

ATTACHMENT 3 – FRAMEWORK INTEGRATED REGIONAL WATER  
MANAGEMENT PLAN

**San Gabriel and Lower Los Angeles Rivers Watershed  
IRWM Implementation Grant, Step 1**

An Integrated Regional Water Management (IRWM) Plan is currently being developed for the San Gabriel and Lower Los Angeles Rivers Watershed Region (Region). A Framework IRWM Plan has been completed and has been adopted by the governing board of the Watershed Conservation Authority (WCA). The WCA resolution of adoption and Framework IRWM Plan follow this summary.

Appendix D of the Framework IRWM Plan contains a Work Plan that has been developed to complete the IRWM Plan for the Region. In addition, a copy of the schedule, showing the major steps and milestones, is included in Section 3 on page 16 of the Work Plan. As the schedule indicates, the IRWM Plan will be completed by October 31, 2006. All agencies that make up the Regional Water Management Group for this Region are a party to the Memorandum of Understanding described on page 3 of the Framework IRWM Plan and have agreed to adopt the plan upon its completion. All agencies will adopt the Final IRWM Plan by December 15, 2006.

A map showing the Region's boundaries is shown on page 2 of the Framework IRWM Plan.

June 30, 2005 – Item 8

RESOLUTION 2005-16

RESOLUTION OF THE WATERSHED CONSERVATION  
AUTHORITY ADOPTING THE SAN GABRIEL AND LOWER  
LOS ANGELES RIVER WATERSHED INTEGRATED  
REGIONAL WATER MANAGEMENT PLAN FRAMEWORK

WHEREAS, the Watershed Conservation Authority has been established to facilitate joint projects between the Rivers and Mountains Conservancy and Los Angeles County Flood Control District; and

WHEREAS, the Watershed Conservation Authority (WCA) has been established to focus on projects which will provide open space, habitat restoration, and watershed improvement projects in both the San Gabriel and Lower Los Angeles Rivers watershed; and

WHEREAS, the people of the State of California have enacted the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 (Bond Act); and

WHEREAS, it amended the California Water Code (CWC) to add, among other articles, Section 79560 *et seq.*, authorizing the Legislature to appropriate \$500 million for Integrated Regional Water Management (IRWM) projects; and

WHEREAS, approximately \$380 million is anticipated to be available for IRWM grants during two funding cycles; and

WHEREAS, the WCA considers the IRWM Grant Program an important fiscal resource for funding projects throughout the San Gabriel and Lower Los Angeles Rivers Watersheds; and

WHEREAS, this action is exempt from the environmental impact report requirements of the California Environmental Quality Act (CEQA); NOW


*Therefore be it resolved*, that the WCA hereby:

1. FINDS that this action is consistent with the purposes and objectives of the WCA.
2. FINDS that the actions contemplated by this resolution are exempt from the environmental impact report requirements of the California Environmental Quality Act.
3. ADOPTS the San Gabriel and Lower Los Angeles River Watershed Integrated Regional Water Management Plan Framework.
4. ADOPTS the staff report dated June 30, 2005.

~ End of Resolution ~

Resolution 2005-16

Passed and Adopted by the Board of the  
WATERSHED CONSERVATION AUTHORITY on June 30, 2005.



Frank Colonna, Chairperson

SAN GABRIEL AND LOWER LOS ANGELES RIVERS WATERSHED



FRAMEWORK INTEGRATED REGIONAL  
WATER MANAGEMENT PLAN

WATERSHED CONSERVATION AUTHORITY

JULY 2005

# Framework Integrated Regional Water Management Plan

**San Gabriel and Lower Los Angeles Rivers Watershed**

July 2005

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- Appendix C Project Criteria and Scoring
- Appendix D IRWM Plan Work Plan
- Appendix E Memorandum of Understanding



# Section 1 Introduction

## 1.1 Overview

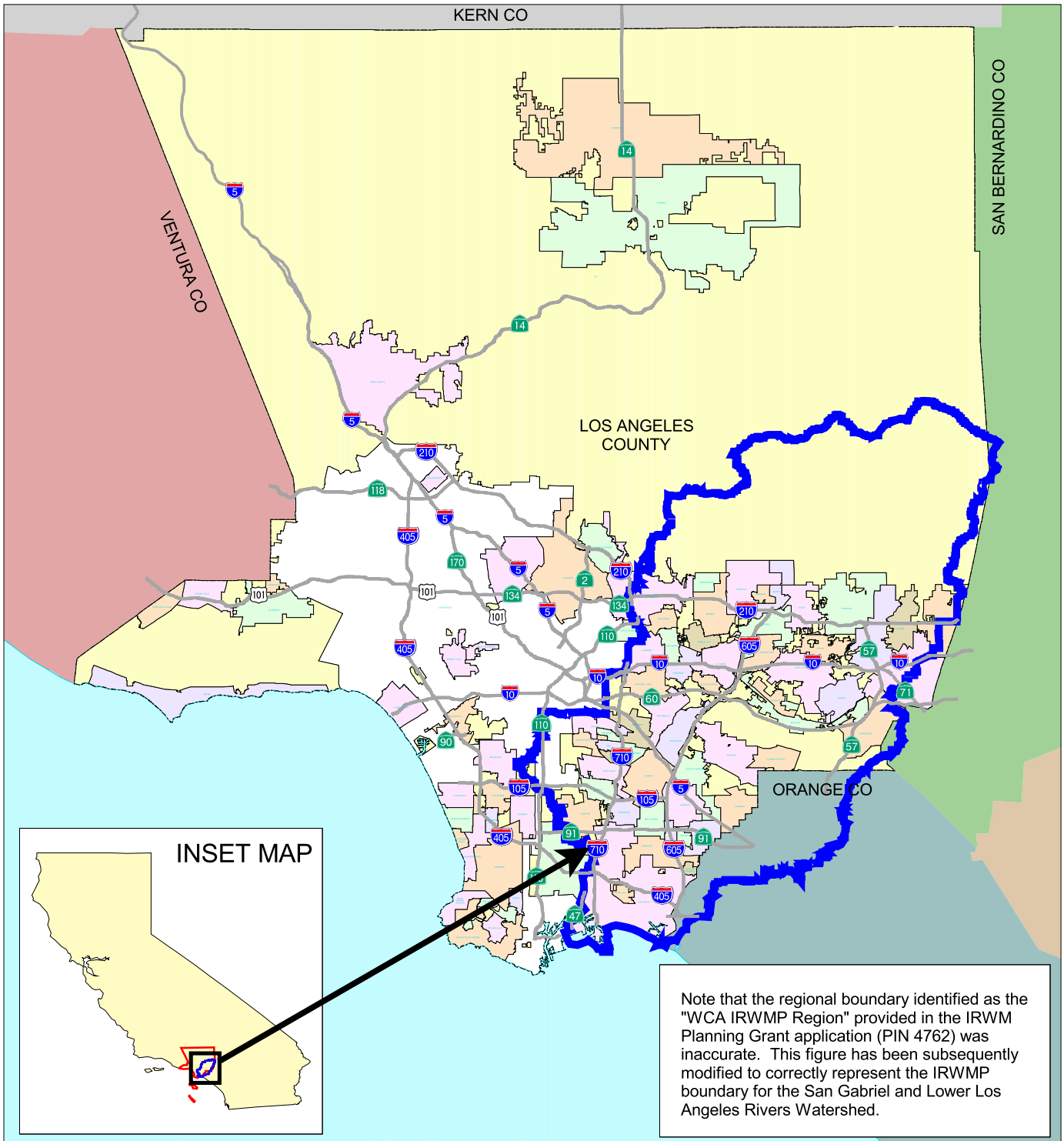
The purpose of this report is to provide an initial framework Integrated Regional Water Management (IRWM) Plan for the San Gabriel and Lower Los Angeles Rivers Watershed Region (Region). Like in other watershed areas in California, there have been several plans and studies for the Region that identify future improvement projects for the area. The purpose of this report is to organize the findings of these related planning efforts and integrates all water management strategies and projects proposed into a Framework IRWM Plan that adequately represents the Region's priorities.

## 1.2 Background

California Proposition 50, Chapter 8, the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 was passed by voters in November 2002. It amended the California Water Code (CWC) to add, among other articles, Section 79560 et. seq. authorizing the Legislature to appropriate \$500 million for IRWM projects. The intent of the IRWM Grant Program is to encourage integrated regional strategies for management of water resources and to provide funding, through competitive grants, for projects that protect communities from drought, protect and improve water quality, and improve local water security by reducing dependence on imported water. The IRWM Grant Program is administered jointly by Department of Water Resources (DWR) and State Water Resources Control Board (SWRCB) and is intended to promote a new model for water management in the state.

The Regional Water Management Group for the San Gabriel and Lower Los Angeles Rivers Watershed Region (Regional Group), operating under the lead agency of the Watershed Conservation Authority (WCA), is developing this Integrated Regional Water Management (IRWM) Plan for the Region shown in the figure on the following page.

**San Gabriel and Lower Los Angeles Rivers Watershed  
Integrated Regional Water Management Plan  
PIN 5956**



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REGIONAL BOUNDARY



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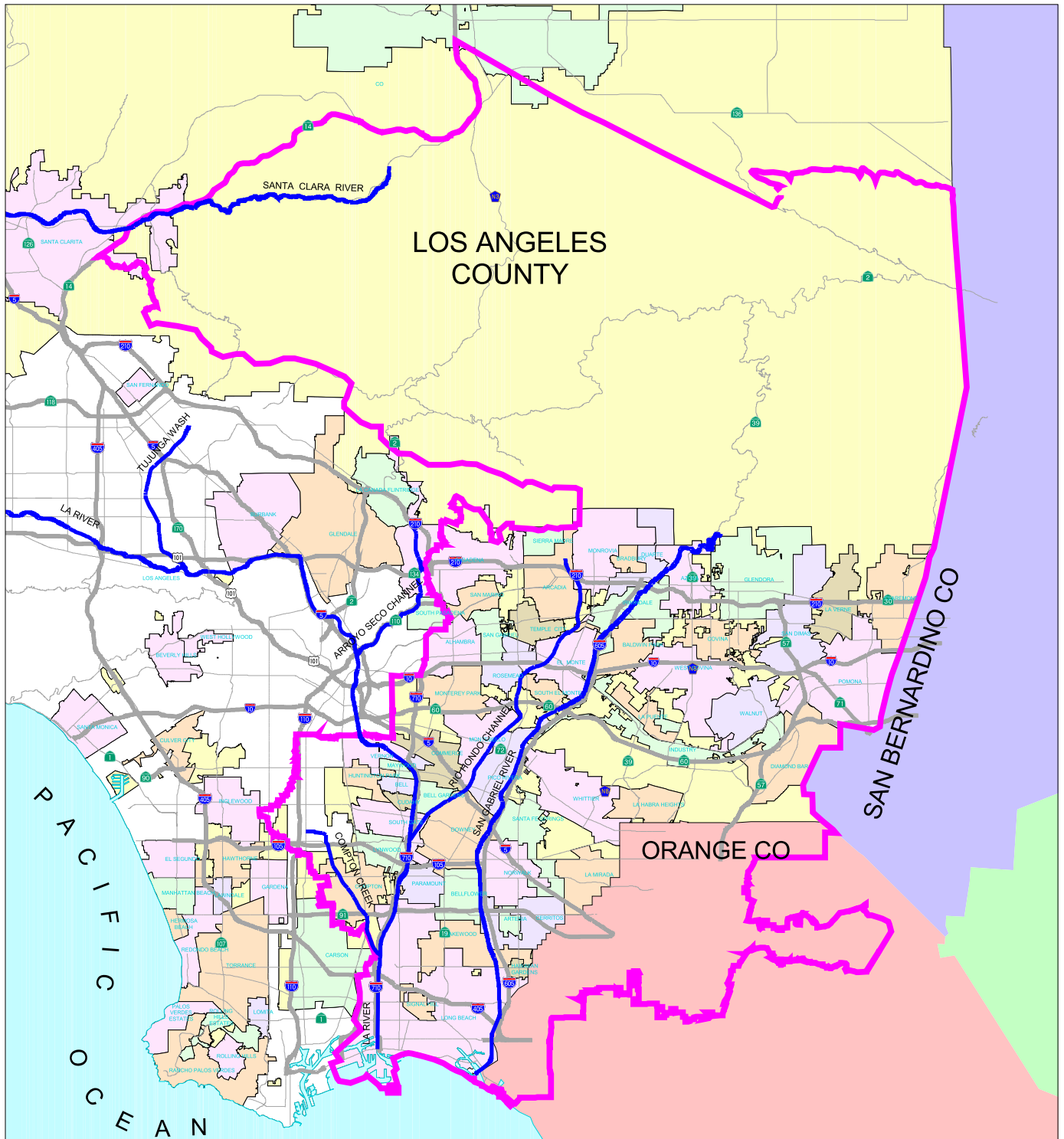
**SAN GABRIEL AND LOWER LOS ANGELES  
RIVERS WATERSHED REGION**

The WCA is a joint powers entity of the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC) and the Los Angeles County Flood Control District (LACFCD) that was created on April 17, 2003.

The RMC is one of nine State conservancies whose mission includes the protection and enhancement of open space and habitat to provide low-impact recreation and educational uses, wildlife habitat restoration and protection, and watershed improvements within the San Gabriel River and Lower Los Angeles River area. The LACFCD, a special district formed in 1915 to control and conserve flood waters for beneficial purposes, has operated and maintained extensive and diverse flood control and water conservation systems within the County of Los Angeles.

The WCA was created to implement joint projects, which focus on providing multiple benefits such as open space, habitat restoration, and recreational opportunities within the boundaries shown in the figure on the following page.

San Gabriel and Lower Los Angeles Rivers Watershed  
 Integrated Regional Water Management Plan  
 PIN 5956



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WATERSHED CONSERVATION AUTHORITY JURISDICTION



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**WATERSHED CONSERVATION  
 AUTHORITY JURISDICTION**

In addition to this IRWM Plan for the Region, similar plans are also being developed for the Upper Los Angeles River Watershed by the City of Los Angeles; Los Angeles County South Bay, including south Santa Monica Bay, Ballona Creek, and Dominguez Channel watersheds by the West Basin Municipal Water District; and North Santa Monica Bay watershed, including the Malibu Creek watershed by the Santa Monica Bay Restoration Authority. Combined, these reflect the Los Angeles basin region.

### 1.3 Regional Water Management Group

This Framework IRWM Plan has been developed by the Regional Group, which includes the following agencies and organizations:

- **San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC)** – State conservancy whose mission includes the protection and enhancement of open space and habitat to provide low-impact recreation and educational uses, wildlife habitat restoration and protection, and watershed improvements within the San Gabriel River and Lower Los Angeles River area.
- **County of Los Angeles Department of Public Works (LACDPW)** – Agency responsible for the design, construction, operation, maintenance, and repair of sewers, water supply, flood control and water conservation facilities throughout the County of Los Angeles. LACDPW acts on behalf of the LACFCD.
- **Watershed Conservation Authority (WCA)** – Joint powers entity between the RMC and LACFCD whose focus is to provide multiple benefits such as open space, habitat restoration, and recreational opportunities in the San Gabriel and Lower Los Angeles Rivers Watershed Region.
- **Central Basin Municipal Water District** – Agency that purchases imported water from the Metropolitan Water District of Southern California (MWD) and wholesales the water to 24 cities, mutual water companies, investor-owned utilities, and private companies located within a 227-square mile service area.
- **City of Long Beach** – Long Beach is the fifth largest City in the State of California. The City provides a full range of municipal services, including both a water and sanitation department. The City operates and maintains a deep-water harbor, several beaches, and marinas. Long Beach’s median household income qualifies it as a disadvantaged community as defined by the State of California.
- **Water Replenishment District of Southern California** – Agency that manages groundwater in the Central and West Coast Basins for nearly 4 million residents in the County of Los Angeles.
- **Sanitation Districts of Los Angeles County (LACSD)** – Agency that operates 11 wastewater treatment facilities, 10 of which are classified as water reclamation plants. These facilities serve approximately five million people in 78 cities and unincorporated areas within the County of Los Angeles.

- **Gateway Cities Council of Governments** – The council serves as an advocate in representing the members of the Gateway Cities Council of Governments at the Regional, State and Federal levels on issues of importance to southeast Los Angeles County. The goal and intent of the council is one of voluntary cooperation among the cities for the collective benefit of cities in southeast Los Angeles County.
- **Mountains Recreation and Conservation Authority (MRCA)** – Local governmental public entity that is a partnership between the Santa Monica Mountains Conservancy and the Conejo Recreation and Park District and the Rancho Simi Recreation Park District. The MRCA is dedicated to the preservation and management of local open space and parkland, watershed lands, trails, and wildlife habitat.
- **Los Angeles and San Gabriel Rivers Watershed Council** – Non-profit organization that is comprised of community groups, governmental agencies, businesses and academia working cooperatively to preserve, restore, and enhance the many beneficial uses of the Los Angeles River and San Gabriel River Watersheds ecosystem through education, research, planning, and mediation.
- **California Coastal Conservancy** – State agency that, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone.
- **Tree People** – Non-profit organization whose focus is to raise environmental awareness, restore watersheds and fragile habitats, and address urban issues such as water and energy conservation, flood protection, and stormwater pollution.
- **City of El Monte** – Located in the San Gabriel Valley, El Monte is the ninth largest city in Los Angeles County and has an ethnically diverse population. Located in both the San Gabriel River and Los Angeles River watersheds, El Monte is active in improving the recreational opportunities along the river corridors. El Monte's median household income qualifies it as a disadvantaged community as defined by the State of California.
- **Amigos de los Ríos** – Non-profit organization that seeks to enhance urban neighborhoods within disadvantaged Southern Californian communities. Amigos' mission is to create sustainable open spaces, protect the environment, and strengthen community life in order to benefit current and future generations.

Several of the agencies and organizations named above have approved a Memorandum of Understanding (MOU) proposing to set up a governance structure, develop an IRWM Plan, and make regional decisions in areas related to integrated water management. These agencies and organizations are currently in the process of

seeking formal adoption of this MOU, which is shown in Appendix E. The Regional Group members are providing the necessary funding match for the development of this IRWM Plan.

## 1.4 Document Organization

This report includes the following sections:

**Section 1: Introduction** – gives an overview of the IRWM Plan and the organization of this document.

**Section 2: Description of Region** – defines the basis for determining the IRWM Plan area.

**Section 3: Analysis of Existing Plans and Studies** – summarizes existing plans and studies and identifies gaps that may prevent existing plans from qualifying as an IRWM Plan.

**Section 4: Planning Objectives** – analyzes regional and statewide priorities, and determines planning objectives for this IRWM Plan.

**Section 5: Water Management Strategies and Project Identification** – identifies water management strategies in plans analyzed. Describes the process for determining future water management strategies and describes areas for further study. Identifies projects that may be eligible for round 1 IRWM implementation grants.

**Section 6: Project Prioritization** – describes initial project prioritization selection criteria, and process for prioritizing projects for round 1 IRWM implementation grants.

**Section 7: Next Steps** – describes the next steps for development of a Final IRWM Plan.

## Section 2

# Description of Region

### 2.1 Basis for Boundaries of the Region

The boundaries of this IRWM Plan Region are derived from an interlinked hydrologic system that has long characterized the relationship between the adjacent San Gabriel River and Los Angeles River Watersheds. Factors defining these borders are reflected in the dual functions of the Rio Hondo, enabling it to serve as a key link between these two watersheds, and by underlying groundwater basins that are also shared by both watersheds.

Today, the Rio Hondo is a major tributary of the Los Angeles River, but prior to 1868 its channel once served as the main bed of the San Gabriel River. Flood control channelization of the Rio Hondo captured tributaries that once formed the western tributaries of the San Gabriel River. Although now a Los Angeles River tributary, the Rio Hondo also carries out a water conservation function of the San Gabriel River. Three channels have been constructed which bring water from the San Gabriel River to the Rio Hondo to be percolated into groundwater at spreading facilities located in the Los Angeles River watershed. As a result of this tangled history, groundwater under the Rio Hondo still flows largely toward the San Gabriel River, while its surface waters are funneled into the lower Los Angeles River.

Whittier Narrows, an area of geologic uplift serves as a natural collection and convergence point for surface waters from both the San Gabriel River and Los Angeles River Watersheds, while acting as a natural barrier to groundwater movement. Taking advantage of this natural convergence, the Whittier Narrows Dam was constructed at this strategic location to capture surface water flows from both watersheds.

The groundwater basins in this area extend beyond the boundaries of the surface watersheds they underlie. The boundaries of the Main San Gabriel Basin, for example, include the upper San Gabriel River Watershed, and the eastern portion of the Los Angeles River Watershed. Similarly, the Central Groundwater Basin and West Coast Groundwater Basin underlie portions of both watersheds. These groundwater basins made possible productive groundwater recharge, which has historically enabled the many cities and unincorporated parts of eastern Los Angeles County to be less dependent upon imported water compared to the City of Los Angeles and other portions of western Los Angeles County. This encouraged the creation of several local and regional institutions, such as the Main San Gabriel Watermaster, to manage and optimize local water resources.

These natural hydrologic connections have also been acknowledged in other regional planning efforts including those that defined the boundaries for the RMC and later those of the WCA. As a result, the numerous cities and other stakeholders within this Region are already accustomed to working together on shared water-related issues of concern.



In addition, many significant multi-objective projects in this Region, such as the Emerald Necklace - a 17-mile interconnected loop of parks and greenways along the Rio Hondo and San Gabriel River proposed by Amigos de los Ríos, will mirror the inherent ecological unity of the Region by straddling the boundary between the Los Angeles and San Gabriel Rivers Watersheds.

### **2.1.1 Benefits of Defining Region by these Boundaries**

Intertwined surface and groundwater flows shaped by the complex hydrologic linkages between the San Gabriel River Watershed and the easternmost portions of the Los Angeles River Watershed are already reflected in current water conservation and flood control infrastructure. These bi-watershed linkages are also acknowledged by regional and local institutions set up to manage these man-made systems. The same integrated relationship between these two watersheds provides the most logical and efficient basis for boundaries proposed for this IRWM Plan. Establishing boundaries limited to one or the other watershed would create an artificial institutional divide that (1) does not reflect natural conditions and existing governance patterns, and (2) would greatly complicate efforts to establish and manage an effective integrated regional water management system. The necessary synergy for a successful IRWM Plan exists in maintaining the planning and institutional relationships that have already been developed across this Region in response to the pre-existing hydrologic factors that have been previously described. This defined Region is appropriate to the planning and implementation of the IRWM Plan.

Water management within this Region, through a unified IRWM Plan approach, propels this Region forward toward the integration and implementation of the many of the recommendations stated in primary water management documents for the San Gabriel and Lower Los Angeles Rivers Watershed.

The agencies and organizations participating in the development of an IRWM Plan for the Region recognize that effective water management is crucial to the area's prosperity and continued leadership in economic development and environmental protection. Development of an IRWM Plan for the Region enhances individual local planning efforts in the following ways:

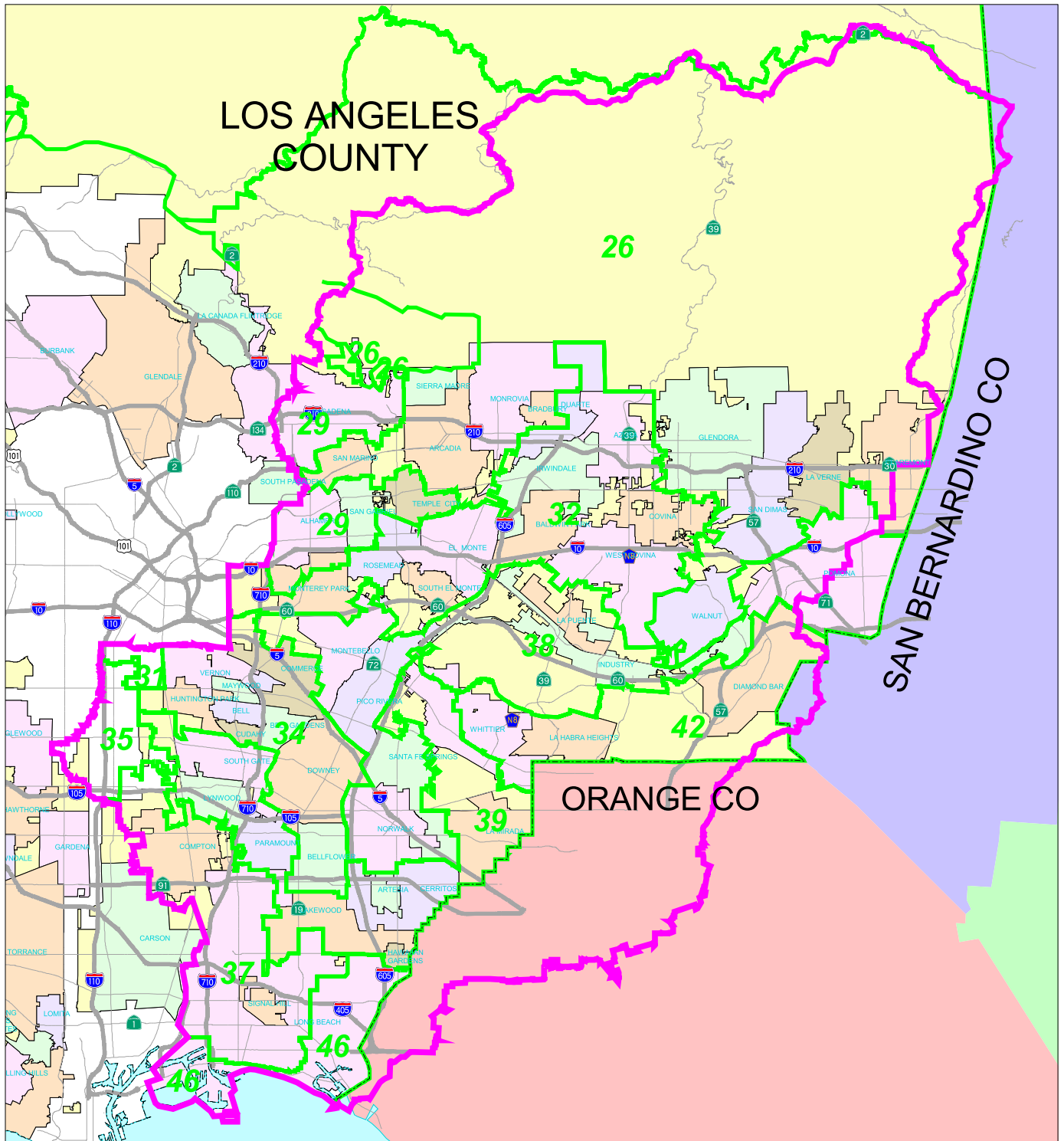
- Reduces dependence on imported water by integrating all water management strategies from a regional perspective as opposed to one agency's perspective
- Provides for coordinated efforts on water quality improvements throughout the Region
- Fosters coordination, collaboration and communication between agencies
- Avoids conflicts and duplication of efforts
- Achieves greater efficiencies
- Enhances public/stakeholder support
- Enables identification of synergies between water management strategies across the Region

- Maximizes benefits for the Region
- Reduces demand for imported water through water conservation on a regional basis as opposed to a singular agency water conservation program
- Increases capture of runoff through expansion and optimization of regional groundwater recharge basins and surface reservoirs on a regional (dual watershed) scale as opposed to a project specific area
- Increases capture and recharge of runoff through local/onsite options on a regional (dual watershed) scale as opposed to a project specific area
- Increases use of recycled water on a regional (dual watershed) scale
- Restores natural channel properties on a regional scale as opposed to a piece-meal, project-by-project basis

## **2.2 Boundaries of the Region**

The proposed IRWM Plan will cover the Region that includes the entire San Gabriel River Watershed along with the easternmost subwatersheds of the Los Angeles River Watershed, including the subwatersheds of the Rio Hondo, Compton Creek, and the Lower Los Angeles River. Over 90% of the San Gabriel and Lower Los Angeles Rivers Watershed Area lies within Los Angeles County, with the balance including a western portion of Orange County and a small part of San Bernardino County. This includes 64 cities as well as unincorporated parts of Los Angeles and Orange Counties. The Region also includes a number of Congressional and State of California Assembly and Senate Districts shown in the figures on the following pages. The Region falls primarily under the jurisdiction of the Los Angeles Regional Water Quality Control Board (Region 4), with a small portion in the Santa Ana Regional Water Quality Control Board (Region 8).

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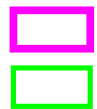


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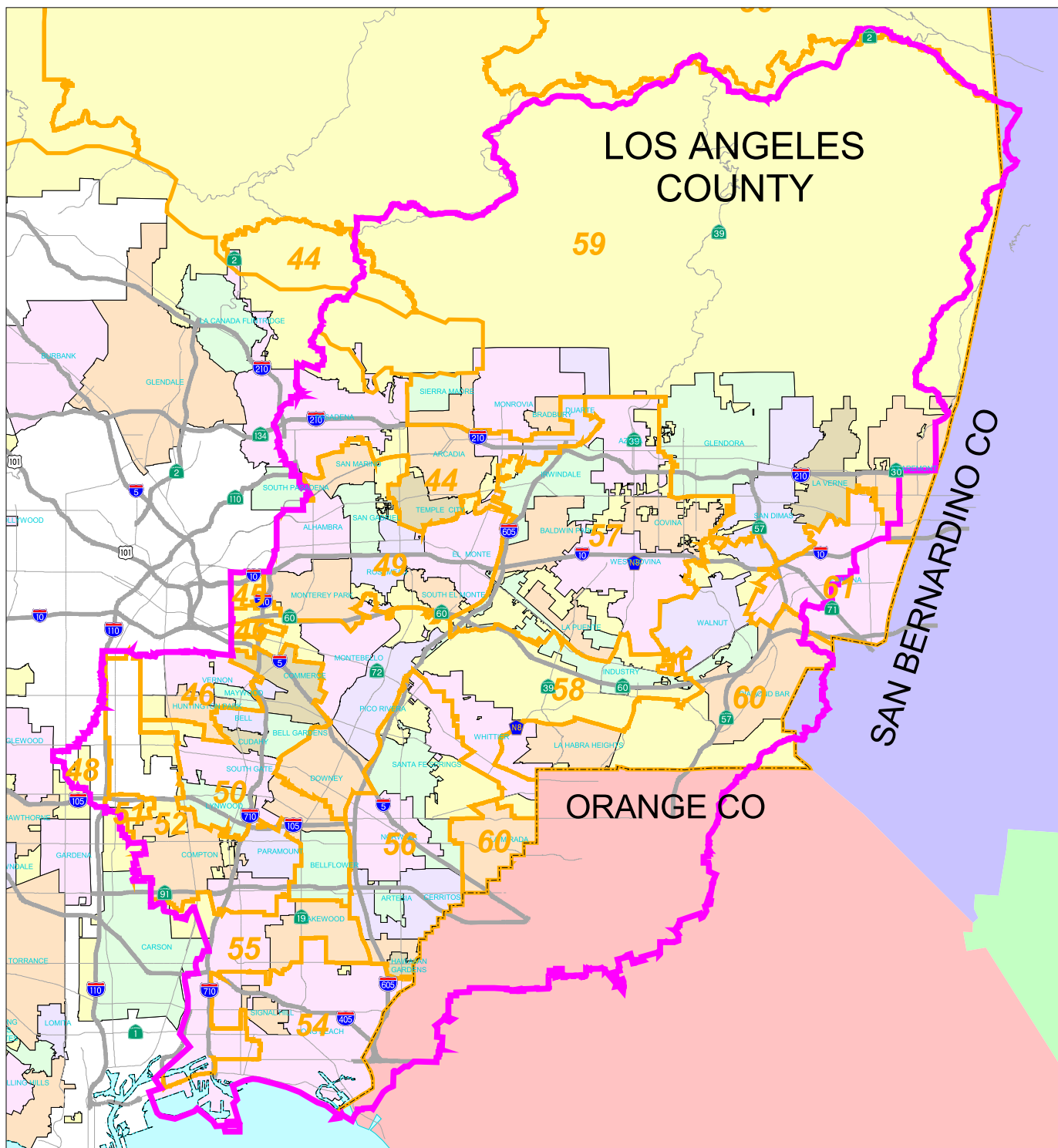
CONGRESSIONAL DISTRICTS



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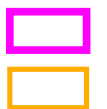


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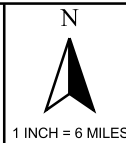
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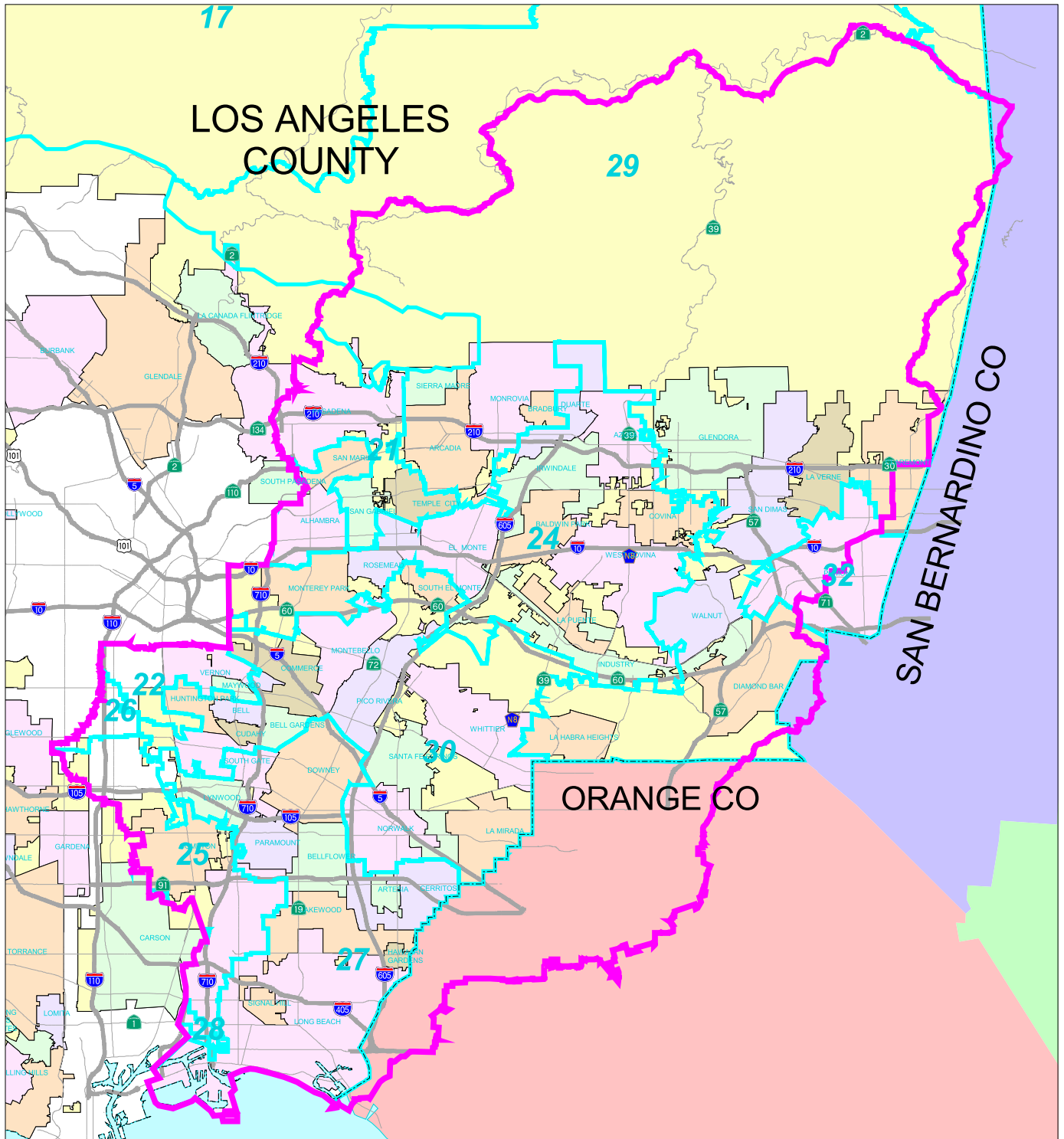


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**CALIFORNIA ASSEMBLY DISTRICTS**

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REGIONAL BOUNDARY

SENATE BOUNDARIES

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# CALIFORNIA SENATE DISTRICTS

The San Gabriel Mountains, which extend across the northern portion of the Region, rise to over 10,000 feet and include the Angeles National Forest. A large portion of the forest (which contains two wilderness areas) lies within the WCA's jurisdictional area. The San Andreas Fault separates the Antelope Valley and the San Gabriel Mountains.

South of the San Gabriel Mountains is the highly urbanized Los Angeles megalopolis, which fills the San Fernando and San Gabriel Valleys and the Coastal Plain. The foothills of the San Gabriels and the lower mountains and hills south of the San Gabriels contain most of the remaining open space in this urban area. A wildlife corridor in the Puente-Chino Hills provides a connection from Cleveland National Forest (off the map to the east) to the San Gabriel River, which in turn provides a connection to Angeles National Forest. This corridor is under development threat. The enormous shipping complex of the Los Angeles and Long Beach Harbors lies to the east of the Palos Verdes Peninsula. The coastline includes Long Beach Harbor, the 1,000 acre Seal Beach National Wildlife Refuge, and a few, smaller wetlands.

The Region includes part of the mostly concrete-lined Los Angeles River and all of the partially-contained San Gabriel River. There are flood control dams located along both.

## **2.2.1 Internal Boundaries Within the Region**

### **2.2.1.1 Watersheds and Sub-watersheds**

The **San Gabriel River Watershed** covers 689 square miles, primarily in eastern Los Angeles County, as well as smaller portions in Orange County and San Bernardino County. More than one-third of the upper watershed falls within the Angeles National Forest, including significant portions of the San Gabriel Mountains. The main channel of the San Gabriel River has a length of approximately 58 miles. Its headwaters originate in the San Gabriel Mountains with the East, West, and North Forks. The river empties into the Pacific Ocean near the Los Angeles and Orange County Boundary, in Seal Beach. The entire San Gabriel River Watershed lies within the Region and encompasses the following seven sub-watersheds or drainage areas:

- Upper San Gabriel River
- Walnut Creek
- San Jose Creek
- Coyote Creek
- Los Alamitos/Bolsa Chica
- Lower San Gabriel River
- Los Cerritos Channel

The **Los Angeles River Watershed** covers a land area of 834 square miles from the Santa Monica Mountains, Simi Hills, and Santa Susana Mountains to the north and

west, the San Gabriel Mountains to the north and east, and the Los Angeles coastal plain to the south, and ends at the Long Beach Harbor. The main channel of the Los Angeles River has a length of approximately 51 miles. The Los Angeles River is hydraulically connected to the San Gabriel River Watershed by the Rio Hondo through the Buena Vista Channel near Santa Fe Dam, and Lario Creek/Zone 1 Ditch in Whittier Narrows. It empties into the Pacific Ocean in Long Beach only 5½ miles up the coast from the mouth of the San Gabriel River in Seal Beach. There are seven major tributaries to the Los Angeles River, but only two of them, Compton Creek and Rio Hondo, fall within this IRWM Plan Region. As only a portion of the Los Angeles River Watershed is included in this IRWM Plan, the following subwatersheds or drainage areas define this portion:

- Rio Hondo
- Lower Los Angeles River
- Compton Creek

The **Rio Hondo**, a tributary of the Los Angeles River, forms a 142 square mile sub-watershed that lies adjacent to the western edge of the San Gabriel River Watershed. The headwaters lie in the Angeles National Forest. The balance of the watershed lies in the densely developed western part of the San Gabriel Valley. From there it extends further south beyond the San Gabriel Valley to the Rio Hondo's confluence with the Los Angeles River, located within the City of South Gate, twelve miles southeast of downtown Los Angeles. The Rio Hondo watershed includes all or portions of the following 22 cities, as well as unincorporated communities in Los Angeles County: Alhambra, Arcadia, Bell Gardens, Bradbury, Commerce, Downey, Duarte, El Monte, Irwindale, Monrovia, Montebello, Monterey Park, Pasadena, Pico Rivera, Rosemead, San Gabriel, San Marino, Sierra Madre, South El Monte, South Gate, South Pasadena, and Temple City.

The direct drainage area for the **Lower Los Angeles River** extends from the City of Alhambra to its outlet at the Pacific Ocean in the City of Long Beach. This is the southern most portion of the Los Angeles River Watershed, all of which lies outside the City of Los Angeles. This subwatershed area includes all or portions of the following cities: Alhambra, Bell, Commerce, Cudahy, Downey, Huntington Park, Long Beach, Lynwood, Maywood, Monterey Park, Paramount, South Gate, and Vernon, as well as unincorporated communities in Los Angeles County.

**Compton Creek** is the largest lower tributary of the Los Angeles River. It is 8.5 miles long and drains a flat, densely developed 22.6 square miles in southern Los Angeles County. Over one-third of the Compton Creek subwatershed covers a small portion of the City of Los Angeles. It also includes all or parts of the cities of Compton, Lynwood, and South Gate as well as unincorporated communities in Los Angeles County.

**2.2.1.2 Counties and Municipalities**

Over 90% of the Region lies within Los Angeles County, with the balance including a western portion of Orange County, and a small part of San Bernardino County. This includes all or portions of 66 cities as well as unincorporated parts of Los Angeles and Orange Counties, as listed in the table below.

**Cities Included in the  
San Gabriel and Lower Los Angeles Rivers Watershed IRWM Plan Region**

<b>Los Angeles County</b>		
Alhambra <sup>1</sup>	Glendora <sup>1</sup>	Pasadena <sup>1</sup>
Arcadia <sup>1</sup>	Hawaiian Gardens <sup>2</sup>	Pico Rivera <sup>2</sup>
Artesia <sup>2</sup>	Huntington Park <sup>2</sup>	Pomona <sup>1</sup>
Azusa <sup>1</sup>	Industry <sup>1</sup>	Rosemead <sup>1</sup>
Baldwin Park <sup>1</sup>	Irwindale <sup>1</sup>	San Dimas <sup>1</sup>
Bell Gardens <sup>2</sup>	La Habra Heights <sup>2</sup>	San Gabriel <sup>1</sup>
Bell <sup>2</sup>	La Mirada <sup>2</sup>	San Marino <sup>1</sup>
Bellflower <sup>2</sup>	La Puente <sup>1</sup>	Santa Fe Springs <sup>2</sup>
Bradbury <sup>1</sup>	La Verne <sup>1</sup>	Sierra Madre <sup>1</sup>
Cerritos <sup>2</sup>	Lakewood <sup>2</sup>	Signal Hill <sup>2</sup>
Claremont <sup>1</sup>	Long Beach <sup>2</sup>	South El Monte <sup>1</sup>
Commerce <sup>2</sup>	Los Angeles	South Gate <sup>2</sup>
Compton <sup>2</sup>	Lynwood <sup>2</sup>	South Pasadena <sup>1</sup>
Covina <sup>1</sup>	Maywood <sup>2</sup>	Temple City <sup>1</sup>
Cudahy <sup>2</sup>	Monrovia <sup>1</sup>	Vernon <sup>2</sup>
Diamond Bar <sup>1</sup>	Montebello <sup>1,2</sup>	Walnut <sup>1</sup>
Downey <sup>2</sup>	Monterey Park <sup>1</sup>	West Covina <sup>1</sup>
Duarte <sup>1</sup>	Norwalk <sup>2</sup>	Whittier <sup>1</sup>
El Monte <sup>1</sup>	Paramount <sup>2</sup>	

<b>Orange County</b>		
Anaheim	Fullerton	Placentia
Brea	La Habra	Seal Beach
Buena Park	La Palma	
Cypress	Los Alamitos	

<sup>1</sup> San Gabriel Valley Council of Governments  
<sup>2</sup> Gateway Cities Council of Governments

Los Angeles County covers an area of 4,083 square miles, making it one of the nation’s largest counties. It is bordered on the east by Orange and San Bernardino Counties, on the north by Kern County, on the west by Ventura County, and on the south by the Pacific Ocean. Its coastline is 81 miles long. Although the Region represents only an estimated 20% of the County’s total land area, it includes 56 of the 88 cities in Los Angeles County, and 40% of the 10,179,716 people living in the County.



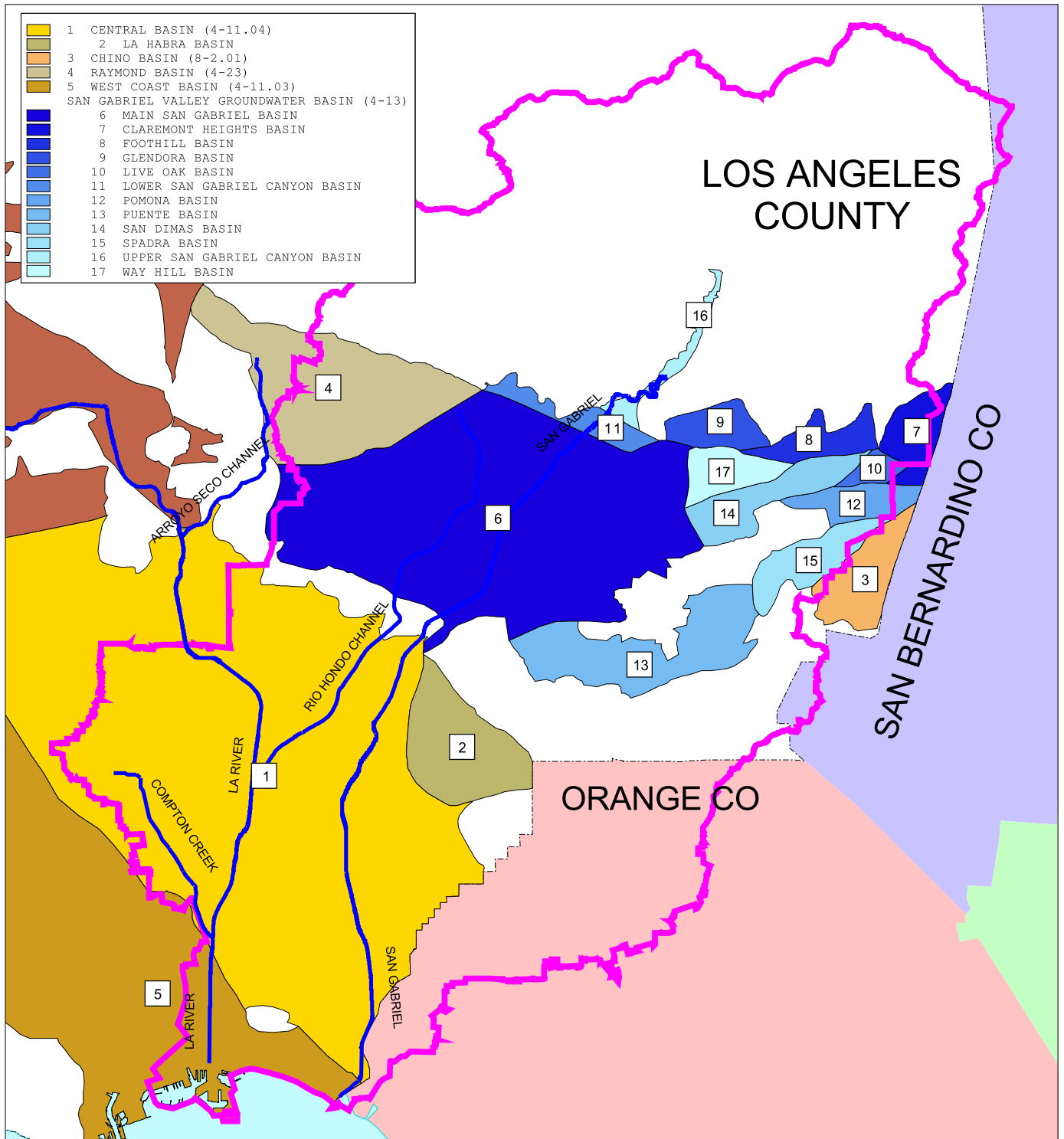
Approximately 10% of the Region falls within a western portion of Orange County, as the final few miles of the San Gabriel River travels through Orange County before it reaches the Pacific Ocean. Orange County covers an area of 798 square miles. It is bordered on the west and north by Los Angeles County, on the north and east by Riverside and San Bernardino Counties, on the east and south by San Diego County, and on the south by the Pacific Ocean. Orange County has 34 cities, and a population currently estimated at 3,017,298.

A large number of separate municipalities exist within the Region, with most of these cities having a long history of working together. Two sub-regional Council of Governments, located in eastern Los Angeles County, help to facilitate inter-jurisdictional cooperation. Cities located within the San Gabriel Valley are members of the San Gabriel Valley Council of Governments. In southeast Los Angeles County, the cities are members of the Gateway Cities Council of Governments. Taken together the boundaries of these two sub-regional councils of government is largely coterminous with the proposed boundaries of the IRWM Plan Watershed Area, with the exception of the Angeles National Forest within the San Gabriel Mountains, and the Orange County section. However, all of these cities, including those in Orange County, are also part of the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy's jurisdiction.

### **2.2.1.3 Groundwater Basins**

Available water resources within the Region include four main sources: local surface water, local groundwater supplies, imported surface water, and reclaimed water. Local surface water and groundwater water supply begins as rainfall, which then either evapotranspires into the atmosphere, percolates naturally into the underlying groundwater aquifer, or results in surface runoff. Imported water is water transported to the Region from either northern California via the California Aqueduct or water transported from the Colorado River via the Colorado River Aqueduct. Reclaimed water is treated wastewater from local water reclamation plants (WRPs). Over the years, a highly complex inter-connected network of facilities has been developed, which involves the transport, storage and conveyance of surface flows, groundwater, imported water, and reclaimed water. Some of these facilities serve multiple purposes including water supply, flood hazard mitigation, recreation and habitat. Groundwater basins are the primary means for long-term water storage in the Region and are recharged through natural soil percolation, engineered spreading grounds and injection wells. The Region's Groundwater basins are shown in the figure on the following page. Surface water reservoirs in the San Gabriel Mountains also provide critical shorter-term storage functions. Groundwater basins underlying the Region, starting in the north and moving south, include the **Raymond Basin, Main San Gabriel Basin, the Central Groundwater Basin, and the West Coast Groundwater Basin.**

San Gabriel and Lower Los Angeles Rivers Watershed  
 Integrated Regional Water Management Plan  
 PIN 5956



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DEPARTMENT OF PUBLIC WORKS  
 900 S. Fremont Ave.  
 Alhambra, CA 91803

Mapping & Property Management Division  
 Mapping & GIS Services Section

REGIONAL BOUNDARY

N

1 INCH = 6 MILES

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## GROUNDWATER BASINS & SUB-BASINS

Approximately two-thirds of the **Raymond Basin**, a 40 square mile groundwater basin, lies underneath the northeastern portion of the Rio Hondo Subwatershed. The entire Raymond Basin extends just below the San Gabriel Mountains from La Canada and the San Rafael Hills on the west to Santa Anita Canyon on the east. Its southern boundary is formed by the Raymond fault, which is what separates it from the Main San Gabriel Basin. The long-term average yield of the Raymond Basin is about 30,000 acre-feet per year. The Raymond Basin Management Board manages water rights for the Raymond Basin.

The **Main San Gabriel Basin** underlies the San Gabriel Valley. It is bounded on the north side by the base of the San Gabriel Mountains, on the east side by the San Jose Hills, on the south by Whittier Narrows and Puente Hills, and on the west by a series of hills and the Raymond Fault. The Main San Gabriel Basin lies underneath two surface watersheds, the upper portion of the San Gabriel River Watershed, and the Rio Hondo, a subwatershed of the Los Angeles River Watershed. The surface area of the groundwater basin is about 167 square miles. It provides approximately 80% of local groundwater supplies. Freshwater storage capacity is about 8.6 million acre-feet. The Main San Gabriel Basin Watermaster is the agency that administers adjudicated water rights and manages groundwater resources for the Main San Gabriel Basin.

The **Central Groundwater Basin** underlies approximately 277 square miles of southeastern Los Angeles County. The basin is bounded by the southern edge of the San Gabriel Valley to the north, Orange County on the east, and the West Coast Groundwater Basin to the southwest. The Whittier Narrows, an area of geologic uplift, acts as a natural barrier to groundwater movement and is what separates the Central Groundwater Basin from the Main San Gabriel Basin, which lies to the north. It can cumulatively store more than 1.3 million acre-feet of water. Approximately 50 percent of local water needs are supplied by groundwater from the Central Groundwater Basin.

The **West Coast Groundwater Basin** underlies approximately 160 square miles of the southwestern part of the Los Angeles Coastal Plain. Although only a portion of this groundwater basin falls within the boundaries of the Region, it lies at the mouth of both the San Gabriel and Los Angeles Rivers. It is separated from the Central Groundwater Basin by the Newport-Inglewood Uplift, which forms its eastern boundary. It is bounded on the south and west by the Pacific Ocean. The California Department of Water Resources – Southern District serves as the official Watermaster for both the Central and West Coast Groundwater Basins.

#### **2.2.1.4 Water Rights**

Five agencies and organizations are involved in administering water rights in the Region.

The **Main San Gabriel Basin Watermaster** was created in 1973 to administer water rights and manage groundwater resources for the Main San Gabriel Basin.

The **San Gabriel River Water Committee (SGRWC)** was formed in 1889 to settle disputes among nine local water interests and was originally called the “Committee of Nine.” SGRWC members are entitled to the first 135 cubic feet per second (cfs) of flow in the San Gabriel River.

The **San Gabriel Valley Protective Association** was formed in 1919 to safeguard the rights of 22 water users from Azusa to Whittier. These members hold a license to use to the water from the San Gabriel River that is in excess of 135 cfs, beyond the allocation given for members of the San Gabriel River Water Committee. The water is used primarily for groundwater recharge.

The **San Gabriel River Watermaster** is responsible for tracking the amount of surface water and groundwater that passes through the Whittier Narrows from the Main San Gabriel Basin to the Central Groundwater Basin.

The **California Department of Water Resources – Southern District** serves as Watermaster for the Central Groundwater Basin and the West Coast Groundwater Basin. As the Central Groundwater Basin Watermaster it manages water rights for 146 parties, who are allocated a total of 217,367 acre-feet per year. As the West Coast Groundwater Basin Watermaster it tracks water rights for 68 parties who are allocated over 64,469 acre-feet per year.

#### **2.2.1.5 Water Supply Agencies**

In the Region, numerous agencies play a role in supplying water either as wholesalers or retailers of water. Retail water supply is provided to residential, commercial and industrial clients through many different local water supply providers including cities, special districts, and investor-owned utilities.

The **Metropolitan Water District of Southern California (MWD)** is a regional consortium of 26 cities and water districts, which provides drinking water to nearly 18 million people in parts of Los Angeles, Orange, San Diego, Riverside, San Bernardino and Ventura counties. MWD currently delivers an average of 1.7 billion gallons of water per day to a 5,200 square mile service area.

The mission of the **Upper San Gabriel Valley Municipal Water District (USGVMWD)** is to provide a reliable wholesale supply of imported water for groundwater recharge and domestic consumption within its boundaries. It serves a population of 900,000 in a service area of 144 miles. As a member agency of the MWD, the USGVMWD provides wholesale water service to local water suppliers. Approximately 60,000 acre-feet of imported water are supplied each year.

Cities served include Arcadia, Baldwin Park, Bradbury, Covina, El Monte, Glendora, Industry, Irwindale, La Puente, Monrovia, Rosemead, San Gabriel, South El Monte, South Pasadena, Temple City, and West Covina. Unincorporated communities in the County of Los Angeles served by the USGVMWD include Avocado Heights, Citrus, Hacienda Heights, Mayflower Village, South San Gabriel, Valinda and Puente Valley.

The **Three Valleys Municipal Water District (TVMWD)** provides water to 600,000 residents in the San Gabriel, Walnut, and Pomona Valleys. Imported water is purchased from MWD and then distributed by TVMWD to various retail agencies. These agencies in turn serve the cities of Azusa, Claremont, Covina, Diamond Bar, Glendora, Industry, La Verne, Pomona, San Dimas, Walnut, and West Covina. Unincorporated areas served include Charter Oak, Covina Knolls, Rowland Heights, and South San Jose Hills.

The **San Gabriel Valley Municipal Water District (SGVMWD)** is responsible for maximizing water quality and supply in the Main San Gabriel Basin for all or portions of four cities in the San Gabriel Valley: Alhambra, Azusa, Monterey Park, and Sierra Madre. Unlike USGVMWD and TVMWD, the SGVMWD is not an MWD member agency, but rather has a separate contract for California Aqueduct Water.

**City of Azusa, Azusa Light and Water** is a municipally owned utility in the San Gabriel Valley serving over 125,000 residents and businesses in the cities of Azusa, Covina, Glendora, Irwindale, West Covina, and some unincorporated communities in Los Angeles County.

The **Central Basin Municipal Water District (CBMWD)** serves a population of 1.5 million people living within 24 cities in southeast Los Angeles County, as well as unincorporated communities in Los Angeles County, including the cities of Artesia, Bell, Bellflower, Bell Gardens, Cerritos, Commerce, Downey, Huntington Park, Lakewood, La Habra Heights, La Mirada, Lynwood, Maywood, Montebello, Norwalk, Paramount, Pico Rivera, Santa Fe Springs, Signal Hill, South Gate, Vernon, Whittier, and portions of Carson, Cudahy and Monterey Park. The CBMWD purchases imported water from MWD and wholesales the water to cities, mutual water companies, investor-owned utilities, and private companies located within a 227 square mile service area.

The **West Basin Municipal Water District (WBMWD)** serves a population of 900,000 within a 185 square mile service area in southwestern Los Angeles County. Only a small portion of this service area, on its eastern edge near the Los Angeles River, falls within the boundaries of the Region.

The **Southern California Water Company** is a public utility engaged in the purchase, production, distribution and sale of water. It provides service to several southern Los Angeles County communities, including the following communities located within the Region: Bell, Bell Gardens, Compton, Cudahy, and unincorporated communities in Los Angeles County.

The **City of Long Beach Water Department (LBWD)** serves a total population of 461,000 within a 50 square mile service area. As a member agency of the MWD, imported water makes up nearly half of its overall water supply. LBWD also has the right to pump over 30,000 acre-feet per year of groundwater from the Central Groundwater Basin.

The **Municipal Water District of Orange County (MWDOC)** provides imported water to more than 2 million Orange County residents, 70 percent of the County's population,

through 27 cities and water districts and two private water companies. A portion of its 600-mile service area lies within the Region, including the cities of Brea, Buena Park, Cypress, La Habra, Los Alamitos, Placentia and Seal Beach. Half of MWDOC's water supply comes from local sources; the other half is imported.

Sources of recycled water in the Region include the Sanitation Districts of Los Angeles County and the City of Los Angeles. Recycled water is delivered through similar arrangements of wholesale and retail water agencies.

#### **2.2.1.6 Other Agencies and Organizations with Water-Related Functions**

Several other agencies play key roles in the cleanup, conservation, and management of local water resources.

The **County of Los Angeles Department of Public Works** is responsible for the design, construction, operation, maintenance, and repair of sewers, water supply, flood control, and water conservation facilities throughout Los Angeles County. Among its functions, it controls the flow of local runoff, reclaimed and imported waters for recharge in 27 spreading grounds throughout Los Angeles County, including those located along the Rio Hondo and San Gabriel River, which are considered its most productive.

The **Los Angeles Regional Water Quality Control Board (LARWQCB)** is one of nine Regional Boards statewide. The LARWQCB protects ground and surface water quality in the Los Angeles Region, including the coastal watersheds of Los Angeles (Los Angeles River Watershed, San Gabriel River Watershed) and Ventura Counties, along with very small portions of Kern and Santa Barbara Counties.

The **San Gabriel Basin Water Quality Authority** coordinates the plans and activities of state and federal agencies and others involved in the cleanup of the Main San Gabriel Basin. It has been responsible for removing nearly 10 tons of contaminants, and is actively intercepting contaminated groundwater flowing toward Whittier Narrows.

The **San Gabriel Valley Water Association** is a voluntary non-profit organization formed in 1955 to promote, maintain, and coordinate the adequate supply and quality of water delivered to consumers in the Valley. The Association has over sixty members, drawn from cities, water suppliers, water agencies, and others throughout the Valley.

The **Sanitation Districts of Los Angeles County** operates 11 wastewater treatment facilities, 10 of which are classified as WRPs. These facilities serve approximately five million people in 78 cities and unincorporated areas within Los Angeles County. Five of these WRPs are located near the Rio Hondo and San Gabriel River system, adding reclaimed water to the supply.

The **U.S. Army Corps of Engineers, Los Angeles District (Corps)** owns and operates two major dams along the San Gabriel River, the Santa Fe Dam and Whittier Narrows Dam, and maintains a portion of the San Gabriel River flood control channel from the mouth of San Gabriel Canyon to Santa Fe Dam, and the Whittier Narrows Flood Control Basin. The Corps also maintains a portion of Rio Hondo, through and just

north of Whittier Narrows. Following destructive floods in the 1930s, the Corps took the lead role over the next several decades, in partnership with the Los Angeles County Flood Control District (LACFCD), in channelizing the Los Angeles, Rio Hondo, and San Gabriel Rivers.

The **Water Replenishment District of Southern California (WRD)** manages groundwater in the Central and West Coast Groundwater Basins for nearly 4 million residents in 43 cities of southern Los Angeles County. Its 420 square mile service area includes much of the lower San Gabriel River Watershed as well as the Lower Los Angeles River Watershed.

#### **2.2.1.7 Land Use Agencies**

The Region is located within the regional planning area of the Southern California Association of Governments (SCAG). SCAG is the metropolitan planning organization for six southern California counties: Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial. SCAG is mandated by both the federal and state governments to plan for transportation, growth management, hazardous waste management, and air quality throughout the Region. As part of its mandate, SCAG develops demographic projections of each city and unincorporated community within its planning area.

Within unincorporated communities of Los Angeles County and Orange County, land use planning is provided by the **Los Angeles County General Plan** and the **Orange County General Plan**, respectively.

Within each of the (63) incorporated cities located in the Region, land use planning is provided by general plans developed by each municipality.

The **U.S. Forest Service – Angeles National Forest** covers over 650,000 acres in the San Gabriel Mountains. It manages the watersheds within its boundaries to provide water to southern California and to protect surrounding communities from floods.

