, 1327, and 1260	Yes	53%	School with grassy area and large paved playground. Link 1260 is an open	$12.00

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
		2651-013-905, 2651-013-907, 2651-013-906, 2651-013-910, 2651-013-909	City, CA 91402	School	School Dist										channel.	
32	Parcel	6074-010-906, 6074-010-907, 6074-010-900, 6074-010-905, 6074-010-908	10811 S Main St, Los Angeles, CA 90061	Los Angeles Fire Department Station 64	LA City	8	73	6.6	10.6	42.6	10.6	7649	Yes	84%	Sizeable parking lot.	$11.90
33	Parcel	5107-005-909	1447 E 45th St, Los Angeles, CA 90011	Ascot Avenue Elementary School	LA Unified School Dist	9	162	43.6	46.9	9.5	9.5	2870	Yes	91%	Mostly buildings. Small parking lot connected to paved playground area. Some construction on site, unclear if construction is complete.	$10.60
34	Parcel	5117-001-900	1569 E 32nd St, Los Angeles, CA 90011	Nevin Ave Elementary School	LA Unified School Dist	9	184	26.7	28.8	8.9	8.9	6185 and 6099	Yes	91%	Large asphalt schoolyard and parking lot. Second link on Compton Ave (6099) that can be diverted from for additional capture. Portion of the site is in an open Brownfield site which will need to be evaluated during future phases to determine suitability.	$9.90
35	Parcel	2651-014-901, 2651-014-900	9075 Willis Ave, Panorama City, CA 91402	Primary Academy for Success CSPP	LA Unified School Dist	6	202	9.8	10.5	8.3	8.3	1131, 1315 and 1327	Yes	53%	Parcel is primarily buildings with a narrow paved playground/grassy area, medium parking lot in northeast corner.	$9.30
36	Parcel	2779-022-902	21444 Parthenia St, Canoga Park, CA 91304	Parthenia Park	LA City	3	50	20.4	11.7	8.2	8.2	1428, 1353, and 1412	Yes	90%	Small grassy area with playground.	$9.20
37	Parcel	6084-012-900	11610 Stanford Ave, Los Angeles, CA 90059	116th Street Elementary School	LA Unified School Dist	15	101	27.4	29.6	7.6	7.6	6900 and 7775	Yes	63%	50% buildings, 50% paved playground area.	$8.60
38	Parcel	6073-023-902, 6073-023-901	234 E 112th St, Los Angeles, CA 90061	Samuel Gompers Middle School	LA Unified School Dist	8	Range 77-80	158.2	170.4	7.4	7.4	7706, 7747	Yes	84%	Parking lot on northern side of E 112th St, large grassy areas and asphalt school yard, empty lot on eastern boundary of S Main St. Has substantial space for potential subsurface infiltration.	$8.30
39	Parcel	2733-024-900	17340 W SAN JOSE ST 91344	Patrick Henry Middle School	LA Unified School Dist	12	126	172.1	185.3	6.8	6.8	13181 and 671	No	80%	Large open field, paved playground area, and parking lot.	$7.60

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
40	Parcel	2626-013-900	13000 Montague St, Arleta, CA 91331	Montague Elementary School & Montague Charter Academy	LA Unified School Dist	7	317	67.3	108.3	6.6	6.6	506 and 999	No	87%	Small grassy area next to small paved playground area. Also two separate parking lots on opposite corners of property.	$7.40
41	Parcel	5113-029-903, 5113-029-908, 5113-029-909, 5113-029-910, 5113-029-911, 5113-029-912, 5113-029-913, 5113-029-914, 5113-029-907, 5113-029-906, 5113-029-905, 5113-029-904, 5113-029-900	4000 S Main St, Los Angeles, CA 90037	Wallis Annenberg High School	LA Unified School Dist	9	141	6.0	6.4	6.0	6.0	6234	Yes	89%	Parcel crowded with buildings but paved courtyard in the center. Diversion potential at intersection of Woodlawn and W Martin Luther King Jr Blvd.	$6.70
42	Parcel	2316-017-900, 2316-017-904, 2316-017-908, 2316-017-907, 2316-017-912, 2316-017-901, 2316-017-903, 2316-017-910, 2316-017-909, 2316-017-905, 2316-017-902, 2316-017-906, 2316-017-911	7451 Camellia Ave, North Hollywood, CA 91605	Camellia Avenue Elementary School	LA Unified School Dist	2	171	20.4	32.9	5.7	5.7	1909	Yes	59%	Large paved playground area and parking lot.	$6.40
43	Parcel	2336-006-900, 2336-009-900, 2336-010-900	6501 Fair Ave, North Hollywood, CA 91606	Fairview Elementary School	LA Unified School Dist	2	154	47.3	76.1	5.3	5.3	2428 and 2507	Yes	79%	Medium paved playground area surrounded by small buildings and trailers.	$6.00
44	Parcel	2321-005-906	7063 Laurel Canyon Blvd, North Hollywood, CA 91605	LAFD Station 89	LA City	2	159	36.1	58.1	5.1	5.1	2206 and 2082	No	63%	Project site is a fire station. Large impervious areas. Consideration should be given to impacts to fire station operations. Site is located in a closed Brownfield site which will need to be evaluated during future phases.	$5.70
45	Parcel	2559-006-900	7960 Foothill Blvd, Tujunga, CA 91040	Possible City yard	LA City	7	45	6.3	4.1	5.0	5.0	11730	No	68%	Tank with unknown contents on site, two small buildings and small open grassy area. Consideration should be taken to ensure the site is suitable.	$5.60
46	Parcel	6075-023-900	510 W 111th	Figueroa St	LA	8	87	31.9	34.3	4.9	4.9	7723	Yes	84%	Approximately 40% of the site is a large	$5.60

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			St, Los Angeles, CA 90044	Elementary School	Unified School Dist										paved playground area; remainder is buildings, parking lot, and disjointed grassy areas.	
47	Parcel	6073-019-904, 6073-019-901, 6073-019-909, 6073-019-905, 6073-019-902, 6073-019-900, 6073-019-907, 6073-019-908, 6073-019-906, 6073-019-903	320 E 111th St, Los Angeles, CA 90061	Animo Locke Charter High School #2	LA Unified School Dist	8	76	3.3	5.4	4.9	4.9	7708	Yes	84%	Parking lot plus disjointed grassy areas.	$5.50
48	Parcel	5117-013-900	1501 E 41st St, Los Angeles, CA 90011	Ross Snyder Recreation Center	LA City	9	179	157.4	169.5	4.9	4.9	6239	Yes	91%	Three soccer fields, tennis court, basket ball court, swimming pool, recreation center building, and grassy area.	$5.50
49	Parcel	2651-009-900, 2651-009-901	9132 N TOBIAS AVE 91402	Tobias Avenue Park	LA City	6	202	11.3	12.2	4.9	4.9	1134 and 1161	No	53%	Grassy areas with two half-basketball courts and a playground	$5.50
50	Parcel	5204-006-900	221 S Ave 22, Los Angeles, CA 90031	Public Parking Lot 657	LA City	1	28	4.7	0.1	6.9	4.7	4435	Yes	74%	Small public parking lot (not a parking garage).	$5.30
51	Parcel	6083-018-900	220 E 118TH ST 90061	118th Street Elementary School	LA Unified School Dist	15	90	39.8	42.9	4.6	4.6	7778 and 7782	Yes	63%	Small grassy area next to large paved playground area as well as parking lot. Link 7782 is approximately 400 ft away, which exceeds the target maximum of 300 ft, but could be considered.	$5.20
52	Parcel	2570-014-900	6410 W OLCOTT ST 91042	Mountain View Elementary School	LA Unified School Dist	7	108	64.5	103.8	4.5	4.5	10985 and 10989	No	58%	Small grassy area next to a large paved playground area.	$5.10
53	Parcel	2625-004-900	9377 Vena Ave, Arleta, CA 91331	Vena Avenue Elementary School	LA Unified School Dist	6	264	55.3	59.5	4.5	4.5	1048	No	87%	Paved playground area.	$5.10
54	Parcel	2748-040-900	20655 Plummer St, Chatsworth, CA 91311	West Valley Animal Shelter	LA City	12	66	38.1	55.4	4.4	4.4	951	No	85%	Small grassy area on northeast corner. Small parking lot on southeast corner.	$5.00
55	Parcel	5204-014-900	2530 N	Lincoln Heights	LA City	1	28	5.2	0.1	4.4	4.4	4433	Yes	74%	Small grassy area and small parking lot	$5.00

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			WORKMAN ST 90031	Branch Library											separated by building.	
56	Parcel	2404-026-900	8642 Sunland Blvd, Sun Valley, CA 91352	Sun Valley Youth Arts Center/Stone House	LA City	6	250	4.2	6.7	4.2	4.2	10917	Yes	90%	Small grassy area divided in half by stone building. Small parking lot. Slightly disjointed. Downstream of an existing BMP; volume to be confirmed during next phase.	$4.80
57	Parcel	5210-013-905, 5210-013-906, 5210-013-907, 5210-013-908, 5210-013-909, 5210-013-910, 5210-013-911, 5210-013-912, 5210-013-913	2425 Alhambra Ave, Los Angeles, CA 90031	US Post Office	LA City	14	45	4.0	1.8	58.9	4.0	8398	Yes	74%	Large parking lot.	$4.60
58	Parcel	5593-029-900, 5593-030-903, 5593-002-904, 5593-030-904	3900 Chevy Chase Dr, Los Angeles, CA 90039	Dept of Recreation & Parks, City of Los Angeles	LA City	13	39	3.9	1.6	11.5	3.9	11914	Yes	85%	Large site with available space for subsurface infiltration. Buildings and storage for maintenance vehicles, and parking lot in the center.	$4.40
59	Parcel	5210-025-905, 5210-025-906	3118 N Main St, Los Angeles, CA 90031	Possible vacant lot	LA City	14	45	3.8	1.7	56.8	3.8	4588	Yes	74%	Empty grassy area.	$4.30
60	Parcel	2314-007-901, 2314-007-900	7935 Vineland Ave, Sun Valley, CA 91352	Sun Valley Branch Library	LA City	6	494	4.0	6.4	3.4	3.4	8245	Yes	79%	Medium sized parking lot adjacent to library.	$3.80
61	Parcel	2409-004-901	10765 Strathern St, Sun Valley, CA 91352	Roscoe Elementary School	LA Unified School Dist	2	645	58.7	94.5	3.3	3.3	1652 and 131	Yes	79%	Large asphalt school yard and outdoor parking lot.	$3.80
62	Parcel	2620-014-900, 2620-014-901, 2620-014-902, 2620-014-903, 2620-014-904	13520 Van Nuys Blvd, Pacoima, CA 91331	Pacoima City Hall	LA City	7	195	2.6	4.1	3.2	3.2	11184	No	91%	Parking lot and small grassy area have the potential to implement subsurface infiltration. Site is located in an oil and gas area which should be evaluated during future phases.	$3.70
63	Parcel	2618-023-901	13605 Van Nuys Blvd, Pacoima, CA 91331	Pacoima Branch Library	LA City	7	180	4.3	6.9	3.2	3.2	655	Yes	91%	Potential subsurface infiltration under library parking lot. Site is located in an oil and gas area which should be evaluated during future phases.	$3.70

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
64	Parcel	5205-019-900	2661 Pasadena Ave, Los Angeles, CA 90031	California Children's Academy	LA Unified School Dist	1	29	3.5	0.2	3.1	3.1	4312	Yes	74%	School yard and parking lot on-site.	$3.50
65	Parcel	5115-019-900, 5115-019-901, 5115-019-902, 5115-019-903, 5115-019-904, 5115-019-905, 5115-020-916, 5115-020-917, 5115-020-918, 5115-020-919, 5115-020-920	899 E 42nd Pl., Los Angeles, CA 90011	Harmony Elementary School	LA Unified School Dist	9	156	23.1	24.9	3.0	3.0	6305	Yes	84%	Large asphalt schoolyard, parking lot, and grassy area	$3.50
66	Parcel	6061-002-900	843 W 104th Pl, Los Angeles, CA 90044	Little Green Acres Park	LA City	8	79	2.8	3.0	13.1	3.0	7613	Yes	84%	Community Garden.	$3.50
67	Parcel	5107-008-900	4504 S Central Ave, Los Angeles, CA 90011	Vernon - Leon H. Washington Jr. Memorial Branch Library	LA City	9	149	2.8	3.0	9.2	3.0	6397	Yes	91%	Small parking lot with potential for subsurface infiltration.	$3.50
68	Parcel	5171-002-900, 5171-003-900, 5171-001-900, 5171-001-901, 5171-001-902, 5171-001-903, 5171-001-904, 5171-001-905, 5171-001-906	1526 East 4th St, Los Angeles, CA 90033	Pico Gardens affordable housing	LA City Housing Auth	14	160 to 169	66.2	71.3	2.7	2.7	5301 and 5378	Yes	91%	Parcel is largely covered by buildings so actual available space for subsurface infiltration is limited. Potential project areas exist on three large lawn areas in northern parcel.	$3.10
69	Parcel	5171-015-902	651 S Mission Rd, Los Angeles, CA 90023	Small Park near pump station	LA City	14	176	8.9	9.6	1.8	1.8	5455	Yes	91%	Landscaped areas.	$2.10
70	Parcel	2645-021-905	14094 Van Nuys Blvd, Arleta, CA 91331	Empty Lot	LA City	6	187	4.9	5.3	1.3	1.3	862	No	87%	Grassy area with potential for subsurface infiltration. Site is located in an oil and gas area which should be evaluated during future phases.	$1.60
71	Roadway		108th St from S Vermont Ave to S Main St, Avalon	108th St from S Vermont Ave to S Main St, Avalon Blvd to	Roadway	8	86	0.0	19.5	7.9	7.9	6889	Yes	84%	Diversion from link 6889 (near intersection with S Grand Ave) for street alignment between Vermont Ave and 110 freeway. Potential diversion against street	$8.90

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			Blvd to S Central Ave	S Central Ave											grade. Limited by available runoff volume.	
72	Roadway		108th St from S Vermont Ave to S Main St, Avalon Blvd to S Central Ave	109th St from S Vermont Ave to S Main St, Avalon Blvd to S Central Ave	Roadway	8	76	0.0	9.5	30.9	9.5	6885	Yes	84%	Diversion along 108th St near intersection with S Broadway Ave. Reduced volume from 6889 accounted for in upstream segments of the street.	$10.60
73	Roadway		108th St from S Vermont Ave to S Main St, Avalon Blvd to S Central Ave	110th St from S Vermont Ave to S Main St, Avalon Blvd to S Central Ave	Roadway	8	73	0.0	27.7	280.6	27.7	6894	Yes	74%	Diversion at Compton Creek on Avalon Blvd for street alignment east of Avalon Blvd. Subtracted flow from upstream segments.	$30.60
74	Roadway		Arleta Ave from Mercer St to Carl St	Arleta Ave from Mercer St to Carl St	Roadway	6	156	0.0	12.9	13.5	12.9	731 and 758	No	91%	Several links to pull from at intersections. A portion of the site is in an oil and gas area.	$14.30
75	Roadway		Arleta Ave from Carl St to Terra Bella St	Arleta Ave from Carl St to Terra Bella St	Roadway	6	205	0.0	17.0	175.7	17.0	487	No	87%	Long channel parallel to road. A segment of this area is in an oil and gas area.	$18.90
76	Roadway		Arleta Ave from Terra Bella St to Kagel Canyon St	Arleta Ave from Terra Bella St to Kagel Canyon St	Roadway	6	262	0.0	12.8	173.3	12.8	926	No	87%	Long channel parallel to road.	$14.20
77	Roadway		Arleta Ave from Kagel Canyon St to Montague St	Arleta Ave from Kagel Canyon St to Montague St	Roadway	6	280	0.0	21.6	162.2	21.6	998	No	87%	Long channel parallel to road.	$23.90
78	Roadway		Arleta Ave from Montague St to Wentworth St	Arleta Ave from Montague St to Wentworth St	Roadway	6	242	0.0	20.2	156.0	20.2	1094	No	87%	Long channel parallel to road.	$22.40
79	Roadway		Arleta Ave from Wentworth St to Sheldon St	Arleta Ave from Wentworth St to Sheldon St	Roadway	6	162	0.0	18.1	87.6	18.1	1247	No	87%	Tool identified link 520 is used by Tujunga Pumping Station & Spreading Grounds, Link 1340 is a surface flow. Potential to divert from link 1247 (channel) which has 87.64 ac-ft available. Note small gap in usable roadway between Tonopah St and Tujunga Wash Channel.	$20.10

Table C-1. Upper Los Angeles River Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
80	Roadway		Avalon Blvd from E. Jefferson Blvd to E 43rd St	Avalon Blvd from E. Jefferson Blvd to E 43rd St	Roadway	9	160	0.0	20.4	24.5	20.4	6033	Yes	84%	Diversion from 62" drain (link 6033) on E 33rd St/S San Pedro St, one block to the north. Volume limited to not exceed 20 ac-ft though potential for additional capture volume. Flow from same storm drain is accounted for upstream at Central Ave (link id 8875); this volume has been subtracted.	$22.60
81	Roadway		Avalon Blvd from E 43rd St to E 51st St	Avalon Blvd from E 43rd St to E 51st St	Roadway	9	146	0.0	19.2	12.4	12.4	6310	Yes	84%	Diversion from 36" drain (link 6310) running under Avalon Blvd.	$13.80
82	Roadway		Avalon Blvd from E 51st St to E 62nd St	Avalon Blvd from E 51st St to E 62nd St	Roadway	9	128	0.0	8.7	7.7	7.7	6450	Yes	84%	Storm drain turns west on E 51st St. Diversion from 54" storm drain (link 6450) at intersection with E 51st St. Small gaps in alignment between E 59th St and E 59th Pl as well as E 60th St and E 61st St. Link is separate hydraulically from links 6310 and 13886.	$8.70
83	Roadway		Avalon Blvd from E 55th St to E Slauson Ave	Avalon Blvd from E 55th St to E Slauson Ave	Roadway	9	125	0.0	6.8	16.3	6.8	13886	Yes	84%	Diversion from 48" drain (link 13886) running under Avalon Blvd.	$7.70
84	Roadway		Avalon Blvd from E Slauson Ave to E 62nd St	Avalon Blvd from E Slauson Ave to E 62nd St	Roadway	9	124	0.0	8.2	5.8	5.8	8672	Yes	84%	Diversion from 36" drain (link 8673/8672) at intersection with E Slauson Ave.	$6.50
85	Roadway		Avalon Blvd from E Florence Ave to E 77th St	Avalon Blvd from E Florence Ave to E 77th St	Roadway	9	90	0.0	12.2	11.2	11.2	8696	Yes	84%	Break in street selection alignment until E Florence Ave. Diversion from storm drain at intersection with E Florence Ave, under Avalon Blvd. Limited by flow. Site is near a closed Brownfield site which should be considered in future phases of evaluation.	$12.40
86	Roadway		Avalon Blvd from E 77th St to E 83rd St	Avalon Blvd from E 77th St to E 83rd St	Roadway	9	66	0.0	8.7	4.2	4.2	7244	Yes	85%	Diversion from 36" drain (link 7244) running under Avalon Blvd.	$4.70
87	Roadway		Avalon Blvd from E 94th St to E Century Blvd	Avalon Blvd from E 94th St to E Century Blvd	Roadway	9	52	0.0	13.1	178.6	13.1	7525	Yes	91%	Break in street selection alignment until E 94th St. Diversion from storm drain (link 7525) under Avalon Blvd. Removed flow used at upstream street segments. Site is near a closed Brownfield site which should be considered in future phases of evaluation.	$14.60
88	Roadway		Avalon Blvd	Avalon Blvd	Roadway	8	65	0.0	30.0	167.4	30.0	7587	Yes	91%	Diversion from storm drain (link id 7587)	$33.20

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			from E Century Blvd to E 108th St	from E Century Blvd to E 108th St											under Avalon Blvd. Both the median and road may provide opportunities for subsurface infiltration. Limited by 30 ac-ft volume.	
89	Roadway		Avalon Blvd from E 108th St to E Lanzit Ave	Avalon Blvd from E 108th St to E Lanzit Ave	Roadway	8	71	0.0	18.6	297.9	18.6	6894	Yes	74%	Diversion from concrete channel (link id 6894) on intersection Avalon Blvd/E 108th St. High volume in channel.	$20.60
90	Roadway		Avalon Blvd from E Lanzit Ave to E 116th Pl (105 Freeway)	Avalon Blvd from E Lanzit Ave to E 116th Pl (105 Freeway)	Roadway	15	88	0.0	9.4	6.1	6.1	7725	Yes	84%	Diversion from 66" pipe (link id 7725) at intersection of E 113th St/Unit St, east of Avalon Blvd. Another street project is proposed on Imperial Hwy, could not divert from this link (7748).	$6.80
91	Roadway		Central Blvd from E 33rd St to E 45th St	Central Blvd from E 33rd St to E 45th St	Roadway	9	168	0.0	22.1	13.0	13.0	8875	Yes	91%	Diversion from 57" diameter storm drain (link id 8875) at intersection with E 33rd St. Site is located near a closed Brownfield site; further evaluation to occur during next phase.	$14.40
92	Roadway		Central Blvd from E 45th St to E 73rd St	Central Blvd from E 45th St to E 73rd St	Roadway	9	150	0.0	61.2	17.4	17.4	8675	Yes	91%	Diversion from pipe running along Central Blvd from link 2873 to 8675 intermittently along street alignment. Limited by runoff volume in pipe. Diversion from adjacent streets may be possible but consideration should be given to other identified sites. Hooper Avenue is hydraulically downstream of Central Blvd, making diversion more difficult.	$19.30
93	Roadway		Central Blvd from E 73rd St to E 87th St	Central Blvd from E 73rd St to E 87th St	Roadway	9	91	0.0	30.2	5.2	5.2	7064	Yes	58%	Diversion from storm drain (link id 7064) at intersection with E 73rd St. Flow is limited by available runoff in pipe.	$5.80
94	Roadway		Central Blvd from E 87th St to E Century Blvd	Central Blvd from E 87th St to E Century Blvd	Roadway	9	60	0.0	20.0	32.8	20.0	7527	Yes	90%	Diversion from unknown diameter storm drain (link id 7527) running south on S Central Ave along street alignment. Limited to 20 ac-ft but may have the potential for additional volume.	$22.20
95	Roadway		Central Blvd from E Century Blvd to Southern Pacific RR	Central Blvd from E Century Blvd to Southern Pacific RR	Roadway	8	71	0.0	34.1	41.6	20.0	7685	Yes	91%	Flow is diverted from storm drain (link id 7592) under Central Ave. 20 ac-ft of flow is being used at the upstream street segments. 21.6 ac-ft of available flow remaining in pipe running along Central Ave. Limited to 20 ac-ft but may have the potential to manage more flow.	$22.20
96	Roadway		Central Blvd	Central Blvd	Roadway	15	104	0.0	18.3	350.2	18.3	7711	Yes	84%	Diversion from open channel at E Lanzit	$20.30

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Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			from Southern Pacific RR to E Imperial Hwy	from Southern Pacific RR to E Imperial Hwy											Ave (link 7711).	
97	Roadway		Central Blvd from E Imperial Hwy to E 119th St	Central Blvd from E Imperial Hwy to E 119th St	Roadway	15	101	0.0	15.1	348.6	15.1	7760	Yes	84%	Diversion from large concrete channel (link 7760).	$16.80
98	Roadway		Glenoaks Blvd from Astoria St to Beaver St	Glenoaks Blvd from Astoria St to Beaver St	Roadway	7	97	0.0	11.7	7.1	7.1	11477, 11476, and 11454	Yes	84%	Requires 3 diversions to fully maximize site's available capacity. 4.05 ac-ft from link 11477 + 5.06 ac-ft from link 11768 + 3.21 ac-ft from link 11790. Diversion from 11768 appears be against grade. Link 11495 is one large block away from the road segment, potentially exceeding maximum target distance.	$7.90
99	Roadway		Glenoaks Blvd from Branford Ave to Northwest of Tujunga Wash Channel	Glenoaks Blvd from Branford Ave to Northwest of Tujunga Wash Channel	Roadway	6	159	0.0	12.8	8.2	8.2	790, 716, and 790	Yes	90%	Tool identified link is surface flow. Alternative links 716 (potentially beyond the 300 ft target maximum distance) and 490 (downstream) provide less than 2.25 ac-ft.	$9.10
100	Roadway		Glenoaks Blvd from Wheatland Ave to Roscoe Blvd	Glenoaks Blvd from Wheatland Ave to Roscoe Blvd	Roadway	6	504	0.0	10.8	97.1	10.8	10910	Yes	90%	Single diversion from link 10920 (channel).	$12.00
101	Roadway		Imperial Highway from Vermont Ave to Harbor Freeway (110)	Imperial Highway from Vermont Ave to Harbor Freeway (110)	Roadway	8	100	0.0	17.5	3.1	3.1	7758	Yes	84%	Four lane highway with turn lane in the center with parking on each side. Diversion from 45" gravity main at Figueroa Street. Currently attributed to Link 7758 and Link 7753. This site should be considered along with the identified parcel APN 6075-023-900, as this parcel is downstream of this site. Also should be evaluated along with segment of Imperial highway. Site is located near a closed Brownfield site which will be evaluated in future phases.	$3.60
102	Roadway		Imperial Highway from South Avalon Boulevard to South Central	Imperial Highway from South Avalon Boulevard to South Central Avenue	Roadway	15	95	0.0	31.1	272.7	31.1	7750 and 7760	Yes	84%	Four lane highway with turn lane in the center and parking on each side. This site could capture link 7750, and potentially channel link 7760.	$34.40

