

Attachment

3

Greater Los Angeles County Region

IRWM Implementation Grant Proposal

Work Plan

Attachment 3 consists of the following items:

Work Plans. Attachment 3 contains detailed information regarding the tasks that were and will be performed for each project constituting the proposal, as well as supporting documents such as regional and project maps, and existing data and studies.

Table of Contents

Introduction 3-2

Citywide Storm Drain Catch Basin Curb Screens 3-12

Dominguez Channel Trash Reduction..... 3-23

Dominguez Gap Spreading Grounds West Basin Percolation Enhancements 3-38

Foothill Municipal Water District Recycled Water Project..... 3-50

Marsh Park, Phase II..... 3-70

Oxford Retention Basin Multi-Use Enhancement Project 3-92

Pacoima Spreading Grounds Improvements Project..... 3-112

Peck Water Conservation Improvement 3-126

San Jose Creek Water Reclamation Plant East Process Optimization Project..... 3-141

South Gardena Recycled Water Pipeline Project 3-155

Upper Malibu Creek Watershed Restoration 3-169

Vermont Avenue Stormwater Capture and Green Street Project..... 3-185

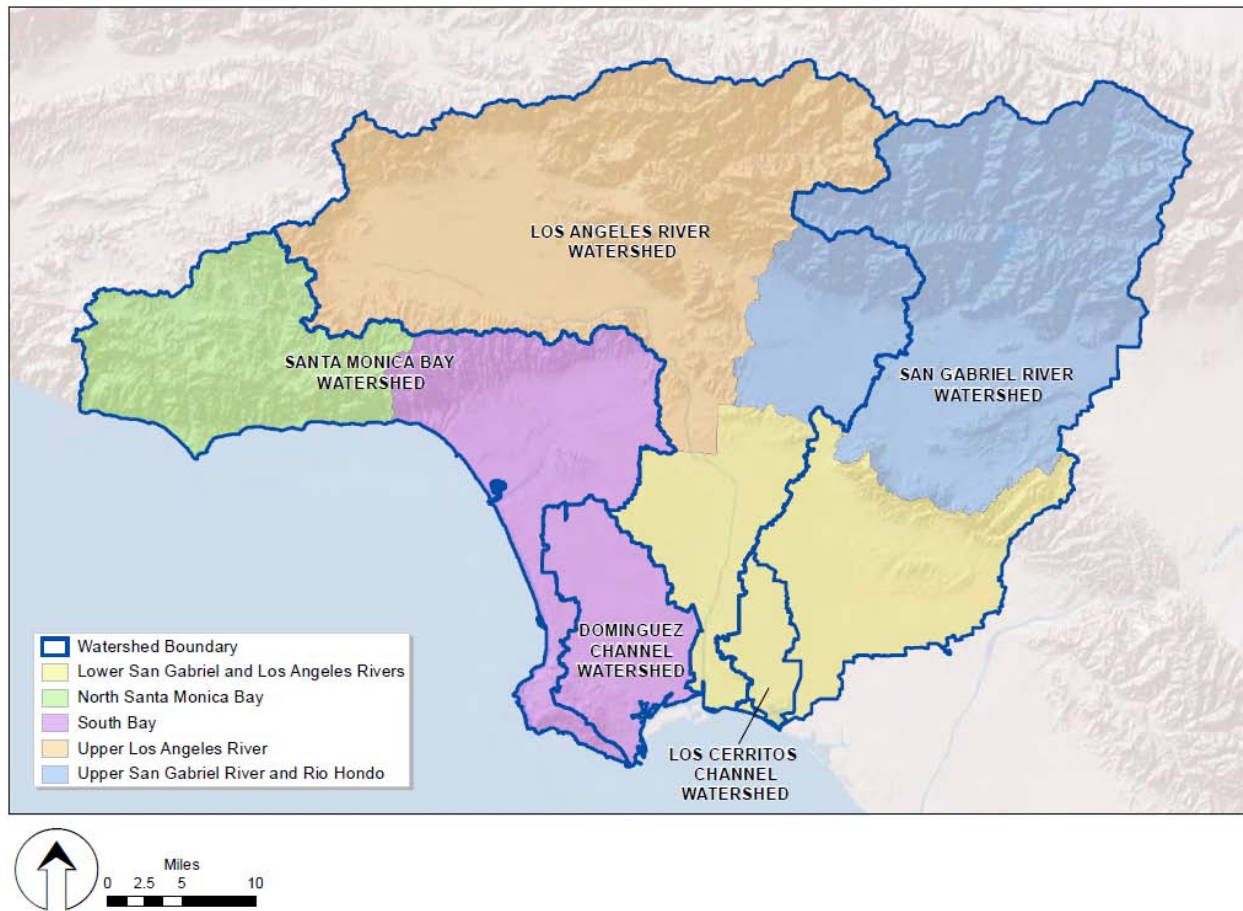
Walnut Spreading Basin Improvements 3-202

This Work Plan contains summary descriptions of all the projects constituting the Greater Los Angeles County (GLAC) Integrated Regional Water Management (IRWM) Implementation Grant Proposal and tasks necessary to complete each project in the proposal. The Work Plan demonstrates that the proposal is ready for implementation, and includes a brief discussion of the supporting studies, data, resources, and deliverables for each project, to ensure implementation of the proposal is based on sound scientific and technical principles. The Work Plan tasks are also consistent with the major tasks and sub-tasks identified in the Budget (Attachment 4) and Schedule (Attachment 5) of this proposal.

Introduction

The GLAC Region, an area of approximately 2,058 square miles, is located in coastal Southern California. The Region contains portions of four counties—Los Angeles, Orange, Ventura, and San Bernardino—and is primarily defined by the coastal watersheds within the area that drain to Santa Monica Bay and San Pedro Bay. The Regional Water Management Group (RWMG) is comprised of 16 entities whose combined responsibilities address all facets of water management, and whose jurisdictions cover various portions of the GLAC Region. The IRWM program also includes numerous water management stakeholders who support IRWM planning and implementation through participation in committees, workshops and projects. The Leadership Committee and Subregional Steering Committees provide essential review, guidance and recommendations to the RWMG on all IRWM planning topics.

Greater Los Angeles County Region Boundaries and Subregions



In the 2006 GLAC IRWM Plan, the RWMG identified six objectives that were established to guide water resource management in the region:

- Optimize local water resources to reduce the Region’s reliance on imported water
- Comply with water quality regulations (including TMDLs) by improving the quality of urban runoff, stormwater, and wastewater
- Protect and improve groundwater and drinking water quality
- Protect, restore, and enhance natural processes and habitats
- Increase watershed friendly recreational space for all communities
- Maintain and enhance public infrastructure related to flood protection, water resources and water quality

The projects included within this proposal are consistent with the IRWM Plan. Each project included was identified as a high priority project by regional stakeholders. As shown in **Table 3-**

1, each of the projects included within this proposal meets one or more of the water management objectives established for the Region.

Table 3-1: Consistency of Proposed Projects with IRWM Plan Objectives

Projects	IRWM Plan Objectives Addressed					
	A	B	C	D	E	F
Citywide Storm Drain Catch Basin Curb Screens		✓				
Dominguez Channel Trash Reduction		✓		✓	✓	✓
Dominguez Gap S.G. West Basin Percolation Improvements	✓		✓			✓
Foothill MWD Recycled Water Project	✓	✓	✓			✓
Marsh Park Phase II	✓	✓	✓	✓	✓	
Oxford Retention Basin Multi-Use Enhancement Project		✓		✓	✓	✓
Pacoima S.G. Improvements Project	✓				✓	✓
Peck Water Conservation Improvement	✓		✓		✓	✓
San Jose Creek WRP East Process Optimization Project	✓	✓				
South Gardena RW Pipeline Project	✓					
Upper Malibu Creek Watershed Restoration		✓		✓	✓	✓
Vermont Stormwater Capture and Green Street Project		✓		✓		✓
Walnut S.B. Improvements	✓		✓			✓

Goals and Objectives

The objective of this *Greater Los Angeles County IRWM Implementation Grant Proposal* is to present a suite of projects and programs that:

- Further the mission, vision, goals, and objectives established in the GLAC IRWM Plan;
- Provide multiple benefits through integration of water management strategies;
- Implement high priority projects and programs as identified by the region; and
- Assist in meeting the region's critical water supply, water quality, and natural resources needs.

Individual goals and objectives for each project are included in the individual project work plans.

Purpose and Need

One of the most significant issues for the Region is the availability and reliability of its water supplies, which currently consist primarily of imported water. The Region receives imported water from the State Water Project (SWP) and the Colorado River, via the Metropolitan Water District of Southern California (MWD) and SWP water via the San Gabriel Metropolitan Water District. It also receives water from the Los Angeles Aqueduct via the Los Angeles Department of Water and Power. Recent legal and regulatory decisions regarding water management in the Sacramento-San Joaquin River Delta may reduce the amount of water delivered by the SWP. This situation, coupled with the recent droughts affecting both the SWP and the Colorado River, serves as a reminder that the region's water supply is vulnerable to events outside the region. The region's water purveyors are working to improve the quantity and reliability of local supplies, primarily through expansion of water conservation and recycling programs.

Another significant issue for the GLAC Region is the quality of surface water. The GLAC Region contains a number of water bodies on the Clean Water Act Section 303(d) list. Total Maximum Daily Loads (TMDLs) have been established for the higher priority impairments in beaches, creeks, lagoons, and Pacific Ocean. The impact to water quality posed by increasing urban runoff from development is a significant concern. The Region also has the benefit of many natural resources, including critical riparian habitat that is home to a number of endangered species and watershed friendly recreational amenities. An important aspect of integrated regional water management planning is to develop projects that can address the critical water supply and water quality issues, while also achieving goals of habitat preservation and expanded recreational opportunities.

As a result, water use efficiency in the form of conservation and recycling, and water quality improvement have been identified as important aspects of the region's IRWM program. As described in Attachment 1, the RWMG and Leadership Committee underwent a detailed project prioritization process to consider the water resources projects to be carried forward for consideration in this proposal. The selected projects were reviewed for eligibility for funding through the Proposition 84-Round 2 program and a recommended funding package was considered and approved by the Leadership Committee.

Through this process, 13 projects and programs were developed to best address the needs of the GLAC region, consistent with the goals and objectives of the GLAC IRWM Plan. This Proposal is comprised of a set of projects aimed at generating geographic balance and a wide array of benefits throughout the region.

For a full explanation of the purpose and need of each project, and how the purpose and need address the GLAC IRWM Plan's goals and objectives, please refer to individual project Work Plans included in this attachment.

Project List

This GLAC IRWM Implementation Grant Proposal is a compilation of projects that will diversify water supply, improve water quality, restore native habitat, improve recreational amenities, and sustain local infrastructure.

This proposal includes the suite of projects best suited to meeting the current and future challenges of the GLAC region. Each of these projects addresses the major water supply, water quality, and/or resource management needs of the region. Further, projects contain synergies and linkages with other projects included in this proposal, resulting in a truly integrated suite of projects that, when implemented together, will assist the Region in meeting its critical water management needs in a real and measurable fashion.

Table 3-2 presents the specific projects included as part of the proposal, organized by program. An abstract, current project status, priority of the project, and implementing agency is provided for each project.

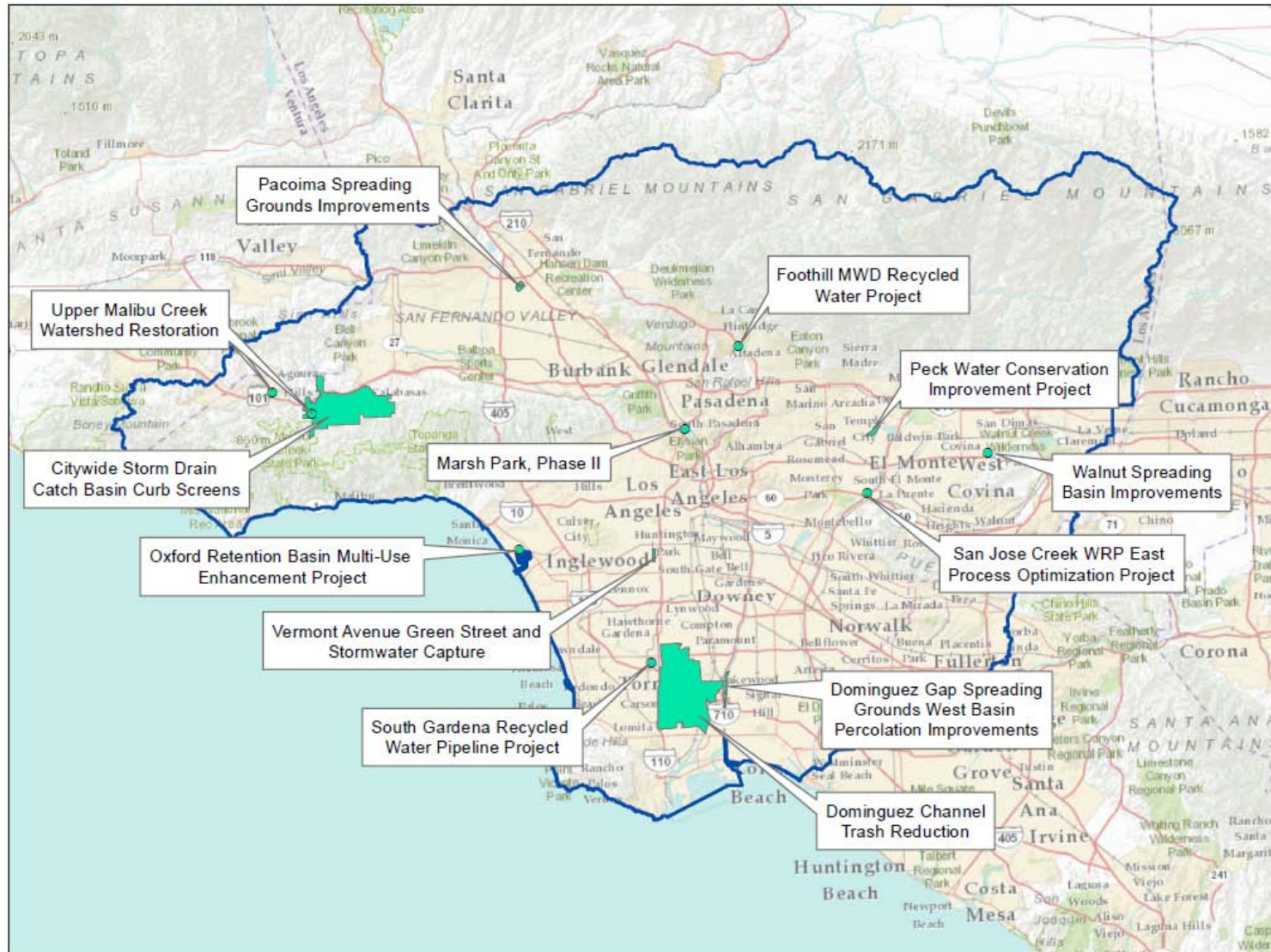
Table 3-2: Projects Abstracts, Status and Implementing Agency

Project	Description	
Citywide Storm Drain Catch Basin Curb Screens	<i>Abstract:</i>	This project will install curb screens on 900 catch basins throughout the City of Calabasas to prevent the accumulation of trash, debris, sediment, and vegetation from entering the stormwater collection system.
	<i>Status:</i>	Project construction set to begin February 2014.
	<i>Implementing Agency:</i>	City of Calabasas
Dominguez Channel Trash Reduction	<i>Abstract:</i>	This project will install retractable curb screens on 1,800 catch basins in the City of Carson to prevent trash, leaves, and other debris from entering the Dominguez Channel and Dominguez Channel Estuary.
	<i>Status:</i>	Project construction set to begin April 2014.
	<i>Implementing Agency:</i>	City of Carson
Dominguez Gap S.G. West Basin Percolation Improvements	<i>Abstract:</i>	This project will remove five to ten feet of clay and sediment in the west basin, among other improvements, to increase percolation and allow for increased recharge capacity. The project also improves water quality by percolating runoff and provides additional capacity for flood protection.
	<i>Status:</i>	Project construction set to begin May 2014.
	<i>Implementing Agency:</i>	Los Angeles County Flood Control District
Foothill MWD Recycled Water Project	<i>Abstract:</i>	This project will construct a 0.25-MGD membrane bioreactor (MBR) plant that will treat a combination of raw sewage, urban runoff, and stormwater and recharge 318 AFY to the Raymond Basin through infiltration galleries underneath a nearby athletic field. The project also includes several educational features such as tours, school curricula, and a 3-D model.
	<i>Status:</i>	Project construction set to begin May 2015.
	<i>Implementing Agency:</i>	Foothill Municipal Water District
Marsh Park, Phase II	<i>Abstract:</i>	This project creates 3.0 additional acres of park and restores 1.25 acres of riparian habitat; it also includes bio-swales to capture and bio-filter local urban runoff and stormwater.
	<i>Status:</i>	Project construction set to begin June 2013.
	<i>Implementing Agency:</i>	Mountains Recreation and Conservation Authority

Project	Description	
Oxford Retention Basin Multi-Use Enhancement Project	<i>Abstract:</i>	This project implements improvements to reduce flooding in the surrounding area, improve quality of runoff, and increase native habitat and recreational features. These improvements include installation of a parapet wall, vegetated circulation berm, trash best management practices (BMPs), bio-swales, native plants, trail and observation areas, and removal of contaminated soils.
	<i>Status:</i>	Project construction set to begin March 2014.
	<i>Implementing Agency:</i>	Los Angeles County Flood Control District
Pacoima Spreading Ground Improvements Project	<i>Abstract:</i>	This project will replace a radial gate, install telemetry and flow measurement equipment, replace the intake canal, remove sediment and clay lenses, and deepen basins to increase percolation and allow for increased recharge capacity. The project also improves water quality by percolating runoff, provides additional capacity for flood protection, and provides additional open space.
	<i>Status:</i>	Project construction set to begin April 2014.
	<i>Implementing Agency:</i>	Los Angeles County Flood Control District
Peck Water Conservation Improvement Project	<i>Abstract:</i>	This project will include the construction of a pump station and pipeline and removal of sediment to increase percolation and allow for increased recharge capacity. The project also improves water quality by percolating runoff, provides additional capacity for flood protection, and provides additional open space.
	<i>Status:</i>	Project construction set to begin December 2014.
	<i>Implementing Agency:</i>	Los Angeles County Flood Control District
San Jose Creek WRP East Process Optimization Project	<i>Abstract:</i>	This project will install flow equalization, implement sequential chlorination, replace process air compressors, and optimize the aeration system at the SJCWRP to provide 8,400 AFY of additional recycled water for groundwater recharge at the Montebello Forebay.
	<i>Status:</i>	Project construction set to begin May 2015.
	<i>Implementing Agency:</i>	Los Angeles County Sanitation Districts
South Gardena Recycled Water Pipeline Project	<i>Abstract:</i>	This project will construct 1.25 miles of recycled water pipeline in order to supply four new irrigation customers. This project serves the City of Gardena and the City of Los Angeles.
	<i>Status:</i>	Project construction set to begin February 2015.
	<i>Implementing Agency:</i>	West Basin Municipal Water District

Project	Description	
Upper Malibu Creek Watershed Restoration	<i>Abstract:</i>	This project restores channelized sections of creeks in the Upper Malibu Creek Watershed, including Medea Creek and Las Virgenes Creek. These restoration activities include the removal of concrete lining, re-engineering of the channels, and installation of native plants and recreational trails with informational signage.
	<i>Status:</i>	Project construction set to begin March 2014.
	<i>Implementing Agency:</i>	City of Agoura Hills
Vermont Stormwater Capture and Green Street Project	<i>Abstract:</i>	This project will install green street standard plan features along Vermont Avenue and in selected sub-watersheds that drain to nearby storm drains. The project also includes community outreach and education activities focused on stormwater BMPs.
	<i>Status:</i>	Project construction set to begin April 2015.
	<i>Implementing Agency:</i>	City of Los Angeles, Bureau of Sanitation
Walnut Spreading Basin Improvements	<i>Abstract:</i>	This project will remove two to six feet of fine sediments and clays and install two pump stations to increase percolation and allow for increased recharge capacity. The project also improves water quality by percolating runoff, and provides additional capacity for flood protection.
	<i>Status:</i>	Project construction set to begin May 2014.
	<i>Implementing Agency:</i>	Los Angeles County Flood Control District

Figure 3-1: Regional Map



Integrated Elements of Projects

Regional Map

Figure 3-1 provides a regional overview of the 13 proposed projects in this GLAC IRWM Implementation Grant Proposal.

Completed Work

Significant work has been completed and is expected to be completed prior to the grant award date (October 1, 2013) on projects included in this proposal. Please note that the individual Work Plans below contain information for each work plan task, demonstrating the work that will be completed by October 31, 2013. Additionally, work that supports the projects and has been completed is described in the individual project work plans below.

Existing Data and Studies

Available data and studies have been collected and reviewed to support the feasibility and technical methods of the projects included within this proposal. For a list of the existing data and studies for each project, please refer to individual project Work Plans included in this attachment. The existing data and studies included for each individual project have been submitted on a separate CD as part of this Implementation Grant proposal.

Project Maps

Site maps showing each project's geographical location and the surrounding work boundary are included in individual project Work Plans provided below. Please refer to those individual project maps.

Project Timing and Phasing

Some projects included in this proposal are multi-phased projects that can operate on a standalone basis; other projects are not multi-phased. For project timing and phasing for each project, please refer to individual project Work Plans included in this attachment.

Work Plan Tasks

The specific activities that will be performed to implement each project in the GLAC IRWM Implementation Grant Proposal are described in detail in the individual project work plans provided below.

Citywide Storm Drain Catch Basin Curb Screens

Description

The Citywide Storm drain Catch Basin Curb Screens Project (Project) calls for the fabrication and installation of curb screens on the approximately 900 catch basins throughout the City of Calabasas to prevent trash, debris, sediment and animal waste from entering local water bodies. The City of Calabasas (City) is located in western Los Angeles County, and overlaps the Malibu Creek watershed and the Los Angeles River watershed, both of which are 303(d) designated water quality impaired for trash, bacteria and sediment. These watersheds drain to the ocean and can affect the quality of recreational beaches. The City's storm water collection system drains into these waterways and contributes to these impairments.

By installing curb screens on 900 catch basins, the City will reduce the amount of debris entering the two watersheds as these screens prevent solid wastes from entering the storm drain system and allow street sweeping trucks to collect the accumulated trash and debris. This Project will help the City to meet the trash Total Maximum Daily Loads (TMDLs) that have been established by the Los Angeles Regional Water Quality Control Board in both watersheds and to meet National Pollutant Discharge Elimination System (NPDES) permit requirements. Ultimately, the implementation of this Project will improve the water quality of creeks, rivers and beaches by reducing the trash, bacterial and sediment loading.

Since the majority of the storm drain lines are owned by the County of Los Angeles, the City is partnering with the Los Angeles County Flood Control District (LACFCD) to implement this Project.

Goals and Objectives

The primary goal of the Project is to improve the water quality of the Los Angeles River watershed, the Malibu Creek watershed, and downstream recreational beaches. In addition, the Project hopes to achieve a zero trash goal for the area's creeks. This will be achieved through the Project objective of installing curb screens at all catch basins within the City to reduce the amount of trash, sediment, debris and vegetation entering the storm drain system.

The Project will help the Greater Los Angeles County Region to meet the following IRWM Plan (IRWM Plan) goal:

- Comply with water quality regulations (including TMDLs) by improving the quality of urban runoff and stormwater.

Citywide Storm Drain Catch Basin Curb Screens

Purpose and Need

The City shares two watersheds: Los Angeles River and Malibu Creek. Both watersheds are 303(d) listed as impaired for trash, bacteria and sediment. A TMDL has been developed for each of these impairments. Of highest concern to the City are the trash TMDLs for both watersheds and the new NPDES Permit requirement for achieving the zero trash goal within the time frame of the NPDES permit, which requires zero trash discharged into water bodies by March 20, 2020 for the Santa Monica Bay Watershed Management Area (WMA), and September 30, 2016 for the Los Angeles River WMA. These documents are shown in **Appendix 3-A**. This Project will help the City to meet this goal as the installation of curb screens will prevent trash, debris, sediment and vegetation from entering the storm water collection system which drains into these impaired watersheds.

Integrated Elements of Project

The Project is part of the Greater Los Angeles County Integrated Regional Watershed Management Plan that seeks to improve the water quality of surface waters by implementing various structural and non-structural best management practices (BMPs). This Project is part of a larger regional project of similar scope already implemented by the City of Los Angeles and County of Los Angeles in communities neighboring Calabasas.

Completed Work

Several studies and design tasks have been completed in preparation for the implementation of the Project. Completed work includes:

- *Curb Screen Effectiveness Project*
- *Technical Report: Assessment of Catch Basin Opening Screen Covers*

These studies are discussed further below, and included in the **Appendix CD**.

Existing Data and Studies

As described in the Completed Work section, several studies have been prepared in support of this Project's site location, feasibility and technical methods. These include:

- **Curb Screen Effectiveness Project:** A pilot project was initiated in 2010 to evaluate the effectiveness of curb screens in collecting trash, debris, sediment and vegetation. The project proved that capturing trash, debris, sediment and vegetation at the street curb will improve the water quality of surface waters. On average, over 12 pounds of trash

Citywide Storm Drain Catch Basin Curb Screens

Work Plan

was collected from each catch basin on a quarterly basis. The picture at right shows the trash and debris which accumulated at one of these curb screens.

- *Technical Report: Assessment of Catch Basin Opening Screen Covers:* This study, conducted by the City of Los Angeles in 2006, revealed that the proposed screens are 87% effective. Combined with other storm drain BMPs such as Continuous Deflection System (CDS) units and public education, the proposed screens provide 100% compliance with trash TMDL requirements within the specific time frame outlined in each TMDL resolution.



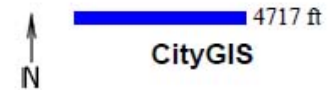
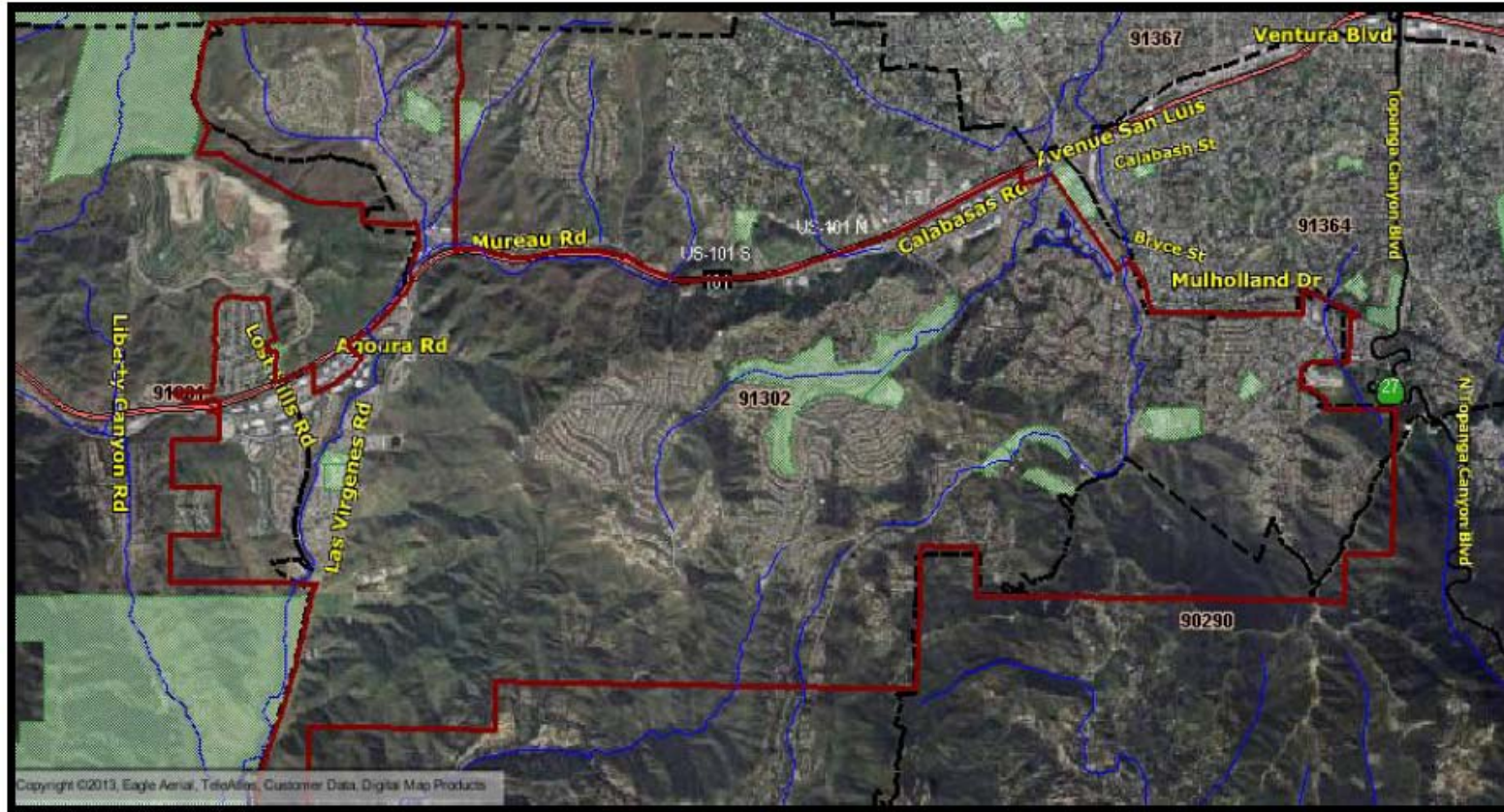
Project Map

The Project location and boundaries are shown in **Figure 3-2**. This Project will be implemented across the City of Calabasas and will include all public and private streets, schools, shopping centers and City facilities.

Project Timing and Phasing

This Project is not currently planned as part of a larger or multi-phase project. The City of Los Angeles and County of Los Angeles have already implemented similar projects in communities neighboring Calabasas. The Calabasas project is part of a larger integrated management plan to protect water bodies and prevent pollutants from entering creeks and rivers.

Figure 3-2: Project Location Map



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Citywide Storm Drain Catch Basin Curb Screens

Work Plan

Proposed Work

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs

Task 1: Project Administration

The City will hire a consultant to assist City staff in administration of the Project, data collection and data management, preparation of environmental documents, drafting of the RFP and review of proposals.

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Hire consultant to assist City staff and administration of contract	October 2013	Not yet begun		✓
Prepare administrative memos, and city council reports	October 2013	Not yet begun		✓
Preparation of invoices and backup documentation	Quarterly after contract execution	Not yet begun		✓
Review RFP and proposals, contract negotiations, contract administration, communication with LA County	October 2013	Not yet begun		✓

Task 2: Labor Compliance Program

The City of Calabasas adopted Los Angeles County's Labor Compliance Program in February 2008. The City will manage the Labor Compliance Program.

Citywide Storm Drain Catch Basin Curb Screens

Work Plan

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Labor Compliance Program	December 2014 – March 2015	Ongoing	✓	✓

Task 3: Reporting

The City will submit quarterly, final and post completion reports to the State per the grant requirements. These reports will be prepared by the consultant hired to assist the City in management of the Project.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Quarterly Progress Reports	Quarterly after Oct. 1, 2013	Not yet begun		✓
Final Report	At completion of project	Not yet begun		✓
Post Completion Report	Annually after project has been implemented one year	Not yet begun		✓

(b) Land Purchase/Easement

Land purchase is not required for this Project. All storm drain lines are either owned by the City or by the County. The City will coordinate with schools, homeowners associations (HOAs) and owners of commercial properties to access their property for screen installation.

(c) Planning/Design/Engineering/Environmental Documentation**Task 4: Assessment and Evaluation**

The actual Project design will take place after a contractor is selected for fabrication and installation of catch basin screens. In order to prepare the RFP, the City will collect accurate measurements of all catch basin openings. The City will then identify catch basins that require repairs and maintenance prior to installation of screens

Citywide Storm Drain Catch Basin Curb Screens

Work Plan

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Data Collection and Database Creation	October 2013 - November 2013	Not yet begun		✓
Preliminary Field Measurements	October 2013 - December 2013	Not yet begun		✓
Identify Problem Catch Basins for Repairs	October 2013 - January 2014	Not yet begun		✓

Task 5: Final Design

Final design will be completed by the selected contractor. All screens will be custom-made.

Final Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Evaluation of other cities' similar projects	January 2013 - June 2013	Underway	✓	
Final field measurements by selected contractor	February 2014 - March 2014	Not yet begun		✓

Task 6: Environmental Documentation

CEQA documentation will be required for this Project. Preparation of the Initial Study will begin in November 2013, followed by preparation of either a mitigated negative declaration (MND) or an environmental impact report (EIR). Should an EIR or negative declaration be required, a notification to stakeholders and interested individuals (including Native American Tribes) will be issued. Environmental documentation shall be completed by the selected consultant.

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Environmental evaluation pursuant to CEQA	January 2014 – February 2014	Not yet begun		✓
Preparing and Filing Notice of Determination	February 2014	Not yet begun		✓

Citywide Storm Drain Catch Basin Curb Screens

Work Plan

Task 7: Permitting

An encroachment permit will be obtained from the Los Angeles County Flood Control District. This will required preparation of an encroachment permit application, as well as plan checking by LACFCD.

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Prepare applications for Encroachment Permit from LACFCD	March 2014	Not yet begun		✓
Plan Checking by LACFCD	March 2014	Not yet begun		✓

(d) Construction/Implementation**Task 8: Construction Contracting**

The construction contracting for the Project will be handled by the City. A request for proposals (RFP) will be released, soliciting proposals from venders approved by the Los Angeles County Department of Public Works. Proposals shall be reviewed by the City, and negotiations of qualified bidders performed. The City Council shall then approve the contract. Finally, a kick-off meeting with the approved bidder will be conducted to discuss scheduling and specific Project requirements.

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of Bid Packages and Advertisement	October 2013	Not yet begun		✓
Review of Proposals	November 2013 - December 2013	Not yet begun		✓
Awarding of Contract by City Council and Kick-off Meeting	January 2014 - February 2014	Not yet begun		✓
Review legal contracts	January 2014 - February 2014	Not yet begun		✓

Citywide Storm Drain Catch Basin Curb Screens

Task 9: Construction

Construction of the Project will include the activities described below.

Subtask Descriptions:

Subtask 9.1 Mobilization and Site Preparation:

This subtask will include catch basin repair and site preparation, including cleaning of catch basins. Each catch basin shall be inspected by the contractor to obtain exact measurements and identify deficiencies. Damaged inlets shall be repaired prior to installation of catch basin curb screens.

Subtask 9.2 Project Construction:

Project construction will involve fabrication and installation of the curb screens. Curb screens are custom-made based on length and height of the opening. Protection bars shall be removed and all holes and cracks shall be sealed prior to installation of screens. Traffic control will need to be conducted as installation will occur along roadways.

Subtask 9.3 Performance Testing and Demobilization:

Following installation, hydraulic testing will be conducted on each screen to ensure that they are working correctly. A final inspection will be completed and demobilization will occur.

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Repairs and site preparation	February 2014	Not yet begun		✓
Cleaning catch basins	February 2014	Not yet begun		✓
Subtask 9.2 Project Construction				
Fabrication of Curb Screens	May 2014 - April 2014	Not yet begun		✓
Installation of Curb Screens	May 2014 - June 2014	Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Hydraulic Testing	October 2014	Not yet begun		✓
Final Inspection	November 2014	Not yet begun		✓
Demobilization	December 2014	Not yet begun		✓

Citywide Storm Drain Catch Basin Curb Screens

Work Plan

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

The final construction specifications will include environmental compliance measures as required by the environmental documents and permits.

Environmental Compliance / Mitigation / Enhancement Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of Storm water Pollution Prevention Plan (SWPPP)	Completion by February 2014	Not yet begun		✓
Implementing SWPPP at job site	February 2014 - December 2014	Not yet begun		✓

(f) Construction Administration

Task 11: Construction Administration

The City will manage the contractor through the duration of the above construction activities.

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Construction Contractor	January 2014 – December 2014	Not yet begun		✓

(g) Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include LA County Grant Administration fees, Development of Performance Measures and Monitoring Plan, and Development of Financing.

Citywide Storm Drain Catch Basin Curb Screens

Work Plan

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
LA County Grant Administration fees	October 2013 – December 2014	Not yet begun		✓
Development of Performance Measures and Monitoring Plan	October 2013 - June 2014	Not yet begun		✓
Development of Financing	October 2013 - May 2014	Not yet begun		✓

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods listed below:

- Standard Specifications for Public Works Construction (SSPWC-“Green Book”)
- Los Angeles County Department of Public Works Inspection Checklist

Dominguez Channel Trash Reduction**Dominguez Channel Trash Reduction****Description**

The Dominguez Channel Trash Reduction Project (Project) will provide for the installation of unique “Keep Carson Beautiful” automatic retractable screens at the curb face opening of all of the approximately 1,800 catch basins within the City of Carson that drain to the Dominguez Channel Estuary. These retractable screens will capture trash and other debris at the street level where it can then be removed through weekly street sweeping. These screens are retractable, which will allow them to open if trash is impeding the flow of runoff during storm events in order to prevent localized flooding.

If the installation of automatic retractable screens at the curb face is physically infeasible in certain catch basins, connector pipe screens may be installed inside catch basins instead. Connector pipe screens are fixed screens with 5 mm-sized openings that cover the pipe inside the catch basin that connects the catch basin to the main line storm drain. Debris is trapped inside the catch basin and removed on a regular basis. The screens are approved by the Regional Water Quality Control Board as trash “full-capture” devices and have been installed in catch basins throughout the Los Angeles River Watershed. The Project will significantly reduce the amount of trash, leaves and other debris entering the waters of the Dominguez Channel.

The City of Carson is an 18.8 square mile, densely urbanized area located in southern Los Angeles County. With the exception of a fraction of the City (less than 0.1 square mile) all of its land area drains to the Dominguez Watershed, specifically the Dominguez Channel Estuary. The City’s storm drain system collects water from 24% of the entire Dominguez Watershed and more than 50% of the Dominguez Channel Estuary subwatershed.

The Dominguez Channel is divided into two segments/areas: above Vermont Avenue and below Vermont Avenue. The man-made Dominguez Channel originates in the City of Hawthorne and empties into the Los Angeles Harbor. Above Vermont (Upper Channel) it is a reinforced concrete vertical-sided open box channel serving a subwatershed area of 37.5 square miles. Below Vermont Avenue (Lower Channel) it is an engineered clay bottom trapezoidal channel with 2:1 side slopes of grouted rip rap serving a subwatershed area of 34.3 square miles. The Lower Channel is at sea level and subject to tidal influence. This body of water from Vermont Avenue to the Consolidated Slip of the Los Angeles Harbor is the Dominguez Channel Estuary. Approximately 42% of the 15-mile long Dominguez Channel is in the City of Carson. The Dominguez Channel watershed and its receiving waters (the Dominguez Channel Estuary and

Dominguez Channel Trash Reduction**Work Plan**

Los Angeles Harbor) are on the Clean Water Act 303(d) list of impaired water bodies for a number of constituents, including sediment, metals, nutrients, pesticides, and bacteria.

Currently, trash and other pollutants are discharged into the tidal and harbor areas, impacting wildlife and reducing habitat value along the tidally-influenced channel areas and in the Harbor. The City of Carson also experiences local flooding events caused by the accumulation of trash that decrease the already-limited conveyance capacity of the stormwater system. In addition, contact recreational use in the watershed is currently limited by water quality issues.