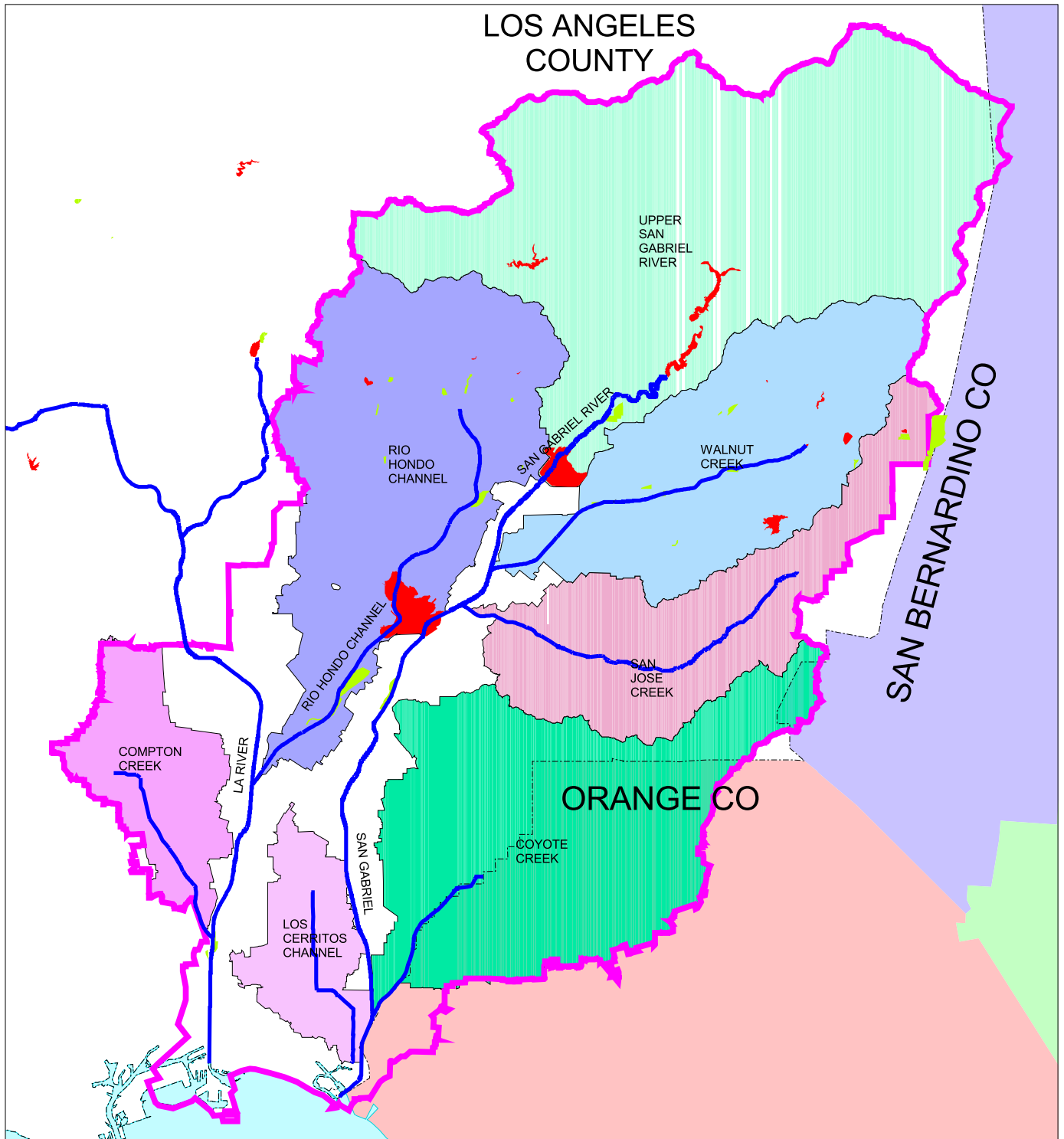
The **California Coastal Commission**, in partnership with coastal cities and counties, plans, and regulates the use of land and water in the coastal zone. The coastal zone is generally defined as areas immediately adjacent to the beach, bay, ocean, or canals. The southern edge of the Region, as defined by the Pacific Ocean, will fall within the Local Coastal Plans for the City of Seal Beach and Long Beach, respectively.

## **2.3 Significant Water Issues in the Region**

### **2.3.1 Water Features**

The Region encompasses a large number of significant water related infrastructure, which are shown in the figure on the following page.

San Gabriel and Lower Los Angeles Rivers Watershed  
 Integrated Regional Water Management Plan  
 PIN 5956



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DEPARTMENT OF PUBLIC WORKS  
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Mapping & Property Management Division  
 Mapping & GIS Services Section



SPREADING GROUNDS

DAMS

REGIONAL BOUNDARY



MAJOR CHANNELS



1 INCH = 6 MILES

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## SUBWATERSHEDS AND MAJOR WATER-RELATED INFRASTRUCTURE



### ***River Channelization***

The **Los Angeles River**, which once flowed freely over the coastal plain, was channelized between 1914 and 1970 to control the runoff and reduce the impacts of major flood events in the Region. Today, the Los Angeles River is lined on 48 miles of its 51-mile length. The entire 21-mile length of the Lower Los Angeles River channel is lined with concrete reinforcement except at the river estuary in Long Beach where the River empties into the Pacific Ocean (the lower 2.6 miles of the river south of Willow Street in Long Beach). Almost the entire length of **Compton Creek** has been channelized for flood control purposes (a portion still remains earthen-bottom).

Also, for flood control purposes, most of the **Rio Hondo** has been encased in a concrete channel. Only four miles of the river stretching from South El Monte to Whittier Narrows retain natural unchannelized riverbanks. The Rio Hondo has also been hydraulically connected to the San Gabriel River through the construction of three channels: the Buena Vista Channel, Lario Creek/Zone 1 Ditch, and the Whittier Narrows Crossover Channel.

The **San Gabriel River** has also been engineered for flood control purposes. However, in the urban areas of the San Gabriel Valley, and unlike the Los Angeles River and Rio Hondo, the San Gabriel River flows in an earthen-bottomed channel between raised levees. The earthen-bottom channel was retained to promote infiltration of water into underlying groundwater basins. Beginning seven miles below the Whittier Narrows Dam, the earthen-bottom of the river is replaced by a concrete channel for about 10 miles. After the confluence with Coyote Creek, the river returns to an earthen-bottom, and flows another 3.5 miles through a natural estuary to the Pacific Ocean.

Recently, the Corps and the LACFCD, completed the **Los Angeles County Drainage Area (LACDA) Project**, modifying structures and improving levees along the main channels of the Lower Los Angeles River, the Rio Hondo, and Compton Creek to accommodate a 133-year flood event. As a result, 133-year storm flood protection was restored to 82 square miles of urbanized development, 500,000 residents, 177,000 structures and 14 communities.

### ***Major Dams and Reservoirs***

Along the San Gabriel River, major dam and reservoir facilities were developed to impound water in the mountain canyons and on the valley floor for both flood control and water supply purposes. From north to south, the five major dams on the San Gabriel River are:

- *Cogswell*, constructed in 1934, and operated by LACDPW
- *San Gabriel*, constructed in 1939, and operated by LACDPW
- *Morris*, constructed in 1935, and operated by LACDPW
- *Santa Fe*, constructed in 1949, and operated by the Corps

- *Whittier Narrows*, constructed in 1957, and operated by the Corps

An additional 8 dams are located on the tributaries (Big Dalton, Thompson Creek, Live Oak, San Dimas, Puddingstone Diversion, Puddingstone, Fullerton, and Brea Dams). Originally constructed primarily for flood control, many of these dams are now also operated for water conservation (groundwater recharge) in conjunction with the spreading grounds along the River. LACDPW operates all spreading basins that receive water from the San Gabriel River and the Rio Hondo.

The primary flood control facilities within the Rio Hondo sub-watershed include *Eaton Wash Dam*, *Santa Anita Dam*, *Sawpit Dam*, and *Peck Road Lake*. In addition, it shares the *Whittier Narrows Dam and Reservoir* with the San Gabriel River Watershed.

There are no dams or reservoirs located in the Lower Los Angeles River, or along Compton Creek.

### ***Spreading Grounds***

There are many spreading grounds within the Region, primarily along the San Gabriel River and the Rio Hondo. These large basins temporarily hold water to allow for percolation through the bottoms and sides of the pond to replenish the groundwater basin. All of these spreading grounds are owned and operated by the LACDPW, with the exception of a small spreading ground area located in the City of Sierra Madre.

- *San Gabriel Canyon Spreading Grounds* – located below the mouth of the San Gabriel Canyon, these two deep basins recharge the uppermost part of the Main San Gabriel Basin. Sources of water include San Gabriel River, controlled releases from Cogswell Dam, San Gabriel Dam, and Morris Dam, and Committee of Nine surplus flows and imported water.
- *Santa Fe Spreading Grounds* – 16 shallow basins located within the Santa Fe Dam reservoir and spillway in an area that replenishes the Main San Gabriel Basin.
- *San Gabriel River (San Gabriel Valley)* – within the earthen-bottom stretch from the Santa Fe Dam to Whittier Narrows Dam, the San Gabriel River has in-river spreading capabilities. The storage occurs behind four rubber dams installed on drop structures.
- *San Gabriel River (Montebello Forebay)* – within this earthen-bottom stretch from the headworks below Whittier Narrows Dam to Firestone Boulevard the San Gabriel River has in-river spreading capabilities. The storage occurs behind seven rubber dams installed on drop structures.

The next two spreading grounds are located above a geologic area known as the Montebello Forebay, an important area for groundwater recharge due to its highly permeable soils, allowing deep percolation of surface waters.

- *San Gabriel Coastal Basin Spreading Grounds* – these are three shallow basins in the productive Montebello Forebay, below Whittier Narrows, that replenish the Central Groundwater Basin.
- *Rio Hondo Coastal Basin Spreading Grounds* – these 20 shallow basins lie on the east side of the Rio Hondo in the productive Montebello Forebay, below Whittier Narrows, that replenish the Central Groundwater Basin. These spreading grounds are LACDPW's largest and most productive.

Another seventeen spreading grounds located on tributaries are scattered throughout the Rio Hondo and San Gabriel River watersheds, include:

- Eaton Wash
- Eaton Basin
- Sierra Madre
- Santa Anita
- Sawpit
- Peck Road Lake
- Buena Vista
- Little Dalton
- Big Dalton
- Citrus
- Irwindale Manning
- San Dimas Canyon
- Forbes
- Ben Lomond
- Live Oak
- Walnut Wash
- Thompson Creek

Along the Lower Los Angeles River adjacent to its confluence with Compton Creek are the *Dominguez Gap Spreading Grounds*.

### ***Imported Water Facilities***

The San Gabriel Valley requires less imported water compared to some other regions in the Los Angeles area since the available local supplies are able to provide a greater percentage of the total demand. Nonetheless supplemental imported supplies are necessary to make up the difference between local surface and groundwater supply and demand. The three primary sources of imported water are the Colorado River, Owens Valley in eastern California, and the Sacramento-San Joaquin River Delta in Northern California. Three aqueducts supply water to Southern California:

- *Colorado River Aqueduct* –delivers water from the Colorado River to California, and supplies it to MWD.
- *Los Angeles Aqueduct* – supplies water to City of Los Angeles customers from the Owens Valley and Mono Lake.
- *California Aqueduct* – is part of the State Water Project and is maintained by the California Department of Water Resources.

Imported water delivered to facilities within the Region is primarily a blend from the State Water Project and the Colorado River.

### ***Water Reclamation Plants (WRPs)***

LACSD owns and operates five WRPs within the Region. Treated wastewater is discharged from these facilities into the Rio Hondo, the San Gabriel River or its tributaries. These plants reclaim 125 million gallons per day from residential, industrial, and commercial wastewater for reuse purposes. Reuse includes groundwater recharge in the spreading basins below Whittier Narrows as well as industrial and landscape uses.

- The *Pomona WRP* discharges 13 million gallons per day of treated effluent into the San Jose Creek, about 16 miles upstream of its confluence with the San Gabriel River.
- The *San Jose Creek WRP* located next to the City of Whittier discharges 100 million gallons per day of treated effluent into San Jose Creek near the San Gabriel River confluence and to the San Gabriel River at two additional outlets downstream of the San Jose Creek confluence.
- The *Whittier Narrows WRP* in El Monte discharges 15 million gallons per day of treated effluent at four different outlets in the vicinity of the Whittier Narrows Dam.
- The *Los Coyotes WRP* in Cerritos discharges 37 million gallons per day of treated effluent exclusively to the San Gabriel River near the 91 Freeway crossing.
- The *Long Beach WRP* discharges 25 million gallons of treated effluent per day to Coyote Creek near the confluence with the San Gabriel River.

### ***Other Water Quality Treatment and Protection Facilities***

Within the vicinity of the San Gabriel River there are five contaminated plumes that threaten groundwater supplies in the Main San Gabriel Basin, and also threaten to migrate through Whittier Narrows to the Central Groundwater Basin. These plumes, called “**Operable Units**” (OUs) are being cleaned-up by a consortium of agencies under the coordination of the San Gabriel Basin Water Quality Authority: Water from groundwater wells in the OUs are treated or blended with other water of higher quality to meet drinking water standards.

- Baldwin Park OU
- El Monte OU
- Puente Valley OU
- South El Monte OU
- Whittier Narrows OU

LACDPW operates and maintains a **seawater barrier**, *the Alamitos Barrier Project*, within the Region. The Alamitos project was developed in conjunction with the Orange County Water District. It crosses south of the Los Angeles County boundary and has been in operation since 1966. It is one of three such barriers that LACDPW has built along the Los Angeles County’s coastline. The Alamitos project was designed to protect the groundwater supplies in a portion of the Central Groundwater Basin of Los Angeles County and the southwest portion of the Coastal Plain area in Orange County from the intrusion of seawater through the Alamitos Gap.

### **2.3.2 Significant Habitats and Areas of Special Biological Significance**

Throughout most of the Region, habitats for native plants and animal species have been displaced by urban development. With the exception of the upper watershed in the San Gabriel Mountains, most remaining habitat areas are significantly fragmented and isolated, making them less capable of supporting native birds, fish, and other wildlife. Major pinch points and other physical barriers limit aerial, aquatic, and terrestrial movement between these habitat islands. In particular, dams and concrete flood control channels, along with other elements of the flood control and water supply system, have significantly altered water flow and other habitat conditions, terminating or altering historic migration patterns. For example, prior to the dams being built, thousands of steelhead trout would travel up the Los Angeles and San Gabriel Rivers during the winter and spring to spawn. Mammals are largely confined to open space areas or wildlife refuges surrounded by vast areas of developed land with little or no habitat value and which may in fact pose a threat, such as freeways, to land animals.

### ***San Gabriel River and Rio Hondo***

The upper San Gabriel River basin supports high quality riparian habitat and oak woodland. Although habitat conditions in the San Gabriel Mountains are of the highest quality in the Region, they are increasingly stressed by heavy recreational use, as well

as five years of drought, only recently brought to an end by the heavy rains of early 2005. In the foothills and throughout other parts of the basin, patches of natural or nearly natural habitat of varying size remain, supporting native species of plants and animals. These are most prevalent in regional parks, recreation areas and other protected areas, but are also significant natural areas that are not yet protected.

The upper San Gabriel River and the creeks in the mountains and foothills support native fish species, such as trout and Arroyo Chub. The Santa Ana sucker and Santa Ana speckled dace are found in the upper reaches of the San Gabriel River.

The largest intact areas of wildlife habitat within the Region all occur within the Angeles National Forest, Santa Fe Dam floodplain, Whittier Narrows recreation areas, and in the San Jose and Verdugo Hills. Riparian areas in the Whittier Narrows reach of the Rio Hondo and San Gabriel River contain freshwater marsh communities and riparian forest, although non-native species are increasingly prevalent. The Puente-Chino Hills corridor also provides the last wildlife linkage to the Cleveland National Forest.

With the exception of the Whittier Narrows portion, the Rio Hondo is mostly concrete lined with minimal habitat. In contrast, along most of its length the San Gabriel River, although also channelized, has for reasons of water conservation retained an earthen-bottom that supports vegetation and provides some habitat value. Beginning seven miles below the Whittier Narrows Dam, the earthen-bottom of the river is replaced by a concrete channel for about 10 miles. Just downstream of the confluence with Coyote Creek, the river returns to earthen-bottom, and flows another 3.5 miles through a natural estuary to the Pacific Ocean.

Other conditions worth noting:

- Exotic plants have reduced habitat areas for many native species along the rivers. *Arundo*, a particularly invasive giant reed, has significantly impacted the river environment. Although major efforts to remove *arundo* are underway, management practices in general currently favor non-native species habitat.
- A managed vegetation control system, in compliance with permits issued by regulatory agencies, is in effect along the rivers. In terms of balancing flood control with habitat maintenance, both LACDPW and the Corps are conducting vegetation management. As a result, the appearance of the reaches under their respective control varies.
- In and below San Gabriel Canyon, minimum water flow requirements, with regards to duration, quantity, and timing, are considered critical considerations for potential habitat improvement along the river channel. A flow study below Morris Dam is exploring this opportunity as well as the constraints. An agreement allowing the diversion of any water to support habitat or provide other benefits would have to be arranged with existing water rights holders.

- As part of the Emerald Necklace Park Network plan, as well as complementary efforts to establish a habitat corridor between the Puente Hills and the San Gabriel Mountains, the reach along both the Rio Hondo and San Gabriel River between the Santa Fe Dam and Whittier Narrows offers habitat restoration opportunities.
- Habitat restoration opportunities south of the Whittier Narrows Dam are more limited, where they are largely confined to specific sites such as parks and open space opportunities. However, improving and restoring river function upstream may allow for future flexibility in downstream sections.
- In its lowest reaches, as the San Gabriel River approaches the Pacific Ocean, reclamation of oil fields and industrial properties offer the potential to restore tidal basin wetlands, providing critical habitat for birds and other native wildlife. Two current proposals include the *Los Cerritos Wetlands Restoration* and the *Hellman Ranch Wetlands Freshwater Marsh Restoration*.

### ***Lower Los Angeles River and Compton Creek***

The watersheds of the Lower Los Angeles River and Compton Creek are among the most densely developed in Los Angeles County, retaining little of the natural habitat that still exists in some parts of the San Gabriel River and Rio Hondo Watersheds. As an example, almost all of the Lower Los Angeles River from downtown Los Angeles to the Pacific Ocean is a concrete lined channel surrounded by urbanized areas. These concrete flood channels, as well as those of Compton Creek, eliminated most of the vegetation, wetlands, wildlife, and other environmental resources that existed here prior to their construction.

There are, however, two exceptions. A high-water table made it impossible to seal the lower portion of Compton Creek. These 2.5 miles of earthen-bottom just above the confluence with the Los Angeles River, includes freshwater marsh areas that support riparian habitats. The final 2.6 miles of the Los Angeles River, the stretch between the ocean and Willow Street, is also not encased in concrete. This earthen-bottom section of the river known as the Los Angeles River Estuary still teems with life.

### ***Significant Ecological Areas (SEAs)***

Significant Ecological Areas (SEAs) are areas that have been identified by the Los Angeles County General Plan as containing unique or unusual species assemblages, or areas of habitat that are rapidly declining in the Los Angeles County. The SEAs were established to protect a special or sometimes unique collection of habitats and species from loss due to encroachment and human disturbances. They do not take away a property owner's right to build, but outline land use management practices requiring development projects to be designed around existing habitat in a way that ensures its long-term viability.

Within the San Gabriel River and Lower Los Rivers Watershed Region there are ten existing SEAs, all of which are located in the San Gabriel River Watershed. Two existing SEAs lie directly on the San Gabriel River. There are also seven proposed SEAs.

### *Existing SEAs*

- The *Santa Fe Dam Floodplain SEA* stretches almost five miles along the San Gabriel River from Azusa to the Santa Fe Dam in Irwindale. This SEA straddles both sides of the river, and includes the entire open space area behind the dam. This SEA encompasses 2,125 acres and is characterized by floodplain conditions including significant stands of alluvial fan sage scrub habitat, a rare plant community that was once abundant along the San Gabriel Mountains where creeks and river canyons opened up to the valleys. Today it exists only in isolated patches. This SEA also includes some stretches of riparian woodland and coastal sage scrub plant communities. This SEA supports many regional biological values including protection of existing core populations of rare species, presence of plant communities with restricted distribution, essential habitat for resident species and migratory birds, and habitat linkages along the upper San Gabriel River.
- The *Whittier Narrows Dam County Recreation Area SEA* is a large area straddling both the San Gabriel River and Rio Hondo above the Whittier Narrows Dam. This SEA encompasses 4,145 acres in an area that is a collection point for surface and groundwaters from throughout the San Gabriel River and Rio Hondo Watersheds. It presents a mix of oak, sycamore, and willow riparian woodland, freshwater marsh, grasslands, and coastal sage scrub. Whittier Narrows is a large and intact patch of rich habitat that is relatively isolated from other intact habitat patches in the watershed. It supports approximately 300 species of resident and migratory bird species alone and supports many regional biological values including protection of existing core populations of rare species, presence of plant communities with restricted distribution, essential habitat for resident species and migratory birds, and potential habitat linkages along and between the San Gabriel River and the Puente Hills corridor. This SEA is in land owned by the Corps and the County of Los Angeles Department of Parks and Recreation.

Other existing SEAs within a mile of the river include the Rio Hondo College Wildlife Sanctuary, the Sycamore-Turnbull Canyons and Alamitos Bay. Other SEA patches are spread throughout the Puente-Chino Hills and San Jose Hills to the east of the river, as well as in the San Gabriel Mountains.

There are no existing SEAs in the Lower Los Angeles or Compton Creek Watersheds.

### *Proposed SEAs*

As part of a General Plan update process now underway, the County of Los Angeles has several proposed SEAs in development. Once adopted, these SEAs will significantly increase the area of protection, especially within the San Gabriel Mountains and Puente Hills areas. Most of the existing SEAs within this area, including those identified above, will be enfolded into the new larger designations. Proposed SEAs in the Rio Hondo and San Gabriel Watersheds include:



- The *Altadena SEA* is located along the Altadena foothills directly above the community of Altadena. The eastern half of this proposed SEA lies within the far northwest corner of the Rio Hondo sub-watershed, where moving east to west it will encompass the following canyons– Hastings, Pasadena Glen, Eaton Wash, and Rubio. A large portion of this SEA lies within the Angeles National Forest. The potential for east-west wildlife movement exists along this foothill area.
- The proposed *San Gabriel Canyon SEA* will lie to the east of the Altadena SEA. There are currently no SEAs in the upper reaches of the San Gabriel River, but this proposed SEA will incorporate the existing SEA, “Santa Fe Dam Floodplain.” Once approved, the SEA will center on the mouths of three canyons, which flow from the mountains and interconnecting terrain in between, for a total of 22,966 acres. From east to west these canyons include: San Gabriel, Sawpit, and Santa Anita Canyon located above the cities of Azusa, Duarte, Monrovia, Arcadia, and Sierra Madre. Within this proposed SEA is a wide variety of plant communities including grasslands, riparian, shrublands, woodlands and forests. The majority of this SEA is within the Angeles National Forest, while remaining portions lie within unincorporated Los Angeles County and the foothill Cities of Arcadia, Azusa, Duarte, Glendora and Monrovia.
- The proposed *San Dimas Canyon/San Antonio Wash SEA* is located in the foothills of the eastern San Gabriel Mountains, near the northeastern corner of the San Gabriel River Watershed. It is centered on the mouths of four canyons which flow from the mountains and interconnecting terrain. From east to west, these canyons include San Antonio Canyon above the City of Claremont, and Live Oak, Marshall, and San Dimas above the cities of La Verne and San Dimas.
- The *Rio Hondo College Wildlife Sanctuary SEA* is located in the far northwest portion of the Puente Hills adjacent to the Rio Hondo Community College (RHCC) campus and the Puente Hills Landfill. It is approximately 109 acres and is currently used by faculty and students at RHCC as a natural classroom and laboratory. On this site are good examples of riparian woodland, chaparral, oak woodland, and coastal sage scrub communities.
- The proposed *Puente Hills SEA* is located in the Puente Hills, which separate the San Gabriel Valley from the coastal plain to the south. This SEA will stretch from the San Gabriel River on the west to the county line in the east. It will encompass the existing Whittier Narrows Recreation Area SEA, as well as other remaining habitat areas within the Puente Hills, including Sycamore Canyon and Turnbull Canyon, Powder Canyon, Brea and Tonner Canyons. The total area proposed is 13,421 acres, containing relatively undisturbed patches of woodland, shrubland, grassland and wetland communities. As part of an important wildlife corridor, the Puente Hills constitute a significant habitat island surrounded by urban development. A majority of this proposed SEA occurs within unincorporated Los Angeles County, while the remainder falls within the city limits of Industry, La Habra Heights, Montebello, Pico Rivera, South El Monte, and Whittier.

- The proposed *East San Gabriel Valley SEA* is located in the easternmost portion of the San Gabriel Valley, at a midway point between the proposed San Dimas Canyon/San Antonio Wash SEA to the north and the proposed Puente Hills SEA to the south. It will include several ridgelines and hilltops and a major drainage area at the eastern end of the San Jose Hills, an area surrounded by urban development. It will encompass five distinct component parts. The largest component is Frank G. Bonelli Regional County Park and a portion of Walnut Creek Park, which includes the Puddingstone Reservoir, a major flood control dam and reservoir.
- The proposed *Alamitos Bay SEA* is located at the lower end of the San Gabriel River Watershed and at the outfall of the Los Cerritos Channel. This SEA is one of two remaining examples of salt marsh found in Los Angeles County, and the last remnant of the extensive salt marshes once found in Los Alamitos Bay. The majority of this vegetation type has been lost to urbanization, flood control projects, harbors, and marinas. It is one of the most productive ecological communities that exist and is extremely important as a breeding ground for both terrestrial and marine organisms. The interface of salt waters with fresh waters provides a rich ecological mix of brackish conditions. Wintering migrating birds also benefit from this salt marsh system.

There are no existing or proposed SEAs in the Lower Los Angeles River or Compton Creek Watersheds.

### **2.3.3 Major Water Related Conflicts and Issues and Quality and Quantity of Water Resources**

#### **2.3.3.1 Surface Water Quality**

Surface water quality within the Region varies widely within the different reaches and tributaries of the principal rivers, but in most areas has been significantly degraded by decades of polluted urban runoff. An exception to this general condition is the receiving waters of the upper San Gabriel River and its tributaries within the San Gabriel Mountains. These areas remain in a relatively pristine state.

Within the more urbanized portions of the Region, however, surface water quality has degraded to levels unsafe for human contact, due both to urban runoff and illegal dumping. Pollutants from a wide variety of residential, commercial, and industrial land uses have impaired water quality in the middle and lower portions of the watershed area, which lie below the San Gabriel Mountains. According to the LARWQCB, “uncontrolled pollutants from non-point sources are believed to be the greatest threats to rivers and streams...”

#### ***San Gabriel River***

The LARWQCB has identified major watershed issues for the San Gabriel River in its Watershed Management Initiative (WMI) Chapter of December 2001. These water quality issues include:

- 764 companies or other entities with minor, general, industrial, stormwater, or construction stormwater permits under the National Pollution Discharge Elimination System (NPDES)
- Sluicing and disposal of sediments from water reservoirs, which can have short-term water quality impacts
- Protection of groundwater recharge areas
- Ambient toxicity
- Excessive trash in recreational areas of upper watershed
- Extensive stream modification for mining and water reclamation
- Urban and stormwater runoff quality
- Non-point source loadings from nurseries and horse stables
- Lack of understanding of estuary dynamics (e.g. salinity)
- Septic systems leaking into groundwater

Impairments to the San Gabriel River include nitrogen and related effects, trash, metals, historic pesticides, coliform, chlorides, and PCBs. Currently, the only completed TMDL plan is the East Fork Trash TMDL, which will take 10 years to bring the area into compliance. Other TMDLs planned for development over the next several years include bacteria, nutrients, metals, and abnormal fish histology.

The San Gabriel River has two impaired reaches, as well as impaired tributaries, appearing in the California 2002 Section 303(d) list of Water Quality Limited Segments, that do not meet water quality standards. The associated constituents or pollutants for reaches in the current 303(d) list include:

- Coyote Creek (entire stretch of main stem) – Abnormal fish histology, algae, coliform, copper, lead, selenium, zinc
- San Gabriel River, Reach 1 (from south of 91 freeway to 405 freeway, south of the confluence of Coyote Creek) – Abnormal fish histology, algae, coliform
- San Gabriel River, Reach 2 (south of Whittier Narrows Dam to south of 91 freeway) – Coliform, copper, lead, zinc
- San Jose Creek, Reach 1 (from confluence with Puente Creek to confluence with San Gabriel River) – algae, coliform
- San Jose Creek, Reach 2 (from top of main stem to confluence with Puente Creek) – algae, coliform

- Walnut Creek (from Puddingstone Reservoir to confluence with Big Dalton Wash, excludes last stretch of Walnut Creek to the San Gabriel River confluence) – pH, toxicity

LACDPW has collected water quality data from 12 locations in the San Gabriel River upstream of the City of Azusa. In addition, the LACDPW has conducted stormwater monitoring since the wet weather season of 1994-95 at two monitoring stations within the San Gabriel River Watershed, below the upper portion.

The Southern California Coastal Water Research Project (SCCWRP) has also been engaged in water quality monitoring activities. SCCWRP monitored dry weather flows in the San Gabriel River in late 2002 and 2003. This data will be used to characterize dry season conditions and may be used for future development of a dry season hydrodynamic and water quality model for the San Gabriel River. Additionally, SCCWRP has been monitoring wet weather since 2002 at four sites on San Jose Creek and Walnut Creek.

### ***Rio Hondo***

Like the San Gabriel River Watershed, the quality of water in the Rio Hondo subwatershed is threatened by point source and non-point source pollution from multiple land uses. These include industrial, commercial, high-density and single family residential, recreational use, and equestrian uses. As a result, a number of individual water bodies or their reaches within the Rio Hondo Watershed are among those designated as impaired water bodies on the States 303(d) list because of impairments such as trash, copper, lead, zinc, ammonia, pH, and coliform bacteria. Two of these impaired reaches are on the Rio Hondo. The associated constituents or pollutants for reaches in the current 303(d) list include:

- Legg Lake – ammonia, copper, lead, odors, pH, trash
- Monrovia Canyon Creek – lead
- Rio Hondo, Reach 1 (from confluence with LA River to Santa Ana Freeway) – copper, high coliform count, lead, pH, trash, zinc
- Rio Hondo, Reach 2 (at Rio Hondo Spreading Grounds) – high coliform count,

There is currently a lack of comprehensive water quality data for the Rio Hondo Watershed. The data that is available was collected by different agencies for different purposes using different methodologies. The most recent data was collected by LACDPW in 2003 at nine locations in a one-time event. A comparison of findings from an analysis of historical water quality data and the results of the 2003 sampling indicate that the Rio Hondo Watershed appears to have an ongoing and widespread problem with pH, copper, and bacteria.

### **Lower Los Angeles River and Compton Creek**

According to the LARWQCB, (*WMI, Chapter IV, October 2004 Version*), the majority of the Los Angeles River Watershed is considered impaired due to a variety of point and non-point sources. Contaminants from urban runoff enter the Los Angeles River during storm events by way of municipal storm drains. Point sources of discharges to surface waters include treatment facilities for municipal and industrial wastewaters. Currently, about 77% of the total base flow in the Los Angeles River is from tertiary treated effluent from the Tillman and Glendale Treatment Plants, which are located upstream of the Lower Los Angeles River.

This assessment of water quality in the overall Los Angeles River Watershed is also particularly true of the Lower Los Angeles River Watershed. Not only is it impacted by pollutant runoff from a variety of residential, industrial and other land uses within its own boundaries, but also from major upstream pollutant inputs in the Los Angeles River originating in flows from upper portions of the Los Angeles River Watershed, including the upstream water treatment facilities identified above. It will also be impacted by flows from the Rio Hondo, a tributary of the Lower Los Angeles River.

Overall, the Los Angeles River Watershed has approximately twice the number of industrial stormwater discharges as the San Gabriel Watershed. Many of these are located in communities along the Lower Los Angeles River, including Vernon, South Gate, Long Beach, Compton, and Commerce. These industrial uses include metal plating, transit, trucking and warehousing, and wholesale trade.

Impaired water bodies in the Lower Los Angeles River Watershed appearing on the States 303(d) list include reaches on the Lower Los Angeles River as well as Compton Creek. The associated constituents or pollutants for reaches in the current 303 (d) list include:

- Los Angeles River, Reach 1 (Estuary to Carson Street) – cadmium, copper, lead, zinc, pH, aluminum, ammonia, high coliform count, nutrients (algae), scum/foam unnatural
- Los Angeles River Reach 2 (Carson to Figueroa Street) – lead, ammonia, high coliform count, nutrients (algae), odors, oil.
- Compton Creek – copper, lead, pH, high coliform count

Completed TMDLs include trash (2001) and nutrients (2004). Currently scheduled TMDLs are metals (fiscal year 2004/05), historic pesticides (fiscal year 2007/08), and coliform (fiscal year 2007/08).

The Regional Board has identified major issues for the Los Angeles River Watershed in its WMI. Most, if not all of these, are applicable to the Lower Los Angeles River Watershed. These include both surface water and groundwater related issues:

- Protection and enhancement of fish and wildlife habitat (including the Los Angeles River estuary in Long Beach, and lower reaches of Compton Creek)
- Removal of exotic vegetation
- Attaining a balance between water reclamation and minimum flows to support habitat
- Management of stormwater quality
- Assessment of other non-point sources including horse stables, golf courses, and septic systems
- Pollution from contaminated groundwater
- Groundwater recharge with reclaimed water
- Contamination of groundwater by volatile organic compounds
- Leakage of MTBE from underground storage tanks
- Groundwater contamination with heavy metals, particularly hexavalent chromium
- Contaminated sediments within the Los Angeles River estuary.

### **2.3.3.2 Groundwater Quality**

In the Region, groundwater quality varies widely. Water quality is relatively good in most areas, but widespread areas have also been impacted by a variety of contaminants.

Most notably, the Main San Gabriel Basin contains substantial contaminated plumes of volatile organic compounds (VOCs) due to past disposal of industrial solvents and other pollutants as well as nitrates largely from past agricultural land use practices. In 1979, the U.S. Environmental Protection Agency (EPA) placed the Main San Gabriel Basin on its National Priorities List, otherwise known as the Superfund program. As part of the Superfund cleanup program, there are five contaminated plumes or “Operable Units” in the San Gabriel Valley which are now undergoing cleanup efforts: Baldwin Park, El Monte, Whittier Narrows, South El Monte, and Puente Valley. At these Superfund sites, contaminated groundwater is being treated to remove the contaminants and to prevent the polluted water from migrating south from the Main San Gabriel Basin into the Central Groundwater Basin, separated only by Whittier Narrows. In 1993, the San Gabriel Valley Water Quality Authority was formed by cities and municipal water districts within the affected area to assist in coordinating the groundwater cleanup effort.

In the Central Groundwater Basin, a local well testing program has detected low levels of perchlorate in two wells. However, the possible migration of contaminated groundwater from the Main San Gabriel Basin into the Central Groundwater Basin remains the larger threat.

Because of groundwater extraction, seawater from the Pacific Ocean increased the salinity of groundwater in the West Coast and Central Groundwater Basins. In response to this problem, a seawater barrier, the Alamitos Barrier, was constructed in 1966 to protect fresh groundwater supplies in the lower portion of the Central Groundwater Basin, as well as a portion of the Coastal Plain Area in Orange County, from the intrusion of seawater.

### **2.3.3.3 Water Supplies and Demands**

Available water sources within the San Gabriel and Lower Los Angeles Rivers Watershed Region include three main sources: local surface and groundwater supplies, reclaimed water, and imported water. These three water source resources supply municipal, industrial and agricultural demands, support riparian and water-based habitat, and provide recreational and aesthetic value to the area.

#### ***Local Surface and Groundwater Supplies***

The local water supply begins as rainfall which evapotranspires or percolates naturally into the underlying groundwater aquifer, or results in surface runoff. Over the years, a highly complex intertwined network of facilities has been developed, which involves the transport, percolation, storage and conveyance of imported surface flows, imported sources, and groundwater. Groundwater basins are the primary means for long-term water storage and are recharged through natural soil percolation, as well as through engineered spreading grounds. Surface water reservoirs in the San Gabriel Mountains also provide critical shorter-term storage functions. Imported water is transported to the region from distant sources hundreds of miles away. Reclaimed water is treated wastewater from local WRPs.

The watersheds of the San Gabriel River and the Rio Hondo are a primary local water supply source. In contrast, the Lower Los Angeles River Watershed has a much more limited local water supply function. Between 90 and 95 percent of precipitation above Whittier Narrows Dam is retained in the watershed for local water supply. The runoff is conveyed via the river and storm drain system to area spreading grounds to be stored for future use by various water agencies. The average annual rainfall is 35 inches in the San Gabriel Mountains, 17 inches in the San Gabriel Valley, and only 12 inches in the coastal plain.

Major dam and reservoir facilities were developed to impound water in the mountain canyons and on the valley floor for both flood control and water supply purposes. Although originally constructed primarily for flood control, many of these dams are now also operated for water conservation (groundwater recharge) in conjunction with the spreading grounds located along the Rio Hondo and San Gabriel River.

Four groundwater basins underlie the San Gabriel and Lower Los Angeles Rivers Watershed Area including the Main San Gabriel, Central and West Coast Basins, and a portion of the Raymond Basin. These basins serve as underground water reservoirs. Wells drilled into the basins pump water to the surface for use. In addition to daily water supply, groundwater aquifers hold emergency reserves of water for periods of drought and natural disasters that disrupt normal water deliveries. Groundwater basins store

local rainfall for use, but the use far exceeds availability. Groundwater supplies are supplemented with reclaimed water from WRPs, as well as with imported water.

Spreading grounds are an important part of the local water supply infrastructure. These large basins temporarily hold water to allow for percolation to replenish the groundwater basins. These basins are fed by carefully controlled allocated water from the San Gabriel River and tributaries. Water from the San Gabriel River and Rio Hondo is derived from different sources, depending on the time of year. During the wet weather season, water is derived from stormwater runoff, both from the mountains and the urban areas draining to the river. During the dry season and in between storms, water for groundwater recharge of groundwater basins is provided by releasing water held at upstream reservoirs, adding water from WRPs, and by use of imported water supplied by several local municipal water districts and purchased either through the MWD or directly from DWR.

In addition to water that is spread within the upper basin, substantial quantities of surface water originating in the upper portions of the watershed, along with imported and reclaimed water is recharged into major spreading grounds downstream of Whittier Narrows along the San Gabriel River and Rio Hondo to replenish the Central Groundwater Basin.

### ***Imported Water***

Water derived from distant sources or imported water, is a major source of water supply for southern California, including the San Gabriel and Lower Los Angeles Rivers Watershed Region. Three primary sources of imported water are the Colorado River, Owens Valley in eastern California, and the Sacramento-San Joaquin River Delta in Northern California. Three aqueducts supply water to Southern California:

- Colorado Aqueduct
- Los Angeles Aqueduct
- California Aqueduct

The San Gabriel Valley requires less imported water compared to some other regions in the Los Angeles area since the available local supplies are able to provide a greater percentage of the total demand. Nonetheless, supplemental imported supplies have been necessary for a number of years to make up the difference between local surface and groundwater local water supply and demand. Water supplied for direct delivery may be a blend of State Water Project and Colorado River Water as shown in the table on the following page. Water supplied for groundwater recharge in the upper basin is State Water Project water.



Los Angeles County, Department of Public Works  
Water Resources Division

**Imported and Reclaimed Water Delivered in Acre-Feet  
WATER YEAR : 2004-2005**

	IMPORTED WATER OUTLET RELEASES														MONTHLY TOTAL SPREAD
	San Dimas CB - 48	Thompson Creek CB - 28	Alhambra CB - 36	USG 3		TVMWD Little Dalton PM26	Live Oak Basin	SGVMWD			Waste to the Ocean				
				MSGB/ Santa Fe	San. Gab. Cyn. S.G.			Live Oak Basin	S.G. Canyon			Beatty Canyon	San Dimas		
									Basin 1	MSGB			CB	MSGB	
OCT	0.0	0.0	0.0	0.0	836.4	0.0	0.0	2,603.0	0.0	0.0	0.0	142.0	0.0	0.0	3,581.4
NOV	0.0	5,937.4	0.0	1,223.0	1,184.0	0.0	0.0	0.0	0.0	0.0	0.0	1,054.0	140.0	0.0	9,538.4
DEC	9,287.7	6,195.4	0.0	1,968.5	517.1	0.0	0.0	1,081.1	344.9	0.0	709.0	19.0	0.0	0.0	20,122.7
JAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	316.0	0.0	0.0	316.0
FEB	0.0	0.0	0.0	0.0	0.0	0.0	90.0	0.0	0.0	0.0	180.0	0.0	0.0	0.0	270.0
MAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
APR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
MAY														0.0	0.0
JUN														0.0	0.0
JUL														0.0	0.0
AUG														0.0	0.0
SEP														0.0	0.0
<b>TOT</b>	<b>9,287.7</b>	<b>12,132.8</b>	<b>0.0</b>	<b>3,191.5</b>	<b>2,537.5</b>	<b>0.0</b>		<b>3,684.1</b>	<b>344.9</b>	<b>0.0</b>	<b>889.0</b>	<b>1,531.0</b>	<b>140.0</b>	<b>0.0</b>	<b>33,828.5</b>

	RECLAIMED WATER DELIVERED												MONTHLY TOTAL WASTED	MONTHLY TOTAL SPREAD
	WHITTIER NARROWS PLANT				SAN JOSE CREEK PLANT				POMONA PLANT					
	DELIVERED		Waste to the ocean	MONTHLY SPREAD	DELIVERED		Waste to the ocean	MONTHLY SPREAD	DELIVERED		Waste to the ocean	MONTHLY SPREAD		
	Rio Hondo	San Gabriel			Rio Hondo	San Gabriel			Rio Hondo	San Gabriel				
OCT	665.3	170.0	154.9	680.4	600.2	1,558.5	361.1	1,797.6	119.3	262.4	31.6	350.0	547.6	2,828.1
NOV	800.2	0.0	1.8	798.4	1,874.2	171.5	0.0	2,045.7	347.6	26.0	2.0	371.6	3.8	3,215.7
DEC	849.7	0.0	84.3	765.4	868.2	1,253.9	289.1	1,833.1	163.2	207.4	67.3	303.3	440.6	2,901.8
JAN	827.7	0.0	623.1	204.6	1,668.7	674.5	1,938.0	405.2	0.0	345.5	293.8	51.8	2,854.9	661.6
FEB	726.4	0.0	310.9	415.5	0.0	2,282.9	2,100.5	182.4	0.0	503.4	419.2	84.3	2,830.5	682.2
MAR	733.9	0.0	507.6	226.3	375.9	1,722.5	666.9	1,431.5	83.1	442.6	98.9	426.8	1,273.4	2,084.6
APR	136.9	548.6	0.0	685.5	129.0	1,848.8	0.0	1,977.8	17.6	172.5	35.0	155.1	35.0	2,818.4
MAY				0.0				0.0				0.0	0.0	0.0
JUN				0.0				0.0				0.0	0.0	0.0
JUL				0.0				0.0				0.0	0.0	0.0
AUG				0.0				0.0				0.0	0.0	0.0
SEP				0.0				0.0				0.0	0.0	0.0
<b>TOT</b>	<b>4,740.1</b>	<b>718.6</b>	<b>1,682.6</b>	<b>3,776.1</b>	<b>5,516.1</b>	<b>9,512.7</b>	<b>5,355.5</b>	<b>9,673.3</b>	<b>730.8</b>	<b>1,959.9</b>	<b>947.8</b>	<b>1,742.9</b>	<b>7,985.9</b>	<b>15,192.2</b>

Due to increased population in other regions, including Arizona and San Diego, combined with a recalculation of water available to the Region, a reduction in future import water supplies is inevitable. To balance a reduction of imported water supplies, locally based conservation measures are on the rise. Current practices include more stormwater capture, increased water conservation programs, and increased reclaimed water availability.

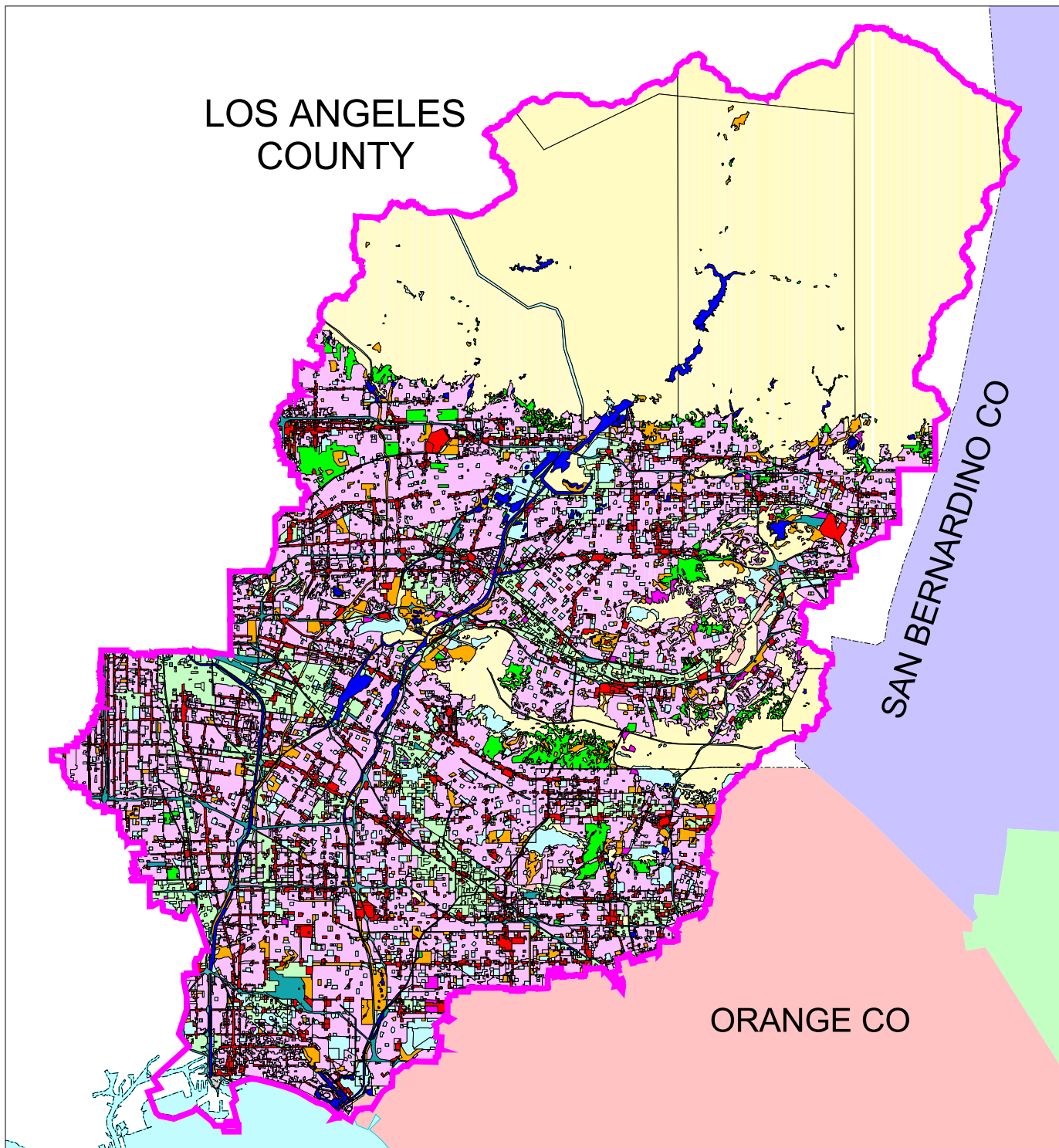
### ***Reclaimed Water***

Treated wastewater at five WRPs discharge into the river or its tributaries. WRPs are managed by LACSD. These plants reclaim almost 80 million gallons per day from residential, industrial and commercial wastewater, making it available for reuse purposes. Reuse includes groundwater recharge in the spreading basins below Whittier Narrows as well as industrial and landscape irrigation uses. Up to an average of 50,000 acre-feet of reclaimed water is used to replenish the Central Groundwater Basin.

### **2.3.4 Major Land Use Divisions**

Land use in the Region, shown in the figure on the following page, can be characterized in terms of two major, distinct categories. 1) The upper portion, which is approximately 25% of the Region, is considered “vacant” or open space land. This is land within the San Gabriel Mountains, consisting largely of the Angeles National Forest; and 2) in sharp contrast, the remaining approximately 75%, consisting of the middle and lower portions of the Region, is densely developed and highly urbanized. There are a variety of land use types in the urbanized areas, including residential, industrial, commercial, and public facilities. Open space is relatively sparse.

San Gabriel and Lower Los Angeles Rivers Watershed  
 Integrated Regional Water Management Plan  
 PIN 5956



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Agricultural	Medium to High Density Residential	Undefined
Commercial	Open Space/Recreational	Under Construction
Industrial	Public Facilities/Institutional	Vacant
Low Density Residential	Transportation	Waterways



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**LAND USE DIVISIONS**

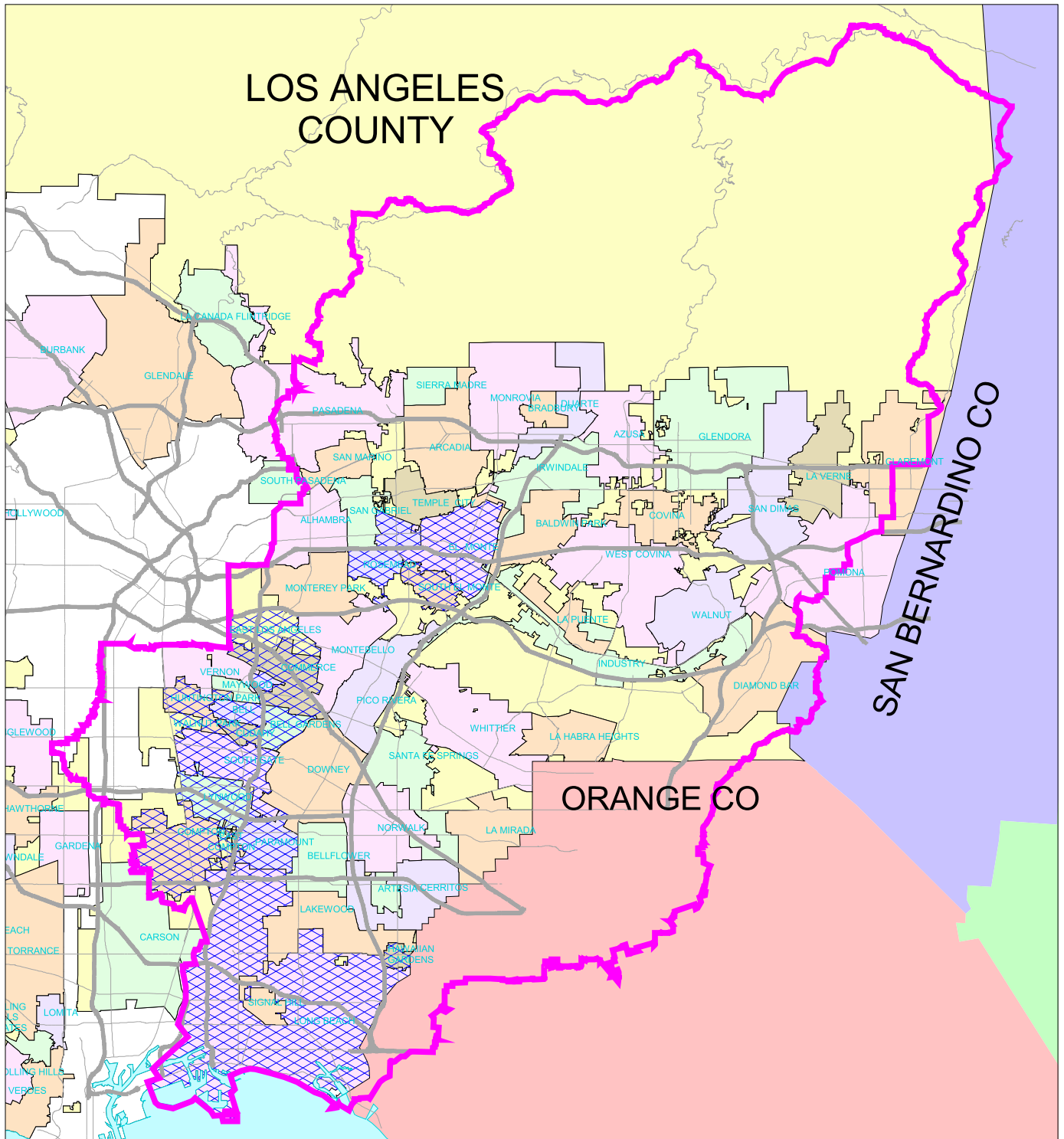
Residential land uses make up a large portion of the urbanized areas. However, there is also a heavy concentration of industrial land uses in the southern portion of the Watershed, including the Lower Los Angeles River. This area also includes the twin ports of Los Angeles and Long Beach, which together are the largest container ports in the nation.

### **2.3.5 Social and Cultural Issues**

The social and cultural makeup of the Region exhibits many extremes, mirroring the wide-ranging demographic diversity in the rest of Los Angeles County. The estimated total population of the Region is over 4 million, based on 2000 Census data. Population is densely concentrated throughout the Region, except in the Angeles National Forest in the upper portion of the San Gabriel River Watershed. The diverse nature of the overall population can best be understood by closely examining populations in two of its most significant components – San Gabriel River corridor and the Rio Hondo watershed.

A disadvantaged community is defined as a community with an annual median household income that is less than 80 percent of the statewide annual median household income. Per the California Department of Finance, in 2000, 80 percent of the median household income is \$37,994. A map of disadvantaged communities is shown on the following page.

San Gabriel and Lower Los Angeles Rivers Watershed  
 Integrated Regional Water Management Plan  
 PIN 5956



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REGIONAL BOUNDARY

DISADVANTAGED CITIES & COMMUNITIES

N

1 INCH = 6 MILES

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**DISADVANTAGED COMMUNITIES**

## **San Gabriel River Corridor**

### ***Population Density***

About 1.5 million people live near the river, including the populations of the cities and unincorporated areas that lie adjacent to the river. Only a handful of people live within the boundaries of the Angeles National Forest. The majority lives within the San Gabriel Valley and the river's coastal plain. The population living along this corridor can be described in terms of seven distinct reaches

**Reaches 1 and 2: San Gabriel Mountains** – Very low population density encompassing the wilderness areas of the Angeles National Forest.

**Reach 3: Upper San Gabriel Valley** (120,000 - Azusa, Duarte, Arcadia, Irwindale) – Relatively low population density, as it is on the edge of the Angeles National Forest, plus a substantial portion of this area is devoted to industrial land use activities, especially gravel quarries.

**Reach 4: Lower San Gabriel Valley** (228,871 - Baldwin Park, El Monte, South El Monte, Industry) – The very highest population densities along the river are located in this reach. This includes Baldwin Park and El Monte, which have population densities greater than 9,600 people per square mile.

**Reach 5: Upper Coastal Plain** (292,973 - Pico Rivera, Whittier, Santa Fe Springs, Norwalk) – This reach also has river-adjacent communities with very high densities.

**Reach 6: Lower Coastal Plain** (311,034 - Downey, Bellflower, Cerritos, Lakewood) – Many low- to medium density communities.

**Reach 7: Zone of Tidal Influence** (495,977 - Long Beach, Seal Beach, Rossmoor) – Mostly low to medium density communities.

### ***Income/Disadvantaged Communities***

Income levels of households vary along the river corridor. The median household income for 1999 along the corridor varied from \$41,372 to \$55,269 by river reach. When calculated on a per capita basis, the breadth of annual income for the surveyed year is even broader ranging from \$11,291 to \$30,757. By the State's measure, having less than 80% of the year 2000 median household income (or less than \$37,994) a relatively high percentage of the residents living near the San Gabriel River corridor are disadvantaged:

- Reach 3 – Upper San Gabriel Valley            greater than 35.5%
- Reach 4 – Lower San Gabriel Valley           greater than 47.5%
- Reach 5 – Upper Coastal Plain                greater than 36.4%
- Reach 6 – Lower Coastal Plain                greater than 33.3%
- Reach 7 – Zone of Tidal Influence            greater than 46.2%

It should be noted that Reach 4 not only has some of the poorest communities along the San Gabriel River community, but also the most densely populated ones, as previously indicated.

***Race and Ethnicity***

Like most of southern California, the area around the San Gabriel River is racially and ethnically diverse. However, these patterns vary along the river corridor. In every reach except for the zone of tidal influence (Reach 7), those who identified themselves as Hispanic or Latino represent the largest component of the population. This is most apparent in the lower San Gabriel Valley and upper coastal plain where the Hispanic population is 75.9% and 68.7% respectively. Those identifying themselves as Asian in the 2000 Census also represent a large percentage of the river corridor’s population. In the lower San Gabriel Valley, the Asian population is the second largest group following the Hispanic population. The largest percentage of Asian population occurs in the upper San Gabriel Valley.

In addition to being very racially and ethnically diverse, the San Gabriel River Watershed is also linguistically diverse. Within one-mile of the San Gabriel River, of the 39 language categories in the 2000 Census, only one category, Navajo, had no respondents when answering the question of what language is spoken at home. The languages most widely spoken at home include English, Spanish and Chinese. The other more prevalently used languages at home include Asian and Pacific Island languages including Korean, Mon-Khmer or Cambodian, Vietnamese and Tagalong, the primary language of the Philippines.

**Rio Hondo Subwatershed**

***Population Density***

The estimated total population of the Rio Hondo Watershed is between 700,000 and 800,000, based on 2000 Census data. This includes 22 cities and 6 unincorporated county communities.

Some of the densest cities in the nation are located within the lower half of the watershed. The densest area of population lies across the center of the watershed in the cities of Alhambra, north Monterey Park, Rosemead, Temple City, El Monte, and South El Monte. These areas have anywhere from 7,500 to 17,500 people per square

mile. Bell Gardens has an extremely high population density, between 17,500 and 29,200 people per square mile.

Areas of low density, less than 3,000 people per square mile, are predominantly large lot single family homes in the foothill communities of upper Pasadena, Sierra Madre, Monrovia and Bradbury. San Marino is generally low in density as well. Other areas that show low population density are commercial areas in Arcadia, industrial areas in South El Monte and Commerce, and open space areas in the Angeles National Forest, Whittier Narrows and Montebello hills.

The 22 cities in the Rio Hondo Watershed include both some of the wealthiest and poorest communities in Los Angeles County. The watershed also houses some of the oldest communities in California and some of the nation's newest immigrant communities. As a result, the watershed is both ethnically and linguistically diverse, encompassing many languages other than English, including Spanish, Chinese, Vietnamese, Thai, Japanese, and Cantonese.

Cities with the largest Asian populations tend to lie within the central portion of the developed areas of the watershed and its northeastern area extending up to the foothills. These include Monterey Park (61%), Rosemead (49%), San Gabriel (49%), San Marino (48%), Alhambra (47%), Arcadia (45%), and Bradbury (20%).

Cities with the largest White populations lie within the northern foothill communities and in some central areas of the watershed. These include Sierra Madre (80%), Bradbury (63%), South Pasadena (51%), Monrovia (47%), San Marino (45%), Arcadia (40%), Pasadena (39%), and Temple City (38%).

There are only two cities with relatively large African American communities and both are located within the northern portion of the watershed. Cities with the largest African American populations include Pasadena (14%) and Duarte (9%).

The table shown on the following page provides a demographic breakdown for the Rio Hondo Watershed. As the political boundaries of 15 of these 22 cities extend beyond the boundaries of the watershed, these percentages are based on overall population totals that exceed actual amounts within the watershed by approximately 30%. Still, these population figures provide a valuable picture of the demographic mosaic within the watershed.



**Race Distribution by Percent of Total Population  
in the Rio Hondo Watershed**

Hispanic	53%
Asian	21%
White	21%
African American	3%
All Other*	2%

**Lower Los Angeles River and Compton Creek**

The three-mile buffer along the Los Angeles River has a population density of 9,398 residents per square mile, compared to the Los Angeles City average density of 7,350. According to the Trust for Public Land, the Lower Los Angeles River in particular has an even higher population density. The Lower Los Angeles River watershed extends from the City of Alhambra to its outlet at the Pacific Ocean in the City of Long Beach, and includes all or portions of 13 small cities, as well as unincorporated County communities.

Compton Creek is a 42.1 square mile subwatershed of the Los Angeles River Watershed. Over one-third of the Compton Creek subwatershed covers a small portion of the City of Los Angeles. It also includes most of the City of Compton and parts of the Cities of Lynwood and South Gate, as well as unincorporated County communities. 700,000 people reside in the Compton Creek subwatershed (16,627 residents per square mile), where the effects of urbanization on water quality, habitat and open space have been extensive. The area is highly urbanized; only 3.3% of the land is open space, parks, agriculture, or vacant. The watershed is predominantly residential, comprised of small single-family homes, multi-family units and significant areas of commercial and industrial facilities.

The people who reside in the Lower Los Angeles River and Compton Creek watersheds are ethnically diverse. These areas have experienced a demographic shift in recent years, transitioning from a primarily African-American population to a predominantly Latino population.

Both the Lower Los Angeles River and Compton Creek areas include a high proportion of residents whose annual median household income is less than \$37,520. This figure is less than 80 percent of the statewide annual median household income, categorizing these communities as *disadvantaged*.

In the Lower Los Angeles River subwatershed, the cities of Bell, Bell Gardens, Vernon, Maywood, Cudahy, Paramount and South Gate in particular have been identified as communities with some of the lowest ratios of parks per resident in the nation

(Greenprinting Los Angeles Initiative, 2004 and Wetlands of the Los Angeles River Watershed, 2000). The Compton Creek watershed is also park-poor with only .06 acres of park per one thousand persons; though they vary, minimum standards for urban park space fall nearly 4 acres per one thousand persons.

## **Section 3**

# **Analysis of Existing Plans and Studies**

### **3.1 Summary of Existing Plans and Studies**

Many water and watershed management plans have been prepared in the Region that address specific water management strategies, but without integration. Many of the watershed management plans include project and programs that seek to implement the goals and objectives of the documents. The overall strategy for implementation of watershed management plans emanates from stakeholder driven processes, purpose and need, Proposition 13 Watershed Protection goals, and cohesive watershed-wide recommendations. When compiled together these plans form a more integrated, comprehensive plan for the Region. Therefore, each of these existing documents have been reviewed and summarized, in order to identify the gaps within them.

Every urban water supplier in the Region has prepared an Urban Water Management Plan in accordance with the California Urban Water Management Act. Typical elements include a description of operations of the water district to achieve the maximum practicable conservation and efficient use of the water resources of the area, both local and imported. These plans address implementation from a water supply perspective.

The following subsections present a summary of each plan that exists within the Region, including a description of the plan, who prepared it, and the purpose. Plans have been grouped according to the type of plan and what water management strategies are covered.

#### **3.1.1 Baseline Documents for Existing IRWM Operations**

##### **3.1.1.1 The Judgment – Upper San Gabriel Valley Municipal Water District v. City of Alhambra, et. al.**

The judgment, dated November 20, 1972, is a water rights settlement between the Upper San Gabriel Valley Municipal Water District and the City of Alhambra. Within the San Gabriel River Watershed, water production is affected by common problems of storage, replenishment, quality and quantity, so the rights of producers of water are affected. As known well before the Judgment, surface flow and ground water are physically inter-related and constitute a common source of water supply for all landowners, water producers and users within the watershed. Production from common source of supply anywhere within the basin decreases the common supply of water to the owners of water rights within the basin and decreases the water supply of each party affected.