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Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			Avenue													
103	Roadway		Imperial Highway from South Central Avenue to Success Ave	Imperial Highway from South Central Avenue to Success Ave	Roadway	15	101	0.0	13.4	366.8	13.4	7760	No	84%	Diversion from channel (link id 7760). High runoff volume. Site is located near a closed Brownfield site which will be evaluated in future phases.	
104	Roadway		Imperial Highway from Success Ave to South Grandee Ave	Imperial Highway from Success Ave to South Grandee Ave	Roadway	15	93	0.0	12.8	138.7	12.8	7761	Yes	90%	Four lane highway with turn lane in the center and parking on each side. Diversions from 57'' gravity main at intersection with Wadsworth Ave, 39'' gravity main at South Central Ave, 84'' gravity main at Success Ave, and 27'' at South Grandee Ave.	
105	Roadway		Lassen St from Desering Ave to De Soto Ave	Lassen St from Desering Ave to De Soto Ave	Roadway	12	51	0.0	21.6	9.5	9.5	849	No	95%	Divert from 52" storm drain under Lassen St (link id 849). The paired link (13494) is an open channel. Limited by available runoff volume.	
106	Roadway		Lassen St from De Soto Ave to Lurline Ave	Lassen St from De Soto Ave to Lurline Ave	Roadway	12	76	0.0	11.7	14.2	11.7	848	No	85%	Divert from 60" storm drain at intersection with De Soto Ave (link id 848). Limited by available drywell capture volume.	
107	Roadway		Lassen St from Lurline Ave to Mason Ave	Lassen St from Lurline Ave to Mason Ave	Roadway	12	73	0.0	11.7	6.7	6.7	818	No	85%	Divert from 60" storm drain running under Lassen St. Limited by available runoff volume.	
108	Roadway		Lassen St from Mason Ave to Winnetka Ave	Lassen St from Mason Ave to Winnetka Ave	Roadway	12	66	0.0	14.1	23.9	14.1	841	No	85%	Divert from 81" storm drain (link id 841) running under Lassen St. Limited at 20 ac-ft.	
109	Roadway		Lassen St from Winnetka Ave to Corbin Ave	Lassen St from Winnetka Ave to Corbin Ave	Roadway	12	52	0.0	13.0	71.3	13.0	907	No	85%	Divert from open channel (link id 907) at intersection with Winnetka Ave. Limited by drywell capture volume.	
110	Roadway		Lassen St from Corbin Ave to Tampa Ave	Lassen St from Corbin Ave to Tampa Ave	Roadway	12	50	0.0	12.6	50.2	12.6	8173	No	85%	Divert from open channel (link id 8173) at intersection with Corbin Ave. Limited by drywell capture volume.	
111	Roadway		Lassen St from Willia Ave to	Lassen St from Willia Ave to Woodman Ave	Roadway	7	70	0.0	9.6	7.8	7.8	489	No	53%	Divert from 81" storm drain around intersection with Natick Ave (link id 489). Limited by drywell capture volume.	

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Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			Woodman Ave													
112	Roadway		Main Street from Jefferson Blvd to W 41st St	Main Street from Jefferson Blvd to W 41st St	Roadway	9	150	0.0	20.6	24.7	20.6	6022	Yes	89%	The same pipe is diverted from on the intersection with Avalon Blvd (link 6033) and Central Ave (link 8875). Volumes used at both segments upstream have been subtracted out of available diversion volume. Diverting from 100" storm drain. Limited to 20 ac-ft but could potentially manage additional flow.	$22.80
113	Roadway		Main Street from W 41st St to W Slauson Ave	Main Street from W 41st St to W Slauson Ave	Roadway	9	138	0.0	12.3	18.3	12.3	6625	Yes	89%	Divert from pipe running under Main St (multiple link numbers with the highest/furthest downstream being 54" storm drain or link id 6625).	$13.70
114	Roadway		Main Street from W Slauson Ave to E 66th St	Main Street from W Slauson Ave to E 66th St	Roadway	9	105	0.0	20.1	39.9	20.1	6760	Yes	84%	Divert from 84" pipe running under Main St (6760). Subtracting flow taken upstream from 6625. Subtracting flow used by parcel project 5113-029-900. Limited at 20 ac-ft. Site is located near a closed Brownfield site which will be evaluated during future phases.	$22.30
115	Roadway		Main Street from E 66th St to E 75th St	Main Street from E 66th St to E 75th St	Roadway	9	88	0.0	20.2	30.7	20.2	6987	Yes	84%	Divert from 84" pipe running under Main St (6987). Subtracting flow taken upstream at 6625 and 6760. Subtracting flow used by parcel project 5113-029-900. Limited at 20 ac-ft.	$22.40
116	Roadway		Main Street from E 75th St to E 82nd Pl	Main Street from E 75th St to E 82nd Pl	Roadway	9	66	0.0	13.6	19.3	13.6	7122	Yes	85%	Divert from 81" pipe running under Main St (7122). Subtracting flow taken upstream at 6625. 6760, and 6987. Subtracting flow used by parcel project 5113-029- 900. Large gap in tool-identified available street alignment from E 82nd Pl to E 94th St. Many BMPs in this area.	$15.10
117	Roadway		Main Street from E 94th St to E 104th St	Main Street from E 94th St to E 104th St	Roadway	8	50	0.0	20.6	4.6	4.6	7562	Yes	91%	Divert from 30" storm drain at intersection of W 94th St and alley way. Limited by available flow.	$5.20
118	Roadway		Plummer St from Jordan Ave to Canoga Ave	Plummer St from Jordan Ave to Canoga Ave	Roadway	12	51	0.0	7.1	5.7	5.7	989	No	89%	Divert from 51" storm drain (link id 989) at intersection with Owensmouth Ave. Limited by available runoff volume.	$6.50
119	Roadway		Plummer St	Plummer St	Roadway	12	65	0.0	20.2	30.7	20.2	956	No	85%	Divert from 81" storm drain at	$22.40

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			from De Soto Ave to Mason Ave	from De Soto Ave to Mason Ave											intersection with De Soto Ave. Site is located near a closed Brownfield site which will be evaluated during future phases.	
120	Roadway		Plummer St from Mason Ave to Oso Ave	Plummer St from Mason Ave to Oso Ave	Roadway	12	61	0.0	9.2	11.1	9.2	976	No	85%	Divert from storm drain directly upstream of link identified by tool.	$10.30
121	Roadway		Plummer St from Oso Ave to Jumilla Ave	Plummer St from Oso Ave to Jumilla Ave	Roadway	12	57	0.0	17.4	72.6	17.4	958	No	85%	Divert from open channel at intersection with Winnetka Ave (link 958).	$19.30
122	Roadway		Plummer St from Jumilla Ave to Tampa Ave	Plummer St from Jumilla Ave to Tampa Ave	Roadway	12	50	0.0	11.5	53.2	11.5	968	No	85%	Divert from open channel at intersection with Winnetka Ave (link 968).	$12.80
123	Roadway		Plummer St from Marley Way to Cedros Ave	Plummer St from Marley Way to Cedros Ave	Roadway	7	176	0.0	10.1	17.8	10.1	497	No	53%	Divert from 60" storm drain at intersection with Marley Way (link 497). Limited by drywell CV. Street segments overlapping large open channel will be infeasible for drywell placement.	$11.30
124	Roadway		Saticoy St from Balboa Blvd to West of Bull Creek	Saticoy St from Balboa Blvd to West of Bull Creek	Roadway	6	109	0.0	10.3	240.0	10.3	1832	Yes	90%	Potential diversion from Bull Creek on east end of project; potentially routing flow against street grade. Note that flow for the most easterly segment in this project is divides between two segments of this road since it crosses under bull creek. Site is located near a closed Brownfield site which will be evaluated during future phases.	$11.50
125	Roadway		Saticoy St from East of Bull Creek to Hayvenhurst Ave	Saticoy St from East of Bull Creek to Hayvenhurst Ave	Roadway	6	112	0.0	7.8	229.8	7.8	1832	Yes	74%	Diversion from Bull Creek (Link 1832).	$8.70
126	Roadway		Saticoy St from Tobias Ave to Tyrone Ave Cul-de-sac	Saticoy St from Tobias Ave to Tyrone Ave Cul- de-sac	Roadway	6	100	0.0	12.3	27.1	12.3	1861	Yes	63%	Diversion from Pacoima Wash. Suggested links appear to be surface flows. This road cuts through a LADWP building complex (parcel 2215-001-910) which is also an identified parcel site. May be sufficient flow for both projects. Note a small gap in the road segment right after Van Nuys Blvd at the gate/entrance to the LADWP building complex.	$13.70
127	Roadway		Saticoy St	Saticoy St from	Roadway	2	209	0.0	8.4	14.6	8.4	1866, 1867	No	63%	This site is limited by access to storm	$9.40

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			from Belair Ave to West of Hollywood Fwy	Belair Ave to West of Hollywood Fwy								or 1923			drains/flow. A single diversion can be taken from link 1923 OR two diversions from links 1866 and 1867 (mutually exclusive) can achieve 7.29 ac-ft of runoff. The link identified by the tool is not feasible because it is on the other side of a major highway.	
128	Roadway		Saticoy St East of Hollywood Fwy to Laurel Canyon Blvd.	Saticoy St East of Hollywood Fwy to Laurel Canyon Blvd.	Roadway	2	217	0.0	25.9	27.3	25.9	144 and 143	Yes	63%	Two diversions to achieve the usable volume. Both options are against grade and potentially distant.	$28.60
129	Roadway		Tujunga Ave from Riverside Dr/Camarillo St to 101 freeway	Tujunga Ave from Riverside Dr/Camarillo St to 101 freeway	Roadway	2	76	0.0	19.5	224.7	19.5	3145	No	63%	Diversion from Tujunga Wash. Site is located near a closed Brownfield site which will be evaluated during future phases.	$21.60
130	Roadway		Tujunga Ave from 101 freeway to Camarillo St (Riverside Dr if looking left of Hollywood Fwy)	Tujunga Ave from 101 freeway to Camarillo St (Riverside Dr if looking left of Hollywood Fwy)	Roadway	2	74	0.0	8.0	2.6	2.6	3160	No	63%	Diversion from link 3160 downstream of the entire segment thus may require diversion against street grade.	$3.10
131	Roadway		Tujunga Ave from Magnolia Blvd to Camarillo St	Tujunga Ave from Magnolia Blvd to Camarillo St	Roadway	2	70	0.0	23.1	222.5	23.1	3113	No	63%	Diversion from Central Branch Tujunga Wash Channel. Potential diversion against grade. Site is located near a closed Brownfield site which will be evaluated during future phases.	$25.60
132	Roadway		Tujunga Ave from Chandler Blvd to Magnolia Blvd	Tujunga Ave from Chandler Blvd to Magnolia Blvd	Roadway	2	83	0.0	10.2	8.4	8.4	13968	No	59%	Diversion from 13968 (52" pipe).	$9.40
133	Roadway		Tujunga Ave from Oxnard St to Burbank Blvd	Tujunga Ave from Oxnard St to Burbank Blvd	Roadway	2	118	0.0	28.9	34.1	28.9	2775	Yes	59%	Site is located near a closed Brownfield site which will be evaluated during future phases.	$31.90
134	Roadway		Tujunga Ave from Vanowen St to Victory	Tujunga Ave from Vanowen St to Victory Blvd	Roadway	2	154	0.0	46.8	22.5	22.5	2488 and 2390	Yes	59%	Diversion from storm drain along the road.	$24.90

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								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			Blvd													
135	Roadway		Tujunga Ave between Peoria St and Bradley Ave, Sun Valley	Tujunga Ave between Peoria St and Bradley Ave, Sun Valley	Roadway	6	204	0.0	74.5	11.4	11.4	1079, 516	Yes	84%	Diversion from storm drain along the road.	$12.70
136	Roadway		Vanowen St from Balboa Blvd to Odessa Ave.	Vanowen St from Balboa Blvd to Odessa Ave.	Roadway	6	52	0.0	19.8	244.3	19.8	2362	Yes	90%	Diversion from Bull Creek bisects this section of roadway. Additional storm drains at the upstream end of this segment could be considered. Potential to capture additional volume.	$21.90
137	Roadway		Vanowen St from Sylmar Ave to Tyrone Ave & Katherine Ave to Hazeltine Ave	Vanowen St from Sylmar Ave to Tyrone Ave & Katherine Ave to Hazeltine Ave	Roadway	2	89	0.0	9.6	46.1	9.6	2304	Yes	63%	Diversion from 120" pipe along Lennox Ave (near the upstream end, but 1 block from the start of the road segment). Note a 1-block gap in feasible road segment selected by tool between Tyrone Ave and Katherine Ave.	$10.70
138	Roadway		Vanowen St from Bellaire Ave to Whitsett Ave	Vanowen St from Bellaire Ave to Whitsett Ave	Roadway	2	153	0.0	17.0	76.2	17.0	2227, 2233, 2220	Yes	63%	Considerations should be given to other identified projects in the vicinity.	$18.90
139	Roadway		Vanowen St from Vantage Ave to Hinds Ave	Vanowen St from Vantage Ave to Hinds Ave	Roadway	2	160	0.0	32.2	79.1	32.2	2293	No	63%	Evaluation in future phases should consider potential overlapping drainage areas and the potential to increase capture at this site. Site is located near a closed Brownfield site which will be evaluated during future phases.	$35.50
140	Roadway		Vanowen St from Troost Ave to Tujunga Ave	Vanowen St from Troost Ave to Tujunga Ave	Roadway	2	160	0.0	20.3	36.0	20.3	2333	Yes	59%	Diversion from 66" pipe at Lankershim Blvd, located a block away from the west end of the road segment.	$22.50
141	Roadway		Victory Boulevard from Balboa Ave to Valjean Avenue	Victory Boulevard from Balboa Ave to Valjean Avenue	Roadway	6	60	0.0	21.1	244.3	21.1	2469	Yes	74%	Six lane highway with center turning lane. Diversion from 48'' gravity main and open channel associated with link 2469 at intersection with Bull Creek. Associated with links 2476, 2469, 2491, 2490, and 2468. Limited to 20 ac-ft but could have the potential to manage more flow.	$23.40
142	Roadway		Victory Boulevard 200 foot stretch to the	Victory Boulevard 200 foot stretch to the west of	Roadway	6	60	0.0	0.8	1.2	0.8	2483	No	63%	Six lane highway with center turning lane. Diversion location from 84'' pipe at intersection with Hayvenhurst Avenue. Potential diversion from link 2483.	$1.00

Table C-1. Upper Los Angeles River Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			west of intersection with Haskell Avenue	intersection with Haskell Avenue												
143	Roadway		Victory Boulevard from Sylmar Avenue to Calhoun Ave	Victory Boulevard from Sylmar Avenue to Calhoun Ave	Roadway	6	78	0.0	7.6	45.3	7.6	2245	Yes	63%	Four lane roadway with center turning lane and parking on each side. Diversion from link 2245 along Lennox Ave.	$8.60
144	Roadway		Victory Boulevard from Hollywood Freeway (170) to Radford Avenue	Victory Boulevard from Hollywood Freeway (170) to Radford Avenue	Roadway	2	145	0.0	20.5	91.3	20.5	2583 and 2578	Yes	63%	Six lane highway with center turning lane. Diversion from 48'' and 57'' gravity main at intersection with Laurel Canyon Boulevard becomes 78" represented by link 2583 (combining runoff from links 2449 and 2450). Could also divert from 2578 at upstream end.	$22.70
145	Roadway		Victory Boulevard from Troost Ave to Tujunga Ave	Victory Boulevard from Troost Ave to Tujunga Ave	Roadway	2	147	0.0	45.6	7.6	7.6	2489	Yes	59%	Four lane roadway with center turning lane and parking on each side. Diversion from storm drain at intersection with Farmdale Ave.	$8.50
146	Roadway		Vineland Ave from Burbank Blvd to Chandler Blvd	Vineland Ave from Burbank Blvd to Chandler Blvd	Roadway	2	96	0.0	8.0	98.6	8.0	99	Yes	63%	Diversion from link 99.	$9.00
147	Roadway		Vineland Ave from Oxnard St to Burbank Blvd	Vineland Ave from Oxnard St to Burbank Blvd	Roadway	2	122	0.0	11.7	90.6	11.7	99	Yes	58%	Diversion from link 99.	$13.10
148	Roadway		Vineland Ave from Erwin St to Oxnard St	Vineland Ave from Erwin St to Oxnard St	Roadway	2	133	0.0	23.5	96.9	23.5	2639	Yes	58%	Diversion from 2639, which extends from Victory to Oxnard St; this length is split into two separate projects to limit size of each project.	$26.00
149	Roadway		Vineland Ave from Victory Blvd to Erwin St	Vineland Ave from Victory Blvd to Erwin St	Roadway	2	141	0.0	11.7	73.4	11.7	2639	Yes	58%	Diversion from 2639, which extends from Victory to Oxnard St; this length is split into two separate projects to limit size of each project.	$13.00
150	Roadway		Vineland Ave from Vanowen St to Victory St	Vineland Ave from Vanowen St to Victory St	Roadway	2	140	0.0	23.4	89.9	23.4	2371	Yes	63%	Diversion from 2371.	$25.90

Table C-1. Upper Los Angeles River Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
151	Roadway		Vineland Ave from Sherman Way to Vanowen St	Vineland Ave from Sherman Way to Vanowen St	Roadway	2	156	0.0	23.4	82.7	23.4	10874	Yes	79%	Site is located near a closed Brownfield site which will be evaluated during future phases.	$25.90
152	Roadway		Vineland Ave from Saticoy St. to Sherman Way	Vineland Ave from Saticoy St. to Sherman Way	Roadway	2	169	0.0	23.4	15.1	15.1	1893 and 10878	Yes	79%	Diversion proposed from two links (appear to be 30" diameters). Adjacent to Hollywood Burbank Airport. Site is located near a closed Brownfield site which will be evaluated during future phases. Site is located near a closed Brownfield site which will be evaluated during future phases.	$16.80
153			Los Angeles River Segment E from Canoga Avenue to White Oak Avenue	LA River Green Infrastructure Project	LASAN	3					N/A					$12.86
154	Roadway		Saticoy Street down to Sherman Way and Tujunga Ave. to Vineland Ave	Sun Valley Neighborhood Green Infrastructure Project	LASAN	2					5.25					$5.40
155	Roadway		Osborne St between San Fernando Rd and Foothill Blvd	Osborne Street Path to Parkway Access Project	StreetsLA	7					N/A					TBD
156	Parcel		13306 Branford Street, Pacoima, CA 91311	Branford Park	LADWP	6					25					$43.36
157	Parcel		10230 Woodman Avenue, Mission Hills, CA 91345	Devonwood Park	LADWP	7					12					$35.26
158	Parcel		12560 FIlmore Street, Pacoima, CA	Hubert H. Humphrey Memorial Recreational	LADWP	7					6.7					$23.55

Table C-1. Upper Los Angeles River Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			91331	Center												
159	Parcel		9540 Van Nuys Boulevard, Panorama City, CA 91402	Mid-Valley Intergenerational Multipurpose Center	LADWP	6					4.5					$18.83
160	Parcel		11300 Glenoaks Boulevard, Pacoima, CA 91331	North East Valley Multipurpose Center	LADWP	7					7.5					$21.69
161	Parcel		8756 Parthenia Place, North Hills, CA 91343	North Hills Community Park	LADWP	6					12.6					$27.08
162	Parcel		8600 Hazeltine Avenue, Panorama City, CA 91402	Panorama City Recreation Center	LADWP	6					11.8					$22.28
163	Parcel		10736 Laurel Canyon Boulevard, Pacoima, CA 91331	Ritchie Valens Park	LADWP	7					9.4					$25.99
164	Parcel		12467 Osborne Street, Pacoima, CA 91331	Roger W. Jessup Park	LADWP	7					7					$23.55
165	Parcel		8825 Kester Avenue, Los Angeles, CA 91404	Sepulveda Recreational Center	LADWP	6					15					$25.85
166	Parcel		14301 Vanowen Street, Van Nuys, CA 91406	Van Nuys Recreational Center	LADWP	6					12					$20.59

Table C-1. Upper Los Angeles River Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
167	Parcel		12229 Slater St. Los Angeles, CA 90059	Compton Creek LFD #2	LA City	8					N/A					$3.30
168	Parcel		LA River at White Oak Ave, Los Angeles, California 91316	White Oak Avenue (LAR LFD-E-021)	LA City	5					20.4					$4.48
169	Parcel		LA River at Reseda Blvd, Los Angeles, California 91316	Reseda Boulevard (LAR LFD-E-048)	LA City	3					20.4					$3.77
170	Parcel		LA River at Tampa Ave, Los Angeles, California 91316	Tampa Avenue (LAR-E-065)	LA City	3					20.4					$2.19
171	Parcel		Intersection of Haynes Street and Lubao Ave, Los Angeles, CA 91303	Haynes Street (LAR LFD-E-077)	LA City	3					33.9					$1.92
172	Parcel		LA River at Winnetka Ave, Los Angeles, California 91316	Winnetka Avenue (LAR LFD-E-081)	LA City	3					6.8					$3.58
173			LA River at De Soto Ave, Los Angeles, California 91316	De Soto Avenue (LAR LFD-E-096)	LA City	3					54.3					$2.01
174			Various	Pollutant Source Characterization Study	LA City	Various					NA					$3.5*
175			Various	Street Sweeping Study	LA City	Various					NA					$0.975*

Table C-1. Upper Los Angeles River Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
										TOTAL CAPTURE VOLUME:	2488 ACRE-FT FROM THE 85TH PERCENTILE 24-HOUR STORM					

Notes:

1: Usable volume is determined as the lesser of max site capacity and estimated runoff to site.

2. Costs assumptions are described in Section 5.4. As described, costs assume $1M per ac-ft managed plus 10 percent additional for design costs and $150,000 per site for geotechnical investigations to determine infiltration rates, depth to groundwater, and other conditions used to determine feasibility.

3. Next phases of evaluation will determine a prioritized list of projects from these opportunity sites. This evaluation will consider scaling and sequencing of projects, which will include an evaluation to ensure projects with overlapping drainage areas are appropriately scaled.