The primary implementing agency for this Project is the City of Carson. The Los Angeles County Flood Control District (LACFCD) and County of Los Angeles Department of Public Works (LADPW) are cooperating agencies. In order to install any device in/on a Flood Control District owned catch basin, a maintenance agreement must be signed with the LADPW and a permit must be obtained from the LACFCD. Approximately 90% of the catch basins in the City of Carson are owned by the LACFCD. The other 10% are owned by the City of Carson.

Goals and Objectives

The primary goals of this Project are to:

- Improve water quality in the Dominguez Channel Estuary, the Los Angeles Harbor and the ocean by eliminating trash, leaves and other pollutants coming from the City of Carson
- Promote, preserve and protect existing beneficial uses of the watershed and encourage future contact recreational use
- Restore and enhance the ecological systems of the watershed, including existing tidal habitats, estuaries and marshes
- Increase public awareness of the Dominguez Watershed water quality issues and encourage participation in its management and protection
- Reduce the potential for localized street flooding

These Project goals will help the Greater Los Angeles County Region meet the following Integrated Regional Water Management (IRWM) Plan goals:

- Comply with water quality regulations (including TMDLs) by improving the quality of urban runoff, stormwater and wastewater
- Protect, restore and enhance natural processes and habitats
- Increase watershed-friendly recreational space

Dominguez Channel Trash Reduction

- Maintain and enhance public infrastructure related to flood protection, water resources and water quality

Purpose and Need

This Project is needed to improve water quality in the Dominguez Channel Estuary, protect tidal habitats, and preserve the Albertoni Farms Marsh which is a small privately owned marsh within the City of Carson which overflows to the Dominguez Channel Estuary.

The City of Carson makes up 24% of the Dominguez Channel Watershed. Storm water and nuisance water discharged through the storm drain system into the Dominguez Channel and the Dominguez Channel Estuary carry non-point source pollutants from surrounding land uses. Obvious pollutants such as trash and leaves and other less visible pollutants (including chromium, copper, lead, zinc, polycyclic aromatic hydrocarbons (PAHs), pesticides, polychlorinated biphenyls (PCBs), bacteria) have resulted in the Dominguez Channel and the Dominguez Channel Estuary being listed as impaired on the Clean Water Act 303(d) list for most of these pollutants. Though a Trash Total Maximum Daily Load (TMDL) has not been developed for the Dominguez Channel and its estuary, preventing trash and leaves from entering the Dominguez Channel and the Dominguez Channel Estuary can greatly improve the water quality of these receiving water bodies.

The recently issued National Pollutant Discharge Elimination System (NPDES) Permit in **Appendix 3-B** (page 132) requires actions to eliminate trash, specifically in those areas where there is a no Trash TMDL. The Dominguez Channel Watershed is one of those areas. The permit states, "In areas that are not subject to a trash TMDL, each Permittee shall install trash excluders, or equivalent devices, on or in catch basins or outfalls to prevent the discharge of trash to the Municipal Separate Storm Sewer Systems (MS4) or receiving water no later than four years after the effective date of this Order..."

Catch basin debris excluders combined with on-going weekly street sweeping is an effective way to prevent trash from entering the storm drain system. Other debris capture systems such as those designed to capture trash at the outfalls are not feasible as they would restrict flow. In addition, most outfalls to the Estuary are at or below sea level. Interim measures have been taken to minimize the impact of trash floating downstream. Floating debris in the Estuary is currently captured by several City of Carson owned floating trash booms. Floating trash is removed after significant storm events. This is a temporary measure that only captures a portion of the floating debris since some quantity is trapped on the banks of the channel before it reaches the booms. Also, the booms do not capture non-floating debris.

Dominguez Channel Trash Reduction

The purpose of the Project is to install trash excluding devices in/on catch basins within the City of Carson which, with continued weekly street sweeping, will nearly eliminate trash and leaves from entering the storm drain system and reduce the likelihood of other pollutants being carried into the Dominguez Channel Estuary.

Integrated Elements of Project

The City of Carson is an active participant in planning and implementation activities within the IRWM Region. The proposed Project could be considered a pre-requisite for many future IRWM-funded projects in the Dominguez Watershed. The Albertoni Farms Marsh restoration project is one example. It would be futile to begin restoration of the marsh if the marsh is going to continue to be inundated with trash. Therefore, capturing and removing the trash upstream using debris excluders at the catch basins is a necessary precursor. There is precedent in the form of two similar projects in adjacent watersheds:

- Installation of Automatic Retractable Screen Excluder and Connector Pipe Screen Full Capture Trash System in the Catch Basin for Seventeen Cities in the Los Angeles Gateway Region, Integrated Regional Water Management Joint Powers Authority, State Water Board Project No. C-06-6439-110: This Project was completed in order to install trash capture systems across 17 cities in what is known as the Gateway Region in the Los Angeles River watershed.
- Machado Lake Trash Ecosystem Rehabilitation Project: This Project was developed in order to install trash BMPs in the Machado Lake watershed and recently received Proposition 84 Stormwater Grant Program, Round 1 funding.

Completed Work

The product design is complete and field verification of installation locations has begun. The product has already been installed and used in the catch basins within the City of Carson that drain to the Los Angeles River. The City of Carson has actively been working to reduce pollution of its watersheds and encourage stakeholder involvement as follows:

- In 2003, the Dominguez Watershed Advisory Council comprised of municipalities and other stakeholders developed a Dominguez Watershed Management Master Plan. The installation of debris excluders is one of the major projects recommended by that plan and is the top stakeholder issue. (See page 4.2-6 and 4.3-26 through 4.3-28, included in the **Appendix CD**).

Dominguez Channel Trash Reduction

- The City of Carson contracts to remove trash from catch basins using street sweepers. The volumes are documented by the LADPW and are used to determine the areas of highest priority.
- The City of Carson maintains trash cans at all city parks and facilities and the 300+ bus stops throughout the city.
- The City of Carson became an affiliate of Keep America Beautiful¹ over 7 years ago. The affiliate name is Keep Carson Beautiful and each year it holds several clean up events in the Dominguez Channel.
- Debris Excluders have been installed on the 12 catch basins within the city that drain to the Los Angeles River Watershed. The “Keep Carson Beautiful” name is clearly visible in every 4’ wide debris excluder to increase public awareness of the issue.
- A Proposition 84 grant has been awarded to install “Keep Carson Beautiful” debris excluders on the catch basins that drain to Machado Lake.
- In 2012, prior to the rainy season, the City of Carson purchased and installed four floating trash booms at strategic points in the Dominguez Channel Estuary. The booms allow the City of Carson to capture, remove and dispose of floating trash and debris after each significant rain event. Unfortunately, not all trash floats. Comparing the volume of floating debris to the volume of debris captured by the weekly street sweeping both before and after Project implementation will provide evidence to demonstrate the effectiveness of this proposed trash reduction method.

Existing Data and Studies

As described in the Completed Work section, several studies have been prepared in support of this Project. These studies are included in the **Appendix CD**. These include:

- *LADPW Collection Reports*: The City of Carson contracts to remove trash from catch basins. The volumes are documented by the LADPW and are used to determine the areas of highest priority.
- *LADPW Floating Trash Reports*: The County has been documenting floating trash captured by a downstream boom in the Dominguez Channel since 2004
- *City of Carson Floating Trash Reports*: In 2012, prior to the rainy season, the City of Carson installed 4 new booms in the Dominguez Channel to improve the floating trash capture and document where the greatest volumes of trash are being generated.

¹ Keep America Beautiful, Inc. is the nation's largest volunteer-based community action and education organization. With a network of more than 1,200 affiliate and participating organizations, KAB forms public-private partnerships and programs that engage individuals to take greater responsibility for improving their community's environment.

Dominguez Channel Trash Reduction

Work that has not yet been completed but is expected to be completed prior to the grant award date includes:

- Project Design - Field measuring, preparing the County required spreadsheet, signing maintenance agreements, and preparing bid documents

Project Map

The relative location of the City of Carson in the watershed and its boundaries are shown in **Figure 3-3**. This Project will be implemented across the City of Carson with the exception of a small portion of the City that drains to Machado Lake and a fraction that drains to the Los Angeles River via Compton Creek. **Figure 3-4** shows the location of the Dominguez Channel Estuary in relation to the City. The Albertoni Farms Marsh and its proximity to the Dominguez Channel Estuary are shown in **Figure 3-5**.

Project Timing and Phasing

This Project is not currently planned as part of a larger or multi-phase project.

Figure 3-3: Project Location Map

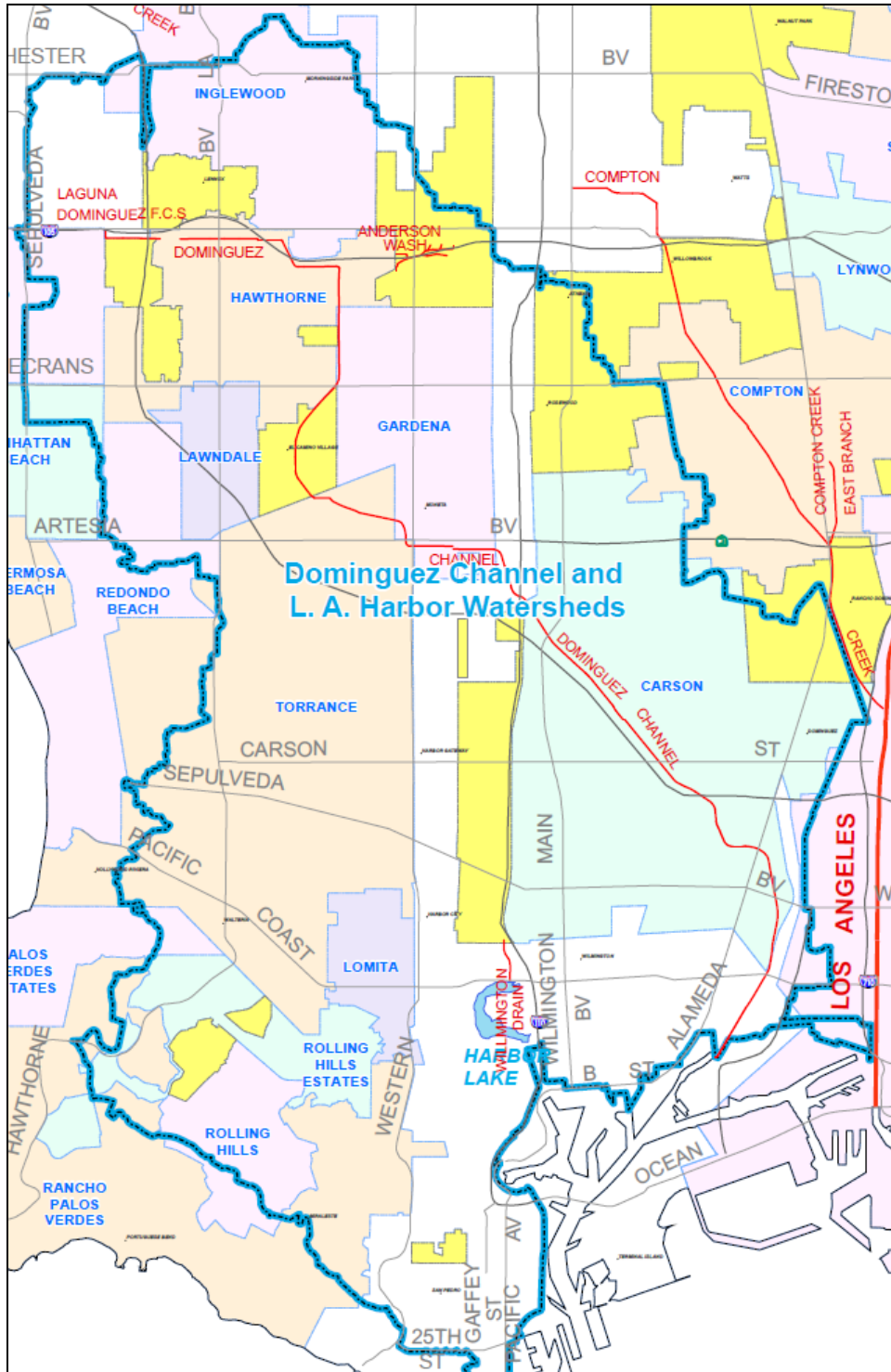
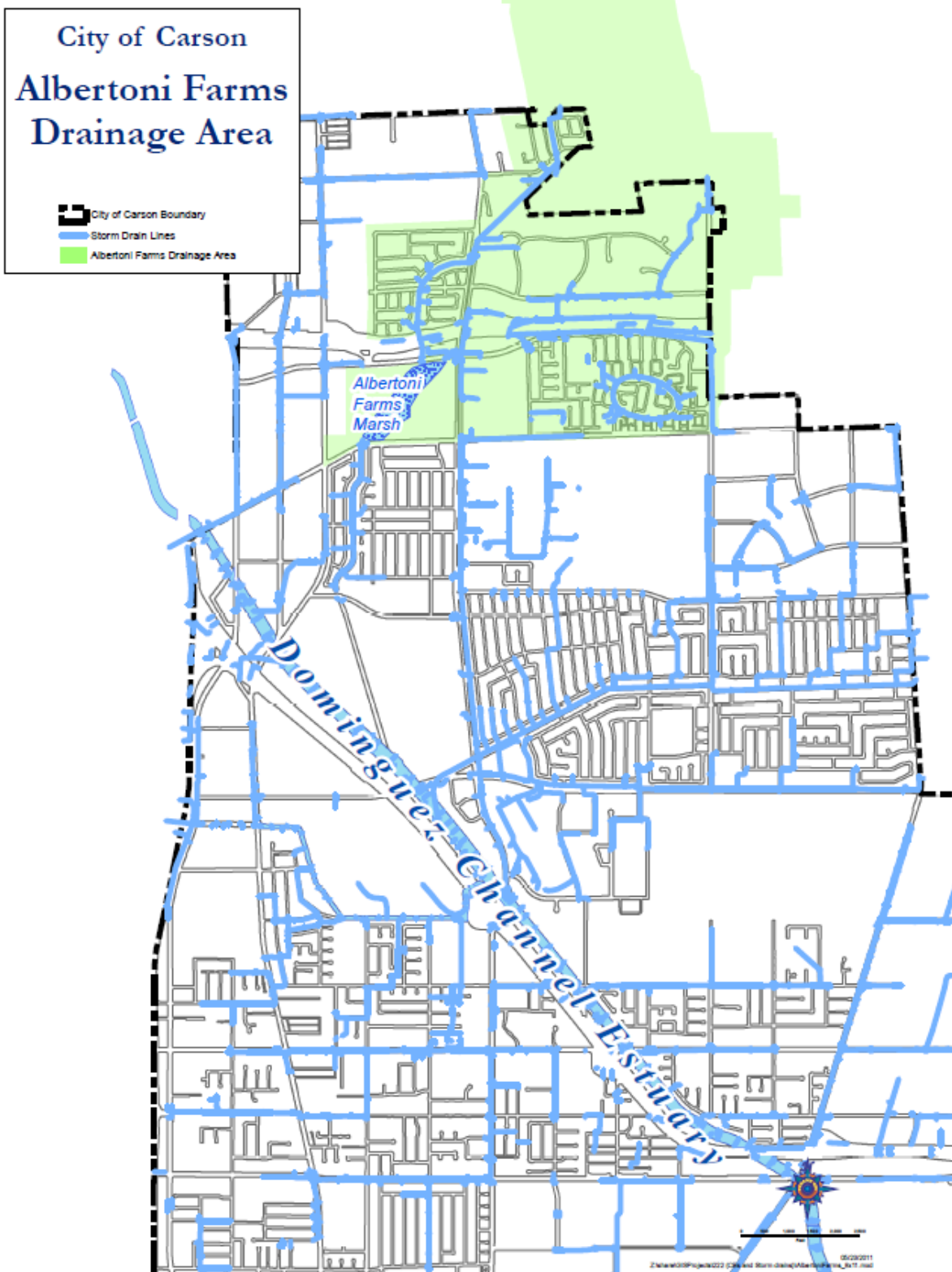


Figure 3-4: Location of Dominguez Channel Estuary



Figure 3-5: Albertoni Farms Drainage Area



Dominguez Channel Trash Reduction**Proposed Work**

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs**Task 1: Project Administration**

Project administration work is to be completed under this task and will be performed by a City of Carson Project Manager. The administration tasks will consist of managing the planning efforts, coordinating with the State on grant management, including invoicing and status reports, resolving any issues that arise, and data management requirements. The PM will also be responsible for coordinating with the appropriate County staff regarding LACFCD owned catch basins.

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of invoices and backup documentation	Quarterly after contract execution	Not yet begun		✓
Coordination with LADPW and LACFCD	Ongoing	Ongoing	✓	✓

Task 2: Labor Compliance Program

The City of Carson has a Labor Compliance Program in place. All Project specifications reference Chapter 5, Division 4 of Title 2 of the California Code of Regulations.

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Maintain Labor Compliance Program	Ongoing	Ongoing	✓	✓

Dominguez Channel Trash Reduction**Task 3: Reporting**

The City will submit quarterly, final and post completion reports to the State per grant requirements. These reports will be prepared by the City's Project Manager or, if necessary, by a Consultant hired to assist the City in management of the Project.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Submittal of Quarterly Progress Reports	Quarterly after Oct. 1, 2013	Not yet begun		✓
Final Report	At completion of project	Not yet begun		✓
Post Completion Reports	Within three months of project being active for one year	Not yet begun		✓

(b) Land Purchase/Easement

Land purchase is not required for this Project. Easements will not be necessary as all catch basins are on public property.

(c) Planning/Design/Engineering/Environmental Documentation**Task 4: Assessment and Evaluation**

Assessment and evaluation activities will include trash volume assessment. Assessing the trash volume before and after installation of the trash excluder devices will provide evidence of how well the devices are performing – how much trash is no longer going into the Dominguez Channel.

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Assessing Trash Volume	Ongoing	Ongoing		✓

Task 5: Final Design

The detailed work that will be necessary to complete Project design includes:

Dominguez Channel Trash Reduction

Work Plan

- Field verify locations and measurements of all 1,800 catch basins
- Based on measurements, determine if automatic retractable screen installation is feasible. If not, determine if connector pipe screen installation is feasible.
- Prepare detailed spreadsheet of each LACFCD-owned catch basin and a shop drawing(s) of the proposed trash excluder device(s) for LACFCD review/approval and request estimate of permit fee
- Prepare and submit trash excluder maintenance agreement for City Council approval and forward to LADPW for signature
- Obtain City Council approval of LACFCD permit fee and process for payment
- Prioritize all installation locations – major arterials and streets within commercial and industrial areas are highest priority
- Prepare bid documents

Project Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Field Measurements	January 2013 - December 2013	Not yet begun		✓
Prepare Spreadsheet	January 2013 - December 2013	Not yet begun		✓
Maintenance Agreements	December 2013	Not yet begun		✓
Prepare Bid Documents	December 2013	Not yet begun		✓

Task 6: Environmental Documentation

Preparation of a negative declaration is scheduled for completion by November 2013.

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Negative Declaration	November 2013	Not yet begun		✓

Task 7: Permitting

A permit must be obtained from the LACFCD. In order to install any device in/on a LACFCD-owned catch basin, a maintenance agreement must be signed with the LADPW and a permit must be obtained from the LACFCD. Approximately 90% of the catch basins in the City of Carson are owned by the LACFCD. The other 10% are owned by the City of Carson, and so do not require LACFCD permitting.

Dominguez Channel Trash Reduction

Work Plan

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
LACFCD Permit	December 2013	Not yet begun		✓

(d) Construction/Implementation**Task 8: Construction Contracting**

The construction contracting for the Project will be handled by the City of Carson. A bid package will be prepared and the Project will be publicly bid. Sealed bids will be received and reviewed by the City, and the lowest responsible contractor will be awarded the contract by City Council. Once contract documents are signed, a notice to proceed will be issued. Construction should begin shortly thereafter within the time stipulated in the contract documents.

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of Bid Packages, Bid Document	January 2014 – February 2014	Not yet begun		✓
Review Bids	February 2014 – April 2014	Not yet begun		✓
Award of Contract	April 2014	Not yet begun		✓

Task 9: Construction

Construction of the Project will include the activities described below.

Subtask Descriptions:*Subtask 9.1 Mobilization and Site Preparation:*

Mobilization and site preparation activities will consist of the procuring of materials and fabrication of the retractable screens. Each catch basin will be cleaned of any debris prior to installation of any trash excluder devices.

Subtask 9.2 Project Construction:

Project construction will involve installation of the trash screens.

Dominguez Channel Trash Reduction*Subtask 9.3 Performance Testing and Demobilization:*

Following installation, performance testing will be conducted to ensure that the screens are working correctly. This testing will be performed on an on-going basis. Once all screens are installed and sufficient testing has been conducted, the Project will be accepted as completed.

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Material Purchase and Fabrication	April 2014 – June 2014	Not yet begun		✓
Subtask 9.2 Project Construction				
Installation of Screens	June 2014 – October 2015	Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Performance Testing	June 2014 – September 2015	Not yet begun		✓
Accept Project as Completed	October 2015	Not yet begun		✓

(e) Environmental Compliance/Mitigation/Enhancement**Task 10: Environmental Compliance/Mitigation/Enhancement**

As no environmental impacts are expected from the Project, environmental compliance, mitigation and enhancement will not be necessary.

(f) Construction Administration**Task 11: Construction Administration**

Construction administration will be completed by the City of Carson.

Dominguez Channel Trash Reduction

Work Plan

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Construction Contractor	April 2014 – October 2015	Not yet begun		✓
File Notice of Completion	October 2015	Not yet begun		✓

(g) Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include the Development of Performance Measures and Monitoring Plan, and Development of Financing. A monitoring plan is already in place for monitoring of trash discharges to the Dominguez Channel, and the City has already developed financing for the Project.

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Development of Performance Measures and Monitoring Plan	Completed	Completed	✓	
Development of Financing	Completed	Completed	✓	

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, and classification methods listed below:

- Standard Specification for Public Works Construction 2009
- Standard Plans of the County of Los Angeles Department of Public Works
- State Water Resources Control Board
- Los Angeles Regional Water Quality Control Board
- Construction Site Best Management Practices Manual

Dominguez Gap Spreading Grounds West Basin Percolation Enhancements

Dominguez Gap Spreading Grounds West Basin Percolation Enhancements

Description

The Dominguez Gap Spreading Grounds are a 54-acre groundwater replenishment facility made up of two basins (the west basin and the east basin) that recharge the Central Groundwater Basin (Central Basin) using local surface water flows from the Los Angeles River. The spreading grounds are owned and operated by the Los Angeles County Flood Control District (LACFCD), although the United States Army Corps of Engineers (USACE) has jurisdiction over the channels and washes in the area that connect hydraulically to the spreading grounds. The Central Basin is an adjudicated basin and is dependent upon replenishment to maintain groundwater levels. Groundwater rights are managed by the California Department of Water Resources (DWR) which serves as Watermaster, while groundwater quality and replenishment are managed by the Water Replenishment District (WRD). The Dominguez Gap Spreading Grounds currently have a maximum intake of 5 cubic feet per second (cfs) with a total water storage capacity of approximately 234 acre-feet and a percolation rate of approximately 1 cfs.

The Dominguez Gap Spreading Grounds West Basin Percolation Enhancements Project (Project) will remove five to ten feet of clay sediment in the west basin to increase percolation and allow for increased recharge capacity. This clay sediment has impeded the percolation rates of these spreading grounds since they were originally constructed. In addition, the connection between the east and west basins will be realigned to accommodate the new configuration of the west basin.

The LACFCD is this Project's primary implementing agency and is partnering with the WRD. A letter of support from WRD for this Project is included in **Appendix 3-C**.

Goals and Objectives

The primary goal of the Project is to improve the groundwater recharge capacity of the Dominguez Gap Spreading Grounds by increasing the facility's percolation rate. In addition, these improvements will reduce potential flooding risks downstream of the spreading grounds by providing more recharge capacity. A groundwater quality benefit will also be realized by providing more captured stormwater with soil aquifer treatment, wherein contaminants from runoff will be filtered by the soil as opposed to continuing on to receiving water bodies.

Dominguez Gap Spreading Grounds West Basin Percolation Enhancements

The Project objectives that address the Greater Los Angeles County Region (Region) Integrated Regional Water Management Plan (IRWM Plan) goals are as follows:

- Optimize local water resources to reduce the Region's reliance on imported water
- Protect and improve groundwater and drinking water quality
- Maintain and enhance public infrastructure related to flood protection, water resources and water quality

Purpose and Need

The purpose of the Project is to improve operations and increase groundwater recharge at the Dominguez Gap Spreading Grounds in order to replenish the Central Basin and increase local groundwater supply. This will allow water users in the area to pump additional groundwater as opposed to using treated imported water.

Local groundwater supply is a key resource that has historically been utilized to support over 60% of the area's water demand, though the area is still highly dependent on imported water to meet both retail demand and replenishment needs. Replenishment of the Central Basin is vital to sustain the long-term reliability of the local groundwater supply and reduce dependence on imported water. The Project is critical to the success of regional efforts to reduce dependence on imported water supplies.

Integrated Elements of Project

The Dominguez Gap spreading grounds are a part of a network of three spreading grounds plus in-channel recharge systems which LACFCD operates in the Central Basin. Improvements made to any of these spreading grounds will improve the ability of the LACFCD to capture stormwater for replenishment of groundwater, and provide better flood management.

Completed Work

Completed work as of the time of this application includes a geotechnical report titled *Technical Report Boreholes*, and *Groundwater Monitoring Wells and Percolation Testing Dominguez Gap Spreading Grounds*. These documents are included in the **Appendix CD**. A description of this work is provided below under "Existing Data and Studies."

Work that has not yet been completed but is expected to be completed prior to the grant award date includes the, the *Dominguez Gap Spreading Grounds West Basin Percolation Enhancement Project Concept Report* (which includes concept plans), and the 30% Design Plans.

Dominguez Gap Spreading Grounds West Basin Percolation Enhancements

Existing Data and Studies

As described in the Completed Work section, several studies have been prepared in support of this Project's site location, feasibility and technical methods. These include:

- *Technical Report Boreholes, Groundwater Monitoring Wells and Percolation Testing Dominguez Gap Spreading Grounds*: This geotechnical report investigated methods to achieve additional groundwater replenishment at the Project site and was completed in January 2001.

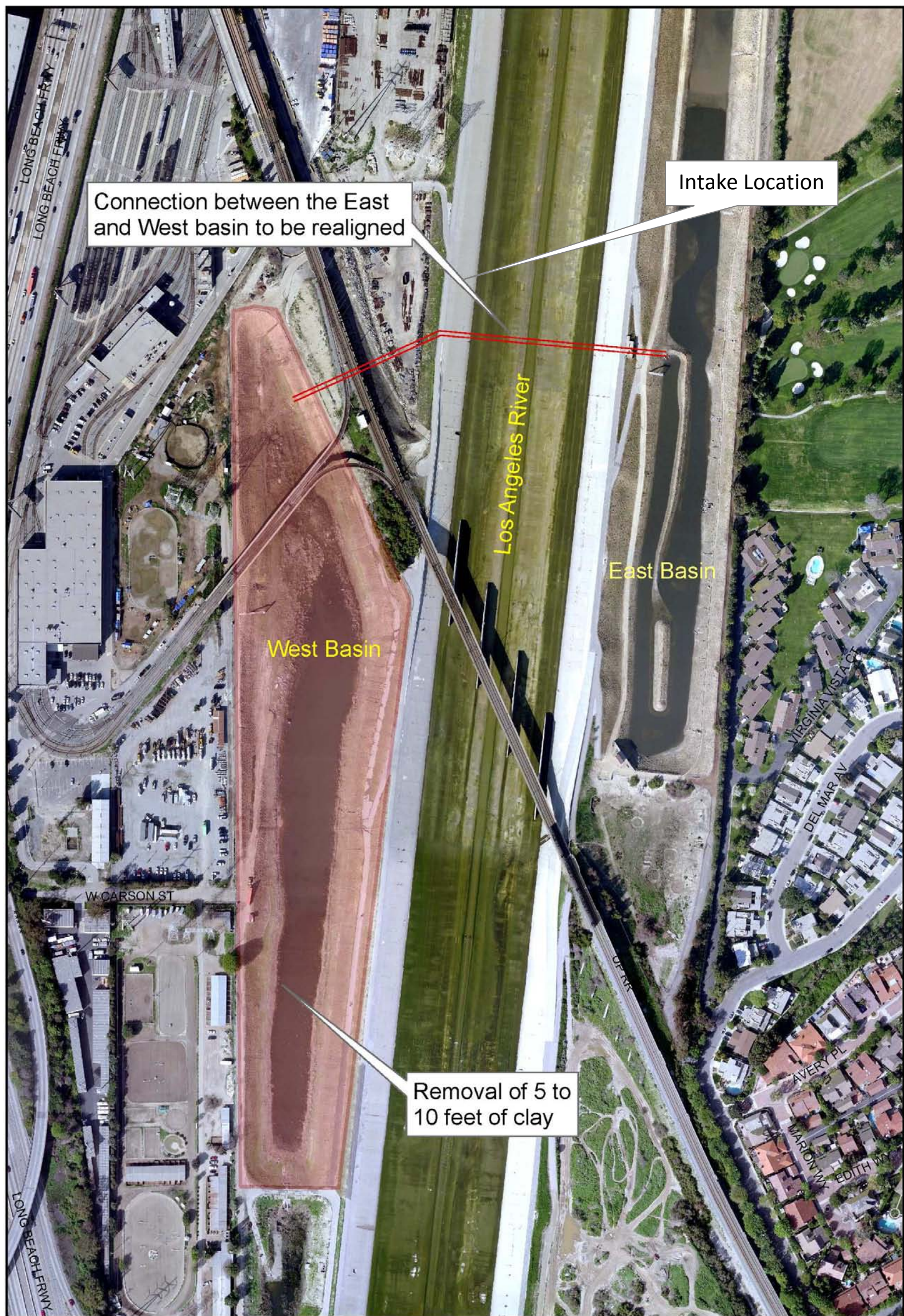
Project Map

The Project location and boundaries are shown in **Figure 3-6**.

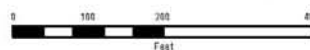
Project Timing and Phasing

This Project is not currently planned as part of a larger or multi-phase Project.

Figure 3-6: Dominguez Gap Spreading Grounds West Basin Percolation Enhancements Location Map



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**Dominguez Gap Spreading Grounds West Basin Percolation
Enhancements**

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Dominguez Gap Spreading Grounds West Basin Percolation Enhancements

Proposed Work

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs

Task 1: Project Administration

Project administration work is to be completed under this task will be performed by a LACFCD Project Manager (PM) with assistance from an Assistant Project Manager. The administration tasks will consist of managing the planning, environmental compliance, and design efforts; data management; coordinating with LACFCD's budgeting personnel; coordinating with the State on grant management, including invoicing and status reports; and resolving any issues that arise. The PM will also be responsible for coordinating with any non-state funding partner agencies through scheduled meetings, phone and electronic mail communications, and establishing memorandums of understanding (MOUs). Preparation of an MOU for cost sharing between the WRD and LACFCD is in progress.

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of invoices and backup documentation	Quarterly after contract execution	Not yet begun		✓
Coordination with non-state funding partner agencies	Prior to contract execution	MOU with WRD in progress	✓	

Task 2: Labor Compliance Program

The LACFCD will serve as the construction manager of the Project. The LACFCD has an approved Labor Compliance Program (LCP), developed by a consultant, Solis Group. All future construction contracts to be awarded for the Project will require compliance with the LCP. Solis

Dominguez Gap Spreading Grounds West Basin Percolation Enhancements

Work Plan

Group will administer the LCP. If, during the course of implementation, changes are required to the LCP or a new administrator is required, the LACFCD will engage Solis Group or another qualified firm to update and/or administer the LCP and will notify DWR.

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Labor Compliance Program (County of LA Dept of Public Works LCP ID: 2011.00802)	Ongoing	Ongoing	✓	✓

Task 3: Reporting

The LACFCD will submit quarterly, annual, final and post completion reports to DWR per grant requirements.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Quarterly Progress Reports	Quarterly after Oct. 1, 2013	Not yet begun		✓
Final Report	At completion of project	Not yet begun		✓
Post Completion Report	Following one year of project implementation	Not yet begun		✓

(b) Land Purchase/Easement

The Project will not require purchase of land or acquisition of right-of-ways as the property is already owned by the LACFCD.

(c) Planning/Design/Engineering/Environmental Documentation

Task 4: Assessment and Evaluation

Assessment and evaluation activities necessary for this Project have been completed and are detailed below.

Dominguez Gap Spreading Grounds West Basin Percolation Enhancements

Work Plan

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Technical Report Boreholes, Groundwater Monitoring Wells and Percolation Testing Dominguez Gap Spreading Grounds	Completed January 2001	Completed	✓	

Task 5: Final Design

A project concept report and conceptual design plans were completed as of the date of this application, and 30%, 60% and 90% design plans will be completed as shown below. The final design plans and specifications are anticipated to be complete in November 2013.

Project Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Dominguez Gap Spreading Grounds West Basin Percolation Enhancement Project Concept Report	December 2012 – June 2013	Underway	✓	
30% Design Plans	June 2013 - September 2013	Not yet begun	✓	
60% Design Plans	October 2013 - December 2013	Not yet begun		✓
90% Design Plans	January 2014 - March 2014	Not yet begun		✓
Final (100%) Design Plans	March 2014 - May 2014	Not yet begun		✓

Task 6: Environmental Documentation

This Project will not require environmental documentation as the Project involves minor sediment removal only; therefore no budget is allocated to this task.

Dominguez Gap Spreading Grounds West Basin Percolation Enhancements

Task 7: Permitting

The Project is entirely within the Flood Control District's spreading grounds and will not require permits for sediment removal.

(d) Construction/Implementation

Task 8: Construction Contracting

The construction contracting for the Project will be handled by LACFCD staff in compliance with public contracting code. Prior to bid solicitation, the LACFCD's governing body, the Los Angeles County Board of Supervisors (Board), is required to approve the Project. Tasks to secure the Contract award include: advertisement for bids, a pre-bid contractors meeting, bid opening, bid evaluation and selection of contractor with lowest responsive bid. The Board would then award the contract unless it has delegated that authority to the Director of Public Works. A Notice to Proceed would then be issued.

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of Bid Packages	May 2014 - June 2014	Not yet begun		✓
Advertisement	July 2014 – September 2014	Not yet begun		✓
Bid Opening	September 2014 – November 2015	Not yet begun		✓
Award	January 2015 – February 2015	Not yet begun		✓
Notice to Proceed	February 2015 – March 2015	Not yet begun		✓

Task 9: Construction

The Project includes excavating sediment from the west basin of the Dominguez Gap Spreading Grounds. The material will be processed and hauled away to a disposal site. The inter-basin connection between the east and west basin will also be realigned to accommodate the new lower west basin invert.

Dominguez Gap Spreading Grounds West Basin Percolation Enhancements

Subtask Descriptions:

Subtask 9.1 Mobilization and Site Preparation:

This subtask includes mobilization of equipment and installation of temporary construction trailers.

Subtask 9.2 Project Construction:

Project construction will include the following components: realignment of the east and west basins' connection, excavation in the west basin, materials processing, and truck hauling sediment to a disposal site.

Subtask 9.3 Performance Testing and Demobilization:

The inter-basin structure will be performance tested prior to contractor demobilization. Contractor demobilization will only occur after final inspection and completion of all punch list items identified during final walk through.

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Mobilization and Site Preparation	April 2015 – May 2015	Not yet begun		✓
Subtask 9.2 Project Construction				
Construction	June 2015- September 2015	Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Performance testing	September 2015 - October 2015	Not yet begun		✓
Demobilization	October 2015	Not yet begun		✓

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

No environmental mitigation or enhancement actions or tasks are required.

Dominguez Gap Spreading Grounds West Basin Percolation Enhancements

(f) Construction Administration

Task 11: Construction Administration

The LACFCD has a dedicated Construction Division that administers numerous civil construction projects every year in conformance with the Public Contracting Code. Construction Division Staff will manage the Project construction contract process and implementation. Construction administration activities will include general preparation of construction documents, advertisement for bids, award of construction contracts, construction contract administration, and construction inspection.

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Construction Contractor	April 2014- October 2015	Not yet begun		✓

(g) Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include Development of Performance Measures and Monitoring Plan, and Development of Financing.

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Development of Performance Measures and Monitoring Plan	April 2015 – October 2015	Not yet begun		✓
Development of Financing	December 2012 – June 2014	In progress		✓

**Dominguez Gap Spreading Grounds West Basin
Percolation Enhancements****Discussion of Standards**

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods listed below:

- Standard specification of Public Works Construction 2009
- Standard Plans of the Los Angeles County Department of Public Works 2000
- Occupational safety and health administration
- American Society for Testing and Materials
- 2011 County of Los Angeles Building Code (Title 26) Based on the 2010 California Building Code and the 2009 International Building Code
- Los Angeles County Department of Public Works “Construction Site Best Management Practices (BMPs) Manual”

Foothill Municipal Water District Recycled Water Project

Description

Foothill Municipal Water District (FMWD) is a wholesale distributor of imported water to eight retail agencies located in the foothills of the San Gabriel Mountains. FMWD is a member agency of the Metropolitan Water District of Southern California (MWD) and has only one connection with MWD. FMWD is solely reliant on imported water supplies from MWD to distribute to its member agencies. Imported supply typically meets 60 percent of total water demands in the FMWD service area. Most of FMWD's member agencies have access to their own local groundwater supplies to augment imported supply and meet retail water demand. Local supplies include groundwater from two adjudicated basins (Verdugo and Raymond Basins), runoff from local canyons and a small amount of recycled water for one retail agency. Any loss of production from these local supplies will require an increased demand on the FMWD system. On average, local supplies comprise 40 percent of demands and imported supplies comprise the remainder with dramatic fluctuations between agencies. In the pursuit of developing new, local and alternative supplies to offer to its member agencies, FMWD has initiated the Foothill Municipal Water District Recycled Water Project (Project).

This Project helps to address the lack of diversification in the FMWD water supply portfolio by developing 318 acre-feet per year (AFY) of new groundwater supplies. These supplies will be available to distribute to FMWD member agencies that have pumping rights in the Monk Hill Basin, a subbasin of the Raymond Basin, thereby reducing demand for imported water. The lower the dependence on imported water in the FMWD service area, the more reliable locally produced supplies become as a result of the sole connection FMWD has to MWD. A second connection to MWD would cost an estimated \$20 million and is not a worthwhile investment because the need would only occur during a shutdown or emergency. During a major disaster, the impact would be disastrous should MWD not be able to deliver water to FMWD. Because of limited reservoir capacity and real estate to construct another tank, FMWD would run out of water in a matter of hours and some of its retail agencies in a matter of days. Utilizing the groundwater basin as another supply source for FMWD will allow the District to better serve its retail agencies with increased reliability during a supply interruption.