Each party producing water from the basin or relevant watershed was responsible for the progressive general lowering of ground water levels throughout the basin, and the progressive and continual deepening of wells. If current practices continued, it would result in further lowering of ground water levels, deepening of wells and ultimate depletion of the usable ground water supply. The case was brought by USGVMWD on

behalf of water producers to find an equitable physical solution shared by all users and stakeholders. In order to protect and preserve the basin from threatened irreparable damage, the Court issued injunctions to enjoin and restrain unauthorized production (non-consumptive and recharge-based); specified the need for a physical solution to the case, and identified the need for a Watermaster that would be responsible for tracking the amount of water that would pass through.

### **3.1.1.2 Long Beach Judgment**

The judgment is a water rights settlement between the Board of Water Commissioners of the City of Long Beach, the San Gabriel Valley Water Company, and the Upper San Gabriel Valley Municipal Water District. Its intent is to declare rights and a physical solution for problems resulting from the inadequate and varying water supply of the San Gabriel River system.

The water supply of the San Gabriel River had been inadequate to supply the diversions and extractions of both the plaintiffs, the Board of Water Commissioners of the City of Long Beach, and the defendants, the San Gabriel Valley Water Company. Plaintiffs were seeking a determination of rights of the defendants in and to the waters of the San Gabriel River System and were also seeking to restrain defendants from interfering with the rights of plaintiffs and persons represented by Central Municipal. The judgment outlines a debit/credit system of water utilization and replenishment.

### **3.1.1.3 Cyclic Storage Agreement**

The cyclic storage agreements establish the legal framework for “utilization of groundwater storage capacity of the Basin for cyclic or regulatory storage of supplemental water, for subsequent recovery or Watermaster credit by the storage entity.” Under these cyclic storage agreements The San Gabriel Valley Municipal Water District delivers supplemental water to the Basin for spreading and percolation into the Basin for subsequent Watermaster Credit.

### **3.1.1.4 Cooperative Agreements between the County and the Main San Gabriel Basin Watermaster**

The Cooperative Agreement established a significant component of the existing integrated regional water management system. It put in place an institutional framework that has been in place to ensure that safe water levels within the Main San Gabriel Basin are maintained. It established the duties of the Watermaster concerning the assessment of water levels and determination of import water needs. LACDPW in turn determines the county’s ability to percolate the imported water into the groundwater basin at no charge to the Watermaster.

### **3.1.1.5 Water Replenishment District of Southern California (WRD): Strategic Plan**

WRD manages groundwater for nearly four million residents in 43 cities of southern Los Angeles County. The 420 square mile service area uses about 250,000 acre-feet of groundwater per year, which equates to nearly 40% of the total demand for water. The WRD ensures that a reliable supply of high quality groundwater is available through its

clean water projects, water supply programs, and effective management principles. In addition to the Strategic Plan, additional projects by the WRD include: Robert W. Goldsworthy Desalter Project, Leo J. Vander Lans Water Treatment Facility Project, Regional Groundwater Monitoring Program, Seawater Barrier Improvement Program, Caltrans Highway 105 Dewatering Project, Replenishment Operations, Safe Drinking Water Program, Hydrogeology Program. These can be found at: <http://www.wrd.org/Projects%20and%20Programs.htm>.

### **3.1.1.6 Water Augmentation Study – Los Angeles and San Gabriel Rivers Watershed Council**

The Los Angeles and San Gabriel Rivers Watershed Council (LA&SGRWC) is a non-profit organization that strives to preserve and enhance the Los Angeles and San Gabriel Rivers through education, communication, research and planning with stakeholders. The LA&SGRWC is comprised of community groups, local agencies, and other stakeholders in the Region. The LA&SGRWC initiated a 10 year project “The Water Augmentation Study.” The Study assesses the water quality implications of infiltrating urban runoff, and the potential of infiltration to recharge groundwater and augment water supplies. In a region where rainfall can vary from four inches per year to over 30 inches, this presents some challenges. The overall goal of the study will be to determine the most effective strategy for developing this potentially significant new local source of water for Southern California. The Water Augmentation Study (WAS) is a ten-year research program of the LA&SGRWC. The purpose of the program is to assess whether the capture and infiltration of stormwater at localized sites throughout the watersheds is a viable means of augmenting water supply, without adversely affecting groundwater quality. It is being done in collaboration with representatives from academia and from federal, state and local public and regulatory agencies. Nine public agencies have joined in a Memorandum of Understanding to support the WAS, and formed a Technical Advisory Committee (TAC) to support the study.

### **3.1.1.7 Main San Gabriel Basin Watermaster Annual Report, 2002-2003**

The purpose of the Watermaster Annual Report is to provide information on the management of the water quality and supply in the Main San Gabriel Basin. The Watermaster manages and controls the withdrawal and replenishment of water supplies in the Basin. This particular annual report describes activities designed to help sustain the groundwater levels through what had been the 5th year of a dry season. The projects that involve Watermaster include groundwater purchase and replacement, environmental remediation, water storage, and sediment management, which all contribute to the quality and supply of groundwater.

### **3.1.1.8 Los Angeles County Drainage Area (LACDA) Feasibility Study**

The primary objective of the LACDA Project was to provide 133-year flood protection along the lower reaches of the Los Angeles River and the Rio Hondo. The feasibility study was a technical study that evaluated the best methods to increase the capacity of the system and where the increased capacity was necessary. A subsequent review of other alternatives was made, leading to the conclusion that expanding the flood channel capacity was by far the most cost effective alternative.

### **3.1.1.9 Central Basin Municipal Water District Water Recycling Program Master Plan**

This Master Plan for the Central Basin Municipal Water District, submitted in August 2000, identifies and prioritizes areas where recycled water is available and/or can be used to replace potable water usage. The Master Plan provides information on potential new users and interconnections in addition to conceptual pipeline details, hydraulic/storage information and cost analysis.

The Master Plan identifies both the availability of recycled water sources and potential users to the system. By replacing potable water demands with recycled water, water supply reliability improves. The Master Plan also discusses the potential for supplying recycled water to other service areas that are adjacent to the CBMWD area, laying the groundwork for a regional recycled water program. An update to the 2000 Master Plan is currently being prepared.

### **3.1.2 Preliminary Multi-Objective Documents**

#### **3.1.3.1 Common Ground: From the Mountains to the Sea: San Gabriel and Los Angeles Rivers Watershed and Open Space Plan**

When the RMC was formed, a prerequisite for issuance of grant funds was the adoption of a plan by a majority of municipalities within its jurisdiction. Since the RMC territory did not include the upper Los Angeles River Watershed, the California Resources Agency directed the RMC to work with the Santa Monica Mountains Conservancy (SMMC) and issue a joint plan for the hydrologically-connected Los Angeles and San Gabriel Rivers Watersheds. This resulted in the creation of “Common Ground: From the Mountains to the Sea: San Gabriel and Los Angeles Rivers Watershed and Open Space Plan.” The plan sets forth a detailed list of guiding principles for land, water, and planning. The plan provides general characteristics of the watersheds and includes general project selection criteria from the SMMC’s work program, but it falls short of identifying actual project selection criteria, specific projects to be implemented, or budgets. Trails, habitat linkages, open space and preservation opportunities are at a gross planning scale only.

#### **3.1.2.2 Watershed Management Initiative (WMI) Chapter**

To protect water resources within a watershed context, a mix of point and nonpoint source discharges, ground and surface water interactions, and water quality/water quantity relationships must be considered. These complex relationships present considerable challenges to water resource protection programs. The State and Regional Boards are responding to these challenges with the WMI. The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science.

#### **3.1.2.3 San Gabriel River Corridor Master Plan**

The intent of the San Gabriel River Corridor Master Plan (Master Plan) was to develop among its many different constituencies, a shared vision for the future of the river and a plan for how to achieve it. The Master Plan integrates the multiple goals of enhancing

habitat, recreation, and open space while maintaining and enhancing long-standing goals for flood protection, water supply, and water quality. It does this by identifying priorities, providing guidance, and by coordinating over 130 independently sponsored enhancement projects identified by the 19 cities along the river, the County of Los Angeles, and many other public agencies and community organizations that participated in developing the Master Plan. It provides a plan framework, river enhancement project concepts, and case studies which work together to provide project sponsors performance criteria and examples for how to simultaneously address multiple goals and objectives in the design and development of their respective projects. This will ensure that all future projects developed within the river corridor will work together as part of a larger, integrated whole reflecting the shared vision for a multi-objective approach to river corridor planning and project design. A significant stakeholder program was established in order to develop this plan.

#### **3.1.2.4 San Gabriel River Corridor Master Plan Environmental Impact Report (EIR)**

The EIR provides detailed information and analysis on the environmental benefits and impacts associated with the Master Plan project. This includes details on water supply and quality impacts in addition to impacts to habitat and air and environmental justice analysis addressing impacts to disadvantaged communities.

#### **3.1.2.5 Watershed Management Plan for the San Gabriel River Above Whittier Narrows**

The Watershed Management Plan for the San Gabriel River Above Whittier Narrows evaluates watershed scale characteristics, subwatershed units (i.e., Upper San Gabriel River Subwatershed, Walnut Creek Subwatershed, and San Jose Creek Subwatershed), and produces regionally-based regenerative management measures and recommendations addressing the following areas: improving water quality and reducing non-point source pollution, protecting and enhancing water resources, protecting and restoring terrestrial habitat and connectivity, protecting open space, promoting monitoring and stewardship programs, identifying key pilot projects, and ensuring community and stakeholder involvement in the planning process.

The Plan addresses eight distinct goals that support the water management strategies of groundwater management. They are as follows: 1) conjunctive use, 2) water supply reliability, 3) water quality protection and improvement, 4) NPS pollution control, 5) storm water capture and management, 6) flood management, 7) water conservation, and 8) surface storage and water recycling with some strategies related to imported water.

#### **3.1.2.6 Technical Report: Watershed Management Plan for the San Gabriel River Above Whittier Narrows**

The Watershed Management Plan (Plan) for the San Gabriel River Above Whittier Narrows was developed through the participation use of a core planning team, technical advisory committee, a stakeholder input process and consultants. It provides recommendations and policy measures to result in multiple beneficial uses for

communities and wildlife by addressing the following areas: 1) improving water quality and reducing NPS pollution; 2) protecting/enhancing local water resources; 3) protecting/restoring terrestrial and aquatic habitat and habitat connectivity; 4) providing open space protection and recreation (beneficial land use relationships); 5) improving urban quality of life; and 6) establishing an on-going community and stakeholder process.

### **3.1.2.7 Rio Hondo Watershed Management Plan**

This Watershed Management Plan addresses most elements of an IRWM Plan, including establishing objectives and identifying strategies that address those objectives. Many of the strategies complete multiple objectives, highlighting the integrated nature of the actions. This Plan also has broad stakeholder support from the watershed it covers.

### **3.1.2.8 Los Angeles River Master Plan**

In 1989, Mayor Tom Bradley commissioned a Los Angeles River task force to examine the Los Angeles River. Seven years later, the Los Angeles River Master Plan was adopted by the County of Los Angeles Board of Supervisors with help from a consortium of agencies, municipalities, environmental groups and individuals. The plan examined the river, reach by reach, for the main stem of the river, as well as Tujunga Wash downstream of Hansen Dam, to identify ways to revitalize the publicly-owned rights-of-way. LACDPW facilitates the Master Plan Advisory group, which continues to meet periodically to focus on the implementation of the Plan, which includes the recent adoption of guidelines for signage and landscaping along the Master Plan reaches. The Master Plan focuses on the river right-of-way, and project recommendations are presented in general terms.

### **3.1.2.9 Los Angeles and San Gabriel Rivers Watershed Feasibility Study: Preliminary Draft Feasibility Report**

A Preliminary Draft Feasibility Report was created in 2001 as part of the settlement of the LACDA Project lawsuit against the Corps and LACDPW for raising the levee walls in the lower Los Angeles River. It is very comprehensive in scope and scale. It characterizes the watershed through GIS data mapping, narrative and tables. The report used GIS modeling to create project selection criteria. Approximately 31 sites were selected for further study, with six of those sites selected to move to the implementation phase.

## **3.1.3 Primary Water Documents**

### **3.1.3.1 Integrated Water Resources Plan**

In the mid 1990s, Metropolitan Water District faced growing demands and increasing competition for existing water supplies. MWD and its member agencies responded to this challenge with the *Metropolitan Water District of Southern California's Integrated Water Resources Plan* (IRP), developing a comprehensive water resources strategy to provide the region with a reliable and affordable water supply for the next 25 years. The IRP process ensures water reliability to support a strong economy and a healthy quality



of life by ensuring the diversification of water supply options available to the region. The IRP is intended to be a dynamic process that allows for response to any changes in water supply or demand. The MWD Board of Directors adopted a specific scope and action plan to update the 1996 IRP. In addition to extending the planning horizon from 2020 to 2025, the IRP update set out to accomplish three major objectives: provide a review of the resource development goals and current implementation achievements of the 1996 IRP; identify significant changed conditions affecting water resource development since the adoption of the 1996 IRP, evaluate the reliability of the IRP Preferred Resource Mix through 2020, adjust targets as needed to reflect changed conditions, and extend resource targets through 2025.

### **3.1.3.2 Water Quality Control Plan Los Angeles Region: Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties**

The *Water Quality Control Plan, Los Angeles Region*, was prepared in 1994 and is the official water quality plan for the Los Angeles Basin. It is designed to preserve and enhance water quality and protect the beneficial use of all regional waters. Specifically, the plan designates beneficial uses for surface and ground waters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to state's anti-degradation policy, and describes implementation programs to protect all waters in the region. While the entire plan has not been updated, the EPA "303d" list of impaired water bodies is updated every three years, and as Total Maximum Daily Load (TMDL) criteria are promulgated, they further revise the requirements of the plan. The plan is an excellent reference for characterization of surface and groundwater, beneficial use designations, and impairments to these uses by waterbody or stream reach.

### **3.1.3.3 Urban Water Management Plan, Central Basin MWD**

This plan is an update to the Central Basin Municipal Water District (CBMWD) Urban Water Management Plan (UWMP) of 2000 as required by the Urban Water Management Planning Act of 1983. The UWMP details current water supplies and water demands, as well as addresses how to best meet future demands through a variety of strategies. The UWMP is an integrated plan to meet urban water needs of both Central Basin MWD and West Basin MWD through a variety of water management strategies. The document discusses current water uses and projected water demands for the Districts which will serve to define a baseline for the IRWM Plan.

### **3.1.3.4 Urban Water Management Plan, San Gabriel Valley**

This plan provides goals and information for the San Gabriel Valley Municipal Water District as required by the Urban Water Management Planning Act of 1983. The UWMP provides details on SGVMWD's water supplies and demands. As SGVMWD only supplies water for groundwater replenishment as required by the Judgment (Water District vs. City of Alhambra) and the Long Beach Judgment, the plan's objectives are to meet water supply reliability issues through conservation and recycling strategies.

### **3.1.3.5 Urban Water Management Plan, Upper San Gabriel Valley**

The Upper San Gabriel Valley District's UWMP is intended to review the activities of Upper District as a wholesale water supplier in the Main San Gabriel Basin (Basin) and to describe the operations of the Basin to achieve the maximum practicable conservation and efficient use of the water resources of the area, both local and imported. The UWMP addresses nine distinct goals that support several water management strategies: 1) groundwater management, 2) conjunctive use, 3) water supply reliability, 4) water quality protection and improvement, 5) imported water, 6) surface storage, 7) recycled water, 8) storm water capture and management, and 9) water conservation, while using stakeholder involvement. It also provides some strategies regarding NPS Pollution Control.

Some policy/programs are provided with regard to habitat, land use/recreation, stakeholder involvement and disadvantaged communities. Also, the cities of Industry and West Covina and the County of Los Angeles Department of Parks and Recreation (LADPR) have developed plans for reclaimed water projects. LADPR plans to use about 3200 acre feet per year of recycled water from Whittier Narrows WRP to irrigate the Whittier Narrows Recreation Area, Golf Course, and Legg Lake.

### **3.1.3.6 Five Year Water Quality Management Plan, Main San Gabriel Basin Watermaster**

The intent of the Five Year Water Quality Management Plan is to outline the activities, which the Watermaster will carry out over the next five years to preserve and restore the quality of groundwater in the Main San Gabriel Basin. In 1991, the Los Angeles County Superior Court granted the Watermaster the additional authority to control pumping for water quality purposes. The new responsibilities included developing this Five-Year Water Quality and Supply Plan, updating it annually, and submitting it to the Regional Board.

A primary activity detailed in the Plan is to identify wells in the Basin that are vulnerable to contamination by volatile organic compounds (VOC). In order to project which wells may be vulnerable over the next five years, the Watermaster reviews water quality tests performed on each well, regional water quality conditions and contaminant migration patterns.

### **3.1.3.7 Three Valleys Water Management Plan**

The Three Valleys Municipal Water District (TVMWD) sells imported water wholesale to several agencies in the communities of suburban eastern Los Angeles County, and plays an important regional water planning role in that area. The 2000 UWMP illustrates TVMWD's water demands as well as sources of current and future water supply, projected water uses, water conservation measures, water rate structure, and drought management programs. The UWMP also highlights water conservation and water management activities that TVMWD currently conducts, or is forecasted to conduct, within the next five years on a regional basis in cooperation with its member agencies. Through its implementation of conservation Best Management Practices, as well as the development of a Local Resources Development Program in cooperation

with other local water suppliers, TVMWD has become increasingly involved with water conservation activities.

The UWMP also incorporated elements from both the MWD Integrated Resources Plan and the TVMWD Regional Water Plan. By synthesizing all of the available information, the UWMP provides an effective tool for the TVMWD, serving as both a statistical reference as well as an outline of current and future water resource alternatives within the service area.

### **3.1.3.8 Orange County Stormwater Program, 2003 Drainage Area Management Plan**

The specific water pollutant control plan elements of the Orange county NPDES Stormwater program were originally documented in the 1993 Drainage Area Management Plan (DAMP), and the main objective was to fulfill the commitment of the Permittees to present a plan that satisfies NPDES permit requirements and to evaluate the impacts of urban stormwater discharges on receiving waters. The draft 2000 DAMP was completed to incorporate the programs developed since 1993 and provide a programmatic foundation for future activities, providing a wide range of BMPs. The 2003 DAMP, which enhanced the existing program elements from the 2000 DAMP as well as developed additional ones, has been redesigned to serve as the foundation for a series of model programs, local implementation plans, and watershed implementation plans. It was developed through a process that involved public and private sector input and public review through CEQA.

### **3.1.3.9 County of Los Angeles Discharge Permits**

The intent of the NPDES permit is to develop, achieve, and implement a timely, comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the Maximum Extent Practicable (MEP) from the permitted areas in the County of Los Angeles to the waters of the U.S. subject to the Permittees' jurisdiction. This permit integrates the following stormwater capture and management, water quality protection and improvement, non-point source pollution control, and water conservation water management strategies. In addition, the permit utilizes a watershed management approach with attention to habitat, land use, recreation, stakeholder involvement, and education.

### **3.1.3.10 Waste Discharge Requirements for Municipal Stormwater and Urban Runoff Discharges within City of Long Beach**

This permit establishes the City of Long Beach's discharge requirements and details their Water Management Program and Monitoring Program.

As required by the permit regulations, the permit details and approves Long Beach's waste discharge requirements, the Long Beach Storm Water Management Plan (LBSWMP), and the Long Beach Monitoring Program. The Regional Board determined that the objectives of the plan are met in the permit and when fully implemented will "be consistent with the statutory standard of MEP".

### **3.1.3.11 Watershed-wide Monitoring Program for San Gabriel River**

The Watershed-wide Monitoring Program developed for the San Gabriel River Watershed provides a framework for monitoring at the watershed scale and satisfy NPDES permit regulations. The core goals of the program are to identify the condition of water quality in watershed streams, to determine if water quality in the streams are improving or degrading, to determine if receiving waters are meeting applicable water quality objectives, and to evaluate if water quality allows for recreational beneficial uses (including swimming and fishing).

### **3.1.3.12 Hydraulic/Hydrologic Model of Los Angeles River and San Gabriel River Systems**

MODRAT is a modified rational method computer program developed by the LACDPW to compute runoff rates under a variety of conditions common to the area of Los Angeles, California. The successor to F0601, MODRAT contains all the features of the F0601 as well as updated capabilities for watershed modeling in the Los Angeles area. MODRAT may be used to find flow rates for any watershed with any combination of existing or proposed channels and drains. Further, the watershed may be undeveloped, partially developed, or completely developed. The model will compute runoff rates for a 50-year, 25-year, or 10-year frequency design storm (developed by LACDPW), as well as any other storm, which can be represented by a rainfall mass curve. Given any combination of the above variables, MODRAT will compute a hydrograph for each subarea and mainline collection point in the watershed.

As a method of urban hydrology, the rational method falls short in several ways. First, the method does not produce a hydrograph, only a single flow rate. Second, the rational method does not account for changing (time dependent) conditions such as soil condition or rainfall intensity. Finally, results are not very accurate for large areas. Due to these problems, MODRAT contains the following modifications:

- Rainfall intensity,  $i$ , is a variable dependent on rainfall frequency, storm time, and time of concentration. The variation of  $i$  is represented by a temporal distribution curve (rainfall mass curve).
- $C$ , the runoff coefficient, varies with soil type, rainfall intensity, and imperviousness.
- The time variation of  $C$  and  $i$  allow the flow,  $Q$ , to vary with time, thus producing a hydrograph. The area under the hydrograph represents the total volume of flow from a watershed, a variable which the rational method does not provide.
- Hydrographs may be computed for a number of subareas, for each lateral to the main channel, and for each collection point on the main channel. These hydrographs are routed and combined as computation progresses downstream.

The above modifications to the rational method allowed for the computation of storm hydrographs for any size watershed. With such improvements, the modified rational

method (MODRAT) has been adopted by LACDPW as the preferred method of hydrologic analysis.

### **3.1.4 Primary Land Use and Habitat Documents**

#### **3.1.4.1 Southern California Wetlands Recovery Regional Strategy**

Prepared by the California Coastal Conservancy, the Southern California Wetlands Recovery Regional Strategy articulates long-term goals and specific implementation strategies to guide efforts of the Wetlands Recovery Project: to increase pace and effectiveness of wetland recovery in the region; to re-establish a mosaic of functioning wetland riparian systems that support a diversity of species, while also providing refuge for humans in the landscape. The Wetlands Recovery Project employs three primary strategies to recover wetlands: (1) acquisition of property from willing sellers, (2) restoration and enhancement of wetlands where allowed by landowners and land managers, and (3) outreach and education about best practices to protect wetlands. The Plan outlines regional goals and strategies, and also identifies more specific objectives at the County level, including County-wide, site-specific, and organizational objectives as well as data and research needs pertaining to each County.

#### **3.1.4.2 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities**

The California Coastal Conservancy created, “Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities”, which characterizes the location, habitat, and water quality for specific projects. The intent of the Plan is to: inventory wetland resources of the Los Angeles River Watershed; provide profiles of nine current wetlands illustrate existing biological and physical resources; compare historic and current wetland resource conditions and extents; outline restoration goals; examine possible restoration opportunities and identify ten specific priority restoration sites. The top priority restoration sites were selected based on their immediate potential for restoration (projects that might be achieved in the near future), as well as on their need for immediate action (projects where fleeting opportunities exist, warranting timely action).

A long-term proposed outcome for the Plan is that its methodology could also serve as a successful model for the San Gabriel River Watershed.

#### **3.1.4.3 Greenprinting Los Angeles Initiative**

The Greenprinting Los Angeles Initiative Plan, prepared by The Trust for Public Land in association with the National Association of Counties, systematically assesses park needs in Los Angeles County and identifies potential priority park/open space areas. The Plan envisions community space and recreational opportunities within a quarter mile walking distance of every family in the densely populated areas of Los Angeles.

The Greenprinting strategy is a land conservation strategy through which communities can protect quality of life, human health, and natural systems by creating an interrelated system of parks, trails, gardens and other protected lands. Greenprinting protects the places that sustain and define communities while allowing for appropriate development.

It revitalizes cities, guides growth, and protects water supplies and farmland. The plan uses GIS data to generate a multi-dimensional assessment of the social, economic and demographic conditions in neighborhoods and districts throughout Los Angeles County.

#### **3.1.4.4 Missing Linkages, South Coast Wildlands Project**

The South Coast Wildlands Project brings a collaborative approach to regional planning, working with biologists and conservation scientists to develop platforms that engage biological experts in the region with methods for identifying and designing movement corridors that functionally connect habitats and sustain ecosystem processes. The South Coast Missing Linkages Project is producing conservation designs for 15 key habitat linkages associated with the [South Coast Ecoregion](#).

#### **3.1.4.5 Rio Hondo Vision Plan (Emerald Necklace Concept)**

The Emerald Necklace Concept, a portion of the Rio Hondo Vision Plan prepared by Amigos de los Ríos and the Sierra Club in association with other local organizations, articulates a vision for a 1,500 acre, 17-mile riverfront urban park network connecting 10 cities and benefiting nearly ½ million residents along the Rio Hondo and San Gabriel River. The purpose of the Emerald Necklace portion of the Plan is to describe the proposed park network that would include multi-use trails, parks, open spaces and habitat corridors and would re-connect the historically linked Rio Hondo and San Gabriel River.

#### **3.1.4.6 Rim of the Valley Trails Corridor Master Plan**

The Rim of the Valley Trails Corridor Master Plan, prepared by the Santa Monica Mountains Conservancy in June 1990, is an comprehensive, coordinated master plan for the recreational and environmental resources of the Corridor area by defining objectives and criteria for developing a system of trails and other recreation facilities, and for preserving viable wildlife areas and corridors.

#### **3.1.5 Studies in Progress**

The **Compton Creek Watershed Management Plan**, is currently being prepared by the Los Angeles and San Gabriel Rivers Watershed Council (LA&SGRWC), and is expected for release in June 2005. The objective of the plan is to expand and encourage local efforts to restore and improve water resources, habitat and recreation uses along the Compton Creek area.

**Green Visions**, is a multi-year project by the University of Southern California, to take a comprehensive analysis of open space in many of the watersheds in Los Angeles County.

### **3.2 Analysis of Existing Plans**

An analysis of these existing plans has been conducted to identify the gaps that may need to be filled with additional planning projects. A Document Matrix has been created of the existing plans (described in Section 3.1) and compared to the Proposition 50 IRWM Plan required elements. This matrix starts on page 64. As previously mentioned,

not all of the existing plans meet the requirements completely, but rather meet some of the elements, or portions of some of the elements. Therefore, a rating system has been defined to summarize what elements have been met. The rating system is defined as follows:

- If a cell is left **blank**, this indicates that none of the requirements of that element are met within the existing plan or study.
- If an open circle, or ○ is marked, this indicates that the existing plan or study provides some background or supporting data for that element.
- If a striped circle, or ◐ is marked, this indicates that some of the requirements of that element have been met by the existing plan or study.
- If a shaded circle, or ◑ is marked, this indicates that about half of the requirements of that element have been met by the existing plan or study.
- If a black circle, or ● is marked, this indicates that all or virtually all of the requirement of that element have been met by that existing plan or study.

### Document Matrix: Framework Documents for Integrated Regional Water Management in The San Gabriel and Lower Los Angeles Rivers Watershed

● Important water management information      ⊕ Considers this strategy      ■ Comprehensive information      ▨ Limited information  
 ○ Provides some program direction      ○ Background/supporting data      ☆ Good resource in this area      ■ Some information      □ Does Not Address

Plan Number	Plan Date	Title of Report	Agency	Water Supply Reliability	Groundwater Management	Conjunctive Use	Storm Water Capture and Management	Surface Storage	Water Quality Protection and Improvement	NPS Pollution Control	Flood Management	Water Conservation	Imported Water	Water Recycling	Desalination	Environmental and Habitat Protection and Improvement	Ecosystem Restoration	Wetlands Enhancement and Creation	Recreation and Public Access	Land Use Planning	Watershed Planning	Stakeholder Involvement	Integration	Implementation	Impacts and benefits	Disadvantaged Communities	Technical Analysis and Plan Performance	Data Management	Relation to Local Planning		
		Title of Report	Agency	Water Management										Habitat		Land Use - Rec		Proposition 50 Criteria													
<b>1. BASELINE DOCUMENTS FOR EXISTING IRWM OPERATIONS</b>																															
1.01	1972	The Judgment - Water District vs City of Alhambra	Superior Court of the State of California for the County of Los Angeles	●	●	●																		□	■	□	□	□	□	□	
1.02	1965	Long Beach Judgment	Superior Court of the State of California for the County of Los Angeles	○	●	●				●													▨	■	□	□	□	□	□	□	
1.03	1994	Cyclic Storage Agreements	Main San Gabriel Basin Watermaster and San Gabriel Valley Municipal Water District	○	●	●	○				⊕	○											▨	▨	□	□	■	□	□	□	
1.04	1973	Cooperative Agreements between the County and the Main San Gabriel Basin Watermaster	County of LA Department of Public Works, Main San Gabriel River Watermaster	●	●	●	●	⊕			⊕	⊕	●	●		○					○				■	■	▨	□	□	□	□
1.05	2003	Water Replenishment District of Southern California Strategic Plan	Water Replenishment District of Southern California	●	●	●	●	●	●		●		●	●	●						●	☆	■	■	■	▨	■	■	▨	▨	
1.06		Water Augmentation Study – LA and SG Watershed Council	Los Angeles and San Gabriel Rivers Watershed Council	●			●	●			●				●					●	●	☆	▨	■	■	□	■	▨	▨	▨	
1.07	2003	Main San Gabriel Basin Watermaster Annual Report	Main San Gabriel Basin Watermaster	●	●	●					⊕	○	●									○	▨	▨	▨	□	□	□	□	□	
1.08	1992	LA County Drainage Area Feasibility Study	U.S. Army Corps of Engineers, County of LA Department of Public Works				●			●									○			○	▨	■	■	■	■	■	■	■	
1.09	2000	Water Recycling Program Master Plan	Central Basin Municipal Water District	●									●											■	□	▨	□	■	▨	□	□
<b>2. PRIMARY MULTI-OBJECTIVE DOCUMENTS</b>																															
2.01	2001	Common Ground from the Mountains to the Sea	RMC and SMMC	○	○		⊕	○	⊕	○	⊕	○	○		●	●	●	●	●	●	☆	■	■	□	■	▨	□	■	▨	■	■
2.02	2004	Watershed Management Initiative Chapter	California EPA, Los Angeles Regional Water Quality Control Board	○	○		⊕		●	●	○	○			○	○				●			■	▨	▨	□	□	□	▨	▨	
2.03	2004	San Gabriel River Corridor Master Plan	County of LA Department of Public Works	○	⊕	○	○	○	○	⊕	●	○	○		●	●	●	●	●	○	☆	■	■	■	▨	▨	▨	▨	▨	▨	▨
2.04	2004	San Gabriel River Master Plan EIR	County of LA Department of Public Works	●	●	○	●	●	●	○	●	●	○		●	●	●	●	●	●	☆	■	■	■	■	■	■	▨	■	■	■
2.05	2005	Watershed Management Plan for the San Gabriel River Above Whittier Narrows	San Gabriel Mountains Regional Conservancy	●	●	●	●	○	●	●	●	●	⊕	○		●	●	●	●	●	☆	■	■	▨	□	▨	■	■	■	■	
2.06	2005	Technical Report: Watershed Management Plan for the San Gabriel River Above Whittier Narrows	San Gabriel Mountains Regional Conservancy	●	○		⊕	○	●	○	○	⊕	⊕	○		●	●		○	●			▨	■	▨	▨	□	▨	▨	▨	
2.07	2004	Rio Hondo Watershed Management Plan	San Gabriel Valley Council of Governments	○	⊕		○	⊕	●	●	○	○	○	⊕		●	○	○	●	○	●	☆	■	▨	▨	▨	▨	▨	▨	▨	▨
2.08	1996	Los Angeles River Master Plan Report	County of LA Department of Public Works	○	⊕		●	○	○	○	●	●	○	○		●	○	○	●	○	○	☆	■	■	■	□	▨	▨	▨	▨	
2.09	2001	Los Angeles and San Gabriel Rivers Watershed Feasibility Study: Preliminary Draft Feasibility Report	U.S. Army Corps of Engineers and County of LA Department of Public Works	●	⊕		●	●			●		●							○			▨	▨	▨	□	▨	▨	▨	▨	



**Document Matrix: Framework Documents for Integrated Regional Water Management in The San Gabriel and Lower Los Angeles Rivers Watershed**

- Important water management information
- Provides some program direction
- Ⓜ Considers this strategy
- Background/supporting data
- ☆ Good resource in this area
- Comprehensive information
- ▣ Some information
- ▤ Limited information
- Does Not Address

Plan Number	Plan Date	Title of Report	Agency	Water Management													Habitat		Land Use - Rec		Proposition 50 Criteria															
				Water Supply Reliability	Groundwater Management	Conjunctive Use	Storm Water Capture and Management	Surface Storage	Water Quality Protection and Improvement	NPS Pollution Control	Flood Management	Water Conservation	Imported Water	Water Recycling	Desalination	Environmental and Habitat Protection and Improvement	Ecosystem Restoration	Wetlands Enhancement and Creation	Recreation and Public Access	Land Use Planning	Watershed Planning	Stakeholder Involvement	Integration	Implementation	Impacts and benefits	Disadvantaged Communities	Technical Analysis and Plan Performance	Data Management	Relation to Local Planning							
<b>3. PRIMARY WATER DOCUMENTS</b>																																				
3.01	2004	Integrated Water Resources Plan, 2003	Metropolitan Water District of Southern California	●	●			○	○			●	●	○	○														☆	■	■	□	□	■	■	□
3.02	1995	Water Quality Control Plan: LA Region Basin Plan for the Coastal Watersheds of LA & Ventura County	Los Angeles Regional Water Quality Control Board			●		●	●			○	●	Ⓜ	○			●	○									☆	■	■	▣	□	■	▣	■	
3.03	2000	Urban Water Management Plan	Central and West Basin Municipal Water Districts	●	●	Ⓜ			●			●		●															▣	■	■	□	▤	▤	▣	
3.04	2000	Urban Water Management Plan	SGVMWD	●	○				Ⓜ			●		●															■	■	▣	□	□	▤	□	
3.05	2000	Urban Water Management Plan	USGVMWD	●	●	●	●	●	●	Ⓜ		●	●	●		○	○	○	○	○	○	○	○	○	○	○	○	○	▣	▣	■	■	▣	■	■	■
3.06	2003	Five Year Water Quality Management Plan, Main San Gabriel Basin Watermaster	Main San Gabriel Basin Watermaster	●	●	○	○	○	●				○	○														☆	▣	■	■	□	▣	▣	▣	
3.07	2000	Three Valleys Water Management Plan	Three Valleys Water District	●	●	●	Ⓜ	●	●			●	●	●		○			○	○	○							☆	■	■	■	▣	▣	▣	▣	
3.08	2003	Orange County Stormwater Program 2003 Drainage Area Management Plan	Orange County				●		●	●		Ⓜ									Ⓜ		Ⓜ						□	□	□	□	□	□	□	
3.09	2001	County of LA Discharge Permits	County of LA Department of Public Works to Regional Water Quality Control Board				●		●	●		●						●	●	●	●	●	●	●	●	●	☆	■	■	■	▤	■	■	■		
3.10	1999	Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges Within City of Long Beach	City of Long Beach, Dept of Parks, Recreation, and Marine				●		○																				▣	■	□	□	□	▣	■	
3.11	2004	Watershed-wide Monitoring Program for the San Gabriel River	Sanitation Districts of Los Angeles County						●	○																			▤	▣	■	□	▣	□	▣	
3.12		Hydraulic/Hydrologic Model of LA River and San Gabriel River Systems	U.S. Army Corps of Engineers and County of LA Department of Public Works	●	●		●	●			●								●	●	●		●	●					■	■	■	□	■	■	■	
<b>4. PRIMARY LAND USE AND HABITAT DOCUMENTS</b>																																				
4.01	2001	Southern California Wetlands Recovery Regional Strategy	State Coastal Conservancy				○		○									●	●	●	○	○	●	☆	■	■	▣	□	■	▣	■					
4.02	2000	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities	California Coastal Conservancy		○				○		○							○	○	○	○	○	●						▣	▤	▣	▣	▣	□	□	
4.03	2004	Greenprinting LA Initiative	Trust for Public Land	○											○	○		Ⓜ	Ⓜ	Ⓜ									□	□	□	▣	□	□	□	
4.04	2001	Missing Linkages, By Christine Penrod	South Coast Wildlands Project												○	○	○	Ⓜ	Ⓜ	Ⓜ									□	□	□	□	□	□	□	
4.05	2004	Rio Hondo Vision Plan (Emerald Necklace Concept)	Amigos de los Rios						○									○	○	○	○	○	Ⓜ	☆	□	□	□	▣	□	□	□	□	□	□		
4.06	1990	Rim of the Valley Trails Corridor Master Plan, 1990	Santa Monica Mountains Conservancy															○	○		○	Ⓜ	☆	▣	▣	▣	□	□	□	□	□	□	□	▣		

**Document Matrix: Framework Documents for Integrated Regional Water Management in The San Gabriel and Lower Los Angeles Rivers Watershed**

- Important water management information
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Plan Number	Plan Date	Title of Report	Agency	Water Management										Habitat		Land Use - Rec		Proposition 50 Criteria											
				Water Supply Reliability	Groundwater Management	Conjunctive Use	Storm Water Capture and Management	Surface Storage	Water Quality Protection and Improvement	NPS Pollution Control	Flood Management	Water Conservation	Imported Water	Water Recycling	Desalination	Environmental and Habitat Protection and Improvement	Ecosystem Restoration	Wetlands Enhancement and Creation	Recreation and Public Access	Land Use Planning	Watershed Planning	Stakeholder Involvement	Integration	Implementation	Impacts and benefits	Disadvantaged Communities	Technical Analysis and Plan Performance	Data Management	Relation to Local Planning
<b>5. Supporting Documents</b>																													
5.01		Floodplain Management Plan	City of Los Angeles																										
5.02	2003	San Gabriel Canyon Sediment Management Plan: Draft Supplemental EIR (July 2003)	County of LA Department of Public Works	○	●	●	●							●								■	■	■	▤	■	□	▤	
5.03	2001	Long Beach Stormwater Management Plan	City of Long Beach, Department of Parks, Recreation, and Marine			●																▤	■	■	□	□	□	□	
5.04		The Los Angeles River: Reshaping the Urban Landscape	Los Angeles River Connection											⓪								⓪	⓪	⓪	⓪	⓪	⓪	⓪	
5.05	2003	Grounds for Renewal: The Revitalization of Compton Creek	Santa Monica Mountains Conservancy	⓪	⓪	⓪	○	⓪						⓪	●	⓪	●	●	⓪	★	▣	▣	■	▣	▤	□	□		
5.06	2002	Watershed Management Plan Characterization Report for Coastal Southern California	Southern California Wetlands Recovery Project				○															○	●						
5.07	2004	Managing Mosquitoes in Stormwater Treatment Devices	Vector Control District											●	●	○						□	▤	□	□	□	□	□	
5.08	2003	Managing Mosquitoes in Surface-Flow Constructed Treatment Wetlands	Vector Control District											●	●	○						□	▤	□	□	□	□	□	
5.09		Western Snowy Plover Pacific Coast Population Draft Recovery	U.S. Fish and Wildlife Service											⓪								□	▤	□	□	□	□	□	
5.10		Recovery Plan for the Vernal Pools of Southern California	U.S. Fish and Wildlife Service											⓪								▤	▤	▤	▤	□	▤	▤	
<b>6. Background Information Documents</b>																													
6.01	2004	Toward a sustainable Water Future: Water Supply and Management in the Los Angeles Area	Independent review	○	●	○	○			○												○	●						
6.02		MET Prop 50 list (Tier 1)	Metropolitan Water District of Southern California	○	○	○	○	○	○	○	○	○	○									●							
6.03		Hydrology/Sedimentation Manual	County of LA Department of Public Works		⓪	⓪	⓪			⓪	⓪												▤	□	□	□	▣	▤	□
6.04	2000	Re-envisioning the LA River and LA Urban Environment-Mayoral Debate	Occidental College							○												○	○	○	★	□	□	□	
6.05	2001	Re-envisioning the LA River: A Program of Community and Ecological Revitalization	Occidental College							○												○	○		★	□	□	□	
6.06	2002	Coyote and Carbon Canyon Creek Watershed Feasibility Study	Orange County Watershed and Coastal Resources Division							○	○	○										○	○	○	○	○	○	□	

### 3.3 Elements of Plans and Studies Requiring Further Development

The existing plans and studies were reviewed and summarized in the Document Matrix. In order for the IRWM Plan to be complete, a determination of each element will be further developed. The matrix was developed to analyze areas that clearly identified gaps and will be used to gather data for further development of projects and plan implementation.

Results:

- **Regional Agency or Group** – adequately covered by the existing regional planning documents.
- **Region Description** – adequately covered by the existing regional planning documents.
- **Objectives** – this area requires further development.
- **Water Management Strategies** – this area requires further development.
- **Integration** – this area requires further development.
- **Regional Priorities** – this area requires further development.
- **Implementation** – this area requires further development.
- **Impacts and Benefits** – this area requires further development.
- **Technical Analysis and Plan Performance** – this area requires further development.
- **Data Management** – this area requires further development.
- **Financing** – this area requires further development.
- **Statewide Priorities** – this area requires further development.
- **Relation to Local Planning** – this area requires further development.
- **Stakeholder Involvement** – this area requires further development.
- **Coordination** – this area requires further development.

In summation, the following areas should be further studied: Objectives, Water Management Strategies, Integration, Regional Priorities, Implementation, Impacts and Benefits, Technical Analysis and Plan Performance, Data Management, Financing,

Statewide Priorities, Relation to Local Planning, Stakeholder Involvement, and Coordination.

Of those plans listed in this section, six of the plans were identified as primary documents that best support this Framework IRWM Plan. These six documents are:

- Common Ground from the Mountains to the Sea
- The Watershed Management Initiative
- Integrated Water Resources Plan
- Water Quality Control Plan, Los Angeles Region (The Basin Plan)
- Southern California Wetlands Recovery Project Regional Strategy
- Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

## Section 4 Planning Objectives

### 4.1 Statewide Goals

This section evaluates the following Statewide Goals and the Regional Planning Objectives identified in six primary documents that support this Framework IRWM Plan.

- Reduce conflict between water uses or resolve water rights disputes, including interregional water rights issues;
- Implement Total Maximum Daily Loads that are established or under development;
- Implement Regional Water Quality Control Board WMI chapters, plans and policies;
- Implement the SWRCB's Non-Point Source Program Plan;
- Meet Bay-Delta Water Quality Objectives;
- Implement recommendations of the floodplain management task force, desalination task force, or recycling task force;
- Address environmental justice concerns;
- Assist in achieving one or more goals of the CALFED Bay-Delta Program.

### 4.2 Regional Objectives

The table that starts on the following page provides a synthesis of regional objectives. This information was derived from the six primary planning documents listed at the end of Section 3. Following the *Regional Objectives* table is a brief review of the origins of each objectives identified in the six primary documents. These documents provide the best evaluation thus far of the needs of the Region. These objectives are expected to be further refined with input from project stakeholders.

**Regional Objectives**

Water Management Focus Areas	Objectives
Water Supply Reliability and Water Quality Protection and Improvement	<ul style="list-style-type: none"> <li>■ Improve long-term supply reliability</li> <li>■ Maximize use of water sources</li> <li>■ Protect and preserve water quality</li> <li>■ Implement Total Maximum Daily Loads that are established or under development</li> <li>■ Implement Regional Water Quality Control Board WMI chapters plans, and policies</li> <li>■ Implement the SWRCB's Non-Point Source Program Plan</li> <li>■ Implement a wide array of Best management Practices to optimize local water resources and reduce dependence on imported water while increasing beneficial water uses available to the public</li> <li>■ Maximize use of seasonally discounted imported water</li> <li>■ Optimize water resources to reduce dependence on imported water</li> </ul>
Groundwater Management and Conjunctive Use	<ul style="list-style-type: none"> <li>■ Provide basin replenishment</li> <li>■ Develop storage programs to improve long-term reliability and reduce basin operating cost</li> <li>■ Implement conjunctive use programs and projects</li> </ul>
Storm Water Capture and Management, Surface Storage, and Flood Management	<ul style="list-style-type: none"> <li>■ Implement sediment clean up and removal</li> <li>■ Maintain and improve flood protection</li> <li>■ Maximize opportunities to capture local water in wet years</li> </ul>
Water Recycling, Water Reclamation, Water Conservation	<ul style="list-style-type: none"> <li>■ Maximize water recycling opportunities</li> <li>■ Maximize water conservation opportunities</li> <li>■ Maximize water reclamation opportunities</li> </ul>
Land Use & Recreation	<ul style="list-style-type: none"> <li>■ Encourage sustainable growth to balance environmental, social and economic benefits</li> <li>■ Preserve and establish riverfront greenways to cleanse water, hold floodwaters and extend open space</li> <li>■ Connect open space with a network of trails</li> <li>■ Improve access to open space and recreation for all communities</li> <li>■ Prioritize open space preservation and park development proximate to under-served and disadvantaged population centers</li> <li>■ Promote education and compatible access related to rivers, wetlands and watersheds</li> </ul>

Water Management Focus Areas	Objectives
Habitat Enhancement	<ul style="list-style-type: none"> <li>■ Improve habitat quality, quantity, and connectivity</li> <li>■ Preserve and restore coastal wetland ecosystems</li> <li>■ Implement biological monitoring using standards and criteria that can be compared region-wide</li> <li>■ Preserve and restore stream corridors and wetland ecosystems in coastal watersheds</li> <li>■ Establish scientific baseline data for restoration and planning purposes</li> <li>■ Advance the science of wetlands restoration and management in southern California</li> <li>■ Recover native habitat and species diversity</li> <li>■ Integrate wetlands recovery with other public objectives</li> </ul>
Watershed Organization & Data Management	<ul style="list-style-type: none"> <li>■ Strategically implement projects to most effectively allocate limited resources</li> <li>■ Pursue funding for regional and local watershed projects and programs</li> <li>■ Encourage multi-objective planning and projects</li> <li>■ Coordinate watershed planning efforts, policies and functions across jurisdictions and political boundaries</li> <li>■ Develop IRWMP to build a regional inventory of data gaps/needs and conduct scientific analyses where lacking to develop a comprehensive understanding of beneficial uses (species inhabiting/using rivers and wetlands, potential for aquatic life, future water supply needs/diversions and water recharge)</li> <li>■ Create a central database for storing and accessing regional watershed planning data (include mapping and assessment of: critical habitat areas, estuarine habitats, water quality, low-flow diversions, and long-term plans for vegetation/sediment removal under 401 certificate program)</li> <li>■ Develop coordinated watershed monitoring programs for water quality and ecosystem health</li> <li>■ Implement watershed management plans</li> </ul>

### 4.2.1 Common Ground from the Mountains to the Sea

Partnerships played a vital role in the development of *Common Ground*. The 68 cities within RMC's territory are critical partners to the RMC. Other partnerships include four federal agencies, 11 California state agencies, five L.A. County agencies, 15 other local governmental agencies, businesses, 10 coordinating agencies, two national and state non-profits, and 15 local non-profits. These agencies participated in the development of

Common Ground and established the guiding principles organized into three categories; Water, Land and Planning.

### **Water Management**

- Improve quality of surface water and groundwater;
- Maintain and improve flood protection;
- Improve flood safety through restoration of river and creek ecosystems;
- Optimize water resources to reduce dependence on imported water;
- Establish riverfront greenways to cleanse water, hold floodwaters and extend open space;

### **Land Use**

- Create, expand and improve public open space throughout the region;
- Improve access to open space and recreation for all communities;
- Improve habitat quality, quantity and connectivity;
- Connect open space with a network of trails;
- Promote stewardship of the landscape;
- Encourage sustainable growth to balance environmental, social and economic benefits

### **Planning**

- Coordinate watershed planning across jurisdictions and boundaries;
- Encourage multi-objective planning and projects;
- Use science as a basis for planning;
- Involve the public through education and outreach programs.

## **4.2.2 The Watershed Management Initiative (WMI)**

The WMI identifies priorities and resource needs across programs at a watershed context and regional level. Regional priorities and additional resource needs from the perspective of the RWQCB are identified. WMI is intended to be a strategy for integrating and managing human and fiscal resources, including existing and newly evolving programs and mandates. The WMI is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within the watershed. The Plan was developed by the nine Regional Water Quality Boards, the State Board and United States Environmental Protection Agency.



The areas addressed in the WMI pertaining to the Region include the Los Angeles River Watershed, the San Gabriel River Watershed, Los Cerritos Channel and Alamitos Bay Water Management Area, and the Dominguez Channel and Los Angeles/Long Beach Harbors Water Management Area.

***Los Angeles River Watershed: Long-term Objectives:***

- Continue participation in both internal and external watershed planning efforts;
- Further incorporation of watershed management, watershed principles and watershed-specific priorities into the next update of the Basin Plan;
- Conduct a more detailed analysis of certain beneficial uses (species inhabiting/using the river, potential for aquatic life in the river, future water supply needs/diversions, ground water recharge areas);
- Pursue funding for Basin Planning programs;
- Balance maintenance of habitat in the river with flood control needs;
- Evaluate areas in the river for restoration purposes;
- Evaluate critical habitat areas;
- Evaluate the most protective long-term plans for vegetation/sediment removal under the 401 certificate program;
- Evaluate and implement low flow diversions where appropriate;
- Assist in greenway developments along the river;
- Evaluate estuarine habitats and water quality; and
- Implement biological monitoring.

***San Gabriel River Watershed: Long-term Objectives:***

- Develop a coordinated watershed monitoring program;
- Conduct a hydrologic study of the estuary to evaluate mixing dynamics and effects on water quality and beneficial uses;
- Evaluate fish tissue from fish in lower river and estuary;
- Evaluate toxicity impacts in the estuary;
- Evaluate habitats in the middle/lower river;
- Evaluate impacts from reservoir cleaning on water quality, particularly fisheries-related;

- Evaluate impacts of mining on instream beneficial uses;
- Evaluate impacts of reclaimed water on river/groundwater;
- Evaluate success of trash TMDL efforts in upper river;
- Evaluate impacts from industrial stormwater in the watershed;
- Consider TMDL-related issues; and
- Implement biological monitoring.

***Los Cerritos Channel and Alamitos Bay Water Management Area: Long-term Objectives:***

- Evaluate existing conditions/beneficial uses;
- Consider TMDL-related issues; and
- Implement biological monitoring.

***Dominguez Channel & Los Angeles/Long Beach Harbor Water Management Area: Long-term Objectives:***

- Develop a watershed-wide monitoring program;
- Consider and implement TMDL-related issues;
- Further evaluate beneficial uses throughout the watershed;
- Restore habitat following improvements in water quality;
- Implement biological monitoring;
- Develop sediment quality objectives; and
- Explore options for, and implement, sediment clean-up/removal.

### **4.2.3 Integrated Water Resources Plan (IRP), 2003 Update**

MWD prepared the IRP, 2003 Update to provide an integrated response to meeting the water supply needs for its service area through 2025. To increase supply reliability, the plan looks at a variety of options including water conservation, water recycling, groundwater recovery, seawater desalination, groundwater storage, surface storage, and imported water options. The plan uses a variety of scenarios to demonstrate the reliability of water supply through an integrated use of available supplies. In addition to working with stakeholders to update supply projections, the plan also discusses the use of a “buffer” to counter any resource risk associated with the uncertainty in projections.

The objectives for the plan were threefold:

- Review the goals and achievements of the 1996 IRP for MWD and provide updates as needed to the 1996 plan;
- Identify changed conditions for water resource development;
- Update resource targets through 2025.

The results of the 1996 IRP were determined through a variety of strategies including analytical modeling and stakeholder input. Revised conditions for water resource development came from changes in projected demands and developments as well as new regulations. Modeling to evaluate reliability and resource options is detailed in Section 2 of the plan. The objective of the model was to "determine the impact and need of resources that are used to meet regional demands that remain after the use of traditional local supplies like groundwater, surface water, and California Aqueduct supplies.

Extensive stakeholder participation occurred during establishment of the original 1996 IRP and again for the development of the 2003 Update. Stakeholder participation for both is detailed in Section 1. As part of the 2003 Update process, MWD also conducted a public outreach program in conjunction with its member agencies. Table 1-3 of the plan lists the 15 different meetings set up as part of the program and the audiences they addressed. The major categories of input received as a result of these meetings and the manner in which they were addressed are provided in Table 1-4.

#### **4.2.4 Water Quality Control Plan, Los Angeles Region (The Basin Plan)**

The Basin Plan, originally written in 1995, provides regional water quality goals and policies and details a regional plan to meet the goals. The area referenced includes all areas of the IRWM Plan Region. The intent of the Basin Plan is to maintain and/or improve surface and ground water quality throughout the Los Angeles Region through water quality standards and policies, and through implementation programs targeted at protecting water quality and supplies. The plan is a resource for those that are involved with permitting and water resource management or the discharge of wastewater. The strategies presented in the Basin Plan provide a regional plan to meet water quality goals, while still providing detail on a local level to guide agencies with local water quality and supply issues.

As required by the California Water Code, standards are reviewed at least every three years during which issues are formally identified and ranked during a public hearing process.

The Basin Plan has several objectives including:

- Designating the beneficial uses for surface and ground water areas;

- Setting water quality narratives and numerical objectives based on beneficial uses. The objectives must be attained and/or maintained to conform to the state's anti-degradation policy;
- Provides implementation programs designed to protect all regional waters;
- Incorporates all applicable state and regional plans and policies in addition to any other applicable water quality policy or regulation.

#### **4.2.5 Southern California Wetlands Recovery Project Regional Strategy**

The California Coastal Conservancy led a broad-based partnership developed through a multi-year planning process involving all Wetlands Recovery Project partners (17 state and federal agencies working in collaboration with scientists, local governments, environmental organizations, business leaders and educators), including the Science Advisory Panel (SAP), the State Coastal Conservancy (SCC), the Board of Governors (BOG), the Wetlands Managers Group (WMG), the Public Advisory Committee (PAC), and County Task Forces. The plan develops recovery strategies that apply to the southern California region's coastal wetlands and watersheds from Point Conception (in Santa Barbara County) south to the U.S.-Mexico border.

The Wetlands Recovery Plan includes long-term goals and specific implementation strategies to guide efforts of the Wetlands Recovery Project. The Wetlands Recovery Project employs three primary strategies to recover wetlands: 1) acquisition of property from willing sellers, 2) restoration and enhancement of wetlands where allowed by landowners and land managers, and 3) outreach and education about best practices to protect wetlands. The Plan outlines regional goals and strategies, and also identifies more specific objectives at the County level, including County-wide, site-specific, and organizational objectives as well as data and research needs pertaining to each County.

Specific goals have been identified for the San Gabriel River, Los Cerritos Wetlands Complex, Los Angeles River (including Dominguez Channel), Ballona Creek Watershed and estuary wetlands, and Santa Monica Mountain Watersheds.

Three regional needs specifically related to the Los Angeles basin and Orange County include:

- 1) Loss of riparian and floodplain habitat as a result of channelization and burying of stream corridors;
- 2) Increased storm runoff quantity and peak flows due to increased impermeable surfaces in the watershed (this has contributed to increased channel incision and bank erosion with loss of riparian habitat and increases in downstream sedimentation);

- 3) Decreased water quality resulting from increased loads of sediments, nutrients, metals, and organic compounds, and increased water temperature. (Chapter 4, pp. 12)

The Plan identifies a long-term, regional vision with six long-term goals and related strategies, as well as more specific strategies relevant to County areas. The vision, goals and objectives that make up the framework of the Plan were developed by the broad-based partnership. The six regional goals and associated strategies include:

- 1) Preserve and restore coastal wetland ecosystems.
  - Acquire privately-owned coastal wetlands and associated uplands.
  - Acquire contiguous wetland and upland areas as sites that are already primarily in public (or conservation) ownership.
  - Restore diversity and quality of wetland habitat types.
  - Restore ecosystem functions.
  - Address watershed impacts.
- 2) Preserve and restore stream corridors and wetland ecosystems in coastal watersheds.
  - Preserve riparian and aquatic habitat along stream corridors.
  - Restore riparian and aquatic habitat along stream corridors.
  - Reconnect creek and river corridors to their floodplains.
  - Restore sediment transport functions and characteristic patterns.
  - Reduce erosion, both along stream channels and from upland areas.
  - Improve water quality.
  - Preserve and restore wetlands, particularly vernal pools, in coastal watersheds.
- 3) Recover native habitat and species diversity.
  - Restore diversity of habitat types.
  - Employ a multi-species approach to wetlands recovery.
  - Preserve and restore habitat linkages and fish and wildlife corridors.
  - Preserve and restore rare wetlands, including vernal pools.

- Preserve and restore surrounding upland and dune habitat.
  - Remove exotic species and re-establish native species.
  - Recover native, extirpated species.
- 4) Integrate wetlands recovery with other public objectives
- Promote integration of wetlands conservation planning and priorities into related public policies and projects.
  - Promote wetlands projects that achieve multiple public objectives.
- 5) Promote education and compatible access related to coastal wetlands and watersheds
- Develop compatible public access opportunities.
  - Integrate interpretive programs into wetlands and watershed projects.
  - Promote opportunities for experiential learning.
  - Promote development and dissemination of educational materials.
  - Research and disseminate information about the economic value of wetlands.
  - Promote practices to reduce urban impacts on wetlands and watersheds.
- 6) Advance the science of wetlands restoration and management in Southern California
- Promote research on wetland ecology and restoration science, as well as on issues affecting the success and long-term sustainability of wetland restorations in Southern California.
  - Promote development of more effective monitoring programs for both regional and project-specific assessments.
  - Disseminate information.

#### **4.2.6 Wetlands of the Los Angeles River Watershed: Profiles & Restoration Opportunities, 2000**

The California State Coastal Conservancy, with the U.S. Environmental Protection Agency and the Los Angeles Regional Water Quality Control Board, evaluated profiles within the San Gabriel and Lower Los Angeles River Watershed: Whittier Narrows, Dominguez Gap, Willow Street (Los Angeles River Estuary), and the Los Angeles River Mouth (Queensway Bay). Ten specific restorations sites are called out within the

profiles described, four of which are relevant to this Region: 1) DeForest Park, 2) Dominguez Gap, 3) Victoria Park, and 4) Harbor Park.

The Plan is multi-objective, seeking to enhance habitat value for environmental as well as recreational benefits to the Greater Los Angeles Area.

Most current wetland research exists in a piecemeal fashion and tends to focus on particular sites or projects. Rather than examining individual coastal zone systems, this Plan provides a more cohesive and progressive regional restoration perspective by comparing historic and current wetland resources and describing them in terms of a classification system adapted from the Hydrogeomorphic Method (HGM). The Plan is grounded in the recognition that opportunities for successful restoration are limited, so goals/guiding principles revolve around prioritizing key regional opportunities.

The approach examines wetlands in terms of their function across a range of habitat types within a landscape. This method takes into account the fact that some historic wetland losses have been offset by the creation of new wetlands in flood control basins, reservoirs, and recreational lakes. Although new wetland resources may only marginally offset the losses, they provide valuable functions including some habitat for wildlife. The Plan is based on the premise that because it is unlikely that more than a minimal amount of the historic wetlands can be recovered, restoration efforts should be directed toward maximizing the performance and continuity of the region's wetland resource functions within the limitations of the current landscape, including the new human-built wetlands. Restoration goals are set after an analysis of what key landscape elements can be rehabilitated, so that wetland functions can be restored.

A long-term proposed outcome for the Plan is that its methodology could also serve as a model for the San Gabriel River Watershed.

The following goals were derived from a comparison of recent historic and current wetland resource conditions, and the recognition that restoration opportunities within the heavily urbanized Los Angeles River Watershed are severely limited.

- Restore historic hydrologic conditions (to the extent possible, or emulate them at specific restoration sites);
- Restore a functional semblance of the historic distribution of wetland resources (maintain geographic balance of wetland habitats and/or functions, but not necessarily the former extent of wetland resources);
- Increase the connectivity/decrease the fragmentation of wetland habitats (via wildlife corridors, increasing the size of existing wetlands, consolidating proximal wetlands, etc.);
- Enhance endangered species populations (regional biodiversity), but not at the expense of maintaining diverse wetland assemblages (i.e., single versus multi-species conservation);

- Establish effective buffers at existing and restored sites to reduce disturbance levels from adjacent land uses; and
- Ensure the landscape-level of sustainability of wetland ecosystems (water quality considerations, sediment and nutrient budgets, prevention of excessive flood damage, etc.).

Within the limited opportunities for wetlands restoration, ten potential sites were selected and surveyed. The selected sites represent a range of wetland and riparian habitats that historically occurred in the watershed and are distributed with the overall objective of improving the geographic balance of such habitat types and promoting greater regional biodiversity. The potential restoration sites, some of which are subsets of larger wetlands (profiled in Chapter 2), are derived from the adapted HGM and are an attempt at a watershed-wide approach to restoration. It should be noted that more extensive, long-term restoration opportunities exist, but within this Plan, shorter-term, quick win opportunities are prioritized.

Plan preparation involved the California State Coastal Conservancy, the U. S. Environmental Protection Agency and the Los Angeles Regional Water Quality Control Board (specifically, contributed the Plan's water quality data and analysis). The larger vision for transforming the Los Angeles River into a green corridor through the heart of the Los Angeles Basin has also involved the following agencies: LACDPW, RMC, the LA&SGRWC, North East Trees, Friends of the Los Angeles River and the Trust for Public Land.

### **4.3 Review of Water Management Strategies Identified in Existing Plans**

The table that begins on page 81 serves as a reference to obtain additional information regarding the regional objectives and the related water management strategies addressed in the six previously mentioned plans covering the entire Region. This table is provided as an example to show how, and where, the six key plans have approached the Water Management Strategies. Because of the limited space available in the table and the volumes written for each water management strategy only references have been provided. The complete summary and references for all sixty plans that comprise this Functional Equivalent IRWM Plan is provided in Appendix A.