* Estimated study cost

Compliance Target	Volume (acre-ft)
Target (2021 EWMP)	2,862.9

Table C-2. Ballona Creek Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Drainage Grid(s)	Load Reduction Factor (%)	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywell Capacity	Runoff to Site	Usable Volume				
1	Parcel	4251-010-902	11020 W CLOVER AVE 90034	Clover Ave Elementary School	LAUSD	5	62	81.8	71.6	300.3	81.8	5857	534-02	95%	$90.10
2	Parcel	5082-011-903	1245 S QUEEN ANNE PL 90019	Queen Anne Recreation Center. Adjacent to Queen Anne Elementary School	L A City	10	44	65.5	27.7	439.7	65.5	5066	517-05	95%	$72.20
3	Parcel	5073-001-900	1500 S ARLINGTON AVE 90019	Pio Pico Middle School	LAUSD	10	63	65.0	58.5	53.3	53.3	8848	517-06	95%	$58.80
4	Parcel	5538-023-902, 5538-023-905	855 N VERMONT AVE 90029	LA City College. Potentially less available space than estimated.	LACCD[2]	13	20	141.5	0.0	49.7	49.7	4216	493-08	95%	$54.80
5	Parcel	4255-006-900	10650 W ASHBY AVE 90064	Overland Ave Elementary School	LAUSD	5	55	43.3	30.3	94.5	43.3	5469	519-10	87%	$47.80
6	Parcel	5080-032-903, 5078-001-920	3250 SAN MARINO ST 90006	Ardmore Recreation Center and Seoul International Park Recreation Center and Playground	L A City	10	51	38.2	22.9	160.0	38.2	4979	517-03	92%	$42.20
7	Parcel	5094-006-902, 5094-006-905	701 S Catalina St 90005	Robert F. Kennedy Community School	LAUSD	10	27	36.1	0.7	101.9	36.1	4697 and 4795; not in series	517-04	92%	$39.90
8	Parcel	5076-007-913, 5076-007-911, 5076-007-901, 5076-007-903, 5076-007-907, 5076-007-909, 5076-007-912, 5076-007-908, 5076-008-909	2481 W 11th ST 90006	Leo Politi Elementary School	LAUSD	1	60	33.3	29.8	142.3	33.3	13816 and 14165; not in series	516-05	95%	$36.80

Table C-2. Ballona Creek Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Drainage Grid(s)	Load Reduction Factor (%)	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywell Capacity	Runoff to Site	Usable Volume				
9	Parcel	5082-007-903, 5082-007-910	1212 S QUEEN ANNE PL 90019	Queen Ann Place Elementary School. Adjacent to Queen Anne Recreation Center	LAUSD	10	44	32.7	12.9	439.7	32.7	5066	517-05	92%	$36.10
10	Parcel	5075-014-900	1550 S NORMANDIE AVE 90006	Normandie Recreation Center	L A City Playgrou nd	1	71	44.3	47.7	31.7	31.7	14163	517-12	95%	$35.00
11	Parcel	5080-023-900, 5080-016-907, 5080-016-908, 5080-016-910	980 S HOBART BLVD 90006	Hobart Boulevard Elementary School	LAUSD	10	53	28.8	18.0	265.2	28.8	4979 and 4980; not in series	517-07, 517-03	92%	$31.90
12	Parcel	4326-016-900	1403 S FAIRBURN AVE 90024	Fairburn Elementary School	LAUSD	5	47	26.1	13.0	31.3	26.1	14053	519-02	87%	$28.90
13	Parcel	4360-024-900	601 S HOLMBY AVE 90024	Warner Avenue Elementary School	LAUSD	5	43	26.9	10.7	26.1	26.1	14054	491-13	87%	$28.90
14	Parcel	5135-025-900, 5135-025-902, 5135-025-903	1725 S TOBERMAN ST 90015	Toberman Recreation Center	L A City	1	141	27.7	29.8	30.9	25.5	5414, 5426; not in series.	516-09	95%	$28.20
15	Parcel	5123-008-905	822 W 32ND ST 90007	32nd St USC Preforming Arts Magnet	LAUSD	9	136	23.0	24.8	30.4	24.8	8457	537-01	95%	$27.40
16	Parcel	4262-023-900	1831 S STONER AVE 90025	Stoner Avenue Recreation Center	L A City	11	59	119.0	95.3	24.0	24.0	5438	520-16	86%	$26.60
17	Parcel	5090-026-900	890 S LUCERNE BLVD CA 90005	Harold A. Henry Park	L A City	5	36	22.1	4.9	23.7	22.1	4895	517-02	95%	$24.40
18	Parcel	5070-013-905	4861 W VENICE BLVD 90019	Los Angeles Police Department. Only suitable for storage/divers	L A City	10	47	22.0	0.0	512.6	22.0	5169	518-08	95%	$24.40

Table C-2. Ballona Creek Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Drainage Grid(s)	Load Reduction Factor (%)	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywell Capacity	Runoff to Site	Usable Volume				
				ion to sewer due to "poor" soils for infiltration.											
19	Parcel	4006-013-900, 4006-014-900, 4006-011-900	3140 W HYDE PARK BLVD 90043	Hyde Park Elementary School	LAUSD	8	153	94.0	101.2	20.9	20.9	6856, 6874, and 6833. In series, 6856 downstream	558-09 and 558-05	96%	$23.10
20	Parcel	5124-023-911	2328 S ST JAMES PL 90007	F D Lanterman High School	LAUSD	1	146	46.6	50.1	20.6	20.6	5669	516-13	95%	$22.80
21	Parcel	5124-021-906, 5124-020-903	2020 S OAK ST 90007	Norwood Street Elementary School	LAUSD	1	147	30.4	32.8	20.5	20.5	5501	516-13	95%	$22.70
22	Parcel	5120-002-912	123 E 32ND ST 90011	Dolores Huerta Elementary School[6]	LAUSD	9	157	19.4	20.8	19.7	19.7	6009	537-06	95%	$21.80
23	Parcel	5134-007-933, 5138-016-914	1301 S FIGUEROA ST 90015	LA Convention Center and surrounding area	L A City	9	143	151.5	163.1	18.0	18.0	5390 and 8850; 5390 downstream of 8850	516-10	95%	$20.00
24	Parcel	5092-011-904	745 S WILTON PL 90005	Wilton Place Elementary School	LAUSD	5	40	18.0	5.8	87.2	18.0	8406	517-02	92%	$19.90
25	Parcel	5127-029-900	1921 MAPLE AVE 90011	Santee High School	LAUSD	9	167	219.5	236.4	17.8	17.8	5833	537-02	95%	$19.70
26	Parcel	5114-017-923	913 E JEFFERSON BLVD 90011	Synergy Charter Academy[7]	LAUSD	9	164	15.7	16.9	25.8	16.9	8873	537-07, 537-06	95%	$18.70
27	Parcel	5077-026-902	2726 W FRANCIS AVE 90005	Hoover Street Elementary School	LAUSD	1	27	15.4	0.0	116.9	15.4	14166	516-01	95%	$17.00
28	Parcel	5126-014-905	2100 S FLOWER ST 90007	LA Trade Technical College. Parking lot is actually a parking structure;	LACCD	9	156	143.9	155.0	14.1	14.1	5666	516-14	90%	$15.70

Table C-2. Ballona Creek Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Drainage Grid(s)	Load Reduction Factor (%)	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywell Capacity	Runoff to Site	Usable Volume				
				need to evaluate available space.											
29	Parcel	5137-014-903	1000 S GRATTAN ST 90015	10th Street Elementary School	LAUSD	1	100	18.4	19.8	13.5	13.5	5209	516-05	95%	$15.00
30	Parcel	5028-004-902	4000 S LA BREA AVE 90008	Jim Gilliam Rec Center	L A City	10	119	256.6	276.3	12.7	12.7	6106	535-11	90%	$14.10
31	Parcel	5540-003-900	1133 N MARIPOSA AVE 90029	Ramona Elementary School	LAUSD	13	20	11.8	0.0	24.2	11.8	4003	493-04	95%	$13.20
32	Parcel	4127-016-901	5540 W 77TH ST 90045	Open Magnet Charter School	LAUSD	11	78	71.6	77.1	11.5	11.5	7211	559-14	95%	$12.80
33	Parcel	5522-023-903	501 N VAN NESS AVE 90004	Van Ness Avenue Elementary School[5]	LAUSD	13	17	11.3	0.0	10.7	10.7	8385	493-06	85%	$12.00
34	Parcel	5078-024-910	1157 S BERENDO ST 90006	Berendo Middle School	LAUSD	1	60	51.9	42.9	10.7	10.7	5025	517-08	92%	$12.00
35	Parcel	5076-010-900	1130 VERMONT AVE 90006	Olympic Community Police Station	L A City	1	62	24.2	21.2	10.1	10.1	14194	517-08	92%	$11.20
36	Parcel	4204-018-900	9000 Overland Ave 90230	West Los Angeles College. Property has Culver City address	LACCD	0	58	128.7	99.8	9.3	9.3	6279	535-09	90%	$10.40
37	Parcel	4260-005-900, 4260-005-903, 4260-005-902	11505 W OLYMPIC BLVD 90064	LA Fire Station 59	L A City	11	56	9.1	6.6	10.7	9.1	3432, 5435. Not series	519-13	86%	$10.20
38	Parcel	5128-016-904, 5128-016-910	2807 S STANFORD AVE 90011	28th Street Elementary School	LAUSD	9	167	37.3	40.1	9.1	9.1	6032 and 5945; 6032 is downstream	537-06, 537-07	95%	$10.10
39	Parcel	5137-007-913, 5137-007-912	1313 W OLYMPIC	Olympic Primary	LAUSD	1	99	8.2	8.9	11.6	8.9	5111	516-06	95%	$9.90

Table C-2. Ballona Creek Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Drainage Grid(s)	Load Reduction Factor (%)	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywell Capacity	Runoff to Site	Usable Volume				
			BLVD 90015	Center											
40	Parcel	5056-011-903	1827 S HOOVER ST 90006	Pico Union Vest Pocket Park	L A City	1	140	8.1	8.7	8.7	8.7	5353	516-09	95%	$9.80
41	Parcel	4321-015-900	2050 S SELBY AVE 90025	Westwood Elementary School and Westwood Charter Elementary School	LAUSD	5	51	33.3	20.0	8.6	8.6	5159	519-06	87%	$9.60
42	Parcel	5053-026-907, 5053-026-908, 5053-026-903, 5053-026-906	2717 S HALLDALE AVE 90018	Loren Miller Rec Center	CRA3	8	106	7.9	8.6	43.4	8.6	5774	517-15	95%	$9.60
43	Parcel	5056-024-901, 5056-030-904, 5056-025-901	1500 W WASHINGTON BLVD 90007	West Adams Preparatory High School	LAUSD	1	124	68.6	73.8	8.3	8.3	5354, 5399, 5484 in series, 5484 furthest downstream	517-12	95%	$9.30
44	Parcel	5545-017-900	1316 N BRONSON AVE 90028	Joseph Le Conte Middle School	LAUSD	13	17	12.8	0.0	7.9	7.9	3977	493-02	85%	$8.90
45	Parcel	5056-024-901, 5056-030-904, 5056-025-901	151 W 30TH ST 90007	John Adams Middle School	LAUSD	9	155	57.3	61.8	9.8	7.9	5819 downstream of 5964; 5881 independent	537-02	95%	$8.80
46	Parcel	4258-016-900	11330 W GRAHAM PL 90064	Webster Middle School	LAUSD	11	58	261.9	203.0	7.8	7.8	6571	519-13	86%	$8.70
47	Parcel	5545-017-907	1316 N BRONSON AVE 90028	Citizens of the World Charter School	LAUSD	13	17	7.4	0.0	7.9	7.4	3907	469-14	85%	$8.30
48	Parcel	5536-014-900	1022 N VAN NESS AVE 90038	Santa Monica Boulevard Community Charter School	LAUSD	13	17	7.2	0.0	8.0	7.2	4065	493-02	85%	$8.00
49	Parcel	5124-009-902, 5124-009-903	1010 W 25TH ST 90007	Hoover Recreation Center	L A City	1	140	31.2	33.6	6.2	6.2	2853 and 5644 in series; 2853 downstream	516-13	95%	$7.00

Table C-2. Ballona Creek Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Drainage Grid(s)	Load Reduction Factor (%)	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywell Capacity	Runoff to Site	Usable Volume				
50	Parcel	4125-001-901	5651 W MANCHESTER AVE 90045	LAPD Ahmanson Recruit Training Center and Los Angeles Police Federal Credit Union	L A City	11	92	179.5	193.3	6.1	6.1	7251	564-01	95%	$6.90
51	Parcel	5117-001-903, 5114-036-900, 5117-001-905	2912 S COMPTON AVE 90011	Nevin Avenue Elementary School	LAUSD	9	181	5.7	6.1	6.1	6.1	6110	537-07, 537-11	95%	$6.90
52	Parcel	5118-012-905	1403 E 27TH ST 90011	Dr. Julian Nava Learning Academy	LAUSD	9	180	16.1	17.4	6.1	6.1	6099	537-07	95%	$6.90
53	Parcel	5076-019-901	1251 S WESTMOREL AND AVE 90006	Fire Station 13 parking lot	L A City	1	82	5.4	5.8	28.5	5.8	5132	517-08	92%	$6.50
54	Parcel	5127-001-901	1635 S SAN PEDRO ST 90015	San Pedro Elementary School	LAUSD	14	172	24.4	26.3	5.4	5.4	5770	537-03	95%	$6.10
55	Parcel	5072-014-902, 5072-012-917	1700 S BRONSON AVE 90019	Johnnie L. Cochran and Arlington Heights Elementary School and detached parking lot.	LAUSD	10	71	163.7	164.4	5.4	5.4	5359, 5405	517-10	95%	$6.10
56	Parcel	5077-027-900	2617 W SAN MARINO ST 90006	Appears to be vacant lot not far from Hoover Elementary School	LAUSD	1	30	5.2	0.4	118.1	5.2	14207	516-01	95%	$5.80
57	Parcel	5083-001-900	4650 W OLYMPIC BLVD 90019	Los Angeles High School	LAUSD	10	35	175.6	0.0	5.2	5.2	14149	517-05	95%	$5.80
58	Parcel	6017-012-900	2112 W 74TH ST 90047	74th Street Elementary School	LAUSD	8	130	31.0	33.4	4.9	4.9	7138	558-10	96%	$5.60
59	Parcel	5059-004-900,	2450 S	Two adjacent	CRA[3]	10	84	4.4	4.7	5.3	4.7	14075	517-13	97%	$5.40

Table C-2. Ballona Creek Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Drainage Grid(s)	Load Reduction Factor (%)	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywell Capacity	Runoff to Site	Usable Volume				
		5059-004-901	CRENSHAW BLVD 90016	parcels that appear to be undeveloped adjacent to Rosa Parks Villas affordable housing.											
60	Parcel	5054-031-901	2700 S BUDLONG AVE 90007	Richardson Family Park	L A City	8	120	4.2	4.5	66.2	4.5	9553	517-16	95%	$5.10
61	Parcel	5082-012-900	4460 W PICO BLVD 90019	Appears to be parking lot for LA Rec and Parks	L A City	10	50	6.8	3.9	4.0	4.0	2830	517-05	92%	$4.60
62	Parcel	5142-023-900	1510 W CAMBRIA ST 90017	Belmont Community Adult School	LAUSD	1	63	4.4	4.0	3.9	3.9	5048	516-06	95%	$4.50
63	Parcel	6036-009-900	8701 S ST ANDREWS PL 90047	Saint Andrew's Recreation Center	L A City	8	131	115.5	124.4	3.8	3.8	7319	565-03	96%	$4.30
64	Parcel	5060-031-900	2520 W WASHINGTON BLVD 90018	Carson Gore Academy of Environmental Studies	LAUSD	10	75	6.1	6.6	3.7	3.7	14162	517-10	95%	$4.20
65	Parcel	5027-015-900	4800 S LA BREA AVE 90008	Norman O. Houston Park	L A City	8	119	142.9	153.9	3.6	3.6	6413	535-15	90%	$4.10
66	Parcel	5006-009-901	5732 S CRENSHAW BLVD 90043	City parking lot	L A City	8	127	3.3	3.6	7.7	3.6	6673	558-01	96%	$4.10
67	Parcel	5135-004-900	1342 S ALVARADO TER 90006	Terrance Park	L A City	1	125	12.3	13.3	3.4	3.4	5238	516-09	95%	$3.90
68	Parcel	4323-026-900	1840 S COTNER AVE 90025	DWP Large parcel	L A City	5	49	10.1	5.5	3.4	3.4	3422	519-09	86%	$3.90
69	Parcel	5124-001-900	2308 S HOOVER ST	Triangle area where streets	L A City	1	139	3.2	3.4	34.2	3.4	8854	516-13	95%	$3.90

Table C-2. Ballona Creek Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Drainage Grid(s)	Load Reduction Factor (%)	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywell Capacity	Runoff to Site	Usable Volume				
			90007	merge. Appears to have recently been developed with benches, shade, and lots of vegetation.											
70	Parcel	5080-019-911	1224 S SERRANO AVE 90006	Los Angeles Elementary School	LAUSD	10	62	3.7	3.2	3.2	3.2	5085	517-07	92%	$3.70
71	Parcel	5031-004-900	4000 W SANTO TOMAS DR 90008	Marlton High School	LAUSD	8	136	39.1	42.1	3.1	3.1	6243	535-12	90%	$3.60
72	Parcel	5006-007-900	5349 S 11TH AVE 90043	City parking lot	L A City	8	118	4.5	4.9	3.1	3.1	6505	558-01	90%	$3.60
73	Parcel	5071-025-903	4601 W WASHINGTON BLVD 90016	City parking lot	L A City	10	65	3.1	2.9	10.4	3.1	5347	518-12	91%	$3.50
74	Parcel	4249-011-900	3330 S GRANVILLE AVE 90066	Mar Vista Elementary School	LAUSD	11	66	50.1	49.0	3.0	3.0	6020	534-05	95%	$3.40
75	Parcel	4401-009-900	333 S BARRINGTON AVE 90049	Barrington Rec Center	L A City	11	35	38.1	7.5	2.9	2.9	4887	490-15	86%	$3.40
76	Parcel	4322-004-902	10901 W PICO BLVD 90064	City Parking Lot	L A City	5	55	2.9	2.1	12.8	2.9	5369	519-10	84%	$3.40
77	Parcel	5078-002-906	984 S NORMANDIE AVE 90006	Maricopa-Nabi Primary Center	LAUSD	10	52	2.9	1.8	160.0	2.9	4974	517-08	92%	$3.40
78	Parcel	5058-009-912	2300 S GRAMERCY PL 90018	24th Street Elementary School	LAUSD	10	84	116.8	125.8	2.8	2.8	14164	517-15	95%	$3.30
79	Parcel	5134-007-921	1206 W PICO BLVD 90015	City Parking Lot. Convention Center Parking.	L A City	9	142	16.7	18.0	2.6	2.6	14095	516-10	95%	$3.10

Table C-2. Ballona Creek Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Drainage Grid(s)	Load Reduction Factor (%)	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywell Capacity	Runoff to Site	Usable Volume				
80	Parcel	5142-013-911	1619 W 7TH ST 90017	Esperanza Elementary School	LAUSD	1	39	3.9	1.2	2.6	2.6	4929	516-02	92%	$3.00
81	Parcel	5058-012-901	2101 W ADAMS BLVD 90018	Housing authority apartments (Gramercy Park)	HACLA[4]	10	88	9.1	9.8	2.6	2.6	2854	517-15	95%	$3.00
82	Parcel	4106-026-900	6011 W 79TH ST 90045	Westport Heights Elementary School	LAUSD	11	59	59.7	70.9	2.6	2.6	7222	559-13	95%	$3.00
83	Parcel	5077-010-902	682 S VERMONT AVE 90005	City Parking Lot	L A City	10	19	3.3	0.0	2.3	2.3	4793	517-04	92%	$2.70
84	Parcel	5040-026-919	1239 W JEFFERSON BLVD 90007	John W. Mack Elementary School	LAUSD	8	125	2.1	2.3	27.9	2.3	14080	536-04	95%	$2.70
85	Roadway		Portland St. to Figueroa Way	Portland St. to Figueroa Way	Roadway	1	150	0	14.4	23.0	14.4	6567	121-5A203, 123A201	90	$12.00
86	Roadway		Budlong Ave to Menlo Ave	Budlong Ave to Menlo Ave	Roadway	8	126	0	10.7	64.2	10.7	2844	123B197	95	$12.00
87	Roadway		Olympic Blvd to 12th St	Olympic Blvd to 12th St	Roadway	4, 10	53	0	4.8	290.1	4.8	5072	129B189	92	$5.50
88	Roadway		Iowa Ave to south of Mississippi Ave	Iowa Ave to south of Mississippi Ave	Roadway	11	54	0	10.3	39.2	10.3	14032	126B149	86	$11.50
89	Roadway		Hope St to west of Main St	Hope St to west of Main St	Roadway	9	153	0	20.3	70.0	20.3	5951	118-5A203, 118-5A205	95	$22.50
90	Roadway		15th St to Pico Blvd	15th St to Pico Blvd	Roadway	14	166	0	5.0	7.7	5.0	5941	124-5A209	95, 90	$5.60
91	Roadway		Brookhaven Ave to Regent St	Brookhaven Ave to Regent St	Roadway	11	58	0	29.6	322.1	29.6	5998	120B153, 120B157, 117B157	95	$32.70

Table C-2. Ballona Creek Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Drainage Grid(s)	Load Reduction Factor (%)	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywell Capacity	Runoff to Site	Usable Volume				
92	Roadway		Crenshaw Blvd to Highland Ave	Median between Crenshaw Blvd and Highland Ave	Roadway	10	54	0	17.8	512.6	17.8	5169	129B181	92	$19.80
93	Roadway		Crenshaw Blvd to Arlington Ave	Crenshaw Blvd to Arlington Ave	Roadway	8	67	0	16.6	62.0	16.6	5223	126B189, 126B185	95	$18.40
94	Roadway		14th St to 20th St	14th St to 20th St	Roadway	10	65	0	18.9	35.2	18.9	5186	129B193	92, 95	$20.90
95	Roadway		Brookhaven Ave to National Blvd	Brookhaven Ave to National Blvd	Roadway	5	57	0	8.0	38.1	8.0	5558	123B157	87	$8.90
96	Parcel		5298 Coliseum Street	Baldwin Vista Green Streets Project	LA City	10									$4.76
97	Roadway		Ballona Creek Watershed bounded by 12th Street, Main Street, Adams Boulevard, and Long Beach Avenue	Historic South Central Neighborhood Greening Project	LA City	9 & 14									$19.80
98	Roadway		Martin Luther King Jr. Blvd from S Vermont Ave to Westside Ave and 39th St and W Vernon Ave	Martin Luther King Jr. Neighborhood Greening Project	LA City	8, 9 & 10									$15.02
99	NA		Various	Pollutant Source Characterization Study	LA City	Various					NA				$3.5*
100	NA		Various	Street Sweeping Study	LA City	Various					NA				$0.975*
										TOTAL CAPTURE VOLUME:		1333.5 ACRE-FT FROM THE 85TH PERCENTILE 24-HOUR STORM			

Table C-2. Ballona Creek Watershed Master List of Projects

Notes:

1: Usable volume is determined as the lesser of max site capacity and estimated runoff to site. Volume (acre-ft)

2: LACCD: Los Angeles Community College District 1,902.2

3: CRA: Community Redevelopment Agency

4: HACLA: Housing Authority of the City of LA

5: Van Ness Elementary School is an area with poor soils for infiltration. Only storage and diverion to sewer should be considereed at this locations. All other sites can consider both as all other sites are located within proximity to a wastewater conduit.

6: Dolores Huerta Elementary School also includes the following APNs: 5120-002-915, 5120-002-910, 5120-002-913, 5120-002-900, 5120-002-902, 5120-002-909, 5120-002-901, 5120-002-914, 5120-002-908, 5120-002-916, and 5120-002-911.

7. Synergy Charter Academy also includes the following APNs: 5114-017-911, 5114-017-917, 5114-017-916, 5114-017-908, 5114-017-918, 5114-017-921, 5114-017-903, 5114-017-906, 5114-017-919, 5114-017-920 and 5114-017-901.

8. Costs assume $1M per ac-ft managed plus 10 percent additional for design costs and $150,000 per site for geotechnical investigations to determine infiltration rates, depth to groundwater, and other conditions used to determine feasibility.