The goals of this Project are to develop recycled water for recharge to the groundwater basin, increase stormwater and urban runoff capture for recharge to the groundwater basin, and increase conservation throughout the FMWD service area. FMWD is currently pursuing the construction of a 0.25 million gallons per day (MGD) membrane bioreactor (MBR) plant near the intersection of Oak Grove Drive and Berkshire Place located in La Cañada Flintridge,

Foothill Municipal Water District Recycled Water Project**Work Plan**

California. FMWD will connect into a main sewer line owned and operated by the Sanitation Districts of Los Angeles County (LACSD). The municipal wastewater, along with the urban runoff and captured stormwater from La Cañada High School (LCHS), will be treated at the proposed MBR plant and pumped into the infiltration galleries. The solids from the MBR will be returned to the sewer line for processing at LACSD's Whittier Narrows Water Reclamation Facility. The infiltration galleries will be installed underneath nearby athletic fields located on the campus of LCHS. The recycled water will help replenish the Raymond Groundwater Basin and allow FMWD to obtain pumping credits to distribute to five of its eight member agencies (La Cañada Irrigation District, Las Flores Water Company, Lincoln Avenue Water Company, Rubio Cañon Land & Water Association, and Valley Water Company).

This Project is estimated to yield on average 318 acre-feet of pumping credits annually. Annual energy reduction benefits are estimated to be nearly 600 megawatts, which is enough savings to power 85 single family homes for one year. A working relationship with California State Polytechnic University – Pomona (Cal Poly Pomona) interdisciplinary team will also be fostered. This includes multiple stakeholders (La Cañada High School, Five FMWD retail agencies, La Cañada United Methodist Church, City of La Cañada Flintridge, City of Pasadena, and local environmental and other stakeholder groups) to develop a multi-faceted and multi-benefit approach to the Project. The interdisciplinary team will support local basin and watershed health as well as provide environmental awareness and stewardship.

An education and conservation component is included in the Project and is being developed by Cal Poly Pomona, *Field of Green* Team, which consists of faculty and students from three departments. The Civil Engineering Department is preparing a 3D model (i.e., a computer model of the infiltration galleries for educational purposes on a interactive screen) of the infiltration galleries; the Department of Landscape Architecture is developing drought tolerant landscaping for both the MBR and school sites; and the Department of Urban and Regional Planning is developing an education component which will provide instruction about water supplies, recycled water and the watershed, with tours of the MBR facility and Hahamongna Watershed Park located directly across the street. The Cal Poly Pomona contribution may be applied to other similar projects both within and outside FMWD's service area, thus benefitting the broader Region. A recycled water feasibility study has already been completed and accepted by the State Water Resources Control Board. Professional hydrogeological modeling of the groundwater basin and percolation testing is currently being conducted, and environmental documentation (CEQA Plus) is being prepared. Overall Project design is currently at 10-percent completion.

Foothill Municipal Water District Recycled Water Project**Work Plan**

FMWD is this Project's primary implementing agency. Project partners include:

- La Cañada Unified School District/La Cañada High School/City of La Cañada Flintridge: Property owner(s) of athletic fields sited for infiltration gallery construction
- California State Polytechnic University – Pomona: University partner to collaborate on the Project and allow students exposure to “*real-world*” capital project applications
- Sanitation Districts of Los Angeles County (LACSD): Owners of the municipal wastewater flow to be “scalped” through the Project
- La Cañada United Methodist Church: Property owner of 0.5 acre parcel of land sited for MBR facility construction

In 2005, FMWD developed a Strategic Plan, prior to adoption, public workshops were held and concerns were raised about meeting demands and the development of a more reliable supply. Based on these concerns, reliability was incorporated into the mission statement of FMWD: “Foothill Municipal Water District will reliably deliver quality water to its member agencies in a cost-efficient manner to meet their projected demands” with an objective to “devise and gain approval for infrastructure enhancements to meet increasing needs.” A Master Plan was developed in 2007 that reviewed an option to construct another connection to MWD. This portion of the Master Plan was not adopted, but was deferred until a water resource plan could be prepared to investigate other alternatives to the expensive second connection. In 2008, a Water Resource Plan – Alternatives Screening Report was prepared that found: “A second MWD connection would require the construction of approximately 27,000 feet of 24-inch transmission main, a 1,700 horsepower pumping plant, a 1 MG terminal reservoir, 3,200 feet of 18-inch looping connection to La Cañada’s reservoir facilities, and an interconnection between La Cañada Irrigation District and Mesa Crest Water Company. This proposed MWD connection would provide an estimated 15.7 cfs in imported water supplies from an alternative source to FM-1. The total cost for the facilities associated with the proposed connection is estimated to total \$19.8 million.” Because of the pumping required, this connection would only be used during a MWD shutdown or emergency situation. Based on historic shutdowns, the cost of water through this connection would be approximately \$47,000 per acre-foot. Thus, the FMWD Board ranked development of recycled water as a more affordable option due to lower \$/acre-foot costs, and they eliminated further consideration of the second connection.

Then in July 2009, MWD imposed a water supply allocation. This allocation was required as a result of three years of drought in Northern California, nine years on the Colorado River watershed and a decision by a Federal Judge that restricted pumping in the Sacramento - San

Foothill Municipal Water District Recycled Water Project**Work Plan**

Joaquin Delta due to the diminishing population of a fish know as the Delta Smelt. FMWD had to pass through the allocation to its member agencies since it had no other supplies to offset the water shortage. The allocation continued through April 12, 2011, at which point the allocation was rescinded by MWD's Board. FMWD's Board, in turn, rescinded its allocation to its retail agencies. However, the issues impacting the Sacramento - San Joaquin Delta have not been resolved and a drought or other event could impact supplies, triggering a return to a water supply allocation.

As the Project evolved, collaboration from partnerships and input from various stakeholders contributed more to the Project. These collaborations and how they were developed are described in the attached paper, "Foothill Municipal Water District Recycled Water Project, Update to Incorporate a Watershed Approach" (see **Appendix 3-D**). Initially, the Project began as a municipality-led recycled water project. A dialogue then began with a Cal Poly Pomona adjunct professor, who is also a member of the Arroyo Seco Foundation, on the potential for Cal Poly Pomona and FMWD to collaborate on a project. At the time, only one Cal Poly Pomona department was involved. However, as more discussions were held, it was recognized that more students would benefit from a "real-world" experience working on a complex, capital project with an actual client. This Project offers unique exposure for students of three Cal Poly Pomona departments and will provide involvement in work outside of academia. A synergy now exists between the technical expertise of Cal Poly Pomona's professors and the enthusiasm of their students to develop the education and conservation components of the Project. FMWD and Cal Poly Pomona subsequently met with the La Cañada Unified School District, La Cañada High School, and the City of La Cañada Flintridge to outline their roles in the Project. These meetings fostered even more synergies as La Cañada High School recognized that an innovative project of this potential would interest parents while demonstrating an educational benefit for students. Since the online curriculum that Cal Poly Pomona is developing will be universal, other stakeholders in the Region will be able to use it within their service areas, thus providing multiple benefits for the same cost. The Arroyo Seco Foundation, a recipient of IRWM grants to restore the Arroyo Seco Watershed, is benefitting from the education component of the Project as well. Students will learn about how the Arroyo Seco is being restored during a tour of nearby Hahamongna Watershed Park located across from the MBR site and will learn what they can do to help. Discussions have been held with the Raymond Basin Executive Officer about groundwater basin benefits. Conjunctive use of the basin has been limited as there is no raw water available for direct replenishment. Limited spreading capacity is also unique to this subaquifer of the Raymond Basin. Recharging the groundwater basin by using land for multi-purposed athletic fields with infiltration galleries will advance conjunctive use. Discussions have also been held with LACSD. LACSD is using this Project as the impetus and case study to develop

Foothill Municipal Water District Recycled Water Project

Work Plan

a standard Recycled Water Policy for all MBR plants. This Project will pave the way for other agencies that cannot use treated wastewater from a centralized recycled water plant due to costs or other issues. Finally, the La Cañada United Methodist Church will benefit from the development of vacant land. The MBR plant will be situated on vacant property, once used as a staging area for construction, located adjacent to the church building. Development of the site will align proper design aesthetics with drought tolerant landscaping, including signage informing the public of materials used. The overall appearance of the community will be improved with these considerations to the plant's façade. Communications have been crucial in developing this Project from a single-purpose recycled water approach to a multi-purpose project with numerous benefits, and it will be a showcase of what successful partnerships with multiple stakeholders can achieve.

Goals and Objectives

The goals of the Project are to reduce dependence on imported water, diversify supplies, increase conservation, increase public outreach, increase education outreach, incorporate a watershed approach, develop land for multiple uses and benefits, reduce energy consumption and carbon footprint, and to make the Project economically viable. **Table 3-3** describes the goals, including anticipated benefits, for the Project.

Table 3-3: Project Goals

Goals	Description
Reduce dependence on imported water	Develop new groundwater supplies by capturing, treating and recharging with recycled water, stormwater and urban runoff capture. Reduce imported water demands through conservation outreach.
Diversify supplies	Add local stormwater and urban runoff percolated to GW as new supply sources.
Increase conservation	Use of drought tolerant landscaping for demonstration gardens (around the MBR and school site) provides an example to immediately engage the public on ways to plant water wise plants and conserve water. Use of outreach during tours of facilities to encourage conservation.
Increase public outreach	Allow public tours of the finished facility which can be booked on the FMWD website. Develop a 3D model (interactive computer model for the public) of the infiltration galleries to demonstrate to the public how the overall recharge system works.
Increase education outreach	Develop 5th grade curriculum outline to be available to use in La Cañada Unified School District and other area schools. Work with local LCUSD administrators and teachers to develop the curriculum. Develop educational tours that support the curriculum.

Foothill Municipal Water District Recycled Water Project

Work Plan

Goals	Description
Incorporate watershed approach	Foster a working relationship with Cal Poly Pomona interdisciplinary team. Include multiple stakeholders (La Cañada High School, five FMWD retail agencies, La Cañada United Methodist Church, City of La Cañada Flintridge, City of Pasadena, and local environmental and other stakeholder groups) to develop a multi-faceted and multi-benefit approach to the Project. Support local basin and watershed health. Provide environmental awareness and stewardship. Recharge the Raymond Groundwater Basin.
Develop land for multiple uses and benefits	Develop 1/2 acre of land for recycled water facility with drought tolerant landscaping. Design of recycled water facilities will consider ease of public access for tours. Place infiltration galleries underneath athletic fields for groundwater recharge of recycled water.
Reduce energy consumption and carbon footprint	Use best available technology (BAT) on the market to save energy when producing recycled water. Energy savings will also mean reduced carbon footprint.
Make Project economically feasible	Keep capital and operating costs low in order to make recycled water competitive with imported water costs.

These Project goals will help the Greater Los Angeles County Region (Region) to meet the following IRWM Plan goals:

- Optimize local water resources to reduce the Region's reliance on imported water
- Comply with water quality regulations (including TMDLs) by improving the quality of urban runoff, stormwater, and wastewater
- Protect and improve groundwater and drinking water quality
- Maintain and enhance public infrastructure related to flood protection, water resources and water quality

Foothill Municipal Water District Recycled Water Project**Work Plan****Purpose and Need**

The development of a local, alternative supply reduces FMWD and its member agencies' dependence on imported water deliveries from MWD. Recycled water from the proposed 0.25 MGD MBR plant will help to replenish the Raymond Groundwater Basin for increased future production. Additionally, nutrients and bacteria in stormwater and urban runoff will be removed from the local storm drain that discharges into the Arroyo Seco and eventually the Los Angeles River. Implementation of the Project will reduce costs associated with importing water and increase conservation while decreasing both energy consumption and greenhouse gas emissions. Development of a conservation component of the Project will help to meet the statutory mandate of SBx7-7 that requires a 20% reduction in per capita urban potable water use by 2020.

Integrated Elements of Project

The Project integrates with other community outreach and educational efforts in the Region, and it will integrate with other satellite projects pursued in the future under LACSD's MBR Policy. As this Project has evolved, collaboration from partnerships and input from various stakeholders have increased. These collaborations and how they were developed are described in the attached paper: "Foothill Municipal Water District Recycled Water Project, Update to Incorporate a Watershed Approach" (see **Appendix 3-D**).

The educational aspects of the Project will integrate with the following programs in the Region:

- Cal Poly Pomona Department of Urban and Regional Planning environmental curriculum
- La Cañada Unified School District and LCHS environmental science curriculum
- La Cañada United Methodist Church environmental education efforts
- Arroyo Seco Foundation outreach

Cal Poly Pomona's education and conservation components will be universal and can be applied to other projects both within and outside FMWD's service area, thereby benefitting the broader Region. Other stakeholders in the Region will be able to use these components within their service areas, thus providing multiple benefits for the same cost.

LACSD is using this Project as the impetus and case study to develop a standard MBR Policy. This Project will pave the way for other agencies that cannot use treated wastewater from a centralized recycled water plant due to costs or other issues.

Foothill Municipal Water District Recycled Water Project

Work Plan

Completed Work

Several studies and design tasks have been completed in preparation for the implementation of the Project. Completed work includes: *Economic Analysis Update of the Arroyo Seco Alternative (Alternative A-6)*, *Foothill Municipal Water District Recycled Water Project, Update to Incorporate a Watershed Approach* and the *FMWD Water Recycling Facilities Planning/Project Report*. A description of this work is provided below under “Existing Data and Studies.”

Work that has not yet been completed but is expected to be completed prior to the grant award date includes:

- Securing agreements with: Sanitation Districts of Los Angeles County, La Cañada United Methodist Church, La Cañada Unified School District, City of La Cañada Flintridge and Raymond Basin Watermaster – To be completed November 2013
- Hydrogeological modeling and infiltration testing – To be completed June 2013
- CEQA Plus Review – To be completed June 2013
- Title 22 Report – To be completed September 2013
- Final Design Plans

Existing Data and Studies

As described in the Completed Work section, several studies have been prepared in support of this Project’s site location, feasibility and technical methods. These include:

- *FMWD Water Recycling Facilities Planning/Project Report* (Jan. 2012): Alternative A-6 (Pages G-15 – G-17) describes Project and volume of yield
- *Foothill Municipal Water District Recycled Water Project, Update to Incorporate a Watershed Approach*: Provides an update to the Project which changes the location of infiltration galleries, incorporates stormwater and urban runoff capture, and describes the development of a conservation outreach and education curriculum component
- *Economic Analysis Update of Arroyo Seco Alternative (Alternative A-6)* (Oct. 2012): shows per acre-foot costs for MBR water production of \$1,246 on page 4

Each of these documents is included in the **Appendix CD**.

Project Map

The Project location and boundaries are shown in **Figure 3-7**. FMWD is planning to construct a 0.25 MGD MBR plant near the intersection of Oak Grove Drive and Berkshire Place located in La Cañada Flintridge, CA. In proximity to the Project area, both Berkshire Place and Oak Grove

Foothill Municipal Water District Recycled Water Project**Work Plan**

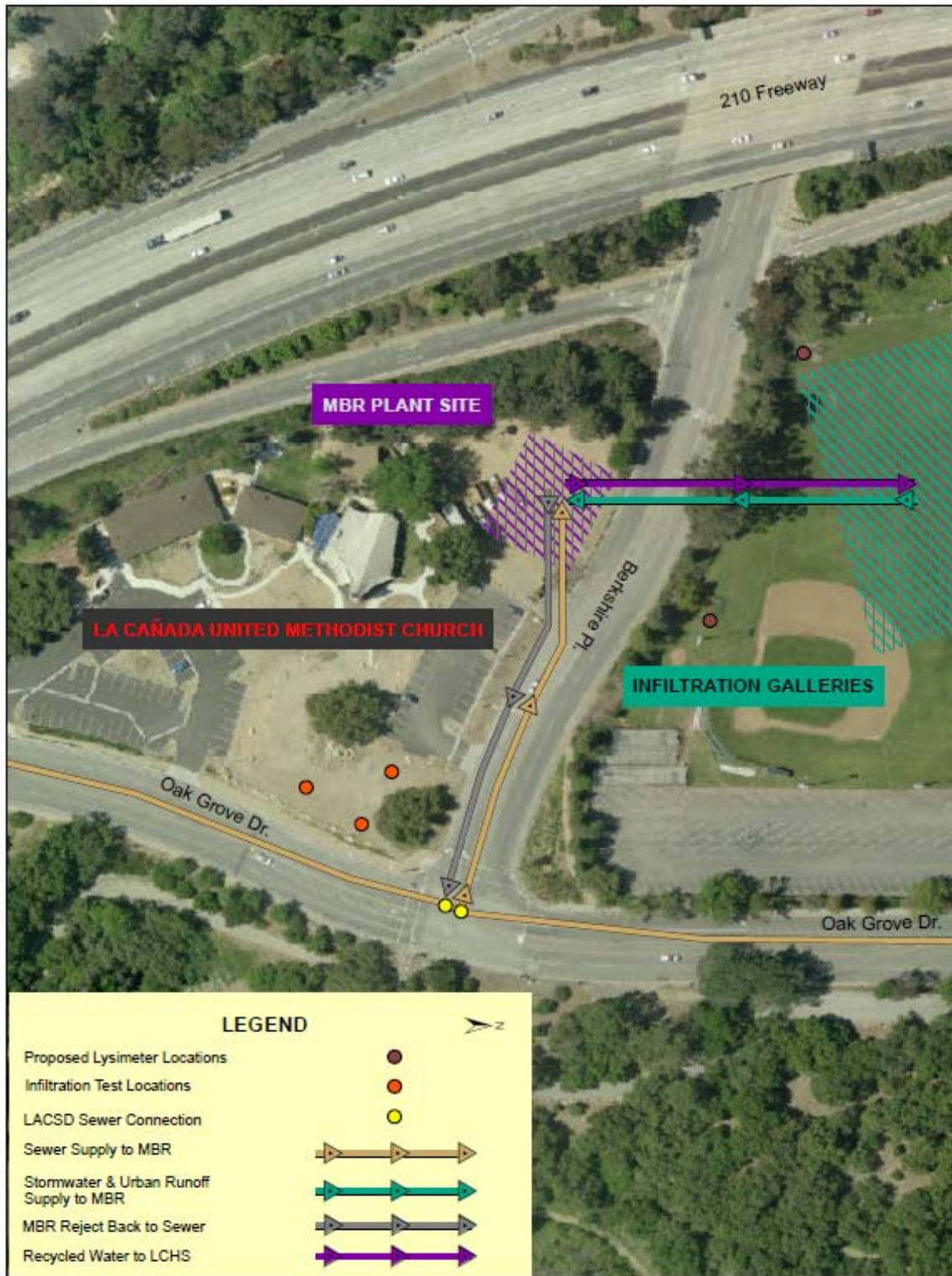
Drive are 4 lane streets with traffic conditions mainly dictated by LCHS and Jet Propulsion Laboratory. Two separate inlets will be constructed into the MBR facility that will convey municipal wastewater, stormwater and urban runoff. It is anticipated that a pipe carrying the recycled water will traverse underneath all 4 lanes of Berkshire Place before the water enters LCHS grounds. The treated water will be discharged into infiltration galleries to be installed underneath nearby athletic fields located on the campus of La Cañada High School.

Project Timing and Phasing

This Project is not currently planned as part of a larger or multi-phase project. The designed scope of the Project, in reference to planned construction and operation of the 0.25 MGD MBR plant and infiltration galleries, dictates a comprehensive and full-install approach. All parts of the Project will be jointly implemented and constructed, as all planned elements need to be utilized concurrently.

Foothill Municipal Water District Recycled Water Project

Figure 3-7: FMWD Recycled Water Project Location Map



Foothill Municipal Water District Recycled Water Project**Proposed Work**

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs**Task 1: Project Administration**

Project administration work to be completed under this task will be performed by a FMWD Project Manager (PM) with assistance from an Assistant Project Manager. The administration tasks consist of management of contracts, preparation of invoices and backup documentation, coordination with consultant and contractors and maintenance of other administrative duties, including data management. Meetings and workshops are also included under Project coordination. Development of other external funding is expected to continue until September 2013 (or until IRWM funds are released).

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Development of Financing	July 2012 – September 2013	Already started	✓	
Finalize Partnership Agreements	November 2012 – November 2013	Already started	✓	✓
Project Coordination and Management of Consultant and Contractors	July 2012 – October 2016	Already started		✓
Preparation of Invoices and Backup Documentation	Quarterly after contract execution	Not yet begun		✓

Task 2: Labor Compliance Program

The Project's construction will be completed utilizing prevailing rates in order to comply with local labor compliance programs. FMWD is currently developing its own labor compliance

Foothill Municipal Water District Recycled Water Project

Work Plan

program and it will be completed before construction bidding opens for the Project. The Project will have a Labor Compliance Program ID before the Project goes out to bid. Management of the program, including all reporting obligations on behalf of the contractor, will be ongoing and overseen by FMWD staff until completion of construction and contractor agreement.

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Labor Compliance Program Management	October 2016	Ongoing	✓	✓

Task 3: Reporting

FMWD will submit quarterly, final and post completion reports to the State per grant requirements. Other reporting obligations (regulatory or otherwise) will be scheduled accordingly.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Progress Report	Monthly	Not yet begun		✓
Quarterly and Annual Progress Reports	Quarterly after Oct. 1, 2013	Not yet begun		✓
Final Report	At completion of project	Not yet begun		✓
Post Completion Report	90 days after project has been active for one year	Not yet begun		✓

(b) Land Purchase/Easement

The proposed site for construction of the MBR plant is on property owned by the La Cañada United Methodist Church. FMWD is in the process of obtaining an appraisal for easement purposes. FMWD will also need to obtain an easement agreement with the La Cañada Unified School District and the City of La Cañada for the construction of the infiltration galleries.

Foothill Municipal Water District Recycled Water Project

Work Plan

Contact has been made with the church council (stewards of the property) and they have expressed interest in accommodating an easement. A letter of interest supporting siting an MBR plant on the vacant property has been received from the church (**Appendix 3-D**).

Negotiations will begin with the La Cañada Unified School District and the City of La Cañada Flintridge in February 2013 for use of the athletic fields for the infiltration galleries.

(c) Planning/Design/Engineering/Environmental Documentation**Task 4: Assessment and Evaluation**

A water recycling feasibility study has already been conducted by FMWD and was approved by the State Water Resources Control Board in January 2012. Since that time, FMWD staff composed a paper titled: "FMWD Recycled Water Project, Update to Incorporate a Watershed Approach" that elaborates on the collaborative approach with Project partner(s) Cal Poly Pomona and LCHS. Another technical paper outlining updated costs to reflect the new, proposed location of the infiltration galleries was completed by Phoenix Civil Engineering, Inc. in December 2012 and is titled: "Economic Analysis Update of Arroyo Seco Alternative (Alternative A-6)".

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
FMWD Water Recycling Facilities Planning/Project Report	Submitted to and approved by State Water Resources Control Board January 2012	Completed January 27, 2012	✓	
FMWD Recycled Water Project, Update to Incorporate a Watershed Approach	FMWD staff paper completed October 2012	Completed October 2012	✓	
Economic Analysis Update of Arroyo Seco Alternative (Alternative A-6)	Completed December 2012	Completed December 2012	✓	

Task 5: Final Design

Preliminary design is expected to start in July 2013. Final design activities will immediately follow the completion of preliminary design.

Foothill Municipal Water District Recycled Water Project

Work Plan

Project Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preliminary Design	July 2013 – February 2014	Not yet begun	✓	✓
Final Design	February 2014 – October 2014	Not yet begun		✓

Task 6: Environmental Documentation

CEQA Plus preparation has started, with a final report expected by June 2013. Data from groundwater infiltration percolation testing is expected by April 2013. This Project will not limit access to or ceremonial use of Indian sacred sites or result in other impacts on tribal lands. A Native American survey via the Bureau of Indian Affairs will be conducted and is part of the CEQA documentation that is in preparation and will be provided upon completion, which will be approximately June 2013.

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Infiltration Galleries Percolation Pilot Test Results	December 2012 – April 2013	Already started	✓	
CEQA Plus Report	December 2012 – June 2013	Already started	✓	

Task 7: Permitting

Permits will be required from:

- Regional Water Quality Control Board (in conjunction with CDPH) – NPDES and Waste Discharge Permits
- Regional Water Quality Control Board – Storm Water Pollution Prevention Program Permit (SWPPP)
- Sanitation Districts of Los Angeles County – Construction Permit
- City of La Cañada Flintridge – Building and Traffic Control Permit
- City of Pasadena – Traffic Control Permit
- South Coast Air Quality Management District – Construction Permit

Foothill Municipal Water District Recycled Water Project

Work Plan

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
NPDES and Waste Discharge Permits	May 2014	Not yet begun		✓
Storm Water Pollution Prevention Plan	February 2015	Not yet begun		✓
LACSD Construction Permit	February 2014	Not yet begun		✓
City of La Cañada Flintridge – Building Permit	October 2014	Not yet begun		✓
City of La Cañada Flintridge – Traffic Permit	October 2014	Not yet begun		✓
City of Pasadena – Traffic Permit	October 2014	Not yet begun		✓
SCAQMD Construction Permit	February 2015	Not yet begun		✓

(d) Construction/Implementation**Task 8: Construction Contracting**

Bidding and construction will not be held until design has been finalized and approved by the FMWD Board of Directors. The construction contracting for the Project will be handled by FMWD staff in compliance with public contracting code. Tasks to secure the Contract award include: advertisement for bids, a pre-bid contractors meeting, bid opening, bid evaluation and selection of contractor with lowest responsive bid. The Board would then award the contract and a Notice to Proceed would be issued.

Foothill Municipal Water District Recycled Water Project

Work Plan

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of Bid Packages	October 2014 – December 2014	Not yet begun		✓
Advertisement	January 2015 – March 2015	Not yet begun		✓
Bid Opening and Evaluation	March 2015	Not yet begun		✓
Bid Award	April 2015	Not yet begun		✓
Notice to Proceed	April 2015	Not yet begun		✓

Task 9: Construction

The Project includes site grading and the construction of a one story building. The site will include a parking lot, drought tolerant landscaping as well as wet and dry utilities. The one story building will include the process equipment (i.e., chemical facilities, coarse screen, fine screens, pumping equipment, air scouring blowers, below ground MBR tanks, below ground wet well tanks and air scrubbers for the building) as well as electrical and instrumentation and control equipment.

Off site, the Project will include supply pipelines from the LACSD sewer to the MBR facility and a sewer return pipeline back to the LACSD sewer to return biosolids. A final effluent pipeline will be constructed to the future infiltration galleries to be located at LCHS. The infiltration galleries will include a series of smaller diameter pipelines (ABS, PVC and HDPE) which will accept the final effluent for percolation into the groundwater. Infiltration galleries will be installed with both native and decomposed granite and will also have lysimeters installed to track the percolation rates of the soil. Miscellaneous landscaping, irrigation pipelines and underground storm water capture drainage pipelines will need to be repaired or replaced on site. A new pipeline to be installed from LCHS to the MBR facility will contain stormwater and urban runoff from LCHS.

Foothill Municipal Water District Recycled Water ProjectSubtask Descriptions:*Subtask 9.1 Mobilization and Site Preparation:*

Contractor will mobilize equipment and a construction trailer for the Project. The site was previously utilized as a staging area and as such has no landscaping. The site will only require cut/fill grading per the grading plans to prepare the site for the future parking lot, drought tolerant landscaping and MBR facility building.

Subtask 9.2 Project Construction:

Project construction will include: the parking lot, drought tolerant landscaping, MBR facility building, all process equipment (including booster pump), electrical supply, instrumentation and controls, wastewater supply pipeline, wastewater return pipeline, treated effluent pipeline, stormwater/urban runoff supply pipeline to the MBR, three acres for infiltration gallery pipelines, miscellaneous landscaping, irrigation and stormwater capture pipeline repairs at LCHS as well as asphalt restoration on Berkshire Place and Oak Grove Drive.

Subtask 9.3 Performance Testing and Demobilization:

Contractor will operate the MBR facility for a period of 45 days in order to comply with FMWD's NPDES and WDR permits. Treated effluent will be discharged to the sanitary sewer until the regulatory agencies are satisfied that the MBR is in compliance, then treated effluent will be discharged to the infiltration galleries for 90 days. Performance testing will be completed after 90 consecutive days of discharge to the infiltration galleries at which time FMWD will issue a Notice of Completion to the Contractor. During the time of performance testing, the Contractor can demobilize all equipment, materials and manpower that are not in support of the performance testing.

Foothill Municipal Water District Recycled Water Project

Work Plan

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Mobilization and Site Preparation	May 2015	Not yet begun		✓
Subtask 9.2 Project Construction				
Project Construction	May 2015 – May 2016	Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Demobilization	May 2016	Not yet begun		✓
Performance Testing – MBR	June 2016 – July 2016	Not yet begun		✓
Performance Testing – MBR w/Infiltration Galleries	August 2016 – October 2016	Not yet begun		✓

(e) Environmental Compliance/Mitigation/Enhancement**Task 10: Environmental Compliance/Mitigation/Enhancement**

Although it is not expected that mitigation measures will be required, a portion of the budget for this Project is allocated to anticipate any additional, small scale environmental hazard mitigation measures that could be required before regulatory agencies sign off on permits. Additionally, the contracted crew for construction of the recycled water facilities must comply with all Occupational Safety and Health Administration (OSHA) standards and requirements.

There are environmental enhancement measures for this Project based on the work that Cal Poly Pomona is contributing. This includes development of an education curriculum outline and tours of both the MBR facility and Hahamongna Watershed Park, where students will learn about environmental stewardship. Cal Poly Pomona will also be providing the drought tolerant landscape design for the MBR plant. The Cal Poly Pomona Field of Greens team deliverables include conservation outreach and education components of the Project.

Foothill Municipal Water District Recycled Water Project

Work Plan

Environmental Compliance / Mitigation / Enhancement Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Secondary Containment/Other Environmental Safety Measures	October 2016	Not yet begun		✓
Development of 0.5 Acres of Barren Land	October 2016	Not yet begun		✓
Cal Poly Pomona Deliverables and Collaboration	June 2012 - October 2016	In progress		✓

(f) Construction Administration**Task 11: Construction Administration**

FMWD will either hire an independent construction manager or design firm to provide engineering services during construction as well as construction management services. These construction management services will include daily inspection, special inspections (e.g., steel and concrete), labor compliance reporting, permitting review and compliance, and storm water compliance.

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Construction Management	May 2015 – May 2016	Not yet begun		✓
Engineering Services During Construction	May 2015 – October 2016	Not yet begun		✓

(g) Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include Development of Performance Measures and Monitoring Plan, which will be completed before the Project goes out to bid. Development of external funding is included under Task 1: Administration.

Foothill Municipal Water District Recycled Water Project

Work Plan

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Development of Performance Measures and Monitoring Plan	March 2013 – March 2015	In progress	✓	✓

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods listed below:

- 2012 Standard Specifications of Public Works Construction (“Greenbook”)
- California Administrative Code Title 22, Division 4 – Environmental Health
- California Administrative Code Title 17, Division 1, Chapter 5, Group 4 – Drinking Water Supplies
- Title 29 Occupational Safety and Health Administration 1926
- American Society for Testing and Materials (ASTM) C90-12 and ASTM A370
- Uniform Building Code 1997
- Construction Site Best Management Practice Manual

Marsh Park, Phase II

Marsh Park, Phase II

Description

The Marsh Park, Phase II Project (Project) will implement improvements to Marsh Park which is located in the City of Los Angeles' Elysian Valley neighborhood adjacent to the Los Angeles River. The Project will include expansion of the existing park to create an additional three acres of park land in a park-poor neighborhood on the banks of the soft-bottom portion of the Los Angeles River. Its creation will be an instrumental step in revitalizing the river and creating a regional park amenity. The Project will convert over two acres of impervious surface into pervious surface which can detain, infiltrate, and recharge stormwater. On-site and off-site runoff will be detained and bio-filtered through the park's system of bio-swales and filter inserts, collectively known as Best Management Practices (BMPs), before being slowly released into the Los Angeles River. Native Californian plants will be predominantly used to landscape the three acres of parkland to promote outdoor education and water conservation. Riparian habitat restoration will occur on 1.25 of the three acres. The park will create habitat which could be utilized by wildlife using the soft-bottom of the Los Angeles River and nearby open space parkland. In the future, the park is planned to host interpretive programs that will teach visitors about gardening with native plants, the ecologies of the Los Angeles River, outdoor skills and general resource management tips to apply at home. The park will provide an amazing natural experience for the immediate underserved neighborhood and will be a gateway to the Los Angeles River for regional visitors. The design of the park and proposed maintenance regime will do the job of a natural environment by decreasing total maximum daily load (TMDL) constituents that are impacting the river.

The Mountains Recreation and Conservation Authority (MRCA) is the primary implementing agency. The MRCA is a local park agency established in 1985 exercising joint powers authority of the Santa Monica Mountains Conservancy, the Conejo Recreation and Park District, and the Rancho Simi Recreation and Park District. The mission of the MRCA is to preserve and manage local open space and parkland, watershed lands, trails, and wildlife habitat. The MRCA currently manages over 69,000 acres of parkland and holds fee title to approximately 10,000 of those acres.

The Santa Monica Mountains Conservancy (SMMC) is a cooperating State agency that has provided funding and initial vision for the Marsh Park Project. The SMMC took ownership of the property after the Trust for Public Land originally acquired the industrial property to convert to public park use. SMMC then transferred the land and project vision to the MRCA because of its leadership role in revitalizing the Los Angeles River. As joint powers agencies, the SMMC and

Marsh Park, Phase II

MRCA are working together to develop all phases of Marsh Park, which will ultimately total 5.4 acres of industrial land converted into a multi-benefit natural park.

The park design is 90% complete. Phase I of the park was developed with partners who continue to be invested in the successful development of Phase II. These partners include the Los Angeles Neighborhood Land Trust who designed and operate the skate park (Phase Ib); the Los Angeles Conservation Corps who built Phase Ia and help maintain the park; and Art Share L.A. who worked with the neighborhood residents to create a playful mosaic.

Goals and Objectives

The primary objectives of this Project are to:

- Create 1.25 acres of riparian habitat (42% of Project land)
- Create 0.2 acres of open space, free-play meadows where unprogrammed recreation can take place on a surface planted with drought-tolerant grasses.
- Convert impervious industrial land into parkland
- Recharge groundwater with 1.74 acre-feet per year of stormwater
- Capture 2.14 acre-feet of stormwater per year and use on-site
- Capture and retain 1.5 acre-feet of stormwater per 50-year storm event
- Filter 698,429 gallons per year (on average) using bio-filtration swales and filter inserts
- Provide improved stormwater drainage for 5.8 acres of residential and parkland area that is tributary to the park
- Provide park amenities to a disadvantaged and “park-poor” community, as well as regional recreation and river access benefits through connection to the Los Angeles River Bike Path
- Expand habitat connections to Los Angeles County designated significant ecological areas
- Improve water quality in the Los Angeles River
- Provide year-round environmental and outdoor education programs to over one-hundred people per year

Figure 3-8 illustrates the onsite benefits for the Project.

Figure 3-8: Planned Open Space and Riparian Areas



Marsh Park, Phase II**Work Plan**

These Project goals will help the Greater Los Angeles County (GLAC) Region to meet the following Integrated Regional Water Management (IRWM) Plan objectives:

- Optimize local water resources to reduce the Region’s reliance on imported water
- Comply with water quality regulations (including TMDLs) by improving the quality of urban runoff, stormwater, and wastewater
- Protect and improve groundwater and drinking water quality
- Protect, restore, and enhance natural processes and habitats
- Increase watershed friendly recreational space for all communities

Purpose and Need

The Project purpose is to convert three acres of former industrial land into a neighborhood natural park designed to improve water quality, restore habitat, provide needed recreation and cultural amenities and connect a disadvantaged community (DAC) to its greatest asset, the habitat-rich portion of the Los Angeles River. The overall purpose of the multiple-benefit park is to revitalize the Los Angeles River in ways consistent with the following criteria for prioritizing projects within the Los Angeles River corridor from the City’s approved Los Angeles River Revitalization Master Plan (2007, pg. 10-11):

- Geographic synergy with other projects currently in progress: Marsh Park would complement the Los Angeles River Bike Path recently completed by the City of Los Angeles.
- Responsiveness to funding source objectives and evaluation criteria: The Project is eligible for Proposition 84 and Proposition A² funding.
- Proposals meeting multiple objectives: The Project simultaneously meets recreation, water quality and other objectives.
- Multiple funding partners: The Project has secured funding from diverse sources, increasing each funding partner’s return on investment.
- Supportive neighborhood organizations and advocacy groups: Over six years of community planning, many neighborhood organizations and advocacy groups have expressed support for the Project proposal.

² In 1991, the state legislature adopted Public Resources Code (“PRC”), Section 5539.9, which authorized numerous urbanized counties statewide to issue a tax assessment for the purchase of open space and for the improvement of park facilities. This assessment was imposed in Los Angeles County by two measures, Proposition “A” in 1992 and “Baby A” in 1996.

Marsh Park, Phase II**Work Plan**

The Glendale Narrows, the area in which the Project is located, is a vital habitat that must be protected from water pollution because of its connections to nearby Significant Ecological Areas in the Verdugo Mountains, Santa Monica Mountains and San Gabriel Mountains. The portion of the Los Angeles River adjacent to the Project serves as wildlife habitat but is severely impacted by non-point source trash and nutrient loadings. The park addresses these issues in an integrated, multiple-benefit approach that has proven to be effective over the long-term life of other MRCA natural parks, such as the Tujunga Wash Greenway and Stream Restoration Project, and Vista Hermosa Park.

The park's natural system of arroyos and restorative habitat vegetation is designed to filter and slow stormwater runoff and trash moving through the park. The park's restored habitat would also serve as a stopping point and provide additional food sources for wildlife currently using this portion of the river to connect to Significant Ecological Areas in nearby mountains. The MRCA's commitment to maintain the park is the second line of defense to ensure that the arroyo system is working optimally and that wind-swept trash is disposed of properly through regular trash collection. Lastly, the park will host year-round education and outreach programs led by MRCA's naturalists to build environmental stewardship among the neighbors and regional visitors. Together the design, maintenance and education programming will enhance the quality of the Los Angeles River's water and habitat.

The stretch of the Los Angeles River adjacent to the Project site is listed on the Clean Water Act 303(d) list for trash, metals, and nutrients. Downstream of the site, the Los Angeles River and Los Angeles Harbor are listed for these constituents, plus bacteria, pesticides, oil, pH, sediment toxicity, and organics such as polychlorinated biphenyls (PCBs) and chrysene. TMDLs for the Los Angeles River have been set by the Los Angeles Regional Water Quality Control Board (RWQCB) for trash, metals, nutrients and bacteria.

The Project will help the City of Los Angeles comply with their TMDL requirements because the park will detain, infiltrate and filter stormwater runoff from the Project's drainage area, which includes the three acres of park area plus 2.8 acres of neighboring tributary area for a total of 5.8 acres. The park is also designed to accommodate increased flows of stormwater should the City of Los Angeles redirect drainage from surrounding feeder streets such that they slope toward the park.

In the urbanized area of Los Angeles, park development efforts can involve revitalization of compromised natural resources like the Los Angeles River and more equitable distribution of park and open space. On average, municipalities within the GLAC IRWM Region use a standard of 4 acres of parkland per 1,000 population for providing neighborhood and community parks that offer both active and passive recreational opportunities. The Los Angeles County General

Marsh Park, Phase II**Work Plan**

Plan reflects this goal. Often these standards are complemented with a proximity goal of a park being within a ¼ to ½ mile radius of all residents. Communities that do not meet one or both of these standards are often considered to be “underserved” from a parkland provision perspective.

Challenges within the Elysian Valley community include a basic lack of parkland and recreation options, poor public health, and pollution. The community where the Project is located is considered “park-poor” by GLAC IRWM Region park standards. According to the Community Fact Finder Report, the usable park space per 1,000 residents within 0.25 mile radius of the Project is 0.21 acres per 1,000 residents. Elysian Valley does include the Los Angeles River Bikeway (as of December 4, 2010); which includes a few small street-end pocket parks that provide entrance to the bikeway and native landscaped resting areas.