**Water Management Strategies in Existing Plans**

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
<p><b>Category I WATER MANAGEMENT</b></p>	<p>Improving water resources one of three major Guiding Principles for Common Ground; a variety of water management goals, objective, and strategies follow</p> <p>Existing conditions – watershed hydrology (page 19), water supply (pages 32-36), water quality (page 36-38)</p> <p>Water Resource goals and objectives – page 48 to 49; Opportunities for water resource management and enhancement – pages 70 to73</p>					
<p><b>Water Supply Reliability*</b></p>	<p>Water supply reliability addressed pages 32 to 36 – including topics on sources of water, groundwater, imported water, surface water, and recycled water</p> <p>Water resource goals and objectives on page 49</p>		<p>pgs. 21-24: Supply reliability analytical methodologies are detailed in Section 2.</p> <p>Pgs. 60-61; 63-64: Risk analysis and discussion of a supply buffer for reliability.</p>			

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
			Sections 4 and 5 provide summaries that include water reliability values.			
<b>Groundwater management*</b>	Groundwater and groundwater management addressed starting on page 33, including recharge programs.  Groundwater management goals and objectives – on pages 49 and 50  Groundwater management opportunities for improvement on pages 72 to 73	See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).  Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)	pgs. 31-33: Local resources (including groundwater) discussed.  Pgs. 46-49: in-region groundwater storage options, target and conditions.  Sections 4 and 5 provide summaries that include groundwater management values.			
<b>Conjunctive use</b>	See Category 1 Baseline Documents for Existing IRWM Operations (Documents 1.01 through 1.09),					
<b>Storm water capture and management*</b>	BMPs to address non-point source pollution on page 39  Stormwater runoff opportunities for improvement identified on pages 71 to 72	See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).  Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)		(pgs 4-21 to 4-25) Storm water permits as regulated by the NPDES program  (pgs 4-39 to 4-43) Urban runoff and control	Ch. 4 p.10 (Orange Co.) and Ch. 4 p. 14 (L.A. Co.) ecological objective for best mgmt. practices to reduce inputs of sediment, nutrients and contaminants in the watershed  Ch. 4 p.10 ecological objective for coordination w/public agencies to reduce impervious surfaces in road/infrastructure projects (Orange Co.).  Ch. 4 p. 14 County-wide objective for L.A. County to promote stormwater retention/urban runoff	

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
					projects to increase opportunities for habitat enhancement in river/stream corridors.	
<b>Surface Storage</b>	Existing conditions – page 36		Pgs. 44-46: in-region surface water targets and conditions.			
<b>Water quality protection and improvement*</b>	Existing conditions for water quality (pages 36 to 39), including topics on responsibility for water quality, beneficial uses, water quality concerns, source controls and planned remediation efforts Water quality protection goals and objectives on page 48	Region-wide water quality priorities described (Ch. 3 pp.11-13).  See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).  Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)	Pg. 24: Analytical WQ assumptions  WQ discussed throughout as part of supply and supply blending issues.	The focus of the document is water quality and improvement on a regional basis.  (pgs 3-8 to 3-17) regional WQ objectives for surface water.  (pgs 3-17) regional WQ narrative objectives for wetlands  (pgs 3-17 to 3-18) regional WQ objectives for groundwater  (pg 3-22) site specific WQ objectives  Strategic Planning and Implementation is discussed in Chapter 4  Plans and Policies are discussed in	Ch. 4 p.10 (Orange Co.) and Ch. 4 p. 14 (L.A. Co.) ecological objective for best mgmt. practices to reduce inputs of sediment, nutrients and contaminants in the watershed	

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
				Chapter 5  Monitoring and Assessments are detailed in Chapter 6.		
<b>NPS pollution control</b>	Existing conditions – page 39	See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).  Los Angeles River Watershed past significant activities (Watershed Management, Nonpoint Source Program) and current activities (core regulatory, monitoring/assessment, nonpoint source program) – (Ch 2.2 pp.7-10).  San Gabriel River Watershed past significant activities (Watershed Management, Nonpoint Source Program) and current activities (core regulatory, monitoring/assessment, non-point source program) – (Ch 2.2 pp.4-7).		(pgs 4-33 to 4-57) Control of NPS pollution.  (pgs 5-4 to 5-5) State Board Nonpoint Source Management Pollution Plan		
<b>Flood management*</b>	Current flood management system described on page 39 to 42  Five flood management objectives identified on page 48 and 49	Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)				

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
	Opportunities for improvement pages 70 to 71					
<b>Water conservation*</b>	Need for water conservation addressed on page 36	See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).	Pgs. 26-30 discussion conservation, reporting, targets and programs.  Sections 4 and 5 provide summaries that include water conservation values.			
<b>Imported water</b>	Existing conditions – page 35 Goal to reduce dependence on imported water – page 49		Pgs. 38-41 discuss the Colorado River Aqueduct.  Pgs. 49-52 discuss the Central Valley/State Water Project Transfers and storage.  Sections 4 and 5 provide summaries that include imported values.			
<b>Water recycling*</b>	Existing conditions - Page 36		pgs. 31-33: Local resources (including water recycling) discussed.  Sections 4 and 5 provide summaries that include water recycling values.	(pg 4-18) Water Reclamation Requirements  (pgs 5-6 to 5-7) Water Reclamation in California		
<b>Desalination</b>	Not identified		pgs. 31-33: Local resources (including			

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
			<p>desalination) discussed.</p> <p>Sections 4 and 5 provide summaries that include desalination values.</p>			
<p><b>Category II HABITAT IMPROVEMENT</b></p>	<p>Habitat improvements a major goal derived from Guiding Principle of growing a greener southern California</p> <p>Existing conditions – page 23 to 29</p> <p>Habitat goals and objectives outlined on page 48</p> <p>Opportunities for habitat improvement pages 66- 70</p> <p>Habitat conservation plan identified on page 75</p>				<p>Ch.4 (Co. Objectives) discusses current habitat conditions for Orange County's Bolsa Chica Wetlands, Los Cerritos Wetlands and San Gabriel River watershed, and vernal pools (pp. 7-9) and for L.A. County's San Gabriel River and Los Cerritos Wetlands, Los Angeles River, Ballona Creek and Wetlands, and the Santa Monica Mtn. watershed (pp. 12-13).</p> <p>Ch.4 (Co. Objectives) presents a variety of habitat improvement strategies for the Orange Co. area (pp. 9-11), and for the L.A. Co. area. (pp. 14-15).</p> <p>Ch. 4 (Co Objectives) p.10 identifies specific recommendations for the Bolsa Chica wetlands, the Los Cerritos Wetlands and San Gabriel River</p>	

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
					<p>Watershed (Orange Co).</p> <p>Ch. 4 p. 14 County-wide objective for L.A. County to promote stormwater retention/urban runoff projects to increase opportunities for habitat enhancement in river/stream corridors.</p> <p>Ch. 4 p. 14 identifies Los Angeles Co. objective to evaluate potential to preserve and reintroduce steelhead.</p> <p>Ch. 4 p. 15 highlights objective to develop habitat linkages along the San Gabriel River to support sensitive spp. and connect wildlife populations in the San Gabriel Mtns. and Puente Hills. Also references need to support creation of habitat (riparian, marsh and grassland/scrub) in parkway and greenway projects along the river and tributaries.</p> <p>Ch. 4 p. 15 presents key objective to evaluate potential for habitat linkages from Verdugo Hills to the San Gabriel</p>	

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
					Mtns. in the Angeles National Forest. Also references need to support creation of habitat (riparian, marsh and grassland/scrub) in parkway and greenway projects along the river and tributaries.	
<b>Environmental and habitat protection and improvement*</b>	<p>Habitat and habitat linkages (page 66 to 69)</p> <p>Use of private and common lands as part of habitat enhancement page 70</p>	<p>See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)</p> <p>Los Angeles River Watershed wetlands protection and management (Ch.2.1 pp 9,10).</p> <p>San Gabriel River Watershed wetlands protection and management (Ch.2.1 pp 7,8).</p>			<p>Ch.4 (Co. Objectives) presents a variety of restoration strategies for the Orange Co. area (pp. 9-11), and for the L.A. Co. area. (pp. 14-15).</p> <p>Ch. 4 (Co. objectives) p. 8 references limited opportunities for restoration of riparian and aquatic habitat in Orange Co. due to concrete flood control channels.</p> <p>Ch. 4 p. 10 presents a priority action for Orange Co. to complete the Port-funded Bolsa Chica wetland restoration project.</p> <p>Ch. 4 p. 11 presents priority action for Orange Co. to pursue off-channel habitat restoration and re-creation along lower reaches of the San Gabriel River, where the</p>	<p>The Victoria Park tributary (Ch.4 p.104) to the Dominguez Channel has been straightened and deepened to accommodate stormwater from urban runoff. The habitat and functional value of the site could be significantly enhanced by widening the channel and reducing bank slopes, thereby increasing its capacity and reducing flow velocities by creating a meandering stream. These improvements would help native plant communities establish and survive and would provide valuable habitat.</p> <p>Potential restoration alternatives for Harbor Park (Ken Malloy Harbor Regional Park) include (Ch.4 p.107-108): re-establishing tidal flow and increasing periods of inundation to the lower marsh by raising the elevation of the outlet structure (note that this alternative would disrupt the composition of existing</p>



Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
					<p>river is confined to concrete.</p> <p>Ch. 4 p. 15 identifies a site-specific objective for Los Cerritos wetland complex (L.A. Co.) to develop and implement a restoration plan for the area, including Colorado Lagoon.</p>	<p>plant and animal communities because the site has not been subject to tidal influence for more than a century); eradicating invasive plant species, removing trash; and phasing excavation of accumulated sediments and emergent marsh vegetation in the lower wetland area. The functional diversity and capacities of the site would increase if the hydrology of the lower march area were restored in conjunction with the enhancement of other wetland features (note: many of these restoration proposals covered in the Ken Malloy Harbor Regional Park Plan, 1994).</p> <p>Restoration potential identified in creation of new wetlands by widening the river channel below Compton Creek to Willow Street (Ch.4 p.109). There is considerable open space along the west side of the channel. Widening of river channels and creation of soft-bottomed wetlands could also provide considerable habitat for a vast array of migratory birds and would also allow for creation of greenbelts and parks.</p> <p>The Plan promotes careful</p>

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
						<p>management of re-established wetlands from sediment deposit on concrete-lined channels, and of temporary wetlands, such as sand bars because, while not ideal, they can still support numerous wildlife benefits (Ch.4 pp.110, 111).</p> <p>A key strategy identified for addressing habitat loss in southern California riparian systems is to develop a comprehensive program of eradication specifically of the highly competitive and invasive non-native, Arundo donax, as well as other invasive species. The importance of reliance on natural processes, especially flood dynamics, for the recovery of native animal communities and species is also referenced (Ch.4 p.112). Arundo donax is especially damaging since it alters the ecological/successional processes in riparian systems by displacing native species and does not supply food or nesting habitat for native animals (Ch.4 pp.111, 112).</p>
<b>Ecosystem Restoration*</b>	Goals to restore and enhance aquatic and terrestrial riparian and upland habitat	See watershed restoration action strategy table (Ch. 3 pp.19,20).			Ch. 4 (Co. objectives) pp. 10, 11 present objectives related to	Promising restoration sites are identified and the restoration potential for

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
					<p>wetlands enhancements and creation in Orange County. A key objective for the Bolsa Chica wetlands is to acquire and restore contiguous wetland and transitional areas that function as part of the wetland ecosystem; and a key objective for the Los Cerritos Wetland (Orange Co. and L.A. Co.)/San Gabriel River Watershed is to acquire and restore wetlands and adjacent upland areas at Los Cerritos Wetlands.</p> <p>Ch. 4 p. 15 presents a priority action for the Ballona Creek watershed and estuary wetlands to acquire coastal wetland and associated upland habitat.</p> <p>Ch. 4 p. 15 identifies need to restore and enhance remnants of the historic Los Angeles River estuary such as Cabrillo Salt Marsh and other saltwater marshes along the lower reaches of the Los Angeles River.</p>	<p>each site is described: DeForest Park (Ch.4 p.99-100), Dominguez Gap (Ch.4 101-102), Victoria Park (Ch.4 103-105) and Harbor Park (106-108).</p> <p>A range of possible restoration alternatives are presented for DeForest Park (Ch.4 p.100). These include: removing exotic plant species and re-establishing native vegetation, and siphoning regular flows from the low-flow channel of the L.A. River to increase currently intermittent hydroperiod; recontouring the site into a riparian strip and revegetating in phases to preserve existing habitat values; adding pool and riffle sequences; extending the restoration for three miles of riparian habitat along the floodway to the Dominguez Gap site adjacent to the LA River.</p> <p>General restoration opportunities that could be considered independently or as part of a multi-objective approach are outlined in Ch.4 pp.109-112. Opportunities include: concrete removal; re-established wetlands in concrete-lined channels; low-impact channel maintenance; undeveloped</p>

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
						lands; public easements and rights-of-way; and removal of exotic invasive species.
<b>Wetlands enhancement and creation*</b>	Wetlands restoration – page 69					<p>A wetland restoration plan for the East Basin of the Dominguez Gap is currently underway by the L.A. Co. Dept. of Public Works (Ch.4 p.102). The project would require siphoning water from the main channel of the L.A. River and pumping is through a created wetland. Restoration would include reducing the basin slopes, replanting the basins with native riparian vegetation and establishing habitat islands.</p> <p>Numerous possibilities exist for wetland creation in the lower reaches of the Los Angeles River where sizable stretches of largely undeveloped publicly and privately owned land adjoin the channel within the historic floodplain (Ch.4 p.111).</p>
<b>Category III LAND USE - RECREATION</b>	Land use one of three Guiding Principles for Common Ground – i.e. to grow a greener southern California and from that derive a variety of public					

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
	access, open space, and recreation goals (see pages 47 – 48)					
<b>Recreation and public access*</b>	<p>Existing open space and recreation resources on pages 30 to 32</p> <p>Identifies several recreation and public access goals and objectives on pages 47 and 48</p> <p>Opportunities to improve public access on pages 65 to 66, including improve and expand existing facilities, creating new ones</p>			Chapter 2 – Beneficial uses are defined for a variety of water uses, including two levels of recreational uses.		<p>Introduction p. viii describes the multiple benefits that enhanced habitat value could produce:</p> <p>the Los Angeles River Watershed could become a significant recreational as well as environmental amenity for the Greater Los Angeles area.</p> <p>The Victoria Park (Ch.4 p.104) potential restoration site has an adjacent Home Garden Learning Center that offers an opportunity to expand the facility into an environmental education and interpretive center.</p> <p>Ch.4 p.108 describes need for Harbor Park site to be well-buffered again disturbance impacts from adjacent land uses and intrusive park visitors.</p> <p>Ch.4 p.111 identifies neighborhoods with some of the lowest ratios of parks per resident in the nation. These are located north of Long Beach: Bell, Bell Gardens, Vernon, Maywood, Cudahy, Paramount and South Gate. The Mountains</p>

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
						<p>Recreation and Conservation Authority and the Trust for Public Land are working on recreation projects in these areas. New riverside parks in these areas would also further the long-term goal of a continuous greenbelt along the entire length of the L.A. River. Brownfield sites in these areas provide opportunities for recreational projects with habitat components, particularly where they border the channel. Creative solutions, such as public/private partnerships will be required to address the economic, social and environmental needs of these communities and the long-term vision of a L.A. River greenbelt.</p> <p>Restoration potential identified in creation of new wetlands by widening the river channel below Compton Creek to Willow Street (Ch.4 p.109). There is considerable open space along the west side of the channel. Widening of river channels and creation of soft-bottomed wetlands could also provide considerable habitat for a vast array of migratory birds and would also allow for creation of greenbelts and parks.</p>

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
<p><b>Land use planning</b></p>	<p>Land acquisition, connectivity, and open space opportunities identified pages 56 to 64 including topics on river parkways, tributaries, trails and bike paths, community gardens</p> <p>Next steps in short-term include Rivers Parkway Plan, Tributary Plan, Trails and Bike Paths Plan, Mountains, Foothills, and Hills Plan(s) and Historic and Cultural Landscape Survey</p>				<p>Ch. 4 p. 17 defines L.A. Co. objective to integrate Wetlands Recovery Project goals and objectives and watershed planning into local land use plans and policies.</p>	
<p><b>Watershed planning</b></p>	<p>Entire plan addresses scope of both the Los Angeles and San Gabriel River Watersheds, and is intended as an umbrella document/plan framework for subsequent subwatershed plans.</p>	<p>Description of watershed management approach (Ch.1 p.1)</p> <p>Describes watershed management initiative (Ch.1 pp.2,3).</p> <p>Region-wide activities described (Ch. 3 pp.1-34).</p> <p>Outline of watershed and non-watershed tasks (those that are tied to a specific watershed and those that are not) – Ch.3 p.1.</p>			<p>Ch. 4 p. 11 and p. 15 presents priority action for both Orange Co. and L.A. Co. to develop a watershed management plan for Coyote Creek and identify restoration opportunities.</p> <p>Ch. 4 p. 15 identifies a site-specific objective for Los Cerritos wetland complex (L.A. Co.) to develop and implement a long-term management plan.</p> <p>Ch. 4 p. 15 identifies priority action to develop</p>	<p>Executive Summary p. xii highlights the need for a long-range plan for wetland restoration in the Los Angeles River Watershed to ensure that available resources are used to the greatest advantage.</p> <p>The Plan proposes a cohesive regional approach to watershed planning by comparing historic and current wetland resources and describing them in terms of a classification system adapted from the Hydrogeomorphic Method (Ch.3 p.71, 72).</p>

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
		<p>Los Angeles River Watershed past significant activities (Watershed Management, Non-point Source Program), current activities (core regulatory, monitoring/assessment, non-point source program, basin planning, wetlands protection and management, watershed management), near-term activities and potential long-term activities (Ch.2.1 pp.6-11).</p> <p>San Gabriel River Watershed past significant activities (Watershed Management, Non-point Source Program), current activities, near-term activities and potential long-term activities (Ch.2.2 pp.4-9).</p>			<p>and implement restoration, watershed and long-term management plans for San Gabriel River and tributaries.</p> <p>Ch. 4 p 15 presents priority actions to develop and implement restoration, watershed and long-term management plans for the Los Angeles River and its tributaries and the Dominguez Channel; and to develop/implement restoration and enhancement plan for the Wilmington Drain and Harbor Lake.</p> <p>Ch. 4 p. 11 and p. 15 presents a priority action for L.A. County's Ballona Creek watershed and estuary wetlands to integrate planning and management for the entire Ballona wetlands complex (including Ballona Lagoon, Del Rey Lagoon, Grand Lagoon, Marina del Rey Harbor and Oxford Lagoon). Developing and implementing a restoration and long-term management plan for Ballona wetlands is</p>	



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Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
					also a priority.	
<b>OTHER</b>						
					<p>Ch.4 (Co. Objectives) pp. 11-12 presents organizational objectives relevant to Orange Co., including: promoting education, increasing funding, developing public and private partnerships, building a comprehensive GIS mapping system, coordinating watershed efforts on a large scale, and streamlining the regulatory processes.</p> <p>Ch. 4 (Co. Objectives) pp. 16, 17 describe organizational objectives relevant to Los Angeles County, including: developing education programs, identifying funding sources for priority acquisitions, organizing a County task force governance structure, evaluating long-term management of public resource lands, coordinating watershed efforts on a large scale, and integrating goals into land use plans and policies.</p>	<p>Provides a thorough description of urban growth history, shift in shoreline, and historic and current wetlands comparison (Ch. 1 pp. 1 – 5; Ch. 3 pp. 71-78; and maps 1, 2, 5 &amp; 6.</p>

Water Management Strategies	Common Ground	Watershed Management Initiative	Integrated Water Resources Plan, 2003 Update	LARWQCB Water Quality Control Plan	Southern California Wetlands Recovery Project Regional Strategy	Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities
					Ch. 4 (Co. Objectives) p. 17 Identifies an inventory of Santa Monica Mountain streams as a data/research need in L.A. Co.	Executive Summary p. xii highlights the need for a long-range plan for wetland restoration in the Los Angeles River Watershed to ensure that available resources are used to the greatest advantage.
OTHER						Executive Summary pl. xii emphasizes the critical need for various planning and funding entities to coordinate their efforts to ensure the most effective use of limited resources and to secure fleeting restoration opportunities.
						<p>-Goals are not clearly linked to strategies/action steps. -Does not include an implementation plan.</p> <p>-Broad-ranging criteria are provided for restoration site selection, but the Plan does not provide detail on why each specific restoration site was chosen.</p>

## **4.4 Sub Watershed Objectives**

Some of the subwatersheds have management plans in place that identify objectives specific to more local conditions. The sections below describe two such watersheds; the Rio Hondo and Compton Creek.

### **4.4.1 Rio Hondo Watershed Management Plan**

The purpose of the Rio Hondo Watershed Management Plan is to provide an organizing framework for municipalities, conservation organizations, and individuals to work together to improve the water quality, health, habitat, and recreation potential of the Rio Hondo Watershed. This Watershed Management Plan identifies goals and strategies necessary to manage the overall watershed as a healthy, life giving natural system. This plan also outlines steps to facilitate the establishment of a watershed consortium, which would be responsible for communication of information, identification of priorities, funding development, creation of new projects, and long-term implementation of watershed improvements.

The vision of a healthy vital Rio Hondo watershed is one that balances the needs of sustaining a healthy ecosystem, including habitat for animals, within the context of providing clean water and flood control in an urban environment. A healthy watershed can capture and filter stormwater runoff, slowing its release into streams and rivers, recharge the groundwater supply, and fully perform all its other natural hydrologic functions even within the confines of the surrounding urban environment. Such a watershed is no longer hidden underneath the built environment but is integrated in ways that allows it to function in harmony with the environment and normal activities of the people who live, work, and play in the area. Critical objectives include:

- Improve in-stream water quality to meet or exceed Regional Water Quality Control Board standards and NPDES permitting requirements;
- Implement a wide array of stormwater Best Management Practices to optimize local water resources and reduce dependence on imported water while increasing beneficial water uses available to the public;
- Create, enhance and protect open space;
- Improve habitat quality, quantity and connectivity;
- Improve recreational opportunities;
- Ensure that public health and safety are fully integrated into watershed management;
- Maintain current flood protection levels and develop new flood protection strategies;
- Develop priority projects that address multiple goals simultaneously;

- Create an effective institutional framework to manage implementation of watershed improvement efforts;
- Establish public awareness and stewardship campaigns.

#### **4.4.2 Grounds for Renewal: Revitalization of Compton Creek**

This document outlines a vision for the adaptive reuse of Compton Creek where the creek becomes the spine of a network of parks and open space areas - that together form a multi-use recreational greenway through impoverished neighborhoods, reconnecting communities with a natural sense of place, while providing additional flood protection, aquifer recharge and air and water quality improvements. The primary goals of the plan are to:

- Connect Compton Creek to the regional Los Angeles River Greenway;
- Create natural open space destination areas;
- Introduce watershed education opportunities;
- Improve water quality and flood protection;
- Enhance avian habitat.

## **Section 5**

# **Water Management Strategies and Project Identification**

### **5.1 Water Management Strategies**

The Document Matrix, shown in Section 3.2, provides a complete listing of applicable documents and the water management strategies addressed by each of the documents. The Regional Group has an internal IRWM Plan website that contains electronic copies of many of the documents in the matrix as well as plan review forms for the documents with references to relevant water management strategies from each document.

One example of regional integration of strategies was demonstrated in the San Gabriel River Corridor Master Plan process where initially three goals were identified by the County of Los Angeles: habitat, recreation, and open space. During a two-year information and consensus building process, a Steering Committee comprised of multiple San Gabriel River stakeholders added the additional goals of flood protection, water management, and economic development to ensure a comprehensive multi-objective approach that acknowledged all of the vital roles and functions of the river.

Baseline documents that form the foundation for integration of water management strategies include the Cooperative Agreement between the County of Los Angeles and the Main San Gabriel Basin Watermaster, the WRD's Water Augmentation Study, the Main San Gabriel Basin Watermaster Annual Report, the LACDA Project Feasibility Study, and the Water Recycling Program Master Plan. These documents address water supply reliability, groundwater management, conjunctive use, water quality protection and improvement as well as a number of other water management strategies.

In addition to the baseline documents above, there are a series of primary multiple objective documents that take the integration of water management strategies to another dimension in that habitat, land use, recreation, and stakeholder involvement are significant components of the plan development and implementation. These include Common Ground from the Mountains to the Sea, the WMI Chapter, the San Gabriel River Corridor Master Plan, the Watershed Management Plan for the San Gabriel River Above Whittier Narrows, the Rio Hondo Watershed Management Plan, the Compton Creek Watershed Management Plan, and the Los Angeles River Master Plan. Some of these plans are heavily oriented toward improving water quality on a watershed scale through multiple benefit projects and approaches to watershed management as a result of Proposition 13. The projects within these documents provide a strong balance between structural water infrastructure improvement projects implemented by many water agencies in the Region and non-structural multi-objective projects like vegetated swales, wetlands, trail, and interpretive elements to improve water quality, habitat, and recreational/educational opportunities proposed by conservancies, non-profits, and public/private partnerships.

Finally, integration is demonstrated through the primary water documents, six of which are fairly comprehensive in terms of integration. These include the Integrated Water Resources Plan, Water Quality Control Plan, Five Year Water Quality Management Plan, Main San Gabriel Basin Watermaster Annual Report, Three Valleys Water Management Plan, County of Los Angeles Discharge Permits, and the Hydraulic/Hydrologic Model of Los Angeles River and San Gabriel River Systems. Primary land use and habitat documents such as the Southern California Wetlands Recovery Regional Strategy and Recovery Plans for the Arroyo Southwestern Toad, Western Snowy Plover, and Vernal Pools are also good examples of integration that can be utilized further in the IRWM Plan formation.

Based on review of the applicable documents and input from the Regional Group, a list of preliminary water management strategies to be considered in the overall IRWM Plan was developed that included:

- Ecosystem Restoration
- Environmental Habitat Protection and Improvement
- Flood Management
- Groundwater Management
- Recreation and Public Access
- Storm Water Capture and Management
- Water Conservation
- Water Recycling
- Wetlands Enhancement and Creation
- Conjunctive Use
- Desalination
- Imported Water
- Land Use Planning
- Non-Point Source Pollution Control
- Surface Storage
- Watershed Planning
- Water and Wastewater Treatment

- Water Transfers
- Groundwater Banking

Many of these water management strategies are currently being implemented in the Region and are consistent with IRWM Plan standards. These strategies work together to achieve established water management objectives relating to five primary Water Management Focus Areas. These focus areas are identified below.

- Water Supply Reliability and Water Quality Protection
- Groundwater Management and Conjunctive Use
- Storm Water Management and Flood Protection
- Watershed Management, Habitat, and Recreation
- Water Recycling, Reclamation, and Conservation

## **5.2 Project Identification**

Based on the criteria used by the granting agencies to evaluate projects' merit, two forms have been developed. The two forms are 1) the Project Description Questionnaire and 2) the Project Screening Tool.

The first form, the Project Description Questionnaire, has been developed to solicit the information required from applicants in narrative form. A copy of the Project Description Questionnaire is included in Appendix B of this document. The questions in the Project Description Questionnaire expressly request, which of the statutorily required water management strategies the project addresses, the degree to which water pollution will be mitigated, and then asks prioritizing information relating to planning, funding and CEQA, and how well the project fits within the IRWM Plan. In addition, information regarding the stakeholder process and the presence of areas of special biological significance is requested. In this manner, projects that integrate water management strategies will be identified and therefore be more likely to be executed.

The questions in the Project Description Questionnaire force applicants to consider the range of water management strategies when planning projects they intend to be implemented under the IRWM Plan. Encouraging applicants to consider a variety of water management strategies and scoring projects that integrate those strategies with more points will encourage implementation of projects with a number of water management strategies. Use of this form at the planning stage simultaneously encourages success of each project and the success of the IRWM program overall.

The questions are designed to supply IRWM Plan managers with the information required to evaluate each project against the criteria mentioned above to prioritize the project using the second form, the Project Screening Tool, included in Appendix C. The Project Description Questionnaire is more fully discussed in Section 6 Project

Prioritization. The table below provides a summary of projects identified through the IRWM Plan Call for Projects.

**Summary of Identified Projects**

<b>Project Name</b>	<b>Submitting Agency</b>	<b>Amount</b>
Alhambra Wash	Amigos de los Ríos	\$7,737,500
Arcadia Wash	Amigos de los Ríos	\$14,020,615
Armstrong Multiuse Grounds	LACDPW	\$7,118,000
Bell Riverfront Greenway	LACDPW	\$915,000
Citrus Spreading Grounds Modification Project	LACDPW	\$203,000
Colorado Lagoon Water, Sediment, Habitat, Restoration Master Plan	Long Beach Water	\$6,917,820
DeForest Wetland Habitat Restoration	Long Beach PRM	\$7,905,055
Duck Farm	WCA	\$15,000,000
El Dorado Park Lakes Water Usage and Wetlands Restoration	Long Beach PRM	\$12,471,109
El Monte Storm Drain Daylighting/Green Infrastructure	City of El Monte/Amigos de los Ríos	\$5,940,000
Emerald Necklace-Alhambra Wash to Eaton Wash	Amigos de los Ríos /City of El Monte	\$1,892,000
Emerald Necklace-Eaton Wash to Peck Park	Amigos de los Ríos /City of El Monte	\$5,270,124
Emerald Necklace-Peck Park to SG River	Amigos de los Ríos /City of El Monte	\$1,311,979
Emerald Necklace-SG River to Walnut Creek	Amigos de los Ríos /City of El Monte	\$1,769,163
Full Capture Trash Removal Devices	LACDPW	\$3,575,000
I-105 Dewatering Wells Beneficial Uses Project	Water Replenishment District	\$24,000,000
Invasive Weed Control in Riparian Habitat	LA & SG Rivers Watershed Council	\$232,000
Large Landscape Conservation/Runoff Reduction Mgmt. And Educational Program	Central Basin Municipal Water District	\$1,555,500
Low Flow Diversion Systems	LACDPW	\$7,640,000
Montebello Forebay Attenuation and Dilution Studies	LACSD	\$2,400,000
Morris Dam Water Supply Enhancement Project	LACDPW	\$12,827,000
Peck Park Wetlands and Enhanced Recharge Project	LACDPW	\$10,400,000
Peck Water Conservation Park	City of El Monte/Amigos de los Ríos	\$8,886,885
Rio Hondo Coastal Spreading Grounds Vertical Drains	LACDPW	\$1,140,000
Seawater Barrier Supply Facilities Improvements	LACDPW	\$3,060,000
SG River-Regional Spreading Grounds Telemetry Systems	LACDPW	\$2,280,000
South Compton Creek Greenway and Bike Trail	LACDPW	\$1,400,000
Southeast Water Reliability Project Phase I Water Recycling	Central Basin Municipal Water District	\$15,230,720



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<b>Project Name</b>	<b>Submitting Agency</b>	<b>Amount</b>
Southeast Water Reliability Project Phase II	Central Basin Municipal Water District	\$27,856,666
Well #12 Installation	Walnut Park Mutual Water Company	\$1,140,000
Whittier Narrows Water Reclamation Plant UV Disinfection Facilities	LACSD	\$6,550,000
Whittier Narrows Conservation Pool Improvements	Water Replenishment District	\$3,966,200
Wrigley Greenbelt	LACDPW	\$2,387,000

## **Section 6**

### **Project Prioritization**

#### **6.1 Introduction**

Per the IRWM requirements, the applicant must provide a prioritization of the project(s) within the proposal. The prioritization of the proposed project(s), activities, and facilities should be sufficiently detailed to understand the relationship to implementation priorities of the Plan.

#### **6.2 Criteria for Prioritization**

The “Initial Project Screening Tool,” included in Appendix C of this document, details the criteria evaluated and the points available for each criteria. It is a simple point scoring spreadsheet, developed to quantitatively and objectively evaluate each project. Evaluation information for each of the criteria was also obtained from the Guidelines’ Appendix B (page 14) , and Guidelines’ Table C-1 (page 26). The point totals for each section equals the point total for those sections per the PSP, although some of the criteria within each section differ slightly from the criteria described by the PSP and the Guidelines.

This tool has been designed to incorporate best judgment regarding consideration of the criteria and other project management considerations in evaluating prospective projects. For example, there is no specific category for “Program Preferences” in the tool, although such a category is in the PSP Table 2. This is because the program preferences have been reflected in the sections labeled “Water Management Strategies” and “Need”. In addition, the tool includes an additional section labeled “CEQA/NEPA” although there is no such section in the PSP, reflecting the importance from a project management perspective of calling out the CEQA/NEPA process at the earliest possible stage.

#### **6.3 Project Prioritization**

Applicants submitted the Project Description Questionnaire when proposing a project to be implemented under the IRWM Plan. Many projects can be ranked by taking the information supplied in the questionnaires and evaluating it using the tool. The scores will prioritize the projects according to their overall merit, considering efficacy, feasibility, adherence to the IRWM Plan goals, funding burden, whether it provides benefits to disadvantaged communities, etc. A listing of the criteria used to score projects, and a summary of the projects submitted can be found in Appendix C of this document.

## **Section 7**

### **Next Steps**

#### **7.1 Coordination with Adjacent Regional Water Management Groups**

This framework is part of a long-term strategy to coordinate water resource and watershed management planning efforts across the Los Angeles region, defined for these purposes as the watersheds of the San Gabriel River, Los Angeles River, Ballona Creek, Dominguez, and Santa Monica Bay from Arroyo Sequit to the Palos Verdes peninsula. Across the region, substantial coordination has taken place among the agencies and organizations in developing these plans. The Regional Water Management Groups are committed to working together so that coordination occurs between jurisdictional boundaries.

The WCA has met with the Santa Ana Watershed Project Authority (SAWPA) to discuss the overlapping Coyote Creek watershed, a subwatershed of the San Gabriel River watershed. SAWPA and WCA have agreed to collaborate and coordinate their IRWM Plan efforts across these overlapping geographies to enhance opportunities to implement common water management strategies.

The Regional Group also sought the participation of the San Gabriel Valley groundwater agencies in the IRWM Plan development process. These agencies have decided to pursue a separate IRWM Planning Grant for areas within the WCA IRWM boundary. The Regional Group will continue to seek their participation and coordinate with these agencies. Given the level of interest in implementing integrated projects by many of the Regional Group members in the San Gabriel Valley, it was decided to keep this area within the WCA's IRWM boundary.

#### **7.2 Stakeholder Involvement**

The Regional Group has invited stakeholders to attend monthly meetings aimed at building coordination and collaboration within the Region. Stakeholder identification and involvement will continue to drive development of the IRWM Plan. Ultimately, this stakeholder process and the adopted IRWM Plan will implement projects that benefit the entire Region and reduce dependence on imported water. A preliminary list of stakeholders has indicated a commitment to the IRWM Plan development through an MOU between the member entities of the Regional Group. A more comprehensive list of stakeholders will be identified as the IRWM Plan continues to develop. General outreach to targeted stakeholders such as the Advisory Committees to each of the subwatershed groups established under the Proposition 13 watershed planning process will be on-going throughout the development of the IRWM Plan. In addition, specific workshops will be conducted at critical decision points during the development of the IRWM Plan to obtain input and feedback from key stakeholders.

Specific efforts will be made to engage representatives from disadvantaged communities in the planning process. In addition, the Regional Group will tackle issues related to environmental justice to ensure impacts are mitigated and benefits of the IRWM Plan will be consistent throughout the Region.

### **7.3 Watershed Funding**

To address funding needs, the American Society of Civil Engineers (ASCE) formed and facilitates the ASCE Los Angeles Regional Watershed Infrastructure Funding Workgroup. The Workgroup is made up of executives and managers from the City of Long Beach, City of Los Angeles Department of Water and Power, Sanitation Districts of Los Angeles County, Tree People, Heal the Bay, City of Los Angeles Bureau of Sanitation, City of Santa Monica, City of Signal Hill, LACDPW, Brown and Caldwell, Regional Water Quality Control Board, Construction Industry Coalition for Water Quality, RMC, Mountains Recreation and Conservation Authority, Coalition for Practical Regulations, and the Building Industry Association. Additionally, representatives from the Riverside County Flood Control District, Santa Ana Watershed Project Authority, and Chief Administrative Office of the County of San Diego have attended meetings.

These stakeholders are working together to develop an integrated management plan for Los Angeles County whose purpose is to detail goals, strategies, proposed projects (structural solutions) and programs (non-structural solutions), and project/program costs to address stormwater quality and to achieve multiple objectives such as water supply, flood control, recreation, open space, wastewater management, and wildlife habitat restoration. The plan will describe the benefits that will be received by the communities and agencies in the County by implementing the proposed projects and programs.

The plan will also describe a proposed stable and long-term funding mechanism to finance the proposed projects and programs. Additionally, the plan will detail the amount of revenue anticipated from the funding mechanism, why the revenue is necessary, potential sources of matching State and Federal funding, and how the revenue is to be used. This plan will be a tool to obtain voter approval for a stable long-term funding mechanism and to seek grant or other funding opportunities when available. This effort will be closely coordinated with the development of the IRWM Plan for this Region.

### **7.4 Completion of the Draft and Final IRWM Plan**

A Work Plan to complete the IRWM Plan is shown in Appendix D. A Public Meeting is scheduled for August 2006 to present the draft document to all interested stakeholders. Formal IRWM Plan adoption will take place between November 2006 and December 2006.

FRAMEWORK INTEGRATED REGIONAL WATER MANAGEMENT PLAN  
**APPENDIX A – Plan Review Forms**

# Section 1

## Baseline Documents

1.01 The Judgment - Water District vs City of Alhambra

1.02 The Long Beach Judgment

1.03 Cyclic Storage Agreements

1.04 Cooperative Agreements between the County and the Main San Gabriel Basin Watermaster

1.05 Water Replenishment District of Southern California

1.06 Water Augmentation Study - LA and SG Watershed Council

1.07 Main San Gabriel Basin Watermaster Annual Report

1.08 LA County Drainage Area Feasibility Study

1.09 Water Recycling Program Master Plan

## **1.01 The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra**

<b><i>IRWM Plan Type</i></b>	<b>Baseline Document for Existing IRWM Operations</b>
<b><i>Name of Plan</i></b>	The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra
<b><i>Preparing Agency or Entity</i></b>	Helm & Budinger, Attorneys at Law
<b><i>Other Agency Coordination</i></b>	The judgment affects the Upper San Gabriel Valley Municipal Water, the San Gabriel Valley Municipal Water, and the Pomona Valley Municipal Water District.
<b><i>Date of the Plan</i></b>	November 20, 1972
<b><i>Contact Information</i></b>	Helm & Budinger (213) 877-1526
<b><i>Reviewer</i></b>	J. Eulate, MIG

### ***Geographic Area Described***

The San Gabriel River watershed: The main San Gabriel basin in Los Angeles County, the San Gabriel River, its tributaries and distributary, the Rio Hondo, and Whittier Narrows to the Pacific Ocean.

### ***Type of Plan<sup>1</sup>***

Legal Decision

### ***Brief Summary of Plan Intent***

The judgment is a water rights settlement between the Upper San Gabriel Valley Municipal Water District and the City of Alhambra. A synopsis of the issue to be resolved follows.

Within the San Gabriel River Watershed, water production is affected by common problems of storage, replenishment, quality and quantity, so the rights of producers of water are affected. Surface flow and ground water are physically inter-related and constitute a common source of water supply for all landowners, water producers and users within the watershed. Production from common source of supply anywhere within the basin decreases the common supply of water to the owners of water rights within the basin and decreases the water supply of each party affected. Defendants are all dependent upon this common source of water supply and therefore any injury to the basin works as a common injury upon all defendants.

At the time of the filing of this action, the annual production of water from the basin had been in excess of the *natural safe yield* (152,700 acre feet under 1967 cultural conditions) for more than five years. The Upper District and the Pomona District were receiving supplemental water (after their annexations) and the Municipal Water District (MWD) was importing water into the basin from the Colorado River. Los Angeles County, the Metropolitan Water District of S. Cal., the City of Glendora, the City of Monrovia, and a number of other water companies were all involved in various pumping and diversion activities related to water production. Each party producing water from the basin or relevant watershed was responsible for the progressive general lowering of ground water levels throughout the basin, and the progressive and continual deepening of wells, and if current practices continued, it would result in further lowering of ground water levels, deepening of wells and ultimate depletion of the usable ground water supply.

In order to protect and preserve the basin from threatened irreparable damage, the Court issued injunctions to enjoin and restrain unauthorized production (non-consumptive and recharge-

## **1.01 The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra**

based); specified the need for a physical solution to the case and identified the need for a Watermaster in order to administer a physical solution.

### ***Brief description of how this plan supports an IRWM Plan.***

Provides a regional legal water rights framework, within which, any proposed regional water management strategies should fall.

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>2</sup>.***

A judgment was determined through a formal hearing process, presided by Judge John Shea. The following action items were set forth:

- The Court appointed a **Watermaster Committee** (6 producer representatives and 3 public representatives) that will have authorization to fix and levy an initial Watermaster Administration Assessment on each acre foot of assessable production during a fiscal year for administrative expenses. Powers and duties of the Watermaster include: to make and adopt any/all appropriate rules and regulations for conduct of Watermaster affairs; to purchase, lease, acquire and hold all necessary property and equipment; to employ personnel as deemed appropriate in carrying out its powers (engineering, geologic, legal, etc.); to ensure that relevant parties install and maintain uniform measuring devices; to levy and collect all assessments specified in the *physical solution*; to hold and invest any and all funds for public agencies; to borrow in anticipation of receipt of assessment proceeds an amount not to exceed the annual amount of assessments levied but uncollected; to purchase supplemental water and to introduce the same into the basin for replacement or cyclic storage purposes subject to affirmative vote of six (of nine) member of Watermaster; to enter into contracts for performance of administrative powers; to act jointly or cooperate with U.S. or State agencies; to assume the make-up obligation for and on the behalf of the basin; to take all reasonable steps to ensure water quality in the basin and to enforce water quality regulations affecting the basin, including solid and liquid disposal; to enter into appropriate contracts (w/Court approval) for utilization of ground water storage capacity of the basin for cyclic or regulatory storage of supplemental water by parties and nonparties for subsequent recovery or Watermaster credit by the storing entity (see additional provisions Annex II. p.20).
- **General Pattern of Contemplated Operation** – Watermaster will determine annually the operating safe yield of the basin and will notify each pumper of his share in acre feet per fiscal year. Thereafter, no party may produce in any fiscal year an amount in excess of the sum of his diversion right, if any, plus his pumper's share of such operating safe yield, or his integrated production right, or the terms of any cyclical storage agreement, without being subject to an assessment for the purpose of purchasing replacement water. In establishing and operating safe yield, Watermaster shall follow all physical, economic and other relevant parameters provided in the Watermaster Operating Criteria. Watermaster shall have assessment powers to raise funds essential to implement the management plan in special circumstances.
- **Basin Operating Criteria** – Watermaster shall not spread replacement water when the water level at the Key Well exceeds elevation 250, and Watermaster shall spread replacement water to maintain the water level at the Key Well above elevation 200.
- **Determination of Operating Safe Yield** – Watermaster shall annually determine the Operating Safe Yield applicable to the succeeding fiscal year and estimate the same for the next succeeding four fiscal years. In making this determination, the Watermaster shall be governed by the Watermaster Operating Criteria (see specific procedures Annex II pp.25,26).
- **Reports of Pumping and Diversion** – Each party (except minimal producers) shall file w/the Watermaster quarterly on or before the last day of January, April, July and October, a report on a prescribed Watermaster form showing total pumping and diversion (separately for direct use and non-consumptive use).
- **Assessments** – Watermaster shall have the power to levy and collect assessments from the parties (other than minimal producers, non-consumptive users, or production under special category rights or cyclic storage agreements) based upon production during the preceding fiscal year.



## 1.01 The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra

Assessments may be for one or more of the following purposes: administration costs; replacement water costs; make-up obligation; in lieu water costs.

- **Availability of Supplemental Water from Responsible Agency** – If any responsible agency shall be unable to deliver supplemental water to Watermaster when needed, Watermaster shall collect funds at an appropriate level and hold them in trust, together with interest accrued, for purchase of water when available.
- **Accumulation of Replacement Water Assessment Proceeds** – In order to minimize fluctuation in assessment and to provide flexibility to Watermaster, Watermaster may make reasonable accumulations of replacement water assessments. Monies and interest accrued in this manner shall only be used for purchase of replacement water.
- **Carry-over of Unused Rights** – Any pumper’s share of operating safe yield and the production right of any integrated producer, which is not produced in a given fiscal year, may be carried over and accumulated for one fiscal year. The first water produced in the succeeding fiscal year shall be deemed produced pursuant to such carry-over rights.

In addition to these key actions, the following next steps were identified:

- San Gabriel District is ordered to proceed with and **complete** necessary **pipeline facilities** as soon as practical. Until the pipeline is constructed and capable of delivering a minimum of 28,000 acre feet of State Project water per year, defendant cities of Alhambra, Azusa and Monterey Park shall **pay** the Watermaster each fiscal year a **replacement assessment** at a uniform rate sufficient to purchase replacement water when available. When water is available through pipeline, San Gabriel District shall make the same available to the Watermaster at specified rate per acre foot. Interest accrued on such funds shall be paid to San Gabriel District.
- Parties producing water from the **Puente Basin** are **dismissed** based on an agreement between the Puente Basin Water Agency and Upper San Gabriel Valley Municipal Water District.

*Stakeholder Involvement* – during preparation of the Plan

None, this was a court judgment

*This Plan should be considered:*

A primary document providing organizational structure to water management strategies

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “**Required Categories to be addressed in the IRWM Plan**” are shown in **Bold Italics\*** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

# 1.01 The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra

Table 1:

<b>The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>	<p>The judgment establishes the SGR Watermaster as the responsible entity to manage water .</p> <p>-Exhibit D pp.37-45: list of all pumping rights and shares;</p> <p>-Exhibit E p. 46: lists all production rights;</p> <p>-Exhibit G: non-consumptive users;</p> <p>-Exhibit J p. 50: Puente Narrows Agreement establishes engineering criteria and base underflow (underflow through Puente Narrows which Puente Agency agrees to maintain, and on which accrued debits and credits shall be calculated). In the agreement, Puente Agency must assure Upper District that no activity within Puente Basin will be undertaken which will interfere with surface flows in San Jose Creek or impair the subsurface flow from Puente Basin to the Main San Gabriel Basin.</p>	<p>See definitions (Annex II pp. 2-7), including: base annual diversion right, direct use, divert, diverter, elevation, fiscal year, ground water, ground water basin, integrated producer, in lieu water cost key well, Long Beach case, Main San Gabriel Basin, make-up obligation, minimal producer, natural safe yield, operating safe yield, overdraft, physical solution, prescriptive pumping right, producing, producer, pumping, pumper, pumper's share, relevant watershed, replacement water, responsible agency, stored water, supplemental water, transporting parties, water level.</p>
<b><i>Water Supply Reliability*</i></b>	<p>Exhibit L p. 73: users rights; p. 31: need for flexibility; p. 32: Watermaster control operating criteria; p. 80: basin capacity.</p>	<p>Findings of Fact and Conclusions of Law, Annex I, pp.2-26</p> <p>Findings of Fact; Hydrology: nature and extent of basin, SG River, common source of supply, natural safe yield, overdraft, supplemental water, MWD agencies, MWD facilities, supplemental water USG-3, supplemental water SG District Facilities (Annex I pp.8-12).</p> <p>Decree (Judgment; Annex II, pp. 8-29)</p> <p>Definitions Annex I pp.2-6; and Annex II pp.2-7.</p>

**1.01 The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra**

	<b>The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Groundwater management*</i>	p. 81: operating safe yield and spreading.	
<i>Conjunctive use</i>		
<i>Storm water capture and management*</i>		
<i>Surface Storage</i>		
<i>Water quality protection and improvement*</i>		
<i>NPS pollution control</i>		
<i>Flood management*</i>		
<i>Water conservation*</i>		
<i>Imported water</i>		
<i>Water recycling*</i>	Annex 1 Exhibit J p. 56, Exhibit L p. 83	
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<i>Environmental and habitat protection and improvement*</i>		
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		
<b><i>Category III LAND USE - RECREATION</i></b>		
<i>Recreation and public access*</i>		
<i>Land use planning</i>		

**1.01 The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra**

<b>The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Watershed planning</i>		<p>Declaration of rights: prescription, common ownership of safe yield, surface rights, ground water rights, optional integrated production rights, special category rights, non-consumptive practices (Judgement; Annex II, pp.8-11).</p> <p>Watermaster (Judgement; Annex II, pp.13-22).</p> <p>Physical solution (Judgement; Annex II, pp. 22-29).</p> <p>Watershed planning related definitions (Judgement; Annex II, pp.2-7)</p>

*\* Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

## **1.01 The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra**

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>3</sup>.

The water rights settlement (between the Upper San Gabriel Valley Municipal Water District and the City of Alhambra) outlines action items that set a precedent for resolving issues related to water supply, water quality and water rights.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>4</sup>.

The document outlines a physical solution – see action items under *Plan Objectives* section

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>5</sup>.

Document does not provide substantial information in this topic area

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>6</sup>.

Document does not provide substantial information in this topic area

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>7</sup>.

Document does not provide substantial information in this topic area

**Data Management** – Provision for management of data generated during plan development and implementation<sup>8</sup>.

Document does not provide substantial information in this topic area

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>9</sup>

Document does not provide substantial information in this topic area

### **End of Document Review**

# **1.01 The Judgment: Upper San Gabriel Valley Municipal Water District vs. City of Alhambra**

## Footnotes From Guidelines

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<sup>1</sup> Watershed management plan, Integrated resource plan, Urban water management plan, Habitat conservation plan, Multi-species conservation plan, Groundwater management plan, Floodplain management plan, Regional drinking water quality plan, or other regional planning efforts.

<sup>2</sup> The Plan must address major water related objectives and conflicts within the region, including, at a minimum, water supply, groundwater management, ecosystem restoration, and water quality.

<sup>3</sup> Include a discussion of the added benefits of integration of multiple water management strategies.

<sup>4</sup> Provide brief description of approach to implementation and types of projects recommended.

If the plan includes projects with a high degree of readiness (CEQA Certified and 10% matching funds available...) which might be candidates for an implementation grant, provide more information such as the agency(ies) responsible for project implementation and linkages or interdependence between projects. As projects rise to the top of the priority list (after these plan evaluations), the project must demonstrate economic and technical feasibility on a programmatic level. Identify the current status of each element of the Plan, such as existing infrastructure, feasibility, pilot or demonstration project, design completed, etc. Include timelines for all active or planned projects and identify the institutional structure that will ensure Plan implementation.

<sup>5</sup> Include an evaluation of potential impacts within the region and in adjacent areas from Plan implementation. Identify the advantages of the regional plan; including a discussion of the added benefits of the regional plan as opposed to individual local efforts. Identify which objectives necessitate a regional solution. Identify interregional benefits and impacts. Describe the impacts and benefits to environmental justice or disadvantaged communities. Include an evaluation of impacts/benefits to other resources, such as air quality or energy.

<sup>6</sup> Disadvantaged community is described as having a Median Household Income below 80% of the average (MHI less than \$37,994).

<sup>7</sup> Technical Analysis and Plan Performance

Is there a discussion of data, technical methods, and analyses used in selection of water management strategies? Were data gaps identified? Are there measures used to evaluate project/plan performance, monitoring systems that will be used to gather performance data, and mechanisms to adapt project operation and plan implementation based on performance data collected?

<sup>8</sup> Does the Plan include mechanisms by which data will be managed and disseminated to stakeholders and the public? Was a discussion of how data collection will support statewide data needs provided? Did the Plan assess the state of existing monitoring efforts, both for water supply and water quality? If applicable, did the IRWM Plan discuss the integration of data into the SWRCB's Surface Water Ambient Monitoring and Groundwater Ambient Monitoring Assessment Programs?

<sup>9</sup> Did the Plan discuss how the identified actions, projects, or studies relate to planning documents established by local agencies? Does the Plan demonstrate coordination with local land-use planning decision-makers? Did the Plan discuss how local agency planning documents relate to the IRWM water management strategies and the dynamics between the two levels of planning documents?

## **1.02 Long Beach Judgment: Board of Water Commissioners of the City of Long Beach vs. San Gabriel Valley Water Company**

<b><i>IRWM Plan Type</i></b>	<b>Baseline Document for Existing IRWM Operations</b>
<b><i>Name of Plan</i></b>	Board of Water Commissioners of the City of Long Beach vs. San Gabriel Valley Water Company
Preparing Agency or Entity	Attorneys at Law
<b><i>Other Agency Coordination</i></b>	The judgment affects the Board of Water Commissioners of the City of Long Beach, Central Basin Municipal Water District; the City of Compton; the City of Alhambra; the City of Arcadia; the City of Azusa; the City of Covina; the City of El Monte; the City of Glendora; the City of Monrovia; the City of Monterey Park; the City of South Pasadena; Baldwin Park County Water District; San Gabriel County Water District; and Upper San Gabriel Valley Municipal Water District.
<b><i>Date of the Plan</i></b>	1965
<b><i>Reviewer</i></b>	J. Eulate, MIG
<b><i>Geographic Area Described</i></b>	Rio Hondo and San Gabriel Rivers in the vicinity of Whittier Narrows Dam in the San Gabriel River watershed, Los Angeles County. See Exhibit ‘A’ map and definitions of Upper Area, Lower Area, Whittier Narrows and Montebello Forebay (pp. 3, 4).
<b><i>Type of Plan<sup>1</sup></i></b>	Legal Decision
<b><i>Brief Summary of Plan Intent</i></b>	<p>The judgment is a water rights settlement between the Board of Water Commissioners of the City of Long Beach, the San Gabriel Valley Water Company, and the Upper San Gabriel Valley Municipal Water District. Its intent is to declare rights and a physical solution for problems resulting from the inadequate and varying water supply of the San Gabriel River system.</p> <p>The water supply of the San Gabriel River had been inadequate to supply the diversions and extractions of both the plaintiffs, the Board of Water Commissioners of the City of Long Beach, and the defendants, San Gabriel Valley Water Company. Plaintiffs were seeking a determination of rights of the defendants in and to the waters of the San Gabriel River System and were also seeking to restrain defendants from interfering with the rights of plaintiffs and persons represented by Central Municipal. The judgment outlines a debit/credit system of water utilization and replenishment (pp. 6 – 27).</p>
<b><i>Brief description of how this plan supports an IRWM Plan.</i></b>	Provides a regional legal water rights framework, within which, any proposed regional water management strategies should fall.
<b><i>Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>2</sup>.</i></b>	The judgment includes: a declaration of rights, a physical solution, entitlements, determination of rainfall and accrued debit or credit, long-term accounting, make-up water delivery, water rights bound, transfer of water rights, watermaster appointment, powers and duties, determinations, and budget/fees/expenses. Key Concepts include:

## 1.02 Long Beach Judgment: Board of Water Commissioners of the City of Long Beach vs. San Gabriel Valley Water Company

- **Declaration of Right** – Lower Area parties (plaintiffs and those represented by Central Municipal) have a right to receive from Upper Area an average annual usable supply of 98,415 acre-feet of water over a long-term period of normal rainfall as set forth in Exhibit ‘B’ (consisting of surface flow, subsurface flow, export to Lower Area and Make-up Water).
- **Average Annual Entitlement** – Lower Area average annual entitlement to Usable Water is 98,415 acre-feet. The outflow of water from Upper Area through Whittier Narrows to Lower Area varies depending on changing conditions of supply/demand. Average annual rainfall for San Gabriel Valley during 10 consecutive years is basis for determining entitlement of Lower Area to Usable Water.
- **Rainfall Adjustment Table** – The quantity of water which the Lower Area is entitled to receive in any Water Year shall be determined in accordance with the rainfall adjustment table.
- **Determination of Accrued Debit or Credit** – The difference between the aggregate of water entitlements determined and the aggregate of Usable Water and delivered Make-up Water shall be computed at the end of each Water Year. Any excess of water entitlements over the quantity of Usable Water and Make-up Water received by Lower Area after 9-30-63 over water entitlements is accrued credit of Upper Area. If at the end of any Water Year it is determined that there is an Accrued Debit of Upper Area, then Upper District shall deliver Make-up Water to Lower Area during the following Water Year in an amount not less than the sum of one-third of such Accrued Debit of Upper Area. That portion, if any, over 25,000 acre-feet which remains after deducting one-third. If at the end of any Water Year it is determined that there is an Accrued Credit of Upper Area, then there shall be no obligation to deliver Make-up Water to Lower Area during the following Water Year.
- **Long-Term Accounting** – A Long-Term accounting system will be relied upon to recalculate debit/credit based significant shifts in rainfall over a 15 – 25 year period.
- **Make-Up Water Delivery** – Make-up water can be delivered via: *surface flow* (by causing water other than reclaimed water to flow on the surface into Montebello Forebay by any means and from any source); *reclaimed water credit* (paying Central Municipal for the benefit of all Lower Area Parties the total amount or portion of the total amount which Central and West Basin Water Replenishment District or any Plaintiff shall have expended in reclaiming water or for the purchase of Reclaimed water in the preceding Water Year); *direct delivery* (by delivering water to any of the Lower Area Parties with consent of Plaintiffs for use in Lower Area).

*Stakeholder Involvement* - during preparation of Plan<sup>3</sup>

None, this was a court judgment

*This Plan should be considered:*

A primary document providing organizational structure to water management strategies

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “*Required Categories to be addressed in the IRWM Plan*” are shown in ***Bold Italics\**** with an asterisk. The *Optional Categories* described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.



## 1.02 Long Beach Judgment: Board of Water Commissioners of the City of Long Beach vs. San Gabriel Valley Water Company

Table 1:

	<b>Long Beach Judgment: Board of Water Commissioners of the City of Long Beach vs. San Gabriel Valley Water Company</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>	Definitions (Judgment pp.3-6); Declaration of Right (Judgment pp. 6, 7); Physical Solution (Judgment pp. 7,8) and Judgment details (pp 9-27).	See definitions (Judgment pp. 3-6) including: Upper District, Lower Area Parties; Upper Area Parties; Upper Area; Lower Area; Whittier Narrows; Montebello Forebay; Export to Lower Area; Subsurface Flow; Surface Flow; Usable Water; Make-up Water; Water Year; and Reclaimed Water.
<i>Water Supply Reliability*</i>	Judgment (pp. 6-27)	
<i>Groundwater management*</i>		
<i>Conjunctive use</i>		
<i>Storm water capture and management*</i>		
<i>Surface Storage</i>		
<i>Water quality protection and improvement*</i>		
<i>NPS pollution control</i>		
<i>Flood management*</i>		
<i>Water conservation*</i>		
<i>Imported water</i>		
<i>Water recycling*</i>		
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<i>Environmental and habitat protection and improvement*</i>		
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and</i>		

**1.02 Long Beach Judgment: Board of Water Commissioners of the City of Long Beach vs. San Gabriel Valley Water Company**

	<b>Long Beach Judgment: Board of Water Commissioners of the City of Long Beach vs. San Gabriel Valley Water Company</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>creation*</i>		
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>		
<i>Land use planning</i>		
<i>Watershed planning</i>		Definitions (Judgment pp.3-6); Declaration of Right (Judgment pp. 6, 7); Physical Solution (Judgment pp. 7,8) and Judgment details (pp 9-27).

**\* Required Categories to be addressed in the IRWM Plan**  
*Optional Categories*

## 1.03 Cyclic Storage Agreements

<b><i>IRWM Plan Type</i></b>	<b>Baseline Document for Existing IRWM Operations</b>
<b><i>Name of Plan</i></b>	<b>Cyclic Storage Agreements</b>
<b><i>Preparing Agency or Entity</i></b>	Main San Gabriel Basin Watermaster and San Gabriel Valley Municipal Water District
<b><i>Other Agency Coordination</i></b>	Los Angeles Superior Court Civil Action No. 924128, - The Judgment
<b><i>Date of the Plan</i></b>	Latest agreement reviewed July 1, 1994 through June 30, 1999 - to be renewed every 5 Years
<b><i>Reviewer</i></b>	Paul Curfman, MIG

### ***Subwatershed(s) Addressed***

Upper San Gabriel and Rio Hondo Watersheds.

### ***Geographic Area Described***

Main and Central Groundwater Basins

### ***Type of Plan***

Extension to Court Judgment

### ***Brief Summary of Plan Intent***

The extension of the 1984 Cyclic Storage agreement through 1999 allows for a maximum of 40,000 acre feet of supplemental water storage in the Main San Gabriel Basin.

### ***Brief description of how this plan supports an IRWM Plan.***

The cyclic storage agreements establish the legal framework for “utilization of groundwater storage capacity of the Basin for cyclic or regulatory storage of supplemental water, for subsequent recovery or Watermaster credit by the storage entity.” Under these cyclic storage agreements The San Gabriel Valley Water District delivers supplemental water to the Basin for spreading and percolation into the Basin for subsequent Watermaster Credit.

### ***Stakeholder Involvement*** - during preparation of Plan<sup>1</sup>

None, this was a court judgment

### ***This Plan should be considered:***

A primary document providing organizational structure to water management strategies

## **1.03 Cyclic Storage Agreements**

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>2</sup>.

The cyclic storage agreements establish the legal framework for “utilization of groundwater storage capacity of the Basin for cyclic or regulatory storage of supplemental water, for subsequent recovery or Watermaster credit by the storage entity.”

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>3</sup>.

Document does not provide substantial information in this topic area

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>4</sup>.

Document does not provide substantial information in this topic area

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>5</sup>.

Document does not provide substantial information in this topic area

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>6</sup>.

Document does not provide substantial information in this topic area

**Data Management** – Provision for management of data generated during plan development and implementation<sup>7</sup>.

Document does not provide substantial information in this topic area

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>8</sup>

Document does not provide substantial information in this topic area

### **End of Document Review**

## **1.04 Cooperative Agreement Between Main San Gabriel Basin Watermaster and County of Los Angeles Flood Control District**

<b><i>IRWM Plan Type</i></b>	<b>Baseline Document for Existing IRWM Operations</b>
<b><i>Name of Plan</i></b>	Cooperative Agreement between Main San Gabriel Basin Watermaster and County of Los Angeles Flood Control District
<b><i>Preparing Agency or Entity</i></b>	Main San Gabriel Watermaster and Los Angeles County Department of Public Works
<b><i>Other Agency Coordination</i></b>	Agreement is between Watermaster and DPW (on behalf of LAC Flood Control District)
<b><i>Date of the Plan</i></b>	1973
<b><i>Contact Information</i></b>	Gary Hilderbrand, LACDPW, 626-458-6308
<b><i>Reviewer</i></b>	Mark Sillings, MIG
<b><i>Subwatershed(s) Addressed<sup>1</sup></i></b>	Upper San Gabriel River Watershed

### ***Geographic Area Described***

Main San Gabriel Basin - lies between San Gabriel Mountains and Puente Hills/Montebello Hills (i.e. Whittier Narrows)

### ***Type of Plan<sup>2</sup>***

A legal agreement

### ***Brief Summary of Plan Intent***

The Cooperative Agreements enables LACDPW to accept imported water purchased by the Main San Gabriel Basin Watermaster for groundwater recharge; to replenish the Main San Gabriel Basin.

### ***Brief description of how this plan supports an IRWM Plan.***

The Cooperative Agreement established a significant component of the existing integrated regional water management system. It put in place an institutional framework that has been in place to ensure that safe water levels within the Main San Gabriel Basin are maintained.

- The watermaster assesses water levels within the Main San Gabriel Basin
- The watermaster then assesses how much imported water will be needed in the coming year to maintain safe water levels
- The watermaster purchases the imported water from the Metropolitan Water District
- LACDPW determines whether it has the capacity within its facilities (spreading grounds) to absorb the imported water; if so, it will take in the imported water, spread it in its water grounds for percolation to the groundwater basin; and performs this function at no cost to watermaster

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

- Manage groundwater in the Main San Gabriel Basin to ensure that safe water levels are maintained.

There are many variables for defining the amount of imported water brought into the system each year. These include:

- Watermaster's assessment of existing water levels within the groundwater basin, and annual estimate of what will be required that year to replenish the basin
- Availability capacity within DPW facilities; spreading grounds, etc. were constructed to capture and percolate local stormwater runoff; DPW will not accept imported water at times when local water is already meeting the capacity of DPW spreading grounds, or stored water is being released in large volumes from Morris Dam.