* Estimated study cost

Compliance Target	Volume (acre-ft)
Target (2021 EWMP)	1,902.2

Table C-3. Santa Monica Bay Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Other Features	SMB Jurisdiction	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
1	Roadway		6974 Vista Del Mar, Playa del Rey, 90293	Nine roadway segments. Road adjacent to dunes, between airport and beach, and Hyperion Treatment Plant and beach. In the LAX/Hyperion WRP area.	Road	11	Range: 16-93	0	Up to 51	Up to 126	50.0	7552, 7749, 7783, 7460, 7413, 7334	No	One open Brownfield site (also designated as closed) and four additional closed Brownfield sites; two segments are located in oil and gas areas. Consideration should be given to the suitability of deep infiltration during future	J2	$55.20
2	Parcel	4122-023-917	9119 S SEPULVEDA WESTWAY 90045	Possible open area with equipment storage. In the Westchester area/near LAX	L A City	11	77	398.1	640.9	68.8	32.0	7425	No	feasibility concerns, adjusted from the SiteSAN tool identified link number 7425 to instead propose diversion from links 7411 and 7412. Volume reduced based on this adjustment. Site is not located in a Brownfield, Superfund, nor oil and gas area.	J2	$35.40
3	Parcels and Roadway	4124-003-914, 4124-002-916	7900 Sepulveda Blvd, Los Angeles 90045	Roadway site plus two sites identified as parcels that are directly adjacent to the road. In the Westchester area.	Road	11	Range: 54-82	Up to 22	Up to 93	Up to 16	17.4	7622, 7318, 7442, 7450	No	Roadway site for drywells; includes two sites identified as parcels that are directly adjacent to the road. One open Brownfield site (also designated as closed) plus one	J2	$19.30
4	Parcel	4244-021-900	1630 S WALGROVE AVE 90066	Walgrove Elementary School, in the Mar Vista area	LAUSD	11	30	117.0	8.2	14.4	14.4	6282	No	School with large open space. Site is not located in a Brownfield, Superfund, nor oil and gas area.	J3	$16.00
5	Parcel and Roadway (median)	4122-026-900, 4122-022-929	8900 S EMERSON AVE 90045 and length of Manchester Blvd	Two separate sites sharing volume: Westchester-Emerson Community Adult School and LA Fire Station 5 plus the adjacent Manchester Blvd. In the Westchester area.	LAUSD, LA City, Road	11	Between 44-69	Up to 200	Up to 322	13.2	13.2	7340, 7381	No	Manchester median is assigned the same link as 4122- 026-900, and that link is upstream of 4122-022-929. 4122 026-900 was assigned 0 capture volume since the flow was assigned to the median. However, either this section of Manchester median or either of the parcels could be suitable for the identified volume, or a combination of both. Site is not located in a Superfund site, but some portion of Manchester Blvd is in an oil and gas area and a Brownfield, which should be evaluated in future phases of feasibility study.	- J2	$14.70
6	Parcel	4122-022-930	6900 W MANCHESTER AVE 90045	Westchester Golf Course. In the Westchester area.	LA City	11	60	1420.4	1740.0	12.6	12.6	7386, 7389	No	Center and Westchester Golf Course are adjacent to one another. Flow appears to be from separate storm drains so usable volumes are not double counted. SiteSAN Tool identified link 7386; adding 7389 as it is adjacent to the site and appears to be a separate tributary. Site is not	J2	$14.00

Table C-3. Santa Monica Bay Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Other Features	SMB Jurisdiction	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
7	Roadway		Sunset Blvd from Barrington Ave to S. Rockingham Ave	Long section of Sunset Blvd that is at the base on the hillside zone. In the Brentwood area.	Road	11	Range: 37-50	0.0	15.7	88.8	10.7	9158, 9153, 9154, 9149, 9075, 5009, 9152, 9068, 9067, 9150, 9147, 9148	No	Roadway site. Flow appears to drain from the hills so there are opportunities to capture separate flow along the alignment. Site is not located in a Superfund site nor an oil and gas area, but is indicated to be within proximity to a closed Brownfield site (near 12200 Sunset Blvd).	J2 and J3 (mostly J3)	$11.90
8	Parcel	4264-008-900	SW corner of San Vicente Blvd and Greta Green Way	Brentwood Country Club. In the Brentwood area.	LA City	11	30	8.8	0.6	20.8	8.8	5001	No	Open area on the edge of the country club that would be suitable for subsurface infiltration. Site is not located in a Brownfield, Superfund, nor oil and gas area.	J3	$9.80
9	Parcel	4108-001-900	8401 Emerson Ave, Los Angeles, CA 90045	Kentwood Elementary School. In the Westchester area.	LAUSD	11	51	55.0	48.3	7.1	7.1	7306	No	School with large paved area. Site is not located in a Brownfield, Superfund, nor oil and gas area.	J2	$7.90
10	Parcel	4119-001-904	7400 W MANCHESTER AVE 90045	Westchester High School. In the Westchester area.	LAUSD	11	31	368.5	40.0	4.9	4.9	7316	No	School with yard potentially suitable for subsurface infiltration. Site is adjacent to Manchester, another identified site, so would need to evaluate during future phases of evaluation if flow is duplicated. Site is not located in a Brownfield or Superfund site, but is in an oil and gas area.	J2	$5.50
11	Roadway		13000 San Vicente Blvd, Brentwood 90049	One length of roadway, separated into two sites, one on either side of a median on San Vicente from Avondale to 26th St. In the Brentwood area.	Road	11	55	0	5.4	4.3	4.3	5216	No	Roadway site. Site is not located in a Superfund site nor an oil and gas area, but is indicated to be within proximity to a closed Brownfield site.	J2 and J3	$4.90
12	Parcel	4122-022-927, 4122-022-931	7000 W MANCHESTER AVE 90045	Westchester Recreation Center. In the Westchester area.	LA City	11	Range: 45-59	Up to 400	Up to 259	4.0	4.0	7389	No	Recreation Center and Westchester Golf Course are adjacent to one another. Flow appears to be from separate storm drains so usable volumes are not double counted. Site is not located in a Brownfield, Superfund,	J2	$4.50
13	Parcel	4118-009-900	7751 Paseo Del Rey, Playa Del Rey, CA 90293	Paseo del Rey Fundamental Elementary School. In the Westchester area.	LAUSD	11	27	60.5	0	3.3	3.3	7341	No	playground. Next to Westchester High School but different storm drains. Site is not located in a Brownfield	J2	$3.80
14	Parcel	4112-029-900	6621 W MANCHESTER AVE 90045	Fire Station Number 5. In the Westchester area.	L A City	11	57	2.9	3.3	12.2	3.3	6544	No	where subsurface infiltration could be installed. Would need to verify that there is no onsite fueling. Site is adjacent to Manchester Blvd medians, and Kenwood Elementary	J2	$3.70

Table C-3. Santa Monica Bay Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Other Features	SMB Jurisdiction	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
														School, bit it appears to not be nested with		
15	Parcel	4119-029-900	8821 Villanova Ave, Los Angeles, CA 90045	Loyola Village Elementary School. In the Westchester area.	LAUSD	11	38	70.8	26.8	3.1	3.1	7397	No	Smaller usable volume but this elementary school is in the same neighborhood as Westchester High School so could combine the projects. Different storm drains. SiteSAN Tool identified link 7397; adding 7363 as it is adjacent to the site and appears to be a separate tributary. Site is not located in a Brownfield, Superfund, nor oil and gas area.	J2	$3.60
16	Parcel	4401-009-900	333 S BARRINGTON AVE 90049	Recreation Center. In the Brentwood area.	LA City	11	35	29.1	5.7	1.8	1.8	13723	No	Recreation center with large open space. Site is not located in a Brownfield, Superfund, nor oil and gas area.	J3	$2.20
17			Various	Pollutant Source Characterization Study	LA City	Various					NA					$3.5*
18			Various	Street Sweeping Study	LA City	Various					NA					$0.975*
										TOTAL CAPTURE VOLUME:		191 ACRE-FT FROM THE 85TH PERCENTILE 24-HOUR STORM				

Notes:

1: Usable volume is determined as the lesser of max site capacity and estimated runoff to site.

2. Costs assumptions are described in Section 5.4. As described, costs assume $1M per ac-ft managed plus 10 percent additional for design costs and $150,000 per site for geotechnical investigations to determine infiltration rates, depth to groundwater, and other conditions used to determine feasibility.

3. Next phases of evaluation will determine a prioritized list of projects from these opportunity sites. This evaluation will consider scaling and sequencing of projects, which will include an evaluation to ensure projects with overlapping drainage areas are appropriately scaled.

* Estimated study cost

Note: SUSMP volumes are estimated for the 0.75-inch storm using the land area and a runoff coefficient of 0.9.

Compliance Target	Volume (acre-ft)
Target (2021 EWMP)	207.6

Table C-4. Dominguez Channel Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
1	Parcel	4128-004-908, 4128-004-907, 4128-003-915, 4128-018-912	5230 Arbor Vitae St, Los Angeles, CA 90	Vacant Parcel with potential new construction	L A City Airport	11	Ranging from 106 to 117	Up to 23.8	Up to 25.6	64.2	50.0	7593	Yes	5	Site looks to have recently been developed. Assessor's website states it is government owned and vacant. If recently developed, it is likely managing flow onsite, however it is a large so has the potential to capture off-site flow. Multiple links are identified across the various parcels, but the furthest downstream appears to be link 7593, which has a runoff volume of 64 ac-ft. Therefore, limiting the flow here to a maximum of 50 ac-ft. Adjacent roadways were also identified by the SiteSAN Tool as viable options, so if this site is infeasible, consideration should be given to the adjacent roads. No Brownfield, Superfund or oil and gas.	$55.20
2	Parcel	6120-022-900	647 W Gardena Blvd, Gardena, CA 9024	Gardena Elementary School	L A Unified School Dist	15	35	39.6	7.8	53.4	39.6	7869	Yes	5	School site appears suitable for subsurface infiltration due to large paved area. Currently assuming diverting flow from link 7869, though could also consider flow from link 7868, though the distance to that link exceeds 300-ft. Site is not located in a Brownfield, Superfund, nor oil and gas area.	$43.70
3	Parcel	4123-018-926	6000 Will Rogers St Los Angeles, CA 900	Carl E. Nielson Youth Park	L A City	11	77	124.7	200.8	30.3	30.3	7352	No	5	Lots of green space where a subsurface infiltration could be implemented. SiteSAN tool identified link 7369 but the adjacent link 7352, which is les than 300-ft away, has 30.3 ac-ft so volume is adjusted to this amount. Site is not in a Brownfield or Superfund location but is in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	$33.50
4	Parcel	6132-005-900	570 W 135th St, Los Angeles, CA 90061	Ramirez Nursery	L A City	15	76	40.3	43.4	19.6	19.6	7818	No	5	Site is a plant nursery underneath overhead electrical transmission lines which could limit construction of deep dry wells. Consideration should be given to impacts to the nursery. Site is not located in a Brownfield or Superfund site, but is indicated as in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	$21.70
5	Parcel	7415-024-902	828 W L St, Wilmington, CA 90744	Gulf Avenue STEAM Elementary	L A Unified School	15	33	42.7	7.9	16.4	16.4	8122	Yes	4	Site is an elementary school with a large paved area to consider for subsurface infiltration. The site is not a Superfund	$18.20

Table C-4. Dominguez Channel Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
				School and Magnet Center	Dist										site but is in a closed Brownfield site and in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	
6	Parcel	7413-017-903	1001 W 253rd St, Harbor City, CA 9071	Normont Elementary School	L A Unified School Dist	15	73	44.7	48.1	13.1	13.1	8040	Yes	3	Site is an elementary school with a large amount of paved play space, some of which could be modified to include subsurface infiltration. Site is not in a Brownfield or Superfund location but is in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	$14.50
7	Roadway		18200 Western Ave 90248	Segment of Western Blvd from 182nd St to north of 405 Fwy	Roadway	15	Between 83-87	0.0	12.1	17.4	12.1	7888	Yes	5	The length of Western included here could draw from Link 7888 to capture 17.42 ac-ft. However, since the freeway crosses Western, limiting the volume to the segment north of the freeway. Adjacent streets could potentially capture the remaining 5 ac-ft of available flow in the storm drain. Site is not a Superfund Site nor is it in an area with oil and gas. The length of the site is associated with a closed Brownfield site so further investigation is needed in the next phases of feasibility study.	$13.50
8	Roadway		1025 Pacific Coast Highway 90710	Segment of Pacific Coast Highway, Senator Ave to east of Normandie Ave	Roadway	15	Between 56-74	0.0	12.1	11.8	11.8	8700	Yes	3 and 4	Rather than draw from links identified (8098, 8095), this site could draw from link 8700, which has a runoff volume of 11.8. Since these four roadway segments have available capacity, setting the usable volume to equal this value. Site is not a Superfund Site nor is it in an area with oil and gas. One roadway segment is a closed Brownfield site so further investigation is needed in the next phases of feasibility study.	$13.10
9	Parcel	7439-016-900	1465 W 243rd St, Harbor City, CA 9071	President Ave Elementary School	L A Unified School Dist	15	75	75.9	81.7	5.9	5.9	8003	No	4	space, some of which could be modified to include a subsurface infiltration. Site is not in a Brownfield or Superfund location but is in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility	$6.70
10	Parcel	6119-025-900	14920 S Menlo Ave, Gardena, CA	Rosecrans Recreation Center	L A City	15	53	155.6	101.1	5.0	5.0	7843	Yes	5	This is an existing project site. However, the capture volume at the site appears to only be 0.4 ac-ft. This site is a park with	$5.60

Table C-4. Dominguez Channel Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
			90247												plenty of opportunity for a BMP. Could be considered for a Phase 2 project to expand the existing BMPs. This site is not a Superfund site nor is it in an oil and gas area. It is a closed Brownfield site so consideration should be given during future phases of the feasibility evaluation to ensure the site is suitable.	
11	Parcel	6117-033-900	801 W 135th St, Gardena, CA 90247	135th Street Elementary School	L A Unified School Dist	15	96	57.6	62.0	4.3	4.3	7814	Yes	5	Site is an elementary school with a large amount of paved play space, some of which could be modified to include a subsurface infiltration. Site could also consider capturing flow from link 7817 for an additional 1 ac-ft, though it is presented as being on the 110 Fwy so further analysis would be required. Site is not in a Brownfield or Superfund location but is in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	$4.90
12	Parcel	6119-012-900	Behind 14834 Estrella Ave (garden behind homes on Estrella Ave and Denver Ave, from W 149th St to W 146th St)	Rosecrans Metro Garden Club	L A City	15	48	29.7	15.6	4.1	4.1	7832	No	5	Green space that appears to be used for community garden plots; appears to be opportunities for subsurface infiltration implementation. Site is not in a Brownfield or Superfund location but is in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	$4.60
13	Parcel	7439-015-900	24300 S Western Ave, Harbor City, CA 9	Narbonne High School	L A Unified School Dist	15	81	400.2	431.0	4.0	4.0	8010	No	4	Site is a high school with opportunity for subsurface infiltration implementation in the paved play spaces or the greenspace near the baseball fields. Site is not in a Brownfield or Superfund location but is in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	$4.50
14	Parcel	7425-023-908	Alameda St from Pacific Coast Highway to near E Opp Street, CA 90744	Railway adjacent parcel	L A City	15	32	86.5	12.7	3.0	3.0	8127	Yes	5	Site is adjacent to a railway line with some additional ROW on either side that could be used for BMP implementation. Pretreatment, consideration for pollutants from the railway, and any ground settling from infiltration would have to be considered in next phases of design. In NavigateLA it appears to be referred to as	$3.40

Table C-4. Dominguez Channel Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
															parcels 7425-023-914, 7425-023-915, and in the SiteSAN tool it is 7425-023-908, which does not appear on Navigate LA. Site is not a Superfund site but is in a closed Brownfield site and an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	
15	Parcel	6132-006-900	552 W 140th St, Gardena, CA 90248	Miyako Nursery	L A City	15	59	29.0	23.2	2.7	2.7	14013	No	5	Site is a plant nursery with a road between plants, which could be suitable for subsurface infiltration. Would need to consider disruption to nursery. SiteSAN tool identified link 14013 but could potentially divert flow from link 7818, which has 19.6 ac-ft of available runoff, and increase the amount of usable volume. However, the lower volume identified here may be suitable for the site. Site is not in a Brownfield or Superfund location but is in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	$3.10
16	Parcel and Roadway	7421-022-900	1425 N Avalon Blvd, Wilmington, CA 90	Avalon High School and segment of Avalon Blvd	L A Unified School Dist and Roadway	15	62	4.9	6.4	2.7	2.7	6914	No	4	Small school site with limited areas for BMP placement in parking lot and play area. Site may not have sufficient space, however, Avalon Blvd is adjacent to the site and is identified by the SiteSAN tool as suitable; potential to consider placement of some drywells in Avalon Blvd as well as subsurface infiltration in the school parking lot. Site is not a Brownfield, Superfund nor oil and gas area.	$3.10
17	Parcel	7422-017-900	401 E M St, Wilmington, CA 90744	Banning Park and Museum	L A City	15	56	309.0	330.9	2.7	2.7	8085	Yes	4	Parcel with lots of greenspace and great opportunity for subsurface infiltration implementation. Site is not a Superfund site but is in a closed Brownfield site and an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	$3.10
18	Roadway		801 El Segundo Blvd 90247	Segment of El Segundo Blvd from Vermont Ave to the 405 Fwy	Roadway	15	110	0.0	4.0	2.3	2.3	7802	Yes	5	Segment of El Segundo Blvd west of Vermont Ave and east of the 405 Fwy. The site is not a Superfund site but is in a closed Brownfield site and in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases	$2.70

Table C-4. Dominguez Channel Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Load Reduction Factor	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume					
															of feasibility study.	
19	Parcel	7410-006-900	1508 254th St, Harbor City, CA 90710	Harbor City Elementary School	L A Unified School Dist	15	77	31.7	34.1	2.3	2.3	8077	No	4	Elementary school with large paved play area, where subsurface infiltration could be implemented. Site is not in a Brownfield or Superfund location but is in an oil and gas area so consideration should be given to the suitability of deep infiltration during future phases of feasibility study.	$2.70
20			Bandini Children's Park at the intersection of West Summerland Place, North Marshall Court and West Oliver	North Marshall Court Green Streets Project	LASAN	15					0.5					$2.20
21			Various	Pollutant Source Characterization Study	LA City	Various					NA					$3.5*
22			Various	Street Sweeping Study	LA City	Various					NA					$0.975*
TOTAL CAPTURE VOLUME:											232.4 ACRE-FT FROM THE 85TH PERCENTILE 24-HOUR STORM					

Table C-4. Dominguez Channel Watershed Master List of Projects

Notes:

1: Usable volume is determined as the lesser of max site capacity and estimated runoff to site.

2. Costs assumptions are described in Section 5.4. As described, costs assume $1M per ac-ft managed plus 10 percent additional for design costs and $150,000 per site for geotechnical investigations to determine infiltration rates, depth to groundwater, and other conditions used to determine feasibility.

3. Next phases of evaluation will determine a prioritized list of projects from these opportunity sites. This evaluation will consider scaling and sequencing of projects, which will include an evaluation to ensure projects with overlapping drainage areas are appropriately scaled.

* Estimated study cost

Compliance Target	Volume (acre-ft)
Target (2021 EWMP)	371.0

Table C-5. Marina Del Rey Watershed Master List of Projects

Site No.	Parcel, Roadway or Combination	Assessor Parcel Numbers (APN) or Roadway	Address	Description	Agency	CD	Depth to Groundwater (ft)	Stormwater Capture (acre-feet)				Stormwater Link ID Number(s)	Benefits a DAC	Other Features	Planning Level Cost Estimate ($M)
								Infiltration Gallery Capacity	Drywells Capacity	Runoff to Site	Usable Volume				
1	Parcel	4245-015-900	2224 Walgrove Ave 90066	Mark Twain Middle School	LAUSD	11	31	282.0	0	3.7	4.7	6412, 6390	No	Property has large grassy field and large parking lots that could be suitable for BMP implementation. SiteSAN Tool identified link 6412; adding link 6390 as it is adjacent to the site with 1 ac-ft.	$5.40
2	Parcel	4245-018-900	12901 W Venice Blvd 90066	Disability Community Resources C	LA City	11	31	1.6	0	1.8	1.8	13842	No	Building takes up most of property in the front but there is a decently large parking lot in the rear, off Beethoven St.	$2.10
3			Various	Pollutant Source Characterization Study	LA City	Various					NA				$3.5*
4			Various	Street Sweeping Study	LA City	Various					NA				$0.975*
TOTAL CAPTURE VOLUME:								6.6 ACRE-FT FROM THE 85TH PERCENTILE 24-HOUR STORM							

Notes:

1: Usable volume is determined as the lesser of max site capacity and estimated runoff to site.

2. Costs assumptions are described in Section 5.4. As described, costs assume $1M per ac-ft managed plus 10 percent additional for design costs and $150,000 per site for geotechnical investigations to determine infiltration rates, depth to groundwater, and other conditions used to determine feasibility.

Compliance Target	Volume (acre-ft)
Target (2021 EWMP)	**59.0**

3. Next phases of evaluation will determine a prioritized list of projects from these opportunity sites. This evaluation will consider scaling and sequencing of projects, which will include an evaluation to ensure projects with overlapping drainage areas are appropriately scaled.

* Estimated study cost

Appendix D

Design Summaries for Priority Projects for SCW Funding

Toberman Recreation Center Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Toberman Recreation Center Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 25.5 acre-feet of stormwater diverted from the 63-inch and 51-inch City of Los Angeles storm drains located under Toberman and Union Streets, respectively. The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery would be located under the existing field. The approximate footprint would be 200 feet by 300 feet (as shown in Figure 1). During design, it would be determined if one single or multiple interconnected infiltration galleries are preferred.
  - As an alternative, stormwater could be infiltrated into the ground by using a system of drywells under the school courtyards. The specific number and locations of drywells would be determined during a future feasibility study.



Figure 2: typical Infiltration Gallery (Source: StormTrap)

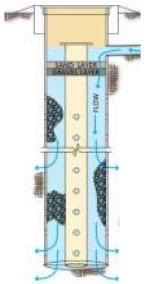


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	1725 S Toberman Street Los Angeles, CA 90015	**Project ID**	242
Coordinates	34° 2'21.15"N, 118°16'43.81"W	**Capture Volume (Drainage Area)**	25.5 acre-feet (507 acres)
City Council District	1	**Construction Cost**	$14.0 M
City of LA Watershed	Ballona Creek	**Construction Duration**	5 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Toberman Recreation Center Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 141 feet based on the City of Los Angeles GeoHub.
- The following will need to be conducted as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.



Photo: Existing condition of the recreation center fields. View from W 18th Street.



Photo: Existing condition of the recreation center fields. View from W 17th Street

Project Benefits

Water Quality
The proposed project assists in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 95 percent.

Water Supply
The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding
This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Parks and Green Space
After construction of the project, the existing park and field would be re-constructed, re-invigorating this important open green space.

Reduced Heat Island Effect
Greenscaping and additional trees at the site would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification
New turf and vegetation in landscaped areas and other beautification elements would increase community pride and engagement.

Community Benefit
The enhanced park would include active recreation features and passive features such as benches, picnicking areas and educational kiosks, which would promote socialization and outdoor time, improving the well-being of the community.

DAC Benefits
The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Public Parking Lot 657 Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Public Parking Lot 657 Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 4.7 acre-feet of stormwater diverted from the 44-inch City of Los Angeles storm drain located under Manitou Avenue. The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One 15-foot-high infiltration gallery under the parking lot with an approximate footprint of 50 feet by 120 feet (as shown in Figure 1). This BMP would manage up to 2 acre-feet of stormwater. Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - Remaining stormwater volume would be received by drywells in the neighboring streets (as shown in Figure 1).



Figure 2: typical Infiltration Gallery (Source: StormTrap)

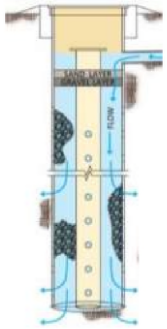
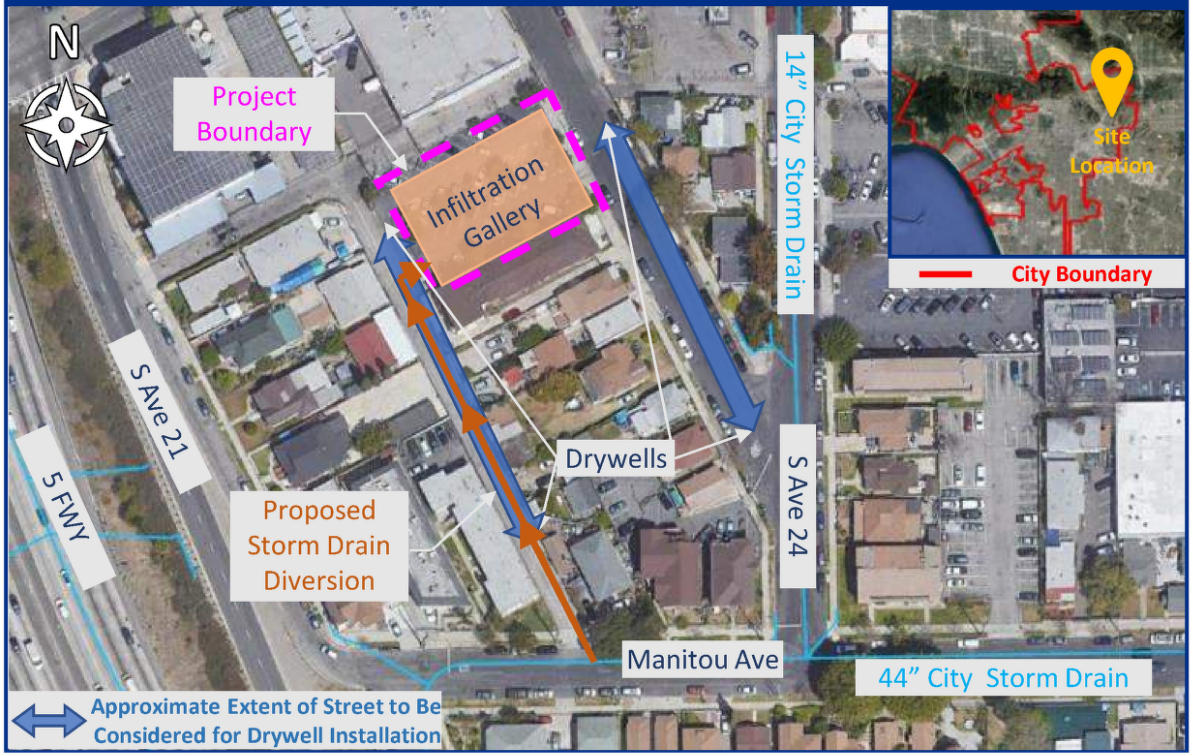


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	221 S Ave 22 Los Angeles, CA 90031	**Project ID**	266
Coordinates	34° 4'22.21"N, 118°13'3.89"W	**Capture Volume (Drainage Area)**	4.7 acre-feet (129 acres)
City Council District	1	**Construction Cost**	$2.6 M
City of LA Watershed	Upper Los Angeles River	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	Upper Los Angeles River	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Public Parking Lot 657 Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1 inch based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 28 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.