Marsh Park will be the premier park for the central city area. When Marsh Park is expanded, it will be the only park adjacent to the Los Angeles River near downtown Los Angeles that is over two acres. The site is poised to become a riverfront destination serving the cultural and recreational needs of downtown Los Angeles and the adjacent central city neighborhoods.

Completion of this phase of Marsh Park will significantly increase the recreational choices available to the community. The planned park amenities directly reflect the needs of the community and input received from the community-based planning process. Opportunities for passive recreation, such as walking, bird watching, and picnicking will be created throughout the park site. Direct access to the active recreation available along the adjacent Los Angeles River Bikeway will also be provided. In addition to these park amenities, a series of health and fitness zones will be installed throughout the park to provide active nodes within the natural setting. Areas geared toward adventure play for children will be incorporated within the park. These areas will consist of natural elements that simulate and encourage the type of recreation that can be found in nature. These activities include climbing, jumping, exploring, and running.

Also, a free play meadow is planned for the park, which will consist of a large open space for un-programmed activities to happen. Picnic tables and benches will be scattered throughout the park providing space for studying, reading, table games, grilling, and a comfortable place from which parents, grandparents, and guardians can watch their children play. A Picnic and Community Gathering Area will provide easy access to benches with a view of the soft-bottom Los Angeles River. A pedestrian path will connect bikeway users to the aforementioned amenities located inside the park, including a restroom.

Marsh Park, Phase II**Integrated Elements of Project**

Marsh Park is part of the regional effort to revitalize the Los Angeles River, which is being implemented by local non-profits and across all levels of federal, state, county and municipal government. Since the City of Los Angeles adopted the *Los Angeles River Revitalization Master Plan* in 2007, there has been momentum to implement the plan. Marsh Park is one of 240 projects guided by the plan to completely redefine the environmental and social quality of inner-city Los Angeles neighborhoods. Specifically, the Project is part of the “Taylor Yard Opportunity Area,” which can be found on page 6-22 of the *Los Angeles River Revitalization Master Plan* (**Appendix 3-E**).

Completed Work

Most of the pre-construction tasks have been completed. Studies of the site focused on community engagement, hazardous wastes related to the demolition of two buildings, and ways to balance existing and future hydrologic function and design feature capabilities. The studies led to the development of the Project plan, which determined the stormwater treatment and habitat restoration capacity of the site. The studies listed below are described in further detail in the next section.

- *Architectural Design Survey of Marsh Street Park*
- *Agricultural Soil Testing Report*
- *Summary Report: Pre-Demolition Bulk Asbestos and Lead-based Paint Survey*
- *SCA Hazardous Materials Specifications – Gleneden Property*
- *Geotechnical Report Update, Proposed Marsh Park*
- *Hydrology and Hydraulics Report, Marsh Park*
- *Concept Design & Community Master Planning* (includes ecological and hydrological technical assessment)
- *Design Development* (includes ecological and hydrological technical development)
- *Mitigated Negative Declaration* (CEQA)

Work that is planned to be completed prior to the grant award date includes:

- Construction Documents
- City of Los Angeles Grading Permit, Demolition Permit and Building Permit

Marsh Park, Phase II**Existing Data and Studies**

A significant amount of data has been collected and studies performed in support of the Project site location, feasibility, and technical methods, and can be found in the **Appendix CD**. These include:

- *Architectural Design Survey of Marsh Street Park*: The survey is a CAD document produced by Hennon Surveying & Mapping, Inc. in May 2001 that measures every feature of the site, including lot lines, buildings, topography, trees, pavement, fencing, access points and some site context. The lot lines determined the phasing of the entire 5.4 acres³ Marsh Park. The design team used the existing drainage patterns showed in the survey to recommend Best Management Practices for the site's stormwater.
- *Agricultural Soil Testing Report*: A soil report was prepared for the Marsh Park site by Wallace Laboratories, LLC in January 2013. This report provides information on the soil types and chemical properties, and provides recommendations for additional nutrients to improve plant growth when native plants are installed at the park.
- *Summary Report: Pre-Demolition Bulk Asbestos and Lead-based Paint Survey*: The Summary Report prepared by SCA Environmental in September 2010 summarizes the survey results for asbestos-containing materials and lead-based paints, conducted for the MRCA on the buildings currently on the Project site.
- *SCA Hazardous Materials Specifications – Gleneden Property*: Based on the findings of the Summary Report in December 2010, SCA Environmental was asked to prepare a demolition abatement plan for the hazardous materials found. The purpose of the plan is to recommend methods for removal and disposal of hazardous materials.
- *Geotechnical Report Update, Proposed Marsh Park*: GeoLogic Associates, geologist/hydro-geologist/engineer consultants prepared a report in March 2012 detailing the structural capacity and porosity of the site's soils. Once the design was finalized, the report was amended to evaluate the soils beneath significant architectural features of the park, including an outdoor picnic shelter, storage building and restroom. The report makes recommendations that will be included in the Construction Documents.
- *Hydrology and Hydraulics Report, Marsh Park*: Civil engineers at KPFF prepared the report in January 2013 to document the Project's designed goal to divert and reduce

³ Once complete, Marsh Park will cover the entire 5.4 acres of property available, and will involve three phases: Phase I (1 acre), Phase II (3 acres), Phase III (1.4 acres). See "Project Timing and Phasing" section for more information.

Marsh Park, Phase II**Work Plan**

peak flows from adjacent residential areas through Project site BMPs before entering the Los Angeles River.

- *Concept Design & Community Master Planning* (includes ecological and hydrological technical assessment): The consultant design team, including landscape architects, architects and engineers, engaged the community and MRCA in envisioning feasible park design options for the entire undeveloped 5.4 acres of the Marsh Park property. During this process, the team studied the site to recommend to the community and MRCA phasing options, habitat enhancement strategies, water quality strategies, recreation options, and other opportunities and constraints of the site. The results of this were the Project's *Concept Design & Community Master Planning* prepared between 2006 and 2008.
- *Los Angeles River Revitalization Master Plan*: As part of the "Taylor Yard Opportunity Area," the entire 5.4 acres of all phases of the Marsh Park Project is recommended for improvements on page 6-22. These improvements include a pocket park, paseo and neighborhood gateway.

Each of these documents is included in the **Appendix CD**.

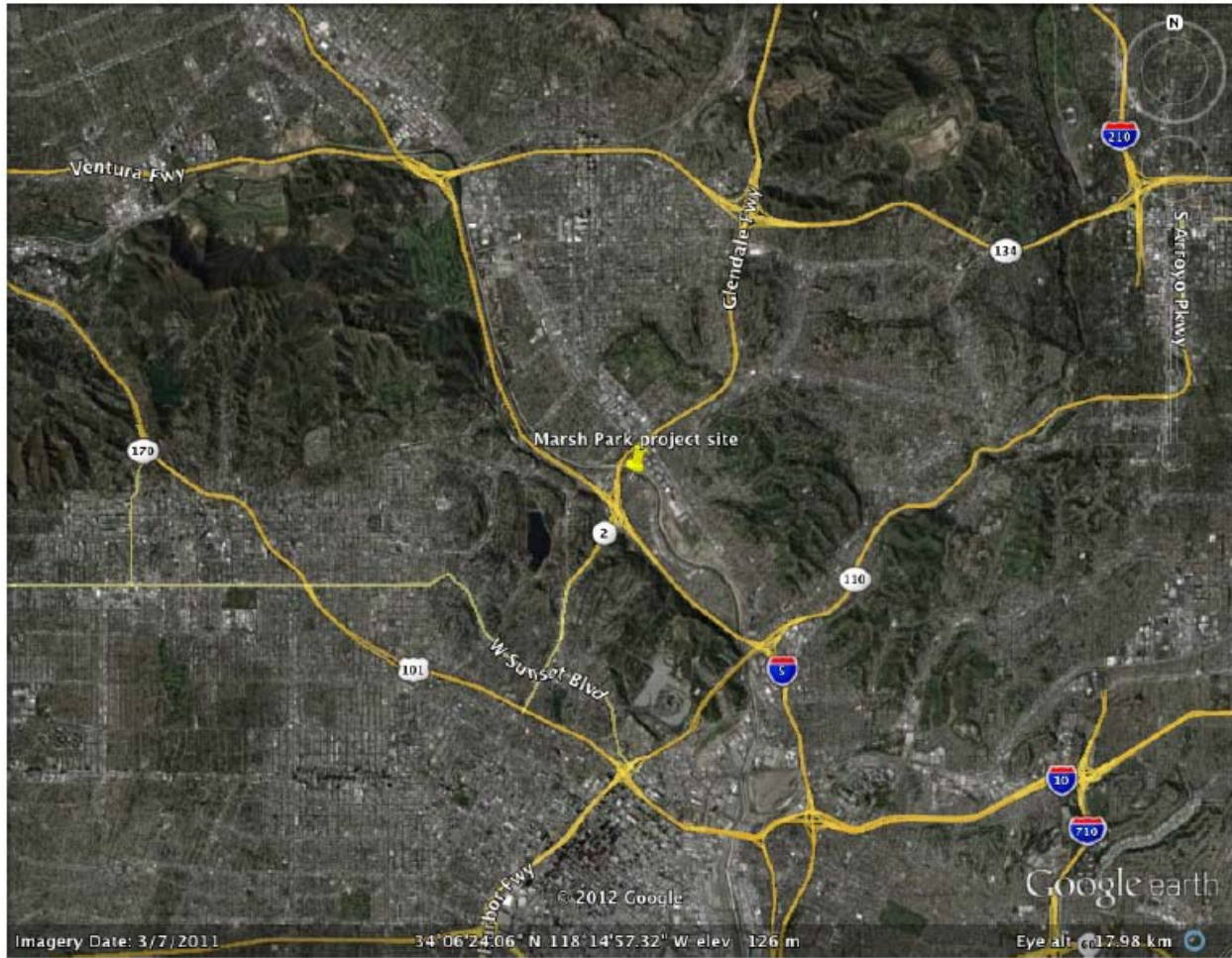
Project Maps

The Project location, boundaries and site plan are shown in **Figure 3-9** and **Figure 3-10**.

Project Timing and Phasing

When all phases are completed, Marsh Park will be a 5.4-acre park on the banks of the Los Angeles River in the Glendale Narrows region. When the land was acquired in 2001, the MRCA planned to develop a public park in phases that would operate on a stand-alone basis, and eventually operate together as one park. Phases Ia (pocket park) and Ib (skate park) were both completed by 2007 and can be run independently. Phase II, the Project in this application, will develop three acres of the former industrial land into public parkland with three public entrances that can operate independently of the already-developed portions of Marsh Park. When Phase II is complete, it will connect to the adjacent skate park (Phase Ib) separated by only one driveway from the pocket park (Phase Ia). Phase III will develop additional public park area on the remaining 1.4 acres of land, but planning has not yet begun.

Figure 3-9: Project Location Map



Source: Google Earth

Figure 3-10: Project Site Map



Source: Google Earth

Marsh Park, Phase II**Proposed Work**

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs**Task 1: Project Administration**

Much of the Project development and planning has been completed. Project outreach to stakeholders, community members and government entities was completed between 2006 and 2012.

The MRCA will continue to manage the Project budget, timeline and progress through the completion of construction. The MRCA will engage the community as needed in these final stages, but will focus on construction management and Project reporting to key funding partners. When the Project is complete, the MRCA will prepare close-out documentation.

Duties performed as part of Task 1, Project Administration, include, but are not limited to:

- Let contracts and obtain procurement of services.
- Administer Project finances
- Schedule and coordinate meetings
- Document meetings
- Control Project records and document distribution
- Handle basic administration, planning, meetings, actions and record keeping
- Implement grant deliverables
- Oversee grant disbursements
- Prepare invoices and backup documentation
- Oversee permitting processes
- Add utilities to the Project site
- Manage the delivery and spend out of consultant contracts
- Data management

Marsh Park, Phase II

Work Plan

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Management / Administration	2006 – December 2014	Ongoing		✓
Grant Administration	2006 – December 2014	Ongoing		✓
Plan Check / Utility Fees	January 2012 – June 2014	In progress		✓
Project Communication & Coordination	2006 – December 2014	Ongoing		✓
Project Closeout	June 2014 – December 2014	Not yet begun		✓

Task 2: Labor Compliance Program

MRCA adopted a Labor Compliance Program (LCP) in 2008, which was most recently approved for continued use in July 2012. For Marsh Park, Phase II, the LCP's requirements will be administered by a construction management consultant and existing staff.

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Labor Compliance Program Management (LCP ID 2008.00585)	Ongoing	Ongoing		✓

Task 3: Reporting

Quarterly, Final and Post Completion Reports will be prepared and submitted to DWR.

Marsh Park, Phase II

Work Plan

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Quarterly Progress Reports	Quarterly after Oct. 1, 2013	Not yet begun		✓
Final Report	At completion of Project	Not yet begun		✓
Post Completion Reports	Within three months of Project being active for one year	Not yet begun		✓

(b) Land Purchase/Easement

Purchase of land or easements will not be required for this Project as it is already owned by MRCA.

(c) Planning/Design/Engineering/Environmental Documentation

Task 4: Assessment and Evaluation

A majority of the assessment and evaluation activities for this Project are complete. These assessment and evaluation activities are listed below:

- *Architectural Design Survey of Marsh Street Park*
- *Agricultural Soil Testing Report*
- *Summary Report: Pre-Demolition Bulk Asbestos and Lead-based Paint Survey*
- *SCA Hazardous Materials Specification*
- *Geotechnical Report Update, Proposed Marsh Park*
- *Hydrology and Hydraulics Report, Marsh Park*

Marsh Park, Phase II

Work Plan

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
<i>Architectural Design Survey of Marsh Street Park</i>	Completed May 2001	Complete	✓	
<i>Agricultural Soil Testing Report</i>	Completed January 2013	Complete	✓	
<i>Summary Report: Pre-Demolition Bulk Asbestos and Lead-based Paint Survey</i>	Completed December 2010	Complete	✓	
<i>SCA Hazardous Materials Specification</i>	Completed December 2010	Complete	✓	
<i>Geotechnical Report Update, Proposed Marsh Park</i>	Completed March 2012	Complete	✓	
<i>Hydrology and Hydraulics Report</i>	Completed March 2013	Complete	✓	

Task 5: Final Design

The Construction Documents for the Project are currently 90% complete. All permit and constructability review comments have been received and are currently being integrated into the 100% Construction Document set. Bids will be solicited once the 100% Construction Document set is complete.

Project Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Concept Design & Community Master Planning	2006-2008	Complete	✓	
Design Development	2008-2012	Complete	✓	
Construction Documents	2012-March 2013	In progress	✓	

Task 6: Environmental Documentation

The CEQA process for Marsh Park, Phase II is complete and included preparation of an Initial Study (IS) and a Mitigated Negative Declaration (MND). The IS was completed in June 2012 and

Marsh Park, Phase II**Work Plan**

it included intensive traffic, air quality and noise impact studies. The public comment period for the Draft MND occurred between July 13, 2012 and August 17, 2012. The State Clearinghouse requirements were fulfilled on August 10, 2012. No comments were received from any of the reviewing agencies (Resources Agency, Department of Conservation, Department of Fish and Wildlife Region 5, Department of Parks and Recreation, Department of Water Resources, California Highway Patrol, Caltrans District 7, Regional Water Quality Control Board Region 4, Department of Toxic Substances Control, Native American Heritage Commission, Public Utilities Commission, and State Lands Commission). The Notice of Determination was filed with the Los Angeles County Clerk on September 18, 2012 and the MRCA Governing Board adopted the MND on September 18, 2012 following the public review period. No public or agency comments were received that required mitigation or further CEQA review.

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Initial Study and Mitigated Negative Declaration	November 2011 – September 2012	Complete	✓	

Task 7: Permitting

The landscape architecture lead consultant, Melendrez, has initiated the permitting process by submitting the 90% Construction Documents (CDs) to the plan checkers with the City of Los Angeles. The 90% CDs were also reviewed by the MRCA and the construction management firm TELACU. Initial comments have been received from the City and Melendrez is currently integrating them into the 100% CDs. Once the 100% CDs are complete, the civil engineer sub-consultant will begin the Stormwater Pollution Prevention Plan (SWPPP) process.

Because the Project does not cause the current stormwater flows in the Los Angeles River to increase, the agencies with jurisdiction over the river (Los Angeles County Flood Control District and U.S. Army Corps of Engineers) do not require a review of the CDs. The CDs are being reviewed by the City of Los Angeles to obtain their grading, demolition and building permits.

Marsh Park, Phase II

Work Plan

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
<i>Secure Los Angeles City Permits, including Grading, Demolition and Building</i>	November 2012 – March 2013	In progress	✓	
Comply with State Water Resources Control Board (SWPPP)	February 2013 – June 2014	Not yet begun		✓

(d) Construction/Implementation

Task 8: Construction Contracting

The Project will be put out to a public bid process. The MRCA’s Governing Board will award a contract to the lowest responsive and responsible bidder.

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Bidding	March 2013 – May 2013	Not yet begun	✓	
Bidding Management	January 2013- May 2013	In-process	✓	

Task 9: Construction

Construction is expected to take 10-12 months from the first day of mobilization. Below is a list of anticipated construction tasks needed to create the Project, a three-acre park with a picnic shelter, picnic areas, restroom, storage building, outdoor classroom, nature trails, landscaping, paving, stormwater treatment zones, parking, and fencing. Construction scope also includes the demolition of two (2) industrial buildings.

Subtask Descriptions:

Subtask 9.1 Mobilization and Site Preparation:

- Building Preparation & Demolition
- General Conditions

Marsh Park, Phase II

Work Plan

Subtask 9.2 Project Construction:

- Architecture, Mechanical and Electrical
- Hardscape, Walls and Pavement
- Site Furnishings
- Landscaping & Irrigation
- Utilities/Infrastructure

Subtask 9.3 Performance Testing and Demobilization:

- Demobilization
- Construction Close-out Activities

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Building Preparation & Demolition	June 2013 – June 2014	Not yet begun		✓
General Conditions	June 2013 – June 2014	Not yet begun		✓
Subtask 9.2 Project Construction				
Architecture, Mechanical and Electrical	June 2013 – June 2014	Not yet begun		✓
Hardscape, Walls and Pavement markings	June 2013 – June 2014	Not yet begun		✓
Site Furnishings	June 2013 – June 2014	Not yet begun		✓
Landscaping & Irrigation	June 2013 – June 2014	Not yet begun		✓
Utilities/Infrastructure	June 2013 – June 2014	Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Demobilization	May 2014 – June 2014	Not yet begun		✓
Construction Close-out Activities	May 2014 – June 2014	Not yet begun		✓

Marsh Park, Phase II

Work Plan

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

The environmental mitigation plans have been completed and will be included in the bid documents. The MRCA will ensure that all mitigation measures are implemented and monitored according to plan.

In particular, the MRCA will hire a consultant to perform abatement monitoring in compliance with Cal/OSHA and AQMD in relation to the demolition of two (2) buildings. Per the MND, mitigations will be implemented to protect air quality, nesting birds, geology and soils, and cultural resources should they be encountered. The MND includes measures to guard against hazards and hazardous material contamination, noise pollution and excessive construction waste. The MND determined the Project has “No Impact” or “Less Than Significant” impacts for the following CEQA categories: Aesthetics, Agriculture and Forestry, Greenhouse Gas Emissions, Hydrology and Water Quality, Land Use and Planning, Mineral Resources, Population and Housing, Public Services, Recreation, Transportation and Traffic, and Mandatory Findings of Significance.

Demolition of the two structures will be monitored to ensure abatement of asbestos and stabilization of lead-based paints. The MRCA will hire a consultant to perform the services of a Cal/OSHA “Certified Site Surveillance Technician” (CSST) under the direct supervision of a Certified Asbestos Consultant (CAC)/Certified Hazardous Materials Manager (CHMM) to provide environmental quality assurance services, including perimeter air quality monitoring and observation of work practices during the asbestos abatement activities. Perimeter air samples will be collected in key locations and analyzed within 24 hours of collection. Air samples will be analyzed at SCA/LA’s contract NVLAP-accredited laboratory, using phase contrast microscopy (PCM) in accordance with the National Institute for Occupational Safety and Health (NIOSH) Method 7400.

Environmental Compliance/Mitigation/Enhance Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Demolition Abatement Monitoring	June 2013 to August 2013	Not yet begun	✓	
CEQA (MND) Mitigation Monitoring	June 2013 to June 2014	Not yet begun		✓

Marsh Park, Phase II**(f) Construction Administration****Task 11: Construction Administration**

Construction Administration / Management will be led by the MRCA with the assistance of a construction management firm, to be hired. Construction administration and management primarily includes keeping the Project on schedule, within budget, and per plans and specifications. All other tasks support this goal, including, but not limited to:

- Requesting and managing a construction schedule provided by contractor
- Documenting, reviewing, processing and/or forwarding change orders
- Distributing, filing, and responding to Requests for Information (RFI)
- Checking that work is performed according to contract documents, plans and specifications
- Tracking work tasks and deliverables on the Project's critical path
- Performing and/or reviewing progress updates and reports
- Tracking work completion for payment purposes
- Keeping track of work performed on "time and materials" basis
- Identifying any ongoing operational constraints
- Keeping track of site security issues
- Keeping track of construction mitigation/SWPPP compliance issues
- Keeping track of health and safety issues
- Labor compliance / Inspection reports
- Verifying any intermediate mechanical and contract completion milestones
- Tracking extra work claims and credits
- Scheduling and leading weekly construction meetings and taking and distributing meeting notes
- Record keeping through weekly photographs of construction work/activities
- Managing and responding to any resident questions or concerns related to construction
- Reviewing, tracking, and approving the contractor's Submittals
- Coordinating third-party inspectors either hired by MRCA or from permitting agencies
- Conducting weekly site walks to ensure progress and quality control

Marsh Park, Phase II

Work Plan

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Construction Administration / Management	June 2013 – June 2014	Not yet begun		✓

(g) Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include

- Legal Service: Will include consultation with MRCA's legal department on land use issues such as encroachment
- Licenses, permits and inspections: As required to comply with City of Los Angeles construction permits listed in Task 7
- Collection of baseline monitoring data: Prior to construction MRCA staff will work with the Council for Watershed Health staff to gather baseline data of the site's existing water quality and habitat quality conditions.
- Development of a performance measures and monitoring plan: A performance measures and monitoring plan will be developed for the Project

Note that development of financing is included under Task 1: Project Administration.

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Legal Service	October 2013 – June 2014	Ongoing		✓
Licenses and Permits and Inspections	November 2012 – June 2014	Underway		✓
Monitoring - Collection of Baseline Data	June 2012 – June 2014	Ongoing		✓
Performance Measures and Monitoring Plan	September 2013	Not yet begun	✓	

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods listed below:

- Standard Specifications for Public Works Construction 2010 Edition and Supplements
- Title 29 Occupational Safety and Health Administration 1926
- American Society for Testing and Materials (ASTM)
- California Building Code
- City of Los Angeles Local Ordinances as applicable
- Air Quality Management District
- National Institute for Occupational Safety and Health (NIOSH) Method 7400.

Oxford Retention Basin Multi-Use Enhancement Project**Work Plan****Oxford Retention Basin Multi-Use Enhancement Project****Description**

Oxford Retention Basin is a 10.7-acre facility located in the community of Marina Del Rey, and is owned and operated by the Los Angeles County Flood Control District (LACFCD). This facility serves as a large detention pond that is inundated by urban and stormwater runoff, high groundwater, and tidal inflows from Marina del Rey Harbor. During large storm events, stormwater overflows the retention basin and floods nearby areas. In addition, the retention basin site currently provides no habitat or open space amenities.

The Oxford Retention Basin Multi-Use Enhancement Project (Project) will provide enhanced protection from flooding along Washington Avenue by construction of a 2-foot-high parapet wall along the northwestern and southern boundaries of the Oxford Retention Basin. The Project will mitigate localized flooding by modifying the existing catch basins on Oxford the south side of Oxford Avenue at the intersection of Oxford Avenue and Olive Street. The catch basin will be modified and a Tideflex “Check-mate” flap-gate will be installed at the connection to the storm drain. Local drainage will be further improved by the removal and replacement of existing Tideflex G-37 valves in four catch basins on Oxford Avenue and Olive Street with more efficient Tideflex “Check-mate” flap gates.

Various improvements will be made to address water quality deficiencies, including: construction of a vegetated circulation berm, installation of trash best management practices (BMPs) at the outlets of storm drains which are draining to the basin, construction of bio-swales, and planting of native vegetation within the basin. The Project includes removal of contaminated soils along the perimeter of the basin. At the same time soils onsite that are contaminated by toxics are removed, non-native plants will be removed which will allow for replacement with drought-tolerant native plants.

The site’s recreational and aesthetic appeal will be improved by replacing the existing sidewalk along Admiralty Way with a landscaped parkway and a decomposed granite walking trail around the entire Basin. Decomposed granite is a crushed stone that is widely used for walking trails, and driveways, and is a great option to lower storm water runoff and to reduce the heat in the surrounding areas. Additionally, there will be improved fencing, informational signage, and six observation areas with park benches overlooking Oxford Basin as part of this enhancement.

**Oxford Retention Basin Multi-
Use Enhancement Project****Work Plan**

The LACFCD is the Project's primary implementing agency and is partnering with the County of Los Angeles Department of Beaches & Harbors.

Goals and Objectives

The objectives of the Project are as follows:

- Enhance flood protection by adding a parapet wall that will increase the volume of the retention basin by 20 acre-feet
- Modify existing catch basins to alleviate localized flooding
- Replace tide gates which are essential for flood control purposes
- Improve water quality through the installation of a vegetated circulation berm, implementation of trash BMPs, and removal of contaminated soils surrounding the retention basin
- Enhance native habitat by removing invasive plant species, and planting native and drought tolerant plant species
- Improve passive recreation features by adding 3,500 linear feet of trails with wildlife-friendly lighting and wayfinding signs, and six observation areas with interpretive signs

The Project objectives that address the Greater Los Angeles Regional County IRWM Plan (IRWM Plan) goals are as follows:

- Comply with water quality regulations (including TMDLs) by improving the quality of urban runoff, stormwater, and wastewater
- Protect, restore and enhance natural processes and habitats
- Increase watershed friendly recreational space for all communities
- Maintain and enhance public infrastructure related to flood protection, water resources and water quality

Purpose and Need

The Oxford Basin is a large retention pond that is inundated year-round with urban and stormwater runoff, high groundwater, and tidal inflows from Basin E of the Marina del Rey Harbor. Under a 50-year capital storm event, there is the potential for flooding along the southerly and westerly perimeters of Oxford Basin. This need will be addressed by the construction of a 2-foot-high parapet wall along the northwestern and southern boundaries of the Oxford Retention Basin. Localized flooding will be mitigated by modifying the existing catch basins on the south side of Oxford Avenue at the intersection of Oxford Avenue and Olive

**Oxford Retention Basin Multi-
Use Enhancement Project****Work Plan**

Street. The catch basin will be modified and a tideflex “Check-mate” flap-gate will be installed at the connection to the storm drain. Local drainage will be further improved by the removal and replacement of existing Tideflex G-37 valves in four catch basins on Oxford Avenue and Olive Street with more efficient Tideflex “Check-mate” flap gates.

Oxford Retention Basin discharges storm flows into Marina del Rey Basin E, which has been identified by the Los Angeles Regional Water Quality Control Board (RWQCB) as an impaired water body. Current Bacteria and Toxics Total Maximum Daily Load (TMDL) regulations call for an improvement to water quality in the Marina Del Rey Harbor back basins. A copy of the TMDL requirements can be found in **Appendix 3-E**. Water quality deficiencies will be addressed by construction of a vegetated circulation berm, installation of trash excluders at the outlets of storm drains which are draining to the basin, construction of bio-swales, and establishing native plants within the basin. The Project includes the removal of contaminated soils along the perimeter of the basin and the replacement of non-native plants with drought-tolerant native plants.

Currently, the site is enclosed by a 10-foot-high chain-link fence, and there are a variety of non-native trees and shrubs along the basin’s banks. The facility provides only significantly compromised habitat, lacks recreational amenities, and has little aesthetic appeal. The site’s recreational and aesthetic appeal will be improved by replacement of the existing sidewalk along Admiralty Way with a landscaped parkway and construction of a decomposed granite walking trail around the Basin. Additionally, there will be improved fencing, informational signage, and six observation areas with park benches overlooking Oxford Basin as part of this enhancement.

Integrated Elements of Project

Oxford Retention Basin is part of a comprehensive program to improve the public infrastructure of the Marina del Rey area. This comprehensive program consists of enhanced traffic flow and capacity, improved water and sewer systems, and the development of existing new recreational opportunities. As part of this program, Oxford Basin will improve flood protection, water quality, enhanced habitat and recreational opportunities.

Completed Work

Several studies and design tasks have been completed in preparation for the implementation of the Project, and are described under “Existing Data and Studies”. Completed work includes:

**Oxford Retention Basin Multi-
Use Enhancement Project****Work Plan**

- Project Concept Report completed on December 31, 2008
- Project Design Concept completed and approved on March 16, 2012
- Environmental Investigation Report, March 2012
- Oxford Retention Basin Sediment and Water Quality Characterization Study, August 2010
- Biological Report of Existing Conditions, November 29, 2012
- Flood protection aspect of the Project is analyzed as part of the Project Design Concept (Basin Hydraulic Analysis-page 5)
- 90% Design Plans, July 2012
- 100% Design Plans, February 2013

Work that has not yet been completed but is expected to be completed prior to the grant award date includes:

- Mitigated Negative Declaration (MND) is schedule to be completed by June 2013.
- Environmental Permits are scheduled to be completed by June 2013.
- The Project is scheduled to be advertised for Bid and Award by August 2013.

Existing Data and Studies

As described in the Completed Work section, several studies have been prepared in support of the Project's site location, feasibility and technical methods. These include:

- Project Concept Report (PCR) completed on December 31, 2008: The Project Concept Report was prepared and approved by the LACFCD in December 18, 2008. This report points out the need for the Project and led to further analysis and design.
- Project Design Concept (PDC): The Project Design Concept was prepared by the LACFCD in March of 2012 and includes a hydraulic analysis which concluded the need for flood protection improvement as part of the Project.
- Geotechnical/Environmental Investigation: This report has been prepared by a consultant, URS, in March of 2012 to assess the subsurface conditions of the site prior to construction activities.
- Review of Existing Biological Conditions at Oxford Basin: At the request of the LACFCD, in November 2012 a consultant, Hamilton Biological, conducted a biological survey to evaluate the consistency of the site condition with a previous report which was prepared in November of 2010. This report concluded that the condition observed is comparable with the previous report and that no biological update was necessary.

Oxford Retention Basin Multi-Use Enhancement Project**Work Plan**

- Oxford Retention Basin Sediment and Water Quality Characterization Study, August-2010: The intent of this study was to characterize sediments that have been deposited in the Oxford Basin from a water quality management standpoint; understand the extent of organic composition and bacterial and toxics contamination in the sediments and the water column; characterize water quality conditions in Oxford Basin in relation to the Bacteria and Toxics TMDL compliance requirements at Basin E; and to satisfy the necessary requirements to evaluate the disposal options for sediment removal.
- 90% Design Plans: The first set of design plans (30% complete) were completed on August 30, 2010. After 30% Design Plan completion, further soil testing was required, and the design did not have substantial progress during that period. Upon completion of soil testing, 60% Design Plans were completed on April 12, 2012. The design team continued working on plans and finalized the 90% Design Plans on July 19, 2012. Final Design Plans will have been completed by the application due date.

Each of these documents is included in the **Appendix CD**.

Project Map

Figures 3-11 and **3-12** show renderings of the completed Oxford Retention Basin Multi-Use Enhancement Project. The catch basin will be modified and a tideflex “Check-mate” flap-gate will be installed at the connection to the storm drain. Local drainage will be further improved by the removal and replacement of existing Tideflex G-37 valves in four catch basins on Oxford Avenue and Olive Street with more efficient Tideflex “Check-mate” flap gates. The 2-foot-high parapet wall will be constructed along the northwestern and southern boundaries of Oxford Basin and will provide enhanced flood protection along Washington Avenue. Non-native vegetation and contaminated soils will be removed and replaced with clean fill and attractive, drought-tolerant native plants to provide habitat and aesthetic enhancements around the perimeter of the basin. There will be a total of six observation areas, four located along Admiralty Way and two on Washington Boulevard. A gateway area will be constructed on Washington Boulevard near Oxford Avenue to welcome visitors to this site.

The Project location and boundaries are shown in **Figures 3-13** and **3-14**.

Project Timing and Phasing

This Project is not currently planned as part of a larger or multi-phase project.

Figure 3-11: Oxford Retention Basin Multi-Use Project – Birdseye View

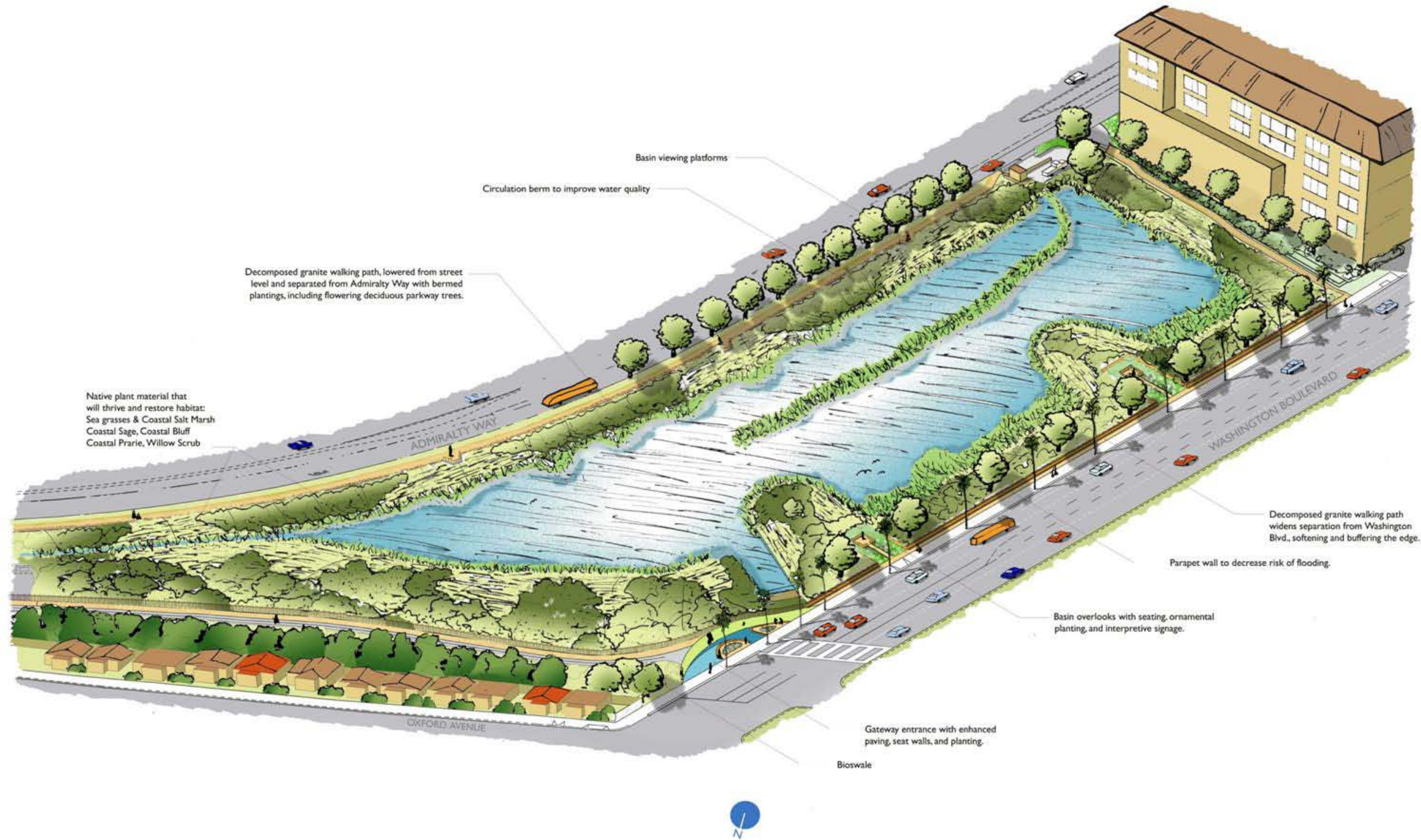
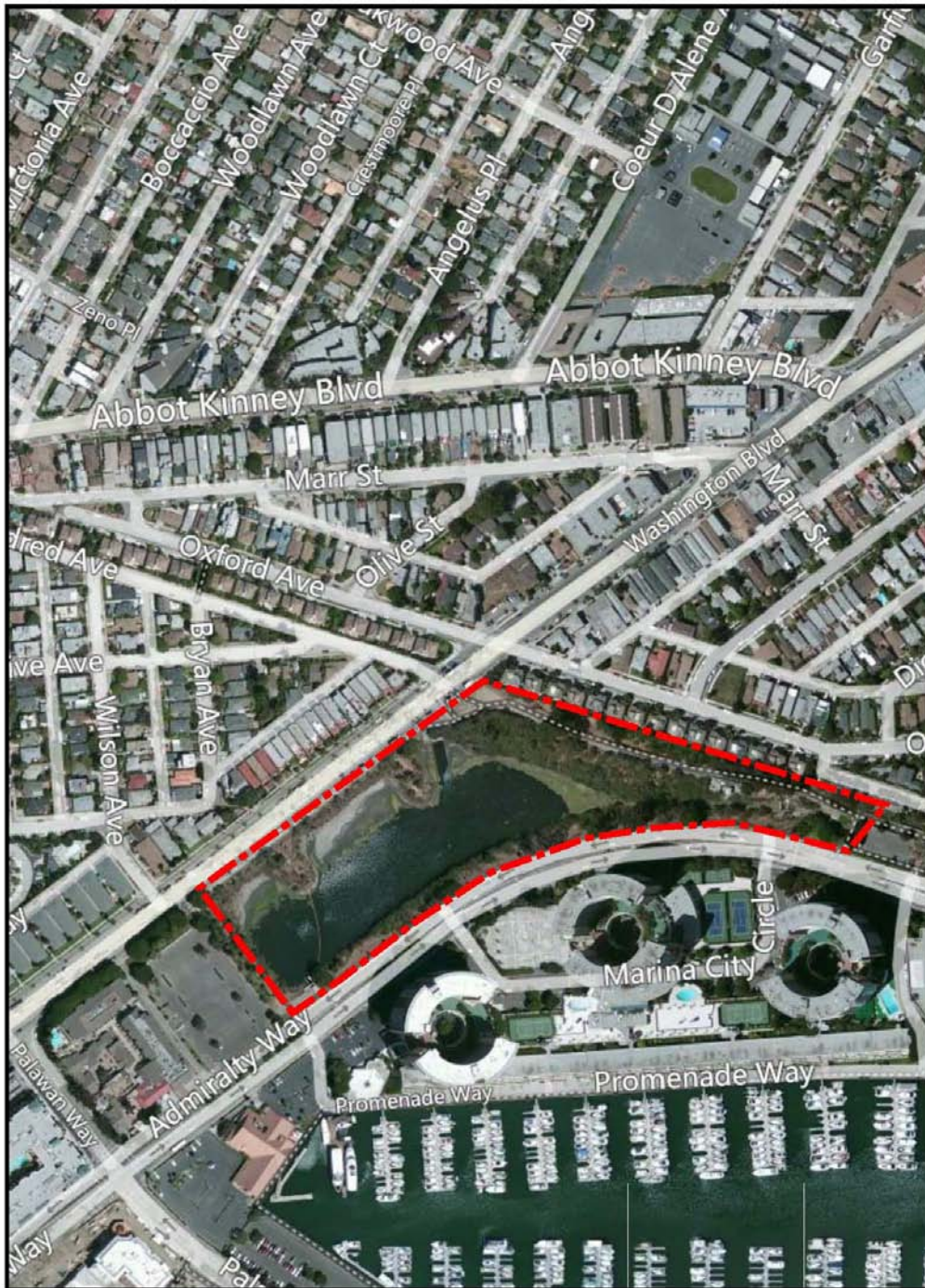


Figure 3-12: Oxford Retention Basin Multi-Use Project – Plan View



Oxford Retention Basin Multi-Use Enhancement Project

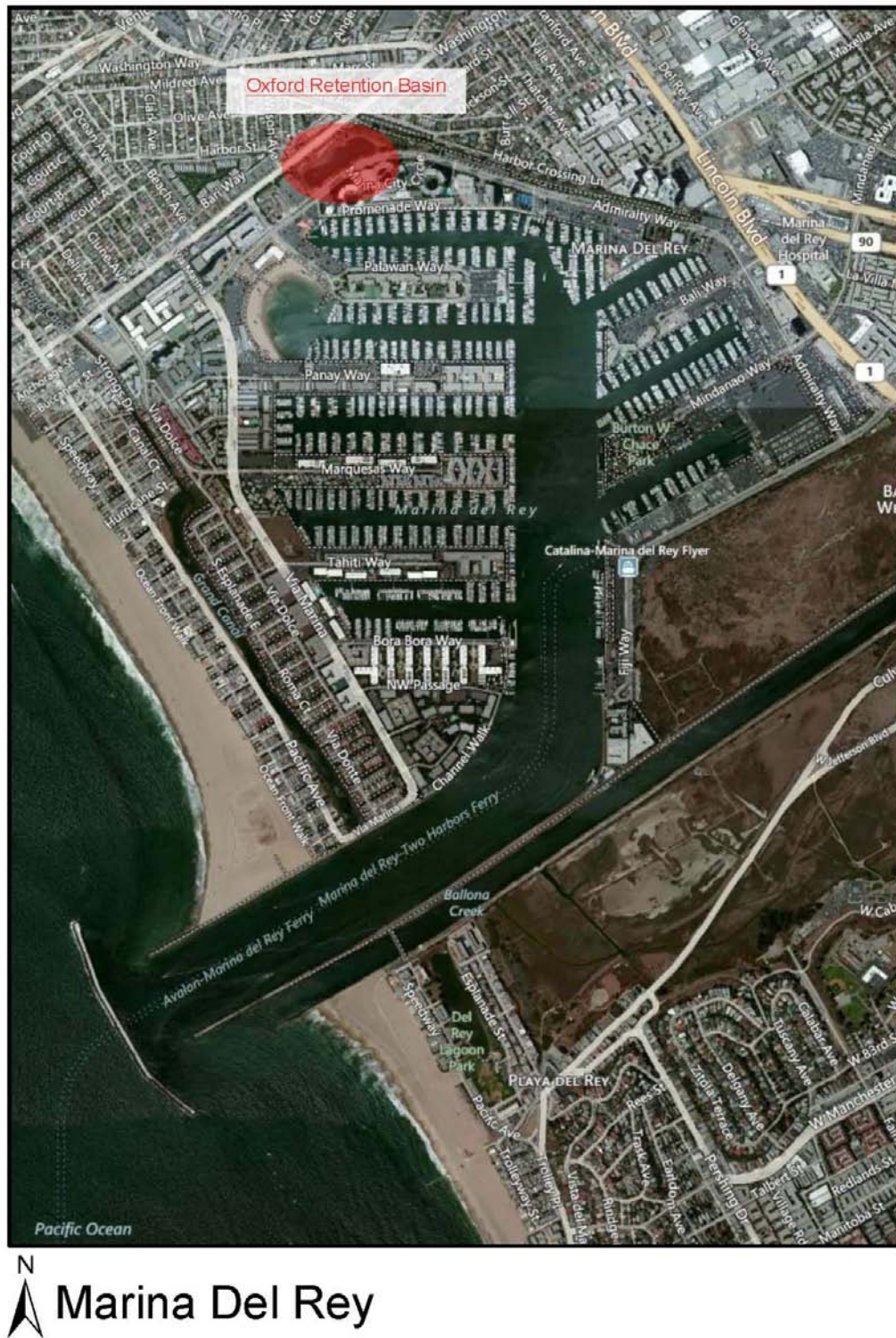
Figure 3-13: Oxford Retention Basin Map



Oxford Retention Basin (TG 671-J6)

Oxford Retention Basin Multi-Use Enhancement Project

Figure 3-14: Project Vicinity Map



**Oxford Retention Basin Multi-Use
Enhancement Project****Proposed Work**

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs**Task 1: Project Administration**

Watershed Management and Project Management Divisions of the County of Los Angeles Department of Public Works are in charge of project administration, and are responsible for the activities outlined below. Please note that project administration will include the preparation of invoices and back up documentation, as well as data management.