## **1.04 Cooperative Agreement Between Main San Gabriel Basin Watermaster and County of Los Angeles Flood Control District**

- MWD also banks imported within the Main Basin, a cyclic storage account; which enables paper transfers of water from one account to that of the Watermaster, under certain circumstances.
- When water rights holders exceed their entitled amount of water and pump in excess of their allotted amount, the Watermaster must fund an equivalent amount of replacement/imported water, and then assesses the water rights holder for that amount.

*Stakeholder Involvement* - during preparation of Plan<sup>4</sup>

The cooperative agreement is strictly between the two agencies, but it benefits all the various water agencies, and water rights holders that fall within the authority of the Main San Gabriel Watermaster

*This Plan should be considered:*

A primary document providing organizational structure to water management strategies – the cooperative agreement is a primary document as it defines a specific organizational structure and management process for imported water.

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “**Required Categories to be addressed in the IRWM Plan**” are shown in ***Bold Italics\**** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 1.04 Cooperative Agreement Between Main San Gabriel Basin Watermaster and County of Los Angeles Flood Control District

Table 1:

	<b>Cooperative Agreement between LACDPW and Main San Gabriel Basin Watermaster, 1973</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I</i></b> <b><i>WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	All of the agreement	
<b><i>Groundwater management*</i></b>	All of the agreement	
<i>Conjunctive use</i>	All of the agreement	
<b><i>Storm water capture and management*</i></b>	Does not address	
<i>Surface Storage</i>	No	
<b><i>Water quality protection and improvement*</i></b>	No	
<i>NPS pollution control</i>	No	
<b><i>Flood management*</i></b>	No	
<b><i>Water conservation*</i></b>	All of the agreement	
<i>Imported water</i>	All of the agreement	
<b><i>Water recycling*</i></b>	DPW accepts reclaimed water for ground water recharge	
<i>Desalination</i>	No	
<b><i>Category II</i></b> <b><i>HABITAT IMPROVEMENT</i></b>	Does not apply	
<b><i>Environmental and habitat protection and improvement*</i></b>		
<b><i>Ecosystem Restoration*</i></b>		
<b><i>Wetlands enhancement and creation*</i></b>		

## 1.04 Cooperative Agreement Between Main San Gabriel Basin Watermaster and County of Los Angeles Flood Control District

	Cooperative Agreement between LACDPW and Main San Gabriel Basin Watermaster, 1973	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Category III LAND USE - RECREATION</i>	Does not apply	
<i>Recreation and public access*</i>		
<i>Land use planning</i>		
<i>Watershed planning</i>		

\* *Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

The cooperative agreements puts in place a process which ensures the effective management and integration of the three primary water sources in the Main San Gabriel Basin, i.e. local stormwater runoff, imported water, and reclaimed water. This enables DPW to optimize the operating capacity of its facilities –spreading grounds, reservoirs, etc.- over the course of the year and for the Main San Gabriel Basin to time/plan its water purchases to ensure a reliable water supply.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

The cooperative agreement lays out the set of actions which are required on the respective parts of LACDPW and the Watermaster to ensure that safe water levels are maintained. These include among others –(1) Assessing existing water levels within the groundwater basin (Watermaster) (2) Estimating what will be required to replenish the basin, i.e. how much imported water will be needed over the coming year (Watermaster), (3) Calculating the capacity of DPW facilities to accept imported water purchased by the Watermaster (DPW), (4) Purchasing imported water from the Metropolitan Water District for delivery to DPW facilities (Watermaster).

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

The agreement ensures that imported water purchases are timed for delivery when DPW facilities have the capacity to accept imported water, optimizing throughout the course of each year the storage capacity of these facilities, and the overall effectiveness of the current integrated water management system.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Document does not provide substantial information in this topic area



## **1.04 Cooperative Agreement Between Main San Gabriel Basin Watermaster and County of Los Angeles Flood Control District**

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Document does not provide substantial information in this topic area

**Data Management** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Document does not provide substantial information in this topic area

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>11</sup>

Document does not provide substantial information in this topic area

**End of Document Review**

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## **1.05 Water Replenishment District of Southern California Strategic Plan**

<b><i>IRWM Plan Type</i></b>	<b>Baseline Document</b>
<b><i>Name of Plan</i></b>	Water Replenishment District of Southern California Strategic Plan
<b><i>Preparing Agency or Entity</i></b>	Water Replenishment District of Southern California
<b><i>Other Agency Coordination</i></b>	p. 16, 141 water rights holders in Central Basin and 24 in West Coast Basin; 6 MWD member agencies (CBMWD, WBMWD, Long Beach, Los Angeles, Torrance, and Compton).
<b><i>Date of the Plan</i></b>	September 3, 2003
<b><i>Contact Information</i></b>	Jason Weeks, WRD
<b><i>Reviewer</i></b>	Wendy Katagi, CDM

### ***Peer Review***

### ***Subwatershed(s) Addressed<sup>1</sup>***

Lower LA River and Lower SGR watersheds; Rio Hondo, Dominguez Gap, Coyote Creek.

### ***Geographic Area Described***

Same coverage as Central and West Basin. 420 square miles.

### ***Type of Plan<sup>2</sup>***

Strategic Plan to protect the groundwater resources of the Central and West Coast groundwater basins in southern LA County.

### ***Brief Summary of Plan Intent***

This document provides an overview of the WRD's background, history, organization, key accomplishments and challenges. Strategic goals and objectives are outlined along w/ WRD's strategic priorities (i.e., projects). Legislative and statutory mandates (Division 18 of CA Water Code) for the WRD.

### ***Brief description of how this plan supports an IRWM Plan.***

The WRD Strategic Plan addresses four distinct goals that support Prop 50 water management strategies of groundwater management, conjunctive use, water supply reliability, water quality protection and improvement, desalination, imported water, surface storage, recycled water, storm water capture and management, flood management (flood pool, p. 22) and stakeholder involvement.

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

Based on the challenges facing WRD, the District has developed the following goals (numbered 1-4) and objectives (lettered a, b, c, etc.):

## 1.05 Water Replenishment District of Southern California Strategic Plan

1. Protect and preserve water quality in the Central and West Coast Basins
  - a. Monitor water quality of the basins
  - b. Mitigate seawater intrusion
  - c. Address groundwater contamination and prevention issues
2. Provide basin replenishment
  - a. Reduce replenishment and barrier water costs
  - b. Ensure available water sources for purpose of replenishing groundwater supply
  - c. Develop optimum groundwater level
3. Manage the basins through environmentally sensitive practices
  - a. Develop storage programs to increase reliability and reduce basin operating cost
  - b. Maximize use of water sources
  - c. Maximize use of seasonally discounted imported water
4. Develop and foster effective relationships and communications for the benefit of residents and businesses of the Central and West Coast Basins.
  - a. Enhance and maintain relationships w/ elected and appointed representatives and regulators who influence policies of interest and relevance
  - b. Enhance and maintain relationships with stakeholders
  - c. Enhance and maintain contacts and mediums to communicate District policies, programs, and board actions.

### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

The WRD Board created a strategic planning ad hoc committee to oversee the development of the strategic plan update. Five meetings were held between the staff and the committee to review and refine elements of the plan. Several stakeholder workshops were held, including two board workshops. In addition to the ad hoc committee mtgs, the District's Technical Advisory Committee, composed of water rights holders from the Central and West Coast basins, reviewed and commented on many of the specific projects and programs identified as **priorities**. In order to solicity comments from all basin stakeholders, two special board meetings were called to discuss goals, concerns, and comments.

### ***This plan should be considered:***

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described

## **1.05 Water Replenishment District of Southern California Strategic Plan**

in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 1.05 Water Replenishment District of Southern California Strategic Plan

	<i>Water Replenishment District Strategic Plan 2003</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	p. 10 supply and reliability concerns; throughout entire document	
<b><i>Groundwater management*</i></b>	All throughout the 29 page document; prevent seawater intrusion	Preliminary Plan for Groundwater Resources Development Program (May 2000); CH2MHill Dominguez Gap Barrier Pipeline project; p. 8 Alternative Seawater Barrier Feasibility Study 1999
<b><i>Conjunctive use</i></b>	Throughout document	
<b><i>Storm water capture and management*</i></b>	Whittier Narrows Conservation pool project p. iii and 22, 25 spreading grounds	
<b><i>Surface Storage</i></b>	p. 15 and through document	
<b><i>Water quality protection and improvement*</i></b>	p.12 and throughout document	
<b><i>NPS pollution control</i></b>		
<b><i>Flood management*</i></b>	p. 22 Whittier Narrows Conservation Pool Project	
<b><i>Water conservation*</i></b>		Not in this document but I know they promote water conservation through website info
<b><i>Imported water</i></b>	p.14 and throughout document	
<b><i>Water recycling*</i></b>	p. iii and p.19 Lans Water Treatment facility	
<b><i>Desalination</i></b>	p. 7 Goldsworthy Desalter treating saline plume in the West Coast Basin; product water is sold to the City of Torrance; p. 26-27 brine line and desalter expansion	
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		
<b><i>Ecosystem Restoration*</i></b>		

## 1.05 Water Replenishment District of Southern California Strategic Plan

<i>Water Replenishment District Strategic Plan 2003</i>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Wetlands enhancement and creation*</i>		
<i>Category III LAND USE - RECREATION</i>		
<i>Recreation and public access*</i>		
<i>Land use planning</i>		
<i>Watershed planning</i>	Basin replenishment priorities and projects are addressed with integrated water management strategies throughout the entire 29 page document.	
<i>OTHER</i>		

*\* Required Categories to be addressed in the IRWM Plan  
Optional Categories*

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

This plan integrates nearly all water management strategies with the exception of NPS but implicitly must address this as well as part of the WQ improvement program. Goals and objectives are clearly articulated and reinforced by continued stakeholder involvement. Projects and priority actions are listed under each of the goals. A matrix of top priority projects and programs weaves it all together. The WRD includes significant City and water entity stakeholders making for a more well balanced plan. The only weakness is that the plan is silent w/ regard to Category II and II (habitat and land use/recreation strategies). Perhaps this is where the WMPs will fill the gaps.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

New and continuing projects and programs, along w/ their schedules and associated benefit-costs analysis, make up the WRD Five-Year Capital Improvement Program. Strategic plan serves as a guide to WRD in developing new projects and programs to reach goals. Top priorities and goals as well as projects and actions are listed on p. iii of the plan. These are a roadmap for WRD implementation.

## **1.05 Water Replenishment District of Southern California Strategic Plan**

*Impacts and Benefits* – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Benefits: Less dependence on imported water; more sustainable water supply and reliability with a local focus but connectedness to legislators and electeds at the state level. WRD does more with less.

*Disadvantaged Communities* – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

City of Compton (major stakeholder) is included as well as many other disadvantaged communities.

*Technical Analysis and Plan Performance* - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

**Appears to be rooted in sound technical studies per referenced material and nature of project proponents.**

*Data Management* – Provision for management of data generated during plan development and implementation<sup>10</sup>.

WRD modeling efforts have shown reductions in pumping in the vicinity of the barrier systems reduce demands on the barrier. Extensive review of the modeling results by District and TAC led to general consensus that for each reduction in pumping, barrier demand decreases by approx. ¾ acre-foot. Additionally, per p. 9 WRD has an extensive Groundwater Monitoring Program. There must be extensive data management behind this strategic plan. **Should contact Jason Weeks to ask about this.**

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>11</sup>

Yes. Plan is well coordinated with County, City of Torrance, City of Compton, CBMWD, WBMWD, and other water rights stakeholders.

**End of Document Review**

## **1.06 Los Angeles and San Gabriel Rivers Watershed Augmentation**

<b><i>IRWM Plan Type</i></b>	<b>Baseline Document</b>
<b><i>Name of Plan</i></b>	Los Angeles and San Gabriel Rivers Watershed Augmentation
<b><i>Preparing Agency or Entity</i></b>	US Army Corps of Engineers and Los Angeles County Department of Public Works
<b><i>Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	2004
<b><i>Contact Information</i></b>	

***Reviewer*** Teresa Raine, CDM

***Peer Review***

### ***Subwatershed(s) Addressed<sup>1</sup>***

The study covers both San Gabriel and the Los Angeles Rivers Watershed

### ***Geographic Area Described***

The county of Los Angeles

### ***Type of Plan<sup>2</sup>***

Watershed/Water Augmentation Study

### ***Brief Summary of Plan Intent***

“The purpose of the Water Augmentation Study (WAS) is to assess the water quality implications of infiltrating urban runoff, and the potential of infiltration to recharge groundwater and augment water supplies. In a region where rainfall can vary from four inches per year to over 30 inches, this presents some challenges. The overall goal of this study will be to determine the most effective strategy for developing this potentially significant local source of water for Southern California, as well as for other arid regions.”

### ***Brief description of how this plan supports an IRWM Plan.***

The study provides information and analyses on existing conditions in the SG/LLAR area and addresses a range of water management strategies including supply reliability, groundwater management,

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

The Water Augmentation Study has been broken up into several phase, each focusing on different objectives:

The objective of Phase 1 (Pilot Study) was to evaluate the effects of infiltrating stormwater runoff, using Best Management Practices (BMPs), on groundwater quality.



## 1.06 Los Angeles and San Gabriel Rivers Watershed Augmentation

Phase 2's objective was to further study water quality impacts by expanding water monitoring and expanding the study of stormwater infiltration to include more locations, other infiltration options, and a variety of land-uses.

For Phase 3, the objective is to analyze the effects of infiltration on a regional scale, by increasing the scope of work started in the first two phases, and conducting a "neighborhood demonstration".

### Stakeholder Involvement - during preparation of Plan<sup>4</sup>

The Council conducted monthly stakeholder meetings. A WAS Workgroup was formed to address basic concerns and strategies for the study. From this group, a Technical Advisory Committee consisting of both stakeholders and regulatory agencies was created to oversee the program. TAC includes (pg. 12):

- California Department of Water Resources
- City of Los Angeles Department of Water and Power
- City of Los Angeles Watershed Protection Division
- City of Santa Monica Environmental Programs Division
- Los Angeles County Department of Public Works
- Metropolitan Water District of Southern California
- Regional Water Quality Control Board – Los Angeles Region
- Upper Los Angeles River Area (ULARA) Watermaster
- United States Bureau of Reclamation
- Water Replenishment District of Southern California

### *This plan should be considered:*

**A primary document** providing organizational structure to water management strategies

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 1.06 Los Angeles and San Gabriel Rivers Watershed Augmentation

	<i>Watershed Augmentation Study</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I</i></b> <b><i>WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	Primary purpose of study.	
<b><i>Groundwater management*</i></b>		
<i>Conjunctive use</i>		
<b><i>Storm water capture and management*</i></b>	Primary purpose of study	
<i>Surface Storage</i>		
<b><i>Water quality protection and improvement*</i></b>	Primary purpose of study	
<i>NPS pollution control</i>		
<b><i>Flood management*</i></b>		
<b><i>Water conservation*</i></b>		
<i>Imported water</i>		
<b><i>Water recycling*</i></b>		
<i>Desalination</i>		
<b><i>Category II</i></b> <b><i>HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		
<b><i>Ecosystem Restoration*</i></b>		
<b><i>Wetlands enhancement and creation*</i></b>		
<b><i>Category III</i></b> <b><i>LAND USE - RECREATION</i></b>		
<b><i>Recreation and public</i></b>		

## 1.06 Los Angeles and San Gabriel Rivers Watershed Augmentation

	<i>Watershed Augmentation Study</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>access*</i>		
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b><i>OTHER</i></b>		

*\* Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

The strategies here involve looking using stormwater to supplement water supplies without impacting groundwater quality.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

The Phase I final report is available for review. Phase II annual reports are also available. Each set of documents describe the work conducted, results of the monitoring program, conclusions on the use of BMPs analyzed, and detail future work necessary.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Results of the monitoring programs and efficiencies of the various BMPs are described in detail in Phase I and II reports.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

While not directly detailed, the study covers a range of areas, and increased water supply and water quality reliability would benefit communities across the entire region.

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Technical information is available in detail in both Phase I and Phase II reports as mentioned. Monitoring plans are detailed in both.

## **1.06 Los Angeles and San Gabriel Rivers Watershed Augmentation**

*Data Management* – Provision for management of data generated during plan development and implementation<sup>10</sup>.

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>11</sup>  
Extensive stakeholder and agency coordination occurred as part of the planning process.

### **End of Document Review**

## **1.07 San Gabriel River Watermaster 2002-03 Annual Report**

<b><i>IRWM Plan Type</i></b>	<b>Baseline Document for Existing IRWM Operations</b>
<b><i>Name of Plan</i></b>	San Gabriel River Watermaster 2002-03 Annual Report
<b><i>Preparing Agency or Entity</i></b>	Main San Gabriel Basin Watermaster
<b><i>Other Agency Coordination</i></b>	San Gabriel Valley Municipal Water District (SGVMWD), Upper San Gabriel Valley Municipal Water District (USGVMWD), Los Angeles County Department of Public Works (LACDPW)
<b><i>Date of the Plan</i></b>	2003
<b><i>Contact Information</i></b>	Carol Thomas Williams <a href="http://www.watermaster.org">www.watermaster.org</a> (626) 815-1300
<b><i>Reviewer</i></b>	Peter D. James, Mark Sillings/ MIG

### ***Subwatershed(s) Addressed<sup>1</sup>***

Primarily the upper San Gabriel River watershed, and parts of the LA River watershed, including the Rio Hondo subwatershed.

### ***Geographic Area Described***

The Main San Gabriel Basin lies in eastern Los Angeles County. The hydrologic basin or subwatershed coincides with a portion of the upper San Gabriel River watershed, and the aquifer or groundwater basin underlies most of the San Gabriel Valley. The groundwater basin is bounded by the San Gabriel Mountains to the north, San Jose Hills to the east, Puente Hills to the south, and by a series of hills and the Raymond Fault to the west. The watershed is drained by the San Gabriel River and the Rio Hondo, a tributary of the Los Angeles River. Surface area of the groundwater basin is approximately 167 square miles.

### ***Type of Plan<sup>2</sup>***

The Watermaster 2003 Annual Report is a summation of the Watermaster's water supply and water quality activities undertaken within the geographic scope of the Main San Gabriel Basin.

### ***Brief Summary of Plan Intent***

The purpose of the Watermaster Annual Report is to provide information on the management of the water quality and supply in the Main San Gabriel Basin. The Watermaster manages and controls the withdrawal and replenishment of water supplies in the Basin. This particular annual report describes activities designed to help sustain groundwater levels through what had been the 5<sup>th</sup> year of a dry season. The projects that involve Watermaster include groundwater purchase and replacement, environmental remediation, water storage, and sediment management, which all contribute to the quality and supply of groundwater.

### ***Brief description of how this plan supports an IRWM Plan.***

This annual report documents the activities of the agency (Main San Gabriel Watermaster) charged with administering adjudicated water rights and managing groundwater resources within the Main San Gabriel Basin. The Watermaster was created in 1973 by the California Superior Court of Los Angeles County to administer the Basin's adjudicated water rights and to provide a basin-wide governing body for management of water resources. This legally mandated governing structure for the Basin, represents a type of integrated regional water management system, which provides a firm foundation for the development of the IRWM Plan proposed for this region.

## 1.07 San Gabriel River Watermaster 2002-03 Annual Report

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

Each year, the Watermaster determines the Operating Safe Yield (OSY) for the following fiscal year. The OSY is the amount of groundwater that can be produced (safely extracted) from the Basin before the Watermaster levies a “Replacement Water Assessment” to purchase imported water for replenishment. In wet years, a high OSY allows water producers to take advantage of higher groundwater levels, helping to minimize costs to the public. In dry years, the Watermaster sets a lower OSY because of additional imported water is needed to supplement local water supplies and recharge the groundwater basins.

In May 2002, responding to record low rainfall, the Watermaster set an OSY of 190,000 acre feet for the 2002-03 fiscal year. As a result, a record high amount of water was imported into the Basin in 2002-03. In the following year, groundwater levels continued to decline, and the Watermaster adopted an OSY of 170,000 acre-feet for fiscal year 2003-04 – the lowest OSY since fiscal year 1991-92.

The concluding chapter recognizes several goals in its future outlook:

- Look beyond traditional replenishment practices that seek to optimize Basin water levels
- Develop a comprehensive and cooperative groundwater storage program that enhances local supply reliability, improves water quality, and provides regional water storage benefits.
- Facilitate cooperative groundwater cleanup programs between “responsible parties” and public water suppliers.

*Stakeholder Involvement – during preparation of the Plan*

Staff of the Watermaster prepares the annual report. However, the Watermaster is composed of a nine-member board, representing the many stakeholders (190 water rights holders defined in the 1973 judgement). Six members are elected by water producers directly, two members are appointed by the Board of Directors of the Upper San Gabriel Valley Municipal Water District, and one member is appointed by the Board of Directors of the San Gabriel Valley Municipal Water District.

*This Plan should be considered:*

A primary document providing organizational structure to water management strategies – it describes current activities undertaken by the existing organizational structure for coordination of groundwater management in a core part of the region.

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “**Required Categories to be addressed in the IRWM Plan**” are shown in ***Bold Italics***\* with an asterisk. The *Optional Categories* described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 1.07 San Gabriel River Watermaster 2002-03 Annual Report

Table 1:

	<i>Main San Gabriel Basin Watermaster Annual Report</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	The entire annual plan describes water quality and supply activities designed to ensure water supply reliability for all who depend on water from the Main San Gabriel Basin.	
<b><i>Groundwater management*</i></b>	Groundwater management a principal strategy with the goal of maintaining safe groundwater levels in the Basin. .	
<b><i>Conjunctive use</i></b>	Conjunctive use (coordination of surface storage and groundwater storage) not identified by name but is a core strategy of the Watermaster	
<b><i>Storm water capture and management*</i></b>	Stormwater capture and management not the responsibility of the Watermaster. However, its groundwater management activities are directly impacted by the extent to which the local water supply has been increased through the capture and storage of rainfall.	
<b><i>Surface Storage</i></b>	Watermaster responsible for groundwater management	
<b><i>Water quality protection and improvement*</i></b>	Discussion of water quality management, which includes groundwater cleanup activities, supply requirements, quality monitoring, and testing. Pages 3-7. Federal and State water quality regulatory monitoring, page 7.	
<b><i>NPS pollution control</i></b>	Does not address non-point source pollution control; focus instead is on groundwater cleanup activities. Significant portion dedicated to improving water quality through clean-up projects such as the Baldwin Park Operable Unit, and others. Additionally, Watermaster monitors Federal and State water quality regulations to maintain safe levels of VOCs. 4-7	

## 1.07 San Gabriel River Watermaster 2002-03 Annual Report

	<i>Main San Gabriel Basin Watermaster Annual Report</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Flood management*</i>	Not a topic addressed in this report	
<i>Water conservation*</i>	Not addressed	
<i>Imported water</i>	The report discusses the process for purchasing replacement water as needed to supplement local water supplies, when pumping exceeds operating safe yields.	
<i>Water recycling*</i>	Cleanup activities from three new treatment facilities will produce 37,000 acre feet of highly treated drinking water to replacing much of water production that has been lost to contamination	
<i>Desalination</i>	Not an element in this report	
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		
<b><i>Ecosystem Restoration*</i></b>		
<b><i>Wetlands enhancement and creation*</i></b>		
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>		
<i>Land use planning</i>		
<i>Watershed planning</i>		

**\* Required Categories to be addressed in the IRWM Plan**  
*Optional Categories*



## **1.07 San Gabriel River Watermaster 2002-03 Annual Report**

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>4</sup>.

The Main San Gabriel Basin Watermaster provides a basin wide governing body for management of water resources. This legally mandated governing structure for the Basin, represents a type of pre-existing integrated regional water management system. The report documents activities and strategies implemented by the Main San Gabriel Basin for the purpose of sustaining the groundwater supply and protecting the quality of the water. In this way, it describes how the current set of strategies implemented by the Main San Gabriel Watermaster work together to achieve these purposes.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>5</sup>.

The Report describes ongoing and planned activities undertaken by the Watermaster, including groundwater purchase and replacement, environmental remediation, water storage, and sediment management, all of which are focused primarily on contributing to the quality and supply of groundwater.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>6</sup>.

Activities described in this annual report document the crucial role played by the Watermaster in sustaining groundwater levels during dry years, despite low amounts of natural replenishment. It also describes water quality monitoring activities undertaken by the Watermaster to identify potential sources of contamination, as well as participation in development of treatment facilities to replace groundwater production lost due to past contamination. Overall the report documents activities designed to improve water quality and supply to increase the reliability of the water supply system.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>7</sup>.

Document does not provide substantial information in this topic area

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>8</sup>.

There is not a substantial discussion of data, technical methods, and analyses used in the selection of water management strategies. But as this is an annual report it is not expected to include substantial technical analysis within the body of the document itself. However, given the role played by the Watermaster and the nature of the information provided it is reasonable to assume this information is based on sound scientific and technical analysis. The report also documents key performance measures over the past decade including Canyon reservoir storage, local water conserved, groundwater production, cyclic storage, and imported water.

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>9</sup>.

Given the performance data included within the annual report, as cited above under technical analysis, it is reasonable to assume that the Main San Gabriel Watermaster deploys substantial data management resources to prepare this report and for ongoing and future management of groundwater resources within the Main San Gabriel Basin. However, with the exception of a general description of water quality monitoring activities, the report does not include a description of the mechanisms used to manage data and disseminate it to the public. The report

## **1.07 San Gabriel River Watermaster 2002-03 Annual Report**

itself represents a dissemination mechanism for the information developed by the Watermaster. The report does describe some existing water quality monitoring activities

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>10</sup>

The document does not provide substantial documentation in this topic area.

**End of Document Review**

## **1.08 Los Angeles County Drainage Area (LACDA) Feasibility Study and Project**

<b><i>IRWM Plan Type</i></b>	<b>Baseline Document for Existing IRWM Operations</b>
<b><i>Name of Plan</i></b>	Los Angeles County Drainage Area (LACDA) Feasibility Study and Project
<b><i>Preparing Agency or Entity</i></b>	U.S. Army Corp of Engineers and Los Angeles County Department of Public Works
<b><i>Date of the Plan</i></b>	June 1992
<b><i>Contact Information</i></b>	Rama Rydman, LACDPW, (626) 458-4336
<b><i>Reviewer</i></b>	Mark Sillings, MIG

### ***Subwatershed(s) Addressed<sup>1</sup>***

Los Angeles River Watershed, Rio Hondo Watershed, Compton Creek Watershed

### ***Geographic Area Described***

82 square mile 100-year flood plain, essentially along all the lower reaches of the LA River from the city of South Gate to Long Beach, and the lower reaches of the Rio Hondo south of Whittier Narrows.

### ***Type of Plan<sup>2</sup>***

A feasibility study and flood protection project

### ***Brief Summary of Plan Intent***

Following a 1980 flood where the lower Los Angeles River reached channel capacity, a 1987 Corp study concluded that the Lower Los Angeles River and Rio Hondo provided no more than a 40-year level of protection. Extensive urban development led to much greater accelerated stormwater runoff in the lower reaches. Peak flows dramatically increased compared to what had been originally predicted for the system. The LACDA Study identified what was required to restore a minimum 100-year level of protection. The project was authorized for \$327 million in 1990, with the Federal govt (Corp) assuming 75% of the cost and Los Angeles County the remaining 25%. Initial federal funding was slow, until FEMA imposed mandatory flood insurance in 1998 upon the 82-square mile area, much of which consisted of lower-income and minority communities. The project was completed by the end of 2001, and will prevent an estimated \$2.3 billion in flood damages resulting from a 100-year overflow event that would affect 14 communities and over 500,000 people living within the 100-year flood plain. FEMA insurance requirements have subsequently been lifted.

### ***Brief description of how this plan supports an IRWM Plan.***

The primary focus of this study and project was flood control improvements. However, opportunities to improve aesthetics along the river channel and provide recreational improvements were incorporated into the project, which raised the height of 21 miles of existing levees and modified 24 railroad, traffic, and pedestrian bridges. Recreational improvements included landscaping and enhancements to the equestrian/bike trail, and improved connections between the river and eight parks along the river channel

As part of the agreement between LA County and the Corp, the Corp indicated that it will never again contribute to any effort to expand the flood channel capacity of the LA River. LACDPW will have to pursue other stormwater management strategies into order to reduce any future increases in peak flow runoff. This has led to the current LA County hydrologic study which is

## 1.08 Los Angeles County Drainage Area (LACDA) Feasibility Study and Project

still in progress, and will have a major impact on all future flood control, water conservation, etal, projects in the region.

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

The primary objective was to restore 100-year flood protection along the lower reaches of the LA River and the Rio Hondo. The feasibility study was initially an technical study. The accompanying EIR was challenged by local environmentalists, who requested that additional alternatives be studied. A subsequent review of other alternatives was made, leading to the conclusion that expanding the flood channel capacity was by far the most cost effective alternative. Subsequent FEMA flood insurance requirements and community pressure for action, facilitated an agreement to proceed with the LACDA project.

*Stakeholder Involvement - during preparation of Plan<sup>4</sup>*

In 1991, the cities of Bellflower, Carson, Downey, Lakewood, Paramount, Pico Rivera, and South Gate formed the LACDA Alliance to promote support for the Federal funding of the LACDA project.

*This Plan should be considered:*

A supporting document clarifying goals, objectives, or specific projects

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “**Required Categories to be addressed in the IRWM Plan**” are shown in ***Bold Italics\**** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 1.08 Los Angeles County Drainage Area (LACDA) Feasibility Study and Project

Table 1:

<i>Los Angeles County Drainage Area Feasibility Study and Project</i>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I</i></b> <b><i>WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>		
<b><i>Groundwater management*</i></b>		
<i>Conjunctive use</i>		
<b><i>Storm water capture and management*</i></b>		Established the need for county wide stormwater management plan, which is currently under development per in-progress hydrologic study (scheduled for completion in 2006 or 2007)
<i>Surface Storage</i>		
<b><i>Water quality protection and improvement*</i></b>		
<i>NPS pollution control</i>		
<b><i>Flood management*</i></b>	Constitutes the major flood control document for the lower reaches of the LA River and the Rio Hondo below Whittier Narrows	
<b><i>Water conservation*</i></b>		
<i>Imported water</i>		
<b><i>Water recycling*</i></b>		
<i>Desalination</i>		
<b><i>Category II</i></b> <b><i>HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		
<b><i>Ecosystem Restoration*</i></b>		
<b><i>Wetlands enhancement and creation*</i></b>		

## 1.08 Los Angeles County Drainage Area (LACDA) Feasibility Study and Project

	<i>Los Angeles County Drainage Area Feasibility Study and Project</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>	Created opportunity to provide landscaping and recreational improvements for the existing bike trail and 8 parks along the 22 miles of river channel that received the flood control improvements.	
<i>Land use planning</i>		
<i>Watershed planning</i>		

***\* Required Categories to be addressed in the IRWM Plan***  
*Optional Categories*

## **1.08 Los Angeles County Drainage Area (LACDA) Feasibility Study and Project**

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

Primarily integrates flood management with improved recreation and public access, as the necessity to expand the capacity of the flood channel created an opportunity to provide recreational and aesthetic improvements along the LA River flood channel. In addition, however, the LACDA study/project has set the stage for improved water conservation efforts in the future by leading to the current LA County hydrologic study.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

This Plan has already been fully implemented, however its completion has provided continuing momentum for various projects along the river channel, both the LA River and Rio Hondo, for parks and other recreational opportunities that otherwise would have been more difficult to implement. In addition, it has established the need for a countywide stormwater management plan designed to further enhance flood control protection by expanding local capacity to capture and control stormwater runoff, which will benefit local water conservation efforts.

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

The project has greatly improved local flood control protection, while laying a strong foundation for concurrent recreational improvements and future water conservation efforts through improved storm water capture and management.

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

This plan directly benefited many lower-income and disadvantaged communities, as these communities represented a significant portion of the 82-square mile area that was at risk of a future flood. In addition to restoring essential 100-year flood protection for these disadvantaged communities, this project significantly reduced flood insurance rates for these communities, and provided desperately needed parks and open space opportunities.

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

The Plan required significant technical analysis including an initial feasibility study, EIR, and subsequent alternatives review, among other actions. Plan performance has been validated by the insurance industry, which subsequently eliminated mandatory flood insurance premiums.

**Data Management** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

The study and project generated a significant amount of data regarding storm water flows, and flood management capacities, which was shared with the public during subsequent EIR review periods.

**Relation to Local Planning** – Is the Plan coordinated with local planning and management?<sup>11</sup>

Many cities located along the lower reaches of the LA River played a crucial role in the development and implementation of this project, as they recognized their land use plans were contingent upon the restoration of 100-year flood protection.

### **End of Document Review**

## **1.09 Water Recycling Program Master Plan**

<b><i>IRWM Plan Type</i></b>	<b>Baseline Document</b>
<b><i>Name of Plan</i></b>	Water Recycling Program Master Plan
<b><i>Preparing Agency or Entity</i></b>	Central Basin Municipal Water District
<b><i>Other Agency Coordination</i></b>	ASL Consulting Engineers, Kennedy/Jenks Consultants, Delta Geographics, Solis Group
<b><i>Date of the Plan</i></b>	August 21, 2000
<b><i>Contact Information</i></b>	Central Basin Municipal Water District 17140 South Avalon Blvd., Suite 210 Carson, CA 90746-1295
<b><i>Reviewer</i></b>	Teresa Raine, CDM
<b><i>Peer Review</i></b>	

### ***Subwatershed(s) Addressed<sup>1</sup>***

Parts of Lower San Gabriel, Compton Creek, and Coyote Creek

### ***Geographic Area Described***

The Central Basin Service area including the cities of Bell Gardens, Downey, Montebello, Norwalk and Vernon, La Habra Heights, La Mirada, Pico Rivera, Santa Fe Springs, Whittier, Bell, Commerce, Huntington Park, Maywood, portions of Cudahy and Monterey Park, unincorporated areas of East Los Angeles, Lynwood, South Gate, portions of Cudahy, Carson, Florence-Graham, Willowbrook, Artesia, Bellflower, Cerritos, Hawaiian Gardens, Lakewood, Paramount and Signal Hill

### ***Type of Plan<sup>2</sup>***

Water management: Recycled Water program

### ***Brief Summary of Plan Intent***

This Master plan identifies and prioritizes areas where recycled water is available and/or can be used to replace potable water usage. The provides information on potential new users and interconnections in addition to conceptual pipeline details, hydraulic/storage information and cost analysis.

### ***Brief description of how this plan supports an IRWM Plan.***

The recycled water program helps create an integrated water management plan by identifying both the availability of recycled water sources and potential users to the system. By replacing potable water demands with recycled water, water supply reliability improves.

The plan also discusses the potential for supply recycled water to other service areas that are adjacent to the CBMWD area, laying the groundwork for a regional recycled water program.



## 1.09 Water Recycling Program Master Plan

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

The objectives of the recycled water program are:

- ◆ To identify potential recycled water customers
- ◆ To investigate potential pipeline alignments and interconnections with other recycled water systems.
- ◆ To provide an economic analysis of the program; and
- ◆ To discuss a preliminary phasing plan to implement the program

A market assessment was conducted to identify potential customers. Technical Memorandums Number 1 and 2 detail the data assessment and database development used for this objective. Potential interconnections, conceptual pipe alignments, and hydraulic modeling are detailed in Technical Memorandums Number 3, 4, and 5. Economics of the program are discussed in Technical Memorandum Number 6, and phasing issues are discussed in Technical Memorandum Number 7.

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

The plan includes an extensive survey of current and potential water users which was used to determine potential demand and additional infrastructure improvements. Following meetings with CBMWD staff, a meeting was held with CBMWD and stakeholders to solicit cooperation and input on the preliminary plan. (pg ES-2). The plan mentions periodic meeting with CBMWD and stakeholders, but does not go into further details.

*This plan should be considered*

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 1.09 Water Recycling Program Master Plan

<i>Water Recycling Program Master Plan</i>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I</i></b> <b><i>WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	The increased water supply reliability provided by additional sources and connections to the recycled water system are discussed in TM 3.	
<b><i>Groundwater management*</i></b>		
<i>Conjunctive use</i>		
<b><i>Storm water capture and management*</i></b>		
<i>Surface Storage</i>		
<b><i>Water quality protection and improvement*</i></b>		
<i>NPS pollution control</i>		
<b><i>Flood management*</i></b>		
<b><i>Water conservation*</i></b>		
<i>Imported water</i>		
<b><i>Water recycling*</i></b>	<p>This is the primary purpose of the document. Identification of current users and demands as well as potential new users and demands is detailed in TM 1 and 2.</p> <p>Connections with other service areas is discussed in TM 3.</p> <p>Facilities, economics, and implementation are detailed in the remaining TMs</p>	
<i>Desalination</i>		
<b><i>Category II</i></b> <b><i>HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat</i></b>		

## 1.09 Water Recycling Program Master Plan

	<i>Water Recycling Program Master Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>protection and improvement*</i>		
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		
<b><i>Category III LAND USE - RECREATION</i></b>		
<i>Recreation and public access*</i>		
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b><i>OTHER</i></b>		

*\* Required Categories to be addressed in the IRWM Plan  
Optional Categories*

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

By identifying potential recycled water users, suggesting interconnections between CBMWD and neighboring service areas, and providing information on pipeline details and economic issues, the plan proposes to work across service area lines to meet regional recycled water needs and improve water supply reliability.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

This specific program is listed as part of the Central and West Basin MWDs’ Urban Water Management plan. Technical Memorandum 7 details the possible phasing plan for the program.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

## **1.09 Water Recycling Program Master Plan**

In addition to the benefits provided by improving water supply reliability, by working with neighboring districts to provided recycled water regionally, instead of just to the CBMWD, cost effective projects and water supplies can be developed that are beneficial across district lines.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.  
This program does not specifically discuss the impact/benefit to disadvantaged communities

***Technical Analysis and Plan Performance*** - *is based on sound scientific and technical analysis and includes measures to assess performance*<sup>9</sup>.

The data assessed and the database of current and potential users developed can be found in TM 1 and 2 of this plan. The hydraulic modeling used to evaluate the various phases of the program can be found in TM 5

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

The database development and print out reports from the database can be found in TM 2

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>11</sup>

This specific program is listed as part of the Central and West Basin MWDs' Urban Water Management plan

Not specifically detailed in this plan

### **End of Document Review**

## Section 2

# Primary Multi-Objective Documents

- 2.01 Common Ground from the Mountains to the Sea
- 2.02 Watershed Management Initiative Chapter
- 2.03 San Gabriel River Corridor Master Plan
- 2.04 San Gabriel River Master Plan EIR
- 2.05 Watershed Management Plan for the San Gabriel River Above Whittier Narrows
- 2.06 Technical Report: Watershed Management Plan for the San Gabriel River Above Whittier Narrows
- 2.07 Rio Hondo Watershed Management Plan
- 2.08 Los Angeles River Master Plan Report
- 2.09 Los Angeles and San Gabriel Rivers Watershed Feasibility Study: Preliminary Draft Feasibility Study

## **2.01 Common Ground from the Mountains to the Sea**

<b><i>IRWM Plan Type</i></b>	<b>Primary Multi-Objective Document</b>
<b><i>Name of Plan</i></b>	Common Ground from the Mountains to the Sea – Watershed and Open Space Plan San Gabriel and Los Angeles Rivers
<b><i>Preparing Agency or Entity</i></b>	San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC)
<b><i>Other Agency Coordination</i></b>	The California Resources Agency, Santa Monica Mountains Conservancy
<b><i>Date of the Plan</i></b>	October 2001
<b><i>Contact Information</i></b>	Belinda Faustinos, Executive Officer, (626) 458-4315
<b><i>Reviewer</i></b>	Mark Sillings, MIG

### ***Subwatershed(s) Addressed<sup>1</sup>***

The Plan addresses the linked watersheds of the Los Angeles and San Gabriel Rivers. Together these two watersheds encompass eleven major sub-watersheds -

For the San Gabriel River Watershed:

- East Fork of the San Gabriel River,
- West Fork of the San Gabriel River
- Walnut Creek,
- San Jose Creek,
- Coyote Creek

For the Los Angeles River Watershed

- Tujunga Wash
- Pacoima
- Verdugo Washes
- Arroyo Seco
- Rio Hondo
- Compton Creek

### ***Geographic Area Described***

The linked watersheds of the Los Angeles and San Gabriel Rivers encompasses 1,513 square miles stretching from the San Gabriel Mountains to the Pacific Ocean. Over 7 million people live within these two watersheds. These watersheds are geographically diverse area in terms of topography, climate, land use, and habitat types, and all are very heavily impacted by urbanization.

### ***Type of Plan<sup>2</sup>***

A watershed and open space plan

### ***Brief Summary of Plan Intent***

Articulate a vision for the future of the San Gabriel and Los Angeles River Watersheds, and provide a framework for future watershed and open space planning

## 2.01 Common Ground from the Mountains to the Sea

### *Brief description of how this plan supports an IRWM Plan.*

The plan seeks to encourage broader participation in watershed planning throughout the Los Angeles and San Gabriel River Watersheds. It is intended to support and inform ongoing planning efforts, as well as provide a framework to plan future projects consistent with a regional vision to restore balance between human and natural systems in the watersheds. This includes support for planning at both watershed and sub-watershed scales, which necessarily involves consideration of the entire water cycle, both above and below ground. All of these planning efforts under the umbrella provided by Common Ground will address the intertwined concerns of flood protection, water resources, water quality, protection and enhancement of habitat, open space for passive and active recreation, and strategies to encourage sustainable future development. Enhancing Waters and Waterways is among the primary Guiding Principles within this Plan, which includes the strategic goal of optimizing water resources to reduce dependence on imported water, while always improving the quality of surface water and groundwater.

### *Plan Objectives* – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.

Plan objectives are expressed by Guiding Principles, an overarching set of conceptual goals that are in turn supported by more specific goals and objectives. Together, they are intended to guide future projects and planning in the watersheds.

#### **Land: Grow a Greener Southern California**

- Create, Expand, and Improve Public Open Space Throughout the Region
- Improve Access to Open Space and Recreation for All Communities
- Improve Habitat Quality, Quantity, and Connectivity'
- Connect Open Space with a Network of Trails
- Promote Stewardship of the Landscape
- Encourage Sustainable Growth to Balance Environmental, Social, and Economic Benefits

#### **Water: Enhance Waters and Waterways**

- Maintain and Improve Flood Protection
- Establish Riverfront Greenways to Cleanse Water, Hold Floodwaters and Extend Open Space
- Improve Quality of Surface Water and Groundwater
- Improve Flood Safety Through Restoration of River and Creek Ecosystems
- Optimize Water Resources to Reduce Dependence on Imported Water

#### **Planning: Plan Together to Make It Happen**

- Coordinate Watershed Planning Across Jurisdictions and Boundaries
- Encourage Multi-Objective Planning and Projects
- Use Science as a Basis for Planning
- Involve the Public Through Education and Outreach Programs
- Utilize the Plan in an On-Going Management Process

The Plan and its objectives build upon more than decade of work carried out by cities, communities, groups, and agencies which have worked to improve and expand open space, optimize water resources, preserve habitat, and create a network of trails and bike paths.

## 2.01 Common Ground from the Mountains to the Sea

*Stakeholder Involvement* - during preparation of Plan<sup>4</sup>

RMC has formal and informal partnerships with a complex web of governmental and non-governmental organizations. These partnerships played a vital role in the development of Common Ground. The 68 cities within RMC's territory are critical partners to the RMC. Other partnerships include four federal agencies, 11 California state agencies, five L.A. County Agencies, 15 other local governmental agencies, businesses, 10 coordinating agencies, two national and state non-profits, and 15 local non-profits.

*This Plan should be considered:*

A primary document providing organizational structure to water management strategies

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “**Required Categories to be addressed in the IRWM Plan**” are shown in ***Bold Italics\**** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.



## 2.01 Common Ground from the Mountains to the Sea

Table 1:

	<b>Common Ground from the Mountains to the Sea</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>	<p>Improving water resources one of three major Guiding Principles for Common Ground; a variety of water management goals, objective, and strategies follow</p> <p>Existing conditions – watershed hydrology (page 19), water supply (pages 32- 36), water quality (page 36-38)            Water Resource goals and objectives – page 48 to 49;            Opportunities for water resource management and enhancement – pages 70 to 73</p>	
<b><i>Water Supply Reliability*</i></b>	<p>Water supply reliability addressed pages 32 to 36 – including topics on sources of water, groundwater, imported water, surface water, and recycled water            Water resource goals and objectives on page 49</p>	
<b><i>Groundwater management*</i></b>	<p>Groundwater and groundwater management addressed starting on page 33, including recharge programs.            Groundwater management goals and objectives – on pages 49 and 50</p> <p>Groundwater management opportunities for improvement on pages 72 to 73</p>	
<b><i>Conjunctive use</i></b>		
<b><i>Storm water capture and management*</i></b>	<p>BMPs to address non-point source pollution on page 39</p> <p>Stormwater runoff opportunities for improvement identified on pages 71 to 72</p>	
<b><i>Surface Storage</i></b>	Existing conditions – page 36	
<b><i>Water quality protection and improvement*</i></b>	Existing conditions for water quality (pages 36 to 39), including topics on responsibility for water quality, beneficial uses, water quality concerns, source controls and planned remediation	

## 2.01 Common Ground from the Mountains to the Sea

<b>Common Ground from the Mountains to the Sea</b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
	efforts Water quality protection goals and objectives on page 48	
<i>NPS pollution control</i>	Existing conditions – page 39	
<b><i>Flood management*</i></b>	Current flood management system described on page 39 to 42 Five flood management objectives identified on page 48 and 49  Opportunities for improvement pages 70 to 71	
<b><i>Water conservation*</i></b>	Need for water conservation addressed on page 36	
<i>Imported water</i>	Existing conditions – page 35 Goal to reduce dependence on imported water – page 49	
<b><i>Water recycling*</i></b>	Existing conditions - Page 36	
<i>Desalination</i>	Not identified	
<b><i>Category II HABITAT IMPROVEMENT</i></b>	Habitat improvements a major goal derived from Guiding Principle of growing a greener southern California  Existing conditions – page 23 to 29 Habitat goals and objectives outlined on page 48  Opportunities for habitat improvement pages 66- 70 Habitat conservation plan identified on page 75	
<b><i>Environmental and habitat protection and improvement*</i></b>	Habitat and habitat linkages (page 66 to 69) Use of private and common lands as part of habitat enhancement page 70	
<b><i>Ecosystem Restoration*</i></b>	Goals to restore and enhance aquatic and terrestrial riparian and upland habitat	
<b><i>Wetlands enhancement and creation*</i></b>	Wetlands restoration – page 69	

## 2.01 Common Ground from the Mountains to the Sea

<b>Common Ground from the Mountains to the Sea</b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
<b><i>Category III LAND USE - RECREATION</i></b>	Land use one of three Guiding Principles for Common Ground – i.e to grow a greener southern California and from that derive a variety of public access, open space, and recreation goals (see pages 47 – 48)	
<b><i>Recreation and public access*</i></b>	Existing open space and recreation resources on pages 30 to 32  Identifies several recreation and public access goals and objectives on pages 47 and 48  Opportunities to improve public access on pages 65 to 66, including improve and expand existing facilities, creating new ones	
<b><i>Land use planning</i></b>	Land acquisition, connectivity, and open space opportunities identified pages 56 to 64 including topics on river parkways, tributaries, trails and bike paths, community gardens  Next steps in short-term include Rivers Parkway Plan, Tributary Plan, Trails and Bike Paths Plan, Mountains, Foothills, and Hills Plan(s) and Historic and Cultural Landscape Survey	
<b><i>Watershed planning</i></b>	Entire plan addresses scope of both the Los Angeles and San Gabriel River Watersheds, and is intended as an umbrella document/plan framework for subsequent subwatershed plans.	

***\* Required Categories to be addressed in the IRWM Plan***  
*Optional Categories*

## **2.01 Common Ground from the Mountains to the Sea**

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

Integration is the strength of this document as it addresses a wide range of water management strategies, goals and actions. It focuses mostly on partnerships, governance, recreation and open space planning, and habitat corridor integration with references to specific water resource management areas.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

- Lists seven short-term (one to three year) projects
- Identifies three long-term (twenty to fifty year) goals regarding improvement of open space, habitat and trails
- Recommends partnerships with a wide range of land management agencies.

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Document does not provide substantial information in this topic area.

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

A map of Median Household Income by Zip code (page 45) highlights many of the disadvantaged communities is included in the watershed study area. These tend to be concentrated in the very lowest reaches of both the Los Angeles and Rio Hondo watersheds with some also just above Whittier Narrows.

**Technical Analysis and Plan Performance** - *is based on sound scientific and technical analysis and includes measures to assess performance*<sup>9</sup>.

Plan includes well researched existing conditions information and provides excellent goals and recommendations. The plan however is not technically driven and performance measures are not highlighted.

**Data Management** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Document does not provide substantial information in this topic area.

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>11</sup>

This plan provides the goals and overall basis for integration of local open space, recreation and habitat planning.

### **End of Document Review**

## **2.02 Watershed Management Initiative Chapter**

<b><i>IRWM Plan Type</i></b>	<b>Primary Multi-Objective Document</b>
<b><i>Name of Plan</i></b>	Watershed Management Initiative Chapter
<b><i>Preparing Agency or Entity</i></b>	California Environmental Protection Agency, Los Angeles Regional Water Quality Control Board
<b><i>Other Agency Coordination</i></b>	The State Water Quality Board and nine Regional Water Quality Boards
<b><i>Date of the Plan</i></b>	October 2004
<b><i>Contact Information</i></b>	Shirley Birosik, Regional Board Watershed Coordinator (213) 576-6679
<b><i>Reviewer</i></b>	J. Eulate, MIG

### ***Geographic Area Described***

The Plan addresses the entire State of California. The areas of interest relevant to our study, include the Los Angeles River Watershed (824 square miles + 55 miles of the L.A. River), the San Gabriel River Watershed (689 square miles), the Los Cerritos Channel and Alamitos Bay Water Management Area, and the Dominguez Channel and Los Angeles/Long Beach Harbors Water Management Area.

### ***Type of Plan<sup>1</sup>***

Watershed Management Plan/Initiative

### ***Brief Summary of Plan Intent***

The Watershed Management Initiative Chapter is the 7<sup>th</sup> iteration of what is referred to as the Region's "Chapter" of the integrated Water Management Initiative (WMI) document for the whole State of California. The goal of WMI is to integrate water quality monitoring, assessment, planning, standards, permit writing, nonpoint source management, ground water protection and other programs at the State and Regional Boards as much as possible to promote a more coordinated and efficient use of personnel and fiscal resources while ensuring maximum water quality protection benefits.

The purpose of the document is to identify priorities and resource needs across programs within a watershed context and at a regional level. The document is currently used both as an outreach tool and as a planning tool to identify the Region's priorities and additional resource needs. WMI is not a program, but an approach/strategy for integrating and managing human and fiscal resources, including existing and newly evolving programs and mandates.

The Plan provides an overview of each watershed, a description of water quality concerns and issues for each watershed, past significant Regional Board activities in the watershed, current (funded) activities, near-term (usually unfunded) activities that would benefit the watershed, and activities which may happen on a longer-term basis (usually unfunded). The Plan also includes a Region-wide section that describes activities not easily associated with particular watersheds.

## 2.02 Watershed Management Initiative Chapter

### *Brief description of how this plan supports an IRWM Plan.*

The Plan utilizes an approach relevant to the broader regional planning realm. Previously, State and Regional Board programs tended to be directed at site-specific problems – an approach that was reasonably effective for controlling pollution from point sources. This initiative uses a strategy to draw solutions from all interested parties within a watershed, to more effectively coordinate and implement measures to control both point and nonpoint sources. The Watershed Management Initiative (WMI) is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. It is also designed to focus limited resources on key issues and use sound science.

### *Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>2</sup>.*

Beginning in the late 1990s, each Regional Board identified the watersheds in their Region, prioritized water quality issues and developed watershed management strategies (for these strategies and the State Board's overall coordinating approach to WMI, see the *Integrated Plan for Implementation of the WMI*, which is updated annually).

Central to the Los Angeles Regional Board's strategy for protecting water quality are: the control of point source pollutants through NPDES permits; participation in watershed stakeholder groups, and active solicitation of stakeholder involvement in TMDL, permit and nonpoint source activities; and awarding of grant monies.

The Watershed Management Initiative document outlines both near-term and potential long-term activities for the Los Angeles River Watershed, the San Gabriel River Watershed, the Los Cerritos Channel and Alamitos Bay Water Management Area, and the Dominguez Channel and Los Angeles/Long Beach Harbors Water Management Area. Near-term objectives for all of these areas include: seeking more funding for core program activities; maintaining involvement with stakeholder activities, and working with stakeholders to implement provisions of the Coastal Zone Act Reauthorization Amendments (as resources permit). Following are long-term objectives per each planning area:

#### Los Angeles River Watershed: Long-term Objectives:

- Continue participation in both internal and external watershed planning efforts;
- Further incorporation of watershed management, watershed principles and watershed-specific priorities (such as more refined regional procedures for conducting use attainability analyses and site-specific objective development) into the next update of the Basin Plan;
- Conduct a more detailed analysis of certain beneficial uses (species inhabiting/using the river, potential for aquatic life in the river, future water supply needs/diversions, ground water recharge areas);
- Pursue funding for Basin Planning programs;
- Balance maintenance of habitat in the river with flood control needs;
- Evaluate areas in the river for restoration purposes;
- Evaluate critical habitat areas;
- Evaluate the most protective long-term plans for vegetation/sediment removal under the 401 certificate program;
- Evaluate and implement low flow diversions where appropriate;

## **2.02 Watershed Management Initiative Chapter**

- Assist in greenway developments along the river;
- Evaluate estuarine habitats and water quality; and
- Implement biological monitoring.

### San Gabriel River Watershed: Long-term Objectives:

- Develop coordinated watershed monitoring program;
- Conduct a hydrologic study of the estuary to evaluate mixing dynamics and effects on water quality and beneficial uses;
- Evaluate fish tissue from fish in lower river and estuary;
- Evaluate toxicity impacts in the estuary;
- Evaluate habitats in the middle/lower river;
- Evaluate impacts from reservoir cleaning on water quality, particularly fisheries-related;
- Evaluate impacts of mining on instream beneficial uses;
- Evaluate impacts of reclaimed water on river/groundwater;
- Evaluate success of trash TMDL efforts in upper river;
- Evaluate impacts from industrial stormwater in the watershed;
- Consider TMDL-related issues; and
- Implement biological monitoring.

### Los Cerritos Channel and Alamitos Bay Water Management Area: Long-term Objectives:

- Evaluate existing conditions/beneficial uses;
- Consider TMDL-related issues; and
- Implement biological monitoring.

### Dominguez Channel & LA/Long Beach Harbor Water Management Area: Long-term Objectives:

- Develop a watershed-wide monitoring program;
- Consider and implement TMDL-related issues;
- Further evaluate beneficial uses throughout the watershed;
- Restore habitat following improvements in water quality;
- Implement biological monitoring;
- Develop sediment quality objectives; and
- Explore options for, and implement, sediment clean-up/removal.

## 2.02 Watershed Management Initiative Chapter

*Stakeholder Involvement* - during preparation of Plan<sup>3</sup>

The Plan was developed by the nine Regional Water Quality Boards, the State Board and United States Environmental Protection Agency.

***This Plan should be considered:***

A primary document providing organizational structure to water management strategies.

***Water management strategies addressed in this Plan***

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as ***“Required Categories to be addressed in the IRWM Plan”*** are shown in ***Bold Italics\**** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.



## 2.02 Watershed Management Initiative Chapter

Table 1:

	<b>Watershed Management Initiative Chapter</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I WATER MANAGEMENT</b>		
<b>Water Supply Reliability*</b>		
<b>Groundwater management*</b>	<p>See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)</p>	<p>See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)</p>
<i>Conjunctive use</i>		
<b>Storm water capture and management*</b>	<p>See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)</p>	<p>See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)</p>
<i>Surface Storage</i>		
<b>Water quality protection and improvement*</b>	<p>Region-wide water quality priorities described (Ch. 3 pp.11-13).</p> <p>See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)</p>	<p>See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River Watershed overview, beneficial uses, water quality issues with tables showing typical data ranges resulting in impairment, potential sources of pollution (Ch.2.1 pp.1-6).</p> <p>San Gabriel River Watershed overview, beneficial uses, water quality issues with tables showing typical data ranges resulting in impairment, potential sources of pollution (Ch.2.2 pp.1-4).</p>
<i>NPS pollution control</i>	See tables that tie specific current grant programs to high priority projects, activities or needs per	See tables that tie specific current grant programs to high priority projects, activities or needs per

## 2.02 Watershed Management Initiative Chapter

<b>Watershed Management Initiative Chapter</b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
	<p>watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River Watershed past significant activities (Watershed Management, Nonpoint Source Program) and current activities (core regulatory, monitoring/assessment, nonpoint source program) – (Ch 2.2 pp.7-10).</p> <p>San Gabriel River Watershed past significant activities (Watershed Management, Nonpoint Source Program) and current activities (core regulatory, monitoring/assessment, nonpoint source program) – (Ch 2.2 pp.4-7).</p>	<p>watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River Watershed overview, beneficial uses, water quality issues with tables showing typical data ranges resulting in impairment, potential sources of pollution (Ch.2.1 pp.1-6).</p> <p>San Gabriel River Watershed overview, beneficial uses, water quality issues with tables showing typical data ranges resulting in impairment, potential sources of pollution (Ch.2.2 pp.1-4).</p>
<b><i>Flood management*</i></b>	Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)	Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)
<b><i>Water conservation*</i></b>	See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).	See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).
<b><i>Imported water</i></b>		
<b><i>Water recycling*</i></b>		
<b><i>Desalination</i></b>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>	<p>See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)</p> <p>Los Angeles River Watershed wetlands protection and management (Ch.2.1 pp 9,10). San Gabriel River Watershed</p>	<p>See tables that tie specific current grant programs to high priority projects, activities or needs per watershed or water management area.(Ch.3 pp.13-18).</p> <p>Los Angeles River and San Gabriel River Watershed issues bulleted (Executive Summary p.v)</p>

## 2.02 Watershed Management Initiative Chapter

<b>Watershed Management Initiative Chapter</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
	wetlands protection and management (Ch.2.1 pp 7,8).	
<i>Ecosystem Restoration*</i>	See watershed restoration action strategy table (Ch. 3 pp.19,20).	See watershed restoration action strategy table and list of related documents (in process, draft or final) (Ch.3 pp.19,20).
<i>Wetlands enhancement and creation*</i>		
<b>Category III LAND USE - RECREATION</b>		
<i>Recreation and public access*</i>		
<i>Land use planning</i>		
<i>Watershed Planning</i>	<p>Description of watershed management approach (Ch.1 p.1)</p> <p>Describes watershed management initiative (Ch.1 pp.2,3).</p> <p>Region-wide activities described (Ch. 3 pp.1-34).</p> <p>Outline of watershed and non-watershed tasks (those that are tied to a specific watershed and those that are not) – Ch.3 p.1.</p> <p>Los Angeles River Watershed past significant activities (Watershed Management, Nonpoint Source Program), current activities (core regulatory, monitoring/assessment, nonpoint source program, basin planning, wetlands protection and management, watershed management), near-term activities and potential long-term activities (Ch.2.1 pp.6-11).</p> <p>San Gabriel River Watershed past significant activities (Watershed Management, Nonpoint Source Program), current activities, near-</p>	<p>Los Angeles River Watershed past significant activities (Watershed Management, Nonpoint Source Program), current activities (core regulatory, monitoring/assessment, nonpoint source program, basin planning, wetlands protection and management, watershed management), near-term activities and potential long-term activities (Ch.2.1 pp.6-11).</p> <p>San Gabriel River Watershed past significant activities (Watershed Management, Nonpoint Source Program), current activities, near-term activities and potential long-term activities (Ch.2.2 pp.4-9).</p>

## 2.02 Watershed Management Initiative Chapter

Watershed Management Initiative Chapter		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
	term activities and potential long-term activities (Ch.2.2 pp.4-9).	

**\* Required Categories to be addressed in the IRWM Plan**

*Optional Categories*

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>4</sup>.

This integrated Water Management Initiative (WMI) seeks to protect water resources within a watershed context. In order to achieve this goal, the complex relationships of point and nonpoint source discharges, ground and surface water interactions and water quality/quantity relationships are addressed. The document identifies priorities and resource needs across programs both within a watershed context and at a regional level.

WMI is an approach to integrating existing and newly evolving programs and mandates. The initiative uses a strategy to draw solutions from all interested parties within a watershed, to more effectively coordinate and implement measures to control both point and nonpoint sources. The Watershed Management Initiative (WMI) is designed to integrate various surface and ground water regulatory programs while promoting cooperative, collaborative efforts within a watershed. The document is currently used both as an outreach tool and as a planning tool to identify the Region's priorities and additional resource needs.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>5</sup>.

Each Regional Board makes water quality decisions for its region. These decisions include setting water quality standards, issuing waste discharge permits, adopting policies and taking enforcement actions. The Plan provides a description of significant Regional Board activities in the watershed, current (funded) activities, projected near-term (usually unfunded) activities that would benefit the watershed, and potential long-term activities (usually unfunded). The document is not intended as a commitment to complete the work, but provides a framework to identify priorities and resource needs which should form the basis for formal commitments, which are made in fund source and program-specific Workplans on an annual basis. Determinants of which activities will be funded by specific Workplans may be negotiated on the basis of information presented in the document. Annual program Workplans and grant applications will be prepared by program managers to identify which activities are going to be funded in a particular year based on the fiscal decisions made.

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>6</sup>.

Document does not provide substantial information in this topic area

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>7</sup>.

Document does not provide substantial information in this topic area

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>8</sup>.

Document does not provide substantial information in this topic area

## **2.02 Watershed Management Initiative Chapter**

*Data Management* – Provision for management of data generated during plan development and implementation<sup>9</sup>.

Document does not provide substantial information in this topic area

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>10</sup>

The State's watershed work integrates and supports, to the extent possible, local community watershed protection efforts to implement cost-effective strategies for natural resource protection. This approach customizes efforts to manage resources and address problems unique to each watershed while offering stakeholders the opportunity to implement the most cost-effective solutions to problems within watersheds.

### **End of Document Review**

## 2.03 San Gabriel River Corridor Master Plan

<b><i>IRWM Plan Type</i></b>	<b>Primary Multi-Objective Document</b>
<b><i>Name of Plan</i></b>	San Gabriel River Corridor Master Plan
<b><i>Preparing Agency or Entity</i></b>	County of Los Angeles Department of Public Works
<b><i>Other Agency Coordination</i></b>	County of Los Angeles Department of Regional Planning; County of Los Angeles Department of Parks and Recreation; County of Los Angeles Board of Supervisors; State of California - San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy; National Park Service - Rivers, Trails & Conservation Assistance Program
<b><i>Date of the Plan</i></b>	Public Review Draft, March 2004
<b><i>Contact Information</i></b>	Martin Moreno, Watershed Manager, LACDPW, (626) 458-4119; Rama Rydman, LACDPW, (626) 458-4336
<b><i>Reviewer</i></b>	Mark Sillings, MIG

### ***Subwatershed(s) Addressed<sup>1</sup>***

San Gabriel River Watershed

### ***Geographic Area Described***

The plan focuses on a one-mile wide corridor along the entire 58-mile length of the San Gabriel River from the Cogswell Dam in the Angeles National Forest to its terminus at the Pacific Ocean.