Photo: Existing condition of the parking lot. View from S Ave 22.



Photo: Existing condition of the parking lot. View from inside the parking lot.

Project Benefits

Water Quality
The proposed project assists in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 74 percent.

Water Supply
The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding
This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Reduced Heat Island Effect
Additional trees and rain garden in the parking lot could help to offset impervious areas and heat absorbing materials.

Neighborhood Beautification
New vegetation would modestly improve neighborhood aesthetics.

Community Benefit
The enhanced parking lot would include educational kiosks, promoting community engagement in stormwater quality improvement.

DAC Benefits
The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

De Garmo Park Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The De Garmo Park Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 14.8 acre-feet of stormwater diverted from a 75-inch storm drain maintained by the Los Angeles County Flood Control District (LACFCD). The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery with an approximate footprint of 0.8 acres would be located under the park (as shown in Figure 1). This BMP would manage up to 12.3 acre-feet of stormwater. Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - Remaining stormwater volume could be received by drywells along the linear park (as shown in Figure 1).
  - Bioretention could be used in the project area to manage additional surface flow runoff.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)

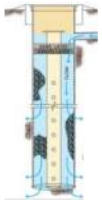


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)



Figure 4: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	10153 Arminta St Sun Valley, CA 91352	**Project ID**	311
Coordinates	34°12'53.14"N, 118°21'9.50"W	**Capture Volume (Drainage Area)**	14.8 acre-feet (507 acres)
City Council District	2	**Construction Cost**	$8.1 M
City of LA Watershed	Upper Los Angeles River	**Construction Duration**	4 years
Safe, Clean Water Program (SCWP) Watershed	Upper Los Angeles River	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



De Garmo Park Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 817 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.





Photos: Existing condition of De Garmo Park.

Project Benefits

Water Quality
The proposed project assists in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 90 percent.

Water Supply
The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding
This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Parks and Green Space
Improved open space, playground equipment, and greenscaping would provide space for people to exercise and socialize.

Neighborhood Beautification
New vegetation and beautification elements would increase community pride and engagement.

Community Benefit
The enhanced park would include walking paths and passive features such as benches and educational kiosks, which would improve the well-being of the community by offering means to socialize and spend time in the outdoors.

DAC Benefits
The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Parthenia Park Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Parthenia Park Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 8.2 acre-feet of surface stormwater runoff by a subsurface Best Management Practice (BMP) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery would be located under the park. The footprint would be approximately 0.5 acres with approximate dimensions of 190 feet by 125 feet (as shown in Figure 1). During design, it would be determined if one single or multiple interconnected infiltration galleries are preferred.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells. The specific number and locations of drywells would be determined during a future feasibility study.



Figure 2: typical Infiltration Gallery (Source: StormTrap)

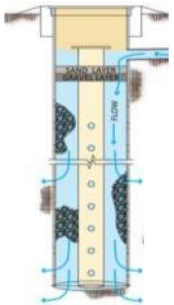


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	21444 Parthenia St Canoga Park, CA 91304	**Project ID**	317
Coordinates	34°13'39.86"N, 118°35'56.19"W	**Capture Volume (Drainage Area)**	8.2 acre-feet (145 acres)
City Council District	3	**Construction Cost**	$4.5 M
City of LA Watershed	Upper Los Angeles River	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	Upper Los Angeles River	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Parthenia Park Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1 inch based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 50 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.



Photo: Existing condition of Parthenia Park. View from Parthenia Street

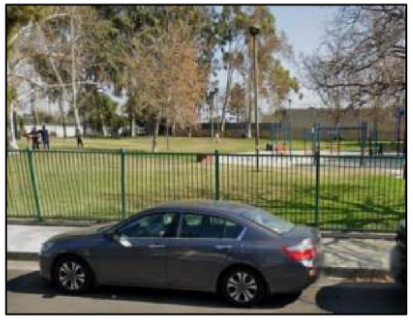


Photo: Existing condition of Parthenia Park. View from International Ave

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 90 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Parks and Green Space

Open space, playground equipment, and greenscaping would provide space for people to exercise and socialize.

Neighborhood Beautification

New vegetation and beautification elements would increase community pride and engagement.

Community Benefit

The enhanced park would include active recreation features and passive features such as benches and educational kiosks, which would promote socialization, and outdoor time would have a positive impact on the well-being of the community.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Wilton Place Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Wilton Place Elementary School Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 18 acre-feet of stormwater diverted from a 78-inch City of Los Angeles storm drain located under South Wilton Place and convey flow to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the central paved area with an approximate footprint of 70 feet by 250 feet (as shown in Figure 1). This BMP would manage up to 6 acre-feet of stormwater. Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - Remaining stormwater volume would be received by drywells at the school site (as shown in Figure 1).
  - Bioretention and porous materials for the walkways and other paved areas could be used in the project area.



Figure 2: typical Infiltration Gallery (Source: StormTrap)



Figure 3: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

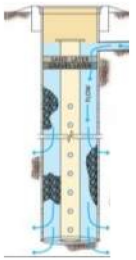
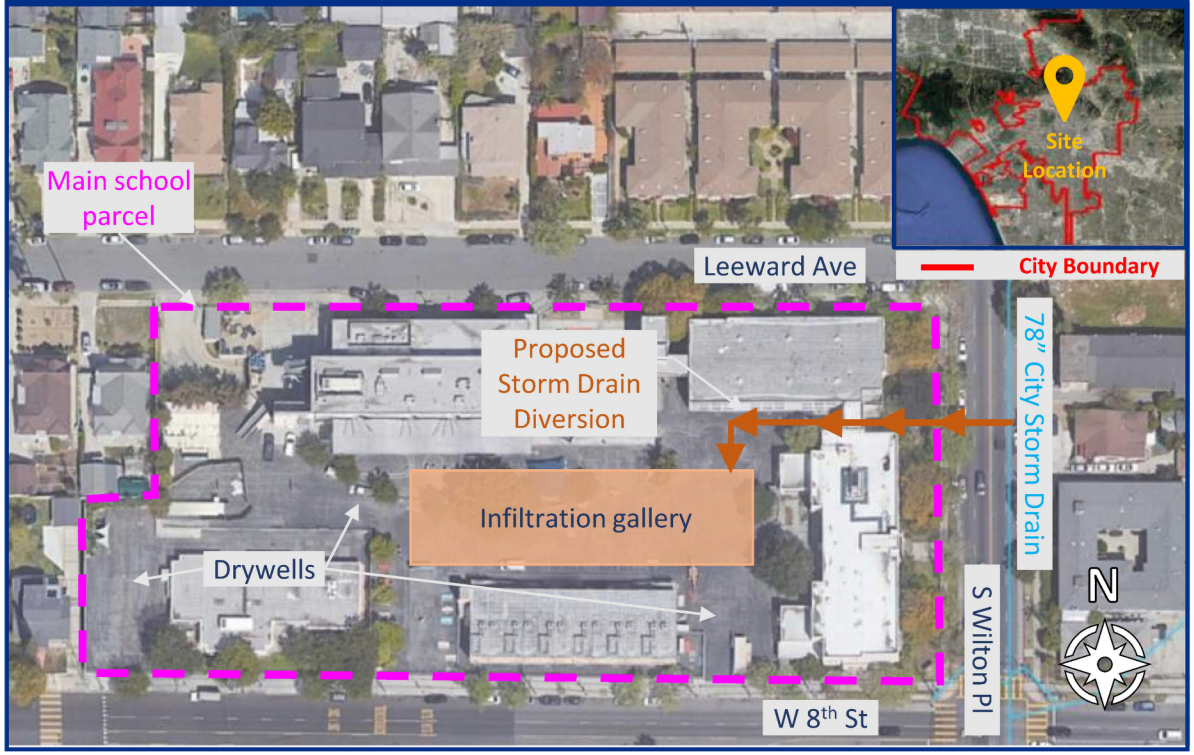


Figure 4: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	745 S Wilton Pl Los Angeles, CA 90005	**Project ID**	212
Coordinates	34° 3'30.83"N, 118°18'54.67"W	**Capture Volume (Drainage Area)**	18 acre-feet (2,481 acres)
City Council District	4	**Construction Cost**	$9.9 M
City of LA Watershed	Ballona Creek	**Construction Duration**	4 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	Los Angeles Unified School District

Figure 1: Conceptual Layout



Wilton Place Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 40 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.



Photo: Existing condition of the school, view from W 8th St.

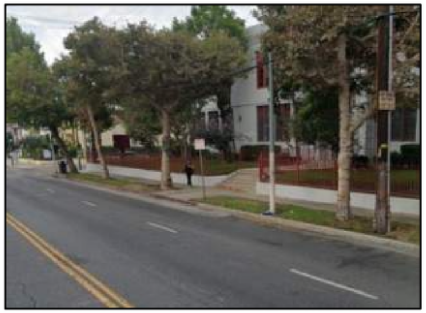


Photo: Existing condition of the school, view from S Wilton Pl.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 92 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Heat Island Effect

Greenscaping and additional trees in the schools' courtyards and around the properties would provide shade and reduce heat-absorbing materials.

Neighborhood Beautification

New vegetation and beautification elements would improve mental well-being by encouraging more active outdoor recreation.

Community Benefit

New and improved playground equipment and greenscaping would improve the schools' aesthetics, recreational spaces, and school pride.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Clover Avenue Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Clover Avenue Elementary School Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 81.8 acre-feet of stormwater diverted from Sawtelle Channel which receives combined flow from the buried Sepulveda Channel, a 186-inch storm drain maintained by the Los Angeles County Flood Control District (LACFCD), and a 144-inch storm drain maintained by City of Los Angeles. The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the paved playground and field, with an approximate footprint of 3.3 acres (as shown in Figure 1). This BMP would manage up to 50 acre-feet. Pending further evaluation, multiple interconnected galleries with open spaces between them may be necessary.
  - Drywells in the neighboring streets would receive additional flow (as shown in Figure 1). Additional stormwater runoff could also be diverted from the 45-inch LACFCD storm drain located in the intersection of National Boulevard and Sepulveda Boulevard. This would add approximately 88 acres to the overall drainage area.
  - Bioretention could be utilized in future green streets.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)



Figure 3: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)



Figure 4: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	11020 Clover Avenue Los Angeles, CA 90034	**Project ID**	165
Coordinates	34° 1'34.86"N, 118°25'28.47"W	**Capture Volume (Drainage Area)**	81.8 acre-feet (9,614 acres)
City Council District	5	**Construction Cost**	$45.0 M
City of LA Watershed	Ballona Creek	**Construction Duration**	5 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay	**Disadvantaged Community (DAC)**	No
Project Type	Parcel	**Owning Agency**	Los Angeles Unified School District

Figure 1: Conceptual Layout



Clover Avenue Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 62 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMPs.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.
  - Identify the number of storm drain diversions required to hydraulically supply the proposed quantity and locations of drywells in the project area.



Photo: Existing condition of the school field and paved areas.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 95 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding

This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Reduced Heat Island Effect

Greenscaping and additional trees in the at the school and on the neighboring greenstreets would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New greenscaping, trees, and some shaded bus stops would beautify the neighborhood. Added green space and playground upgrades would benefit students and staff while encouraging safer, more active outdoor recreation.

Community Benefit

New and improved athletic fields, playground equipment, and greenscaping would improve the school's aesthetics, recreational spaces, and school pride. New greenscaping and shaded seating at bus stops would be provided in the future green streets. Participation of local artists in redesign at the school and along the green streets would increase community engagement.

Sun Valley Metrolink Station Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Sun Valley Metrolink Station Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 13 acre-feet of stormwater diverted from a 54-inch Los Angeles County Flood Control District (LACFCD) located under San Fernando Road and a Caltrans storm drain under the 5 Freeway and convey to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery would be located under the parking lot with approximate dimensions of 200 feet by 200 feet (as shown in Figure 1). During design, it would be determined if one single or multiple interconnected infiltration galleries are preferred.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells under the parking lot. The specific number and locations of drywells would be determined during a feasibility study.



Figure 2: typical Infiltration Gallery (Source: StormTrap)

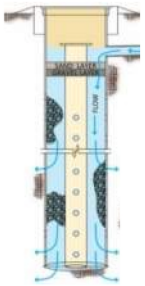
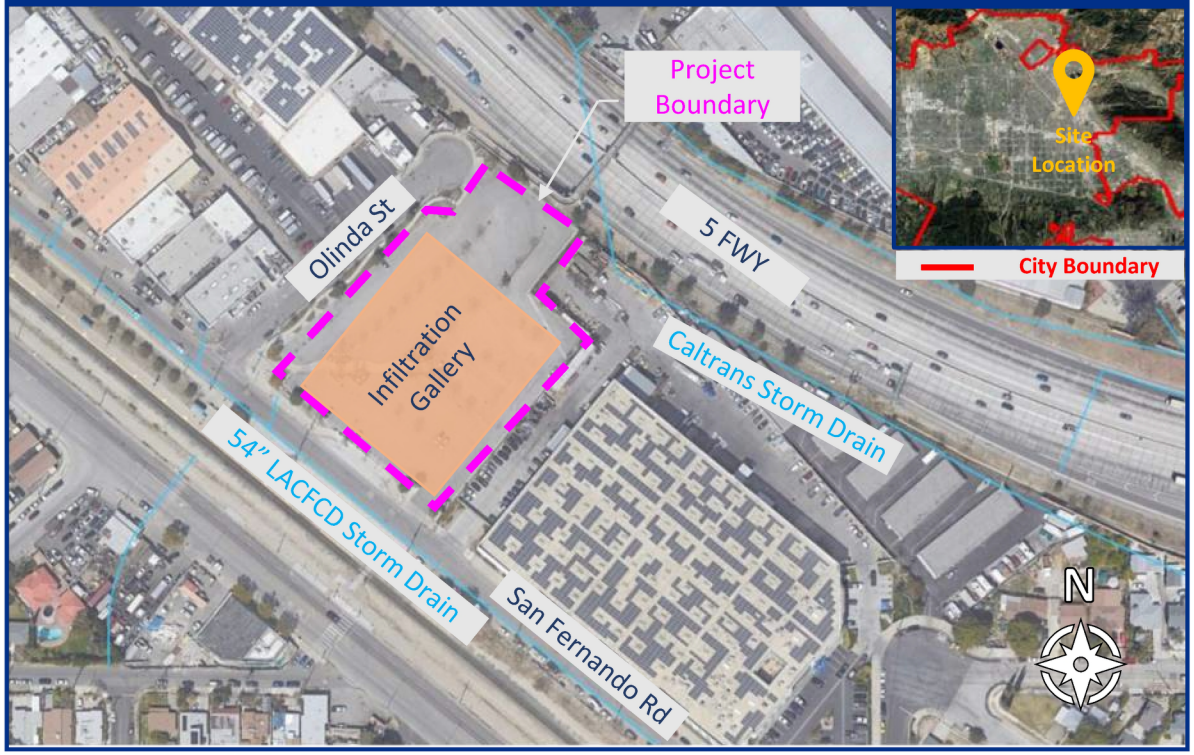


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	8358 San Fernando Rd Sun Valley, CA 91352	**Project ID**	314
Coordinates	34°13'21.56"N, 118°22'20.45"W	**Capture Volume (Drainage Area)**	13 acre-feet (172 acres)
City Council District	6	**Construction Cost**	$7.1 M
City of LA Watershed	Upper Los Angeles River	**Construction Duration**	4 years
Safe, Clean Water Program (SCWP) Watershed	Upper Los Angeles River	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Sun Valley Metrolink Station Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.5 in/hr and 5 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is good for infiltration.
- Depth to groundwater is approximately 259 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD and Caltrans for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Existing condition of the parking lot, view from inside.



Photo: Metrolink station, view from San Fernando Rd.

Project Benefits

Water Quality
The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 95 percent.

Water Supply
The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding
This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Reduced Heat Island Effect
Greenscaping and additional trees in the parking lot would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification
New landscaped areas proposed for parking lot would improve neighborhood aesthetics.

Community Benefit
The enhanced parking lot would include educational kiosks, promoting community engagement in stormwater quality improvement.

DAC Benefits
The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Verdugo Hills High School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Verdugo Hills High School Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 13.4 acre-feet of stormwater diverted from Los Angeles County Flood Control District (LACFCD) 72-inch and 36-inch reinforced concrete pipe (RCP) storm drains located under Hillrose Street and Irma Avenue, respectively, and convey flow to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery would be located under the field. The approximate footprint would be 300 ft by 130 feet (as shown in Figure 1). During design, it would be determined if one single or multiple interconnected infiltration galleries are preferred.
  - Other parts of the school (as shown in Figure 1) may be also used to manage additional stormwater runoff if additional storm drain diversions deem feasible.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells at the school. The specific number and locations of drywells would be determined during a feasibility study.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)

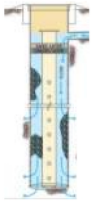
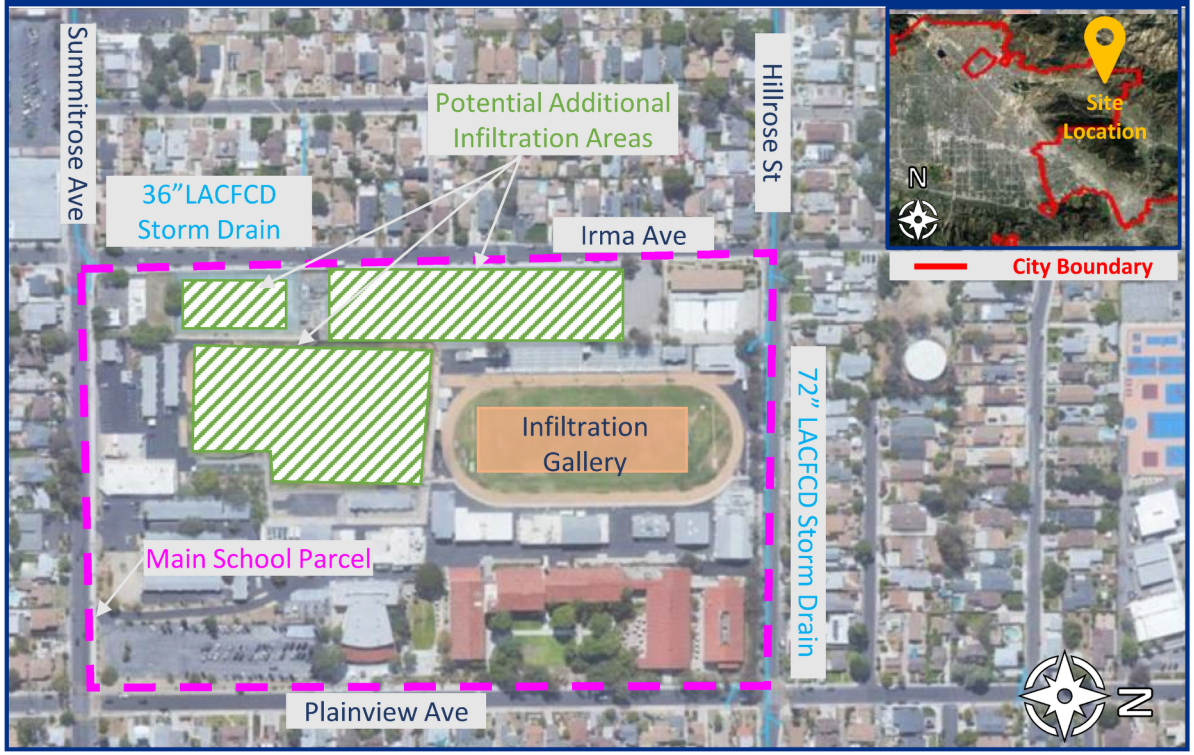


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	10625 Plainview Ave Tujunga, CA 91042	**Project ID**	353
Coordinates	34°15'41.74"N, 118°17'54.51"W	**Capture Volume (Drainage Area)**	13.4 acre-feet (613 acres)
City Council District	7	**Construction Cost**	$7.3 M
City of LA Watershed	Upper Los Angeles River	**Construction Duration**	4 years
Safe, Clean Water Program (SCWP) Watershed	Upper Los Angeles River	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	Los Angeles Unified School District

Figure 1: Conceptual Layout



Verdugo Hills High School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.5 in/hr and 5 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is good for infiltration.
- Depth to groundwater is approximately 95 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Existing condition of the school, view from Plainview Ave.



Photo: Existing condition of the soccer field, view from Hillrose St.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 18 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding

This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Reduced Heat Island Effect

Greenscaping and additional trees in the school's courtyards and around the property would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New vegetation and beautification elements would increase community pride and engagement.

Community Benefit

New and improved athletic fields and greenscaping would improve the school's aesthetics, recreational spaces, and school pride.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

108th, 109th, and 110th Streets Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The 108th, 109th, and 110th Streets Stormwater Project (Project), from South Vermont Avenue to South Main Street and from Avalon Boulevard to South Central Avenue was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality by diverting, capturing, and infiltrating upstream wet weather runoff.
- The Project would manage total of 45.1 acre-feet of stormwater diverted from multiple links of the City of Los Angeles reinforced concrete pipe (RCP) storm drain system. The diverted flow would be conveyed to a network of drywells along 108th, 109th, and 110th Streets and their adjacent streets from South Vermont Avenue to South Main Street and Avalon Boulevard to South Central Avenue for groundwater recharge.
- Figure 1 presents an example of the diversion from the 90-inch City of Los Angeles storm drain that could be conveyed to a network of drywells along 108th, 109th, 110th Streets, and adjacent streets. The specific number and locations of drywells will be determined during a feasibility study.
- Bioretention would also be designed into the cross streets to capture surface flow.

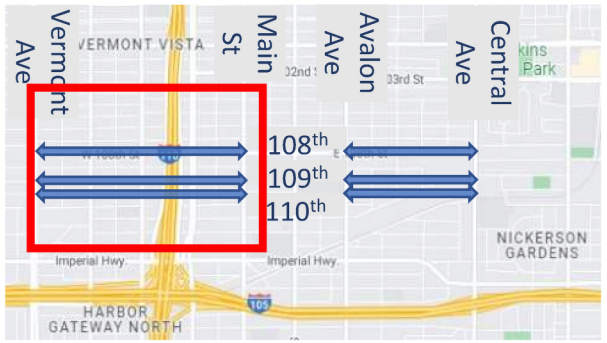


Figure 2: Project overall area. The area in the red rectangle is shown in Figure 1.

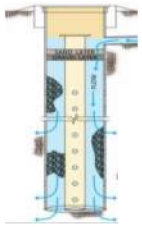


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	108th , 109th , 110th St Los Angeles, CA	**Project ID**	119, 122, 123
Coordinates	33°56'17.54"N, 118°17'29.72"W	**Capture Volume (Drainage Area)**	45.1 acre-feet (7,076 acres)
City Council District	8	**Construction Cost**	$13.0 M
City of LA Watershed	Upper Los Angeles River	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	Upper Los Angeles River	**Disadvantaged Community (DAC)**	Yes
Project Type	Roadway	**Owning Agency**	Roadway

Figure 1: Conceptual Layout



108th, 109th, and 110th Streets Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1 inch based on Los Angeles County isohyets.
- The assumed infiltration rate is 3 in/hr for drywells. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater ranges from approximately 73 to 86 feet, based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Identify the number of storm drain diversions required to hydraulically supply the proposed quantity and locations of drywells in the project area.



Photo: 108th Street facing east from Vermont Ave.



Photo: 108th facing west from Main St.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 84 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduce Heat Island Effect

Greenscaping and additional trees in biofiltration areas and upgraded bus stops would aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New greenscaping, trees, and shaded bus stops would improve neighborhood aesthetics.