Oxford Retention Basin Multi-Use Enhancement Project

Work Plan

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Consultant Contract Recovery	October 2013 – April 2015	Not started yet		✓
Contract Administration Services	October 2013 – April 2015	Not started yet		✓
Document Control (Consultant)	October 2013 – April 2015	Not started yet		✓
LA County Affirmative Action Compliance	October 2013 – April 2015	Not started yet		✓
PM/CM As-needed Cont. (Labor)	October 2013 – April 2015	Not started yet		✓
Printing and Legal Advertising	October 2013 – April 2015	Not started yet		✓
Project Technical Support	October 2013 – April 2015	Not started yet		✓
Secretarial/Clerical	October 2013 – April 2015	Not started yet		✓
Senior Capital Project Administration	October 2013 – April 2015	Not started yet		✓
Watershed Management Division (WMD) Support Services	October 2013 – April 2015	Not started yet		✓

Task 2: Labor Compliance Program

The LACFCD will serve as the construction manager of the Project. The LACFCD has an approved Labor Compliance Program (LCP), developed by a consultant, Solis Group. All future construction contracts to be awarded for the Project will require compliance with the LCP. Solis Group will administer the LCP. If, during the course of project implementation, changes are required to the LCP or a new administrator is required, the LACFCD will engage Solis Group or another qualified firm to update and/or administer the LCP and will notify DWR.

Oxford Retention Basin Multi-Use Enhancement Project

Work Plan

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Labor Compliance Program Management (County of LA Dept of Public Works LCP ID: 2011.00802)	Ongoing	Ongoing		✓

Task 3: Reporting

The LACFCD will submit quarterly, final and post completion reports to the State per grant requirements.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Submittal of Quarterly Progress Reports	Quarterly after Oct. 1, 2013	Not started yet		✓
Final Report	Upon project completion	Not started yet		✓
Post Completion Reports	Within three months of project being active for one year	Not started yet		✓

(b) Land Purchase/Easement

The Oxford Retention Basin Improvements Project will not require purchase of land or acquisition of right-of-ways as the property is already owned by the County of Los Angeles.

(c) Planning/Design/Engineering/Environmental Documentation

Task 4: Assessment and Evaluation

Several assessment and evaluation activities have already been completed and include:

- Geotechnical/Environmental Investigation: This report has been prepared by a consultant, URS, in March of 2012 to assess the subsurface conditions of the site prior to construction activities.
- Review of Existing Biological Conditions at Oxford Basin: At the request of the Department of Public Works, in November 2012 a consultant, Hamilton Biological, conducted a biological

Oxford Retention Basin Multi-Use Enhancement Project

Work Plan

survey to evaluate the consistency of the site condition with a previous report which was prepared in November of 2010. This report concluded that the condition observed is comparable with the previous report and no biological update is necessary.

- Oxford Retention Basin Sediment and Water Quality Characterization Study: A sediment and water quality characterization study was completed in August 2010

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Geotechnical/Environmental Investigation	Completed March 2012	Completed	✓	
Existing Biological Conditions at Oxford Basin	Completed November 2010	Completed	✓	
Review of Existing Biological Conditions at Oxford Basin	November 2012	Completed	✓	

Task 5: Final Design

The Project Concept Report, Project Design Concept, and 90% Design Plans are complete. The remaining design plans and specifications are anticipated to be completed as indicated below.

Oxford Retention Basin Multi-Use Enhancement Project

Work Plan

Project Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Concept Report	December 2008	Completed	✓	
Project Design Concept	February 2012 - March 2012	Completed	✓	
Conceptual Plans	January 2009 - June 2010	Completed	✓	
30% Design Plans	July 2010 - August 2010	Completed	✓	
60% Design Plans	August 2010 - April 2012	Completed	✓	
90% Design Plans	April 2012 - July 2012	Completed	✓	
Final (100%) Design Plans	July 2012 - February 2013	Completed	✓	
Constructability Review	March 2013	Completed	✓	

Task 6: Environmental Documentation

Preparation of the Initial Study and mitigated negative declaration (MND) are underway, and will be completed in June 2013. A Native American Tribe Notification will not be included here as no Environmental Impact Report will be required.

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Initial Study and Mitigated Negative Declaration	May 2010 - September 2013	Underway	✓	

Task 7: Permitting

Permits will be required from the United States Army Corps of Engineers and the Los Angeles Regional Water Quality Control Board. Permit applications have not been submitted as of the date of this application package.

Oxford Retention Basin Multi-Use Enhancement Project

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Regional Water Quality Control Board (401)	July 2012 - April 2013	Underway	✓	
California Department of Fish and Wildlife permit	July 2012 - April 2013	Underway	✓	
U.S. Army Corps of Engineers (408)	July 2012 - April 2013	Underway	✓	
Local Coastal Program for Marina Del Rey	July 2012 - April 2013	Underway	✓	

(d) Construction/Implementation

Task 8: Construction Contracting

The construction contracting for the Project will be handled by LACFCD staff in compliance with public contracting code. Prior to bid solicitation, the LACFCD's governing body, the County of Los Angeles Board of Supervisors (Board), is required to approve the Project and certify the environmental document. Tasks to secure the Contract award include: project cost estimate services, preparation of bid packages, advertisement for bids, a pre-bid contractors meeting, bid opening, bid evaluation and selection of contractor with lowest responsive bid. The Board would then award the contract unless it has delegated that authority to the Director of Public Works, who is also the Chief Engineer of the LACFCD. A Notice to Proceed would then be issued.

Oxford Retention Basin Multi-Use Enhancement Project

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Cost Estimate Services	May 2013 – June 2013	Not started yet	✓	
Preparation of Bid Packages	July 2013	Not started yet	✓	
Advertisement and Pre-Bid Meeting	August 2013 – October 2013	Not started yet		✓
Bid Opening	December 2013	Not started yet		✓
Award	December 2013 – January 2014	Not started yet		✓
Notice to Proceed	January 2014 – March 2014	Not started yet		✓

Task 9: Construction

The Project includes construction tasks as described below.

Subtask Descriptions:

Subtask 9.1 Mobilization and Site Preparation:

- This subtask includes mobilization of equipment and installation of temporary construction trailers. It also includes discharging the water from the basin, removal of accumulated sediment within the basin, grading, demolition of paving and fencing. This will also involve removal of existing vegetation and approximately 6,200 CY of contaminated soils along the perimeter of Oxford Basin (3,200 CY and 3,000 CY to be disposed at Class I and Class III landfills, respectively) and replacement with clean imported fill to improve habitat.

Subtask 9.2 Project Construction:

Project construction will include the following components:

- Construction of Retaining walls: This wall will be constructed along Washington Boulevard and the southern boundary of Oxford Basin and will provide additional flood capacity and will act as a retaining wall at these locations.
- Electrical: To provide adequate wildlife-friendly lighting for the 8-foot-wide walking trail around the perimeter of Oxford Basin.

**Oxford Retention Basin Multi-Use
Enhancement Project****Work Plan**

- Boat Ramp: This permanent boat ramp is located at the outlet of Project No. 3872, and is necessary to allow access to Oxford Basin for routine maintenance, trash removal, and water quality monitoring.
- Trash Excluder, Pollutant Trap: Installation of trash BMPs at the outlets of Storm Drain Project Nos. 5243 and 3872 to remove gross solids in urban and storm water runoff.
- Water Quality Berm: Construction of a berm between the two existing tide gates and reprogramming the gates' operation to increase circulation and dissolved oxygen levels of the water which will improve the water quality.
- Access Ramp and Walkway: Construction of a maintenance vehicle access ramp from Admiralty Way adjacent to the tide gate control house for maintenance and operation purpose.
- Paving/DG Trails: Construction of an 8-foot-wide decomposed granite walking trail around the perimeter of the basin.
- Replace Tide Gates: The existing tide gates do not allow for water to be exchanged between Oxford Basin and Basin E of Marina del Rey. These tide gates will be removed and replaced with programmable tide gates to allow water exchange and to improve the water quality of the basin.
- Irrigation and Native Plants: Installation of an irrigation system to establish the new native plants.
- Deck Lookouts: Construction of observation areas and a gateway area overlooking Oxford Basin.
- Deck Overlooks: Construction of observation areas overlooking Oxford Basin
- Fences & Gates: Installation of approximately 3,550 linear feet of 4-foot-high ornamental steel fence around the perimeter of the basin to improve the aesthetics.
- Grading: Grading work is required for construction inside and outside of the basin. There will be accumulated sediment and contaminated soils removal in order to construct the other elements of the Project.
- Signage: Installation of interpretive signage at the observation decks and along the walking trail to educate users about the Project and its benefits.
- Bioswales: There will be six bioswales planted near the Gateway and observation areas to collect and treat the runoff around the basin.

Oxford Retention Basin Multi-Use Enhancement Project

- Miscellaneous site furnishings: Install signs, benches, and other furnishings at the observation areas. Also, other unexpected items that may arise during construction.

Subtask 9.3 Performance Testing and Demobilization:

The control system and monitoring equipment will be performance tested prior to contractor demobilization. Contractor demobilization will only occur after final inspection and completion of all punch list items identified during final walk through.

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Mobilization and Site Preparation	April 2014	Not started yet		✓
Subtask 9.2 Project Construction				
De-Water	April 2014	Not started yet		✓
Excavation/Export/Fill	May 2014	Not started yet		✓
Retaining Walls	July 2014	Not started yet		✓
Electrical	July 2014	Not started yet		✓
Boat Ramp	July 2014	Not started yet		✓
Trash Excluder, Pollutant Trap	July 2014	Not started yet		✓
Water Quality Berm	July 2014	Not started yet		✓
Access Ramp	August 2014	Not started yet		✓
Paving/DG Trails	September 2014	Not started yet		✓
Replace Tide Gates	September 2014	Not started yet		✓
Irrigation, Native Plants	November 2014	Not started yet		✓
Landscape	November 2014	Not started yet		✓
Deck Lookouts	July 2014	Not started yet		✓
Deck Overlooks	July 2014	Not started yet		✓
Fence & Gate	April 2014	Not started yet		✓
Grading	May 2014	Not started yet		✓
Signage	November 2014	Not started yet		✓
Bioswales	November 2014	Not started yet		✓
Misc. Site Furnishings	August 2014	Not started yet		✓
Subtask 9.3 Performance Testing and Demobilization				
Performance testing	March 2015	Not started yet		✓
Demobilization	March 2015	Not started yet		✓

Oxford Retention Basin Multi-Use Enhancement Project

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation/Enhancement

The Project will comply with environmental permits, and will follow all recommendations in the Mitigated Negative Declaration. Additionally, the Project scope includes substantial environmental enhancements, including water quality enhancements, habitat restoration, and native landscaping.

Environmental Compliance / Mitigation / Enhancement Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Enhanced Flood Protection	April 2014 – November 2014	Not started yet		
Enhanced Water Quality	April 2014 – November 2014	Not started yet		✓
Enhanced Habitat	April 2014 – November 2014	Not started yet		✓
Improved Recreation & Aesthetics	April 2014 – November 2014	Not started yet		✓

(f) Construction Administration

Task 11: Construction Administration

The LACFCD has a dedicated Construction Division that administers numerous civil construction projects every year in conformance with the Public Contracting Code. Construction Division Staff will manage the Project construction contract process and implementation. Construction administration activities will include general preparation of construction documents, advertisement for bids, award of construction contracts, construction contract administration, and construction inspection.

Oxford Retention Basin Multi-Use Enhancement Project

Work Plan

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Construction Contractor	April 2014-February 2015	Not started yet		✓
Project Scheduling Services	April 2014-February 2015	Not started yet		✓
Material Engineering Plan Check	April 2013 – May 2013	Not started yet	✓	
Construction Inspection Services	April 2014-February 2015	Not started yet		✓

(g) Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include Development of Performance Measures and Monitoring Plan, and Development of Financing.

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Development of Performance Measures and Monitoring Plan	April 2013 – November 2014	Not started yet		✓
Development of Financing	Ongoing	Ongoing		✓

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods listed below:

- Standard Plan for Public Works Construction 2009; 120-1, 303-3, 314-3, 335-2, 381-2, 600-3, 606-3, 610-3, 616-3, and 617-3.
- Los Angeles County Flood Control District Structural Design Manual (April 1982)
- Los Angeles County Department of Public Works Standard Plan; 3090-1, 3091-1, 3093-1, 6002-1, and 6008-1.
- Occupational Safety and Health Administration (OSHA)

Pacoima Spreading Grounds Improvements Project

Description

The Pacoima Spreading Grounds is a 169-acre groundwater replenishment facility comprised of twelve shallow basins that recharge the San Fernando Valley Groundwater Basin using local surface water flows and imported water. The facility is owned and operated by the Los Angeles County Flood Control District (LACFCD). The San Fernando Valley Groundwater Basin is an adjudicated basin managed by the Upper Los Angeles River Area Watermaster and is primarily pumped by the City of Los Angeles. The Pacoima Spreading Grounds currently have a maximum intake of 600 cubic feet per second (cfs) with a total water storage capacity of approximately 530 acre-feet and a percolation rate of approximately 65 cfs.

The Pacoima Spreading Grounds Improvements Project (Project) includes the following elements which will improve operational efficiency and increase recharge capacity, as shown in Figure 3-15:

- Replacement of the existing Pacoima Diversion Channel radial gate with an inflatable rubber dam. The rubber dam will perform the same control function as the radial gate but will add the ability to overtop high flows in excess of the intake capacity of the grounds, deflate automatically to mitigate flood risk, and provide overall safer operation of the spreading grounds.
- Installation of telemetry
- Installation of updated flow measurement instrumentation at the spreading grounds intake
- Replacement of the intake canal with underground pipes and filling of the canal, creating new open space which will allow this land to be converted to a park or recreational area in the future
- Removal of sediment and clay lenses to enhance percolation
- Increasing storage volume in the spreading grounds, from 530 acre-feet to 1,197 acre-feet, by combining and deepening the basins
- Enhancement of landscaping around the perimeter of the facility

The LACFCD is this project's primary implementing agency and is partnering with the City of Los Angeles Department of Water and Power (LADWP).

Pacoima Spreading Grounds Improvements Project

Work Plan

Goals and Objectives

The primary goal of the Project is to improve the groundwater recharge capability of the Pacoima Spreading Grounds by increasing the facility's storage capacity and percolation rate. In addition, these improvements will eliminate potential flooding risks at the radial gate and intake canal and will create new open space for future use as a park/recreation area.

The Project addresses the following Greater Los Angeles County Region (Region) Integrated Regional Water Management Plan (IRWM Plan) goals:

- Optimize local water resources to reduce the Region's reliance on imported water
- Increase watershed friendly recreational space for all communities
- Maintain and enhance public infrastructure related to flood protection, water resources and water quality

Purpose and Need

The purpose of the Project is to improve operations and increase groundwater recharge at Pacoima Spreading Grounds in order to replenish the San Fernando Groundwater Basin and increase local groundwater supply.

Local groundwater supply is a key resource that has historically supplied approximately 12% of the City of Los Angeles' total water demand. Since over 85% of demand is met with imported supplies, the Region's increased use of groundwater, made possible by ongoing replenishment of groundwater basins, is vital to sustain the long-term reliability of the local water supply and to reduce dependence on imported water.

Integrated Elements of Project

Additional flood control and water conservation projects planned in the same watershed include the Pacoima reservoir sediment removal project upstream of the Pacoima Spreading Grounds and the Tujunga Spreading Grounds improvement project downstream of this Project. The Project is not directly linked with these other projects, but the Pacoima Spreading Grounds are one part of a regional system maintained by the LACFCD that includes five spreading ground facilities and two dams operated to provide flood control and replenish the San Fernando Basin.

Completed Work

Several studies and design tasks have been completed in preparation for the implementation of this Project. Completed work includes a Pacoima Spreading Grounds Subsurface Investigation Report, a Pacoima Spreading Grounds Geologic Investigation Report, the Pacoima Spreading

Pacoima Spreading Grounds Improvements Project**Work Plan**

Grounds Project Concept Report, 30% Design, 60% Design, 90% Design and Final Design. A description of this work is provided below under “Existing Data and Studies.”

Work that has not yet been completed but is expected to be completed prior to the grant award date includes:

- Preparation of CEQA documents (a mitigated negative declaration or an environmental impact report)
- Acquisition of regulatory permits/approvals

Existing Data and Studies

As described in the Completed Work section, several reports and design tasks have been prepared in support of this Project’s site location, feasibility, and technical methods. These include:

- Pacoima Spreading Grounds Subsurface Investigation Report: A subsurface investigation report for the Pacoima Spreading Grounds site was completed in September 2007 to determine the depths of underlying clay lenses.
- Pacoima Spreading Grounds Geologic Investigation Report: A geologic investigation report was completed in January 2009 to determine the cause of decreasing percolation rates and provide recommended basin excavation depths.
- Pacoima Spreading Grounds Project Concept Report: The Concept Report (April 2011) describes the current issues with the spreading ground facilities and recommends improvements. It includes conceptual design. Various alternatives are explored to improve the spreading ground layout, the intake, the percolation rate and storage. The Concept Report also describes estimated costs for each alternative as well as estimates for increased storage, percolation rate, and average groundwater recharge. Concept Plans show the current configuration of the spreading ground facilities and the different alternatives, with potential improvement types and locations.
- 30% Design plans completed in January 2012 showing a more precise configuration of the basins based on the preferred alternative identified in the Project Concept Report and preliminary structural details
- 60% Design plans completed in August 2012 showing more refined structural details.
- 90% Design plans completed in January 2013 showing the final, unstamped submittal.
- Final (100%) Design: Final design package completed in February 2013 will be advertised for construction in November 2013.

Each of these documents is included in the **Appendix CD**.

Pacoima Spreading Grounds Improvements Project

[Project Map](#)

The Project location and boundaries are shown in **Figure 3-15**.

[Project Timing and Phasing](#)

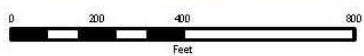
This Project is not part of a multi-phased project.

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Figure 3-15: Pacoima Spreading Grounds Location Map



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Pacoima Spreading Grounds Improvements

Proposed Work

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the six primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs

Task 1: Project Administration

Work to be completed under this task will be performed by a LACFCD Project Manager (PM) with assistance from an Assistant Project Manager. The administration tasks will consist of managing the planning, environmental compliance, and design efforts; data management; coordinating with LACFCD's budgeting personnel; coordinating with the State on grant management, including invoicing and status reports; and resolving any issues that arise. The PM will also be responsible for coordinating with any non-state funding partner agencies through scheduled meetings, phone and electronic mail communications, and establishing memorandums of understanding (MOUs). Preparation of an MOU for cost sharing between the LACFCD and the LADWP is in progress.

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of invoices and backup documentation	Quarterly after contract execution	Not yet begun		✓
Coordination with non-state funding partner agencies	Prior to contract execution	MOU with LADWP in progress	✓	

Task 2: Labor Compliance Program

The LACFCD will serve as the construction manager of the Project. The LACFCD has an approved Labor Compliance Program (LCP), developed by our consultant, Solis Group. All future construction contracts to be awarded for the Project will require compliance with the LCP. Solis Group will administer the LCP. If, during the course of project implementation, changes are

Pacoima Spreading Grounds Improvements

Work Plan

required to the LCP or a new administrator is required, the LACFCD will engage Solis Group or another qualified firm to update and/or administer the LCP and will notify DWR.

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Labor Compliance Program Management (County of LA Dept of Public Works LCP ID: 2011.00802)	Ongoing	Ongoing	✓	✓

Task 3: Reporting

The LACFCD will submit quarterly, final and post completion reports to DWR per grant requirements.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Quarterly Reports	Quarterly after Oct. 1, 2013	Not yet begun		✓
Final Report	At completion of project	Not yet begun		✓
Post Completion Report	Following one year of project implementation	Not yet begun		✓

(b) Land Purchase/Easement

The Project will not require purchase of land or acquisition of right-of-way as the property is already owned by the LACFCD.

(c) Planning/Design/Engineering/Environmental Documentation**Task 4: Assessment and Evaluation**

Assessment and evaluation activities have already been completed, and include:

- A subsurface investigation report was completed in September 2007 to determine the depths of underlying clay lenses.

Pacoima Spreading Grounds Improvements

Work Plan

- A geologic investigation report was completed in January 2009 to determine the cause of decreasing percolation rates and provide recommended basin excavation depths.

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Pacoima Spreading Grounds Subsurface Investigation Report	Completed September 2007	Completed	✓	
Pacoima Spreading Grounds Geologic investigation report	Completed January 2009	Completed	✓	

Task 5: Final Design

A project concept report and conceptual design plans were completed in February 2011. The 30%, 60%, 90% and final design plans have been completed as of February 2013.

Final Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project concept report	Completed April 2011	Complete	✓	
30% Design Plans	Completed January 2012	Complete	✓	
60% Design Plans	Completed August 2012	Complete	✓	
90% Design Plans	Completed January 2013	Complete	✓	
Final (100%) Design Plans	Completed February 2013	Complete	✓	

Task 6: Environmental Documentation

A CEQA document will be required for this Project. Preparation of the Initial Study began in February 2013 and will be followed by preparation of either a Mitigated Negative Declaration (MND) or an Environmental Impact Report (EIR). Should an EIR be necessary, a Native American tribe notification will be sent out prior to adoption of the EIR.

Pacoima Spreading Grounds Improvements

Work Plan

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Initial Study	February 2013 – July 2013	Not yet begun	✓	
MND or EIR	July 2013 – December 2013	Not yet begun		✓
Native American Tribe Notification	Prior to EIR adoption	Not yet begun		✓

Task 7: Permitting

Permits will be required from the California Department of Fish and Wildlife, United States Army Corps of Engineers, and California Regional Water Quality Control Board. Permit applications have not been submitted as of the date of this application package.

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Regional Water Quality Control Board (401)	May 2013 - December 2013	Not yet begun		✓
Army Corps of Engineers (404)	May 2013 - December 2013	Not yet begun		✓
Department of Fish and Wildlife (1602)	May 2013 - December 2013	Not yet begun		✓
Army Corps of Engineers (408)	May 2013 - December 2013	Not yet begun		✓

(d) Construction/Implementation**Task 8: Construction Contracting**

The construction contracting for the Project will be handled by LACFCD staff in compliance with public contracting code. Prior to bid solicitation, the LACFCD's governing body, the County of Los Angeles Board of Supervisors (Board), is required to approve the Project and certify the environmental document. Tasks to secure the Contract award include: advertisement for bids, a pre-bid contractors meeting, bid opening, bid evaluation and selection of contractor with lowest responsive bid. The Board would then award the contract unless it has delegated that authority to the Director of Public Works. A Notice to Proceed would then be issued.

Pacoima Spreading Grounds Improvements

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of Bid Packages, Advertisement, Bid Opening, Award, Notice to Proceed	September 2013 – February 2014	Not yet begun		✓

Task 9: Construction

Construction of the Project includes replacing the existing radial gate in the Pacoima Diversion Channel with a rubber dam; installing a control system for the rubber dam in an existing building adjacent to the spreading grounds intake; installing four reinforced concrete pipes in place of the intake canal; filling and re-grading the intake canal as a flat, open area; and combining and deepening the spreading basins. Excavated material will be processed and either hauled away to a disposal site or, if suitable, returned to the spreading basin. New inter-basin structures, pipes, and control gates, and new flow measuring instrumentation will be installed.

Subtask Descriptions:*Subtask 9.1 Mobilization and Site Preparation:*

This subtask includes mobilization of equipment and installation of temporary construction trailers.

Subtask 9.2 Project Construction:

Project construction will include the following components: installation of the rubber dam and controls, installation of new flow measuring instrumentation, installation of the intake pipes, excavation of the basins, materials processing, truck hauling of sediment to a disposal site, and construction of new inter-basin structures.

Subtask 9.3 Performance Testing and Demobilization:

The instrumentation, control gates, rubber dam, and associated rubber dam control system will be performance tested prior to contractor demobilization. Contractor demobilization will only occur after final inspection and completion of all punch list items identified during final walk through.

Pacoima Spreading Grounds Improvements

Work Plan

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Mobilization and Site Preparation	April 2014	Not yet begun		✓
Subtask 9.2 Project Construction				
Construction	May 2014-September 2015	Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Performance testing	October 2015	Not yet begun		✓
Demobilization	October 2015	Not yet begun		✓

(e) Environmental Compliance/Mitigation/Enhancement**Task 10: Environmental Compliance/Mitigation/Enhancement**

The final construction specifications will include environmental compliance measures as required by the environmental documents and permits. During construction, the LACFCD's Construction Division will designate an environmental compliance inspector to ensure the contractor adheres to the required compliance measures. Any required environmental mitigation or enhancement identified in the document or permits, but not a part of Project construction, will be implemented by the LACFCD through in-house forces or by a qualified specialist or contractor through a separate contract.

Environmental Compliance / Mitigation / Enhancement Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Environmental Compliance/Mitigation/Enhancement	April 2014 – October 2015	Not yet begun		✓

(f) Construction Administration**Task 11: Construction Administration**

The LACFCD has a dedicated Construction Division that administers numerous civil construction projects every year in conformance with the Public Contracting Code. Construction Division Staff will manage the Project construction contract process and implementation. Construction

Pacoima Spreading Grounds Improvements

Work Plan

administration activities will include general preparation of construction documents, advertisement for bids, award of construction contracts, construction contract administration, and construction inspection.

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Construction Contractor	April 2014 – October 2015	Not yet begun		✓

(g) Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include development of Performance Measures and Monitoring Plan. Note that development of financing is included under Task 1: Project Administration.

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Development of Performance Measures and Monitoring Plan	Prior to completion of construction	Not yet begun		✓

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods:

- Standard specification of Public Works Construction 2009
- Standard Plans of the Los Angeles County Department of Public Works 2000
- Occupational safety and health administration
- American Society for Testing and Materials
- 2011 County of Los Angeles Building Code (Title 26) Based on the 2010 California Building Code and the 2009 International Building Code
- Los Angeles County Department of Public Works "Construction Site Best Management Practices (BMPs) Manual"

Peck Water Conservation Improvement

Description

The Peck Road Spreading Basin, also known as Peck Road Park Lake (Lake), is a 157-acre groundwater replenishment facility. It is comprised of two deep pits that recharge the Main San Gabriel Groundwater Basin using local surface water flows from Sawpit Wash and Santa Anita Wash, both of which are tributaries to the Rio Hondo. This facility is owned and operated by the Los Angeles County Flood Control District (LACFCD). The Main San Gabriel Groundwater Basin is an adjudicated basin managed by the Main San Gabriel Watermaster and is dependent upon replenishment to maintain basin levels.

The Peck Road Spreading Basin currently has a maximum intake of 30,100 cubic feet per second (cfs) with a total water storage capacity of approximately 3,350 acre-feet and a current percolation rate of approximately 25 cfs. The intake from the Santa Anita Wash is located near the center of the Lake. Accumulated sediment from the Santa Anita Wash currently restricts flow between the two pits which make up the Lake.

The public can access the Lake for recreation through the Peck Road Water Conservation Park (Park) which provides the public with green areas, fishing, walking trails, and bicycle trails. The park is located on a peninsula near the center of the Lake. A portion of this peninsula is inundated during periods of high water elevation within the Lake, but is exposed during low water elevation.

The State Water Resources Control Board has classified Peck Road Park Lake as a 303(d) listed water body impaired for pesticides, metals, trash, and nutrients.

The Peck Water Conservation Improvement Project (Project) will implement improvements to this facility that will allow for increased recharge capacity to the Main San Gabriel Groundwater Basin. These improvements include the following:

- Construction of a pump station at the east end of the Peck Road Spreading Basin and construction of a 7,000 foot pipeline to convey flows from the pump station to the San Gabriel River. This will provide LACFCD with the flexibility to transfer water to the San Gabriel River, which is a soft bottom channel, and increase the overall replenishment of groundwater through the use of the rubber dam system which allows recharge within the San Gabriel River.
- Removal of sediment from the middle of the Lake to allow water to flow freely between the two pits. This will increase the percolation rate at the facility and is expected to

Peck Water Conservation Improvement

improve water quality by subjecting an increased amount of percolated stormwater to soil aquifer treatment (SAT) thereby reducing the amount of potentially impaired runoff which could continue down the Rio Hondo.

These improvements will increase groundwater recharge, which will drain the Lake more quickly and allow for possible expansion of seasonal recreational activities using the portion of the peninsula that will no longer be under water. The LACFCD is this Project's primary implementing agency and is partnering with the Upper San Gabriel Valley Municipal Water District (USGVMWD).

Goals and Objectives

The primary goal of the Project is to improve the groundwater recharge ability of the Peck Road Spreading Basin by increasing the facility's percolation rate through the removal of accumulated sediment. In addition, potential flood risks will be reduced downstream of the spreading basin and overall recharge will be increased in the groundwater basin by providing the flexibility to pump water to the San Gabriel River. Once in the San Gabriel River, the water will be recharged through the use of the rubber dam system in place to increase recharge through the soft channel bottom.

In addition, water quality will be improved through soil aquifer treatment which will remove contaminants such as metals that would otherwise flow untreated to the ocean. Lastly, the Project will create new open space for future use as a park/recreation area as the higher percolation rate and pumping ability will allow the Lake to drain more quickly, and therefore will make more open space available on a seasonal basis.

The Project will help to address the following Greater Los Angeles County IRWM Plan (IRWM Plan):

- Optimize local water resources to reduce the Region's reliance on imported water
- Protect and improve groundwater and drinking water quality
- Increase watershed friendly passive recreation space for all communities
- Maintain and enhance public infrastructure related to flood protection, water resources and water quality

Purpose and Need

The purpose of the Project is to improve operations and increase groundwater recharge at the Peck Road Spreading Basin in order to replenish the Main San Gabriel Groundwater Basin and

Peck Water Conservation Improvement

increase local groundwater supply. This will allow the San Gabriel Valley water users to pump additional groundwater and thus reduce their dependence on imported water.

Local groundwater supply is a key resource that has historically been utilized to support approximately 58% of the San Gabriel Valley's water demand⁴, though the area is still highly dependent on imported water to meet both retail demand and replenishment needs. Replenishment of the Main San Gabriel Groundwater Basin is vital to sustain the long-term reliability of the local groundwater supply and reduce the Region's dependence on imported water.

Integrated Elements of Project

This Project is not directly linked with other projects, however, the Peck Road Spreading Basin is one part of a regional system maintained by the LACFCD that includes 17 spreading ground facilities operated to provide flood control and replenish the Main San Gabriel Basin. One of these facilities is also included in this application package, the Walnut Spreading Basin Improvements Project. This Walnut Spreading Basins Improvement Project will address many of the same IRWM objectives as the Project, though not all: optimize local water resources to reduce the Region's reliance on imported water, increase watershed friendly passive recreation space for all communities, and maintain and enhance public infrastructure related to flood protection, water resources and water quality.

Completed Work

Several studies and design tasks have been completed in preparation for the implementation of this Project. Completed work includes the *Peck Road Spreading Basin Pump Station and Pipeline Project Concept Report and Conceptual Plans*. A description of this work is provided below under "Existing Data and Studies."

Work that has not yet been completed but is expected to be completed prior to the grant award date includes:

- *Geotechnical Investigation Report*
- Preparation of the *Initial Study* portion of the CEQA process
- *30% Design Plans*
- *60% Design Plans*

⁴ RMC, 2013. *Water Supply Objective and Targets*. Table 1: Current (2010) Direct Use Supplies. Prepared for the Greater Los Angeles County IRWM Region.

Peck Water Conservation Improvement

- *90% Design Plans*

Existing Data and Studies

As described in the Completed Work section, a study has been prepared in support of this Project's site location, feasibility and technical methods and it is included in the **Appendix CD**:

- *Peck Road Spreading Basin Pump Station and Pipeline Project Concept Report and Conceptual Plans*: The Concept Report describes the current issues with the spreading ground facilities and recommendations for improvements. The proposed improvements to the facility are described, benefits and costs are described, and environmental documentation needs are discussed. Concept Plans show the current configuration of the spreading ground facilities and the planned project facilities.

Project Map

The Project location and boundaries are shown in **Figure 3-16**.

Project Timing and Phasing

This Project is part of a multi-phased project being completed through partnerships with Los Angeles County Parks and Recreation, Amigos De Los Rios, the City of Arcadia, and the USGVMWD to both improve the spreading basin and make park improvements. The spreading basin is Phase 1 of the Project, while the park improvements will be part of Phase 2. Park improvements may include upgraded irrigation, habitat enhancements, a smart garden, and low flow fixtures in the restrooms.

Since the main objective of the Project is to increase water supply, the supply benefits are stand-alone for this phase. The recreation and open space improvements planned for Phase 2 would turn the Project into a multi-use benefit project and increase the recreational benefits to the community.

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Figure 3-16: Peck Water Conservation Improvement Project Location Map



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Peck Water Conservation Improvement**Proposed Work**

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the six primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs**Task 1: Project Administration**

Work to be completed under this task will be performed by a LACFCD Project Manager (PM) with assistance from an Assistant Project Manager. The administration tasks will consist of managing the planning, environmental compliance, and design efforts; coordinating with LACFCD's budgeting personnel; coordinating with the State on grant management, including invoicing and status reports; data management; and resolving any issues that arise. The PM will also be responsible for coordinating with any non-state funding partner agencies through scheduled meetings, phone and electronic mail communications, and memorandums of understanding (MOUs). A MOU for cost sharing between the LACFCD and the USGVMWD is in progress.

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of invoices and backup documentation	Quarterly after contract execution	Not yet begun		✓
Coordination with non-state funding partner agencies	Prior to contract execution	MOU with USGVMWD in progress	✓	

Task 2: Labor Compliance Program

The LACFCD will serve as the construction manager of the Project. The LACFCD has an approved Labor Compliance Program (LCP), developed by our consultant, Solis Group. All future construction contracts to be awarded for the Project will require compliance with the LCP. Solis Group will administer the LCP. If, during the course of project implementation, changes are

Peck Water Conservation Improvement

Work Plan

required to the LCP or a new administrator is required, the LACFCD will engage Solis Group or another qualified firm to update and/or administer the LCP and will notify DWR.