### ***Type of Plan<sup>2</sup>***

Other regional planning effort - a multi-objective river corridor master plan integrating habitat, recreation, open space, flood control, water supply, and economic development

### ***Brief Summary of Plan Intent***

The intent of the Plan was to develop among its many different constituencies, including 19 cities, a shared vision for the future of the river and a plan for how to achieve it. It integrates the multiple goals of enhancing habitat, recreation, and open space while maintaining and enhancing long-standing goals for flood protection, water supply, and water quality. It does this by identifying priorities, providing guidance, and by coordinating over 130 independently sponsored enhancement projects identified by the 19 cities along the river, the County of Los Angeles, and many other public agencies and community organizations that participated in developing the Master Plan. It provides a Plan Framework, river enhancement project concepts, and case studies which work together to provide project sponsors performance criteria and examples for how to simultaneously address multiple goals and objectives in the design and development of their respective projects. This will ensure that all future projects developed within the river corridor will work together as part of a larger, integrated whole reflecting the shared vision for a multi-objective approach to river corridor planning and project design.

### ***Brief description of how this plan supports an IRWM Plan.***

The San Gabriel River Corridor Master Plan will be adopted in 2005 well in advance of the January 1, 2007 deadline. It was developed with input by more than three local public agencies, including some with statutory authority over water management (I believe this is correct, but need to confirm depending on how they define statutory authority over water management). It addresses multiple regional objectives including water supply management, water quality, flood control, habitat enhancement, recreation, and open space. It addresses the following water management strategies - water supply reliability, groundwater management, water quality protection and improvement, water conservation, storm water capture and management, flood management, recreation and public access, wetlands enhancement and

## 2.03 San Gabriel River Corridor Master Plan

creation, ecosystem restoration, and environmental and habitat protection and improvement. It integrates two or more water management strategies by emphasizing a multi-objective design approach to all projects and programs implemented within the river corridor. It provides a comprehensive Projects Action Grid that classifies and organizes 134 projects in terms of seven reaches along the river corridor, the plan goals (or Plan Elements) they address, and the river enhancement concepts they incorporate. It provides a regional context demonstrating through text and multiple maps, the relationship of the river corridor to the larger San Gabriel River watershed, as well as how the watershed relates to the larger Southern California region. It includes various existing conditions maps that document major water related infrastructure including - flood control structures, existing channel capacity, existing storm drains, groundwater basins and existing water supply infrastructure. In addition it provides land use maps and maps detailing internal boundaries of the region as defined by political jurisdictions. The existing conditions section provides a detailed summary of water supply resources within and near the river corridor, and how those resources are likely to be impacted by increased demand and future limits on imported water. . A future opportunities section describes various groundwater recharge and water quality improvement project opportunities existing in and near the river corridor that can contribute to local efforts to reduce dependence on imported water. The Plan describes environmental resources, both past and present, including biological, geological, hydrological, habitat, vegetation, and wildlife. The Plan also features a profile of regional demographics and the cultural composition of communities along the river corridor. The Plan also addresses economic conditions and how they present both challenges and opportunities for the development and enhancement of the river corridor.

***Plan Objectives*** – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.

The Plan addresses six major goals (or objectives) as well as the challenges and opportunities in finding a balance between these different goals. The Plan is also organized around these goals, which are defined as Plan Elements, as listed below:

*Habitat* – Preserve and enhance habitat systems through public education, connectivity, and balance with other uses

*Recreation* - Encourage and enhance safe and diverse recreation systems, while providing for expansion, equitable and sufficient access, balance, and multi-purpose uses

*Open Space* - Enhance and protect open space systems through conservation, aesthetics, connectivity, stewardship, and multi-purpose uses

*Flood Protection* - Maintain flood protection, and existing water and other rights while enhancing flood management activities through the integration with recreation, open space, and habitat systems.

*Water Supply and Water Quality* - Maintain existing water and other rights while enhancing water quality, water supply, groundwater recharge, and water conservation, through the integration with recreation, open space, and habitat systems

*Economic Development* - Pursue economic development opportunities derived from and compatible with the natural aesthetics and environmental qualities of the river

Initially three of these goals - habitat, recreation, and open space - were identified by the County Board of Supervisors, when it instructed LACDPW to develop a Master Plan for the San Gabriel River. During a two-year information and consensus building process, a Steering Committee composed of multiple San Gabriel River stakeholders added goals for flood protection, water management, and economic development to ensure a comprehensive multi-objective approach that acknowledged all of the vital roles and functions of the river. All of these goals are further defined by supplementary objectives and project performance criteria.

## 2.03 San Gabriel River Corridor Master Plan

*Stakeholder Involvement* - during preparation of Plan<sup>4</sup>

LACDPW established a Steering Committee composed of cities along the river, water and regulatory agencies, interested community, business, and environmental groups, and other stakeholders. The Steering Committee consisted of over 80 member organizations, with an average of 40-60 individuals participating in each meeting. The roles and functions of the Steering Committee included: guiding the preparation of the Plan, providing staff and consultants regarding project development, reviewing and commenting on all work products, and encouraging broad community participation in the planning process. The Steering Committee met approximately 35 times during three years, spending over 10,000 hours of combined efforts developing elements of the Master Plan.

*This Plan should be considered:*

A primary document providing organizational structure to water management strategies. The San Gabriel River Corridor Master Plan complements and integrates other planning efforts. It does so by targeting the main stem of the San Gabriel River, while other planning efforts focus on the entire San Gabriel Watershed or on sub-watersheds. The Master Plan coordinates all plans, providing a comprehensive river corridor planning program.

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “**Required Categories to be addressed in the IRWM Plan**” are shown in ***Bold Italics***\* with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.



## 2.03 San Gabriel River Corridor Master Plan

Table 1:

<b>San Gabriel River Corridor Master Plan</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	<p>Page 2-32 to 2-41, details existing water supply conditions including current water supply institutional arrangements/strategies/infrastructure</p> <p>Page 3-10 to 3-11, Section 3.4.5 Water Supply and Water Quality Element; especially objective WQ 2 – optimize water resources to reduce dependence on imported water, and accompanying performance criteria/strategies</p> <p>Page 3-14, Section 3.5.7 Water Quality and Supply – discusses river enhancement concepts incorporating strategies intended to expand water supply capabilities</p> <p>Section 3.6 (starting on page 3-15) provides descriptions of all projects; accompanying maps identify projects that incorporate water supply and/or quality strategies. Project Action Grid (Appendix) also identifies projects that address water quality/water supply goals and water supply/quality river enhancement concepts</p> <p>Pages 4-22 to 4-24, Section 4.10 on Groundwater Recharge addresses strategies for increasing water supply reliability</p>	
<b><i>Groundwater management*</i></b>	<p>Page 2-32 to 2-36, describes groundwater basins, and spreading grounds</p> <p>Page 3-10, Section 3.4.5 Water Supply and Water Quality Element; objectives and performance criteria highlight groundwater management strategies, such as WQ1.2 Expand and enhance groundwater infiltration and recharge; WQ1.3 Use on-site opportunities to reduce impermeable surfaces and increase infiltration WQ2.1 Expand groundwater</p>	

## 2.03 San Gabriel River Corridor Master Plan

<b>San Gabriel River Corridor Master Plan</b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
	<p>recharge facilities to increase water supplies</p> <p>Page 4-22 to 4-24, Section 4.10 discuss future groundwater recharge opportunities</p>	
<i>Conjunctive use</i>	<p><i>Conjunctive use not identified by name but Plan does describe the coordinated use of local rainfall, reclaimed water, and imported water as basis for surface water flows and groundwater storage; in addition to daily water supply groundwater aquifers hold emergency reserves of water for periods of drought (page 2-32)</i></p>	
<b><i>Storm water capture and management*</i></b>	<p>Page 3-10 to 3-11; section 3.4.5 Water Supply and Water Quality Element, includes stormwater management objectives &amp; performance criteria – WQ1.1 Reduce dry weather urban runoff discharge into waterways WQ1.3 Use on-site opportunities to reduce impermeable surfaces and increase infiltration WQ2.3 Encourage onsite collection of stormwater for irrigation and percolation, where consistent with water rights</p> <p>Section 3.7 River Corridor-Wide Projects, Policies, and Programs, identifies Stormwater Retention/Recharge (PP11 on page 3-39) as a corridor wide policy/program</p> <p>Section 4.11 Water Quality Improvement discuss treatment wetlands and other strategies for capturing and treating stormwater (page 4-25 to 4-26)</p>	
<i>Surface Storage</i>	<p>Plan discusses roles of dams in San Gabriel Canyon for both flood control and water conservation; below the dams spreading grounds temporarily store water at the surface before it infiltrates into the groundwater basins</p>	

## 2.03 San Gabriel River Corridor Master Plan

<b>San Gabriel River Corridor Master Plan</b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
<b><i>Water quality protection and improvement*</i></b>	<p>Existing water quality conditions discussed on pages 2-41 to 2-44, including map of impaired reaches</p> <p>Page 3-10 to 3-11 presents Water Supply and Water Quality Element; including relevant water quality objectives and performance criteria:            WQ1 – Improve quality of surface water and groundwater            WQ1.4 Assist cities in meeting water quality requirements for TMDLs, etc.            WQ3 Establish riverfront greenways to cleanse water, etc.            WQ3.1 Utilize open spaces and landscaped areas to filter and cleanse runoff</p> <p>The Plan encourages projects that address water quality treatment solutions; proposed projects that currently incorporate water quality improvement strategies are identified throughout Chapter 3 and in the Project Action Grid, appearing in the Appendix</p>	
<b><i>NPS pollution control</i></b>	<p>4.11 Water Quality Improvement, page 4-25 states that roughly half of the Master Plan projects will address most of the RWQCB watershed issues for the San Gabriel River, including best management practices for reducing non-point source pollution</p>	
<b><i>Flood management*</i></b>	<p>Flood Management addressed throughout the Plan, as one of the six major goals/elements of the Plan-            Page 2-28 to 2-32 existing flood protection strategies/infrastructure            Page 3-9 Flood Protection Element, including objectives and performance criteria            Page 4-19 Section 4.9 Flood Channel Enhancement opportunities</p>	
<b><i>Water conservation*</i></b>	<p>Primary goal for water supply/quality identifies water conservation as one of the strategies for achieving this goal            Performance criteria on page 3-10 (WQ2.4) advocates maintaining conservation of local water as a</p>	

## 2.03 San Gabriel River Corridor Master Plan

<b>San Gabriel River Corridor Master Plan</b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
	means to reduce dependence on imported water Water conservation education identified on page 3-39 as a corridor wide policy/program (PP13)	
<i>Imported water</i>	Role of imported water in existing water supply infrastructure discussed beginning on page 2-38	
<b><i>Water recycling*</i></b>	Existing infrastructure for Reclaimed water discussed beginning on page 2-36 Reclaimed water usage (page 3-40) listed as a corridor-wide policy (PP14)	
<i>Desalination</i>	This strategy not included in Master Plan	
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>	Existing habitat conditions presented in chapter 2 Preservation and enhancement of habitat systems one of the six major goals/elements of the Master Plan, see discussion on page 3-5 Multiple habitat enhancement goals and performance criteria presented on page 3-6 Habitat enhancement introduced as a project concept on page 3-15 Habitat restoration and linkage opportunities presented on pages 4-1 to 4-4	
<b><i>Ecosystem Restoration*</i></b>	Creation of habitat corridors and other habitat restoration projects are cited throughout the Plan  Ecosystem restoration in the form of flood plain restoration identified as a possible project opportunity along selected portions of the river corridor (-page 4-21)  Soft bottom vegetation management and exotic plant removal advocated as corridor wide policies/programs	
<b><i>Wetlands enhancement and</i></b>	Wetland restoration projects featured	

## 2.03 San Gabriel River Corridor Master Plan

<b>San Gabriel River Corridor Master Plan</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>creation*</i>	<p>in the southern reaches of the River corridor</p> <p>Creation of treatment wetlands discussed on page 4-25</p>	
<b>Category III LAND USE - RECREATION</b>		
<i>Recreation and public access*</i>	<p>Existing recreation and access to open space addressed in chapter 2</p> <p>Both recreation and open space are identified as two of the primary goals/elements of the Plan, along with multiple objectives and performance criteria (pages 3-5, 3-7, and 3-8)</p> <p>Parks, open space, and trail enhancements introduced as a major river enhancement concepts (page 3-12 and on)</p> <p>Numerous corridor-wide projects, policies, and programs to enhance recreation and public access to the river introduced starting on page 3-37, including wayfinding system, river identity program, integrated regional trail system, multi-objective use of corridor right of way, public access guidelines, ADA guidelines, and open space acquisition</p> <p>Majority of 130 identified projects listed in chapter 3 and project action grid incorporate recreation and open space access elements</p> <p>Future opportunities for trail enhancement, bridges and gateways, interpretive facilities, park development and open space discussed in chapter 4.</p>	
<i>Land use planning</i>	<p>Existing land use conditions presented in chapter 2</p> <p>The entire Master Plan examines existing land use conditions along the</p>	

## 2.03 San Gabriel River Corridor Master Plan

San Gabriel River Corridor Master Plan		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
	river corridor for the purpose of identifying other land use options for possible recreation, open space, and habitat restoration opportunities, as well as economic development.	
<i>Watershed planning</i>		The San Gabriel River Master Plan is not a watershed plan, but by focusing on the main stem of the river, it will complement and reinforce watershed planning efforts now taking place on the entire watershed or on sub-watersheds. These include Common Ground, and the Watershed Management Plan for the San Gabriel River Above Whittier Narrows

*\* Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

The core vision for the Master Plan is that, “the San Gabriel River is the centerpiece of an integrated watershed system that provides water, flood protection, habitat, open space, and recreation.” Single-purpose projects that address only one or two of these objectives, as was the past pattern, are no longer acceptable. The Plan emphasizes throughout the need to take a multi-objective approach in the design, development and implementation of all projects within the river corridor. Case studies derived from five projects within the corridor further demonstrate the thinking and approach needed to make seemingly disparate strategies work together to achieve water supply, water quality, and other critical objectives

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

The Master Plan provides an overarching vision and plan framework which will guide the design and development of independently sponsored projects throughout the river corridor. Because the river flows through a complex mosaic of 19 cities, various other political jurisdictions at the local, regional, state and federal level, as well as a multiplicity of private interests, adoption of the Plan will help ensure that the respective efforts undertaken by these various entities within the corridor complement and reinforce each other. It is expected that all of these cities and other entities, led by the County of Los Angeles Board of Supervisors, will adopt this Plan, especially as they were all intimately involved in its development. The Steering Committee, which guided development of this Plan continues to meet under the auspices of LACDPW on a quarterly basis and has shifted its focus to Plan implementation. This includes sharing information on project development to help ensure that all these efforts are in concert with each other and in sync with the multi-objective design guidelines of the Master Plan

## **2.03 San Gabriel River Corridor Master Plan**

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

A primary benefit emerging from this Plan is the development of shared vision for the entire river corridor. Although most project implementation will proceed at an independent, local level, it is expected that all of these projects will replicate the design guidelines and multi-objective approach inherent in the Master Plan. This will ensure that integration of recreation, open space, habitat, water quality/water supply and other strategies into the river corridor does so over time in a way that will create dramatic improvements and an enhanced identity for the river as a whole. An identity in which the river is seen and protected by the public as a tremendous hydrologic, environmental, and recreational resource.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

The Plan recognizes that much of the river flows through a densely developed urban landscape. Some of these are disadvantaged communities lacking access to nearby parks and other recreational resources. The adjacent river corridor offers these communities a tremendous untapped potential for recreational and environmental educational resources, which the Plan supports and advocates.

***Technical Analysis and Plan Performance*** - *is based on sound scientific and technical analysis and includes measures to assess performance*<sup>9</sup>.

Existing technical studies relevant to the San Gabriel River corridor were reviewed and analyzed to assist in the development of this Plan. In particular this facilitated the existing conditions analysis, and the development of GIS maps for planning and identification of future opportunities along the river corridor. Existing hydrologic information available for the study area was reviewed and summarized, with a particular focus on five case studies (or Concept Design Studies) highlighted in the Master Plan. Existing available biological resources and habitat data along the study area corridor was reviewed and analyzed. New biological data was collected to facilitate development of the Concept Design Studies and the EIR.

To assess overall plan and project level performance, the Master Plan provides an extensive set of performance criteria for all six Plan Elements and supplementary objectives. These performance criteria are to be used to evaluate and reconfigure proposed projects as well as to assess progress made by these projects in achieving Plan goals and objectives.

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

The Master Plan incorporates 12 separate ongoing and proposed studies for the further planning and development of enhancement efforts along the river corridor.

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>11</sup>

The Master Plan was developed in coordination with other local recent and current planning studies to ensure consistency and minimize duplication with these other plans. The majority of these other plans are watershed-based. The Master Plan complements these other planning efforts by focusing on the main stem of the river that creates the San Gabriel River watershed. In addition, the Steering Committee that shaped the developed of this Master Plan consisted of organizations and individuals who were and are intimately involved in these other related planning studies. Ongoing coordination with these plans will be needed as the San Gabriel River Master Plan moves forward to implementation.

### **End of Document Review**

## **2.04 San Gabriel River Master Plan EIR**

<b><i>IRWM Plan Type</i></b>	<b>Primary Multi-Objective Document</b>
<b><i>Name of Plan</i></b>	San Gabriel River Master Plan EIR
<b><i>Preparing Agency or Entity</i></b>	Count of LA Department of Public Works
<b><i>Other Agency Coordination</i></b>	County of Los Angeles Department of Regional Planning; County of Los Angeles Department of Parks and Recreation; County of Los Angeles Board of Supervisors; State of California - San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy; National Park Service - Rivers, Trails & Conservation Assistance Program
<b><i>Date of the Plan</i></b>	February 2005
<b><i>Contact Information</i></b>	Martin Moreno, Watershed Manager, LACDPW, (626) 458-4119; Rama Rydman, LACDPW, (626) 458-4336

***Reviewer*** Teresa Raine, CDM

***Peer Review***

### ***Subwatershed(s) Addressed<sup>1</sup>***

San Gabriel River Watershed

### ***Geographic Area Described***

The plan focuses on a one-mile wide corridor along the entire 58-mile length of the San Gabriel River from the Cogswell Dam in the Angeles National Forest to its terminus at the Pacific Ocean.

### ***Type of Plan<sup>2</sup>***

This is an Environmental Impact Statement (EIR) in support of the San Gabriel River Master plan which is a regional planning effort - a multi-objective river corridor master plan integrating habitat, recreation, open space, flood control, water supply, and economic development

### ***Brief Summary of Plan Intent***

“This Draft Program Environmental Impact Report (Program EIR) presents the results of an analysis of the environmental effects of the San Gabriel River Corridor Master Plan (Master Plan) proposed by the County of Los Angeles Department of Public Works (LADPW) as CEQA Lead Agency. The Master Plan is an overall conceptual plan that focuses primarily on developing the river corridor as an integrated watershed system that enhances habitat, provides recreational benefits, and protects open space, while maintaining and enhancing flood protection and water resources.”

### ***Brief description of how this plan supports an IRWM Plan.***

The intent of the Plan was to develop among its many different constituencies, including 19 cities, a shared vision for the future of the river and a plan for how to achieve it. It integrates the multiple goals of enhancing habitat, recreation, and open space while maintaining and enhancing



## 2.04 San Gabriel River Master Plan EIR

long-standing goals for flood protection, water supply, and water quality. It does this by identifying priorities, providing guidance, and by coordinating over 130 independently sponsored enhancement projects identified by the 19 cities along the river, the County of Los Angeles, and many other public agencies and community organizations that participated in developing the Master Plan. It provides a Plan Framework, river enhancement project concepts, and case studies which work together to provide project sponsors performance criteria and examples for how to simultaneously address multiple goals and objectives in the design and development of their respective projects. This will ensure that all future projects developed within the river corridor will work together as part of a larger, integrated whole reflecting the shared vision for a multi-objective approach to river corridor planning and project design.

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

“The Steering Committee and LADPW developed a vision statement and a set of broad goals. As defined by the Steering Committee, the vision for the project is:

*The San Gabriel River will be the corridor of an integrated watershed system while providing protection, benefit and enjoyment to the public.*

The following goals of the Master Plan support the vision for the San Gabriel River:

1. Habitat: Preserve and enhance habitat systems through public education, connectivity, and balance with other uses.
2. Recreation: Encourage and enhance safe and diverse recreation systems, while providing for expansion, equitable and sufficient access, balance, and multi-purpose uses.
3. Open Space: Enhance and protect open space systems through conservation, aesthetics, connectivity, stewardship, and multi-purpose uses.
4. Flood Protection: Maintain flood protection and existing water and other rights while enhancing flood management activities through the integration with recreation, open space, and habitat systems.
5. Water Supply and Water Quality: Maintain existing water and other rights while enhancing water quality, water supply, groundwater recharge, and water conservation through the integration with recreation, open space, and habitat systems.
6. Economic Development: Pursue economic development opportunities derived from and compatible with the natural aesthetic and environmental qualities of the river.

Pursuant to State CEQA Guidelines Section 15124, these goals also serve as the CEQA project objectives for the Master Plan.”

### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

During the development of the Master Plan, LACDPW established a Steering Committee composed of cities along the river, water and regulatory agencies, interested community, business, and environmental groups, and other stakeholders. The Steering Committee consisted of over 80 member organizations, with an average of 40-60 individuals participating in each meeting. The roles and functions of the Steering Committee included: guiding the preparation of the Plan, providing staff and consultants regarding project development, reviewing and commenting on all work products, and encouraging broad community participation in the planning process. The Steering Committee met approximately 35 times during three years, spending over 10,000 hours of combined efforts developing elements of the Master Plan.

## 2.04 San Gabriel River Master Plan EIR

*This plan should be considered:*

A **primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "*Required Categories to be addressed in the IRWM Plan*" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 2.04 San Gabriel River Master Plan EIR

<i>San Gabriel River Master Plan EIR</i>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	<p>Objectives and Criteria for Water supply and WQ Goals (Table 3-2)</p> <p>Water Supply element impacts and benefits (Table 4.6-14)</p> <p>Water Supply and Water rights (Section 4.6.4.7)</p>	
<b><i>Groundwater management*</i></b>	<p>Objectives and Criteria for Water supply and WQ Goals (Table 3-2)</p> <p>Water Quality (pg 4.6-25)</p> <p>Groundwater Quality (Section 4.6.4.4)</p> <p>Groundwater hydrology impacts (Section 4.6.4.5)</p> <p>Groundwater quality mitigation measure (Section 4.6.5.4)</p> <p>Groundwater hydrology mitigation measure (Section 4.6.5.5)</p>	
<b><i>Conjunctive use</i></b>		
<b><i>Storm water capture and management*</i></b>	<p>NDPES Stormwater program (pg 4.6-20).</p> <p>Water Quality (pg 4.6-24)</p> <p>Storm water capture (Section 4.6.4.1)</p> <p>Surface water quality mitigation measure (Section 4.6.5.2)</p>	
<b><i>Surface Storage</i></b>	<p>Existing conditions (Section 4.6.1.1 and 4.6.1.2). Water quality (pg4.6-21 to 23)</p> <p>Construction impacts to surface water quality (Section 4.6.4.2)</p> <p>Operational impacts to surface water quality (Section 4.6.4.3)</p> <p>Surface water quality mitigation measure (Section 4.6.5.2 and 4.6.5.3)</p>	

## 2.04 San Gabriel River Master Plan EIR

	<i>San Gabriel River Master Plan EIR</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Water quality protection and improvement*</i></b>	<p>Objectives and Criteria for Water supply and WQ Goals (Table 3-2)</p> <p>Existing conditions (Section 4.6.1.4)</p> <p>Water quality project element impacts and benefits (Table 4.6-14)</p> <p>Construction impacts to surface water quality (Section 4.6.4.2)</p> <p>Operational impacts to surface water quality (Section 4.6.4.3)</p> <p>Surface water quality mitigation measure (Section 4.6.5.2 and 4.6.5.3)</p>	
<i>NPS pollution control</i>	Flood control – including water quality (Section 4.6.4.1)	
<b><i>Flood management*</i></b>	<p>Objectives and Criteria for Flood Management Goals (Table 3-2)</p> <p>Flood protection element impacts and benefits (Table 4.6-14)</p> <p>Flood control (Section 4.6.4.1)</p> <p>Flood control mitigation measure (Section 4.6.5.1)</p>	
<b><i>Water conservation*</i></b>		
<i>Imported water</i>		
<b><i>Water recycling*</i></b>	Existing conditions/regulations (Section 4.6.1.4, pg 4.6-21)	
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>	<p>Habitat Goals (Table 3-1)</p> <p>Habitat element impacts and benefits (Table 4.6-14)</p> <p>Soil contamination issues (Section 4.6.4.6)</p> <p>Soil contamination mitigation measure (Section 4.6.4.6)</p>	
<b><i>Ecosystem Restoration*</i></b>	Habitat Goals (Table 3-1)	

## 2.04 San Gabriel River Master Plan EIR

<i>San Gabriel River Master Plan EIR</i>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Wetlands enhancement and creation*</i>	Habitat Goals (Table 3-1)	
<b><i>Category III LAND USE - RECREATION</i></b>		
<i>Recreation and public access*</i>	Objectives and Criteria for Habitat Goals – including public education (Table 3-1)  Objectives and Criteria for Recreation Goals (Table 3-2)  Recreation element impacts and benefits (Table 4.6-14)	
<i>Land use planning</i>	Recreation Goals (Table 3-2)  Objectives and Criteria for Open Space Goals (Table 3-3)  Objectives and Criteria for Open space element impacts and benefits (Table 4.6-14)	
<i>Watershed planning</i>	Objectives and Criteria for Recreation Goals (Table 3-2) Objectives and Criteria for Open Space Goals (Table 3-3)	
<b><i>OTHER</i></b>		

*\* Required Categories to be addressed in the IRWM Plan  
Optional Categories*

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

The core vision for the Master Plan is that, “the San Gabriel River is the centerpiece of an integrated watershed system that provides water, flood protection, habitat, open space, and recreation.” This EIR provides a complete picture of benefits and impacts (as required by CEQA) that result would result from the implementation of the Master Plan.

## **2.04 San Gabriel River Master Plan EIR**

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

This EIR is a step in the implementation process of the Master Plan. Elements of the Master Plan are detailed in Chapter 3 of the EIR.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Impacts, benefits and mitigation measures are all extensively covered by environmental topic in Chapter 4 of the EIR.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

The Plan recognizes that much of the river flows through a densely developed urban landscape. Some of these are disadvantaged communities lacking access to nearby parks and other recreational resources. The adjacent river corridor offers these communities a tremendous untapped potential for recreational and environmental educational resources, which the Plan supports and advocates.

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Technical analysis, plan performance and criteria are all provided in detail in Chapter 4 of the EIR

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

The Master Plan and Master Plan EIR detail numerous projects and individual plan details for proposed projects along the San Gabriel River Corridor.

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>11</sup>

The Master Plan was developed in coordination with other local recent and current planning studies to ensure consistency and minimize duplication with these other plans. The majority of these other plans are watershed-based. The Master Plan complements these other planning efforts by focusing on the main stem of the river that creates the San Gabriel River watershed. In addition, the Steering Committee that shaped the developed of this Master Plan consisted of organizations and individuals who were and are intimately involved in these other related planning studies. Ongoing coordination with these plans will be needed as the San Gabriel River Master Plan moves forward to implementation.

### **End of Document Review**

## **2.05 Watershed Management Plan for the San Gabriel River Above Whittier Narrows**

<b><i>IRWM Plan Type</i></b>	<b>Primary Multi-Objective</b>
<b><i>Name of Plan</i></b>	Watershed Management Plan for the San Gabriel River Above Whittier Narrows.
<b><i>Preparing Agency or Entity</i></b>	San Gabriel Mountains Regional Conservancy (SGMRC) in conjunction with the RWQCB, LACDPW, RMC, and other partners
<b><i>Other Agency Coordination</i></b>	SGMRC coordinated closely with RWQCB, LACDPW, Rivers and Mountains Conservancy, Southern California Edison, California State Polytechnic University, Pomona, USDA Forest Service, and 140 other stakeholders in preparing this plan. Refer to Chapter 8.
<b><i>Date of the Plan</i></b>	April 1, 2005 (draft)
<b><i>Contact Information</i></b>	SGMRC, Ann Croissant, President
<b><i>Reviewer</i></b>	Wendy Katagi, CDM
<b><i>Peer Review</i></b>	

### ***Subwatershed(s) Addressed<sup>1</sup>***

San Gabriel River Watershed above Whittier Narrows.

### ***Geographic Area Described***

More than 500 square miles occupying the upper two-thirds of the watershed formed by the San Gabriel Mountains to the north, the Puente-Chino Hills to the South, the Santa Ana river Watershed to the east, and the Rio Hondo Watershed to the west. The river system runs through lands of the Angeles National Forest and highly urbanized areas in San Gabriel, Walnut, and Pomona Valleys.

### ***Type of Plan<sup>2</sup>***

Watershed management plan contracted by the SWRCB. Plan focuses on improving water quality and the known beneficial uses within the study area. Plan promotes environmental stewardship, monitoring, education, community involvement, along with primary goals.

### ***Brief Summary of Plan Intent***

This document evaluates watershed scale characteristics, subwatershed units (i.e., Upper San Gabriel River Subwatershed, Walnut Creek Subwatershed, and San Jose Creek Subwatershed), and produces regionally-based regenerative management measures and recommendations addressing the following areas: improving water quality and reducing non-point source pollution, protecting and enhancing water resources, protecting and restoring terrestrial habitat and connectivity, protecting open space, promoting monitoring and stewardship programs, identifying key pilot projects, and ensuring community and stakeholder involvement in the planning process.

### ***Brief description of how this plan supports an IRWM Plan.***

## **2.05 Watershed Management Plan for the San Gabriel River Above Whittier Narrows**

The Watershed Management Plan for the San Gabriel River Above Whittier Narrows addresses eight distinct goals that support Prop 50 water management strategies of groundwater management, conjunctive use, water supply reliability, water quality protection and improvement, NPS pollution control, storm water capture and management, flood management, and water conservation. The plan also provides policies and programs relative to surface storage and water recycling with some strategies related to imported water.

The document is a primary document for habitat, land use, and recreation within the study area. It also serves as a good resource addressing stakeholder involvement and disadvantaged communities.

Because of the breadth of watershed objectives, the plan is notably comprehensive in addressing integration, implementation, impacts/benefits, disadvantaged communities, technical analysis, data management, and relation to local planning.

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

Proposition 13 Watershed Protection Program (Machado) lays the framework and goals for all watershed management plans funded under Prop 13. As such, the goals of the Watershed Plan follows:

1. **Improve Water Quality and Reduce Non-Point Source Pollution** by identifying sustainable practices that consider land use changes, bio-remediation, resource use efficiency, and citizen monitoring and stewardship.
2. **Protect and Enhance Local Water Resources** by investigating opportunities for stormwater capture and reuse, groundwater protection and recharge, landscape water conservation, and public/agency education.
3. **Protect and Restore Terrestrial Habitat and Habitat Connectivity** by evaluating opportunities to restore critical habitats such as riparian corridors and wetlands and evaluating urban wildlife potential.
4. **Provide for Open Space Protection and Monitoring/Stewardship Programs** among urban uses, water quality and supply, wildlands, and quality of life including recreation, urban design, and citizen stewardship.
5. **Identify Key Pilot Projects and Monitoring/Stewardship Programs** that demonstrate sustainable BMP's which improve water quality and supply and explore citizen water monitoring and land stewardship options.
6. **Ensure Community/Stakeholder Involvement** in the Planning Process through public agency workshops, a “watershed roundtable”, youth involvement opportunities, and local college and university talent.

### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

The plan was prepared in coordination with stakeholders in the watershed as follows: 3 scoping meetings, two visioning workshops, three Environmental Roundtables, and focused workshops and meetings. Invitations to attend scoping meeting and to provide information for the plan were



## **2.05 Watershed Management Plan for the San Gabriel River Above Whittier Narrows**

sent to over 400 entities. Over 140 stakeholders participated in scoping meetings for the plan. Refer to Chapter 8.

How should this plan be considered for inclusion into the IRWM Plan?

*This plan should be considered:*

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorized the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 2.05 Watershed Management Plan for the San Gabriel River Above Whittier Narrows

<i>Water Replenishment District Strategic Plan 2003</i>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	pp. 3-1 to 3-16 focus on water supply. Also p. 9-10 Morris Dam project.	Consistent with and incorporates by reference from SGR Master Plan and Common Ground
<b><i>Groundwater management*</i></b>	pp. 3-11 to 3-12. Also p. 9-10 Morris Dam project.	
<b><i>Conjunctive use</i></b>	Chapter 3. Also p. 9-10 Morris Dam project.	
<b><i>Storm water capture and management*</i></b>	pp. 3-17 to 3-41	
<b><i>Surface Storage</i></b>	p. 3-3 and Chapter 2. Also p. 9-10 Morris Dam project.	
<b><i>Water quality protection and improvement*</i></b>	pp. 3-17 to 3-41	Consistent with and incorporates by reference from SGR Master Plan and Common Ground
<b><i>NPS pollution control</i></b>	pp. 3-17 to 3-41	Consistent with and incorporates by reference from SGR Master Plan and Common Ground
<b><i>Flood management*</i></b>	Chapter 2	Consistent with and incorporates by reference from SGR Master Plan and Common Ground
<b><i>Water conservation*</i></b>	Chapter 3	Consistent with and incorporates by reference from SGR Master Plan and Common Ground
<b><i>Imported water</i></b>	Chapter 3. Also p. 9-10 Morris Dam project.	
<b><i>Water recycling*</i></b>	Chapter 3	
<b><i>Desalination</i></b>	n/a	
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>	Chapter 4. Also Chapter 9 pilot projects.	Consistent with and incorporates by reference from SGR Master Plan and Common Ground
<b><i>Ecosystem Restoration*</i></b>	Chapter 4 Also Chapter 9 pilot projects.	
<b><i>Wetlands enhancement and creation*</i></b>	Chapter 4 Also Chapter 9 pilot projects.	
<b><i>Category III</i></b>		

## 2.05 Watershed Management Plan for the San Gabriel River Above Whittier Narrows

	<i>Water Replenishment District Strategic Plan 2003</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>LAND USE - RECREATION</i></b>		
<i>Recreation and public access*</i>	Chapter 5 Also Chapter 9 pilot projects.	Consistent with and incorporates by reference from SGR Master Plan and Common Ground
<i>Land use planning</i>	Chapter 5 and Chapter 6 Also Chapter 9 pilot projects.	Consistent with and incorporates by reference from SGR Master Plan and Common Ground
<i>Watershed planning</i>	All throughout document Also Chapter 9 pilot projects.	Consistent with and incorporates by reference from SGR Master Plan and Common Ground
<b><i>OTHER</i></b>		
<i>Environmental Stewardship</i>	Chapter 7 Also Chapter 9 pilot projects.	

\* *Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

This plan integrates nearly all water management strategies with the exception of desalination. Goals and objectives are clearly articulated and reinforced by continued stakeholder involvement. Projects and priority actions are listed under each of the goals. A matrix of top priority projects and programs weaves it all together. The plan includes significant City and water entity stakeholders making for a well balanced plan. However, aside from LACDPW, the three local water districts were not closely involved in the preparation of the plan (although invited to participate). Therefore, one weakness is that the plan does not incorporate Upper SGV Municipal Water District, Three Valleys, and San Gabriel Valley MWD projects. Perhaps this is where the Urban Water Management Plans and Met project list will fill the gaps.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

Chapter 9 Action Plan provides a set of actions, projects, and studies both current and future that will carry out the actions identified in the plan.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

The document is the first watershed plan for the subject region and therefore is expected to promote integration of watershed projects and water management strategies on multiple levels including legislative, statewide initiatives, funding, regional, and local levels.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Chapter 6 addresses all cities within the study area. Need to check this further.

## **2.05 Watershed Management Plan for the San Gabriel River Above Whittier Narrows**

*Technical Analysis and Plan Performance - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.*

Appears to be rooted in sound technical studies per referenced material and nature of project proponents.

*Data Management* – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Sources for watershed plan including the Tech Report are based on many data sources as referenced in Section 10 of the plan. GIS data and map sources are documented in Section 10 as well.

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>11</sup>

The document contains an Action Plan that is intended to be used by all local jurisdictions in future planning such as General Plans and project specific planning efforts.

### **End of Document Review**

## **2.06 Technical Report Watershed Management Plan for the San Gabriel River Above Whittier Narrows**

<b><i>IRWM Plan Type</i></b>	<b>Primary Multi-Objective</b>
<b><i>Name of Plan</i></b>	Technical Report Watershed Management Plan for San Gabriel River Above Whittier Narrows.
<b><i>Preparing Agency or Entity</i></b>	Prepared by CDM for the San Gabriel Mountains Regional Conservancy
<b><i>Other Agency Coordination</i></b>	Regional Water Quality Control Board, Los Angeles Region
<b><i>Date of the Plan</i></b>	January 18, 2005
<b><i>Contact Information</i></b>	San Gabriel Mountains Regional Conservancy P. O. Box 963, Glendora, CA 91740 Contacts: Ann Croissant, PhD and Rick Thomas
<b><i>Reviewer</i></b>	Nicole Nugent-Cobleigh, CDM
<b><i>Peer Review</i></b>	

### ***Sub-Watershed(s) Addressed<sup>1</sup>***

- Upper San Gabriel River Sub-Watershed
- Walnut Creek Sub-Watershed
- San Jose Creek Sub-Watershed

### ***Geographic Area Described***

*Page 2-1:*

“The San Gabriel River Watershed is located in Los Angeles County, California (Figure 1a). The project area occupies the upper two-thirds of the watershed and is formed by the San Gabriel Mountains to the North, the Puente-Chino Hills to the South, the Santa Ana River Watershed to the east, and the Rio Hondo watershed to the west. The river system runs through lands of the Angeles National Forest and highly urbanized areas in San Gabriel, Walnut, and Pomona Valleys. The Upper Watershed above Whittier Narrows encompasses more than 500 square miles.

The San Gabriel River is the largest watershed in the San Gabriel Mountain drainage system of southern California, encompassing a total area of 648 mi<sup>2</sup> (Figure 1b). It is the second largest drainage system in southern California, second only to that of the Santa Ana River system. Its 75-mile length begins northeast of Los Angeles in the Angeles National Forest and consists of three major upper forks (North, West and East) and a number of significant tributary streams.”

### ***Type of Plan<sup>2</sup>***

Technical Report prepared in advance of, and for, the San Gabriel River Watershed Management Plan Above Whittier Narrows

### ***Brief Summary of Plan Intent***

## **2.06 Technical Report Watershed Management Plan for the San Gabriel River Above Whittier Narrows**

The Watershed Management Plan (Plan) for the San Gabriel River above Whittier Narrows is being developed through the participation use of a core planning team, technical advisory committee, a stakeholder input process and consultants. It will provide recommendations and policy measures to result in multiple beneficial uses for communities and wildlife by addressing the following areas: (1) improving water quality and reducing nonpoint source pollution; (2) protecting/enhancing local water resources; (3) protecting/restoring terrestrial and aquatic habitat and habitat connectivity; (4) providing open space protection and recreation (beneficial land use relationships); (5) improving urban quality of life; and (6) establishing and on-going community and stakeholder process.

This technical report will become the technical core of the Plan and constitutes one of the products of the planning effort.

### ***Brief description of how this plan supports an IRWM Plan.***

This Report is a characterization of the San Gabriel River Watershed area, above Whittier Narrows, and specifically the three sub-watersheds of: 1) Upper San Gabriel River Sub-watershed; 2) Walnut Creek Sub-watershed; and 3) San Jose Creek Sub-watershed. This Watershed area

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

The Report does not lay out any objectives.

### **Stakeholder Involvement - during preparation of Plan<sup>4</sup>**

No stakeholder involvement processes are discussed in detail; however, there is a brief mention of stakeholder involvement on page 2-72 in Section 2.5.2.

### ***This plan should be considered:***

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 2.06 Technical Report Watershed Management Plan for the San Gabriel River Above Whittier Narrows

	<i>Draft Technical Report: Watershed Management Plan for the San Gabriel River Above Whittier Narrows</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I</b> <b>WATER MANAGEMENT</b>		
<i>Water Supply Reliability*</i>	Pages 2-19 through 2-34	
<i>Groundwater management*</i>	Pages 2-20 through 2-22	
<i>Conjunctive use</i>		
<i>Storm water capture and management*</i>	Page 2-24	
<i>Surface Storage</i>	Pages 2-19 through 2-34 (integrated into the discussion throughout these pages)	
<i>Water quality protection and improvement*</i>	Pages 2-34 through 2-45	
<i>NPS pollution control</i>	Pages 2-35 through 2-36	
<i>Flood management*</i>	Pages 2-19 through 2-34 (integrated into the discussion throughout these pages)	
<i>Water conservation*</i>	Page 2-34	
<i>Imported water</i>	Page 2-22	
<i>Water recycling*</i>	Page 2-24, Pages 2-30 through 2-31	
<i>Desalination</i>		
<b>Category II</b> <b>HABITAT IMPROVEMENT</b>		
<i>Environmental and habitat protection and improvement*</i>	Pages 2-61 through 2-64; Pages 2-66 through 2-70	
<i>Ecosystem Restoration*</i>	Pages 2-64 through 2-66; Pages 2-66 through 2-70	
<i>Wetlands enhancement and creation*</i>		
<b>Category III</b>		

## 2.06 Technical Report Watershed Management Plan for the San Gabriel River Above Whittier Narrows

<i>Draft Technical Report: Watershed Management Plan for the San Gabriel River Above Whittier Narrows</i>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>LAND USE - RECREATION</b>		
<i>Recreation and public access*</i>	Pages 2-89 through 2-90 (Just a bit of information); Table 2-13 on these pages provides most of the information	
<i>Land use planning</i>	Pages 2-73 through 2-88	
<i>Watershed planning</i>		
<b>OTHER</b>		
<i>Topography</i>	Pages 2-13 through 2-14	
<i>Significant Ecological Areas</i>	Pages 2-48 through 2-52	

*\* Required Categories to be addressed in the IRWM Plan  
Optional Categories*

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

This Plan/Report provides a comprehensive characterization of all resources and identifies opportunities for future studies and opportunities. However, because the Plan does not identify any objectives, there is no real strategy defined or laid out that reflects or builds upon Plan/Report objectives.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

The Plan/Report identifies opportunities for enhancing habitat, water supply, and land use trends to improve overall quality of water, resources and quality of life within the Watershed area.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Impacts would be economic and require buy-in from a variety of stakeholders (none of which are called out in the Plan/Report). Benefits would include an overall improvement to water quality, supply & reliability, resource enhancement, and improvement to quality of life for residents within the Watershed area.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Disadvantaged communities are not identified or discussed in the Plan/Report; however, overall quality of life improvements would be seen through Plan/Report implementation.

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.



## **2.06 Technical Report Watershed Management Plan for the San Gabriel River Above Whittier Narrows**

The Plan/Report shows sound scientific and technical analysis but does not include true performance assessment measures.

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

The Plan/Report does not go into too much detail about data management but does include some discussions of existing monitoring efforts and status updates for existing enhancement efforts. The Plan/Report also provides good characterization of existing water assessment programs and results.

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>11</sup>

Local planning efforts are discussed but not always entirely linked to improvements to water quality, supply & reliability and habitat enhancement.

### **End of Document Review**

## **2.07 Rio Hondo Watershed Management Plan**

<b><i>IRWM Plan Type</i></b>	<b>Primary Multi-Objective Document</b>
<b><i>Name of Plan</i></b>	Rio Hondo Watershed Management Plan
<b><i>Preparing Agency or Entity</i></b>	San Gabriel Valley Council of Governments
<b><i>Other Agency Coordination</i></b>	San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, Los Angeles Regional Water Quality Control Board, County of Los Angeles Department of Public Works Moore Iacofano Goltsman, Inc.
<b><i>Date of the Plan</i></b>	September 2004
<b><i>Contact Information</i></b>	Grace Eng, San Gabriel Valley COG, (626) 564-9702
<b><i>Reviewer</i></b>	Mark Sillings, MIG

### ***Subwatershed(s) Addressed<sup>1</sup>***

Rio Hondo Watershed

### ***Geographic Area Described***

142 square mile subwatershed of the Los Angeles River watershed; extends from the San Gabriel Mountains south into the urban developed areas of the San Gabriel Valley, and then further south to the confluence of the Rio Hondo with the LA River, just southeast of downtown Los Angeles

### ***Type of Plan<sup>2</sup>***

Watershed Plan

### ***Brief Summary of Plan Intent***

The Plan was made possible by a \$200,000 grant from the State Water Resources Control Board's Proposition 13 grant program. The Plan provides an organizing framework for cities, public agencies, private groups, community members, and other stakeholders working together to develop a healthy watershed within a densely developed urban environment.

### ***Brief description of how this plan supports an IRWM Plan.***

The Rio Hondo Watershed Management Plan is designed to be a multi-objective plan to "restore" the beneficial properties of the watershed. Among several objectives, strategies to improve water quality and water conservation, which among other benefits will reduce dependence on imported water, are a major focus of the Plan.

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

Plan objectives are derived from the vision of a healthy urban watershed, which is defined as a watershed that can perform its natural hydrologic functions, such as capturing and filtering runoff, within the context of a developed urban environment. Nine goals were identified in the Plan:

Improve in-stream water quality to meet or exceed Regional Water Quality Control Board standards and NPDES permitting requirements. Implement a wide array of Stormwater Best Management Practices to optimize local water resources and reduce dependence on imported water while increasing beneficial water uses available to the public.

## 2.07 Rio Hondo Watershed Management Plan

Other Plan goals address the need to:

- Create, enhance and protect open space;
- Improve habitat quality, quantity, and connectivity;
- Improve recreational opportunities;
- Ensure that public health and safety are fully integrated into watershed management;
- Maintain current flood protection levels and develop new flood protection strategies;
- Develop priority projects that address multiple goals simultaneously;
- Create an effective institutional framework to manage implementation of watershed improvement efforts; and
- Establish public awareness and stewardship campaigns.

These goals were developed through an assessment of existing conditions based on currently available data, stakeholder focus groups, and input from a policy advisory committee.

***Stakeholder Involvement*** - during preparation of Plan<sup>4</sup>

Development of the watershed plan was led by a project management team consisting of the following key stakeholders:

- San Gabriel Valley Council of Governments;
- San Gabriel and Lower Los Angeles River and Mountains Conservancy (RMC);
- County of Los Angeles Department of Public Works; and
- A Policy Advisory Committee (PAC).

The Policy Advisory Committee (PAC) was formed representing thirty-six different stakeholder organizations, including cities, other public agencies at the local, state, and federal level, as well as various private conservation groups. The PAC met 5 times and provided a forum for discussions to identify issues, determine priorities, and shape a consensus. A series of six focus groups were held in the summer of 2003 to gather input from a wide range of stakeholders on strategic issues impacting the watershed. A public forum was held in late 2003 to build public awareness and to gather additional public input on the draft watershed plan.

***This Plan should be considered:***

A primary document providing organizational structure to water management strategies

***Water management strategies addressed in this Plan***

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “***Required Categories to be addressed in the IRWM Plan***” are shown in ***Bold Italics***\* with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 2.07 Rio Hondo Watershed Management Plan

Table 1:

	<i>Rio Hondo Watershed Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>	Section 2.2 , page 2-5 to 2-37  Section 3.1 Water Quality & Conservation Strategies, pages 3-11 to 32	
<b><i>Water Supply Reliability*</i></b>	Section 2.2.2 water conservation and supply (pages 2-13 to 2-24)  Sections 3.1.1 through 3.1.5 (pages 3-11 to 3-13) discuss strategies for increasing water supply reliability	
<b><i>Groundwater management*</i></b>	Major portion of section 2.2.2 cited above	
<b><i>Conjunctive use</i></b>	Not specifically addressed	
<b><i>Storm water capture and management*</i></b>	Section 3.1.7 on page 3-15 deals with stormwater management, as well as following subsections that discuss related BMPs (pages 3-15 through 3-31)	
<b><i>Surface Storage</i></b>	Rio Hondo features spreading grounds for groundwater percolation but no long term water surface storage in the watershed	
<b><i>Water quality protection and improvement*</i></b>	Section 2.2.3 address current water quality conditions (pages 2-25 to 2-37) Section 3.1.6 through Section 3.1.19 (pages 3-14 through 3-32) discusses a range of water quality improvement strategies recommended for the Rio Hondo watershed	
<b><i>NPS pollution control</i></b>	Most of the water quality improvement strategies cited in these sections focus on non-point source control	
<b><i>Flood management*</i></b>	Section 2.2.1 (pages 2-6 through 2-12) addresses existing flood protection infrastructure  Section 3.6 (pages 3-57 to 3-64) discusses various strategies to ensure continued flood protection and strategy, designed to complement existing infrastructure	

## 2.07 Rio Hondo Watershed Management Plan

<i>Rio Hondo Watershed Management Plan</i>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Water conservation*</i>	See above water supply reliability	
<i>Imported water</i>	Water supply and quality goal includes need to reduce dependence on imported water by enhancing local water supply through conservation and water quality improvements  Existing conditions section (ch 2) references current need for imported water	
<i>Water recycling*</i>	Not specifically mentioned	
<i>Desalination</i>	Not discussed	
<b><i>Category II HABITAT IMPROVEMENT</i></b>	Section 2.3.2 (pages 2-46 through 2-63) discuss current habitat conditions  Section 3.3 (pages 3-39 through 3-44) presents various habitat enhancement strategies	
<i>Environmental and habitat protection and improvement*</i>	Section 3.3 features various habitat enhancement strategies	
<i>Ecosystem Restoration*</i>	Section 3.3.4, (page 3-40) discusses strategies to restore degraded aquatic and terrestrial riparian and upland habitat areas	
<i>Wetlands enhancement and creation*</i>	The plan includes wetlands enhancement and creation projects at a few select locations	
<b><i>Category III LAND USE - RECREATION</i></b>	Section 2.3 (pages 2-38 to 2-83) addresses existing land use conditions especially as they apply to open space and recreation  Section 3.2 (pages 3-33 to 3-38) discusses strategies to acquire, develop and maintain multi-use open space  Section 3.3 (pages 3-45 to 3-52) reviews recreation development strategies	

## 2.07 Rio Hondo Watershed Management Plan

<i>Rio Hondo Watershed Management Plan</i>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Recreation and public access*</i>	Section 2.3.3 existing open space conditions, including public access (pages 2-64 to 2-68) Section 2.3.4 existing recreation conditions (pages 2-69 to 2-83)  See land use/recreation	
<i>Land use planning</i>	Section 2.3.1 – existing land use and regulations (pages 2-38 to 2-45)	
<i>Watershed planning</i>	Chapter IV presents overall implementation strategy for the watershed plan, including steps for creating institutional framework, building public awareness, and continued watershed assessment as part of ongoing watershed planning	

*\* Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

## **2.07 Rio Hondo Watershed Management Plan**

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

Integration is the strength of this document. It identifies goals and objectives, and in some cases projects that work together to address nearly all of the Proposition Plan objectives.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

Chapter 4 identifies numerous projects in each of the subwatersheds that support plan objectives.

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Impacts from the absence of plan implementation are well represented by the existing conditions in the watershed. Waterways are impaired, disadvantaged populations have little access to recreation or open space. Benefits of plan implementation are described in Chapter 3 where the goals and objectives describe the benefits of plan implementation.

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Chapter 2 includes maps and descriptions of demographic conditions, however it does not characterize household income levels as described in the Proposition 50 Guidelines.

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Chapter 2 includes some technical analysis of water quality conditions as related to land use in each of the subwatersheds. Some measures to assess plan performance are identified as indicators.

**Data Management** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Document does not provide substantial information in this topic area. GIS maps were used to produce evaluations of the watershed.

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>11</sup>

Considerable coordination with local planning was done in an intensive agency stakeholder involvement process. The process included 15 cities, 4 County Agencies, 2 State Agencies, 3 Federal Agencies, 2 Water Agencies, 5 Non-profit groups, and 3 elected officials.

### **End of Document Review**

## **2.08 Los Angeles River Master Plan**

<b><i>IRWM Plan Type</i></b>	<b>Primary Multi-Objective Document</b>
<b><i>Name of Plan</i></b>	Los Angeles River Master Plan
<b><i>Preparing Agency or Entity</i></b>	Los Angeles County Department of Public Works
<b><i>Other Agency Coordination</i></b>	Los Angeles County Department of Parks and Recreation, Los Angeles County Department of Regional Planning, National Parks Service Rivers Trails and Conservation Assistance Program and the Los Angeles River Advisory Committee
<b><i>Date of the Plan</i></b>	June 1996
<b><i>Contact Information</i></b>	Vik Bapna, Los Angeles County Department of Public Works, (626) 458-4363
<b><i>Reviewer</i></b>	Mark Sillings, MIG

### ***Subwatershed(s) Addressed<sup>1</sup>***

The Los Angeles River drains an 834 square mile watershed. However, the LA River Master Plan focuses on the corridor of the LA River, not its watershed, and that of the tributary which drains Tujunga Wash.

### ***Geographic Area Described***

The LA River Master Plan focuses on the 51 miles of the Los Angeles River, from its outlet in Long Beach to its origin at the confluence of Bell and Calabasas Creeks at Owensmouth Avenue, in the San Fernando Valley. It also includes the 9 miles of the Tujunga Wash from the Los Angeles River to Hansen Dam. The Master Plan focuses on the River Corridors for both the LA River and Tujunga Wash, which consists of the flood control rights of way, as well as adjacent lands. Locations within approximately one-half mile of either side of the river's center line were evaluated in the process of project planning, mapping, etc. These areas lie within the jurisdiction of thirteen cities, including the Cities of Bell, Bell Gardens, Burbank, Compton, Cudahy, Glendale, Long Beach, Los Angeles, Lynwood, Maywood, Paramount, South Gate, and Vernon, and unincorporated County territory.

### ***Type of Plan<sup>2</sup>***

Other regional planning effort : a River Corridor Master Plan

### ***Brief Summary of Plan Intent***

The purpose of the Master Plan is to provide a plan for the optimization and enhancement of the Los Angeles River and Tujunga Wash as multi-use resources, without compromising the primary purpose of providing flood control protection to the area. The Plan represents a response to the need for public open-space to improve the quality of life in the urban setting of the Los Angeles River Basin. Implementation of the Master Plan will encourage opportunities for developing the Los Angeles River and Tujunga Wash, and adjacent lands as multi-use, public open-space areas.

### ***Brief description of how this plan supports an IRWM Plan.***

This is a multi-objective plan that has established a major planning framework for river enhancement efforts, and which is currently guiding such efforts along the 51-mile corridor of the LA River. These efforts will enhance local water conservation and water quality efforts, as well as improve habitat and provide residents with improved recreational and open space resources. As such, it should be a major component of the IRMWMP. The only limitation is that the Plan reflects the thinking of a decade ago, and would probably place even greater emphasis on water



## **2.08 Los Angeles River Master Plan**

quality and supply strategies were it being developed today. Other current and new regional planning efforts, including subwatershed management plans also featured in the IRWMP, can provide the necessary update.

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

The Master Plan features multiple goals and specific objectives for each goal:

### **Ensure flood control and public safety needs are met**

- Ensure that public safety is primary
- Ensure that flood control needs are met
- Seek consensus on land-use decisions

### **Improve the appearance of the river and the pride of local communities in it**

- Improve appearance of the river, encourage river cleanup and promote beautification
- Increase community pride and promote identity of the river
- Provide interconnection between communities and recreation facilities
- Develop a greenbelt along the river
- Encourage development of a riverfront

### **Promote the river as an economic asset to the surrounding communities**

- Provide education, training, jobs and business opportunities to benefit communities
- Establish long- and short-term funding sources
- Promote responsible development
- Preserve and enhance real estate values
- Ensure maximum citizen involvement in all phases of economic development planning
- Balance local and regional benefits

### **Preserve, enhance and restore environmental resources in and along the river**

- Improve and create natural plant and animal habitats
- Increase water conservation efforts and provide for the most beneficial use of river water
- Improve water quality and cleanliness of river
- Improve air quality

### **Consider stormwater management alternatives**

### **Ensure public involvement and coordinate Master Plan development and implementation among jurisdictions**

- Develop comprehensive planning goals
- Integrate public involvement
- Coordinate Master Plan management
- Clearly define Master Plan objectives

### **Provide a safe environment and a variety of recreational opportunities along the river**

Secure ongoing and long-term funding for land acquisition, construction and maintenance of additional recreational facilities

- Provide a network of continuous multi-use trails
- Ensure access and compatibility between the river and other activity centers
- Provide for a variety of active and passive recreation opportunities
- Ensure public safety and security along the river
- Expand open space

### **Ensure safe access to and compatibility between the river and other activity centers**

## 2.08 Los Angeles River Master Plan

The overall and site-specific goals and objectives were defined as a result of input received from regulatory agencies, local jurisdictions, organizations, and individuals.

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

In July 1991, the LA County Board of Supervisors directed the Departments of Public Works, Parks and Recreation, and Regional Planning to coordinate all interested public and private parties in the development of the Master Plan. The National Park Services Rivers, Trails and Conservation Assistance Program provided technical assistance and group and community facilitation.

An Advisory Committee consisting of cities, agencies and citizen group representatives was formed in September 1992. Public outreach consisted of three efforts: public workshops held to gauge the level of support for various project ideas (in this regard a series of community workshops were held between 1992 and 1995); implementing the developed goals for the river through demonstration project proposals; and meetings with city staff to discuss how the Master Plan would address specific issues and needs. It was anticipated that local jurisdictions would incorporate the Los Angeles River Master Plan as a General Plan Amendment to guide land use planning and development decisions along the Los Angeles River and Tujunga Wash.

***This Plan should be considered:***

A primary document providing organizational structure to water management strategies

***Water management strategies addressed in this Plan***

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “***Required Categories to be addressed in the IRWM Plan***” are shown in ***Bold Italics\**** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 2.08 Los Angeles River Master Plan

Table 1:

	<b>Los Angeles River Master Plan</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I</b> <b>WATER MANAGEMENT</b>	Flood Management and Water Conservation addressed as two of the primary goals of the Master Plan; pages 55 to 61	
<b>Water Supply Reliability*</b>	Vital role of water conservation, whether dealing with local water, imported water, or reclaimed water addressed in pages 58 to 59	
<b>Groundwater management*</b>	Discusses function of groundwater basins and spreading grounds via percolation into groundwater basins – pages 59 61	
<i>Conjunctive use</i>	Not mentioned	
<b>Storm water capture and management*</b>	The need to consider stormwater management alternatives is one of the principal goals of the Plan, including the establishment of multi-use flood control facilities that allow for increased storm water detention and retention (page 61)	
<i>Surface Storage</i>	Spreading grounds currently operated are identified in pages 59 to 60	
<b>Water quality protection and improvement*</b>	Improving water quality, etc. an objective per page 43 Existing water quality conditions – page 48 The need for water quality education – page 52	
<i>NPS pollution control</i>	The problem of impermeable sources identified on page 49, the problem of urban runoff discussed on page 48, as well as early regulatory efforts to address the problem (page 48 and 49)	
<b>Flood management*</b>	Flood Management a major goal addressed starting on page 56	
<b>Water conservation*</b>	Water Conservation addressed in same section as Flood Management starting on page 56	
<i>Imported water</i>	Briefly mentioned	
<b>Water recycling*</b>	Briefly mentioned	
<i>Desalination</i>	Not addressed	
<b>Category II</b>	Habitat improvement is addressed	

## 2.08 Los Angeles River Master Plan

<b>Los Angeles River Master Plan</b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
<b><i>HABITAT IMPROVEMENT</i></b>	in the Environmental Quality section of the Plan, pages 43 to 53	
<b><i>Environmental and habitat protection and improvement*</i></b>	A major goal of the Plan – enhancing environmental quality of LA River, starting on page 44, describes existing conditions of habitats along the river (pages 44 to 47), habitat restoration recommendations – pages 51 to 53	
<b><i>Ecosystem Restoration*</i></b>	Selected habitat restoration efforts described on page 51	
<b><i>Wetlands enhancement and creation*</i></b>	The need to pursue wetlands restoration mentioned (on page 52) as an area needing further study	
<b><i>Category III LAND USE - RECREATION</i></b>	Land Use addressed in two sections – River Aesthetics from pages 25 through 33, and Economic Development from pages 35 through 41  Recreation – both existing conditions and plan recommendations presented on pages 69 through 76	
<b><i>Recreation and public access*</i></b>	See pages 69 through 76, providing more open space and recreation for nearby urbanized communities is a major thrust of the Plan	
<b><i>Land use planning</i></b>	Changes in zoning codes and other land use practices discussed in pages 40 through 41	
<b><i>Watershed planning</i></b>	Watershed planning to address water quality protection is mentioned as a recent development – page 49	

***\* Required Categories to be addressed in the IRWM Plan***  
*Optional Categories*

## **2.08 Los Angeles River Master Plan**

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

This Plan represents one of the first efforts in the Los Angeles region to require a multi-objective approach requiring the integration of various strategies including flood management, river aesthetics, economic development, environment improvement, storm water management, and recreational opportunities. The Plan integrates these multiple strategies by dividing the river into reaches, and then identifying issues specific to that reach along with projects and opportunities that can be developed to address those issues.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

Projects and recommendations are identified on a reach by reach basis. It discusses ways in which cities, agencies and groups can support and encourage the implementation of the Master Plan recommendations. Sample language is provided which the cities can adapt for their local planning documents, including possible amendments to their General Plans. It proposes an Implementation Team and a Citizen’s Advisory Committee, along with a project manager from LA County Dept of Public Works to work together to implement Master Plan recommendations. It is recognized that full implementation of the Master Plan will require many years, but that by providing a Vision for the river’s future along with a planning framework it facilitates coordination among local agencies as well as funding development.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

The Plan has been a catalyst for continuing and future improvements along the river corridor, including a major effort recently launched by the City of Los Angeles to revitalize the river as a green corridor for parks, open space, aesthetic and recreational improvements along with other community and environmental benefits.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

The Plan does not directly address the current economic and demographic status of communities that lie adjacent to the river. However, the LA River corridor passes through many low-income and disadvantaged communities. Implementation of the Master Plan will benefit these communities both as an economic development tool and by providing improved recreational and public access to the river corridor.

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

The plan provides some technical information on each of the reaches and the river overall but is largely qualitative in its methodology and documentation. The accompanying EIR provides technical analysis per existing conditions and impacts analysis per Plan recommendations.

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

The Plan EIR organizes data generated during plan development in a matrix format. This includes program recommendations listed by reach and individual maps along the x (vertical) axis and by plan goals – environmental enhancement, etal, along the y (horizontal) axis.

## **2.08 Los Angeles River Master Plan**

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>11</sup>

The Plan is the result of collaboration of various groups, agencies, and organizations interested in the future of the river. It includes input provided by communities along the river. It recognizes that implementation of many of the Master Plan's recommendations will require coordination between multiple jurisdictions and proposes institutional mechanisms to facilitate that coordination.