Community Benefit

New greenscaping and shaded seating at bus stops in the future green streets. Potential for local artists to participate in redesign to increase community engagement and capture the local community aesthetic.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Richardson Family Park Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Richardson Family Park Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 4.5 acre-feet of stormwater diverted from a 90-inch City of Los Angeles storm drain located under South Budlong Avenue and convey to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery would be located under the field. The approximate footprint would be 90 feet by 145 feet (as shown in Figure 1). During design, it would be determined if one single or multiple interconnected infiltration galleries are preferred.
  - Remaining stormwater volume would be received by drywells at the school site (as shown in Figure 1).
  - Bioretention and porous materials for the walkways and other paved areas could be used in the project area.



Figure 2: typical Infiltration Gallery (Source: StormTrap)



Figure 3: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

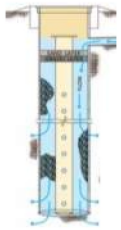


Figure 4: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	2700 S Budlong Ave Los Angeles, CA 90007	**Project ID**	184
Coordinates	34° 1'48.77"N, 118°17'44.28"W	**Capture Volume (Drainage Area)**	4.5 acre-feet (1,077 acres)
City Council District	8	**Construction Cost**	$2.5 M
City of LA Watershed	Ballona Creek	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Richardson Family Park Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 120 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Identify the number of storm drain diversion required to hydraulically supply the proposed quantity and locations of drywells in the project area.



Photos: Existing condition of Richardson Family Park.

Project Benefits

Water Quality
The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 95 percent.

Water Supply
The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding
This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Parks and Green Space
After construction of the BMP, the existing park and field would be re-constructed, re-invigorating this important open green space.

Neighborhood Beautification
New vegetation and beautification elements would increase community pride and engagement.

Community Benefit
The enhanced park would include active recreation features and passive features such as benches, picnicking areas and educational kiosks, which would promote socialization, and outdoor time would have a positive impact on the well-being of the community.

DAC Benefits
The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Jefferson Boulevard and Main Street Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Jefferson Boulevard and Main Street Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet weather runoff.
- The Project would manage a total of 111.7 acre-feet of stormwater diverted from multiple links of the City of Los Angeles reinforced concrete pipe (RCP) storm drain system. The diverted flow would be conveyed to a network of drywells along Jefferson Boulevard, Main Street, and their adjacent streets for groundwater recharge.
- Figure 1 presents an example of the diversion from the 100-inch City of Los Angeles storm drain that could be conveyed to a network of drywells along Jefferson Boulevard and adjacent streets, including Figueroa Street, Grand Avenue, Hill Street, Broadway, and Maple Street. The specific number and locations of drywells will be determined during a feasibility study.
- Bioretention would also be designed into the cross streets to capture surface flow.

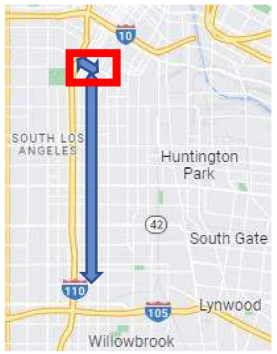


Figure 2: Project overall area. The area in the red rectangle is shown in Figure 1.

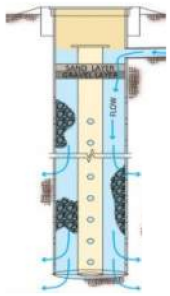


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)



Figure 4: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	Jefferson Blvd and Main Street	**Project ID**	379,251,224,139, 136,135,131
Coordinates	34° 1'14.87"N, 118°16'39.84"W	**Capture Volume (Drainage Area)**	111.7 acre-feet (5,762 acres)
City Council District	11	**Construction Cost**	$61.4 M
City of LA Watershed	Ballona Creek/ Upper Los Angeles River	**Construction Duration**	3-5 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay/ Upper Los Angeles River	**Disadvantaged Community (DAC)**	Yes
Project Type	Roadway	**Owning Agency**	Roadway

Figure 1: Conceptual Layout



Jefferson Boulevard and Main Street Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm ranges from approximately 1 inch to 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 3 in/hr for drywells. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater ranges from approximately 50 to 150 feet, based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Identify the number of storm drain diversions required to hydraulically supply the proposed quantity and locations of drywells in the project area.



Photo: Hill Street facing north from Jefferson.



Photo: Jefferson facing east from Flower St.

Project Benefits

Water Quality — The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor that ranges from 84 to 95 percent.

Water Supply — The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduce Heat Island Effect — Greenscaping and additional trees in biofiltration areas to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification — New greenscaping and trees would improve aesthetics and provide much-needed benefits to those who live and work in this neighborhood.

Community Benefit — New greenscaping in the future green streets. Potential for local artists to participate in redesign to increase community engagement and capture the local community aesthetic.

DAC Benefits — The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Johnnie L. Cochran Jr. Middle School and Arlington Heights Elementary School
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Johnnie L. Cochran Jr. Middle School and Arlington Heights Elementary School Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 5.4 acre-feet of stormwater diverted from a 48-inch Los Angeles County Flood Control District (LACFCD) storm drain located under West Washington Boulevard. The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery with an approximate footprint of 125 feet by 125 feet at a Los Angeles Unified School District (LAUSD) parking lot located to the south of the main school property (as shown in Figure 1). During design, it would be determined if one single or multiple interconnected infiltration galleries are preferred.
  - The main school parcel may be used to manage an additional 50 acre-feet of stormwater if a longer diversion from Venice Boulevard were deemed feasible. This option would divert stormwater from a 162-inch LACFCD storm drain approximately 850 feet from the school athletic field (as shown in Figure 1).
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells at the site or in the neighboring streets. The specific number and locations of drywells would be determined during a future feasibility study.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)



Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	1700 S. Bronson Ave Los Angeles, CA 90019	**Project ID**	193
Coordinates	34° 2'35.51"N, 118°19'40.79"W	**Capture Volume (Drainage Area)**	5.4 acre-feet (72 acres)
City Council District	10	**Construction Cost**	$3.0 M
City of LA Watershed	Ballona Creek	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	Los Angeles Unified School District

Figure 1: Conceptual Layout



Johnnie L. Cochran Jr. Middle School and Arlington Heights Elementary School
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 71 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Existing condition of the school field and paved areas.



Photo: Existing condition of the LAUSD parking lot.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 95 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Heat Island Effect

Greenscaping and additional trees in the school's courtyards and around the properties would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New vegetation and enhanced aesthetics would improve mental well-being by encouraging, more active outdoor recreation.

Community Benefit

Updated athletic field, basketball courts, playground equipment at the elementary school, greenscaping, and addition of trees throughout the campus, would improve the school's aesthetics, recreational spaces, and school pride.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Stoner Recreation Center Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Stoner Recreation Center Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 24 acre-feet of stormwater diverted from the 66-inch City of Los Angeles storm drain located under South Westgate Avenue. The diverted flow would be conveyed to a series of Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the athletic field, with an approximate footprint of 280 feet by 250 feet (as shown in Figure 1). Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells at the site or in the neighboring streets. The specific number and locations of drywells would be determined during a future feasibility study.
  - Bioretention BMPs and trees around the project's perimeter and pervious pavement to infiltrate surface flow (as shown in Figure 1).
  - Additional stormwater runoff could also be diverted from the 36-inch City storm drain located under Missouri Avenue. This would add approximately 94 acres to the overall drainage area.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)



Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)



Figure 4: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	1831 S Stoner Ave Los Angeles, CA 90025	**Project ID**	169
Coordinates	34° 2'17.20"N, 118°27'14.81"W	**Capture Volume (Drainage Area)**	24 acre-feet (355 acres)
City Council District	11	**Construction Cost**	$13.2 M
City of LA Watershed	Ballona Creek	**Construction Duration**	5 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay	**Disadvantaged Community (DAC)**	No
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Stoner Recreation Center Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 59 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.



Photo: Existing condition of the site.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 86 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Parks and Green Space

New and improved athletic fields, playground equipment, and greenscaping would improve the existing recreation center.

Reduced Heat Island Effect

Bioretention, greenscaping, and additional trees along the park perimeter would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

Re-constructed fields, new vegetation and enhanced aesthetics, along with added trees and seating areas, would improve mental well-being by encouraging social gatherings and providing a break from the heat.

Community Benefit

Upgraded park amenities would allow children and adults to play, exercise, and relax. Improvements would be decided upon through an interactive stakeholder process.

Vacant Parcel with Potential New Construction Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Vacant Parcel with Potential New Construction Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 50 acre-feet of stormwater diverted from reinforced concrete pipe (RCP) storm drain lines that are maintained by the Los Angeles County Flood Control District (LACFCD) and are surrounding the site. The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the paved area with an approximate footprint of 3.3 acres as shown in the northeast of the Project area (Figure 1). This BMP would manage up to 50 acre-feet of stormwater runoff. Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - Other parts of the site (as shown in Figure 1) may be also used to manage additional stormwater runoff if additional storm drain diversions deem feasible.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells. The specific number and locations of drywells would be determined during a future feasibility study.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)



Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	5230 Arbor Vitae St Los Angeles, CA 90045	**Project ID**	363
Coordinates	33°57'8.19"N, 118°22'15.96"W	**Capture Volume (Drainage Area)**	50 acre-feet (1,040 acres)
City Council District	11	**Construction Cost**	$27.5 M
City of LA Watershed	Dominguez Channel	**Construction Duration**	5 years
Safe, Clean Water Program (SCWP) Watershed	South Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	Los Angeles International Airport

Figure 1: Conceptual Layout



Vacant Parcel with Potential New Construction Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 106 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Existing condition of the site. Arbor Vitae St and La Cienega Blvd intersection.



Photo: Existing condition of the site. View from the Cienega Blvd.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Heat Island Effect

New vegetation, greenscaping and additional trees would provide shade to aid in offsetting the effects of heat-absorbing materials.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Carl E. Nielson Youth Park Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Carl E. Nielson Youth Park Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 30.3 acre-feet of stormwater diverted from a 45-inch storm drain maintained by the City of Los Angeles. The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the ball field, with an approximate footprint of 300 feet by 300 feet (as shown in Figure 1). Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - Additional stormwater runoff could be diverted from the 24-inch City storm drain located under parking lot. This would add approximately 63 acres to the overall drainage area.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells. The specific number and locations of drywells would be determined during a future feasibility study.
  - Bioretention could be utilized in future green streets.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)

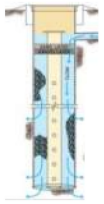


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)



Figure 4: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	6000 Will Rogers St Los Angeles, CA 90045	**Project ID**	364
Coordinates	33°57'22.13"N, 118°23'19.47"W	**Capture Volume (Drainage Area)**	30.3 acre-feet (51 acres)
City Council District	11	**Construction Cost**	$16.7 M
City of LA Watershed	Dominguez Channel	**Construction Duration**	5 years
Safe, Clean Water Program (SCWP) Watershed	South Santa Monica Bay	**Disadvantaged Community (DAC)**	No
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Carl E. Nielson Youth Park Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 77 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.



Photo: Existing condition of the park, view from Will Rogers St.



Photo: Existing condition of the park, view from Yorktown Ave.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Neighborhood Beautification

New greenscaping and trees would beautify the neighborhood. The updated park will benefit visitors while encouraging safer, more active outdoor recreation.

Community Benefit

The updated park includes active recreation features and passive features such as benches, picnicking areas and educational kiosks, which would promote socialization, and outdoor time would have a positive impact on the well-being of the community. Upgrades in the parking lot could include educational kiosks, promoting community engagement in stormwater quality improvement.

Fire Station Number 5 Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Fire Station Number 5 Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 3.3 acre-feet of stormwater diverted from the 84-inch Los Angeles County Flood Control District (LACFCD) storm drain located under Emerson Avenue and convey flow to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One 15-foot-high infiltration gallery under the parking area of the fire station, with approximate dimensions of 100 feet by 100 feet (as shown in Figure 1). A BMP this size would require the former fire station's building to be demolished.
  - Drywells would receive additional flow if building demolition is not deemed feasible and the infiltration gallery was restricted to a smaller footprint.



Figure 2: typical Infiltration Gallery
(Source: StormTrap)

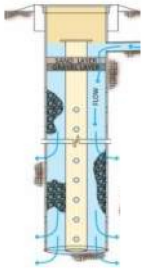
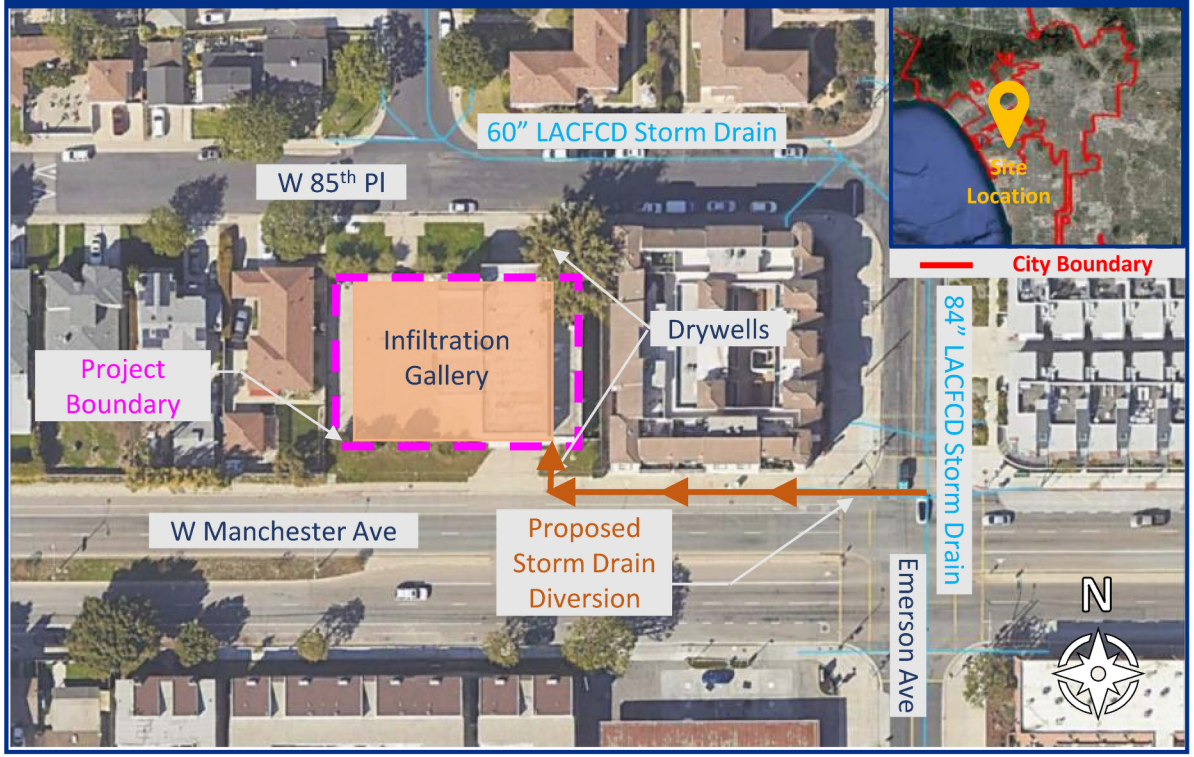


Figure 3: Typical Drywell
(Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	6621 W Manchester Ave, Los Angeles, CA 90045	**Project ID**	154
Coordinates	33°57'36.52"N, 118°24'18.75"W	**Capture Volume (Drainage Area)**	3.3 acre-feet (302 acres)
City Council District	11	**Construction Cost**	$1.8 M
City of LA Watershed	Santa Monica Bay J2/3	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay	**Disadvantaged Community (DAC)**	No
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Fire Station Number 5 Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.5 in/hr and 5 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 57 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.



Photo: Existing condition of the former fire station, view from W Manchester Ave.

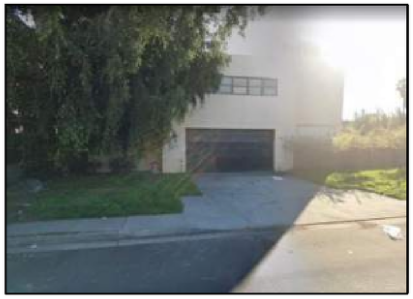


Photo: Existing condition of the former fire station, view from W 85th Pl.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Heat Island Effect

Replacing the building and parking lot with open space, greenscaping, and trees would provide shade and aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New vegetation and beautification elements would increase community pride and engagement.

Community Benefit

If the demolition of the fire station is deemed feasible, converting this site into a neighborhood pocket park would provide a space for residents to gather and socialize. Including educational kiosks would engage the community in stormwater quality improvement.

Mark Twain Middle School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Mark Twain Middle School Stormwater Project (Project) in the Westchester area was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 4.7 acre-feet of stormwater diverted from a 39-in storm drain under Lucile Avenue, maintained by the Los Angeles County Flood Control District (LACFCD). The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under one of the school's paved playgrounds, with an approximate dimension of 100 feet by 135 feet (as shown in Figure 1). This BMP would manage up to 4.7 acre-feet of stormwater runoff. Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - Other parts of the school parcel (as shown in Figure 1) may be used to manage additional volume of stormwater if diversions from other LACFCD storm drains under Beethoven Street, Walgrove Avenue, and Marco Place are deemed feasible.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells at the site. The specific number and locations of drywells would be determined during a future feasibility study.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)

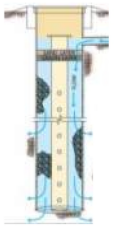


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	2224 Walgrove Ave Los Angeles, CA 90066	**Project ID**	162
Coordinates	33°59'59.36"N, 118°26'52.81"W	**Capture Volume (Drainage Area)**	4.7 acre-feet (78 acres)
City Council District	11	**Construction Cost**	$2.6 M
City of LA Watershed	Marina Del Ray	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay	**Disadvantaged Community (DAC)**	No
Project Type	Parcel	**Owning Agency**	Los Angeles Unified School District

Figure 1: Conceptual Layout



Mark Twain Middle School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 31 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Existing condition of the school paved playground, view from Victoria Ave.



Photo: Existing condition of Beethoven Elementary School's paved playground, view from Lucille Ave.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Heat Island Effect

Greenscaping and additional trees in the school's courtyards and around the property would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New vegetation and beautification elements would increase community pride and engagement. Added green space would benefit students and staff while encouraging safer, more active outdoor recreation.

Community Benefit

New and improved athletic fields, outdoor recreational space, and greenscaping would improve the school's aesthetics, recreational spaces, and school pride.

Plummer Street Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Plummer Street Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet weather runoff.
- The Project would manage total of 74.1 acre-feet of stormwater diverted from multiple links of the City of Los Angeles storm drain system. The diverted flow would be conveyed to a network of drywells along Plummer and its adjacent streets for groundwater recharge.
- Figure 1 presents an example of the diversion from the 81-inch City of Los Angeles storm drain under DeSoto Avenue that could be conveyed to a network of drywells along Plummer Street from DeSoto Avenue to Mason Avenue. The specific number and locations of drywells will be determined during a feasibility study.
- Bioretention would also be designed into the cross streets to capture surface flow.



Figure 2: Project overall area.
The area in the red rectangle is shown in Figure 1.

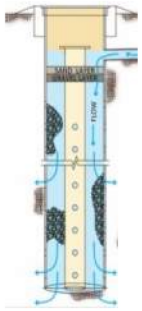
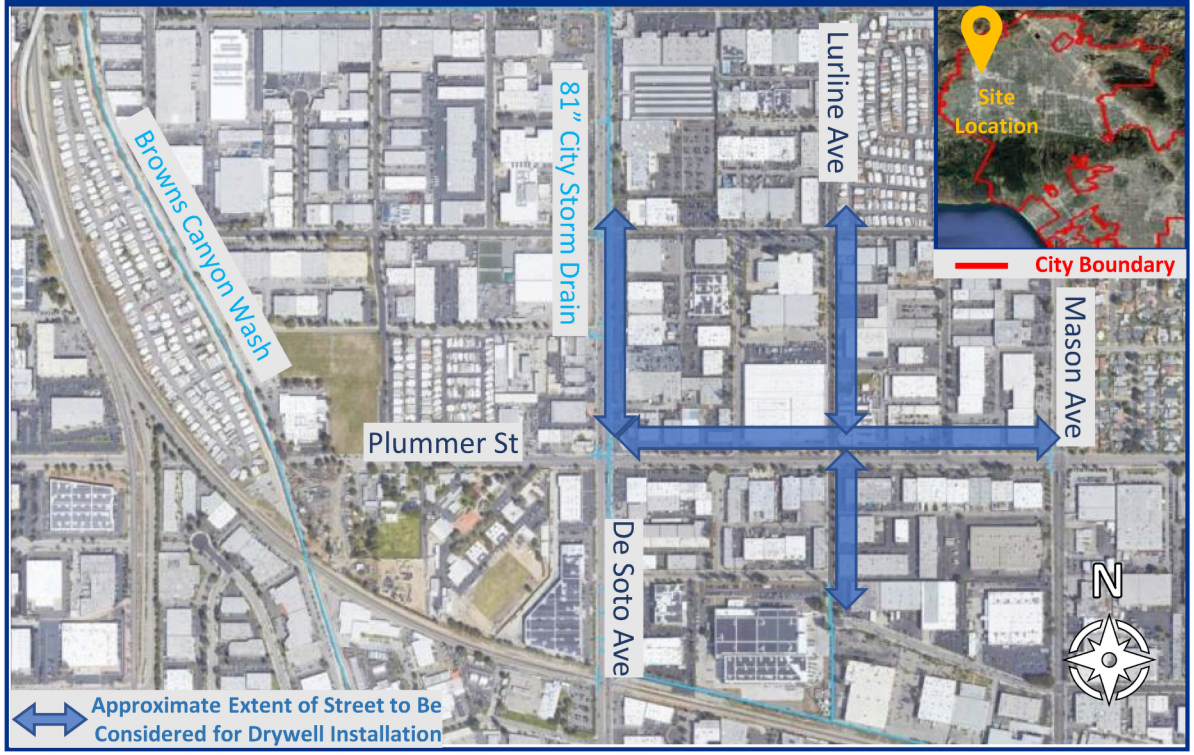


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	Plummer St from DeSoto Ave to Mason Ave, Los Angeles, CA 91311	**Project ID**	323, 324, 325, 326, 327, 332
Coordinates	34°14'33.77"N, 118°36'14.28"W	**Capture Volume (Drainage Area)**	74.1 acre-feet (5,912 acres)
City Council District	12	**Construction Cost**	$40.8 M
City of LA Watershed	Upper Los Angeles River	**Construction Duration**	3-5 years
Safe, Clean Water Program (SCWP) Watershed	Upper Los Angeles River	**Disadvantaged Community (DAC)**	No
Project Type	Roadway	**Owning Agency**	Roadway

Figure 1: Conceptual Layout



Plummer Street Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm ranges from approximately 1 inch to 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 3 in/hr for drywells. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater ranges from approximately 50 to 65 feet, based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Identify the number of storm drain diversions required to hydraulically supply the proposed quantity and locations of drywells in the project area.



Photo: Plummer Street facing east from De Soto Ave.



Photo: Plummer St facing west from Mason St.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor that ranges from 85 to 95 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduce Heat Island Effect

Greenscaping and additional trees in biofiltration areas would aid in offsetting the effects of heat-absorbing materials.

Community Benefit

New greenscaping in the future green streets. Potential for local artists to participate in redesign to increase community engagement and capture the local community aesthetic.

Neighborhood Beautification

New greenscaping and trees would improve neighborhood aesthetics.

Ramona Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Ramona Elementary School Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 11.8 acre-feet of stormwater diverted from a 64-inch storm drain maintained by the City of Los Angeles. The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the paved playground and field, with an approximate footprint of 0.8 acres (as shown in Figure 1). Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells under the paved playground or other parts of the school. The specific number and locations of drywells would be determined during a future feasibility study.



Figure 2: typical Infiltration Gallery (Source: StormTrap)

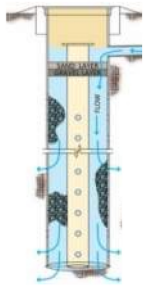


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	1133 N Mariposa Av Los Angeles, CA 90029	**Project ID**	260
Coordinates	34° 5'29.49"N, 118°17'59.95"W	**Capture Volume (Drainage Area)**	11.8 acre-feet (573 acres)
City Council District	13	**Construction Cost**	$6.5 M
City of LA Watershed	Ballona Creek	**Construction Duration**	4 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	Los Angeles Unified School District

Figure 1: Conceptual Layout



Ramona Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1-inch based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 20 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.



Photo: Existing condition of the school, view from N Normandie Ave.



Photo: Existing condition of the school, view from Santa Monica Blvd.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 95 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding

This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Reduced Heat Island Effect

Greenscaping and additional trees around the school property would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New vegetation and beautification elements would increase community pride and engagement.