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Labor Compliance Program management (County of LA Dept of Public Works LCP ID: 2011.00802)	December 2014 – December 2015	Not yet begun		✓

Task 3: Reporting

The LACFCD will submit quarterly, final and post completion reports to the State per grant requirements.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Quarterly Progress Reports	Quarterly after Oct. 1, 2013	Not yet begun		✓
Final Report	At completion of project	Not yet begun		✓
Post Completion Reports	Beginning 3 months after the project has been implemented one year	Not yet begun		✓

(b) Land Purchase/Easement

The Project will require easement acquisitions as the proposed pipeline runs through one parcel of private property as well as along public streets in the City of Arcadia. The easement acquisition process will be initiated when the project design reaches the 60% design level and the pipeline alignment is finalized.

Peck Water Conservation Improvement

Work Plan

(c) Planning/Design/Engineering/Environmental Documentation**Task 4: Assessment and Evaluation**

Assessment and evaluation activities will include preparation of a geotechnical investigation report which will be completed prior to the grant award date.

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Geotechnical Investigation Report	Complete June 2013	Underway	✓	

Task 5: Final Design

A project concept report and conceptual design plans were completed in October 2012. Conceptual Plans been completed. The final design plans and specifications are anticipated to be complete in December 2013.

Final Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Concept Report and Conceptual Plans	Completed October 2012	Complete	✓	
30% Design Plans	Complete April 2013	Underway	✓	
60% Design Plans	Complete July 2013	Not yet begun	✓	
90% Design Plans	Complete October 2013	Not yet begun	✓	
Final (100%) Design Plans	Complete January 2014	Not yet begun		✓

Task 6: Environmental Documentation

A CEQA document will be required for this Project. Preparation of the Initial Study will begin in April 2013, followed by preparation of a negative declaration (ND), mitigated negative declaration (MND) or an environmental impact report (EIR).

Peck Water Conservation Improvement

Work Plan

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Initial Study	April 2013 – July 2013	Not yet begun	✓	
ND or MND or EIR	July 2013 – May 2014	Not yet begun		✓
Native American Tribe Notification	Prior to adoption of ND, MND or EIR	Not yet begun		✓

Task 7: Permitting

Permits will be required from the Department of Fish and Game, the U.S. Army Corps of Engineers, the Regional Water Quality Control Board, and the City of Arcadia. Permit applications have not been submitted as of the date of this application package.

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Regional Water Quality Control Board (401)	Submit June 2013	Not yet begun	✓	
Army Corps of Engineers (404)	Submit June 2013	Not yet begun	✓	
Department of Fish and Wildlife (1602)	Submit June 2013	Not yet begun	✓	
Army Corps of Engineers (408)	Submit June 2013	Not yet begun	✓	
City of Arcadia Offsite Permit	Submit June 2013	Not yet begun	✓	

(d) Construction/Implementation**Task 8: Construction Contracting**

The construction contracting for the Project will be handled by LACFCD staff in compliance with public contracting code. Prior to bid solicitation, the LACFCD's governing body, the County of Los Angeles Board of Supervisors (Board), is required to approve the Project and certify the environmental document. Tasks to secure the Contract award include: advertisement for bids, a pre-bid contractors meeting, bid opening, bid evaluation and selection of contractor with

Peck Water Conservation Improvement

lowest responsive bid. The Board would then award the contract unless it has delegated that authority to the Director of Public Works. A Notice to Proceed would then be issued.

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of Bid Packages	February 2014	Not yet begun		✓
Advertisement	March 2014 - April 2014	Not yet begun		✓
Bid Opening	May 2014 - June 2014	Not yet begun		✓
Award	July 2014 - October 2014	Not yet begun		✓
Notice to Proceed	November 2014	Not yet begun		✓

Task 9: Construction

The Project includes installing pumps and a pipeline to send water from Peck Road Spreading Basin to the San Gabriel River. A control system for the pumps will be installed at the crest of the spreading basin. An outlet structure at the river will be constructed. Material will be excavated from the vicinity of the Santa Anita Wash outlet, processed and hauled away to a disposal site. New flow measuring instrumentation will also be installed.

Subtask Descriptions:*Subtask 9.1 Mobilization and Site Preparation:*

This subtask includes mobilization of equipment and installation of temporary construction trailers.

Subtask 9.2 Project Construction:

Project construction will include the following components: installation of the pumps and structure, installation of new pipeline, installation of new measuring instrumentation, construction of a new outlet structure, excavation in the basin, materials processing, and truck hauling sediment to a disposal site.

Peck Water Conservation Improvement

Work Plan

Subtask 9.3 Performance Testing and Demobilization:

The pumps, control system, and the monitoring equipment will be performance tested prior to contractor demobilization. Contractor demobilization will only occur after final inspection and completion of all punch list items identified during final walk through.

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Mobilization and Site Preparation	December 2014	Not yet begun		✓
Subtask 9.2 Project Construction				
Construction	December 2014 - November 2015	Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Performance testing	December 2015	Not yet begun		✓
Demobilization	December 2015	Not yet begun		✓

(e) Environmental Compliance/Mitigation/Enhancement**Task 10: Environmental Compliance/Mitigation/Enhancement**

The final construction specifications will include environmental compliance measures as required by the environmental documents and permits. During construction, the LACFCD's Construction Division will designate an environmental compliance inspector to ensure the contractor adheres to the required compliance measures. Any required environmental mitigation or enhancement identified in the document or permits, but not a part of Project construction, will be implemented by the LACFCD through in-house forces or by a qualified specialist or contractor through a separate contract.

Environmental Compliance / Mitigation / Enhancement Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Potential environmental mitigation or enhancement actions	December 2014 - December 2015	Not yet begun		✓

Peck Water Conservation Improvement**(f) Construction Administration****Task 11: Construction Administration**

The LACFCD has a dedicated Construction Division that administers numerous civil construction projects every year in conformance with the Public Contracting Code. Construction Division Staff will manage the Project construction contract process and implementation. Construction administration activities will include general preparation of construction documents, advertisement for bids, award of construction contracts, construction contract administration, and construction inspection.

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Construction Contractor	December 2014 - December 2015	Not yet begun		✓

(g) Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include development of Performance Measures and Monitoring Plan, and development of financing.

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Development of Performance Measures and Monitoring Plan	December 2014 - December 2015	Not yet begun		✓
Development of Financing	Complete February 2014	Underway		✓

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods:

- Standard specification of Public Works Construction 2009
- Standard Plans of the Los Angeles County Department of Public Works 2000

Peck Water Conservation Improvement

Work Plan

- Occupational safety and health administration
- American Society for Testing and Materials
- 2011 County of Los Angeles Building Code (Title 26) Based on the 2010 California Building Code and the 2009 International Building Code
- Los Angeles County Department of Public Works "Construction Site Best Management Practices (BMPs) Manual"

San Jose Creek Water Reclamation Plant East Process Optimization Project

San Jose Creek Water Reclamation Plant East Process Optimization Project

Description

The San Jose Creek Water Reclamation Plant East Process Optimization Project (Project) consists of the construction of process optimization facilities at the San Jose Creek Water Reclamation Plant (SJCWRP) East. The SJCWRP is located within unincorporated Los Angeles County, next to the city of Whittier. The SJCWRP is split by Interstate 605 into two independent, but hydraulically interconnected, plants. Under normal conditions, each plant operates independently with separate sewage sources and outfalls. The combined permitted capacity of the SJCWRP is 100 million gallons per day (MGD) – 62.5 MGD at the SJCWRP East and 37.5 at the SJCWRP West. The SJCWRP currently serves recycled water demands of 43,266 acre-feet per year (AFY)⁵. These recycled water demands include California Department of Public Health Title 22 uses such as irrigation, industrial and commercial cooling, and groundwater recharge.

The construction of process optimization facilities at the SJCWRP East will include the addition of flow equalization, implementation of sequential chlorination, replacement of process air compressors (PACs), and optimization of the aeration system. Flow equalization tanks would reduce flow variability to downstream unit processes thereby improving operation of those processes and the overall quality of the recycled water produced by the plant. The equalization tanks will allow the plant to more precisely manage both hydraulic and nutrient loadings to the nitrification/denitrification (NDN) unit processes. Flow equalization tanks would also increase the quantity and availability of recycled water by 8,400 AFY. Implementation of sequential chlorination would ensure continued compliance with Title 22 disinfection requirements for unrestricted reuse while minimizing the formation of disinfection byproducts. PACs are the SJCWRP's most significant source of power demand, and replacing the existing PACs with newer models that are optimally sized would greatly lower power consumption. Optimization of the aeration system would improve secondary treatment and use process air more efficiently, which would further decrease power demands and greenhouse gas emissions (GHG).

The primary implementing agency of this Project is the Sanitation Districts of Los Angeles County (LACSD). Other stakeholders include the Water Replenishment District of Southern

⁵ Fiscal Year 2011-2012. The information is included in LACSD's Twenty-Third Annual Status Report on Recycled Water, Fiscal Year 2011-2012, Draft.

San Jose Creek Water Reclamation Plant East Process Optimization Project

California, the City of Industry, the Central Basin Municipal Water District, the Upper San Gabriel Valley Municipal Water District, and the San Gabriel Valley Municipal Water District.

Goals and Objectives

The primary goals and objectives of this Project are:

- Increase the volume and availability of recycled water for reuse
- Improve the performance of the NDN process
- Ensure continued compliance with Title 22 disinfection requirements for unrestricted reuse
- Minimize formation of disinfection byproducts
- Reduce power consumption
- Reduce GHG emissions

These Project goals will help the Greater Los Angeles County Region (Region) to meet the following IRWM Plan goals:

- Optimize local water resources to reduce the Region's reliance on imported water
- Comply with water quality regulations (including TMDLs) by improving the quality of urban runoff, stormwater, and wastewater

Purpose and Need

In 2004, LACSD implemented the NDN process at the SJCWRP in order to meet new effluent discharge limits. Since NDN implementation, the SJCWRP has consistently met permit requirements; however, the NDN process has reduced the secondary treatment system's ability to reliably treat peak flows and constituent loads, especially ammonia. The SJCWRP is transitioning to sequential chlorination⁶ for disinfection, and incomplete nitrification of secondary effluent can jeopardize the efficacy of virus inactivation. As flows increase over time, this issue will be exacerbated. Furthermore, the existing and anticipated contracted demands (which are higher than the current deliveries of recycled water for reuse) equal or exceed the amount currently produced at the SJCWRP.

⁶ Sequential chlorination is a two-step process. First, free chlorine is added to fully nitrified secondary effluent to inactivate pathogens and to react with N-nitrosodimethylamine (NDMA) precursors, thus reducing NDMA formation. Second, chloramines (ammonia then chlorine) are added to media filtered effluent to stop formation of trihalomethanes (THMs) and haloacetic acids to provide further disinfection. (Sequential Chlorination: A New Approach for Disinfection of Recycled Water, 2009)

San Jose Creek Water Reclamation Plant East Process Optimization Project

The purpose of this Project is to optimize wastewater treatment processes at the SJCWRP East in a cost-effective and environmentally sound manner through construction of flow equalization, implementation of sequential chlorination, replacement of PACs, and optimization of the aeration system.

Integrated Elements of Project

The Project helps to address water supply and water quality needs within the Region by providing a larger quantity of higher quality recycled water for reuse through groundwater recharge at the San Gabriel Spreading Grounds and/or through municipal and industrial use.

Completed Work

Work that has been completed for the Project at the time of this application includes the following documents which are discussed further in the next section:

- Clearwater Program Master Facilities Plan (2012)
- San Jose Creek WRP Process Air Compressor Efficiency Study RI (2010)
- Update to San Jose Creek WRP Process Air Compressor Efficiency Study (2012)
- Recycled Water Supply for GRIP – August 2010 Update (2010)
- Sequential Chlorination: A New Approach for Disinfection of Recycled Water (2009)
- Equalization Volume Required for Complete Nitrification at the San Jose Creek East Water Reclamation Plant (2013)
- Flow Equalization Alternatives at San Jose Creek East Water Reclamation Plant (2013)
- Twenty-Second Annual Status Report on Recycled Water, Fiscal Year 2010-2011 (2012)
- Twenty-Third Annual Status Report on Recycled Water, Fiscal Year 2011-2012 (2013)

Work that has not yet been completed, but is expected to be completed by the grant award date includes:

- Draft Facilities Plan
- Environmental Documentation (Draft Negative Declaration)

Existing Data and Studies

Several pieces of data have been collected and studies performed that support the project site location, feasibility, and technical methods. These include:

**San Jose Creek Water Reclamation Plant East Process
Optimization Project**

- *Clearwater Program Master Facilities Plan (2012)*: A master facilities plan (MFP) for the Joint Outfall System (JOS). The MFP includes an evaluation of infrastructure needs for the JOS, including the San Jose Creek Water Reclamation Plant through the year 2050. Needs identified include process optimization improvements at the San Jose Creek Water Reclamation Plant.
- *San Jose Creek WRP Process Air Compressor Efficiency Study RI (2010)*: A memorandum that evaluates the potential energy and cost savings for replacement of the process air compressors (PACs) at the SJCWRP.
- *Update to San Jose Creek WRP Process Air Compressor Efficiency Study (2012)*: A memorandum that updates the PAC efficiency evaluation conducted in 2010.
- *Recycled Water Supply for GRIP – August 2010 Update (2010)*: A memorandum that identifies various options for increasing influent flow to the SJCWRP. As described in the document, Option 4 (implement flow equalization at SJCWRP) would result in an estimated recycled water gain of 8,400 AFY.
- *Sequential Chlorination: A New Approach for Disinfection of Recycled Water (2009)*: A paper published in *Environmental Engineer: Applied Research & Practice, Volume 9* that describes the sequential chlorination process and its disinfection efficacy on fully nitrified secondary effluent.
- *Equalization Volume Required for Complete Nitrification at the San Jose Creek East Water Reclamation Plant (2013)*: A memorandum that presents the results of an analysis conducted to determine the equalization volume required to achieve complete nitrification at the SJCWRP.
- *Flow Equalization Alternatives at San Jose Creek East Water Reclamation Plant (2013)*: A memorandum that evaluates potential flow equalization volumes for SJCWRP East.
- *Twenty-Second Annual Status Report on Recycled Water, Fiscal Year 2010-2011 (2012)*: A report that describes the LACSD's water reuse program, including the SJCWRP for fiscal year 2010 to 2011. Details include historic recycled water use activities, descriptions of plant operations, lists of users and quantities used, recycled water quality, and plans for expanding the use of recycled water.
- *Twenty-Third Annual Status Report on Recycled Water, Fiscal Year 2011-2012, Draft (2013)*: An annual report that updates the LACSD's water reuse program, including descriptions of the various water distribution systems, effluent water quality, list of users and quantities used, and future plans for expanding the use of recycled water.

Each of these documents is included in the **Appendix CD**.

**San Jose Creek Water Reclamation Plant East Process
Optimization Project****Project Maps**

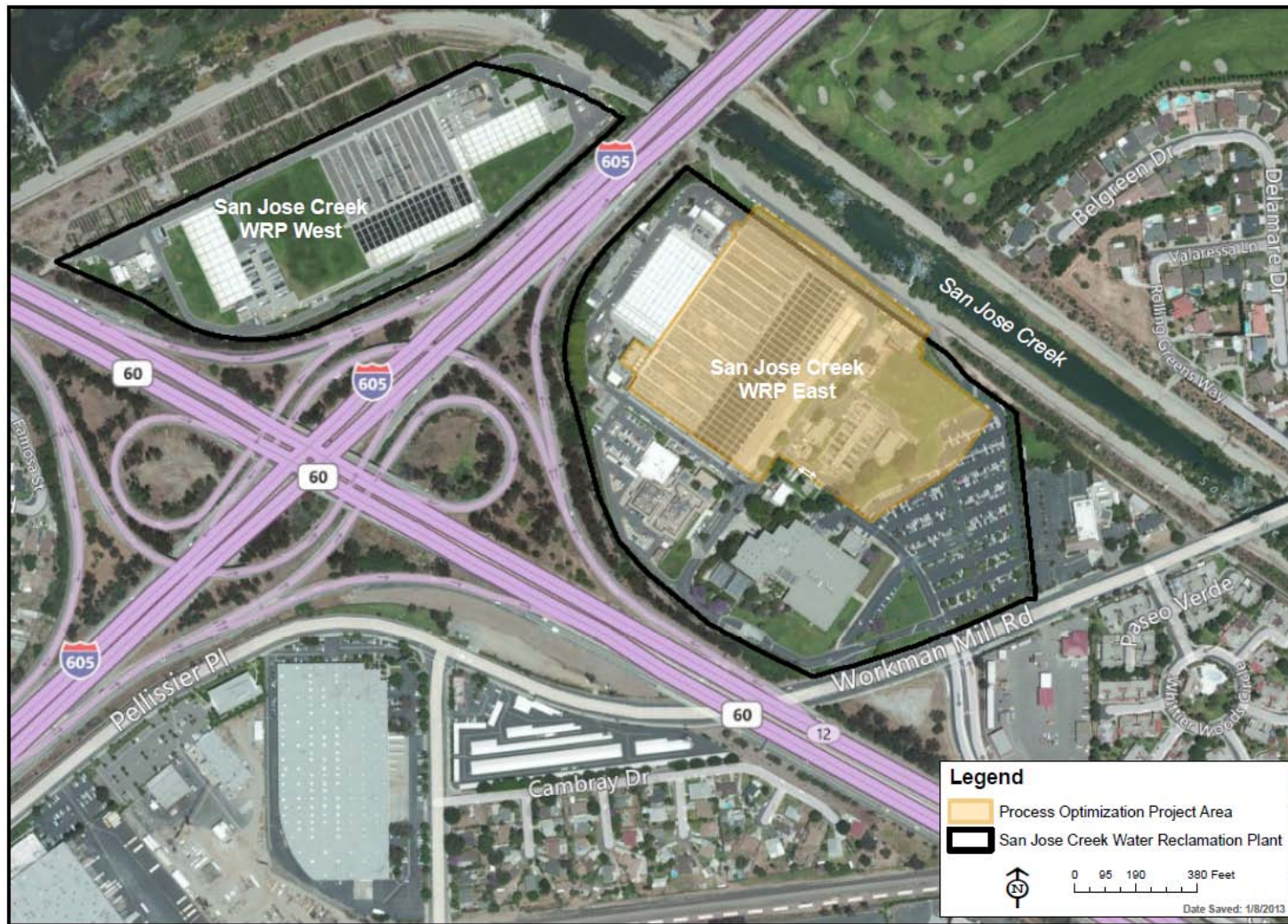
The Project location and boundaries are shown in **Figure 3-17**.

Project Timing and Phasing

LACSD's Clearwater Program Master Facilities Plan (MFP), approved November 2012, analyzed the wastewater management needs of the Joint Outfall System (JOS) through the year 2050. The JOS is a regional, interconnected system of wastewater conveyance and treatment facilities, including the SJCWRP. The recommendations of the MFP include a 25-million gallon per day (MGD) expansion at the SJCWRP West and process optimization at both SJCWRP East and West. The SJCWRP East Project Optimization (PO) Project, which is the only component of the MFP being proposed for Proposition 84 funding, would be implemented prior to the 25-MGD expansion and process optimization at SJCWRP West. Therefore, it would be operated on a stand-alone basis and would be fully functional without implementation of the other two projects.

San Jose Creek Water Reclamation Plant East Process Optimization Project

Figure 3-17: Project Area



San Jose Creek Water Reclamation Plant East Process Optimization Project

Proposed Work

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs

Task 1: Project Administration

The following project administration activities will be performed by LACSD staff:

- Development of financing
- Execution of grant contract
- Documentation of invoices and payments for disbursement requests
- Development of Performance Measures and Monitoring Plan
- Data management

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Administration	April 2013- December 2014	Not started		✓

Task 2: Labor Compliance Program

LACSD will implement the labor compliance program in accordance with the requirements of the California Labor Code.

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Implement Labor Compliance Program	January 2015 – December 2018	Not started		✓

San Jose Creek Water Reclamation Plant East Process Optimization Project

Task 3: Reporting

Quarterly, Final and Post Completion Reports will be prepared and submitted to DWR. Quarterly reports will be submitted every quarter after October 2013 and the Final Report will be submitted 90 days after the completion of the Project. Submittal of Post Completion Reports will be 90 days after the completion of first year of operation. No budget is allocated for the Post Completion Reports because this will be done after completion of the Project.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Submittal of Quarterly Progress Reports and Final Report	Quarterly after October 2013 and 90 days after project completion	Not started		✓
Submittal of Post Completion Reports	90 days after the completion of first year of operation	Not started		✓

(b) Land Purchase/Easement

A license agreement may be required from the United States Army Corps of Engineers (USACE) for yard piping, pending final design. Acquisition of the license agreement has not been initiated. However, LACSD already has existing agreements with USACE in the proposed area. It is anticipated that acquisition would be initiated during the final design phase in mid-2014 and would be completed prior to Project advertisement. The only costs associated with land acquisition would be for a USACE processing fee (see Attachment 4 - Budget).

(c) Planning/Design/Engineering/Environmental Documentation

Task 4: Assessment and Evaluation

Various studies, as previously described, have been performed to support the need for the Project. Previous assessments, evaluations and technical studies include:

- Clearwater Program Master Facilities Plan (2012)

San Jose Creek Water Reclamation Plant East Process Optimization Project

Work Plan

- San Jose Creek WRP Process Air Compressor Efficiency Study RI (2010)
- Update to San Jose Creek WRP Process Air Compressor Efficiency Study (2012)
- Recycled Water Supply for GRIP – August 2010 Update (2010)
- Sequential Chlorination: A New Approach for Disinfection of Recycled Water (2009)
- Equalization Volume Required for Complete Nitrification at the San Jose Creek East Water Reclamation Plant (2013)
- Flow Equalization Alternatives at San Jose Creek East Water Reclamation Plant (2013)
- Twenty-Second Annual Status Report on Recycled Water, Fiscal Year 2010-2011 (2012)
- Twenty-Third Annual Status Report on Recycled Water, Fiscal Year 2011-2012, Draft (2013)

Task 4 includes completion of the Draft Facilities Plan and certifying the Final Facilities Plan by December 2013.

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Complete Draft Facilities Plan and Certify Final Facilities Plan	December 2010 – December 2013	In progress		✓

Task 5: Final Design

Final Design is currently less than 10% complete.

Project Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
PACs Replacement/Aeration System Upgrades	April 2013 – December 2014	In progress		✓
Sequential Chlorination	June 2013- December 2015	Not started		✓
Flow Equalization	June 2013- December 2015	Not started		✓

San Jose Creek Water Reclamation Plant East Process Optimization Project

Task 6: Environmental Documentation

Preparation of the environmental documentation is in progress. Based on preparation of an initial study checklist, it is anticipated that a negative declaration would fulfill the requirements for CEQA. The Draft Negative Declaration is anticipated to be released with the Draft Facilities Plan in summer 2013 for public review and comment. The Final Negative Declaration is anticipated to be certified by the LACSD Board of Directors in September 2013. The Project is not subject to NEPA requirements.

A previously prepared Cultural Resources Survey indicated the Native American Heritage Commission determined that no areas of special concern are located within ½ mile of the proposed project area. Tribal entities, as required, will be contacted prior to certification of the Negative Declaration.

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Prepare, Release and Certify the Negative Declaration	April 2011 – December 2013	In progress		✓

Task 7: Permitting

Initial preparation efforts for the environmental documentation indicate that additional permits will not need to be secured for the Project.

(d) Construction/Implementation

Task 8: Construction Contracting

The following construction contracting activities will be performed by LACSD staff, including managerial, engineering, field, and clerical personnel. This task includes:

- Development of a contract agenda item for the LACSD Board of Directors
- Contract advertisement
- Distribution of bid invitations and issue instructions to potential bidders
- Pre-bid meeting for the contractors and subcontractors per labor compliance requirements

**San Jose Creek Water Reclamation Plant East
Process Optimization Project**

- Evaluation of the bids and selection of lowest responsible bidder
- Verification of compliance with bonding requirements
- Award of contract and procurement of services
- Notice to Proceed
- Maintenance of contract escrow bid documents

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Contract activities for the PACs Replacement/Aeration System Upgrades Construction	January 2015 – May 2015	Not started		✓
Contract activities for the Sequential Chlorination and Flow Equalization	January 2016 – May 2016	Not started		✓

Task 9: Construction

This task will involve construction of flow equalization, implementation of sequential chlorination, replacement of PACs, and optimization of the aeration system. Construction of each of these elements includes mobilization, site preparation, demolition, materials (including concrete, pavement, piping, valves), equipment, earthwork, electrical/instrumentation, equipment and performance testing, startup, and demobilization. Construction tasks will be defined in more detail during the design phase of the Project.

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
PACs Replacement/Aeration System Upgrades				
PACs Replacement/Aeration System Upgrades	May 2015-Spring 2017	Not started		✓
Flow Equalization				

**San Jose Creek Water Reclamation Plant East
Process Optimization Project**

Work Plan

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Equalization Tank	May 2016- December 2018	Not started		✓
Pump Station 1		Not started		✓
Pump Station 2		Not started		✓
Odor Control Station		Not started		✓
Yard Piping/Junction Structures		Not started		✓
Sequential Chlorination				
Sequential Chlorination	May 2016- December 2018	Not started		✓

(e) Environmental Compliance/Mitigation/Enhancement
Task 10: Environmental Compliance/Mitigation/Enhancement

Initial preparation efforts for the environmental documentation indicate that mitigation will not be needed for the Project.

(f) Construction Administration
Task 11: Construction Administration

The following construction management activities will be performed by LACSD staff, including managerial, engineering, field, and clerical personnel. Construction administration includes managing the Construction Contractor; administering the project finances; control of project records and document distribution; general administration, planning, and record keeping; general administration, planning, and record keeping; and management of risk assessment.

San Jose Creek Water Reclamation Plant East Process Optimization Project

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Construction Administration	May 2015 – December 2018	Not started		✓

(g) Other Costs

There are no additional activities necessary to meet grant requirements. The development of performance measures and a monitoring plan as well as the development of financing are included under Task 1.

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods including:

- Standard Specifications for Public Works Construction, 2012 Edition
- Amendments to Standard Specifications for Public Works Construction, 2012 Edition
- Air Movement and Control Association (AMCA)
- American Gear Manufacturers Association (AGMA)
- American Institute of Steel Construction (AISC)
- American National Standard Institute (ANSI)
- American Petroleum Institute (API)
- American Society for Testing and Materials (ASTM)
- American Society of Civil Engineers (ASCE)
- America Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE)
- American Society of Mechanical Engineers (ASME)
- American Water Works Association (AWWA)
- American Welding Society (AWS)
- Chlorine Institute (CI)
- Compressed Air and Gas Institute (CAGI)
- Hydraulic Institute Standards (HIS)
- Illumination Engineering Society of North America (IES)
- Industrial Risk Insurers and applicable insurance agencies

**San Jose Creek Water Reclamation Plant East
Process Optimization Project**

- Institute of Electrical and Electronics Engineers (IEEE)
- Instrument Society of America (ISA)
- Insulated Power Cable Engineers Association (IPCEA)
- Los Angeles County Building Code
- Los Angeles County Electrical Code
- Los Angeles County Fire Code
- Los Angeles County Mechanical Code
- Los Angeles County Plumbing Code
- National Association of Corrosion Engineers (NACE)
- National Electric Code (NEC)
- National Electric Manufacturers Association (NEMA)
- National Fire Protection Association (NFPA)
- Scientific Apparatus Makers Association (SAMA)
- Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
- Society for Protective Coatings (SSPC)
- South Coast Air Quality Management District (SCAQMD)
- State of California, California Code of Regulations (CCR)
- State of California, Construction Safety Orders (CAL/OSHA)
- State of California, Electrical Safety Orders (CAL/OSHA)
- State Water Resources Control Board
- Steel Structures Painting Council (SSPC)
- Tubular Exchanger Manufacturers Association (TEMA)
- Underwriters Laboratories (UL)
- U.S. Department of Labor, Occupational Safety and Health Administration (OSHA)

South Gardena Recycled Water Pipeline Project

Description

The South Gardena Recycled Water Pipeline Project (Project) includes the design and construction of a 1.25 mile recycled water pipeline in South Gardena, a disadvantaged community (DAC), which would connect to four new sites where recycled water can be used for irrigation: Gardena High School, South Garden Park, Roosevelt Memorial Park Association and C Stars Nursery. Once completed, the Project is anticipated to serve approximately 120 acre-feet per year (AFY) of recycled water. The Project was identified in the 2009 West Basin Capital Implementation Master Plan and has been requested to be implemented by the City of Gardena. Design for this Project has not yet started.

The primary implementing agency is West Basin Municipal Water District (WBMWD). Cooperating agencies include the City of Gardena (City) and Los Angeles Department of Water and Power (LADWP). The Roosevelt Memorial Park Association currently receives potable water from LADWP; the Gardena High School is located within the City of Los Angeles but also within the WBMWD service area. LADWP is a funding partner for the Project and will be providing \$409,162 toward Project construction. The City will be involved in the construction outreach, planning, and design to ensure that the entire Project meets the needs of the City.

Goals and Objectives

The primary goal of the Project is to offset imported water by extending the recycled water pipeline to serve four irrigation sites.

This Project goal will help the Greater Los Angeles County Region (Region) to meet the following IRWM Plan goal:

- Optimize local water resources to reduce the Region's reliance on imported water

Purpose and Need

The purpose of the Project is to offset imported water supplies by constructing 1.25 miles of recycled water pipeline to serve 120 AFY of non-potable water to four large irrigation sites.

The City has great potential to use recycled water within their service area to offset the need for potable water supplies. Currently, a recycled water distribution pipeline is in operation in the southern portion of the City. By constructing a lateral from the existing distribution pipeline, WBMWD can serve recycled water to four large irrigation customers. This 120 AFY

South Gardena Recycled Water Pipeline Project**Work Plan**

offset of potable water will contribute to the Region's 20x2020 water conservation goals. The City and both water agencies consider the Project to be a high priority for implementation.

Integrated Elements of Project

The Project, in combination with other projects, will help the Region reduce its dependence on imported water and optimize its local water resources. It implements a recycled water pipeline that has been identified in the WBMWD 2009 Capital Implementation Master Plan. This plan identified and prioritized potential areas to receive non-potable water throughout the WBMWD service area. One of the high priority projects identified was an extension from the existing 42-inch main recycled water pipeline along West 168th Street to serve four irrigation sites south of the main pipeline. The City subsequently requested that this Project be constructed. LADWP is also contributing \$409,162 to the construction of the Project because it would offset the need for potable water at two of the sites within their service area.

Completed Work

Three studies have been completed in preparation for the implementation of the Project:

- *2003 Programmatic EIR for the Harbor/South Bay Water Recycling Project*: The lateral alignment (to be constructed by this Project) is part of the Filed Environmental Assessment, Programmatic EIR for the Harbor/South Bay Water Recycling Project.
- *2009 WBMWD Capital Implementation Master Plan*: The proposed lateral and the four recycled water sites are identified and described.
- *2012 LADWP Non-Potable Reuse Master Planning Report*: The Roosevelt Water Recycling Project, one of the 38 projects identified, is a potential recycled water project that would serve four potential customers south of the existing WBMWD recycled water in the Gateway area of City of Los Angeles.

A description of this work is provided below under "Existing Data and Studies." No other work is expected to be completed prior to the grant award date.

Existing Data and Studies

As described in the Completed Work section, three studies have been prepared in support of this Project's site location, feasibility and technical methods. The following table provides a discussion of the studies and the page references. These studies are included in the **Appendix CD**.

South Gardena Recycled Water Pipeline Project

Work Plan

Existing Data and Studies	Discussion of Study	Page References
Programmatic EIR for the Harbor/South Bay Water Recycling Project (HDR Engineering, Inc., January 2003)	West Basin has partnered with the U.S. Army Corps of Engineers to expand the use of recycled water through the Harbor/South Bay Water Recycling Project which consists of multiple lateral and capital facility projects with nearly 60 miles of combined pipelines, including the South Gardena Pipeline. The South Gardena Lateral was one of the pipelines that was identified and incorporated into the environmental assessment in 2003. The majority of the alignment is included in the environmental assessment. If alignment changes need to be incorporated, they will be covered under the appropriate environmental documentation.	All, specifically 13, 16, 19, 21, 22, 45, 46, 47, 48, 50, 66, 79, 82, 83, 85, 95, 98, 100, 103, 104, 106, 108, 109, 112, and 115
WBMWD Capital Implementation Master Plan (Carollo, 2009)	The Capital Implementation Master Plan defines and prioritizes the capital improvement projects needed to establish reliable recycled water supply for existing and new recycled water customers through the year 2030. The Project is defined as one of the improvement projects needed for WBMWD to achieve their goal.	3-23, 9-4, 9-41, and Chapter 9
LADWP Non-Potable Reuse Master Planning Report (RMC/CDM Smith, 2012)	The Non-Potable Reuse Master Planning Report recommends a suite of projects for LADWP's four major service areas to increase non-potable reuse in Los Angeles by 9,650 acre-feet per year by 2035. The Gateway System, one of the 11 hydraulically-independent non-potable reuse systems, includes the Roosevelt Water Recycling Project which is almost the same alignment as the South Gardena Pipeline Project.	7-15 to 7-18, Appendix I pg 111-120

Project Map

The majority of the Project is located in the southern part of the City of Gardena and a portion is located in the City of Los Angeles. The pipeline extends south from West 168th Street to Electric Street, via South Normandie Avenue. The Project location and boundaries are shown in

South Gardena Recycled Water Pipeline Project

Figure 3-18. **Figure 3-19** shows the four potential irrigation customers that would connect to the recycled water distribution pipeline.

Project Timing and Phasing

This Project is not currently planned as part of a larger or multi-phase project. The Project was identified in the *2009 WBMWD Capital Implementation Master Plan* and is considered a specific project within the overall expansion of WBMWD recycled water distribution system facilities.

Figure 3-18: South Gardena Recycled Water Pipeline Project - Location Map

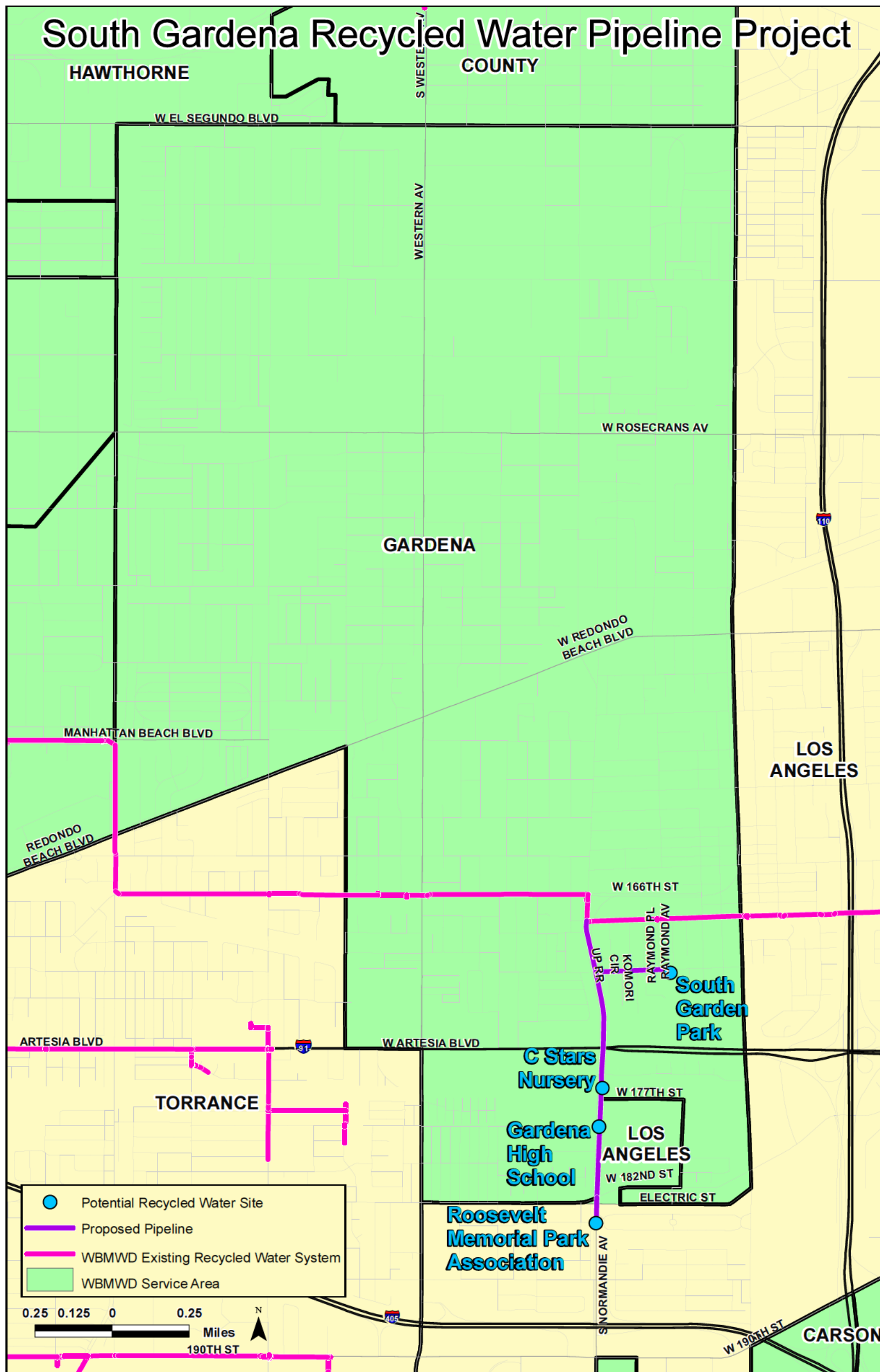


Figure 3-19: South Gardena Recycled Water Pipeline Project



South Gardena Recycled Water Pipeline Project

Work Plan

Proposed Work

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs

Task 1: Project Administration

Project administration work to be completed under this task will be performed by a WBMWD Project Manager (PM) with oversight by the Engineering Manager and coordination with the Planning Specialist. Project administration includes coordination of meetings, management of all contracts and schedule, management of data, and overseeing the Project's conceptual proposal, implementation, and grant reporting. The PM will provide input, data, review documents and design plans, coordinate tasks throughout all phases of Project and be responsible for communication with the Project partners, the City and LADWP, during implementation.

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Administration	After grant is awarded October 2013 – September 2015	Not yet begun		✓
Preparation of Invoices and Backup Documentation	Quarterly after contract execution	Not yet begun		✓

Task 2: Labor Compliance Program

The Labor Compliance Program (LCP) will be requested by WBMWD to be maintained and implemented by the contractor. WBMWD's Construction Manager will review labor compliance reports prepared by the contractor. WBMWD will require that the contractor meet the prevailing wage requirements.

South Gardena Recycled Water Pipeline Project

Work Plan

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Labor Compliance Program Management	February 2015 – July 2015	Not yet begun		✓

Task 3: Reporting

Once the Project begins, WBMWD will submit quarterly, final and post completion reports to the State per Proposition 84 requirements.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Quarterly and Annual Progress Reports	Quarterly after contract execution	Not yet begun		✓
Final Report	October 2015- December 2015	Not yet begun		✓
Post Completion Report	October 2016 – December 2016	Not yet begun		✓

(b) Land Purchase/Easement

The Project will not require purchase of land or acquisition of easements as the pipeline will be constructed within the public right-of-way.