**End of Document Review**

## **2.09 Los Angeles and San Gabriel Rivers Watershed Feasibility Study: Preliminary Draft Feasibility Report**

<b><i>IRWM Plan Type</i></b>	<b>Primary Multi-Objective</b>
<b><i>Preparing Agency or Entity</i></b>	Los Angeles County Department of Public Works and the US Army Corps of Engineers
<b><i>Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	2001
<b><i>Contact Information</i></b>	
<b><i>Reviewer</i></b>	Teresa Raine, CDM
<b><i>Peer Review</i></b>	

### ***Subwatershed(s) Addressed<sup>1</sup>***

All subwatersheds along the LA and SG Rivers

### ***Geographic Area Described***

County of Los Angeles

### ***Type of Plan<sup>2</sup>***

Watershed Study

### ***Brief Summary of Plan Intent***

The Los Angeles and San Gabriel Rivers Watershed Feasibility Study: Preliminary Draft Feasibility Report was created in 2001 as part of the settlement of the LACDA lawsuit against the US Army Corps of Engineers and Los Angeles County Department of Public Works for raising the levee walls in the lower Los Angeles River. It is very comprehensive in scope and scale, it characterizes the watershed through GIS data mapping, narrative and tables. The report used GIS modeling to create project selection criteria. Approximately 31 sites were selected for further study, and from this, six sites selected to move to the implementation phase.

### ***Brief description of how this plan supports an IRWM Plan.***

This study provides a comprehensive look at the SGLLRWA for a variety of water management strategies

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

“the purpose of this study was to determine if a multi-objective approach at various locations in the watershed could be used to solve flood control problems, while also addressing other deficiencies in the watershed, including environmental degradation, loss of recreational space, reduced water supply, continuing flooding impacts, and an overall declining aesthetic quality of the watershed and riverfront areas.”

The specific objectives of the study were”

## **2.09 Los Angeles and San Gabriel Rivers Watershed Feasibility Study: Preliminary Draft Feasibility Report**

“1) Investigate potential non-structural alternatives to the structural solutions presented;  
2) Develop a framework for an Integrated Basin Management Plan (IBMP);  
3) Identify multi-objective demonstration project sites in the Los Angeles and San Gabriel Rivers Watershed.”

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

Limited information

**This plan should be considered:**

A **primary document** providing organizational structure to water management strategies.

Only a summary of this report was available for review. Therefore no additional review is provided.

**End of Document Review**



# Section 3

## Primary Water Documents

- 3.01 Integrated Water Resources Plan
- 3.02 Water Quality Control Plan: LA Region Basin Plan for the Coastal Watersheds of LA & Ventura CountySan Gabriel River Corridor Master Plan
- 3.03 Urban Water Management Plan (Central Basin MWD)
- 3.04 Urban Water Management Plan (San Gabriel Valley MWD)
- 3.05 Urban Water Management Plan (Upper San Gabriel Valley MWD)
- 3.06 Five Year Water Quality Management Plan, Main San Gabriel Basin Watermaster
- 3.07 Three Valleys Water Management Plan
- 3.08 OC Stormwater Program 2003 Drainage Area Management Plan
- 3.09 County of LA Discharge Permits
- 3.10 Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges Within City of Long Beach
- 3.11 Watershed-wide Monitoring Program for the San Gabriel River
- 3.12 Hydraulic/Hydrologic Model of LA River and San Gabriel River Systems

### **3.01 Integrated Water Resources Plan 2003**

<b><i>IRWM Plan Type</i></b>	<b>Primary Water Document</b>
<b><i>Name of Plan</i></b>	Integrated Water Resources Plane
<b><i>Preparing Agency or Entity</i></b>	Metropolitan Water District of Southern California
<b><i>Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	May 2004
<b><i>Contact Information</i></b>	

***Reviewer*** Teresa Raine, CDM

***Peer Review***

#### ***Subwatershed(s) Addressed<sup>1</sup>***

All areas at least partially effected by MWD plan

#### ***Geographic Area Described***

#### ***Type of Plan<sup>2</sup>***

Regional water resources plan

#### ***Brief Summary of Plan Intent***

The plan was intended to review the goals and achievements of the 1996 IRP for MWD and provide updates as needed to the 1996 plan, identify changed conditions for water resource development, and updated resource targets to comply with any new water planning legislation linking land use decisions to water supply reliability.

#### ***Brief description of how this plan supports an IRWM Plan.***

The 2003 IRP Update provides an integrated response to meeting the water supply needs for its service area through 2025. To increase supply reliability, the plan looks at a variety of options including water conservation, water recycling, groundwater recovery, seawater desalination, groundwater storage, surface storage, and imported water options.

#### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

1) review the goals and achievements of the 1996 IRP for MWD and provide updates as needed to the 1996 plan, 2) identify changed conditions for water resource development and 3) updated resource targets through 2025.

The results of the 1996 IRP were determined through a variety of strategies including analytical modeling and stakeholder input (detailed below under "Stakeholder Involvement"). Revised conditions for water resource development came from changes in projected demands and developments as well as new regulations. Modeling to evaluate reliability and resource options is

### 3.01 Integrated Water Resources Plan 2003

detailed in Section 2 of the plan (pages. 21 to 24). The objective of the model was to "determine the impact and need of resources that are used to meet regional demands that remain after the use of traditional local supplies like groundwater, surface water, and Los Angeles Aqueduct supplies.

#### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

Extensive stakeholder participation occurred during establishment of the original 1996 IRP and again for the development of the 2003 Update. Stakeholder participation for both the 1996 IRP and the 2003 Update has been detailed in Section 1, pages 18-20.

Table 1-2 provides a timeline listing of stakeholder participation including meetings and forums, IRP "report cards" sent to member agency managers to track the progress of the 1996 IRP, solicitation of member input. Comments from the member agencies on the 1996 IRP were also encouraged and have been incorporated into the 2003 Update.

As part of the 2003 Update process, MWD also conducted a public outreach program in conjunction with its member agencies. Table 1-3 of the plan lists the 15 different meetings set up as part of the program and the audiences they addressed. The major categories of input received as a result of these meetings and the manner in which they were addressed are provided in Table 1-4 (page 20).

#### ***This plan should be considered:***

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

### 3.01 Integrated Water Resources Plan 2003

#### Water Management Strategies Addressed in This Plan<sup>5</sup>

Table 1 below is categorized the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “*Required Categories to be addressed in the IRWM Plan*” are shown in ***Bold Italics\**** with an asterisk. The *Optional Categories* described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

	<i>Ingrated Water Resources Plan, 2003 Update</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	<p>pgs. 21-24: Supply reliability analytical methodologies are detailed in Section 2.</p> <p>Pgs. 60-61; 63-64: Risk analysis and discussion of a supply buffer for reliability.</p> <p>Sections 4 and 5 provide summaries that include water reliability values.</p>	
<b><i>Groundwater management*</i></b>	<p>pgs. 31-33: Local resources (including groundwater) discussed.</p> <p>Pgs. 46-49: in-region groundwater storage options, target and conditions.</p> <p>Sections 4 and 5 provide summaries that include groundwater management values.</p>	
<i>Conjunctive use</i>		
<b><i>Storm water capture and management*</i></b>		
<i>Surface Storage</i>		Pgs. 44-46: in-region surface water targets and conditions.
<b><i>Water quality protection and improvement*</i></b>		<p>Pg. 24: Analytical WQ assumptions</p> <p>WQ discussed throughout as part</p>

### 3.01 Integrated Water Resources Plan 2003

<i>Ingrated Water Resources Plan, 2003 Update</i>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
		of supply and supply blending issues.
<i>NPS pollution control</i>		
<i>Flood management*</i>		
<i>Water conservation*</i>	<p>Pgs. 26-30 discussion conservation, reporting, targets and programs.</p> <p>Sections 4 and 5 provide summaries that include water conservation values.</p>	
<i>Imported water</i>	<p>Pgs. 38-41 discuss the Colorado River Aqueduct.</p> <p>Pgs. 49-52 discuss the Central Valley/State Water Project Transfers and storage.</p> <p>Sections 4 and 5 provide summaries that include imported values.</p>	
<i>Water recycling*</i>		<p>pgs. 31-33: Local resources (including water recycling) discussed.</p> <p>Sections 4 and 5 provide summaries that include water recycling values.</p>
<i>Desalination</i>		<p>pgs. 31-33: Local resources (including desalination) discussed.</p> <p>Sections 4 and 5 provide summaries that include desalination values.</p>
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<i>Environmental and habitat protection and improvement*</i>		
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		

### 3.01 Integrated Water Resources Plan 2003

	<i>Ingrated Water Resources Plan, 2003 Update</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category III</b> <b>LAND USE - RECREATION</b>		
<b>Recreation and public access*</b>		
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b>OTHER</b>		

\* **Required Categories to be addressed in the IRWM Plan**  
*Optional Categories*

#### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>6</sup>.

The plan uses a variety of scenarios to demonstrate the reliability of water supply through an integrated use of available supplies. In addition to working with stakeholders to update supply projections, the plan also discusses the use of a “buffer” to counter any resource risk associated with the uncertainty in projections.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>7</sup>.

Funding is detailed in Appendix 4 (pages 94-99) and includes sale forecasts, costs associated with local and imported sources and an analysis of rate impacts associated with the 2003 update

Implementation programs associated with various strategies (both current and proposed) are detailed throughout Section 3 of the Plan:

#### Conservation

- ◆ Conservation Credits program (pg 28)
- ◆ Passive Conservation from Plumbing Codes (pg 29)
- ◆ Price-Effect Conservation (pg 29)
- ◆ Southern California Heritage Landscape program (pg 29)
- ◆ Innovative Conservation Program (pg 30)
- ◆ Additional programs listed and detailed in MWD’s 2003 Annual Report to the California State Legislature on Achievements in Conservation, Recycling, and Groundwater Recharge.

### **3.01 Integrated Water Resources Plan 2003**

Recycling, groundwater recovery, and seawater desalination

- ◆ Funding mechanisms (pg. 33)
- ◆ Seawater Desalination implementation (pg. 33)

Table 3-10 (pgs. 52-53) summarizes all the current and proposed implementation plans associated with the MWD targets.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>8</sup>.

Not well covered in this plan

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>9</sup>.

Not well covered in this plan.

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>10</sup>.

The analytical methodologies used to assess both the 1996 IRP and the 2003 Update are presented in Section 2 of the plan.

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>11</sup>.

Assumptions, analyses and information used is detailed throughout the report. Model outputs are available in Appendix 3 of the plan. Section 2 details the analytical methodologies and summarizes data and assumptions used.

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>12</sup>

Please see detail provided above under stakeholder involvement. MWD solicited input from member agencies as well as from the public during various stages of the Plan's creation.

#### **End of Document Review**

### **3.02 Water Quality Control Plan, Los Angeles Region Basin**

<b><i>IRWM Plan Type</i></b>	<b>Primary Water Document</b>
<b><i>Name of Plan</i></b>	Water Quality Control Plan
<b><i>Preparing Agency or Entity</i></b>	California Regional Water Quality Control Board, Los Angeles Region
<b><i>Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	February 23, 1995
<b><i>Contact Information</i></b>	

***Reviewer*** Teresa Raine, CDM

***Peer Review***

#### ***Subwatershed(s) Addressed<sup>1</sup>***

Compton Creek, Lower LA River, Coyote Creek, Rio Hondo, Lower San Gabriel, and Upper San Gabriel

#### ***Geographic Area Described***

The area encompassing the costal drainages between Rincon Point (on the coast of weater Ventura County) and the eastern Los Angeles County Line. This includes all areas of the IRWMP's study area

#### ***Type of Plan<sup>2</sup>***

Regional Water Quality Plan

#### ***Brief Summary of Plan Intent***

The intent of the Basin Plan is to maintain and/or improve surface and ground water quality throughtout the Los Angeles Region through water quality standards and policies, and through implementation programs targeted at protecting water quality and supplies. The plan acts as a resource for the Regional board, local agencies and organizations, and anyone in the Basin's areas that is invovled with permitting and resource management associated with water use and/or the discharge of wastewater.

#### ***Brief description of how this plan supports an IRWM Plan.***

The Basin Plan provides water quality goals and policies on a regional basis and details a regional plans to meet the goals.

#### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

The Basin plan has several objectives including:

- 1) designating the beneficial uses for surface and ground water areas



### 3.02 Water Quality Control Plan, Los Angeles Region Basin

- 2) Setting water quality narratives and numerical objectives based on beneficial uses. The objectives must be attained and/or maintained to conform to the state's antidegradation policy
- 3) Provides implementation programs designed to protect all regional waters
- 4) Incorporates all applicable state and regional plans and policies in addition to any other applicable water quality policy or regulation.

#### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

As required by the California Water Code, standards are reviewed at least every three years during which issues are formally identified and ranked during a public hearing process.

#### ***This plan should be considered:***

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

### 3.02 Water Quality Control Plan, Los Angeles Region Basin

#### Water Management Strategies Addressed in This Plan<sup>5</sup>

	Water Quality Control Plan, Los Angeles Region	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I WATER MANAGEMENT</b>		
<i>Water Supply Reliability*</i>		
<i>Groundwater management*</i>		
<i>Conjunctive use</i>		
<i>Storm water capture and management*</i>	(pgs 4-21 to 4-25) Storm water permits as regulated by the NPDES program  (pgs 4-39 to 4-43) Urban runoff and control	
<i>Surface Storage</i>		
<i>Water quality protection and improvement*</i>	The focus of the document is water quality and improvement on a regional basis.  (pgs 3-8 to 3-17) regional WQ objectives for surface water.  (pgs 3-17) regional WQ narrative objectives for wetlands  (pgs 3-17 to 3-18) regional WQ objectives for groundwater  (pg 3-22) site specific WQ objectives  Strategic Planning and Impelemention is discussed in Chapter 4  Plans and Policies are discussed in Chapter 5  Monitoring and Assessments are detailed in Chapter 6.	
<i>NPS pollution control</i>	(pgs 4-33 to 4-57) Control of NPS pollution.  (pgs 5-4 to 5-5) State Board Nonpoint Source Management Pollution Plan	
<i>Flood management*</i>		

### 3.02 Water Quality Control Plan, Los Angeles Region Basin

Water Quality Control Plan, Los Angeles Region		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Water conservation*</i></b>		
<i>Imported water</i>		(pgs 1-22 to 1-23) Imported water into the Basin is briefly discussed.
<b><i>Water recycling*</i></b>	(pg 4-18) Water Reclamation Requirements  (pgs 5-6 to 5-7) Water Reclamation in California	
<i>Desalination</i>		Desalination only briefly discussed.
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		Chapter 2 – Beneficial uses are defined for a variety of water uses, including cold and warm water habitat restrictions.
<b><i>Ecosystem Restoration*</i></b>		
<b><i>Wetlands enhancement and creation*</i></b>		
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>	Chapter 2 – Beneficial uses are defined for a variety of water uses, including two levels of recreational uses.	
<i>Land use planning</i>		Chapter 2 – Beneficial uses are defined for a variety of water uses.
<i>Watershed planning</i>		
<b><i>OTHER</i></b>		

\* ***Required Categories to be addressed in the IRWM Plan***  
*Optional Categories*

#### **Additional Proposition 50 Criteria**

### **3.02 Water Quality Control Plan, Los Angeles Region Basin**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>6</sup>.

The strategies presented in the Basin Plan provide a regional plan to meet water quality goals while still providing detail on a local level to guide agencies with local water quality and supply issues. By protecting the water quality of surface and groundwater on a regional basis, it not only ensures compliance with California's antidegradation regulations, but provides clean water for both supply purposes and recreational uses.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>7</sup>.

Chapter 4 covers the strategic Planning and Implementation for the regional Basin Plan. This includes the control of point source pollutants through waste discharge requirements, water reclamation requirements, and the National Pollution Discharge Elimination System Program (which includes storm water permits). Nonpoint Source Pollution control efforts include early planning efforts (pg 4-34), and information on funding and the costal nonpoint source pollution program. Remediation plans and guidance are covered on pages 4-47 to 4-65

Chapter 5 of the basin plan defines one going plans and policies on the state level that pertain to the region.

Chapter 6 discusses the state and regional board's monitoring programs

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>8</sup>.

This plan provides a regional guidance to water quality in the LA area. It looks at beneficial uses for surface and groundwater and details objectives based on those uses. A regional look at water quality provides a better water quality solution as it considers both the upstream and downstream users.

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>9</sup>.

This plan does not provide specific discussion disadvantaged communities, however the plan looks at water quality regardless of the area it's flowing through, improving water quality for all communities uniformly.

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>10</sup>.

The introduction to Chapters 2 and 3 present the basis of the beneficial use designations and the water quality objectives, respectively. Chapter 6 covers the monitoring and assessment programs for the Basin Plan including compliance monitoring, complaint investigations, surveillance, assessment reports, surveys, and coordination with other agencies.

**Data Management** – Provision for management of data generated during plan development and implementation<sup>11</sup>.

Data storage and retrieval that is part of the State's Monitoring program is explained in page 6-2. Additional information on the state's and the regional board's monitoring and reporting programs can be found in pages 6-1 to 6-10 of Chapter 6.

### **3.02 Water Quality Control Plan, Los Angeles Region Basin**

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>12</sup>

The plan was created and is updated through a public hearing process that includes coordination with local agencies. Additional information on the coordination with other agencies concerning the regional board's monitoring programs can be found on pg 6-10.

**End of Document Review**

### 3.03 Urban Water Management Plan Central Basin

<b><i>IRWM Plan Type</i></b>	<b>Primary Water Document</b>
<b><i>Name of Plan</i></b>	Urban Water Management Plan
<b><i>Preparing Agency or Entity</i></b>	West Basin and Central Basin Municipal Water Districts
<b><i>Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	November 2000
<b><i>Contact Information</i></b>	

***Reviewer*** Teresa Raine, CDM

***Peer Review***

#### ***Subwatershed(s) Addressed<sup>1</sup>***

Rio Hondo, parts of Los Cerritos and Coyote Creek

#### ***Geographic Area Described***

West and Central Basin MWDs (Districts) service areas.

#### ***Type of Plan<sup>2</sup>***

Urban water management plan

#### ***Brief Summary of Plan Intent***

To "continue their commitment to ensure an adequate, reliable, high quality supply of supplemental water by looking beyond imported water sources to promote efficient use and management of all available water resources. This plan is an update to their Urban Water Management report as required by the Urban Water Management Planning Act of 1983. The plan details current water supplies and water demands, as well as addressing how to best meet future demands through a variety of strategies.

#### ***Brief description of how this plan supports an IRWM Plan.***

This is an integrated plan to meet urban water needs of both CBMWD and WBMWD through a variety of water management strategies. The document discusses current water uses and projected water demands for the Districts which will serve to define a baseline for the IRWM Plan.

Chapter 3 discusses the current water supplies and reliability of the supplies for the Districts.

The next chapters discuss future conditions and how best to meet water supply objectives through efficient management and monetary incentives, supporting an IRWM Plan by proposing a variety of strategies that help efficiently manage supplies, conserve water use, and encourage recycled water use.

***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

### 3.03 Urban Water Management Plan Central Basin

The Districts' Plan proposes to continue meeting the needs of their customers by following fundamental resource management approaches:

Implementation of water conservation measures to offset growth in water demand.

Development of cost-effective water recycling projects to preserve imported water for potable uses;

Active participation to ensure reliable imported water supplies from MWD;

Assisting local groundwater producers and agencies in protecting existing groundwater supplies and monitoring the quality of groundwater produced.

Pursuit of cost-effective alternative water supply options to increase reliability and/or reduce water costs to customers.

#### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

Chapter 1 says the plan was prepared in cooperation between the Districts and MWD " with input from retail water utilities, cities, other water agencies, and the residents within the CBMWD and WBMWD service areas...". The Best Management Practices report filing in 2000 for the Districts both list having programs to promote and educate on water awareness.

No other information was provided on involvement.

#### ***This plan should be considered:***

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

### 3.03 Urban Water Management Plan Central Basin

	<i>Urban Water Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	<p>Chapter 3 details water supplies and reliability for the districts.</p> <p>Figures 3-1 and 3-2 detail water sources. Local supplies are detailed on pages 18-19.</p> <p>Water Quality is discussed on pg. 21</p> <p>Supply reliability (both current and through 2020) is discussed on pgs. 21 – 26 and detail meeting demands from groundwater, recycled water, and imported sources.</p>	
<b><i>Groundwater management*</i></b>	<p>Pg. 46-49 Historic/background information on groundwater management and groundwater recharge.</p> <p>Pg. 49-50 Groundwater Recovery including treatment of saltwater plumes and treatment of VOC plumes.</p>	
<i>Conjunctive use</i>		Pg 51 has minimal details on conjunctive uses.
<b><i>Storm water capture and management*</i></b>		
<i>Surface Storage</i>		
<b><i>Water quality protection and improvement*</i></b>	<p>Pg 21 has general information on the water quality for the water supply.</p> <p>Pgs. 49-50 has information on steps to improve the quality of groundwater in the Basins</p>	
<i>NPS pollution control</i>		
<b><i>Flood management*</i></b>		
<b><i>Water conservation*</i></b>	Chapter 4 details conservation measures for the Districts (pgs. 28 through 35). Measures	



### 3.03 Urban Water Management Plan Central Basin

	<i>Urban Water Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
	include demand management, current and proposed Urban Conservation Best Management Practices (BMP), retail user conservation programs and outreach, landscape conservation through use of recycled water, and education.	
<i>Imported water</i>		
<b><i>Water recycling*</i></b>	Chapter 5 details current and proposed water recycling efforts for the Districts.  Pgs. 38-39 detail available wastewater.  Pgs. 39-41 detail existing recycled water programs and the existing distribution system  Pgs. 41-42 details system improvements.	
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		
<b><i>Ecosystem Restoration*</i></b>		
<b><i>Wetlands enhancement and creation*</i></b>		
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>		
<i>Land use planning</i>		
<i>Watershed planning</i>		

### 3.03 Urban Water Management Plan Central Basin

	<i>Urban Water Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>OTHER</b>		

*\* Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

#### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

A combined effort between the two Districts using a variety of water management strategies allows both districts to effectively manage demand and maintain reliable supplies through integrated use of groundwater, imported water and recycled water options.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

Implementation of the plans objectives are met through continuation of existing projects for both Districts and start of proposed projects:

- ◆ Water Recycling Program Master Plan (Final Submittal, August 2000) as mentioned on page 41 of this plan, identifies and prioritizes areas in the CBWMD service area where recycled water can be used to replace potable water use. Meetings between CBWMD staff and stakeholders occurred periodically to “allow maximum understand and assistance in developing...” the master plan. Through a combined effort with the stakeholders, over 1,500 potential new users were identified, a series of development phases planned.
- ◆ The Central Basin Water Quality Protection Plan (January 2001) was created to treat contaminated groundwater in the Montebello Forebay and is part of this plan’s groundwater recovery program (as listed on pg. 49). Water will be extracted, treated, and distributed for consumptive use.
- ◆ Encouraging recycled water use (pg. 42) – in addition to promoting additional use of recycled water through the Water Recycling Program Master Plan, the Districts use innovative marketing to present recycled water as not only a conservation strategy but as a cost-effective option for businesses. The Districts have used financial incentives to promote recycled water use including:
  - ◆ Wholesale recycled water rates are lower than potable water rates
  - ◆ The Districts can advanced funds for costs require to retrofit plumbing to accept recycled water, and be reimbursed over time through water bills.

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

The impacts of the Plan include:

- ◆ Construction impacts during the installation of addition pipelines for recycled water treatment and conversion of existing distribution systems to except recycled water.

### 3.03 Urban Water Management Plan Central Basin

- ◆ Minimal air impacts may result from the construction and operation of additional wastewater treatment facilities. Any pollutant or odor impacts from these sources could be mitigated using known air control technologies and efficient plant design.

The Plan's benefits include:

- ◆ Water conservation through effective management of resources.
- ◆ Water conservation and reliability of water resources through expanded use of recycled water for existing and new users.
- ◆ Water quality and supply improvements through groundwater recovery programs, increased recycled water use, and reduced vulnerability during dry year by increasing the Districts' water management self-reliance within their service areas.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

No direct advantages listed. Indirectly, reducing costs, providing financial incentives and ensuring reliable water supplies ensure water supplies are available to all communities in their service areas.

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

The Plan itself does not include a detailed discussion on the technical analysis. However the projects presented in the plan (the Water Recycling Program and the Water Quality Protection Plan) each include information on their technical analysis, information database management, detailed drawings (for the Water Quality Protection Project), and additional information on the project's specific performance.

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

The Plan, itself, does not include a detailed discussion of data management. However, as part of the Water Recycling Program, the methodology used to collect and assess data from stakeholders to identify new potential recycled water users has been documented as part of the project's Master Plan submittal.

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>11</sup>

The Plan summarizes interaction between the Districts' staff and its wholesale and retail water users.

### **End of Document Review**

### **3.04 Urban Water Management Plan**

<b><i>IRWM Plan Type</i></b>	<b>Primary Water Document</b>
<b><i>Name of Plan</i></b>	Urban Water Management Plan
<b><i>Preparing Agency or Entity</i></b>	San Gabriel Valley Muncipal Water District
<b><i>Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	June 2000
<b><i>Contact Information</i></b>	

***Reviewer*** Teresa Raine, CDM

***Peer Review***

***Subwatershed(s) Addressed<sup>1</sup>***

Main San Gabriel

***Geographic Area Described***

South Eastern Los Angeles County

***Type of Plan<sup>2</sup>***

Urban water management plan

***Brief Summary of Plan Intent***

The purpose of the plan is to update the SGVMWD's urban water supplier plan as required by the Urban Water Management Plan. The plan discusses water management supplies and strategies for the area

***Brief description of how this plan supports an IRWM Plan.***

The plan address water supplies and maintaining supply realiability through a variety of water management strategies.

***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

This plan provides details on SGVWMD's water supplies and demands. As SGVMWD only supplies water for groundwater replenishment as required by the Main Basin and Long Beach Judgments, the plan's objectives are to meet water supply reliability issues through conservation and recycling strategies.

***Stakeholder Involvement - during preparation of Plan<sup>4</sup>***

As detailed on page 1, a draft of the Urban Management Plan was made available for public comment. Following public hearings, comments from the public review period were integrated into the plan which was then adopted by SGVMWD

### 3.04 Urban Water Management Plan

*This plan should be considered:*

A **primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

### 3.04 Urban Water Management Plan

	<i>Urban Water Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I</b> <b>WATER MANAGEMENT</b>		
<b>Water Supply Reliability*</b>	The plan focuses on urban water supply reliability. Chapter III (pgs. 11-19) details water supplies and demands.  (pgs 27-29) Contingency plan  (pg 33) Water service reliability	
<b>Groundwater management*</b>	(pgs. 14-15) general groundwater management. Replacement water requirements as detailed in the Main Basin Judgment	
<i>Conjunctive use</i>		
<b>Storm water capture and management*</b>		
<i>Surface Storage</i>		
<b>Water quality protection and improvement*</b>		(pgs 21-22) brief discussion on groundwater quality
<i>NPS pollution control</i>		
<b>Flood management*</b>		
<b>Water conservation*</b>	(pgs 20 – 24) Chapter IV: Current conservation measures.  (pgs 25-26) Chapter V: proposed conservation measures	
<i>Imported water</i>		
<b>Water recycling*</b>	(pgs 30-31) history of available recycled water and potential uses for recycled water.	
<i>Desalination</i>		
<b>Category II</b> <b>HABITAT IMPROVEMENT</b>		
<b>Environmental and habitat protection and improvement*</b>		
<b>Ecosystem Restoration*</b>		

### 3.04 Urban Water Management Plan

	<i>Urban Water Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Wetlands enhancement and creation*</i>		
<i>Category III LAND USE - RECREATION</i>		
<i>Recreation and public access*</i>		
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b>OTHER</b>		

*\* Required Categories to be addressed in the IRWM Plan  
Optional Categories*

#### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

The plan discusses use of a variety of water strategies to provide a reliable water supply to it users throughout the document, in addition to strategies requiring cooperation with adjacent agencies.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

Conservation measures and their implementation schedule are detail in pages 25-26. Recycled water projects and implementation are detailed in pages 30 - 32

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Impacts and benefits for each water strategy are discussed throughout the document.

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.  
Disadvantaged communities are not discussed in this plan

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Not well covered in this plan

### **3.04 Urban Water Management Plan**

*Data Management* – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Data and information for this plan are briefly discussed for each strategy.

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>11</sup>

Not well covered in this plan

#### **End of Document Review**



### 3.05 Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District

<b><i>IRWM Plan Type</i></b>	<b>Primary Water Document</b>
<b><i>Name of Plan</i></b>	Urban Water Management Plan
<b><i>Preparing Agency or Entity</i></b>	Upper San Gabriel Valley Municipal Water District
<b><i>Other Agency Coordination</i></b>	District's Urban Water Suppliers are listed on p. II-2 of the plan. Public hearing and noticing conducted for the plan. Water conservation projects involve municipalities and schools within the service area.
<b><i>Date of the Plan</i></b>	December 2000
<b><i>Contact Information</i></b>	Provided by Don Schroeder, CDM
<b><i>Reviewer</i></b>	Wendy Katagi, CDM

#### ***Peer Review***

#### ***Subwatershed(s) Addressed<sup>1</sup>***

San Gabriel River Watershed Above Whittier Narrows.

#### ***Geographic Area Described***

Known as the San Gabriel Valley, located in southeastern LA County, bounded on the north by San Gabriel Mountains, on the west by San Rafael and Merced Hills, on the south by the Puente Hills and San Jose Hills, and on the east by a low divide between the SGR System and the Upper Santa Ana River System.

#### ***Type of Plan<sup>2</sup>***

Prepared in accordance with the California Urban Water Management Planning Act (Act), effective January 1, 1985, requiring every "urban water supplier" (i.e., providing water directly/indirectly to more than 3,000 customers or supplying more than 3,000 af of water annually) to prepare and adopt an Urban Water management Plan, and to periodically review its plan at least once every five years and make any amendments or changes indicated by review.

#### ***Brief Summary of Plan Intent***

Upper District's Plan is intended to review the activities of Upper District as a wholesale water supplier in the Main San Gabriel Basin (Basin) and to describe the operations of the Basin to achieve the maximum practicable conservation and efficient use of the water resources of the area, both local and imported.

#### ***Brief description of how this plan supports an IRWM Plan.***

The Upper District's Plan addresses nine distinct goals that support Prop 50 water management strategies of groundwater management, conjunctive use, water supply reliability, water quality protection and improvement, imported water, surface storage, recycled water, storm water capture and management, water conservation, and stakeholder involvement. It also provides some strategies regarding NPS Pollution Control.

### 3.05 Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District

Some policy/programs are provided with regard to habitat, land use/recreation, stakeholder involvement and disadvantaged communities (p. VII-2 use of recycled water by the City of Industry for ornamental lakes, equestrian center, and golf courses). Also, Cities of Industry and West Covina and the County of LA Dept of Parks and Recreation have developed plans for reclaimed water projects. DPR plans to use about 3200 af/yr of recycled water from WNWRP to irrigate the Whittier Narrows Recreation Area, Golf Course, and Legg Lake.

Some information is provided on integration and to a lesser degree disadvantaged communities. However the document is strong in terms of implementation of water management strategies, noting impacts/benefits of these, technical analysis, data management, and relation to local planning (cities/future development).

#### *Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

Plan objectives were derived from Water Code Section 10631 that specifies topics that must be covered in the plan. These include:

1. Service Area described with population projections for 20 years
2. Identifying and quantifying existing/planned sources of water
3. Description of water supply reliability and vulnerability
4. Description of water transfers
5. Quantifying water use by type
6. Describing water demand management measures

Special note: The plan includes a good summary of water resource management in the San Gabriel Valley based upon Watermaster services under two Court Judgments: San Gabriel River Watermaster (River Watermaster) and Main San Gabriel Watermaster (Basin Watermaster). Refer to pp. II-3 to II-8 of the plan.

#### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

Draft Plan allowed for public review and published a notice of the public hearing the San Gabriel Valley Tribune.

Annual Report documents the District completed a school education program to 2,180 students via “In Concert with the Environment” program and outreach education for large no. of students/teachers at 252 schools w/n the District.

District reached out to 14 cities/planning divisions regarding on-residential landscape BMPs.

While the Upper District references numerous water suppliers within the plan, the plan itself does not document coordination with other water suppliers, public agencies, or provide evidence of community participation in the plan except for water conservation and education activities that appear to be an area of strength for the Upper District.

### 3.05 Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District

*This plan should be considered:*

A **primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "*Required Categories to be addressed in the IRWM Plan*" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

### 3.05 Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District

<b>Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	pp. III-1 to IV-3 supply and reliability concerns; Chapter VIII Water service reliability and throughout document.	Also discusses lots of water exchanges such as city of Alhambra, Met, SG District, and Basin Watermaster. Upper District also participates in Met's Water Surplus and Drought Management Plan.
<b><i>Groundwater management*</i></b>	pp. IV-3 to IV-8 Groundwater quality and management; Upper District will continue to work w/ other water agencies to coordinate supplemental water recharge and new recharge facilities such as sand and gravel pits (p. VI-3).	References the Basin Judgment, amended August 24, 1989; also references Potential Effective Recharge Capabilities (PERC) Study, June 17, 1992. References 1975 Potential Use of Reclaimed Water for Groundwater Replenishment in the Basin.
<b><i>Conjunctive use</i></b>	Throughout document	
<b><i>Storm water capture and management*</i></b>	Chapter V: Upper District encourages utilization of on-site conservation of local storm water on residential and commercial properties where feasible; at least 600k af of storage capacity for local storm water runoff from the local watershed becomes available in the Basin.	
<b><i>Surface Storage</i></b>	Spreading facilities are noted on p. IV-4 and Plate 3.	
<b><i>Water quality protection and improvement*</i></b>	Groundwater quality problems have been addressed through blending water and on-site treatment (p IV-7 to IV-8).	
<b><i>NPS pollution control</i></b>		Not thoroughly addressed in this document although BMPs related to water quality and surface runoff projects are described throughout the document.
<b><i>Flood management*</i></b>	N/A	
<b><i>Water conservation*</i></b>	Annual Report 1996-1997 states the District's implementation or support of BMPs including water conservation, public information, school education, etc.  Appendix D Upper District Water Conservation Program Goals and	Promotes water conservation and supports/participates in Met's water conservation programs.

3.05 Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District

<b>Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District</b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
	Objectives contain public outreach activities such as water conservation seminars for the public, participation in local fairs/events increased awareness of water issues (educate), increase water resource library, etc.	
<i>Imported water</i>	pp. I-1, II-7, II-8, VIII-1 and throughout document. Upper District sells imported water, delivered by Met, to its subagencies and to the Basin Watermaster through ten service connections. Cyclic storage agreements allow Met and Upper District to deliver and store 100,000 af of imported water in the Basin.	References Judgments and Monterey Agreement (1994) and Regional UWMP MWD.
<b><i>Water recycling*</i></b>	Pp VI-2 recycled water study; pp. VII-1 to VII-5 contains a Recycled Water Chapter covering water recycling plants, recycled water use, potential uses of recycled water, and projected use of recycled water.	References San Gabriel Valley Water Reclamation Plan, Feasibility Study and Implementation Program (July 1992) indicates 28k af of recycled water could be used in place of imported water and 5600 af of recycled water could be used for landscape irrigation at parks, schools, and fwy r-o-w. Also District draft EIR Oct 1993 indicates 16k af/yr could be recharged on a long-term basis.
<i>Desalination</i>	n/a	
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>	Some policy/programs are provided with regard to habitat, land use/recreation, stakeholder involvement and disadvantaged communities (p. VII-2 use of recycled water by the City of Industry for ornamental lakes, equestrian center, and golf courses). Also, Cities of Industry and West Covina and the County of LA Dept of Parks and	

3.05 Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District

<b>Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
	Recreation have developed plans for reclaimed water projects. DPR plans to use about 3200 af/yr of recycled water from WNWRP to irrigate the Whittier Narrows Recreation Area, Golf Course, and Legg Lake.	
<i>Ecosystem Restoration*</i>	See above.	
<i>Wetlands enhancement and creation*</i>	See above	
<b><i>Category III LAND USE - RECREATION</i></b>		
<i>Recreation and public access*</i>	Plan promotes use of Recycled water by parks, golf courses, etc. p. VII-3 to VII-4	References Direct Reuse Study that identifies over 600 potential users in the San Gabriel Valley consisting of schools, parks, golf course, nurseries, sand/gravel companies, and cemeteries.
<i>Land use planning</i>	Upper District partners with cities such as Industry, West Covina, and the County of LA Parks and Rec to do recycled water projects in conjunction with recreation areas, golf course; Useful land use planning information includes Table 6 Summary of Potential Reclaimed Water Users and Table 7 Potential Direct Users of Reclaimed Water that are Economically Viable (Vulcan, Hanson, United Rock).	
<i>Watershed planning</i>	Basin replenishment priorities and projects are addressed within the context of the basin/watershed boundary, Plate 4.	
<b><i>OTHER</i></b>		
<i>Water Treatment</i>	References the Whittier Narrows Water Reclamation Plant and San Jose Creek Water Reclamation Plant and their treatment capacity	

### 3.05 Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District

	<b>Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
	within the context of utilizing recycled water within the context of quantity, cost, and distance to convey water from treatment plant to point of use. P. VII-1.	

**\* Required Categories to be addressed in the IRWM Plan**  
*Optional Categories*

#### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

This plan integrates nearly all water management strategies with the exception of flood management and desalination. The Upper District’s Plan incorporates by reference the draft 2000 Regional Urban Water Management Plan by Metropolitan Water District of Southern California and supplements the plans prepared by the urban water suppliers with the Upper District.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

As required under the code regulations, the Upper District plan is available to the public and is implemented by the District.

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

In particular, water conservation details regarding the use of reclaimed water in parks, schools, sand and gravel operations, cemeteries, ecosystems such as Santa Fe Nature Dam area are beneficial toward watershed integration and enhancement on multiple levels (public understanding, recreation, water quality, water supply, etc.).

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

The Plan states that this should be used by disadvantaged communities and the public at large

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Appears to be rooted in sound technical studies per referenced material and nature of project proponents.

### 3.05 Urban Water Management Plan, Upper San Gabriel Valley Municipal Water District

**Data Management** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Plan appears to be based on credible data management as referenced throughout the document.

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>11</sup>

Plan contains examples of local planning coordination with the City of Industry, County of LA Parks and Recreation and the City of West Covina.

**End of Document Review**



### **3.06 Five-Year Water Quality and Supply Plan**

<b><i>IRWM Plan Type</i></b>	<b>Primary Water Document</b>
<b><i>Name of Plan</i></b>	<b>Five-Year Water Quality and Supply Plan</b>
<b><i>Preparing Agency or Entity</i></b>	Main San Gabriel Basin Watermaster
<b><i>Date of the Plan</i></b>	November 2003
<b><i>Contact Information</i></b>	Carol Williams, Executive Director, 725 North Azusa Avenue, Azusa CA 91702 (626) 815-1300
<b><i>Reviewer</i></b>	Peter D. James, Mark Sillings, MIG

#### ***Subwatershed(s) Addressed<sup>1</sup>***

Primarily the upper San Gabriel River watershed, and parts of the LA River watershed, including the Rio Hondo subwatershed

#### ***Geographic Area Described***

The Main San Gabriel Basin lies in eastern Los Angeles County. The hydrologic basin or subwatershed coincides with a portion of the upper San Gabriel River watershed, and the aquifer or groundwater basin underlies most of the San Gabriel Valley. The groundwater basin is bounded by the San Gabriel Mountains to the north, San Jose Hills to the east, Puente Hills to the south, and by a series of hills and the Raymond Fault to the west. The watershed is drained by the San Gabriel River and the Rio Hondo, a tributary of the Los Angeles River. Surface area of the groundwater basin is approximately 167 square miles.

#### ***Type of Plan<sup>2</sup>***

Groundwater management plan

#### ***Brief Summary of Plan Intent***

The intent of this plan is to outline the activities, which the Watermaster will carry out over the next five years to preserve and restore the quality of groundwater in the Main San Gabriel Basin. In 1991, the Los Angeles County Superior Court granted the Watermaster the new, additional authority to control pumping for water quality purposes. The new responsibilities included developing this Five-Year Water Quality and Supply Plan, updating it annually, and submitting it to the California Regional Water Quality Control Board, Los Angeles Region.

One of the primary purposes of the Five-Year Plan is to identify wells in the Basin that are vulnerable to contamination by volatile organic compounds (VOC). In order to project which wells may be vulnerable over the next five years, the Watermaster reviews water quality tests performed on each well, regional water quality conditions and contaminant migration patterns.

#### ***Brief description of how this plan supports an IRWM Plan.***

The plan addresses current water supply conditions and current water quality conditions in the Main San Gabriel Basin. These provide the basis for a variety of groundwater basin monitoring and cleanup programs that are coordinated and implemented by the Watermaster. Monitoring involves measuring groundwater levels, groundwater quality, and groundwater flow, all of which constitute core aspects for an IRWM Plan. The Plan also projects groundwater demands over the next five years based on reports from each Producer that are submitted to the Watermaster. The Watermaster continuously refines its understanding of the groundwater Basin in order to increase the safe yield of the Basin, and protect and improve local water quality, and this understanding is reflected in the Five-Year Plan.

### 3.06 Five-Year Water Quality and Supply Plan

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

- 1.) Monitor groundwater supply and quality
- 2.) Develop projections of future groundwater supply and quality
- 3.) Review and cooperate on cleanup projects, and provide technical assistance to other agencies;
- 4.) Assure that pumping does not lead to further degradation of water quality in the Basin;
- 5.) Address perchlorate, n-nitrosodimethylamine (NDMA), and other emerging contaminants in the Basin;
- 6.) Develop a cleanup and water supply program in compliance with the USEPA Operable Unit Superfund sites; and
- 7.) Coordinate and manage the design, permitting, construction, and performance evaluation of the BPOU cleanup and water supply plan.

*Stakeholder Involvement* - during preparation of Plan<sup>4</sup>

Dozens of water agencies. Among them are cities, public water districts, private utilities, and mutual water companies.

*This Plan should be considered:*

A primary document providing organizational structure to water management strategies

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “**Required Categories to be addressed in the IRWM Plan**” are shown in ***Bold Italics\**** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

### 3.06 Five-Year Water Quality and Supply Plan

Table 1:

	<b>Five-Year Water Quality and Supply Plan</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	Entire five year plan is focused on maintaining water supply reliability, especially as it involves water quality monitoring and cleanup activities designed to preserve and restore the quality of water in the Main San Gabriel Basin.	
<b><i>Groundwater management*</i></b>	Managing the groundwater supply of the Main San Gabriel Basin is the mission of the Watermaster, and this strategy is a core element of this report.	
<b><i>Conjunctive use</i></b>	Coordination of surface water supplies in canyon reservoirs and groundwater supplies in the Basin are discussed.	
<b><i>Storm water capture and management*</i></b>	The report addresses local stormwater capture levels for each year, as this drives all other water supply parameters, including projected groundwater levels and imported water needs. However, implementation of stormwater capture strategies is not the responsibility of the Watermaster.	
<b><i>Surface Storage</i></b>	See conjunctive use description; surface storage is not a primary strategy for the Watermaster	
<b><i>Water quality protection and improvement*</i></b>	Current water quality conditions in Chapter III. Water quality monitoring, protection, and improvement activities outlined in detail in Chapter IV.	
<b><i>NPS pollution control</i></b>	Non-point source pollution control is not a focus of this water quality improvement plan. Instead, it is focused on water quality cleanup programs needed because of past failures to put in place pollution control programs. 23.	
<b><i>Flood management*</i></b>	Not mentioned	
<b><i>Water conservation*</i></b>	Not mentioned	

### 3.06 Five-Year Water Quality and Supply Plan

	<b>Five-Year Water Quality and Supply Plan</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Imported water</i>	Discusses the need to increase imported water to offset the loss of groundwater from wells shut down due to contamination; cleanup efforts will help to reduce this reliance.	
<i>Water recycling*</i>	The Watermaster coordinates and provides technical assistance on many of the key cleanup projects in the Basin. This Plan provides detailed descriptions of these cleanup programs including water treatment facilities.	
<i>Desalination</i>	Not addressed	
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		
<b><i>Ecosystem Restoration*</i></b>		
<b><i>Wetlands enhancement and creation*</i></b>		
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>		
<i>Land use planning</i>		
<i>Watershed planning</i>		

**\* Required Categories to be addressed in the IRWM Plan**  
*Optional Categories*

## **3.06 Five-Year Water Quality and Supply Plan**

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

The document addresses current water supply and water quality conditions in the Main San Gabriel Basin. These provide the basis for a variety of groundwater basin monitoring and cleanup programs that are coordinated and implemented by the Watermaster.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

The intent of this plan is to outline the activities, which the Watermaster will carry out over the next five years to preserve and restore the quality of groundwater in the Main San Gabriel Basin.

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

A key purpose of the Plan is to identify wells in the Basin that are vulnerable to contamination. In order to project which wells may be vulnerable over the next five years, the Watermaster reviews water quality tests performed on each well, regional water quality conditions and contaminant migration patterns.

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Document does not provide substantial information in this topic area

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

The monitoring described in the Plan involves measuring groundwater levels, groundwater quality and groundwater flow to provide a solid technical planning framework. The Plan also projects groundwater demands over the next five years based on reports from each Producer, and continually refines its understanding of the groundwater Basin in order to increase safe yield and protect/improve local water quality. This allows for midcourse corrections and opportunity to assess performance.

**Data Management** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Data management is integral to the Plan since it serves as a five-year workplan for the Watermaster.

**Relation to Local Planning –Is the Plan coordinated with local planning and management?**<sup>11</sup>

The Plan is tied to local planning and management in that it serves as a directive, specifying and projecting activities to be carried out by the Watermaster.

### **End of Document Review**

## 3.06 Five-Year Water Quality and Supply Plan

### Footnotes From Guidelines

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<sup>1</sup> Subwatersheds: Compton Creek, Lower LA River, Coyote Creek, Rio Hondo, Lower San Gabriel, Upper San Gabriel (See Appendix A)

<sup>2</sup> Watershed management plan, Integrated resource plan, Urban water management plan, Habitat conservation plan, Multi-species conservation plan, Groundwater management plan, Floodplain management plan, Regional drinking water quality plan, or other regional planning efforts.

<sup>3</sup> The Plan must address major water related objectives and conflicts within the region, including, at a minimum, water supply, groundwater management, ecosystem restoration, and water quality.

<sup>4</sup> Is a stakeholder involvement process described in the plan and did it have an effect on the outcome of the plan? Is there a list of agencies or organizations that participated? Are there partnerships proposed or planned?

<sup>5</sup> Include a discussion of the added benefits of integration of multiple water management strategies.

<sup>6</sup> Provide brief description of approach to implementation and types of projects recommended.

If the plan includes projects with a high degree of readiness (CEQA Certified and 10% matching funds available...) which might be candidates for an implementation grant, provide more information such as the agency(ies) responsible for project implementation and linkages or interdependence between projects. As projects rise to the top of the priority list (after these plan evaluations), the project must demonstrate economic and technical feasibility on a programmatic level. Identify the current status of each element of the Plan, such as existing infrastructure, feasibility, pilot or demonstration project, design completed, etc. Include timelines for all active or planned projects and identify the institutional structure that will ensure Plan implementation.

<sup>7</sup> Include an evaluation of potential impacts within the region and in adjacent areas from Plan implementation. Identify the advantages of the regional plan; including a discussion of the added benefits of the regional plan as opposed to individual local efforts. Identify which objectives necessitate a regional solution. Identify interregional benefits and impacts. Describe the impacts and benefits to environmental justice or disadvantaged communities. Include an evaluation of impacts/benefits to other resources, such as air quality or energy.

<sup>8</sup> Disadvantaged community is described as having a Median Household Income below 80% of the average (MHI less than \$37,994).

<sup>9</sup> Technical Analysis and Plan Performance

Is there a discussion of data, technical methods, and analyses used in selection of water management strategies? Were data gaps identified? Are there measures used to evaluate project/plan performance, monitoring systems that will be used to gather performance data, and mechanisms to adapt project operation and plan implementation based on performance data collected?

<sup>10</sup> Does the Plan include mechanisms by which data will be managed and disseminated to stakeholders and the public? Was a discussion of how data collection will support statewide data needs provided? Did the Plan assess the state of existing monitoring efforts, both for water supply and water quality? If applicable, did the IRWM Plan discuss the integration of data into the SWRCB's Surface Water Ambient Monitoring and Groundwater Ambient Monitoring Assessment Programs?

<sup>11</sup> Did the Plan discuss how the identified actions, projects, or studies relate to planning documents established by local agencies? Does the Plan demonstrate coordination with local land-use planning decision-makers? Did the Plan discuss how local agency planning documents relate to the IRWM water management strategies and the dynamics between the two levels of planning documents?

### **3.07 Three Valleys Water Management Plan - Review**

<b><i>IRWM Plan Type</i></b>	<b>Primary Water Document</b>
<b><i>Name of Plan</i></b>	Three Valleys Water Management Plan
<b><i>Preparing Agency or Entity</i></b>	Three Valleys Municipal Water District, Claremont
<b><i>Other Agency Coordination</i></b>	Appendix B Public Participation lists all cities, MWD contacts, water districts, and other partners such as SCE and California State Polytechnic University, Pomona.
<b><i>Date of the Plan</i></b>	December 2000
<b><i>Contact Information</i></b>	Richard Hansen, GM, Three Valleys MWD Plan provided by Don Schroeder, CDM
<b><i>Reviewer</i></b>	Wendy Katagi, CDM
<b><i>Peer Review</i></b>	

#### ***Subwatershed(s) Addressed<sup>1</sup>***

Upper San Gabriel River Subwatershed and Walnut Creek Subwatershed

#### ***Geographic Area Described***

TVMWD's boundaries encompass approximately 133.3 square miles of East San Gabriel Valley, Pomona Valley, and Walnut Valley. Area includes municipalities of Azusa, Covina, Glendora, Industry, La Verne, Pomona, and West Covina. Its boundaries are contiguous with five different municipal water districts, four of which are member agencies of MWD.

#### ***Type of Plan<sup>2</sup>***

Urban Water Management Plan

#### ***Brief Summary of Plan Intent***

The UWMP provides a 20-year vision of the water needs of the Three Valleys region, and the actions that may be taken to ensure a reliable supply of water to the region.

#### ***Brief description of how this plan supports an IRWM Plan.***

Three Valleys sells imported water wholesale to several agencies in the communities of suburban eastern Los Angeles County, and plays an important regional water planning role in that area.

The 2000 Urban Water Management Plan illustrates TVMWD's water demands as well as sources of current and future water supply, projected water uses, water conservation measures, water rate structure, and drought management programs. The UWMP also highlights water conservation and water management activities that TVMWD currently conducts, or is forecasted to conduct, within the next five years on a regional basis in cooperation with its member agencies. Through its implementation of conservation Best Management Practices, as well as the development of a Local Resources Development Program in cooperation with other local water suppliers, TVMWD has become increasingly involved with water conservation activities.

### 3.07 Three Valleys Water Management Plan - Review

The TVUWMP will also incorporate elements from both the Metropolitan Water District (MWD) Integrated Resources Plan and the TVMWD Regional Water Plan. Furthermore, the proposed MWD Water Surplus and Drought Management (WSDM) Plan is discussed in reference to TVMWD's own water shortage contingency plan. By synthesizing all of the available information, the TV UWMP provides an effective tool for the district, serving as both a statistical reference as well as an outline of current and future water resource alternatives within the service area.

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

TVMWD's Mission Statement is to supplement and enhance local water supplies to meet customers' needs for adequate, high quality, reliable water in a cost-effective as well as environmentally sound manner. Plan goals:

1. Proactively investigating the feasibility of developing resources to benefit the region.
2. Optimizing the value of existing and potential future water resources
3. Accounting for all activities
4. Providing equity and fairness to all retailers
5. Reducing dependence upon imported water
6. Promoting conservation efforts

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

TVMWD promoted stakeholder involvement through public review of the plan, public hearing, and notification. Public comments were incorporated into the plan.

*This plan should be considered:*

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "*Required Categories to be addressed in the IRWM Plan*" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.



### 3.07 Three Valleys Water Management Plan - Review

	<i>Three Valleys Water Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	Chapter 2 water use, demand, trends; Ch 4 existing supply/mgt; 4.4 comparison of supply/demand	Water Surplus and Drought Management Plan (appendix C); Three Valleys Regional Water Plan-Final Report June 2000 (Appendix D)
<b><i>Groundwater management*</i></b>	4.1.1 groundwater sources 6.1 alternative groundwater and 6.1.1	
<i>Conjunctive use</i>	4.3.2conjunctive use programs; 6.1.2 storage and conjunctive use alternatives	
<b><i>Storm water capture and management*</i></b>		
<i>Surface Storage</i>	4.1.2 surface water sources; 6.1 alternative surface water sources	
<b><i>Water quality protection and improvement*</i></b>	4.2 quality of current water supply	
<i>NPS pollution control</i>		
<b><i>Flood management*</i></b>		
<b><i>Water conservation*</i></b>	Ch 3 conservation and public affairs programs; conservation credits program, landscape conservation; protector del agua (bilingual classes); retrofits; education programs in elementary and high school; public affairs; implementation of BMPs; 6.2 alts for water conservation	
<i>Imported water</i>	Fig 2-1, 2-2; 4.1.4 purchases; 4.3 water supply mgt (imported supply)	
<b><i>Water recycling*</i></b>	4.1.3 recycled water sources; 4.3.3 reclamation programs; 6.1 alternative recycled water sources; 6.1.3	
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		

### 3.07 Three Valleys Water Management Plan - Review

	<i>Three Valleys Water Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		
<b>Category III LAND USE - RECREATION</b>		
<i>Recreation and public access*</i>		
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b>OTHER</b>		
<i>Water transfers/exchanges</i>	4.3.1 transfers and exchanges assist in sharing local resources; 6.1.4 water transfers	
<i>Water shortage contingency plan</i>	Chapter 5, drought management plan	

*\* Required Categories to be addressed in the IRWM Plan  
Optional Categories*

#### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

TVMWD's water demands as well as sources of current and future water supply, projected water uses, water conservation measures, water rate structure, and drought management programs provide a strong baseline for integration of the following water management strategies: water supply reliability, groundwater management, conjunctive use, surface storage, water quality and protection, water conservation and imported water. Because TVMWD is closely connected with the planning departments of the cities within its service area, land use and local planning is also integrated.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

### **3.07 Three Valleys Water Management Plan - Review**

This plan is implementing a 20-year vision as described above. The referenced studies noted above also supply guidance needed for forecasting supply/demand and continuing to integrate measures for conservation and drought management noted above.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Appears great benefit is gained from TVMWD's involvement with local agencies and proactive conservation measures as well as fundamental water supply reliability measures.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Not well covered.

***Technical Analysis and Plan Performance*** - *is based on sound scientific and technical analysis and includes measures to assess performance*<sup>9</sup>.

Appears to be well covered.

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Appears to be well covered based on references

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>11</sup>

As stated above, this is a strength of the plan.

### **End of Document Review**

### **3.08 OC Stormwater Program 2003 Drainage Area Management Plan**

<b><i>IRWD Plan Type</i></b>	<b>Primary Water Document (Supporting)</b>
<b><i>Name of Plan</i></b>	Water Replenishment District of Southern California Strategic Plan
<b><i>Preparing Agency or Entity</i></b>	County of Orange, Public Facilities and Resources Department
<b><i>Other Agency Coordination</i></b>	Orange County Flood Control District and Incorporated Cities
<b><i>Date of the Plan</i></b>	July 1, 2003
<b><i>Contact Information</i></b>	Eileen Takata 714.834.4786 Eileen.Takata@rdmd.ocgov.com

***Reviewer*** Jennifer Gronberg

***Peer Review***

#### ***Subwatershed(s) Addressed<sup>1</sup>***

Coyote Creek

#### ***Geographic Area Described***

The Plan address the 500,000 acres of Orange County

#### ***Type of Plan<sup>2</sup>***

Regional Water Quality Plan

#### ***Brief Summary of Plan Intent***

The specific water pollutant control plan elements of the Orange county NPDES Stormwater program were originally documented in the 1993 DAMP, and the main objective was to fulfill the commitment of the Permittees to present a plan that satisfies NPDES permit requirements and to evaluate the impacts of urban stormwater discharges on receiving waters. The DRAFT 2000 DAMP was completed to incorporate the programs developed since 1993 and provide a programmatic foundation for future activities, providing a wide range of BMPs. The 2003 DAMP, which is has enhanced the existing program elements from the 2000 DAMP as well as developed additional ones, has been redesigned to serve as the foundation for a series of model programs, local implementation plans, and watershed implementation plans. It was developed through a process that involved public and private sector input and public review through CEQA.

#### ***Brief description of how this plan supports an IRWM Plan.***

The DAMP supports the purpose of the IRWMP in that it addresses the water quality issues, goals and regulatory requirements within the region.

#### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

1. Main objectives are to fulfill the commitment of the Permittees to present a plan that satisfies NPDES permit requirements and to evaluation the impacts of urban stormwater discharges on receiving waters.

### 3.08 OC Stormwater Program 2003 Drainage Area Management Plan

2. Public policy issues – intent is to proceed in a measured, deliberate way designed to obtain the maximum benefit for the resources expended and to secure maximum public awareness, understanding and support.
3. Assure an open planning process, with ample opportunity for public participation and meaningful consideration of the input obtained.
4. Implement a strategic and comprehensive public education program as a central program component.
5. Maintain the integrity of the receiving waters and their ability to sustain beneficial uses.
6. Prioritization of initiatives and analyze and evaluate the existing and future baseline monitoring program data
7. Continue to evaluate opportunities to incorporate stormwater control features into existing flood control structure sin each orange county watershed as they are designed and /or identified through the water quality planning process
8. Continues to approach water quality management program on the same regional watershed basis, guided by the priorities as identified through the water quality monitoring program
9. Investigate and verify the effectiveness of the various treatment control BMP designs through experience, research and demonstration projects
10. Vigorously detect and eliminate illegal discharges/illicit connections into the storm drain system
11. Participate in various regional research and/or monitoring projects which provide unique opportunities to gather valuable information about he impacts on these habitats and place them in a larger regional context

#### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

As stated in objective 3 above, the public was involved and are continually to be involved in the plan.

#### ***This plan should be considered:***

**A supporting document** clarifying goals, objectives, or specific projects.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

### 3.08 OC Stormwater Program 2003 Drainage Area Management Plan

	<i>OC Stormwater Program 2003 Drainage Area Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I</i></b> <b><i>WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>		
<b><i>Groundwater management*</i></b>		
<i>Conjunctive use</i>		
<b><i>Storm water capture and management*</i></b>	Section 3, Section 8	
<i>Surface Storage</i>		
<b><i>Water quality protection and improvement*</i></b>	Water quality is addressed throughout the document. Mainly Sections 5, 6, 8	
<i>NPS pollution control</i>	Sections 4, 6, 8	
<b><i>Flood management*</i></b>		
<b><i>Water conservation*</i></b>	Section 8 p. 33	
<i>Imported water</i>		
<b><i>Water recycling*</i></b>		
<i>Desalination</i>		
<b><i>Category II</i></b> <b><i>HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>	Section 5, page 12 on	
<b><i>Ecosystem Restoration*</i></b>		
<b><i>Wetlands enhancement and creation*</i></b>	Section 3 p. 8	
<b><i>Category III</i></b> <b><i>LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>		

### 3.08 OC Stormwater Program 2003 Drainage Area Management Plan

	<i>OC Stormwater Program 2003 Drainage Area Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b><i>OTHER</i></b>		

\* *Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

**End of Document Review**

### **3.09 County of Los Angeles Discharges**

<b><i>IRWM Plan Type</i></b>	<b>Primary Water Document</b>
<b><i>Name of Plan</i></b>	County of Los Angeles Discharge Permits
<b><i>Preparing Agency or Entity</i></b>	LA RWQCB
<b><i>Other Agency Coordination</i></b>	
<i>See stakeholder involvement description below.</i>	
<b><i>Date of the Plan</i></b>	December 2001
<b><i>Contact Information</i></b>	LA RWQCB Shirley Birosik Plan provided on RWQCB website

***Reviewer*** Wendy Katagi, CDM

***Peer Review***

#### ***Subwatershed(s) Addressed<sup>1</sup>***

All watersheds within LA County, namely SGR and Lower LA River study area except for Coyote Creek which is in Orange County.

#### ***Geographic Area Described***

County of LA, 84 incorporated cities, and unincorporated LA County areas.

Type of Plan: Permit

#### ***Brief Summary of Plan Intent***

The intent of the NPDES permit is to develop, achieve, and implement a timely , comprehensive, cost-effective storm water pollution control program to reduce the discharge of pollutants in storm water to the Maximum Extent Practicable (MEP) from the permitted areas in the County of LA to the waters of the U.S. subject to the Permittees' jurisdiction.

***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>2</sup>.***

#### **Stakeholder Involvement - during preparation of Plan<sup>3</sup>**

p. 25 Includes watershed management committees to facilitate cooperation and exchange of information among permittees.

As stated on p. 17, the Regional Board notified all permittees, interested agencies and persons of its intent to issue waste discharge requirements and to submit comments and recommendations to the Regional Board. Regional Board has conducted public workshops and coordinated with the LA County Flood Control District, County of LA and other municipalities regarding this permit.



### 3.09 County of Los Angeles Discharges

*This plan should be considered:*

A **primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "*Required Categories to be addressed in the IRWM Plan*" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

### 3.09 County of Los Angeles Discharges

	<i>County of LA Discharge Permits</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	Chapter 2 water use, demand, trends; Ch 4 existing supply/mgt; 4.4 comparison of supply/demand	Water Surplus and Drought Management Plan (appendix C); Three Valleys Regional Water Plan-Final Report June 2000 (Appendix D)
<b><i>Groundwater management*</i></b>	4.1.1 groundwater sources 6.1 alternative groundwater and 6.1.1	
<i>Conjunctive use</i>	4.3.2conjunctive use programs; 6.1.2 storage and conjunctive use alternatives	
<b><i>Storm water capture and management*</i></b>		
<i>Surface Storage</i>	4.1.2 surface water sources; 6.1 alternative surface water sources	
<b><i>Water quality protection and improvement*</i></b>	4.2 quality of current water supply	
<i>NPS pollution control</i>		
<b><i>Flood management*</i></b>		
<b><i>Water conservation*</i></b>	Ch 3 conservation and public affairs programs; conservation credits program, landscape conservation; protector del agua (bilingual classes); retrofits; education programs in elementary and high school; public affairs; implementation of BMPs; 6.2 alts for water conservation	
<i>Imported water</i>	Fig 2-1, 2-2; 4.1.4 purchases; 4.3 water supply mgt (imported supply)	
<b><i>Water recycling*</i></b>	4.1.3 recycled water sources; 4.3.3 reclamation programs; 6.1 alternative recycled water sources; 6.1.3	
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>	pp. 34, 42	

### 3.09 County of Los Angeles Discharges

	<i>County of LA Discharge Permits</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Ecosystem Restoration*</i>	p. 35	
<i>Wetlands enhancement and creation*</i>	pp. 114-15	
<b><i>Category III LAND USE - RECREATION</i></b>		
<i>Recreation and public access*</i>		
<i>Land use planning</i>	pp. 41, 43-47	
<i>Watershed planning</i>	pp. 13 (#21 promotes watershed mgt approach) 28, 35	
<b><i>OTHER</i></b>		
<i>Water transfers/exchanges</i>	4.3.1 transfers and exchanges assist in sharing local resources; 6.1.4 water transfers	
<i>Water shortage contingency plan</i>	Chapter 5, drought management plan	

*\* Required Categories to be addressed in the IRWM Plan  
Optional Categories*

#### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>4</sup>.