Community Benefit

New and improved outdoor recreational space and greenscaping would improve the school's aesthetics, recreational spaces, and school pride.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Los Angeles Street Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Los Angeles Street, from 15th to Pico Boulevard, Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet weather runoff.
- The Project would manage 5 acre-feet of stormwater diverted from the City of Los Angeles reinforced concrete pipe (RCP) storm drain system. The diverted flow would be conveyed to a network of drywells along Los Angeles Street between 15th Street and Pico Boulevard for groundwater recharge.
- Figure 1 presents an example of the diversion from the 24-inch and a 48-inch City of Los Angeles storm drain that could be conveyed to a network of drywells along Los Angeles Street from 15th Street to Pico Boulevard and adjacent streets. The specific number and locations of drywells will be determined during a feasibility study.
- Bioretention would also be designed into the cross streets to capture surface flow.

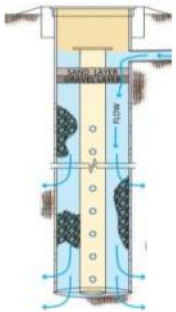


Figure 2: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)



Figure 3: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	Los Angeles St from 15th to Pico Blvd	**Project ID**	380
Coordinates	34° 2'8.54"N, 118°15'33.83"W	**Capture Volume (Drainage Area)**	5 acre-feet (66 acres)
City Council District	14	**Construction Cost**	$2.8 M
City of LA Watershed	Ballona Creek	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	Central Santa Monica Bay	**Disadvantaged Community (DAC)**	No
Project Type	Roadway	**Owning Agency**	Roadway

Figure 1: Conceptual Layout



Los Angeles Street Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1.1 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 3 in/hr for drywells. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 166 feet, based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Identify the number of storm drain diversions required to hydraulically supply the proposed quantity and locations of drywells in the project area.

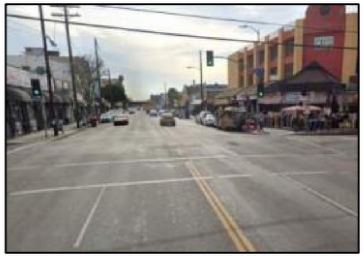


Photo: Los Angeles St facing south from Pico Blvd.



Photo: Los Angeles St facing north from 15th St.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 7 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduce Heat Island Effect

Greenscaping and additional trees in biofiltration areas would aid in offsetting the effects of heat-absorbing materials.

Community Benefit

New greenscaping in the future green streets. Potential for local artists to participate in redesign to increase community engagement and capture the local community aesthetic.

Neighborhood Beautification

New vegetation and beautification elements would increase community pride and engagement.

City Yard Multi-Benefit Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The City Yard Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 40.6 acre-feet of stormwater diverted from the 72-inch and 62-inch storm drains maintained by the Los Angeles County Flood Control District (LACFCD) and City of Los Angeles, respectively, as well as Caltrans storm drains located near the freeway system to the east of the project area. The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the paved city yard, with an approximate footprint of 2.7 acres (as shown in Figure 1). Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells under the City yard. The specific number and locations of drywells would be determined during a future feasibility study.



Figure 2: typical Infiltration Gallery (Source: StormTrap)

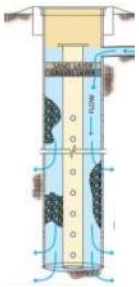
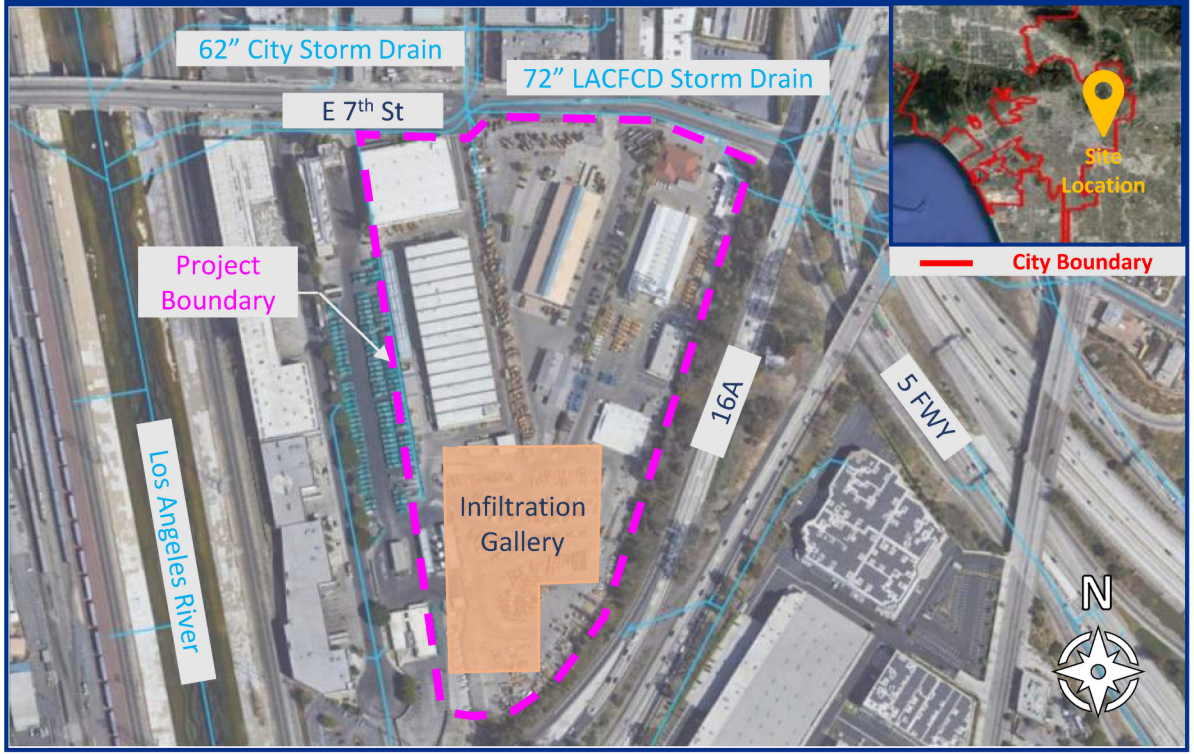


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

Project Summary (per CIP Analysis Workbook)

Address	2300 E 7th St Los Angeles, CA 90023	**Project ID**	252
Coordinates	34° 2'4.21"N, 118°13'22.20"W	**Capture Volume (Drainage Area)**	40.6 acre-feet (1,011 acres)
City Council District	14	**Construction Cost**	$22.3 M
City of LA Watershed	Upper Los Angeles River	**Construction Duration**	5 years
Safe, Clean Water Program (SCWP) Watershed	Upper Los Angeles River	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



City Yard Multi-Benefit Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 1-inch based on Los Angeles County.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 177 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD and Caltrans for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Existing condition of the City yard: front gate area.



Photo: Existing condition of the City yard: proposed infiltration gallery area.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor of 91 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Heat Island Effect

Greenscaping and additional trees around the perimeter of the City yard would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New vegetation and beautification elements would increase community pride and engagement.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Central Boulevard and Imperial Highway Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Central Boulevard and Imperial Highway Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet weather runoff.
- The Project would manage total of 41.3 acre-feet of stormwater diverted from multiple links of the City of Los Angeles reinforced concrete box (RCB) storm drain system. The diverted flow would be conveyed to a network of drywells along Central Boulevard from East Imperial Highway to East 119th Street, Imperial Highway from South Central Avenue to Success Avenue, Imperial Highway from Success Avenue to South Grandee Avenue, and their adjacent streets for groundwater recharge.
- Figure 1 presents an example of a diversion from the 60-inch City of Los Angeles storm drain that could be conveyed to a network of drywells along Central Boulevard and adjacent streets. The specific number and locations of drywells will be determined during a feasibility study.
- Bioretention would also be designed into the cross streets to capture surface flow.

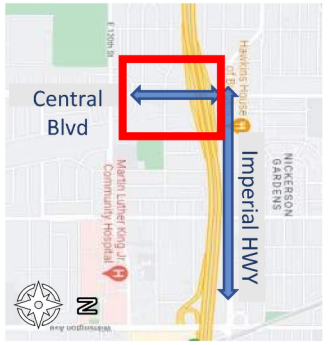


Figure 2: Project overall area. The area in the red rectangle is shown in Figure 1.

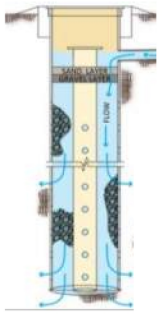


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment).

Project Summary (per CIP Analysis Workbook)

Address	Central Blvd and Imperial Hwy Los Angeles, CA 90059	**Project ID**	109, 110, 111
Coordinates	33°55'46.10"N, 118°15'15.46"W	**Capture Volume (Drainage Area)**	41.3 acre-feet (14,543 acres)
City Council District	15	**Construction Cost**	$22.7 M
City of LA Watershed	Upper Los Angeles River	**Construction Duration**	4 years
Safe, Clean Water Program (SCWP) Watershed	Upper Los Angeles River	**Disadvantaged Community (DAC)**	Yes
Project Type	Roadway	**Owning Agency**	Roadway

Figure 1: Conceptual Layout



Central Boulevard and Imperial Highway Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 0.9 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 3 in/hr for drywells. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater ranges from approximately 93 to 101 feet, based on the City of Los Angeles GeoHub.
- The following will need to be conducted as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater would be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Identify the number of storm drain diversions required to hydraulically supply the proposed quantity and locations of drywells in the project area.



Photo: Central Ave facing north from 119th St.



Photo: Central Ave facing south from Imperial Hwy.

Project Benefits

Water Quality

The proposed project assists in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies. This project location has a pollutant load reduction factor that ranges from 84 to 90 percent.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduce Heat Island Effect

Greenscaping and additional trees in biofiltration areas and upgraded bus stops would aid in offsetting the effects of heat-absorbing materials.

Community Benefit

New greenscaping and shaded seating at bus stops in the future green streets. Potential for local artists to participate in redesign to increase community engagement and capture the local community aesthetic.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Neighborhood Beautification

New greenscaping, trees, and shaded bus stops would be part of improved neighborhood aesthetics and provide much-needed benefits to those who live and work in this DAC.

Banning Park and Museum Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Banning Park and Museum Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration project needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 2.7 acre-feet of stormwater diverted from a 24-inch City of Los Angeles storm drain. The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the existing open spaces and walkways, with an approximate footprint of 150 feet by 55 feet (as shown in Figure 1).
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells at the site or in the neighboring streets. The specific number and locations of drywells would be determined during a future feasibility study.
  - Bioretention and porous materials for the walkways could be used in the project area.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)

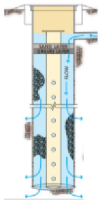


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)



Figure 4: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	401 E M St, Wilmington CA 90744	**Project ID**	274
Coordinates	33°47'25.02"N, 118°15'29.47"W	**Capture Volume (Drainage Area)**	2.7 acre-feet (57 acres)
City Council District	15	**Construction Cost**	$1.5 M
City of LA Watershed	Dominguez Channel	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	South Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Banning Park and Museum Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 0.7 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.5 in/hr and 5 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is good for infiltration.
- Depth to groundwater is approximately 56 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.

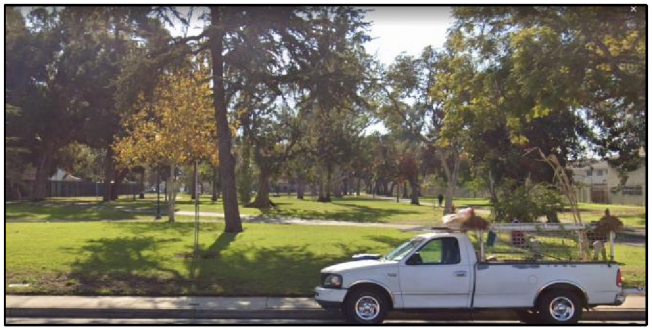


Photo: Existing condition of the west side of the park.

Project Benefits

Water Quality
The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply
The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding
This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Parks and Green Space
After construction of the project, the existing park and field would be re-constructed, re-invigorating this important open green space.

Neighborhood Beautification
New vegetation and beautification elements would increase community pride and engagement.

Community Benefit
New greenscaping and other passive features such as shaded seating and educational kiosks would be provided may promote socialization, and outdoor time would have a positive impact on the well-being of the community.

DAC Benefits
The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Gardena Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Gardena Elementary School Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff while providing other benefits to the community.
- The Project would manage 39.6 acre-feet of stormwater diverted from a 114-inch storm drain maintained by the Los Angeles County Flood Control District (LACFCD). The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the paved playground and field, with an approximate footprint of 0.8 acres (as shown in Figure 1). This BMP would manage up to 12 acre-feet.
  - Remaining stormwater volume could be received by drywells at the school site or neighboring streets (as shown in Figure 1).
  - Bioretention and porous materials for the walkways could be used in the project area.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)



Figure 3: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	647 W Gardena Blvd Gardena, CA 90247	**Project ID**	279
Coordinates	33°52'56.24"N, 118°17'11.62"W	**Capture Volume (Drainage Area)**	39.6 acre-feet (991 acres)
City Council District	15	**Construction Cost**	$21.8 M
City of LA Watershed	Dominguez Channel	**Construction Duration**	5 years
Safe, Clean Water Program (SCWP) Watershed	South Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	Los Angeles Unified School District

Figure 1: Conceptual Layout



Gardena Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 0.9 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 35 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Existing condition of the school outdoor recreational area. View from W Gardena Blvd.



Photo: Existing condition of the school outdoor recreational area. View from Estrella Ave.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding

This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Reduced Heat Island Effect

Greenscaping and additional trees at the school and on the neighboring green streets would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New greenscaping, trees, and a shaded bus stop on W Gardenia Boulevard would beautify the neighborhood. Added green space and playground upgrades would benefit students and staff while encouraging safer, more active outdoor recreation.

Community Benefit

New and improved playground spaces and greenscaping would improve the school's aesthetics, recreational spaces, and school pride.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Segment of Pacific Coast Highway Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- Segment of Pacific Coast Highway Stormwater Project (Project), Senator Avenue to the east of Normandie Avenue, was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet weather runoff.
- The Project would manage 11.8 acre-feet of stormwater diverted from the Los Angeles County Flood Control District (LACFCD) storm drain system. The diverted flow would be conveyed to a network of drywells along the Pacific Coast Highway between Senator Avenue to the east of Normandie Avenue and their adjacent streets for groundwater recharge.
- Figure 1 presents an example of the diversion from the 81-inch LACFCD storm drain that could be conveyed to a network of drywells along the Pacific Coast Highway between Senator Avenue to the east of Normandie Avenue and their adjacent streets. The specific number and locations of drywells will be determined during a feasibility study.
- Bioretention would also be designed into the cross streets to capture surface flow.

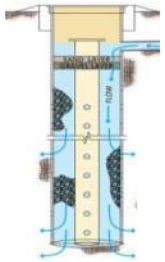


Figure 2: Typical Drywell
(Source: CA Office of Environmental Health Hazard Assessment)



Figure 3: Typical Bioretention
(Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	Pacific Coast Highway, Senator Ave to east of Normandie Ave Los Angeles, CA 90701	**Project ID**	272
Coordinates	33°47'27.80"N, 118°15'0.19"W	**Capture Volume (Drainage Area)**	11.8 acre-feet (193 acres)
City Council District	15	**Construction Cost**	$6.5 M
City of LA Watershed	Dominguez Channel	**Construction Duration**	4 years
Safe, Clean Water Program (SCWP) Watershed	South Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Roadway	**Owning Agency**	Roadway

Figure 1: Conceptual Layout



Segment of Pacific Coast Highway Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 0.9 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 5 in/hr for drywells. This infiltration rate was conservatively estimated based on the best available data when soil condition is good for infiltration.
- Depth to groundwater is approximately 56 feet, based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Identify the number of storm drain diversions required to hydraulically supply the proposed quantity and locations of drywells in the project area.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Pacific Coast Hwy facing west from N Normandie Ave.



Photo: Pacific Coast Hwy facing east from Senator Ave.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduce Heat Island Effect

Greenscaping and additional trees in biofiltration areas and upgraded bus stops to aid in offsetting the effects of heat-absorbing materials.

Community Benefit

New greenscaping in the future green streets. Potential for local artists to participate in redesign to increase community engagement and capture the local community aesthetic.

Neighborhood Beautification

New greenscaping and trees would improve neighborhood aesthetics.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Western Avenue Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Western Avenue from 182nd Street to North of 405 Freeway Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet weather runoff.
- The Project would manage 12.1 acre-feet of stormwater diverted from the City of Los Angeles storm drain system. The diverted flow would be conveyed to a series of drywells along Western Boulevard from 182nd Street to North of 405 Freeway and their adjacent streets for groundwater recharge.
- Figure 1 presents an example of the diversion from the 78-inch City of Los Angeles storm drain that could be conveyed to a network of drywells along Western Boulevard from 182nd Street to North of 405 Freeway and adjacent streets. The specific number and locations of drywells will be determined during a feasibility study.
- Bioretention would also be designed into the cross streets to capture surface flow.

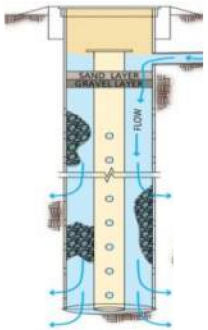


Figure 2: Typical Drywell
(Source: CA Office of Environmental Health Hazard Assessment)



Figure 3: Typical Bioretention
(Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	Western Ave from 182nd St to 405 Fwy Gardenia, CA 90248	**Project ID**	278
Coordinates	33°51'55.01"N, 118°18'31.84"W	**Capture Volume (Drainage Area)**	12.1 acre-feet (329 acres)
City Council District	15	**Construction Cost**	$6.7 M
City of LA Watershed	Dominguez Channel	**Construction Duration**	4 years
Safe, Clean Water Program (SCWP) Watershed	South Santa Monica Bay	**Disadvantaged Community (DAC)**	No
Project Type	Roadway	**Owning Agency**	Roadway

Figure 1: Conceptual Layout



Western Avenue Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 0.9 inch based on Los Angeles County isohyets.
- The assumed infiltration rate is 3 in/hr for drywells. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 83 feet, based on the City of Los Angeles GeoHub.
- The following will need to be conducted as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Identify the number of storm drain diversions required to hydraulically supply the proposed quantity and locations of drywells in the project area.



Photo: Western Ave facing south from 182nd Ave.



Photo: Western Ave facing north from north of 405 FWY.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduce Heat Island Effect

Greenscaping and additional trees in biofiltration areas and upgraded bus stops would aid in offsetting the effects of heat-absorbing materials.

Community Benefit

New greenscaping and shaded seating at bus stops in the future green streets. Potential for local artists to participate in redesign to increase community engagement and capture the local community aesthetic.

Neighborhood Beautification

New greenscaping, trees, and shaded bus stops would improve neighborhood aesthetics.

Rosecrans Recreation Center Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Rosecrans Recreation Center Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 5 acre-feet of stormwater diverted from a 108-inch storm drain maintained by the Los Angeles County Flood Control District (LACFCD). The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the ball field, with an approximate footprint of 100 feet by 145 feet (as shown in Figure 1). This BMP would manage up to 5 acre-feet of stormwater runoff. Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells at the site or in the neighboring streets. The specific number and locations of drywells would be determined during a future feasibility study.
  - Bioretention could be utilized in the area between the two fields.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)

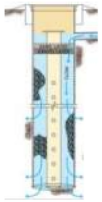


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)



Figure 4: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	14920 S Menlo Ave Gardena, CA 90247	**Project ID**	280
Coordinates	33°53'44.63"N, 118°17'25.79"W	**Capture Volume (Drainage Area)**	5 acre-feet (124 acres)
City Council District	15	**Construction Cost**	$2.8 M
City of LA Watershed	Dominguez Channel	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	South Santa Monica Bay	**Disadvantaged Community (DAC)**	No
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Rosecrans Recreation Center Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 0.9 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 53 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Existing condition of the ball field. View from Vermont Ave.



Photo: Existing condition of the basketball field. View from 149th St.

Project Benefits

Water Quality
The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply
The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding
This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Reduced Heat Island Effect
Greenscaping and additional trees at the recreation center would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification
New greenscaping and trees would beautify the neighborhood. Added green space and passive features (spectator seating and educational kiosks) would benefit visitors while encouraging safer, more active outdoor recreation.

Community Benefit
New and improved athletic fields and greenscaping would improve the aesthetics and recreational spaces.

Rosecrans Metro Garden Club Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Rosecrans Metro Garden Club Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 4.1 acre-feet of surface stormwater runoff by a subsurface Best Management Practice (BMP) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the garden club plots with an approximate footprint of 40 feet by 300 feet (as shown in Figure 1). This BMP would manage up to 4.1 acre-feet. Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells at the site. The specific number and locations of drywells would be determined during a future feasibility study.
  - Bioretention could be used in the project area to manage surface flow from W 149th Street.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)

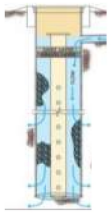


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)



Figure 4: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	Behind 14834 Estrella Ave, Gardena, CA 90248	**Project ID**	281
Coordinates	33°53'53.70"N, 118°17'6.34"W	**Capture Volume (Drainage Area)**	4.1 acre-feet (99 acres)
City Council District	15	**Construction Cost**	$2.2 M
City of LA Watershed	Dominguez Channel	**Construction Duration**	3 years
Safe, Clean Water Program (SCWP) Watershed	South Santa Monica Bay	**Disadvantaged Community (DAC)**	No
Project Type	Parcel	**Owning Agency**	City of Los Angeles

Figure 1: Conceptual Layout



Rosecrans Metro Garden Club Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 0.9 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 48 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.



Photo: Existing condition of the garden club from the north end.



Photo: Existing condition of the garden club from the south end.

Project Benefits

Water Quality

The proposed project assists in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Neighborhood Beautification

The community gardens offer neighborhood beautification.

Community Benefit

The existing gardens will be replaced above the infiltration gallery. Potential upgrades could be incorporated based on community input.

Normont Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Normont Elementary School Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 13.1 acre-feet of stormwater diverted from the Lomita reinforced concrete box (RCB) storm drain maintained by the Los Angeles County Flood Control District (LACFCD). The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the paved playground and field, with an approximate footprint of 300 feet by 100 feet (as shown in Figure 1). This BMP would manage up to 10.3 acre-feet. Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - Remaining stormwater volume would be received by drywells at the school site or neighboring streets (as shown in Figure 1).
  - Bioretention and porous materials for the parking lot, driveways, and walkways could be used in the project area.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)



Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)

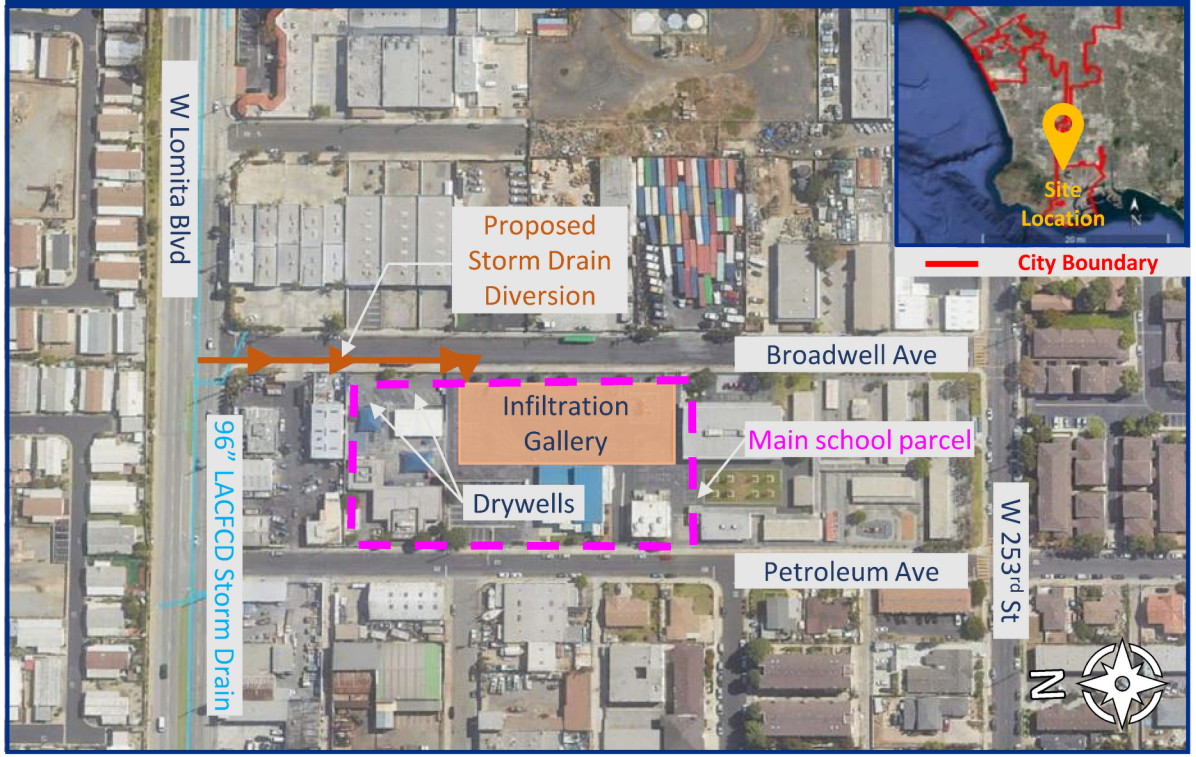


Figure 4: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	1001 W 253rd St Harbor City, CA 90710	**Project ID**	271
Coordinates	33°47'45.91"N, 118°17'35.68"W	**Capture Volume (Drainage Area)**	13.1 acre-feet (283 acres)
City Council District	15	**Construction Cost**	$7.2 M
City of LA Watershed	Dominguez Channel	**Construction Duration**	4 years
Safe, Clean Water Program (SCWP) Watershed	South Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	Los Angeles Unified School District

Figure 1: Conceptual Layout



Normont Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 0.9 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.3 in/hr and 3 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is fair for infiltration.
- Depth to groundwater is approximately 73 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Existing condition of the school parking lot.