(c) Planning/Design/Engineering/Environmental Documentation**Task 4: Assessment and Evaluation**

Three assessment and evaluation studies have been completed in preparation for the implementation of the Project:

- 2003 Programmatic EIR for the Harbor/South Bay Water Recycling Project
- 2009 WBMWD Capital Implementation Master Plan
- 2012 LADWP Non-Potable Reuse Master Planning Report

South Gardena Recycled Water Pipeline Project

Work Plan

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Environmental Assessment, Harbor/South Bay Water Recycling Project Programmatic EIR	Completed in January 2003	Completed in 2003	✓	
West Basin 2009 Capital Implementation Master Plan	Completed in June 2009	Completed in 2009	✓	
LADWP Non-Potable Reuse Master Planning Report	Completed in March 2012	Completed in 2012	✓	

Task 5: Final Design

The Project was identified for its feasibility in the *2009 Capital Implementation Master Plan*. A feasibility study or preliminary design has not been completed for the Project. Upon contract execution, a preliminary design will be initiated.

Project Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preliminary Design Report	January 2014 – May 2014	Not yet begun		✓
60% Design Plans	May 2014 - August 2014	Not yet begun		✓
90% Design Plans	August 2014 – October 2014	Not yet begun		✓
100% Design Plans	October 2014 – November 2014	Not yet begun		✓

Task 6: Environmental Documentation

West Basin has completed the Environmental Assessment: *Harbor/South Bay Water Recycling Project Programmatic EIR* in 2003 which includes this Project. In addition, West Basin will prepare a CEQA initial study and anticipates a Categorical Exemption. West Basin will be submitting documentation of the CEQA Categorical Exemption upon completion in November 2014.

South Gardena Recycled Water Pipeline Project

Work Plan

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Categorical Exemption	January 2014 – October 2014	Not yet begun		✓
Environmental Documentation Material	January 2014 – October 2014	Not yet begun		✓
Native American Tribe Notification	January 2014 – October 2014	Not yet begun		✓

Task 7: Permitting

Permits will be required from:

- Caltrans: The alignment is at the west terminus of the 91 freeway. Once the design and perimeters for traffic control are set during the design, Caltrans will determine their involvement in permitting.
- City of Gardena: Encroachment Permit (West Basin will initiate the process; and contractor, once awarded the construction project, will complete the requirements of the permit, [i.e., business license, permit fees, etc.]).
- City of Los Angeles U Permit (West Basin will initiate the process; and contractor, once awarded the construction project, will complete the requirements of the permit, [i.e., business license, permit fees, etc.]).
- Los Angeles County Flood Control District: The proposed alignment crosses the Dominguez Channel. Permitting requirements with the City of Los Angeles and/or the Los Angeles County Flood Control District for the crossing will be determined during the design phase.
- Department of Public Health (DPH) – This is not a permit but rather a letter that WBMWD sends to this agency informing them of the Project's compliance with their guidelines on potable and recycled water separation criteria. The DPH responds to WBMWD with a letter.
- NPDES permit – for discharge of pressure test water.

Permit applications have not been submitted as of the date of this application package.

South Gardena Recycled Water Pipeline Project

Work Plan

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Caltrans (if required)	July 2014 – November 2014	Not yet begun		✓
City of Gardena	July 2014 – November 2014	Not yet begun		✓
City of Los Angeles, U permit	July 2014 – November 2014	Not yet begun		✓
Los Angeles County Flood Control District (if required)	July 2014 – November 2014	Not yet begun		✓
Department of Public Health	July 2014 – July 2014	Not yet begun		✓
NPDES Permit	July 2014 – November 2014	Not yet begun		✓

(d) Construction/Implementation**Task 8: Construction Contracting**

Upon completion of construction specifications and plans, the Project will go out to bid. The successful contractor will be presented to the WBMWD Board for construction project award. Contractor will have to submit insurance, bonds, signed contract, etc. in order to receive the Notice to Proceed.

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Final Package for Bid Construction	November 2014- December 2014	Not yet begun		✓
Board Meeting Preparation for Construction Award	January 2015	Not yet begun		✓
Notice to Proceed	February 2015	Not yet begun		✓

Task 9: Construction

The Project includes installation of a recycled water pipeline to send recycled water from WBMWD to serve four irrigation customers.

South Gardena Recycled Water Pipeline Project

Work Plan

Subtask Descriptions:*Subtask 9.1 Mobilization and Site Preparation:*

Mobilization and Site Preparation by the contractor will include: procure the DIG Alert for utility markings, surveying, potholing, material submittal, contractor permits, construction temporal re-striping, attendance of meetings, material and equipment procurement, best management practices, and storage area setup.

Subtask 9.2 Project Construction:

Project construction will include the following components: traffic control, sawcutting, trenching, pipe installation, pavement, restoration of stripping, and best management practices.

Subtask 9.3 Performance Testing and Demobilization:

This subtask includes pressure test, cleanup of Project site and storage area, final walk through of the site for Project acceptance, demobilization, and final notice of completion letter.

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Mobilization and Site Preparation	February 2015 – March 2015	Not yet begun		✓
Subtask 9.2 Project Construction				
Construction	March 2015 – August 2015	Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Performance Testing and Demobilization	July 2015- August 2015	Not yet begun		✓
Final Notice of Completion Letter	August 2015 - September 2015	Not yet begun		✓

South Gardena Recycled Water Pipeline Project

Work Plan

(e) Environmental Compliance/Mitigation/Enhancement**Task 10: Environmental Compliance/Mitigation/Enhancement**

Throughout the construction, dust, noise, application of best management practices and environmental assessment recommendations will be monitored. Disposal of pressure test water will be conducted per NPDES permit requirements. No enhancement or mitigation actions have been identified for this Project at this point.

Environmental Compliance / Mitigation / Enhancement Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Environmental Compliance and Best Management Practices	February 2015 – August 2015	Not yet begun		✓
NPDES Permit Requirements Implementation	February 2015 – August 2015	Not yet begun		✓

(f) Construction Administration**Task 11: Construction Administration**

A construction management company will be hired to assist the PM to perform inspections, reports, field verifications, participate in negotiations, and maintain booking of log reports and submittals. A construction outreach firm will be hired to operate the project construction hotline and distribute construction notices.

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Construction Contractor	December 2014 – October 2015	Not yet begun		✓
Construction Outreach	December 2014 – October 2015	Not yet begun		✓
Design Engineering during Construction	February 2015 – October 2015	Not yet begun		✓

(g) Other Costs

South Gardena Recycled Water Pipeline Project

Work Plan

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include Indirect Costs, Development of Performance Measures and Monitoring Plan and Development of Financing. Indirect Costs include overhead and financial services. For every hour an employee with WBMWD works on this project, 0.59 (or 59%) is applied towards the indirect costs.

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Indirect Costs	October 2013 – October 2015	Not yet begun		✓
Development of Performance Measures and Monitoring Plan	November 2014 – January 2015	Not yet begun		✓
Development of Financing	October 2013 – December 2013	Not yet begun		✓

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods listed below:

- City standard codes (Gardena, Los Angeles)
- Department of Public Health
- WBMWD Design Standards
- Standard specification of Public Works Construction 2009
- Standard Plans of the Los Angeles County Department of Public Works; 3080-2, 3090-1, 3091.1, 3093-1, and 6002-1. (As needed)
- Occupational safety and health administration
- American Society for Testing and Materials
- State Water Resources Control Board
- Construction Site Best Management Practices Manual

Upper Malibu Creek Watershed Restoration

Work Plan

Upper Malibu Creek Watershed Restoration

Description

As part of a larger Malibu Creek Watershed restoration goal, the Upper Malibu Creek Watershed Restoration Project (Project) will address channelized sections of creeks in the Upper Malibu Creek Watershed (Watershed) on Medea Creek abutting Chumash Park and on a failed channelized section of Las Virgenes Creek between Meadow Creek Lane and Lost Hills Road Bridge.

The Malibu Creek Watershed is one of the least urbanized of the watershed management areas in Los Angeles County, being approximately 81% open space. Portions of the watershed are occupied by the City of Agoura Hills and the City of Calabasas where watersheds have been channelized in an effort to reduce flood risk to the residents of these cities. The Malibu Creek Watershed drains 109 square miles of the Santa Monica Mountains and Simi Hills. The Santa Monica Mountains and Simi Hills provide a large amount of dedicated open space for the Region, support a diverse community of flora and fauna, and provide recreational space for the Region's population and visitors. By restoring portions of the upper Malibu Creek Watershed, the Project will improve upon these open space areas.

To the extent possible, the Project will mimic an earlier successful creek restoration project within the Watershed that was completed in 2006 by restoring and reestablishing creek habitat to enhance the water quality and biological environment of the area. In addition to providing more native habitat in the Region, the restoration would reestablish direct connectivity between segmented riparian communities. A successful restoration would provide better cover for local wildlife and promote increased wildlife movement up and down the stream course. This Project will also provide a public outreach and education component.

The City of Agoura Hills is the sponsor of the Medea Creek portion of the Project. The City of Agoura Hills proposes to naturalize an existing 450-foot concrete channel portion of Medea Creek while maintaining the segment's flood control capabilities. Meandering along this portion of completely natural creek will be a pedestrian trail with educational elements such as storyboards describing habitat and water conservation.

The City of Calabasas is the sponsor of the Las Virgenes Creek portion of the Project, and proposes a bank stabilization and barrier removal for the segment between Meadow Creek Lane and Lost Hills Road Bridge.

Upper Malibu Creek Watershed Restoration

The Project is being conducted in cooperation with the County of Los Angeles Department of Public Works and with the support of the Office of Supervisor Zev Yaroslavsky.

Goals and Objectives

The primary objectives of this Project are to:

- Create approximately 4 acres of new riparian ecosystem
- Restore habitat by reconnecting mammal migration corridors and removing fish migration barriers
- Provide recreational access with trail system connectivity
- Improve water quality by increasing dissolved oxygen concentration, increasing vegetative uptake of nutrients (nitrogen and phosphorus) and reducing water temperature by adding vegetated canopy cover
- Provide educational value to neighboring schools and the overall community
- Maintain flood control needs and public safety

These Project goals will help the Greater Los Angeles County Region (Region) to meet the following Integrated Regional Water Management Plan goals:

- Comply with water quality regulations including Total Maximum Daily Loads (TMDLs) by improving the quality of urban runoff, stormwater and wastewater
- Protect, restore and enhance natural processes and habitats
- Increase watershed friendly recreational space for all communities
- Maintain and enhance public infrastructure related to flood protection, water resources and water quality

Purpose and Need

Medea Creek and Las Virgenes Creek are upper Malibu Creek Watershed tributaries that convey natural and urban drainage through Malibu Lake, Malibu Creek, Malibu Lagoon and to the Santa Monica Bay as the final destination. Under the State Water Quality Control Board's Tributary Rule, this tributary system is either Clean Water Act 303(d) listed or has a TMDL for the following impairments: bacteria, trash/debris, DDT, PCB, sediment toxicity, fish passage, nutrients, benthic macro-invertebrate imbalances, sedimentation/siltation, invasive species, chloride, foam/scum, specific conductivity, sulfates and selenium. Stakeholders for the Malibu Creek Watershed have documented and prioritized the need for water quality improvements and habitat restoration, which are the two primary goals of this Project.

Upper Malibu Creek Watershed Restoration

Restoring habitat and improving water quality are the primary purposes of this Project. With the removal of the creeks' concrete lining, urban runoff will percolate into the soft bottom channel which will enhance the following natural treatment processes: filtration of pollutants such as oils and grease, absorption of nutrients and coliforms by the restored vegetation, and removal of metals by adherence to sediments. The native vegetation will metabolize coliforms and nutrients, reducing eutrophication which has historically led to algal blooms and low dissolved oxygen.

The Las Virgenes Creek portion of the Project will reduce and/or eliminate undercutting, remove failing cement structures and restore functional hydrology while providing some habitat restoration benefits through the restoration of 2.5 acres of riparian habitat. The Medea Creek portion of the Project will remove 450 linear feet of concrete and will restore 1.5 acres of riparian habitat, while creating better migration corridors, linking key trails for the community, and increasing canopy cover/ riparian bank habitat and creating a soft bottom for the stream itself.

Integrated Elements of Project

The Project will have a regional impact on policy for urban stream restoration in the Santa Monica Mountains. There are numerous locations throughout the Greater Los Angeles County Region where flood control agencies have channelized natural stream courses. This Project seeks to recreate the flood control facility in an environmentally harmonious fashion that will increase wildlife corridor connectivity, provide essential riparian habitat, protect fish passage, and preserve essential flood control capability within the confines of the engineered channel that exists today. All objectives of this Project are consistent with the goals and direction of the Malibu Creek Watershed agencies, nonprofits, and environmental groups that have been developed through the IRWM Program and Malibu Creek Watershed Council, specifically the Council's 44 Action Item Plan. If successful, this will become the second restoration project of its kind in the upper Malibu Creek Watershed and interested agencies will be encouraged to restore their own channelized creek segments. This shared vision and opportunity to work incrementally toward full stream restoration from the Santa Monica Bay to the headwaters will be realized throughout the Region.

Completed Work

Work that has been completed as of the time of this grant application includes:

Upper Malibu Creek Watershed Restoration

- *Draft Las Virgenes Creek Stream Restoration Special Provisions, 2005*: This draft document, completed in 2005, contains the special provisions that will be used in the design of the Las Virgenes Creek restoration portion of the project.
- *Feasibility Study for the Removal of Concrete Lining in Las Virgenes Creek Down Stream of Meadow Creek Lane*: This study, completed in 2005, investigates the feasibility of removing the failed concrete channel lining in the Las Virgenes Creek between Meadow Creek Lane and Lost Hills Road, and restoring the existing channel within this reach to a naturalized streambed.

These documents are included in the **Appendix CD**.

Work that has not yet been completed, but is expected to be completed by the grant award date includes:

- *Project Concept Report (feasibility)*, June 2013: This report will provide a technical evaluation of possible restoration options, taking into consideration various factors such as flood control, slope stability, scouring of nearby bridge piers, and cost/benefit.
- *Project Design Concept*, July 2013: Once the Project Concept Report has been completed, the recommended option will be designed in concept with input from various professionals in creek restoration, landscape architects, and hydraulic/hydrology engineers.
- *Final Design and Permitting*, September 2013: During the Project Design Concept phase, various permitting agencies will be identified and will be incorporated into the outcome of the final design.

Existing Data and Studies

Several pieces of data have been collected and studies performed that support the Project site location, feasibility, and technical methods. These include:

- *Feasibility Study for the Removal of Concrete Lining in Las Virgenes Creek Down Stream of Meadow Creek Lane, 2005*.
- *Integrated Total Maximum Daily Load Implementation Plan for the Malibu Creek Watershed, 2007*.
- *Las Virgenes Creek Stream Restoration Special Provisions, 2005*.

Project Maps

The Project location and boundaries are shown in **Figures 3-20, 3-21 and 3-22**.

Upper Malibu Creek Watershed Restoration**Project Timing and Phasing**

The Project is comprised of two restoration segments on Medea Creek and Las Virgenes Creek narrowed down from a larger group of segments identified by the Malibu Creek Watershed Council as potential restoration sites. To minimize cost impacts, these two identified high priority creek sections are combined into one project and will be bid as one project from the feasibility phase through design. However, should one segment of this Project not be completed, the other can be completed on a stand-alone basis.

Figure 3-20: Project Regional Map

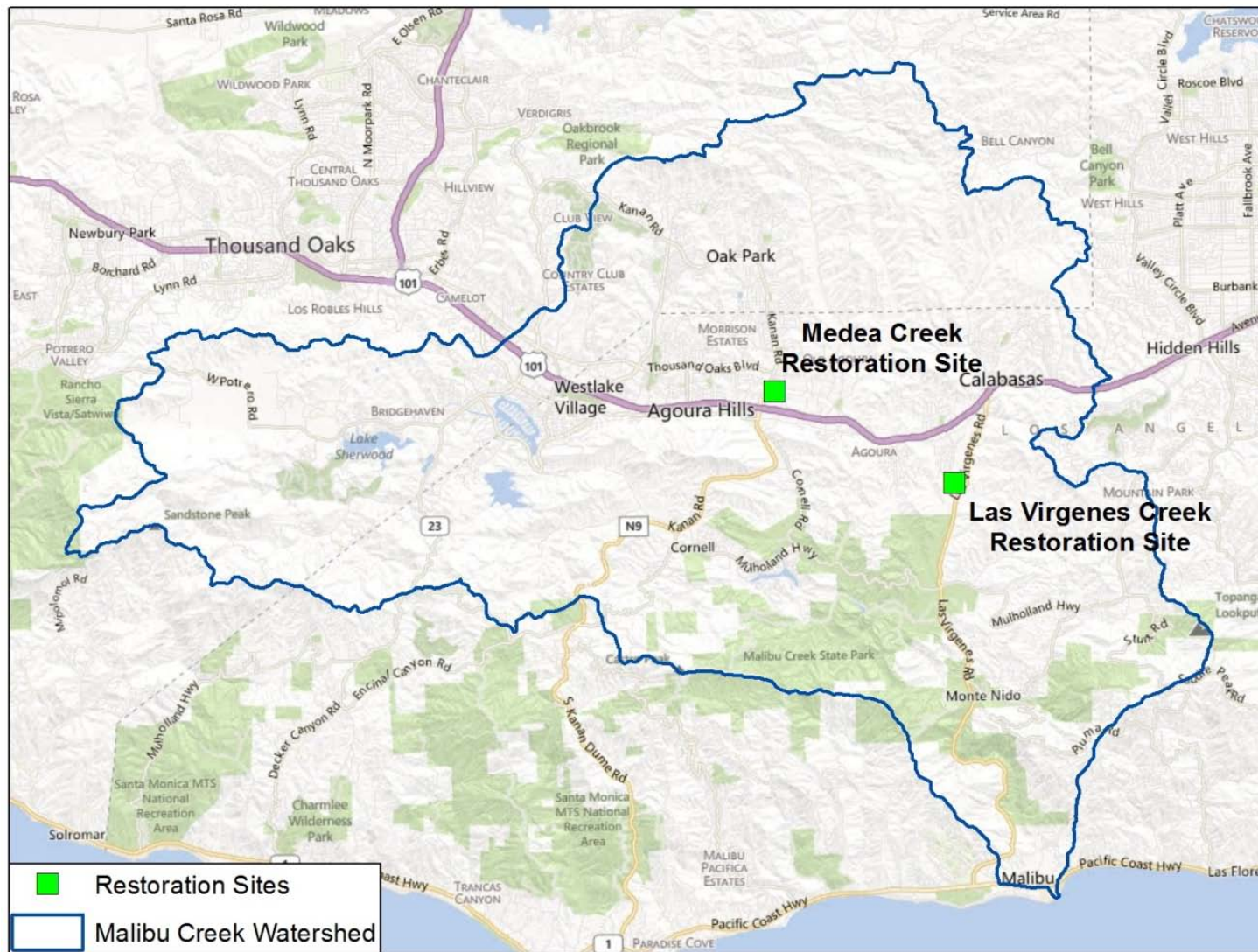


Figure 3-21: Las Virgenes Creek Project Area

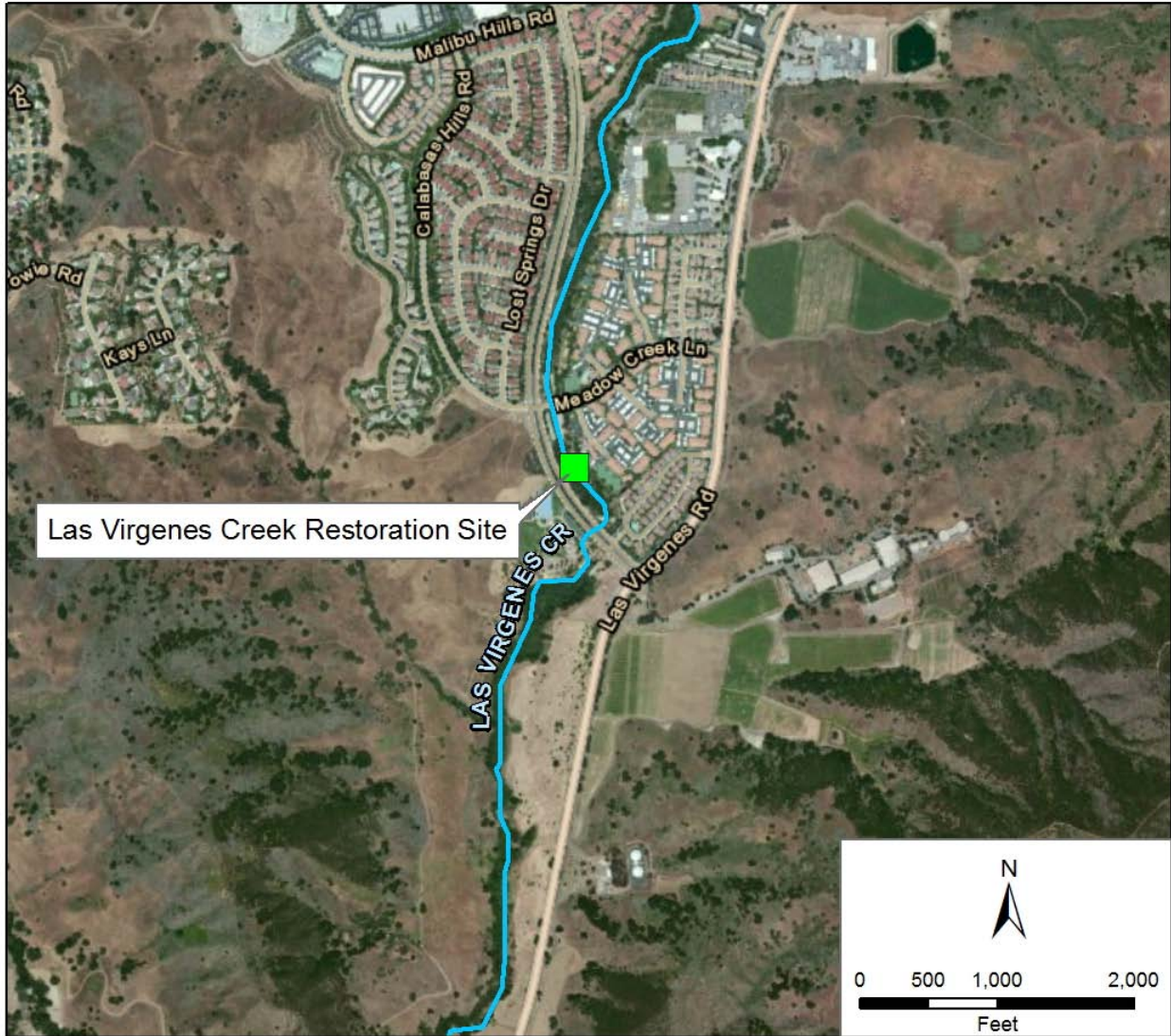


Figure 3-22: Medea Creek Project Area



Upper Malibu Watershed Restoration

Work Plan

Proposed Work

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs

Task 1: Project Administration

Project Administration will be performed by the City of Agoura Hills Engineering Department with assistance from the City of Calabasas and County of Los Angeles. Administration of the Project shall consist of project management activities to include submitting regular progress reports and invoices to the State, administering the bid process, completing design reviews, conducting stakeholder outreach, presenting staff reports to City Council regarding contract award and completion, data management, and general project management responsibilities such as meetings, status reports, and budget tracking.

Reportable and reimbursable expenditures and/or match for the above described activities shall include expenditures from the City of Agoura Hills, City of Calabasas, and the County of Los Angeles. Formal arrangements shall be described in detail and agreed to in the form of a memorandum of understanding or agreement.

Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
General Project Management	October 2013 – February 2015	Not yet begun		✓
Notice of Completion, Staff Report of City Council for Completion	February 2015	Not yet begun		✓

Task 2: Labor Compliance Program

The Project's construction will be completed utilizing prevailing rates in order to comply with local labor compliance programs. A labor compliance program will be developed prior to the beginning of construction.

Upper Malibu Watershed Restoration

Work Plan

Labor Compliance Program Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Labor Compliance Program	March 2014 – December 2014	Not yet begun		✓

Task 3: Reporting

Quarterly, Final and Post Completion Reports will be prepared and submitted to DWR.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Quarterly Progress Reports	Quarterly after Oct. 1, 2013	Not yet begun		✓
Final Report	At completion of project	Not yet begun		✓
Post Completion Reports	Within three months of project being active for one year	Not yet begun		✓

(b) Land Purchase/Easement

The Agoura Hills portion of the Project, on Medea Creek, is located on property currently owned by Los Angeles County Flood Control District and is in the process of being quit claim deeded over to the City of Agoura Hills by the grant award date. This task should be completed prior to the grant award. The Las Virgenes Creek project limits are within the existing right-of-way owned by the City of Calabasas. Staging areas are on land within the ownership of the two cities.

(c) Planning/Design/Engineering/Environmental Documentation**Task 4: Assessment and Evaluation**

Assessment and evaluation activities will be conducted under two subtasks:

- Project Concept Report (feasibility study): This task will perform a technical evaluation of site conditions, project goals and objectives, needs and constraints, and alternatives. This task shall include geotechnical and hydraulic modeling.

Upper Malibu Watershed Restoration

Work Plan

- Project Design Concept: Based on results of the Project Concept Report, this task shall outline the scope of the design.

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Concept Report	February 2013 to June 2013	Underway	✓	
Project Design Concept	April 2013 to July 2013	Not yet begun	✓	

Task 5: Final Design

Final Design will be conducted under the following subtasks:

- Develop and Release Request for Proposal (RFP): Dependant on Task 4, an RFP shall be developed to hire a design firm. During the design phase of the project, Project design plans and specifications will be completed. The Project Assessment and Evaluation Plan (PEAP) shall be completed by the first quarterly progress report.
- Stakeholder Outreach: Several meetings shall be conducted with stakeholders to address their 50% and 90% design review comments.
- Preliminary Design: A 50% and 90% design will be required of the successful bidder for the RFP. Both design milestones shall be released to stakeholders for comment.
- Final Design of Plans, Specifications and Estimate: This task is intended to transition Preliminary Design, Task 6 and Task 7 to bid-ready construction documents, affirm construction funding, and confirm approval for release by sponsoring agencies.

Final Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Develop and Release Request for Proposal (RFP)	July 2013	Not yet begun	✓	
Stakeholder Outreach	April 2013 to November 2013	Not yet begun		✓
Preliminary Design	July 2013 to September 2013	Not yet begun	✓	
Final Design of Plans, Specifications and Estimate	September 2013 to November 2013	Not yet begun		✓

Task 6: Environmental Documentation

Upper Malibu Watershed Restoration

Work Plan

Based on a similar creek restoration project recently completed by the City of Calabasas, it is anticipated that the Project will result in an initial study and mitigated negative declaration. Properly-developed and prompt CEQA notices shall be filed with the Los Angeles County Recorder.

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Initial Study and Mitigated Negative Declaration	June 2013 to August 2013	Not yet begun	✓	

Task 7: Permitting

Performed concurrently with Task 4, and throughout the final design identified in Task 5 and documentation in Task 6, this task will obtain all necessary permits such as California Department of Fish and Game streambed alteration permit, Los Angeles Regional Water Quality Control Board 401 certification, and United States Army Corp of Engineers 404 permit. The types of permits necessary will be determined during the design task.

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Permitting	February 2013 to October 2013	Underway	✓	

(d) Construction/Implementation**Task 8: Construction Contracting**

This task involves construction of the bid package identified in Task 5. The construction contract will be awarded to the lowest responsive bidder in a competitive bidding process. The City of Agoura Hills shall advertise for bids once it has received official notice of Grant Award and completion of Task 5. The advertisement period shall be 45 days with a staff report requesting the City Council to award the contract at the next scheduled City Council meeting. Upon award by the City Council, the City shall issue a Notice to Proceed within 30 days.

Upper Malibu Watershed Restoration

Work Plan

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of Bid Packages	September 2013 to November 2013	Not yet begun		✓
Pre-bid Meeting Minutes	December 2013	Not yet begun		✓
City Council Award of Construction Contract	January 2014	Not yet begun		✓
Notice to Proceed	January 2014	Not yet begun		✓
Notice of Completion	January 2015	Not yet begun		✓
Final Construction Summary Report	February 2015	Not yet begun		✓

Task 9: Construction

Efforts performed in Task 9: Construction will be developed during Task 5 and Task 8.

Subtask Descriptions:*Subtask 9.1 Mobilization and Site Preparation:*

For both the Medea Creek and Las Virgenes Creek Restoration areas, mobilization and site preparation will include setting up equipment and materials onsite.

Subtask 9.2 Project Construction:

Project construction for both the Medea Creek and Las Virgenes Creek restoration sites will include the following items:

- Clearing and grubbing, channel demolition and removal
- Earthwork, including side slopes, terraces, low-flow channel, rock groin, and willow trenches
- Planted rock toe revetment
- Planted rock groin
- Planted rock weirs and pool
- Willow trench staking
- Rootwads installation

Upper Malibu Watershed Restoration

Work Plan

- Planted Coir Bio D Block installation
- Hydroseeding
- Erosion control blankets: terrace
- Erosion control blankets: slopes
- Irrigation of installed plants
- Planting of native species
- Retaining walls
- Concrete masonry floodwalls

Subtask 9.3 Performance Testing and Demobilization:

The Project will not require performance testing, as is typical for restoration projects. Demobilization will include removal of all equipment and vehicles from the work sites.

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Mobilization and Site Preparation at Medea Creek Site	March 2014	Not yet begun		✓
Mobilization and Site Preparation at Las Virgenes Creek Site	March 2014	Not yet begun		✓
Subtask 9.2 Project Construction				
Construction at Medea Creek Site	March 2014 – December 2014	Not yet begun		✓
Construction at Las Virgenes Creek Site	March 2014 – December 2014	Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Demobilization at Medea Creek Site	December 2014	Not yet begun		✓
Demobilization at Las Virgenes Creek Site	December 2014	Not yet begun		✓

(e) Environmental Compliance/Mitigation/Enhancement**Task 10: Environmental Compliance/Mitigation/Enhancement**

Detailed efforts under Task 10 shall be determined upon completion of Tasks 6 and 7.

Upper Malibu Watershed Restoration

Work Plan

Environmental Compliance/Mitigation/Enhance Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Environmental Mitigation	March 2014 to January 2015	Not yet begun		✓

(f) Construction Administration**Task 11: Construction Administration**

Construction administration activities will be performed by the City of Agoura Hills Engineering Department with the assistance of contract staff. Contracting staff will provide assistance on an as-needed basis during the construction phase per the current On-Call Professional Services Contract. Construction administration shall consist of conducting the preconstruction meeting, field inspections, status meetings with the contractor, paying invoices, review of change orders, and other general construction engineering services.

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Pre-Construction Meeting Minutes	February 2014	Not yet begun		✓
Field Inspection Reports	February 2014 to December 2014	Not yet begun		✓
Construction Status Reports and Invoices to Cities	February 2014 to December 2014	Not yet begun		✓
Change Orders with Determination	February 2014 to December 2014	Not yet begun		✓

(g) Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include development of a performance measures and monitoring plan, and development of financing.

Upper Malibu Watershed Restoration

Work Plan

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Performance Measures and Monitoring Plan	October 2013 - December 2014	Not yet begun		✓
Development of Financing	October 2013 - January 2014	Ongoing		✓

Discussion of Standards

This Project's work and materials will be in full accordance with the latest rules and regulation of safety orders of the Division of Industrial Safety, the Uniform Plumbing Code, and other applicable laws or regulations, including all local codes, to be determined during the design phase of the Project.

Vermont Avenue Stormwater Capture and Green Street Project

Vermont Avenue Stormwater Capture and Green Street Project

Description

The Vermont Avenue Stormwater Capture and Green Street Project (Project) will implement a series of stormwater best management practices (BMPs) along an area known as the Vermont Corridor in the City of Los Angeles (City). A “Green Street” is a street that uses vegetated facilities to manage stormwater runoff at its source, and is considered a sustainable stormwater strategy that meets regulatory compliance and resource protection goals by using a natural systems approach to manage stormwater, reduce flows, improve water quality and enhance watershed health. As part of the Project, the City will assess total cost effectiveness, land use, and environmental compatibility of stormwater BMPs. The Project will serve as a model for further development of the Vermont highway corridor and for other distributed BMP measures, such as the design and installation of Green Street Standard Plans, and BMPs that will be pilot tested for the first time at the highway scale. The City’s stormwater greenway development program, Greenways to Rivers Arterial Stormwater Systems or “G.R.A.S.S.” will establish the regional framework for organizing arterial greenways such as the Vermont corridor that connect sub-watersheds. The Project focuses on the immediate, or local scale, of stormwater BMPs; however, the goal is to apply these lessons to other major highways at the city-wide scale for the City’s watershed master planning and stormwater enhancement efforts. The wide-scale implementation of the BMPs that are developed and or refined by this Project will assist the City in its TMDL compliance and in meeting regional water quality standards.

The targeted Project area(s) are located in a heavily urbanized sub-watershed along Vermont Avenue between Gage Avenue and Florence Avenue, and on the eastern tributary side streets. Construction areas are only within the public rights-of-way. Outreach efforts will focus on raising public awareness of low impact development (LID) measures for capturing and filtering, using and/or infiltrating stormwater at the source and on private property. The Project area is tributary to the Ballona Creek watershed which drains to the Ballona Wetlands, Ballona Estuary, and the Santa Monica Bay. These waters are 303(d) listed for a number of constituents including trash, metals, toxicity, pesticides, organics and pathogens. Total Maximum Daily Loads (TMDLs) are currently in place for metals, bacteria, toxic pollutants and trash. By implementing the selected stormwater BMPs, this Project will help to reduce the anticipated contaminants, and help the City meet its TMDL requirements. The prioritized sub-watersheds on which this Project will focus include Area A, Area B, and Area C.

Vermont Avenue Stormwater Capture and Green Street Project

- **Area A** encompasses 4.7 acres of mostly multi-family residential dwellings near a grassy median. This area was selected based on its potential to capture pollutants and because it contains sufficient public right-of-way to capture and treat the $\frac{3}{4}$ -inch (or 85th percentile) storm event (design storm). This sub-watershed runs parallel to Gage Avenue, a busy street where high pollutant loadings from vehicles are anticipated. It contains an asphalt median that is ideal for siting a biofiltration swale and dry-wells. This Project will aim to capture the entire design storm in the public right of way, including this median.
- **Area B** was chosen for its potential for capturing pollutant loadings. It is one of the largest single sub-watersheds in the Project area, totaling 16.9 acres. Water drains along both local (68th Street) and major highways (Hoover Street and Vermont Avenue). BMPs used in this area will utilize both the public right of way and private property to capture the design storm. This area is also favorable because it contains a public school that presents an opportunity for educational outreach. BMPs will be maximized in the public right of way. However, private participation will be needed in order to address the large drainage area. To solicit private participation, public outreach and education will be conducted by Heal the Bay. Property partnerships considered for BMP installation include residential properties, the Los Angeles Unified School District (LAUSD), and commercial properties along Vermont Avenue.
- **Area C** is located northeast of the intersection of Vermont and Florence Avenues, a very large and busy intersection. This area constitutes two sub-watersheds totaling 17.4 acres and is prone to nuisance flooding. It contains a private school and church that present the opportunity for key community partnerships. Similar to Area B, installation of BMPs in a combination of both public right of way and private properties will be utilized in this area to capture the design volume.

The target stormwater capture is a $\frac{3}{4}$ -inch 24-hour storm⁷ using a combination of distributed BMPs installed by the City of Los Angeles. Examples of distributed BMPs include existing standard plans such as parkway swales, tree well watering devices, median landscaping and infiltration swales. Another BMP includes a median island landscape with a drywell for infiltration and ecological enhancement. Landscaped vegetated stormwater curb extensions (VSCE's) will improve the right-of-way by reducing traffic speed and street crossing distances, while applying water conserving and stormwater filtering landscapes. The Project will also include a non-structural outreach and community participation program led by the partner

⁷ The $\frac{3}{4}$ " storm is considered the 85th percentile storm for the greater Los Angeles area.

Vermont Avenue Stormwater Capture and Green Street Project

agency, Heal the Bay, that targets schoolchildren from a public and a private school as well as their families and other residents within the Project areas. The Project will directly involve community members along Vermont Avenue, residents within the sub-watersheds along Gage Avenue, 68th Street, 70th Street, 71st Street, and Florence Avenue within 0.5 miles of the Project.

The City of Los Angeles is the Project's primary implementing agency and will lead construction, administration, engineering, and monitoring tasks. Heal the Bay is the City's Project partner, and will lead public survey and outreach tasks.

Goals and Objectives

The primary goals of this Project are to:

- Create a model for cost-effective green street installation for use in city-wide applications
- Demonstrate water quality capture measures on a major highway and tributary sub-watersheds
- Determine treatment capacity that will provide the greatest benefit and cost-effectiveness
- Develop and test scalable improvements that will be integrated with standard BMP plans and applied at a regional level.
- Improve water quality in receiving water bodies
- Reduce the volume of stormwater flows
- Educate the adjacent community about water quality, stormwater, and biodiversity
- Engage the community and encourage stewardship of the Project, while encouraging voluntary efforts to capture and conserve stormwater on private property
- Beautify Vermont Avenue by adding trees and vegetation
- Conduct outreach and education activities targeting all sub-watershed residents
- Survey residents at the start and end of the process to determine effectiveness of outreach, including qualitative measures regarding awareness of biodiversity and stormwater
- Educate school age children on the benefits of water conservation, water quality, and the tools for improving stormwater quality

These Project goals will help the Greater Los Angeles County Region to meet the following Integrated Regional Water Management (IRWM) Plan objectives:

Vermont Avenue Stormwater Capture and Green Street Project

- Comply with water quality regulations (including TMDLs) by filtering and improving the quality of urban runoff, or stormwater
- Protect, restore and enhance natural processes and habitats
- Maintain and enhance public infrastructure related to flood protection, water resources and water quality

Purpose and Need

The Ballona watershed, which drains to the Ballona Wetlands, Ballona Estuary and Santa Monica Bay, is 303(d) listed as impaired for a number of constituents. TMDLs for trash, metals, toxic pollutants, and bacteria have been developed for these waters that will require the City of Los Angeles to reduce pollutant loading. The Project reduces the volume and pollutant loadings of runoff that would otherwise drain to Ballona Creek. In addition, this Project is located in a disadvantaged community (DAC) with low to no vegetative cover, mostly hardened surfaces such as concrete and asphalt, and which will benefit from the aesthetic and educational components of the Project.

The purpose of this Project is to improve stormwater quality by converting underutilized right-of-ways, including sidewalks and parkways, into functional environmental, social, and economic units of the urban infrastructure that will assist in meeting the City's Municipal Separate Stormwater Sewer System (MS4) permit requirements. Applications of distributed measures throughout the sub-watersheds along with raising public awareness of their role in pollution reduction have demonstrated effectiveness and cost benefits. By applying these measures at the Project scale, we can further develop standards and eventually extrapolate a wider distribution of benefits for similar projects implemented at the regional scale.

The data collected from this Project will aid the City in projecting the capacities for green streets standard plans as BMPs on other major highways in the City. This Project will also serve as a demonstration of green street standard plans and identify factors that contribute to their effectiveness in siting and optimal implementation for future projects.

Integrated Elements of Project

Information from this Project will be applied to other efforts such as the G.R.A.S.S. program, which is a series of regional storm-water greenways being planned in a collaborative effort of stakeholders, major universities, and the City of Los Angeles Bureau of Sanitation (BOS), Watershed Protection Division. The Project will also help the City achieve compliance with the

Vermont Avenue Stormwater Capture and Green Street Project

water conservation goals of the City of Los Angeles Department of Water and Power, LID Ordinance, and State as well as local planning, public works and zoning codes. Project information will be available for use in future citywide enhanced watershed management plans (EWMP's) under the new MS4 Permit. Utilization of greening elements developed in this Project will assist in removal of pollutants from sub-watersheds that would otherwise discharge to Ballona Creek, ultimately integrating the Project with the City's Ballona Creek Watershed planning efforts and assisting in attaining permit compliance.

Completed Work

Work that has already been completed for this Project includes:

- Site scoping and measurements along Vermont Avenue to identify obstructions and constraints as well as potential areas for siting Project elements
- Consultations with LAUSD on new school construction and potential for BMP inclusion adjacent to the new school
- Meetings with administrators at Saint Raphael School to form community relationships and to discuss the Project outreach
- Calculation of pollutant loadings and runoff volumes
- Geotechnical Review/Analysis performed by Leighton Consulting, Inc. for the former Project proposed at this segment of Vermont Avenue by the Community Redevelopment Agency: Geotechnical Exploration Report Proposed for Vermont Avenue Median Park Project, on Vermont Avenue from Gage Avenue to Manchester Avenue, Los Angeles, California as Prepared for Community Redevelopment Agency Los Angeles (CRA/LA), November 20, 2009
- Geotechnical reviews with in-house engineering and geotechnical staff

Work that has not yet been completed, but is expected to be completed prior to the grant award date, includes:

- Further community engagement
- Concept Design Report
- Site Inventory, Planning and Agency Reviews
- Water Quality Analysis

Vermont Avenue Stormwater Capture and Green Street Project

Existing Data and Studies

Besides the concept report, water quality analysis and geotechnical review/analysis described above, existing studies and plans that support this Project include:

- *Vermont Avenue Storm Water Capture and Green Street Project*: This concept report estimates the amount of stormwater to be captured from tributary areas. The target volume is based on capturing the 85% percentile storm event (runoff from 3/4-inch rainfall depth) from the tributary areas, and was estimated as a spreadsheet exercise.
- *Los Angeles River & Ballona Creek TMDL Implementation Plans*: The TMDL Implementation Plans include baseline pollutant levels and target levels for the City of Los Angeles
- *City of Los Angeles Water Quality Compliance Master Plan for Urban Development (WQCMPUR)*
- Los Angeles (and other National) Low Impact Development (LID) Ordinances, Handbooks, rules and guidelines.
- City of Los Angeles Greenstreet Standard Plans
- Ballona Creek TMDL Implementation Plan

Each of these documents is included in the **Appendix CD**.

Project Maps

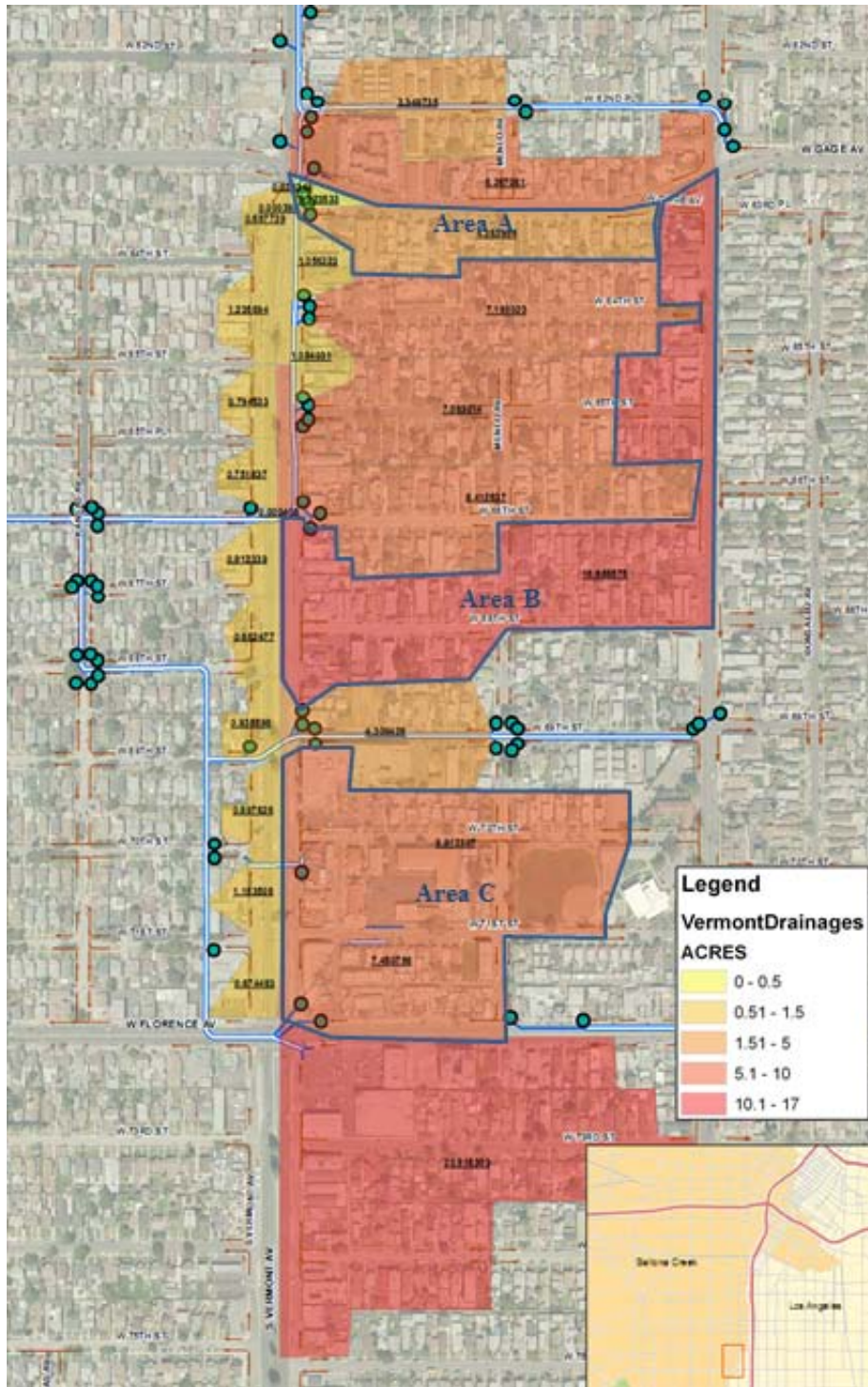
Figure 3-23 shows the map of the area considered for this Project. The blue points on the map indicate existing catch basins. The various shades of orange indicate the size of the catchment areas upstream of these catch basins. **Figure 3-24** shows the land uses in and around the Project area (outlined in blue). **Figure 3-25** shows proposed sampling and monitoring locations for the Project (denoted by pink stars).

Project Timing and Phasing

The Project consists of three main areas, designated as Areas A, B and C. Area A at the north end of the Project is 4.7 acres. It will target a capture volume of 9,553 cubic feet. Area B is 16.9 acres and would target a volume of 34,791 cubic feet of runoff. Area C, at the south end of the Project, is 17.4 acres, and targets a volume of 36,662 cubic feet of runoff. These Project areas will each operate on a stand-alone basis and be partially funded by, and fully functional with, this proposal.

Vermont Avenue Stormwater Capture and Green Street Project

Figure 3-23: Project Map

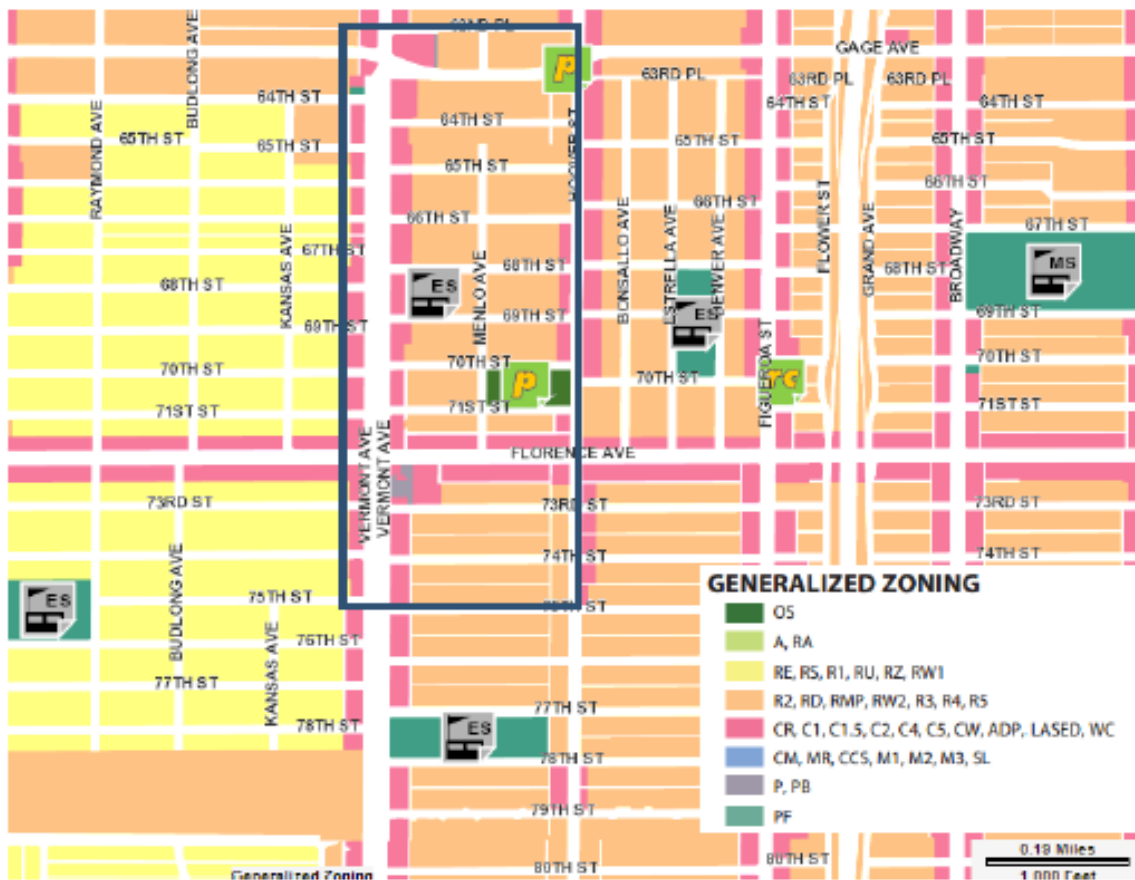


Vermont Avenue Stormwater Capture and Green Street Project

Figure 3-24: Project Area and Land Use Map

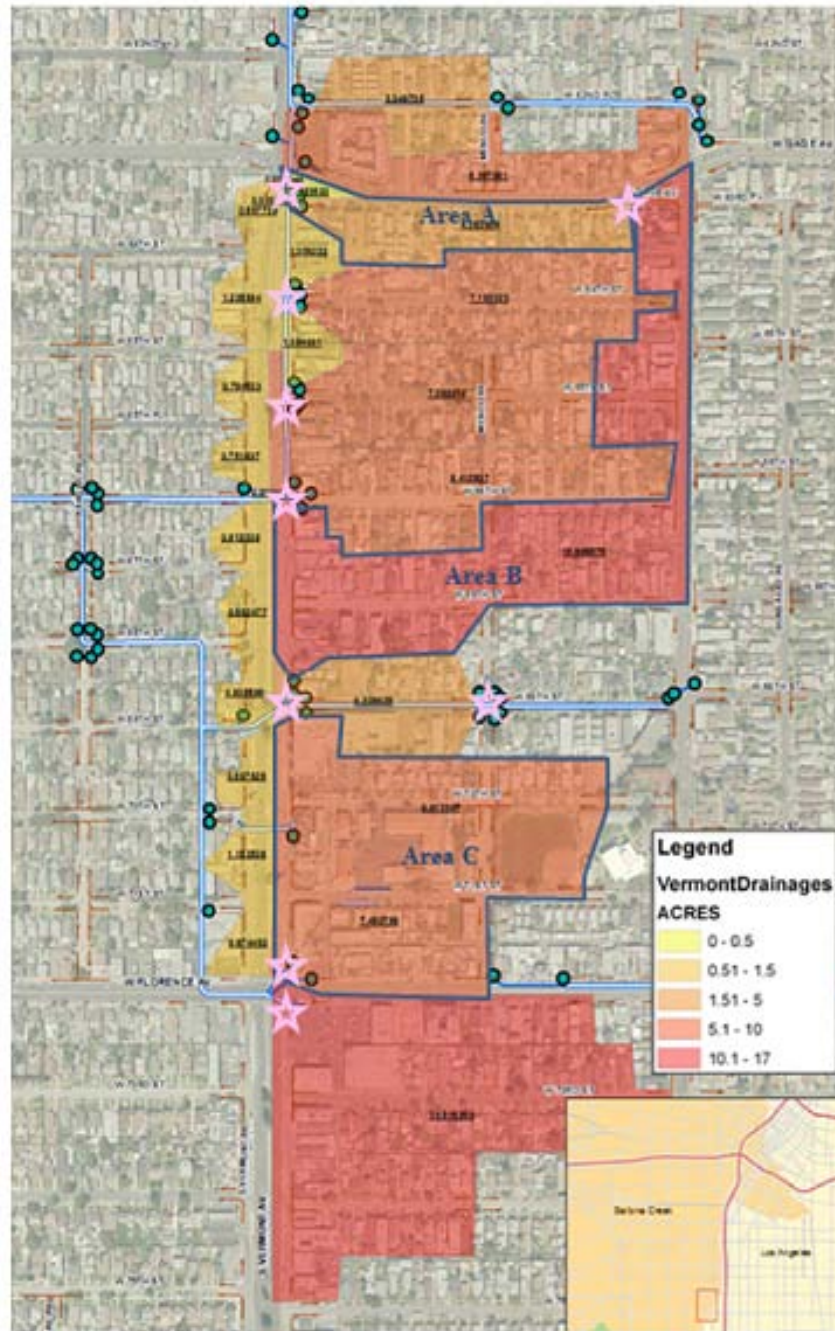
The land uses in the area are as follows:

- High Density Single Family (19%),
- Light Industrial (7%),
- Vacant (3%),
- Retail (17%),
- Multi-family Residential (4%),
- Transportation (13%), Education (3%), and Mixed-residential (46%).



Vermont Avenue Stormwater Capture and Green Street Project

Figure 3-25: Project Monitoring Locations



★ Tentative Monitoring Locations

Vermont Avenue Stormwater Capture and Green Street Project

Proposed Work

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs

Task 1: Project Administration

Project administration work is to be completed under this task will be performed by the City of Los Angeles. The administration tasks will consist of preparation of invoices and backup documents, data management, grant contract administration, and work order processing/project oversight and management. The Project Manager (PM) will also be responsible for preparation of an MOU with the partner agency, Heal the Bay.

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Administration	October 2013 – March 2018	Not yet begun		✓

Task 2: Labor Compliance Program

The City of Los Angeles has an ongoing Labor Compliance Program; however, the city will attempt to secure city forces for construction in which case a Labor Compliance Program will not be required.

Vermont Avenue Stormwater Capture and Green Street Project

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Labor Compliance Program Management (City of Los Angeles Contract Admin, LCP ID 009)	Ongoing	Ongoing		✓

Task 3: Reporting

Quarterly, Final and Post Completion Grant Reports will be prepared and submitted to DWR by the City. Reports on public surveys and outreach will be submitted to the City by the Project partner, Heal the Bay.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Quarterly Progress Reports and Final Report	Quarterly after Oct. 1, 2013	Not yet begun		✓
Post Completion Reports	Within three months of Project being active for one year	Not yet begun		✓

(b) Land Purchase/Easement

Land purchase is not required for this Project. The City of Los Angeles owns the right-of-ways that will be required. Where private landowners agree to partner with the City on this Project, the work will be conducted by the landowners or permits to enter will be acquired.

(c) Planning/Design/Engineering/Environmental Documentation

Task 4: Assessment and Evaluation

Assessment and evaluation activities will include a complete site survey, a water quality analysis, a geotechnical review/analysis, and a supplemental geotechnical analysis.

Vermont Avenue Stormwater Capture and Green Street Project

The site and geotechnical surveys will be performed in-house by the Office of Geotechnical and Engineering Services within the City Bureau of Engineering (BOE). Water quality samples will be collected by BOS staff and analyzed in-house by our certified environmental monitoring lab.

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Assessment and Evaluation	June 2012 - September 2013	Underway	✓	

Task 5: Final Design

Project design will be led by the BOS, Watershed Protection Division. The detailed work that will be necessary to complete Project design includes:

- Concept Design Report- A monitoring plan and the community surveys-outreach strategy will be developed by the BOS and Heal the Bay.
- Site inventory, planning and agency reviews
- 60% Design (includes location of all proposed site elements)
- 100% Design (includes a full set of engineering and landscape construction plans and specifications)

Footprints of the specific BMPs that will be utilized will be determined during the design process, and will be based on existing or proposed City of Los Angeles' standard BMP plans

Project Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Project Design	September 2013 – December 2014	Not yet begun		✓

Task 6: Environmental Documentation

CEQA documentation will be required for this Project. Preparation of an initial study and a categorical exemption will be performed by February 2014.

Vermont Avenue Stormwater Capture and Green Street Project

Work Plan

Environmental Documentation Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Initial Study and Categorical Exemption	February 2014	Not yet begun		✓

Task 7: Permitting

City of Los Angeles B-Permits will be required from the Bureau of Engineering. The Bureau of Sanitation will review and approve all BMPs to be implemented, and the Bureau of Street Services will review and approve all landscape work in parkways. Either standard plans will be used or B-permits will be issued. For non-standard design features, a revocable permit will also be needed. Building and safety permits will be obtained as necessary after project design is completed, and as outreach continues with property owners.

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
City of Los Angeles Permits	July 2014 – July 2015	Not yet begun		✓

(d) Construction/Implementation

Task 8: Construction Contracting

The Project construction plan involves the use of city forces, and would therefore likely avoid construction contracting costs. However, in the event crews are not available to construct, the funding that is shown in Attachment 4 - Budget will be added to the construction contingency. In this case, the City of Los Angeles standard Bid Notification Process includes: posting in the Los Angeles Business Assistance Virtual Network (LABVN), advertising, bid reading, and contract award to lowest responsible bidder.

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Bid-and-Award Process	December 2015- March 2016	Not yet begun		✓

Task 9: Construction

Vermont Avenue Stormwater Capture and Green Street Project

Construction of the Project will include the activities described below.

Subtask Descriptions:

Subtask 9.1 Mobilization and Site Preparation:

Mobilization and site preparation activities will consist of securing laydown areas for construction with perimeter fencing, establishing safety measures, and preparing and executing a SWPPP for construction. A construction start meeting will also be conducted prior to the beginning of these activities.

Subtask 9.2 Project Construction:

Project construction will involve demolition, removal and disposal, and installation of Project and BMP elements. BMP elements for each area will be determined in the design phase, but may include any of the following elements available as standard plans from the City of Los Angeles:

- Parkway swales
- Vegetated stormwater curb extensions
- Dry-wells
- Tree well watering devices
- Green street infiltration systems

Subtask 9.3 Performance Testing and Demobilization:

Following construction, post construction performance reviews will be conducted, and monitoring and analyses will be performed on the installed BMPs. In prior projects, BMPs have needed minor adjustments to checkdam locations, inlet heights or other refinements of the new details that are being pilot tested. This is called “optimization”. The data gathered from this process along with the surveys and outreach will be used to improve existing or to develop new standard plans. The process will provide new standards that can be applied to other areas of the City (see Standards Development and Project Integration under “Other” category).

Vermont Avenue Stormwater Capture and Green Street Project

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Construction Start Meeting and Contractor Mobilization		Not yet begun		✓
Subtask 9.2 Project Construction				
Project Construction		Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Post Construction Activities		Not yet begun		✓

(e) Environmental Compliance/Mitigation/Enhancement

Task 10: Environmental Compliance/Mitigation

Regulatory Environmental Compliance/Mitigation activities are not anticipated. Environmental performance measures will be developed and used to evaluate the Project results.

Environmental Compliance/Mitigation/Enhance Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Monitoring/Public Surveys/Enhancement	December 2016 - December 2018	Not yet begun		✓

(f) Construction Administration

Task 11: Construction Administration

For projects built in-house, construction administration is not necessary. The City of Los Angeles Bureau of Contract Administration (BCA) could provide construction oversight during the construction phase of the Project if City forces are not available, and if the Project was required to bid-and-award. The City has allocated funds in case City forces are not available at the time of construction; however, this funding would go to construction or construction contingency if not required.

Vermont Avenue Stormwater Capture and Green Street Project

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Construction Contractor	April 2015 – October 2016	Not yet begun		✓

(g) Other Costs

Task 12: Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above.

Following construction close out, additional Project activities include performance measures and monitoring for optimization of the BMPs to insure performance prior to end of construction (see Subtask 9.3). Following optimization, analysis of costs, surveys, outreach and performance provides information necessary to refine the current standard plans and to develop new standards for adoption by the City. This is referred to in Task 12 (c).

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
(a) Development of Financing	September 2013	Underway	✓	
(b) Performance	September 2013	Not yet begun	✓	
(c) Standards Development and Project integration	September 2013	Not yet begun		✓

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, laboratory analysis, and classification methods listed below:

- Standard specification of Public Works Construction 2009
- Standard Plans of the Los Angeles County Department of Public Works; 3080-2, 3090-1, 3091.1, 3093-1, and 6002-1.
- Green Street Standard Plans S-457, S-481, S-482, S-484, S-489, S-490, S-491, S-494
- Occupational safety and health administration
- American Society for Testing and Materials

**Vermont Avenue Stormwater Capture and Green
Street Project**

- Uniform Building Code
- State Water Resources Control Board
- Construction Site Best Management Practices Manual
- American Water Works Association.

Walnut Spreading Basin Improvements

Walnut Spreading Basin Improvements

Description

The Walnut Spreading Basin is a 16-acre groundwater replenishment facility that recharges the Main San Gabriel Groundwater Basin using local surface water flows and is owned and operated by the Los Angeles County Flood Control District (LACFCD). The Main San Gabriel Groundwater Basin is an adjudicated basin managed by the Main San Gabriel Watermaster and is dependent upon replenishment to maintain basin levels. The Walnut Spreading Basin currently has a maximum intake of 150 cubic feet per second (cfs) from the Walnut Wash with a total water storage capacity of approximately 170 acre-feet and a percolation rate of approximately 5 cfs.

The Walnut Spreading Basin Improvements Project (Project) will implement improvements to this facility that will allow for increased recharge capacity. These improvements include the following:

- Clean out of the basin to remove the fine sediments and clays to increase the percolation rate and increase detention volume.
- Installation of a pump station with two pumps to drain the facility, which will both improve the percolation rate in the Walnut Spreading Basin and convey water to other downstream replenishment facilities when optimal. Prolonged wet periods decrease the percolation rate significantly. With the pump station, the basin will be drained by pumping the water back into Walnut Wash annually to allow for drying; drying has been shown to improve percolation rates in deep spreading basins.
- New flow measurement equipment to monitor flow rates into and out of the basin

After Project implementation, the Walnut Spreading Basin will be used as a combination spreading basin and detention basin (currently it is only used as a spreading basin), and it could be designed to allow for passive recreation in the future.

The LACFCD is the Project's primary implementing agency and is partnering with the Upper San Gabriel Municipal Water District (USGMWD) and Three Valleys Municipal Water District (TVMWD).

Goals and Objectives

The primary goal of the Project is to improve the groundwater recharge capacity of the Walnut Spreading Basin by increasing the facility's detention volume and percolation rate. In addition

Walnut Spreading Basin Improvements

to conserving water, these improvements will eliminate potential flooding downstream of the spreading basin by increasing the volume of the basin and capturing additional stormwater that might otherwise cause flooding downstream. The pump station to be installed can then be used to pump water to downstream facilities that have additional spreading capacity. In addition, a groundwater quality benefit for the water recharged at the Walnut Spreading Basin will be provided through soil aquifer treatment, wherein contaminants from stormwater runoff captured in the spreading basin will be filtered by the soil as opposed to being carried to receiving water bodies.

The Project will help to address the following Greater Los Angeles County Region (Region) Integrated Regional Water Management Plan (IRWM Plan) goals:

- Optimize local water resources to reduce the Region’s reliance on imported water
- Protect and improve groundwater and drinking water quality
- Maintain and enhance public infrastructure related to flood protection, water resources and water quality

Purpose and Need

The purpose of the Project is to improve operations and increase groundwater recharge at the Walnut Spreading Basin in order to replenish the Main San Gabriel Groundwater Basin and increase local groundwater supply. This will allow the San Gabriel Valley water users to pump additional groundwater and thus reduce their dependence on imported water.

Local groundwater supply is a key resource that has historically been utilized to support 58%⁸ of the San Gabriel Valley’s water demand, though the area is still highly dependent on imported water to meet both retail demand and replenishment needs. Replenishment of the Main San Gabriel Groundwater Basin is vital to sustain the long-term reliability of the local groundwater supply and reduce the Region’s dependence on imported water.

Integrated Elements of Project

The Walnut spreading basin is a part of a network of 17 spreading grounds which LACFCD operates to replenish the Main San Gabriel Groundwater Basin. Improvements made to any of these spreading grounds will improve the ability of the LACFCD to capture stormwater for replenishment of groundwater, and provide better flood management.

Completed Work

⁸ RMC, 2013. *Water Supply Objective and Targets*. Table 1: Current (2010) Direct Use Supplies. Prepared for the Greater Los Angeles County IRWM Region.

Walnut Spreading Basin Improvements

Several studies and design tasks have been completed in preparation for the implementation of the Project. Completed work includes the *Foundation and Backfill Recommendations for the Walnut Creek Spreading Basin Pump Station Project*, *Walnut Creek Spreading Basin Pump Station Project Concept Report and Conceptual Plans*, 30% design plans, 60% design plans, and 90% design plans. A description of this work is provided below under “Existing Data and Studies.”

Work that has not yet been completed but is expected to be completed prior to the grant award date includes:

- Acquisition of regulatory permits/approvals
- Final Design

Existing Data and Studies

As described in the Completed Work section, several studies have been prepared in support of this Project’s site location, feasibility and technical methods. These include:

- *Foundation and Backfill Recommendations for the Walnut Creek Spreading Basin Pump Station Project*: A geotechnical and subsurface investigation report was completed in May 2012 to determine the soil conditions for the foundation design of the pump station.
- *Walnut Creek Spreading Basin Pump Station Project Concept Report and Conceptual Plans*: The Concept Report, completed in May 2011, describes the current issues with the spreading ground facilities and recommendations for improvements. Alternatives to improve the spreading grounds percolation through dewatering are included. The Concept Report also describes estimated costs for each alternative. Conceptual Plans show the current configuration of the spreading ground facilities and the different alternatives with potential improvement types and locations.
- 30% Design: The 30% Design Plans, completed in May 2011, establish the scope, schedule, budget, fee and overall project design, including the forms, sizes, and overall appearance through further development of the plans, sections, typical construction / fabrication details, and equipment layouts.
- 60% Design: The 60% Design Plans, completed in June 2012, incorporate any changes or comments from the 30% Design Plans and also describe all the Project systems in further detail.

Walnut Spreading Basin Improvements

Work Plan

- 90% Design: The 90% Design Plans, completed in November 2012, are engineering drawings and specifications that provide the final dimensions, locations and associated details of the Project. The specifications identify major building materials and systems, and establish quality standards.

Each of these documents is included in the **Appendix CD**.

Project Map

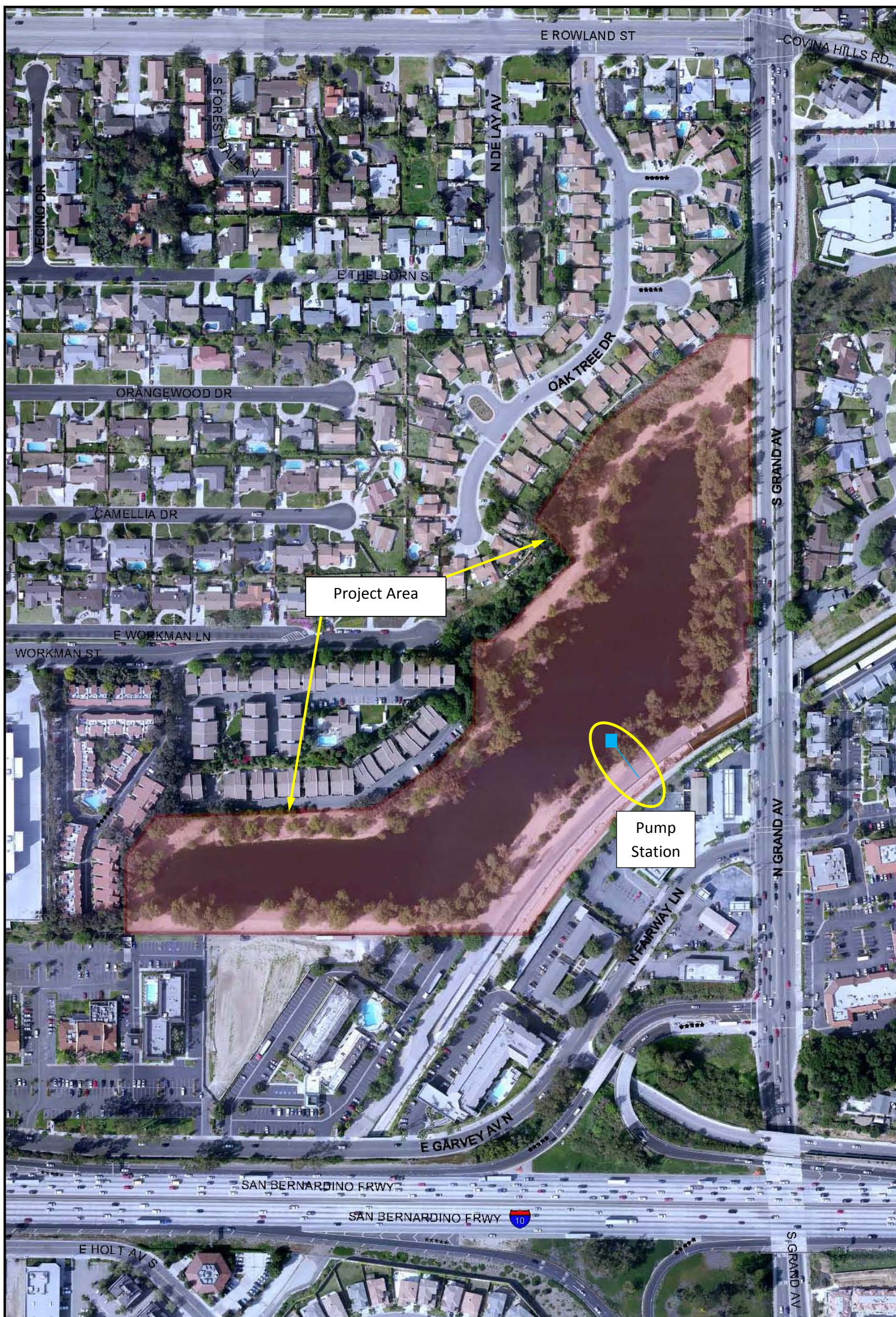
The Project location and boundaries are shown in **Figure 3-26**.

Project Timing and Phasing

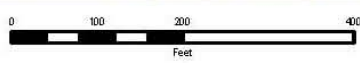
This Project is not currently planned as part of a larger or multi-phase project. However, the surrounding undeveloped area could be open to passive recreation opportunities in the future. This additional recreation opportunity will require partners to pursue, which the LACFCD is currently exploring. Since the main benefits of the Project are to increase water supply and improve water quality, the Project could be completed on its own. The recreation and open space could be completed in a later phase and would turn the Project into a multi-use benefit project with recreational benefits to the community.

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Figure 3-26: Walnut Spreading Basin Location Map



Data contained in this map is produced in whole or part from the Los Angeles County Department of Public Work's precise database.



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Walnut Spreading Basin Improvements**Proposed Work**

The following sections discuss work items necessary for implementation of the Project. The work items are divided into each of the eight primary budget categories and associated tasks as shown on Table 6, pages 33 and 34, of the Proposition 84, Round 2 Implementation Grant PSP. Work is divided into tasks completed before the grant award date (before October 1, 2013) and after the grant award date (after October 1, 2013).

(a) Direct Project Administration Costs**Task 1: Project Administration**

Project administration work to be completed under this task will be performed by a LACFCD Project Manager (PM) with assistance from an Assistant Project Manager. The administration tasks will consist of managing the planning, environmental compliance, and design efforts; data management; coordinating with LACFCD's budgeting personnel; coordinating with the State on grant management, including invoicing and status reports; and resolving any issues that arise. The PM will also be responsible for coordinating with any non-state funding partner agencies through scheduled meetings, phone and electronic mail communications, and establishing memorandums of understanding (MOUs). MOUs for cost sharing between the LACFCD, the USGMWD and TMVWD are in progress.

Project Administration Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of invoices and backup documentation	Quarterly after contract execution	Not yet begun		✓
Coordination with non-state funding partner agencies	March 2009 – September 2013	MOUs in progress	✓	

Task 2: Labor Compliance Program

The LACFCD will serve as the construction manager of the Project. The LACFCD has an approved Labor Compliance Program (LCP), developed by a consultant, Solis Group. All future construction contracts to be awarded for the Project will require compliance with the LCP. Solis Group will administer the LCP. If, during the course of project implementation, changes are

Walnut Spreading Basin Improvements

Work Plan

required to the LCP or a new administrator is required, the LACFCD will engage Solis Group or another qualified firm to update and/or administer the LCP and will notify DWR.

Labor Compliance Program Activities or Deliverables	Completion Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Labor Compliance Program Management (County of LA Dept of Public Works LCP ID: 2011.00802)	January 2014 – July 2014	Ongoing		✓

Task 3: Reporting

The LACFCD will submit quarterly, final and post completion reports to the State per grant requirements.

Reporting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Quarterly Progress Reports	Quarterly after Oct. 1, 2013	Not yet begun		✓
Final Report	At completion of project	Not yet begun		✓
Post Completion Report	Annually following, beginning 3 months after project has been implemented one year	Not yet begun		✓

(b) Land Purchase/Easement

The Project will not require purchase of land or acquisition of right-of-ways as the property is already owned by the LACFCD.

(c) Planning/Design/Engineering/Environmental Documentation**Task 4: Assessment and Evaluation**

Assessment and evaluation activities have already been completed and include a subsurface investigation report which was completed in May 2012.

Walnut Spreading Basin Improvements

Work Plan

Assessment and Evaluation Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Walnut Creek Spreading Grounds Pump Station Project Foundation and Backfill Recommendations	Completed May 2012	Completed	✓	

Task 5: Final Design

A project concept report and conceptual design plans were completed in July 2010. 30%, 60%, 90%, and final design plans have been completed as of March 2013.

Project Design Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Walnut Creek Spreading Basin Pump Station Project Concept Report and Conceptual Plans	Completed July 2010	Complete	✓	
30% Design Plans	Completed May 2011	Complete	✓	
60% Design Plans	Completed June 2012	Complete	✓	
90% Design Plans	Completed November 2012	Complete	✓	
Final (100%) Design Plans	Complete May 2013	Underway	✓	

Task 6: Environmental Documentation

CEQA documentation will not be required as the Project involves some minor sediment removal that is not significant enough to require environmental documentation.

Task 7: Permitting

A United States Army Corps of Engineers Permit 408 will be required to connect the new pump station outlet to the Walnut Wash, which is owned by the Army Corps. Permit applications have not been submitted as of the date of this application package.

Walnut Spreading Basin Improvements

Work Plan

Permitting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Army Corps of Engineers (408)	February 2013 – July 2013	Not yet begun	✓	

(d) Construction/Implementation**Task 8: Construction Contracting**

The construction contracting for the Project will be handled by LACFCD staff in compliance with public contracting code. Prior to bid solicitation, the LACFCD's governing body, the County of Los Angeles Board of Supervisors (Board), is required to approve the Project and certify the environmental document. Tasks to secure the Contract award include: advertisement for bids, a pre-bid contractors meeting, bid opening, bid evaluation, and selection of contractor with lowest responsive bid. The Board would then award the contract unless it has delegated that authority to the Director of Public Works. A Notice to Proceed would then be issued.

Construction Contracting Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Preparation of Bid Packages	Complete September 2013	Not yet begun	✓	
Advertisement	Complete October 2013	Not yet begun		✓
Bid Opening	Complete December 2013	Not yet begun		✓
Award	Complete May 2014	Not yet begun		✓
Notice to Proceed	Complete May 2014	Not yet begun		✓

Task 9: Construction

Construction of the Project includes installation of pumps and a pipeline to send water from Walnut Spreading Basin back to Walnut Wash, and installation of a control system for the pumps to be installed at the crest of the spreading basin. Material will be excavated from the

Walnut Spreading Basin Improvements

entire basin, processed, and hauled away to a disposal site. New flow measuring instrumentation will also be installed.

Subtask Descriptions:*Subtask 9.1 Mobilization and Site Preparation:*

This subtask includes mobilization of equipment and installation of temporary construction trailers.

Subtask 9.2 Project Construction:

Project construction will include the following components: installation of the pumps and structure, installation of new pipeline, excavation in the basin, materials processing, and truck hauling of sediment to a disposal site.

Subtask 9.3 Performance Testing and Demobilization:

The pumps, control system and monitoring equipment will be performance tested prior to contractor demobilization. Contractor demobilization will only occur after final inspection and completion of all punch list items identified during final walk through.

Construction Activities or Deliverables	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Subtask 9.1 Mobilization and Site Preparation				
Mobilization and Site Preparation	Complete June 2014	Not yet begun		✓
Subtask 9.2 Project Construction				
Construction	June 2014-December 2014	Not yet begun		✓
Subtask 9.3 Performance Testing and Demobilization				
Performance Testing	Complete December 2014	Not yet begun		✓
Demobilization	Complete December 2014	Not yet begun		✓

(e) Environmental Compliance/Mitigation/Enhancement**Task 10: Environmental Compliance/Mitigation/Enhancement**

Walnut Spreading Basin Improvements

Work Plan

Project construction will not require environmental compliance measures as there are no CEQA documents required.

(f) Construction Administration**Task 11: Construction Administration**

The LACFCD has a dedicated Construction Division that administers numerous civil construction projects every year in conformance with the Public Contracting Code. Construction Division staff will manage the Project construction contract process and implementation. Construction administration activities will include general preparation of construction documents, advertisement for bids, award of construction contracts, construction contract administration, and construction inspection.

Construction Contracting Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Management of Construction Contractor	January 2014 – July 2015	Not yet begun		✓

(g) Other Costs

Additional activities will be necessary to meet grant requirements that do not fall under the categories above. These activities include Development of Performance Measures and Monitoring Plan, and Development of Financing.

Other Activity or Deliverable	Schedule	Status	Completion	
			Before Oct 2013	After Oct 2013
Development of Performance Measures and Monitoring Plan	March 2013 – January 2014	Not yet begun		✓
Development of Financing	March 2009 – September 2013	Underway	✓	

Discussion of Standards

This Project will meet all the following construction standards, health and safety standards, laboratory analysis standards, and classification methods listed below:

- Standard specification of Public Works Construction 2009

Walnut Spreading Basin Improvements

Work Plan

- Standard Plans of the Los Angeles County Department of Public Works 2000
- Occupational safety and health administration
- American Society for Testing and Materials
- 2011 County of Los Angeles Building Code (Title 26) Based on the 2010 California Building Code and the 2009 International Building Code
- Los Angeles County Department of Public Works "Construction Site Best Management Practices (BMPs) Manual"

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