Photo: Existing condition of School outdoor recreational area.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding

This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Reduced Heat Island Effect

Greenscaping and additional trees at the school would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New greenscaping and trees would beautify the neighborhood. Added green space and playground upgrades would benefit students and staff while encouraging safer, more active outdoor recreation.

Community Benefit

New and improved outdoor recreation and greenscaping would improve the school's aesthetics, recreational spaces, and school pride.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Gulf Avenue STEAM Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Project Overview

- The Gulf Avenue STEAM Elementary School Stormwater Project (Project) was part of a 2021 citywide effort to identify stormwater capture and infiltration projects needed to achieve National Pollutant Discharge Elimination System (NPDES) permit compliance and meet Total Maximum Daily Loads (TMDLs).
- The Project presents an opportunity to enhance surface water quality and increase subsurface infiltration by diverting, capturing, and infiltrating upstream wet-weather runoff.
- The Project would manage 16.4 acre-feet of stormwater diverted from a 114-inch storm drain maintained by the Los Angeles County Flood Control District (LACFCD). The diverted flow would be conveyed to a series of subsurface Best Management Practices (BMPs) that would recharge groundwater.
- BMP options include:
  - One large 15-foot-high infiltration gallery under the existing paved playground and field, with an approximate footprint of 300 feet by 160 feet (as shown in Figure 1). Pending further evaluation, multiple interconnected galleries with open spaces between may be necessary.
  - As an alternative, stormwater could be infiltrated into the ground using a system of drywells under the paved playground or other parts of the school. The specific number and locations of drywells would be determined during a future feasibility study.
  - Bioretention and porous paving for the parking lot, driveways, and walkways could be used in the project area.



Figure 2: Typical Infiltration Gallery (Source: StormTrap)

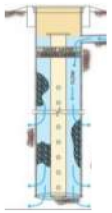


Figure 3: Typical Drywell (Source: CA Office of Environmental Health Hazard Assessment)



Figure 4: Typical Bioretention (Source: Philadelphia Green Streets Design Manual)

Project Summary (per CIP Analysis Workbook)

Address	828 W L St Wilmington, CA 90744	**Project ID**	155
Coordinates	33°47'7.19"N, 118°16'21.88"W	**Capture Volume (Drainage Area)**	16.4 acre-feet (448 acres)
City Council District	15	**Construction Cost**	$9.0 M
City of LA Watershed	Dominguez Channel	**Construction Duration**	4 years
Safe, Clean Water Program (SCWP) Watershed	South Santa Monica Bay	**Disadvantaged Community (DAC)**	Yes
Project Type	Parcel	**Owning Agency**	Los Angeles Unified School District

Figure 1: Conceptual Layout



Gulf Avenue STEAM Elementary School Stormwater Project
City of Los Angeles | Stormwater Project Design Summary

Design Considerations

- Rainfall from the 85th percentile 24-hour storm is approximately 0.8 inches based on Los Angeles County isohyets.
- The assumed infiltration rate is 0.5 in/hr and 5 in/hr for infiltration galleries and drywells, respectively. This infiltration rate was conservatively estimated based on the best available data when soil condition is good for infiltration.
- Depth to groundwater is approximately 33 feet based on the City of Los Angeles GeoHub.
- The following will need to be considered as part of the future design:
  - Conduct a site evaluation to confirm that the site can manage the flow volume with the maximum safe size of the BMP.
  - Perform geotechnical investigations to confirm soil suitability, infiltration rates, and setback requirements at this site.
  - Consider the invert elevation of the diversion point and BMP freeboard requirements, which could impact the installation depth and capture volume capacity of the infiltration BMP.
  - Evaluate overhead utilities, potential utility easements, and right-of-way constraints that may interfere with the BMP or diversion system's constructability.
  - Pretreatment of stormwater will be necessary to reduce maintenance and prolong the lifespan of the infiltration BMP by removing trash, debris, organic materials, coarse sediments, and associated pollutants prior to entering the infiltration BMP.
  - Coordinate with LACFCD for the flood control permit with respect to the potential hydraulic impacts of the proposed storm drain diversion.



Photo: Existing condition of the school outdoor recreation area.



Photo: Existing condition of the school driveway from Gulf Ave.

Project Benefits

Water Quality

The proposed project would assist in increasing wet-weather stormwater infiltration to reduce bacteria, toxics, and metals in downstream receiving water bodies.

Water Supply

The proposed project would increase subsurface infiltration of stormwater and contribute to groundwater recharge.

Reduced Flooding

This area is a location with identified flooding issues. Increasing subsurface infiltration would reduce flooding in the project vicinity.

Reduced Heat Island Effect

Greenscaping and additional trees at the site would provide shade to aid in offsetting the effects of heat-absorbing materials.

Neighborhood Beautification

New greenscaping and trees would beautify the neighborhood. Added green space and playground upgrades would benefit students and staff while encouraging safer, more active outdoor recreation.

Community Benefit

New and improved playground spaces and greenscaping would improve the school's aesthetics, recreational spaces, and school pride.

DAC Benefits

The project is located within a disadvantaged community (DAC) boundary, as defined by the Department of Water Resources (DWR).

Appendix E
SCW Projects Funding Opportunities

This appendix contains a list of potential grant opportunities for LASAN led SCW Projects.

Table E-1. List of Federal and State Funding Opportunities

Table E-2. Potential Funding Opportunities Matched with Municipal and Regional SCW Projects

Table E-1. List of Federal and State Funding Opportunities

Grant	Grantor	Description	Applicability and Requirements Guides	Grant Type	Deadline to Apply
Measure A	County of Los Angeles	As Proposition A came to an end, Los Angeles County launched a Countywide Parks and Recreation Needs Assessment (PNA) to determine park needs countywide. Measure A was drafted to meet current and future park needs, and its content reflects the findings of the PNA. Annual allocations are distributed using set formulas. To provide funds to benefit property and improve the quality of life throughout the Regional Park and Open Space District by preserving and protecting parks, safe places to play, community recreation facilities, beach, rivers, open spaces, water conservation, youth and veteran career development, and the urban tree canopy. Funded projects are consistent with or similar to those identified in the 2016 Countywide Parks and Recreation Needs Assessment.	Grant Guidelines and Eligibility	County	Applications are accepted continuously through the Grant Management Online System
California Office of Traffic Safety Grant Program	California Office of Traffic Safety	The goal of the California Office of Traffic Safety (OTS) Grant Program is to prevent serious injury and death resulting from motor vehicle crashes so that all roadway users arrive at their destination safely. One of the grant priority areas is pedestrian and bicycle safety.	Grant Guidelines and Eligibility	State	1/30/2024
Outdoor Recreation Legacy Partnership (ORLP)	California Department of Parks and Recreation	ORLP is a nationally competitive program targeting grant assistance to help economically disadvantaged urban communities with no, or almost no access to publicly available, close-by, outdoor recreation. Funds can be used for the acquisition and/or development of, or to substantially renovate obsolete, public parks and other outdoor recreation spaces.	Grant Guidelines and Eligibility	Federal	1/31/2024
WaterSMART Project Design Grants	Bureau of Reclamation	The goal of this grant is to provide funding to site-specific final designs of medium and large-scale on-the ground water supply construction (including domestic water supply projects for Tribes, insular areas, and disadvantaged communities), water management construction, and restoration projects. Project Design Grants should result in a final design package at approximately 60% design level.	Grant Guidelines and Eligibility	Federal	4/2/2024
WaterSMART Drought Resiliency Program	Bureau of Reclamation	The goal of this grant program is to support a proactive approach to drought by providing assistance to water managers to: develop and update comprehensive drought plans and implement projects that will build long-term resilience to drought. Financial assistance is provided for applicants to develop a drought contingency plan or update an existing plan to meet the required elements described in	Grant Guidelines and Eligibility	Federal	4/4/2024

Table E-1. List of Federal and State Funding Opportunities

Grant	Grantor	Description	Applicability and Requirements Guides	Grant Type	Deadline to Apply
		the Drought Response Program Framework.			
WaterSMART Environmental Water Resources	Bureau of Reclamation	The goal of this program is to support projects focused on their environmental benefits. These include water conservation and efficiency projects that result in quantifiable and sustained water savings and benefit ecological values; water management or infrastructure improvements to mitigate drought-related impacts to ecological values; and watershed management or restoration projects benefiting ecological values that have a nexus to water resources or water resources management.	Grant Guidelines and Eligibility	Federal	Anticipated application due April 2024
Clean California Local Grant Program	California Department of Transportation	The California Department of Transportation (Caltrans) has developed the Clean California Local Grant Program as part of a program through which funds will go to local communities to beautify and improve local streets and roads, tribal lands, parks, pathways, and transit centers to clean and enhance public spaces. Through the combination of adding beautification WaterSMART Environmental Water Resources Projects for Fiscal Year (FY) 2022n measures and art in public spaces along with the removal of litter and debris, this effort will enhance communities and improve spaces for walking and recreation.	Grant Guidelines and Eligibility	State	Anticipated application due May 2024
Extreme Heat and Community Resilience Program	Governor's Office of Planning and Research	The Extreme Heat and Community Resilience Program in California aims to address the public health, climate resilience, and social equity challenges posed by increasing extreme heat events caused by climate change. The program targets vulnerable populations, including the elderly, children, and those with specific health conditions, who face higher risks of heat-related illnesses. By coordinating the state's response, providing funding and technical support, and emphasizing equity, the program funds projects such as creating extreme heat action plans, installing shade, enhancing building reflectance, and implementing cooling strategies in communities most affected by extreme heat.	Grant Guidelines and Eligibility	State	Anticipated application due January -March 2024
Urban Streams Restoration	California Department of	The Urban Streams Restoration Program (USRP) in California, established under Water Code section 7048, aims to involve local	Grant Guidelines and Eligibility	State	Applications are accepted on a rolling basis.

Table E-1. List of Federal and State Funding Opportunities

Grant	Grantor	Description	Applicability and Requirements Guides	Grant Type	Deadline to Apply
Program	Water Resources	agencies and organizations in protecting, restoring, and enhancing urban creeks impacted by development. The program funds projects and provides technical assistance with a focus on goals such as preserving ecological value, preventing property damage from flooding, and encouraging community involvement and education. Eligible projects encompass bank stabilization, floodplain restoration, bioswale installations, culvert removal, and planning grants, all requiring partnerships between local agencies or nonprofits and community groups, with a minimum 20 percent funding match for non-State sources unless benefiting a disadvantaged community.			
Urban Streams Restoration Program	California Department of Water Resources	The Urban Streams Restoration Program (USRP) in California, established under Water Code section 7048, aims to involve local agencies and organizations in protecting, restoring, and enhancing urban creeks impacted by development. The program funds projects and provides technical assistance with a focus on goals such as preserving ecological value, preventing property damage from flooding, and encouraging community involvement and education. Eligible projects encompass bank stabilization, floodplain restoration, bioswale installations, culvert removal, and planning grants, all requiring partnerships between local agencies or nonprofits and community groups, with a minimum 20 percent funding match for non-State sources unless benefiting a disadvantaged community.	Grant Guidelines and Eligibility	State	Applications are accepted on a rolling basis
The US Fish and Wildlife Service North America Wetlands Conservation Act Small Grants Program	U.S. Fish & Wildlife Service	The goal of this grant is to support the long-term protection, restoration, and enhancement of wetlands and associated uplands habitats for the benefit of all wetlands-associated migratory birds.	Grant Guidelines and Eligibility	Federal	10/10/2024
Environmental and Climate Justice Community	Environmental Protection Agency	The goal of this grant is to support community-driven projects that build capacity for communities to tackle environmental and climate justice challenges, strengthen their climate resilience, and advance clean energy. Applicable projects include multi-benefit stormwater	Grant Guidelines and Eligibility	Federal	11/21/2024

Table E-1. List of Federal and State Funding Opportunities

Grant	Grantor	Description	Applicability and Requirements Guides	Grant Type	Deadline to Apply
Change Grants Program		projects, public parks and open spaces, and building climate resilience and carbon sequestration through tree planting.			
Climate Pollution Reduction Grants Program	Environmental Protection Agency	This program provides grants to states, local governments, tribes, and territories to develop and implement ambitious plans for reducing greenhouse gas emissions and other harmful air pollution. Up to $4.3 billion in competitive grants are available to implement GHG reduction programs, policies, projects, and measures. The application will ultimately be prepared and submitted by the LA County Dept of Public Works with input from the entire LA-Long Beach-Anaheim area.	Grant Guidelines and Eligibility	Federal	4/1/2024
Urban Greening Program Grant-California Natural Resources Agency	California Natural Resources Agency	The purpose of the Urban Greening Program is to fund projects that will reduce greenhouse gasses while also transforming the built environment into places that are more sustainable, enjoyable, and effective in creating healthy and vibrant communities. These projects will establish and enhance parks and open space, using natural solutions to improve air and water quality and reducing energy consumption, and creating more walkable and bike-able trails. Per the statute, projects do one of the following: acquire, create, enhance, or expand community parks and green spaces, and/or use natural systems or systems that mimic natural systems to achieve multiple benefits.	Grant Guidelines and Eligibility	State	Anticipated application due November 2024
Caltrans Financial Contribution Only (FCO) program	California Department of Transportation	FCOs provide funding for capital construction costs (labor and materials) only of stormwater treatment facilities. Treatment of runoff from Caltrans ROW must be included.	Grant Guidelines and Eligibility	State	Anticipated application due November 2024
Caltrans Cooperative Implementation Agreement (CIA) Program	California Department of Transportation	Caltrans' CIA program provides capital and support funding for planning, design, environmental studies, right of way acquisition (easement only) and construction of stormwater treatment facilities. Treatment of Caltrans right of way is desirable, but not required.	Grant Guidelines and Eligibility	State	Anticipated application due November 2024

Table E-1. List of Federal and State Funding Opportunities

Grant	Grantor	Description	Applicability and Requirements Guides	Grant Type	Deadline to Apply
Habitat Conservation Fund	California Department of Parks and Recreation	The intent of this program is to protect, restore, and enhance wildlife habitat and fisheries that are vital to maintaining California's quality of life.	Grant Guidelines and Eligibility	State	6/1/2025
General Fund-Water Resilience Infrastructure-Water Recycling	State Water Resources Control Board	The purpose of the General Fund grant is to provide technical and financial assistance to local agencies for the planning and construction of water recycling projects that promote the beneficial use of treated municipal wastewater in order to augment fresh water supplies in California. Eligible projects include recycled water treatment; recycled water storage, distribution, and pumping; groundwater recharge; indirect potable reuse; and surface water augmentation. Cannot be used for O&M costs.	Grant Guidelines and Eligibility	State	6/30/2025
Storm Water Grant Program / Principal Forgiveness Eligibility	State Water Resources Control Board	This program provides up to $5 million in principal forgiveness for stormwater and estuary projects that mitigate stormwater runoff and also contribute to water supply resiliency or feasibility and planning studies to identify stormwater mitigation projects capable of contributing to water supply resiliency.	Grant Guidelines and Eligibility	State	Applications are accepted on a rolling basis.
Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Program	US Department of Transportation	This program is designed to invest in surface transportation that will have significant local or regional impact and support projects that are consistent with the DOT's strategic goals. Thus they will provide funds for planning or constructing surface transportation infrastructure projects that will improve safety; environmental sustainability; quality of life; mobility and community connectivity; economic competitiveness and opportunity including tourism; state of good repair; partnership and collaboration; and innovation.	Grant Guidelines and Eligibility	Federal	2/28/2024

Table E-2. Potential Funding Opportunities Matched with Municipal and Regional SCW Project

Project Name	CD	SCWP Watershed	California Natural Resources Agency	Governor's Office of Planning and Research		California Department of Transportation			California Department of Parks and Recreation		California Office of Traffic Safety	Environmental Protection Agency	U.S. Fish & Wildlife Service	CA Wildlife Conservation Board	State Water Resources Control Board		County of Los Angeles- Measure A						WaterSMART- Bureau of Reclamation		
			Urban Greening Program Grant *	Extreme Heat and Community Resilience Program	Regional Resiliency Planning and Imp. Grant Program	Clean California Local Grant	Cooperative Imp. Agreement	Financial Contribution Only	ORLP Grant	Habitat Conservation Fund	Traffic Safety Grant Program	Environmental and Climate Justice Community Change Grants	Wetland Conservation Act Small Grants	General Grant	Urban Streams Restoration Program	General Water Fund- Water Recycling	Innovation Grant Program	County Projects Priority Program	County Neighborhood Parks and Healthy Communities, Urban Greening Program	Natural lands, local beaches, water conservation and protection program	Community Based Park Investment Program	Planning and Design Grants using Annual Allocations	Environmental Water Resources	Drought Resiliency Program	Project Design Grants
Municipal Projects																									
Mission & Jesse Green Parking Lot	14	ULAR			✔	✔	✔					✔		✔				✔		✔		✔	✔	✔	
E 6th St Green Infrastructure Corridor	14	ULAR	✔	✔			✔					✔		✔				✔		✔		✔	✔		
LA River Low Flow Diversion (Compton Creek 1 LFD)	15	ULAR					✔					✔		✔				✔		✔		✔	✔		
North Sepulveda Pedestrian Island	6	ULAR			✔	✔	✔				✔			✔				✔		✔		✔	✔		
Haynes Street Greenway Project (Phase 1)	3	ULAR				✔	✔							✔				✔		✔	✔	✔			
Reseda Blvd Alley Green Street Project	12	ULAR				✔	✔							✔			✔	✔		✔		✔	✔		
La Cienega Blvd Green Infrastructure Corridor (La Ciénega Green Street)	11	CSMB			✔	✔	✔							✔				✔		✔		✔	✔		
Regional Projects																									
Ballona Creek Water Quality Improvement Project	1, 11	CSMB			✔							✔		✔		✔		✔		✔		✔	✔		
Echo Park Lake Rehabilitation	13	ULAR					✔		✔	✔		✔		✔			✔	✔	✔	✔	✔	✔	✔		
Lankershim Boulevard Local Area Urban Flow	6	ULAR		✔			✔	✔						✔				✔		✔		✔	✔	✔	

Table E-2. Potential Funding Opportunities Matched with Municipal and Regional SCW Project

Project Name	CD	SCWP Watershed	California Natural Resources Agency	Governor's Office of Planning and Research		California Department of Transportation			California Department of Parks and Recreation		California Office of Traffic Safety	Environmental Protection Agency	U.S. Fish & Wildlife Service	CA Wildlife Conservation Board	State Water Resources Control Board		County of Los Angeles- Measure A						WaterSMART- Bureau of Reclamation		
			Urban Greening Program Grant *	Extreme Heat and Community Resilience Program	Regional Resiliency Planning and Imp. Grant Program	Clean California Local Grant	Cooperative Imp. Agreement	Financial Contribution Only	ORLP Grant	Habitat Conservation Fund	Traffic Safety Grant Program	Environmental and Climate Justice Community Change Grants	Wetland Conservation Act Small Grants	General Grant	Urban Streams Restoration Program	General Water Fund- Water Recycling	Innovation Grant Program	County Projects Priority Program	County Neighborhood Parks and Healthy Communities, Urban Greening Program	Natural lands, local beaches, water conservation and protection program	Community Based Park Investment Program	Planning and Design Grants using Annual Allocations	Environmental Water Resources	Drought Resiliency Program	Project Design Grants
Management Network																									
MacArthur Park Rehabilitation Project	1	CSMB	✔			✔	✔		✔	✔		✔	✔	✔		✔	✔	✔	✔	✔	✔	✔	✔	✔	✔	
Oro Vista Avenue Urban Flow Management Network	7	ULAR	✔	✔			✔							✔				✔		✔		✔	✔	✔	✔	
Wilmington Q Street Local Area Urban Flow Management Project	15	SSMB		✔			✔				✔	✔		✔				✔		✔		✔	✔	✔	✔	
Lincoln Park Neighborhood Green Street Network	1	ULAR		✔			✔		✔			✔		✔			✔	✔	✔	✔	✔	✔	✔			
Wilmington Neighborhood Greening Project	15	SSMB					✔		✔			✔		✔		✔	✔	✔		✔	✔	✔	✔	✔		
Angeles Mesa Green Infrastructure Corridor Project	8	CSMB		✔			✔					✔		✔				✔		✔		✔	✔			
Echo Park Lake Rehabilitation Operation and Maintenance	13	ULAR																								
(StreetsLA) Broadway-Manchester Multi-Modal Green Street Project	8	ULAR		✔			✔				✔	✔		✔		✔		✔		✔	✔	✔	✔			
Hollenbeck Lake	14	ULAR		✔				✔	✔	✔		✔	✔	✔			✔	✔	✔	✔	✔	✔	✔			✔

Table E-2. Potential Funding Opportunities Matched with Municipal and Regional SCW Project

Project Name	CD	SCWP Watershed	California Natural Resources Agency	Governor's Office of Planning and Research		California Department of Transportation			California Department of Parks and Recreation		California Office of Traffic Safety	Environmental Protection Agency	U.S. Fish & Wildlife Service	CA Wildlife Conservation Board	State Water Resources Control Board		County of Los Angeles- Measure A						WaterSMART- Bureau of Reclamation		
			Urban Greening Program Grant *	Extreme Heat and Community Resilience Program	Regional Resiliency Planning and Imp. Grant Program	Clean California Local Grant	Cooperative Imp. Agreement	Financial Contribution Only	ORLP Grant	Habitat Conservation Fund	Traffic Safety Grant Program	Environmental and Climate Justice Community Change Grants	Wetland Conservation Act Small Grants	General Grant	Urban Streams Restoration Program	General Water Fund- Water Recycling	Innovation Grant Program	County Projects Priority Program	County Neighborhood Parks and Healthy Communities, Urban Greening Program	Natural lands, local beaches, water conservation and protection program	Community Based Park Investment Program	Planning and Design Grants using Annual Allocations	Environmental Water Resources	Drought Resiliency Program	Project Design Grants
Rehabilitation Project																									
Sylmar Channel Project	7	ULAR	✔	✔			✔	✔	✔	✔		✔		✔	✔			✔		✔	✔	✔	✔	✔	✔
Imperial Highway	11	CSMB		✔			✔				✔	✔		✔				✔		✔		✔	✔	✔	✔
Wilmington-Anaheim Green Infrastructure Corridor Project	15	CSMB		✔			✔				✔	✔		✔		✔		✔		✔		✔	✔		✔
Sun Valley Green Neighborhood Infrastructure Project	2	ULAR		✔								✔		✔				✔	✔	✔		✔	✔		✔
LA River Green Infrastructure Project	3	ULAR		✔								✔		✔	✔			✔		✔		✔	✔		✔
Baldwin Vista Green Streets Project	10	CSMB		✔								✔		✔				✔		✔		✔	✔	✔	✔
Mission College Project	7	ULAR	✔				✔							✔				✔		✔		✔	✔		
Venice Blvd Corridor Project	5	CSMB		✔			✔		✔		✔	✔		✔			✔	✔	✔	✔		✔	✔		
Rosecrans Recreation Center	15	SSMB					✔		✔			✔		✔			✔	✔		✔	✔	✔	✔		
Marina Del Rey Triangle	11	CSMB					✔		✔					✔			✔	✔	✔	✔	✔	✔	✔		