This permit integrates the following WMPs: stormwater capture and management, water quality protection and improvement, NPS Pollution control, and water conservation. In addition, the permit utilizes a watershed management approach with attention to habitat, land use, recreation, stakeholder involvement, and education.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>5</sup>.

As stated on p. 15, the permit has been structured with implementation directives and measures so that Permittees can respond to provisions of the permit.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>6</sup>.

### **3.09 County of Los Angeles Discharges**

*Disadvantaged Communities* – Discuss how this plan serves disadvantaged communities<sup>7</sup>.

p. 22 and 27: Principal permittee is required to develop a strategy to educate ethnic communities and business through culturally effective methods as part of the public education program

*Technical Analysis and Plan Performance* - is based on sound scientific and technical analysis and includes measures to assess performance<sup>8</sup>.

*Data Management* – Provision for management of data generated during plan development and implementation<sup>9</sup>. **Each permittee is required to maintain a watershed-based inventory or database of all facilities within its jurisdiction that are critical sources of storm water pollution. (p. 28)**

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>10</sup>  
References Storm Water Quality management Program (SQMP) implementation including BMPs, etc.

Includes watershed management committees to facilitate cooperation and exchange of information among permittees.

As stated on p. 17, the Regional Board notified all permittees, interested agencies and persons of its intent to issue waste discharge requirements and to submit comments and recommendations to the Regional Board. Regional Board has conducted public workshops and coordinated with the LA County Flood Control District, County of LA and other municipalities regarding this permit.

#### **End of Document Review**

### **3.10 Waste Discharge Requirements for Municipal Storm Water**

<b><i>IRWM Plan Type</i></b>	<b>Primary Water Document</b>
<b><i>Name of Plan</i></b>	Waste Discharge Requirements for Municipal Storm Water
<b><i>Preparing Agency or Entity</i></b>	California Regional Water Quality Control Board
<b><i>Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	June 20, 1999
<b><i>Contact Information</i></b>	

***Reviewer*** Teresa Raine, CDM

***Peer Review***

***Subwatershed(s) Addressed<sup>1</sup>***

Lower LA River

***Geographic Area Described***

City of Long Beach

***Type of Plan<sup>2</sup>***

Storm Water Management: National Pollutant Discharge Elimination System Permit

***Brief Summary of Plan Intent***

This permit establishes the City of Long Beach's discharge requirements and as well details their Water Management Program and Monitoring Program.

***Brief description of how this plan supports an IRWM Plan.***

Provides details for storm water management and water quality criteria for discharges from the Long Beach Area.

***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

As required by the permit regulations, the permit details and approves:

Long Beach's waste discharge requirements

Long Beach Storm Water Management Plan (LBSWMP)

Long Beach Monitoring Program

The Regional Board determined that the objectives of the plan are met in the permit and when full implemented will "be consistent with the statutory standard of Maximum Extent Practicable (MEP).

### 3.10 Waste Discharge Requirements for Municipal Storm Water

#### Stakeholder Involvement - during preparation of Plan<sup>4</sup>

Public involvement (detailed on page 5) included notification to stakeholders and a public hearing and comment period in accordance to the permit.

Public Agency Activities are detailed as part of the permit on pgs. 19-20

Public Information and Participation is detailed as part of the permit on pgs. 20-22

#### *This plan should be considered:*

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

### 3.10 Waste Discharge Requirements for Municipal Storm Water

	<i>Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I</b> <b>WATER MANAGEMENT</b>		
<i>Water Supply Reliability*</i>		
<i>Groundwater management*</i>		
<i>Conjunctive use</i>		
<i>Storm water capture and management*</i>	<p>This is the primary focus of the document.</p> <p>(pgs 8-11) Storm water management requirements</p> <p>(pgs 11- 14) Monitoring and Reporting Requirements</p> <p>(pgs 16-17) Plan development requirements, including BMPs</p>	
<i>Surface Storage</i>		
<i>Water quality protection and improvement*</i>		Water quality is briefly touched on as it concerns the receiving waters to the MS4 (pgs 6-8)
<i>NPS pollution control</i>		
<i>Flood management*</i>		
<i>Water conservation*</i>		
<i>Imported water</i>		
<i>Water recycling*</i>		
<i>Desalination</i>		
<b>Category II</b> <b>HABITAT IMPROVEMENT</b>		
<i>Environmental and habitat protection and improvement*</i>		
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and</i>		

### 3.10 Waste Discharge Requirements for Municipal Storm Water

	<i>Waste Discharge Requirements for Municipal Storm Water and Urban Runoff Discharges</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>creation*</i>		
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>		
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b><i>OTHER</i></b>		

*\* Required Categories to be addressed in the IRWM Plan  
Optional Categories*

#### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

Management of storm water runoff and water quality are both important strategies in an effort to maintain the water quality of water supplies and habitats

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

The storm water management plan and BMPs referenced in the permit are part of the on-going plan being implemented by the City of Long Beach.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Not well covered.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Disadvantaged communities are not directly discussed here in this permit.

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Not well covered.



### **3.10 Waste Discharge Requirements for Municipal Storm Water**

*Data Management* – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Monitoring and reporting requirements are detailed on pages 11-14 of the permit.

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>11</sup>

As required by the permit, stakeholder involvement has included notification in addition to the public meetings, to local management groups.

#### **End of Document Review**

### **3.11 Watershed-Wide Monitoring Program for the San Gabriel River**

<b><i>IRWM Plan Type</i></b>	<b>Primary Water Document</b>
<b><i>Name of Plan</i></b>	Watershed-Wide Monitoring Program for the San Gabriel River
<b><i>Preparing Agency or Entity</i></b>	County Sanitation Districts of Los Angeles
<b><i>Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	December 30, 2004
<b><i>Contact Information</i></b>	

***Reviewer*** Carrie Buckman, CDM

***Peer Review***

#### ***Subwatershed(s) Addressed<sup>1</sup>***

San Gabriel

#### ***Geographic Area Described***

San Gabriel River Watershed is in the eastern portion of Los Angeles County. It is bound by San Gabriel Mountains to the north, San Bernadino Mountains to the east, the watershed divide with the Los Angeles River to the west, and the Pacific Ocean to the south. The headwaters originate in the San Gabriel Mountains and terminate at the twin river delta of San Pedro Bay.

#### ***Type of Plan<sup>2</sup>***

Monitoring Program (not really a plan – it documents the program)

#### ***Brief Summary of Plan Intent***

Provide a framework for monitoring at the watershed scale and satisfy NPDES permit regulations

#### ***Brief description of how this plan supports an IRWM Plan.***

This program provides a comprehensive monitoring effort for the San Gabriel Watershed, which can contribute to provide data and identify new monitoring or priorities.

#### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

The workgroup identified the 5 core questions as goals. The goal is to develop a monitoring program that answers five core management questions:

1. What is the condition of streams in the watershed?
2. Are conditions at areas of unique interest getting better or worse?
3. Are receiving waters near discharges meeting water quality objectives?
4. Is it safe to swim?
5. Are locally caught fish safe to eat?

### 3.11 Watershed-Wide Monitoring Program for the San Gabriel River

Carrie's note: The Program is structured around these 5 questions, but they do not constitute typical objectives. They could be restructured to be more typical.

#### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

Workgroup included regulatory, regulated, environmental, and research organizations. Monitoring Program has high degree of consensus (see pg. i).

#### ***This plan should be considered:***

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

### 3.11 Watershed-Wide Monitoring Program for the San Gabriel River

	<i>Watershed-wide Monitoring Program for San Gabriel River</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<i>Water Supply Reliability*</i>		
<i>Groundwater management*</i>		
<i>Conjunctive use</i>		
<i>Storm water capture and management*</i>		
<i>Surface Storage</i>		
<b><i>Water quality protection and improvement*</i></b>	<p>The plan includes a section on existing monitoring and a section to address each of the 5 core management questions.</p> <p>Section 3 – Defines existing monitoring and companion document, “Summary of Existing Monitoring Programs in the San Gabriel Watershed.”</p> <p>Section 4 – Monitor stream conditions, including bioassessment, aquatic toxicity, and water chemistry.</p> <p>Section 5 – Monitor areas of unique interest, including freshwater and estuary portions.</p> <p>Section 6 – Monitor point source discharges, including bioassessment, aquatic toxicity, and water chemistry.</p> <p>Section 7 – Monitor sites with heavy recreational, using E. Coli and fecal coliform as indicators.</p> <p>Section 8 – Monitor frequently fished sites, including tissues concentrations of key chemicals.</p>	
<i>NPS pollution control</i>	The program focuses on monitoring water quality, which also helps define non-point pollution	
<i>Flood management*</i>		
<i>Water conservation*</i>		
<i>Imported water</i>		

### 3.11 Watershed-Wide Monitoring Program for the San Gabriel River

	<i>Watershed-wide Monitoring Program for San Gabriel River</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Water recycling*</i>		
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		
<b><i>Ecosystem Restoration*</i></b>		
<b><i>Wetlands enhancement and creation*</i></b>		
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>		
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b><i>OTHER</i></b>		

*\* Required Categories to be addressed in the IRWM Plan*

*Optional Categories*

#### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

Program focuses on water quality.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

The Program provides general implementation recommendations and preliminary cost estimates (see pg. 10).

### **3.11 Watershed-Wide Monitoring Program for the San Gabriel River**

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

The Program does not explicitly define impacts and benefits; however, impacts from a monitoring program would likely be negligible and benefits would be an increase in data and understanding.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Not well covered.

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Yes. Plan contains some details

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Not well covered.

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>11</sup>

Program includes coordination with other monitoring programs, including the Surface Water Ambient Monitoring Program and monitoring efforts of the Friends of the San Gabriel River and the San Gabriel Mountains Regional Conservancy (see Pg. 9)

#### **End of Document Review**



### 3.12 Hydraulic/Hydrologic Model of La River and San Gabriel River Systems

As a method of urban hydrology, the rational method falls short in several ways. First, the method does not produce a hydrograph, only a single flow rate. Second, the rational method does not account for changing (time dependent) conditions such as soil condition or rainfall intensity. Finally, results are not very accurate for large areas. Due to these problems, MODRAT contains the following modifications:

- Rainfall intensity,  $i$ , is a variable dependent on rainfall frequency, storm time, and time of concentration. The variation of  $i$  is represented by a temporal distribution curve (rainfall mass curve).
- $C$ , the runoff coefficient, varies with soil type, rainfall intensity, and imperviousness.
- The time variation of  $C$  and  $i$  allow the flow,  $Q$ , to vary with time, thus producing a hydrograph. The area under the hydrograph represents the total volume of flow from a watershed, a variable which the rational method does not provide.
- Hydrographs may be computed for a number of subareas, for each lateral to the main channel, and for each collection point on the main channel. These hydrographs are routed and combined as computation progresses downstream.

The above modifications to the rational method allowed for the computation of storm hydrographs for any size watershed. With such improvements, the modified rational method (MODRAT) has been adopted by LACDPW as the preferred method of hydrologic analysis.

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

Not covered

*This plan should be considered:*

**A primary document** providing organizational structure to water management strategies.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.



### 3.12 Hydraulic/Hydrologic Model of La River and San Gabriel River Systems

	<i>Hydrologic Model of LA River and San Gabriel River</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>	The MODRAT provides an method for calculating runoff flows more accurately/dynamically than the traditional rational method allowing for a better understanding of available runoff.	
<b><i>Groundwater management*</i></b>		
<i>Conjunctive use</i>		
<b><i>Storm water capture and management*</i></b>	The MODRAT provides an method for calculating runoff flows more accurately/dynamically than the traditional rational method.	
<i>Surface Storage</i>		
<b><i>Water quality protection and improvement*</i></b>		
<i>NPS pollution control</i>		
<b><i>Flood management*</i></b>	The MODRAT provides an method for calculating runoff flows more accurately/dynamically than the traditional rational method.	
<b><i>Water conservation*</i></b>		
<i>Imported water</i>		
<b><i>Water recycling*</i></b>		
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		
<b><i>Ecosystem Restoration*</i></b>		
<b><i>Wetlands enhancement and</i></b>		

### 3.12 Hydraulic/Hydrologic Model of La River and San Gabriel River Systems

	<i>Hydrologic Model of LA River and San Gabriel River</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>creation*</i>		
<b>Category III LAND USE - RECREATION</b>		
<b>Recreation and public access*</b>		
<i>Land use planning</i>	The MODRAT accounts for soil conditions and how they relate to over all flow.	
<i>Watershed planning</i>	The MODRAT accounts for a variety of subareas with different soil type and imperviousness allowing for more accurate calculation of run-off flow.	
<b>OTHER</b>		

\* **Required Categories to be addressed in the IRWM Plan**  
*Optional Categories*

#### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

Not well covered

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

Not well covered

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Not well covered

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Not well covered

### **3.12 Hydraulic/Hydrologic Model of La River and San Gabriel River Systems**

*Technical Analysis and Plan Performance - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.*

This is a technical analysis providing a methodology for the hydrologic analysis of the LA River.

*Data Management* – Provision for management of data generated during plan development and implementation<sup>10</sup>.

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>11</sup>

**End of Document Review**

# Section 4

## Primary Land Use and Habitat Documents

4.01 Southern California Wetlands Recovery Regional Strategy

4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

4.03 Greenprinting LA Initiative

4.04 Missing Linkages, South Coast Wildlands Project

4.05 Rio Hondo Vision Plan (Emerald Necklace Concept)

4.06 Rim of the Valley Trails Corridor Master Plan

## 4.01 Southern California Wetlands Recovery Project Regional Strategy

<i>IRWM Plan Type</i>	<b>Primary Land Use and Habitat Document</b>
<i>Name of Plan</i>	Southern California Wetlands Recovery Project Regional Strategy
<i>Preparing Agency or Entity</i>	California Coastal Conservancy
<i>Other Agency Coordination</i>	Broad-based partnership of 17 state and federal agencies working in collaboration with scientists, local governments, environmental organizations, business leaders and educators
<i>Date of the Plan</i>	November, 2001
<i>Contact Information</i>	David Hughs 510-286-0736 <a href="http://www.coastalconservancy.ca.gov/scwrp">www.coastalconservancy.ca.gov/scwrp</a>
<i>Reviewer</i>	J. Eulate, MIG
<i>Subwatershed(s) Addressed<sup>1</sup></i>	All

### ***Geographic Area Described***

The strategies apply to the southern California region's coastal wetlands and watersheds from Point Conception (in Santa Barbara Co.) south to the U.S.-Mexico border. This includes the state's southernmost coastal counties: San Diego, Orange, Los Angeles, Ventura and Santa Barbara. Counties relevant to our studies include: Orange and Los Angeles.

### ***Type of Plan<sup>2</sup>***

Wetlands Recovery Project – Regional Strategy

### ***Brief Summary of Plan Intent***

The Plan articulates long-term goals and specific implementation strategies to guide efforts of the Wetlands Recovery Project (WRP): to increase pace and effectiveness of wetland recovery in the region; to re-establish a mosaic of functioning wetland riparian systems that support a diversity of species, while also providing refuge for humans in the landscape. The WRP employs three primary strategies to recover wetlands: (1) acquisition of property from willing sellers, (2) restoration and enhancement of wetlands where allowed by landowners and land managers, and (3) outreach and education about best practices to protect wetlands. The Plan outlines regional goals and strategies, and also identifies more specific objectives at the County level, including County-wide, site-specific, and organizational objectives as well as data and research needs pertaining to each County.

### ***Brief description of how this plan supports an IRWM Plan.***

The proposed strategy reflects a comprehensive, multi-jurisdictional regional effort. The Plan represents a shared vision at federal, state and local levels and the proposed implementation strategies are tied to lead responsible parties – so that each partner can best manage staff effort, direct resources and measure progress.

## 4.01 Southern California Wetlands Recovery Project Regional Strategy

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

Regional, local, site-specific and organizational objectives are presented. The Plan identifies a long-term, regional vision with six long-term goals and related strategies, as well as more specific strategies relevant to County areas. The vision, goals and objectives that make up the framework of the Plan were developed by the broad-based partnership (as described under Coordination w/Agencies and under Stakeholder Involvement), drawing on the expertise of scientists, governmental agencies, environmental organizations, planners and educators.

Specific goals have been identified for the San Gabriel River, Los Cerritos wetlands complex, Los Angeles River (including Dominguez Channel), Ballona Creek watershed and estuary wetlands, and Santa Monica Mountain Watersheds.(Chapter 4, pp. 14, 15)

Three regional needs specifically related to the Los Angeles basin and Orange County include: loss of riparian and floodplain habitat as a result of channelization and undergrounding of stream corridors; increased storm runoff quantity and peak flows due to increased impermeable surfaces in the watershed (this has contributed to increased channel incision and bank erosion with loss of riparian habitat and increases in downstream sedimentation); decreased water quality resulting from increased loads of sediments, nutrients, metals, and organic compounds, and increased water temperature. (Chapter 4, pp. 12)

The six regional goals and associated strategies include:

- 1. Preserve and restore coastal wetland ecosystems.**
  - a. Acquire privately-owned coastal wetlands and associated uplands.
  - b. Acquire contiguous wetland and upland areas as sites that are already primarily in public (or conservation) ownership.
  - c. Restore diversity and quality of wetland habitat types.
  - d. Restore ecosystem functions.
  - e. Address watershed impacts.
- 2. Preserve and restore stream corridors and wetland ecosystems in coastal watersheds.**
  - a. Preserve riparian and aquatic habitat along stream corridors.
  - b. Restore riparian and aquatic habitat along stream corridors.
  - c. Reconnect creek and river corridors to their floodplains.
  - d. Restore sediment transport functions and characteristic patterns.
  - e. Reduce erosion, both along stream channels and from upland areas.
  - f. Improve water quality.
  - g. Preserve and restore wetlands, particularly vernal pools, in coastal watersheds.
- 3. Recover native habitat and species diversity.**
  - a. Restore diversity of habitat types.
  - b. Employ a multi-species approach to wetlands recovery.
  - c. Preserve and restore habitat linkages and fish and wildlife corridor.
  - d. Preserve and restore rare wetlands, including vernal pools.
  - e. Preserve and restore surrounding upland and dune habitat.

## 4.01 Southern California Wetlands Recovery Project Regional Strategy

- f. Remove exotic species and re-establish native species.
  - g. Recover native, extirpated species.
- 4. Integrate wetlands recovery with other public objectives**
- a. Promote integration of wetlands conservation planning and priorities into related public policies and projects.
  - b. Promote wetlands projects that achieve multiple public objectives.
- 5. Promote education and compatible access related to coastal wetlands and watersheds**
- a. Develop compatible public access opportunities.
  - b. Integrate interpretive programs into wetlands and watershed projects.
  - c. Promote opportunities for experiential learning.
  - d. Promote development and dissemination of educational materials.
  - e. Research and disseminate information about the economic value of wetlands.
  - f. Promote practices to reduce urban impacts on wetlands and watersheds.
- 6. Advance the science of wetlands restoration and management in Southern California**
- a. Promote research on wetland ecology and restoration science, as well as on issues affecting the success and long-term sustainability of wetland restorations in Southern California.
  - b. Promote development of more effective monitoring programs for both regional and project-specific assessments.
  - c. Disseminate information.

***Stakeholder Involvement*** - during preparation of Plan<sup>4</sup>

This regional strategic Plan was developed through a multi-year planning process involving all WRP partners (17 state and federal agencies working in collaboration with scientists, local governments, environmental organizations, business leaders and educators), including the Science Advisory Panel (SAP), the State Coastal Conservancy (SCC), the Board of Governors (BOG), the Wetlands Managers Group (WMG), the Public Advisory Committee (PAC) and County Task Forces.

***This Plan should be considered:***

A primary document providing organizational structure to water management strategies

***Water management strategies addressed in this Plan***

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “***Required Categories to be addressed in the IRWM Plan***” are shown in ***Bold Italics***\* with an asterisk. The *Optional Categories* described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 4.01 Southern California Wetlands Recovery Project Regional Strategy

Table 1:

	<b>Southern California Wetlands Recovery Project Regional Strategy</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I</b>		
<b>WATER MANAGEMENT</b>		
<i>Water Supply Reliability*</i>		
<i>Groundwater management*</i>		
<i>Conjunctive use</i>		
<i>Storm water capture and management*</i>		<p>Ch. 4 p.10 (Orange Co.) and Ch. 4 p. 14 (L.A. Co.) ecological objective for best mgmt. practices to reduce inputs of sediment, nutrients and contaminants in the watershed</p> <p>Ch. 4 p.10 ecological objective for coordination w/public agencies to reduce impervious surfaces in road/infrastructure projects (Orange Co.).</p> <p>Ch. 4 p. 14 County-wide objective for L.A. County to promote stormwater retention/urban runoff projects to increase opportunities for habitat enhancement in river/stream corridors.</p>
<i>Surface Storage</i>		
<i>Water quality protection and improvement*</i>		Ch. 4 p.10 (Orange Co.) and Ch. 4 p. 14 (L.A. Co.) ecological objective for best mgmt. practices to reduce inputs of sediment, nutrients and contaminants in the watershed
<i>NPS pollution control</i>		
<i>Flood management*</i>		
<i>Water conservation*</i>		
<i>Imported water</i>		
<i>Water recycling*</i>		
<i>Desalination</i>		



## 4.01 Southern California Wetlands Recovery Project Regional Strategy

<p><i>Category II</i> <b>HABITAT IMPROVEMENT</b></p>		
<p><i>Environmental and habitat protection and improvement*</i></p>	<p>Ch.4 (Co. Objectives) discusses current habitat conditions for Orange County’s Bolsa Chica Wetlands, Los Cerritos Wetlands and San Gabriel River watershed, and vernal pools (pp. 7-9) and for L.A. County’s San Gabriel River and Los Cerritos Wetlands, Los Angeles River, Bollona Creek and Wetlands, and the Santa Monica Mtn. watershed (pp. 12-13).</p> <p>Ch.4 (Co. Objectives) presents a variety of habitat improvement strategies for the Orange Co. area (pp. 9-11), and for the L.A. Co. area. (pp. 14-15).</p> <p>Ch. 4 (Co Objectives) p.10 identifies specific recommendations for the Bolsa Chica wetlands, the Los Cerritos Wetlands and San Gabriel River Watershed (Orange Co).</p> <p>Ch. 4 p. 14 County-wide objective for L.A. County to promote stormwater retention/urban runoff projects to increase opportunities for habitat enhancement in river/stream corridors.</p> <p>Ch. 4 p. 14 identifies L.A. Co. objective to evaluate potential to preserve and reintroduce steelhead.</p> <p>Ch. 4 p. 15 highlights objective to develop habitat linkages along the San Gabriel River to support sensitive spp. and connect wildlife populations in the San Gabriel Mtns. and Puente Hills. Also references need to support creation of habitat (riparian, marsh and grassland/scrub) in parkway and greenway projects along the river and tributaries.</p> <p>Ch. 4 p. 15 presents key objective to evaluate potential for habitat linkages from Verdugo Hills to</p>	<p>Ch. 4 (County Objectives) p. 7 describes channel and bank erosion issues, degraded water quality, loss of riparian and aquatic habitat, and infestation of exotic spp. in So. Orange Co. (San Juan Hydrologic Unit). Ch. 4 p. 12 describes the same concerns for L.A. Co.</p>

## 4.01 Southern California Wetlands Recovery Project Regional Strategy

	<p>the San Gabriel Mtns. in the Angeles National Forest. Also references need to support creation of habitat (riparian, marsh and grassland/scrub) in parkway and greenway projects along the river and tributaries.</p>	
<p><b><i>Ecosystem Restoration*</i></b></p>	<p>Ch.4 (Co. Objectives) presents a variety of restoration strategies for the Orange Co. area (pp. 9-11), and for the L.A. Co. area. (pp. 14-15).</p> <p>Ch. 4 (Co. objectives) p. 8 references limited opportunities for restoration of riparian and aquatic habitat in Orange Co. due to concrete flood control channels.</p> <p>Ch. 4 p. 10 presents a priority action for Orange Co. to complete the Port-funded Bolsa Chica wetland restoration project.</p> <p>Ch. 4 p. 11 presents priority action for Orange Co. to pursue off-channel habitat restoration and re-creation along lower reaches of the San Gabriel River, where the river is confined to concrete.</p> <p>Ch. 4 p. 15 identifies a site-specific objective for Los Cerritos wetland complex (L.A. Co.) to develop and implement a restoration plan for the area, including Colorado Lagoon.</p>	
<p><b><i>Wetlands enhancement and creation*</i></b></p>	<p>Ch. 4 (Co. objectives) pp. 10, 11 present objectives related to wetlands enhancements and creation in Orange County. A key objective for the Bolsa Chica wetlands is to acquire and restore contiguous wetland and transitional areas that function as part of the wetland ecosystem; and a key objective for the Los Cerritos Wetland (Orange Co. and L.A. Co.)/San Gabriel River Watershed is to acquire and restore wetlands and adjacent upland areas at Los Cerritos</p>	

## 4.01 Southern California Wetlands Recovery Project Regional Strategy

	<p>Wetlands.</p> <p>Ch. 4 p. 15 presents a priority action for the Ballona Creek watershed and estuary wetlands to acquire coastal wetland and associated upland habitat.</p> <p>Ch. 4 p. 15 identifies need to restore and enhance remnants of the historic Los Angeles River estuary such as Cabrillo Salt Marsh and other saltwater marshes along the lower reaches of the Los Angeles River.</p>	
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>		
<i>Land use planning</i>		Ch. 4 p. 17 defines L.A. Co. objective to integrate WRP goals and objectives and watershed planning into local land use plans and policies.
<i>Watershed planning</i>	<p>Ch. 4 p. 11 and p. 15 presents priority action for both Orange Co. and L.A. Co. to develop a watershed management plan for Coyote Creek and identify restoration opportunities.</p> <p>Ch. 4 p. 15 identifies a site-specific objective for Los Cerritos wetland complex (L.A. Co.) to develop and implement a long-term management plan.</p> <p>Ch. 4 p. 15 identifies priority action to develop and implement restoration, watershed and long-term management plans for San Gabriel River and tributaries.</p> <p>Ch. 4 p 15 presents priority actions to develop and implement restoration, watershed and long-term management plans for the Los Angeles River and its tributaries and the Dominguez Channel; and to develop/implement restoration and enhancement plan for the</p>	Ch. 4 p. 17 defines L.A. Co. objective to integrate WRP goals and objectives and watershed planning into local land use plans and policies.

## 4.01 Southern California Wetlands Recovery Project Regional Strategy

	<p>Wilmington Drain and Harbor Lake.</p> <p>Ch. 4 p. 11 and p. 15 presents a priority action for L.A. County's Ballona Creek watershed and estuary wetlands to integrate planning and management for the entire Ballona wetlands complex (including Ballona Lagoon, Del Rey Lagoon, Grand Lagoon, Marina del Rey Harbor and Oxford Lagoon). Developing and implementing a restoration and long-term management plan for Ballona wetlands is also a priority.</p>	
<b><i>OTHER</i></b>		
<b><i>Organizational Objectives</i></b>	<p>Ch.4 (Co. Objectives) pp. 11-12 presents organizational objectives relevant to Orange Co., including: promoting education, increasing funding, developing public and private partnerships, building a comprehensive GIS mapping system, coordinating watershed efforts on a large scale, and streamlining the regulatory processes.</p> <p>Ch. 4 (Co. Objectives) pp. 16, 17 describes organizational objectives relevant to Los Angeles County, including: developing education programs, identifying funding sources for priority acquisitions, organizing a County task force governance structure, evaluating long-term management of public resource lands, coordinating watershed efforts on a large scale, and integrating goals into land use plans and policies.</p>	
<b><i>Data &amp; Research Needs</i></b>	<p>Ch. 4 (Co. Objectives) p. 17 Identifies an inventory of Santa Monica Mountain streams as a data/research need in L.A. Co.</p>	

***\* Required Categories to be addressed in the IRWM Plan***  
*Optional Categories*

## 4.01 Southern California Wetlands Recovery Project Regional Strategy

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

The proposed strategy is a multi-jurisdictional effort, weaving together scientific, ecological, organizational and research objectives at both regional and local levels. The document includes an implementation plan with discrete action steps that can be realized at State and local levels. Linking action steps to lead agencies/parties reinforces accountability.

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

The Plan presents a five-year implementation strategy (2002 – 2007). Implementation actions are organized into a framework of the six regional goals, setting policies and priorities for the acquisition, restoration and enhancement of coastal wetlands and coastal watersheds (discussed on pages 2 and 3 of this review form and in Ch. 3 of the Plan). The Plan outlines both short and medium-term steps that will be taken by the Wetlands Recovery Project to realize goals. Proposed implementation strategies are tied to lead responsible parties so that each partner can best manage staff effort, direct resources and measure progress. Partners and lead parties include the Science Advisory Panel (SAP), the State Coastal Conservancy (SCC), the Board of Governors (BOG), the Wetlands Managers Group (WMG), the Public Advisory Committee (PAC) and County Task Forces.

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Impacts/benefits are described in Chapters 1 and 2 (pp. 1-12 and in tables pp. 13 and 14) and as they pertain to the regional goals (Ch. 3 pp. 6-12).

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Document does not provide substantial information in this topic area

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

The goals, objectives and specific strategies that make up the framework of the Plan were developed by a credible coalition of experts, ranging from scientists and governmental agencies (17 State and Federal agencies) to environmental organizations, planners and educators. The Plan acknowledges the critical role of scientific research in successful regional planning, specifying a key goal (1 of 6 Plan goals) to, “advance the science of wetlands restoration and management in Southern California” (Ch.3 p.12-13). As described above, the Plan’s implementation strategy includes specific action steps tied to lead responsible parties so that each partner can best manage staff effort, direct resources and measure progress. The Plan explains that implementation actions will be revisited and updated periodically as program goals are redefined and new projects are developed (Ch 5 p.1).

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

The Plan identifies organizational objectives as well as data and research needs pertaining to each County, and identifies specific groups responsible for moving the project forward (see Implementation section above). The intent is for the Plan to remain flexible so that as program goals evolve and new projects are developed, the Plan can be updated.

## **4.01 Southern California Wetlands Recovery Project Regional Strategy**

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>11</sup>

The Plan is well-coordinated with local planning and management. The development of the Plan involved participation at the local level with Public Advisory Committees, and local governments, including a Board of Governors as well as County Task Forces. The Plan outlines not only regional goals and strategies, but also identifies more specific objectives at the County level, including County-wide and site-specific objectives. Organizational objectives and data and research needs are also identified, as they pertain to each County. The Plan's implementation strategy includes specific directives tied to lead responsible parties, some at the local level, such as County Task Forces, Boards of Governors and Public Advisory Committees. This allows each partner to best manage staff effort, direct resources and measure progress.

**End of Document Review**

## **4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities**

<b><i>IRWM Plan Type</i></b>	<b>Primary Land Use and Habitat Document</b>
<b><i>Name of Plan</i></b>	Wetlands of the Los Angeles River Watershed: <i>Profiles &amp; Restoration Opportunities</i>
<b><i>Preparing Agency or Entity</i></b>	California State Coastal Conservancy
<b><i>Other Agency Coordination</i></b>	The U. S. Environmental Protection Agency and the Los Angeles Regional Water Quality Control Board
<b><i>Date of the Plan</i></b>	May, 2000
<b><i>Contact Information</i></b>	Mary Small, Project Manager 510-286-4181 msmall@scc.ca.gov
<b><i>Reviewer</i></b>	J. Eulate, MIG

### ***Geographic Area Described***

The Los Angeles River Watershed, including descriptions of nine profiles, four of which fall within the San Gabriel and Lower Los Angeles River Watershed: Whittier Narrows, Dominguez Gap, Willow Street (Los Angeles River Estuary), and the Los Angeles River Mouth (Queensway Bay). Ten specific restoration sites are called out within the profiles described, four of which are relevant to our study area: DeForest Park, Dominguez Gap, Victoria Park, and Harbor Park.

### ***Type of Plan<sup>1</sup>***

Wetland inventory and restoration plan for the Los Angeles River Watershed

### ***Brief Summary of Plan Intent***

The intent of the Plan is to: inventory wetland resources of the Los Angeles River Watershed; provide profiles of nine current wetlands (chosen because the most significant amount of information was available about them) illustrating substantial existing biological and physical resources; compare historic and current wetland resource conditions and extents; outline restoration goals; examine possible restoration opportunities and identify ten specific priority restoration sites. The top priority restoration sites were selected based on their immediate potential for restoration (projects that might be achieved in the near future), as well as on their need for immediate action (projects where fleeting opportunities exist, warranting timely action).

The Plan relies on a progressive approach (described in more detail in Executive Summary p. xii and Ch. 3 pp. 72-73) that utilizes a classification system that distinguishes wetlands according to their function, as governed by such factors as position in the landscape, microclimate, substrate, gradients, and hydrologic regime. The system is based on the Hydrogeomorphic Method (HGM) and was adapted for the Los Angeles River Watershed by Charles Rairdan. Unlike the commonly used habitat-based approach, which attempts to restore wetlands according to the proportions of their historic loss, this approach examines wetlands in terms of their function across a range of habitat types within a landscape. This method takes into account the fact that some historic wetland losses have been offset by the creation of new wetlands in flood control basins, reservoirs, and recreational lakes. Although new wetland resources may only marginally offset the losses, they provide valuable functions including some habitat for wildlife. The Plan is based on the premise that because it is unlikely that more than a minimal amount of the historic wetlands can be recovered, restoration efforts should be directed toward maximizing the performance and continuity of the region's wetland resource functions within the limitations of

## **4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities**

the current landscape, including the new human-built wetlands. Restoration goals are set after an analysis of what key landscape elements can be rehabilitated, so that wetland functions can be restored. A long-term proposed outcome for the Plan is that its methodology could also serve as a model for the San Gabriel River Watershed.

### ***Brief description of how this plan supports an IRWM Plan.***

The Plan is multi-objective, seeking to enhance habitat value for environmental as well as recreational benefits to the Greater Los Angeles Area.

Most current wetland research exists in a piecemeal fashion and tends to focus on particular sites or projects. Rather than examining individual coastal zone systems, this Plan provides a more cohesive and progressive regional restoration perspective by comparing historic and current wetland resources and describing them in terms of a classification system adapted from the Hydrogeomorphic Method (HGM). The Plan is grounded in the recognition that opportunities for successful restoration are limited, so goals/guiding principles revolve around prioritizing key regional opportunities.

### ***Plan Objectives*** – Identify Plan objectives and the manner in which they were determined<sup>2</sup>.

The following goals were derived from a comparison of recent historic and current wetland resource conditions, and the recognition that restoration opportunities within the heavily urbanized Los Angeles River Watershed are severely limited.

1. Restore historic hydrologic conditions (to the extent possible, or emulate them at specific restoration sites);
2. Restore a functional semblance of the historic distribution of wetland resources (maintain geographic balance of wetland habitats and/or functions, but not necessarily the former extent of wetland resources);
3. Increase the connectivity/decrease the fragmentation of wetland habitats (via wildlife corridors, increasing the size of existing wetlands, consolidating proximal wetlands, etc.);
4. Enhance endangered species populations (regional biodiversity), but not at the expense of maintaining diverse wetland assemblages (i.e., single versus multi-species conservation);
5. Establish effective buffers at existing and restored sites to reduce disturbance levels from adjacent land uses; and
6. Ensure the landscape-level of sustainability of wetland ecosystems (water quality considerations, sediment and nutrient budgets, prevention of excessive flood damage, etc.).

Within the limited opportunities for wetlands restoration, ten potential sites were selected and surveyed (four of which are relevant to our study area: DeForest Park, Dominguez Gap, Victoria Park, and Harbor Park) based on the above restoration goals, and on considerations including size, adjacent land uses, hydrologic conditions, land ownership, and immediate potential for restoration (Ch 4 p. 85). Sites were preliminarily screened with the use of aerial photographs, USGS and National Wetlands Inventory maps, existing restoration studies and ground surveys by vehicle and foot. The selected sites represent a range of wetland and riparian habitats that historically occurred in the watershed and are distributed with the overall objective of improving the geographic balance of such habitat types and promoting greater regional biodiversity. The potential restoration sites, some of which are subsets of larger wetlands (profiled in Chapter 2), are derived from the adapted HGM and are an attempt at a watershed-wide approach to restoration. It should be noted that more extensive, long-term restoration opportunities exist, but within the framework of this Plan, shorter-term, quick win opportunities are being prioritized.



## 4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

*Stakeholder Involvement* - during preparation of Plan<sup>3</sup>

Plan preparation involved the California State Coastal Conservancy, the U. S. Environmental Protection Agency and the Los Angeles Regional Water Quality Control Board (specifically, contributed the Plan's water quality data and analysis). The larger vision for transforming the Los Angeles River into a green corridor through the heart of the Los Angeles Basin has also involved: the Los Angeles County Department of Public Works, the Mountains and Recreation and Conservation Authority, the Los Angeles/San Gabriel Rivers Watershed Council, North East Trees, Friends of the Los Angeles River and the Trust for Public Land.

*This Plan should be considered:*

A primary document providing organizational structure to water management strategies

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "**Required Categories to be addressed in the IRWM Plan**" are shown in **Bold Italics**\* with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

Table 1:

	<b>Wetlands of the Los Angeles River Watershed: <i>Profiles &amp; Restoration Opportunities</i></b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>		
<b><i>Groundwater management*</i></b>	Concrete-lined channels prevent ground water recharge, increases the velocity of water flow, and prevents vegetation from establishing (Ch.4 p.109).	Concrete-lined channels prevent ground water recharge, increases the velocity of water flow, and prevents vegetation from establishing (Ch.4 p.109).
<i>Conjunctive use</i>		
<b><i>Storm water capture and management*</i></b>		
<i>Surface Storage</i>		
<b><i>Water quality protection and improvement*</i></b>		<p>Profile of Whittier Narrows (Ch. 2 p.51), includes detailed water quality characteristics for the existing reach at Rio Hondo at the Whittier Narrows flood control basin.</p> <p>Profile of Dominguez Gap (Ch. 2 p.56-57), includes detailed water quality characteristics for the spreading grounds at Dominguez Gap's East Basin.</p> <p>Profile of Willow Street (Ch. 2 p.63), includes detailed water quality characteristics for the area from Los Angeles River, from Carson Street to the estuary (Willow Street).</p>
<i>NPS pollution control</i>		
<b><i>Flood management*</i></b>		Ch.4 p.109 describes additional restoration opportunities, including the creation of new wetland by widening the river channel below Compton Creek to Willow Street – widening of river channels and creation of soft-bottomed wetlands would not only provide considerable habitat for a vast array of migratory birds, but would also allow for

## 4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

<b>Wetlands of the Los Angeles River Watershed: <i>Profiles &amp; Restoration Opportunities</i></b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
		the creation of greenbelts and parks.  Concrete-lined channels prevent ground water recharge, increases the velocity of water flow, and prevents vegetation from establishing (Ch.4 p.109).
<b><i>Water conservation*</i></b>		
<b><i>Imported water</i></b>		
<b><i>Water recycling*</i></b>		
<b><i>Desalination</i></b>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>	<p>The <b>Victoria Park</b> tributary (Ch.4 p.104) to the Dominguez Channel has been straightened and deepened to accommodate stormwater from urban runoff. The habitat and functional value of the site could be significantly enhanced by widening the channel and reducing bank slopes, thereby increasing its capacity and reducing flow velocities by creating a meandering stream. These improvements would help native plant communities establish and survive and would provide valuable habitat.</p> <p>Potential restoration alternatives for <b>Harbor Park</b> (Ken Malloy Harbor Regional Park) include (Ch.4 p.107-108): re-establishing tidal flow and increasing periods of inundation to the lower marsh by raising the elevation of the outlet structure (note that this alternative would disrupt the composition of existing plant and animal communities because the site has not been subject to tidal influence for more than a century); eradicating invasive</p>	<p>Existing profiles are provided for: <b>Whittier Narrows</b> (Ch. 2 pp. 45-51), <b>Dominguez Gap</b> (Ch.2 pp. 52-57), <b>Willow Street - Los Angeles River Estuary</b> (Ch.2 pp.58-63) and <b>Los Angeles River Mouth- Queensway Bay</b> (Ch.64-69). Profiles for each area include general information (contacts, acreage, ownership, land use, historic use, pressures), description of hydrology (inflow, tributaries), inventory of existing habitat (vegetation, animal use, and sensitive spp.), water quality and data sources. Profiles distill recent studies, documenting physical and biological characteristics of each wetland area. Coastal Conservancy staff compiled research data based on the Conservancy's Southern California Wetlands Inventory (Ch.2 p.12).</p> <p>Concrete-lined channels prevent ground water recharge, increases the velocity of water flow, and prevents vegetation from establishing (Ch.4 p.109).</p> <p>A key strategy identified for</p>

## 4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

<b>Wetlands of the Los Angeles River Watershed: <i>Profiles &amp; Restoration Opportunities</i></b>	
<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<p>plant species, removing trash; and phasing excavation of accumulated sediments and emergent marsh vegetation in the lower wetland area. The functional diversity and capacities of the site would increase if the hydrology of the lower march area were restored in conjunction with the enhancement of other wetland features (note: many of these restoration proposals covered in the Ken Malloy Harbor Regional Park Plan, 1994).</p> <p>Restoration potential identified in creation of new wetlands by widening the river channel below Compton Creek to Willow Street (Ch.4 p.109). There is considerable open space along the west side of the channel. Widening of river channels and creation of soft-bottomed wetlands could also provide considerable habitat for a vast array of migratory birds and would also allow for creation of greenbelts and parks.</p> <p>The Plan promotes careful management of re-established wetlands from sediment deposit on concrete-lined channels, and of temporary wetlands, such as sand bars because, while not ideal, they can still support numerous wildlife benefits (Ch.4 pp.110, 111).</p> <p>A key strategy identified for addressing habitat loss in southern California riparian systems is to develop a comprehensive program of eradication specifically of the highly competitive and invasive non-native, <i>Arundo donax</i>, as well as other invasive species. The importance of reliance on natural processes, especially</p>	<p>addressing habitat loss in southern California riparian systems is to develop a comprehensive program of eradication specifically of the highly competitive and invasive non-native, <i>Arundo donax</i> (Ch.4 p.112).</p> <p>The Plan promotes careful management of re-established wetlands from sediment deposit on concrete-lined channels, and of temporary wetlands, such as sand bars because, while not ideal, they can still support numerous wildlife benefits (Ch.4 pp.110, 111).</p>

## 4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

<b>Wetlands of the Los Angeles River Watershed: <i>Profiles &amp; Restoration Opportunities</i></b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
	<p>flood dynamics, for the recovery of native animal communities and species is also referenced (Ch.4 p.112). <i>Arundo donax</i> is especially damaging since it alters the ecological/successional processes in riparian systems by displacing native species and does not supply food or nesting habitat for native animals (Ch.4 pp.111, 112).</p>	
<b><i>Ecosystem Restoration*</i></b>	<p>Promising restoration sites are identified and the restoration potential for each site is described: DeForest Park (Ch.4 p.99-100), Dominguez Gap (Ch.4 101-102), Victoria Park (Ch.4 103-105) and Harbor Park (106-108).</p> <p>A range of possible restoration alternatives are presented for <b>DeForest Park</b> (Ch.4 p.100). These include: removing exotic plant species and re-establishing native vegetation, and siphoning regular flows from the low-flow channel of the L.A. River to increase currently intermittent hydroperiod; recontouring the site into a riparian strip and revegetating in phases to preserve existing habitat values; adding pool and riffle sequences; extending the restoration for three miles of riparian habitat along the floodway to the Dominguez Gap site adjacent to the L.A. River.</p> <p>General restoration opportunities that could be considered independently or as part of a multi-objective approach are outlined in Ch.4 pp.109-112. Opportunities include: concrete removal; re-established wetlands in concrete-lined channels; low-impact channel maintenance; undeveloped lands; public easements and rights-of-way; and removal of exotic invasive species.</p>	

## 4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

<b>Wetlands of the Los Angeles River Watershed: <i>Profiles &amp; Restoration Opportunities</i></b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
<b><i>Wetlands enhancement and creation*</i></b>	<p>A wetland restoration plan for the East Basin of the <b>Dominguez Gap</b> is currently underway by the L.A. Co. Dept. of Public Works (Ch.4 p.102). The project would require siphoning water from the main channel of the L.A. River and pumping is through a created wetland. Restoration would include reducing the basin slopes, replanting the basins with native riparian vegetation and establishing habitat islands.</p> <p>Numerous possibilities exist for wetland creation in the lower reaches of the Los Angeles River where sizable stretches of largely undeveloped publicly and privately owned land adjoin the channel within the historic floodplain (Ch.4 p.111).</p>	<p>Numerous possibilities exist for wetland creation in the lower reaches of the Los Angeles River where sizable stretches of largely undeveloped publicly and privately owned land adjoin the channel within the historic floodplain (Ch.4 p.111).</p>
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>	<p>Introduction p. viii describes the multiple benefits that enhanced habitat value could produce: the Los Angeles River Watershed could become a significant recreational as well as environmental amenity for the Greater Los Angeles area.</p> <p>The <b>Victoria Park</b> (Ch.4 p.104) potential restoration site has an adjacent Home Garden Learning Center that offers an opportunity to expand the facility into an environmental education and interpretive center.</p> <p>Ch.4 p.108 describes need for <b>Harbor Park</b> site to be well-buffered against disturbance impacts from adjacent land uses and intrusive park visitors.</p> <p>Ch.4 p.111 identifies</p>	<p>Whittier Narrows Nature Center and Wildlife Refuge currently has recreational uses (Ch.2 p.47)</p> <p>Ch.4 p.111 identifies neighborhoods with some of the lowest ratios of parks per resident in the nation. These are located north of Long Beach: Bell, Bell Gardens, Vernon, Maywood, Cudahy, Paramount and South Gate.</p> <p>Numerous possibilities exist for wetland creation in the lower reaches of the Los Angeles River where sizable stretches of largely undeveloped publicly and privately owned land adjoin the channel within the historic floodplain (Ch.4 p.111).</p> <p>Brownfield sites in the lower reaches of the L.A. River could</p>

## 4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

<b>Wetlands of the Los Angeles River Watershed: <i>Profiles &amp; Restoration Opportunities</i></b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
	<p>neighborhoods with some of the lowest ratios of parks per resident in the nation. These are located north of Long Beach: Bell, Bell Gardens, Vernon, Maywood, Cudahy, Paramount and South Gate. The Mountains Recreation and Conservation Authority and the Trust for Public Land are working on recreation projects in these areas. New riverside parks in these areas would also further the long-term goal of a continuous greenbelt along the entire length of the L.A. River. Brownfield sites in these areas provide opportunities for recreational projects with habitat components, particularly where they border the channel. Creative solutions, such as public/private partnerships will be required to address the economic, social and environmental needs of these communities and the long-term vision of a L.A. River greenbelt.</p> <p>Restoration potential identified in creation of new wetlands by widening the river channel below Compton Creek to Willow Street (Ch.4 p.109). There is considerable open space along the west side of the channel. Widening of river channels and creation of soft-bottomed wetlands could also provide considerable habitat for a vast array of migratory birds and would also allow for creation of greenbelts and parks.</p>	<p>provide opportunities for recreational projects with habitat components, particularly where they border the channel (Ch. 4 p.111).</p>
<i>Land use planning</i>		<p>Defines existing land use designation and adjacent land use for Whittier Narrows (Ch.2 p.47).</p> <p>Defines existing land use designation and adjacent land use for Dominguez Gap (Ch.2 p.52).</p> <p>Defines existing land use</p>

## 4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

<b>Wetlands of the Los Angeles River Watershed: <i>Profiles &amp; Restoration Opportunities</i></b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
		designation and adjacent land use for Willow Street (Ch.2 p.58).  Defines existing land use designation and adjacent land use for L.A. River Mouth (Ch.2 p.64).
<i>Watershed planning</i>	Executive Summary p. xii highlights the need for a long-range plan for wetland restoration in the Los Angeles River Watershed to ensure that available resources are used to the greatest advantage.  The Plan proposes a cohesive regional approach to watershed planning by comparing historic and current wetland resources and describing them in terms of a classification system adapted from the Hydrogeomorphic Method (Ch.3 p.71, 72).	See description of regional methodology Ch.3 pp. 72-73; see Charles Rairdan's doctoral dissertation, <i>Regional Restoration Goals for Wetland Comparison of Recent Historic and Current Conditions Using Geographic Information Systems</i> , 1998.
<b><i>OTHER</i></b>		
<i>Natural and Human History</i>	Provides a thorough description of urban growth history, shift in shoreline, and historic and current wetlands comparison (Ch. 1 pp. 1 – 5; Ch. 3 pp. 71-78; and maps 1, 2, 5 & 6.	
<i>Data &amp; Research Needs</i>	Executive Summary p. xii highlights the need for a long-range plan for wetland restoration in the Los Angeles River Watershed to ensure that available resources are used to the greatest advantage.	
<i>Organizational Strategies</i>	Executive Summary pl. xii emphasizes the critical need for various planning and funding entities to coordinate their efforts to ensure the most effective use of limited resources and to secure fleeting restoration opportunities.	
<i>Plan Gaps</i>	-Goals are not clearly linked to strategies/action steps. -Does not include an implementation plan.  -Broad-ranging criteria are	



## 4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities

	<b>Wetlands of the Los Angeles River Watershed: <i>Profiles &amp; Restoration Opportunities</i></b>	
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
	provided for restoration site selection, but the Plan does not provide detail on why each specific restoration site was chosen.	

**\* Required Categories to be addressed in the IRWM Plan**  
*Optional Categories*

## **4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities**

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>4</sup>.

The Plan focuses on providing the logic and means for assessing a watershed in a systematic way at a regional level, and for honing in on specific restoration sites with potential to improve the geographic balance of habitat types and promote greater regional biodiversity.

The work illustrates that current wetland research exists in a piecemeal fashion and tends to focus on particular sites or projects (Ch.3 p.71). The Plan proposes a more holistic regional approach to watershed planning by comparing historic and current wetland resources and describing them in terms of a classification system adapted from the Hydrogeomorphic Method (HGM). HGM is presented as a dynamic, versatile approach that is well-suited to wetland restoration in the dynamic physical environment of the Los Angeles Basin (Specific methodology and information sources Ch.3 p.72-73). Using HGM, historic and current wetlands were mapped and then compared in terms of function within the range of habitat types in the watershed. Extent of habitat loss was determined and functions associated with the lost habitats were identified. After this analysis, restoration goals were developed and the potential restoration sites were selected, visited and surveyed.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>5</sup>.

The major contribution of the Plan is to present a methodology with the potential for larger scale application and to identify top priority restoration sites for short-term implementation. The restoration opportunities described consist of a range of possibilities to be considered. The Plan does not provide discrete action steps, identify responsible agencies/organizations, or provide an implementation plan. Successful implementation of recommended restorations will require coordination and commitment of relevant agencies and organizations.

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>6</sup>.

The Plan discusses the significant value of the biological and physical resources that exist in the highly altered Los Angeles River Watershed and documents the extensive range of physical and biological characteristics of each wetland area. Impacts and benefits of proposed restoration measures are primarily discussed per each site: DeForest Park (Ch.4 p.100), Dominguez Gap (Ch.4 p.102), Victoria Park (Ch.4 p.104), Harbor Park (Ch.4 pp.107, 108). Several additional restoration opportunities, impacts and benefits are described (Ch.4 pp. 109-112).

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>7</sup>.

The Plan provides some discussion of opportunities to improve public access to open space resources in neighborhoods north of Long Beach that have been identified as having some of the lowest ratios of parks per resident in the nation (Ch.4 p.111). Neighborhoods identified include: Bell, Bell Gardens, Vernon, Maywood, Cudahy, Paramount and South Gate. The Mountains Recreation and Conservation Authority and the Trust for Public Land are currently working on recreation projects in these areas. The study proposes that new riverside parks in these areas would also further the long-term goal of a continuous greenbelt along the entire length of the L.A. River. Brownfield sites in these areas provide opportunities for recreational projects with habitat components, particularly where they border the channel.

## **4.02 Wetlands of the Los Angeles River Watershed: Profiles and Restoration Opportunities**

*Technical Analysis and Plan Performance - is based on sound scientific and technical analysis and includes measures to assess performance*<sup>8</sup>.

The Plan relies heavily on a methodology based on dissertation research by Charles Rairdan (Rairdan, 1998) and on the Hydrogeomorphic Method, also known as “HGM” (specific methodology and information sources Ch.3 p.72-73). It is also grounded on the premise that since only minimal historic wetlands can be recovered, restoration efforts should be directed toward maximizing the performance and continuity of the region’s wetland resource functions within the limitations of the current landscape, including the new human-built wetlands. The Plan’s goals are derived from a comparison of recent historic and current wetland resource conditions and the recognition that restoration opportunities within heavily urbanized Los Angeles River Watershed are severely limited. Potential restoration sites were selected and surveyed based on considerations including, size, adjacent land uses, hydrologic conditions, land ownership, and immediate potential for restoration (Ch 4 p. 85). Note that more extensive, long-term restoration opportunities exist, but within the framework of this Plan, shorter-term opportunities are being prioritized.

**Data Management** – Provision for management of data generated during plan development and implementation<sup>9</sup>.

Document does not provide substantial information in this topic area

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>10</sup>

Document does not provide substantial information in this topic area

**End of Document Review**

## 4.03 Greenprinting Los Angeles Initiative

<b><i>IRWM Plan Type</i></b>	<b>Primary Land Use and Habitat Document</b>
<b><i>Name of Plan</i></b>	Greenprinting Los Angeles Initiative
<b><i>Preparing Agency or Entity</i></b>	The Trust for Public Land (a non-profit national land conservation organization)
<b><i>Other Agency Coordination</i></b>	National Association of Counties
<b><i>Date of the Plan</i></b>	2004
<b><i>Contact Information</i></b>	Kimberly Holcomb, Director of Development (213) 380-4233 Kimberly.Holcomb@tpl.org
<b><i>Reviewer</i></b>	J. Eulate, MIG

### ***Geographic Area Described***

Los Angeles County

### ***Type of Plan<sup>1</sup>***

A park access analysis and corresponding initiative for strategically identifying resources and opportunities for park creation in the most underserved neighborhoods. The initiative consists of a set of companion documents including: *Local Greenprinting for Growth Workbook*; *Parks for People: Why America Needs More City Parks and Open Space*; and *No Place to Play: A Comparative Analysis of Park Access in Seven Major Cities*.

### ***Brief Summary of Plan Intent***

The intent of the Plan is to systematically assess park needs in Los Angeles County and identify potential priority park/open space areas. The Plan envisions community space and recreational opportunities within a quarter mile walking distance of every family in the densely populated areas of Los Angeles. The intent of the associated *Greenprinting* strategy and initiative is to assist communities in taking the next steps toward park development, including vision development, securing financing and conducting conservation transactions.

*Greenprinting* is a land conservation strategy through which communities can protect quality of life, human health, and natural systems by creating an interrelated system of parks, trails, gardens and other protected lands. *Greenprinting* protects the places that sustain and define communities while allowing for appropriate development. It revitalizes cities, guides growth, and protects water supplies and farmland.

The *Greenprint* uses geographic information system (GIS) data to generate a multi-dimensional assessment of the social, economic and demographic conditions in neighborhoods and districts throughout Los Angeles County. Combined with land use, land ownership, demographic conditions, public facilities (ie. parks and schools), community development projects, revitalization efforts, and other information layers, the GIS Greenprint provides a snapshot of social, environmental and economic needs and opportunities for community investment. This information aggregation and visualization methodology was designed as a decision-making tool, to help Trust for Public Land (TPL) and its partners identify high priority park creation and open space protection projects that leverage the financial investments and political consensus of neighborhood revitalization initiatives already underway (or anticipated) in high priority/high need neighborhoods of Los Angeles.

## 4.03 Greenprinting Los Angeles Initiative

### *Brief description of how this plan supports an IRWM Plan.*

This is not an IRWM Plan, but a supporting resource that provides an analysis and strategy for tying disadvantaged communities to potential open space resources. The GIS database provides important information about potentially disadvantaged communities, including relative income levels (mapping census block groups with a majority of households with income less than \$24,999 per year), ethnicity, age, population density and park proximity.

### *Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>2</sup>.*

The purpose of the Initiative is to create new parks for people who otherwise have limited access to green spaces and public recreational resources. Specifically, the primary goal of the *Greenprint* Initiative is to create 25 parks in Los Angeles County by 2010 in an effort to change the statistic that almost two-thirds of children in Los Angeles County live beyond a quarter mile from the nearest open space (see “No Place to Play, a Comparative Analysis of 7 Major Cities”).

While the *Greenprint* analysis identifies several areas containing chronically park-poor neighborhoods, the related program, *Parks for People* and the *Greenprinting* process, focuses on implementing top priority open space projects in the most chronically park-poor and high need neighborhoods of Los Angeles through a community-based strategic planning process.

The *Greenprinting* process includes three major steps:

1. Inventory the existing park and open space resources of the city using state-of-the-art Geographic Information System (GIS) technology.
  - a. Identify neighborhoods that are located further than a ¼ mile from an existing park, trail or open space.
  - b. Map the demographic and socio-demographic attributes of the city’s neighborhoods (population, density, age, income, race, ethnicity).
  - c. Map environmental and cultural resources (streams, wildlife corridors, historic and scenic landscapes).
  - d. Identify areas of the city that could be the beneficiary of public, private and philanthropic investment in new parks and open spaces (Prop K, Prop 40, LWCF appropriations).
  
2. Create a strategic plan.
  - a. Identify high need/high opportunity neighborhoods that may be uniquely positioned to leverage new parks and open space with other types of neighborhood reinvestment (ie. New community housing, public transit, new schools).
  - b. Force alliances among advocates and professionals in the open space protection, economic development, housing, youth development, health care and private real estate development communities.
  - c. Identify potential sources of public, private and philanthropic funding for new park and open space protection.
  - d. Build support by engaging elected officials, policy makers, local activists, community and business leaders, and families and children in the design and implementation of these new parks, playgrounds, gardens and trails.

## 4.03 Greenprinting Los Angeles Initiative

3. Assist public agencies and emerging private stewardship organizations in creating a park vision.
  - a. Select high leverage/high value park creation/open space protection projects.
  - b. Identify funding from local, state, federal and private sources.
  - c. Negotiate land contracts, acquire critical properties, build new park facilities.
  - d. Secure stewardship for long-term maintenance of park facilities.

### *Stakeholder Involvement* - during preparation of Plan<sup>3</sup>

The development of the Greenprint Initiative involved the Trust for Public Land and the National Association of Counties. As the Greenprinting strategy is applied in various communities, the aim is to collaborate with community leaders, activists, elected officials, and professionals in the design community to identify the greatest needs and opportunities for park creation and renewal.

### *This Plan should be considered:*

A supporting document clarifying goals, objectives, or specific projects

### *Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “***Required Categories to be addressed in the IRWM Plan***” are shown in ***Bold Italics\**** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 4.03 Greenprinting Los Angeles Initiative

Table 1:

	Greenprinting Los Angeles Initiative	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I</b> <b>WATER MANAGEMENT</b>		
<b>Water Supply Reliability*</b>		<i>Greenprinting</i> protects the places that sustain and define communities while allowing for appropriate development. It revitalizes cities, guides growth, and protects water supplies and farmland.
<b>Groundwater management*</b>		
<i>Conjunctive use</i>		
<b>Storm water capture and management*</b>		
<i>Surface Storage</i>		
<b>Water quality protection and improvement*</b>		
<i>NPS pollution control</i>		
<b>Flood management*</b>		
<b>Water conservation*</b>		
<i>Imported water</i>		
<b>Water recycling*</b>		
<i>Desalination</i>		
<b>Category II</b> <b>HABITAT IMPROVEMENT</b>		
<b>Environmental and habitat protection and improvement*</b>		<i>Greenprinting</i> is a land conservation strategy through which communities can protect quality of life, human health, and natural systems by creating an interrelated system of parks, trails, gardens and other protected lands. <i>Greenprinting</i> protects the places that sustain and define communities while allowing for appropriate development. It revitalizes cities, guides growth,

## 4.03 Greenprinting Los Angeles Initiative

<b>Greenprinting Los Angeles Initiative</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
		and protects water supplies and farmland.
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		
<b>Category III LAND USE - RECREATION</b>		
<i>Recreation and public access*</i>		The main goal of the Trust for Public Land's <i>Parks for People</i> Initiative is to create 25 new parks, playgrounds and community gardens over the next five years, all within Los Angeles County's most densely-populated and park deficient neighborhoods.
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b>OTHER</b>		
<i>Disadvantaged Communities</i>		<p>The Los Angeles region is one of the most park-poor regions in the nation, with over 65% of the County's children lacking convenient access to parks (<i>No Place to Play: Comparative Analysis of Park Access in Seven Major Cities</i>).</p> <p>Low income neighborhoods are short of park space (<i>Parks for People</i> p.6).</p> <p>The GIS database provides important information about potentially disadvantaged communities, including relative income levels (mapping census block groups with a majority of households with income less than \$24,999 per year), ethnicity, age, population density and park proximity.</p>



## 4.03 Greenprinting Los Angeles Initiative

Greenprinting Los Angeles Initiative		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
		<p>Benefits of parks: public health, economic, environmental and social (<i>Parks for People</i> pp. 12-25).</p> <p>Process for Greenprinting, or implementing park projects in high need communities described (<i>Local Greenprinting for Growth Workbook</i> pp. 7 – 27).</p>

*\* Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>4</sup>.

Document does not provide substantial information in this topic area

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>5</sup>.

Document does not provide substantial information in this topic area

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>6</sup>.

Document does not provide substantial information in this topic area

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>7</sup>.

The intent of the document’s analysis and corresponding initiative is to strategically identify resources and opportunities for park creation in the most underserved neighborhoods in Los Angeles. The document locates potentially disadvantaged communities utilizing GIS data and proposes park development in these areas.

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>8</sup>.

Document does not provide substantial information in this topic area

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>9</sup>.

Document does not provide substantial information in this topic area

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>10</sup>

Document does not provide substantial information in this topic area

### **End of Document Review**

## 4.04 Missing Linkages

<i>IRWM Plan Type</i>	<b>Primary Land Use and Habitat Document</b>
<i>Name of Plan</i>	Missing Linkages – Chapter 6, South Coast Eco Region, August 2001 and A Linkage Design for the San Gabriel - San Bernardino Connection, May 04
<i>Preparing Agency or Entity</i>	South Coast Wildlands, Kristeen Penrod
<i>Other Agency Coordination</i>	SCWP received financial and/or in-kind support from project partners and financial support from The Wildlands Conservancy, The Resources Agency California Legacy Project, San Bernardino National Forest, California State Parks Foundation, and the Zoological Society of San Diego.
<i>Date of the Plan</i>	August 2001
<i>Contact Information</i>	Above contacts or <a href="http://scwildlands.org/missinglinks/projectsupport.htm">http://scwildlands.org/missinglinks/projectsupport.htm</a>
<i>Reviewer</i>	Paul Curfman
<i>Geographic Area Described</i>	Part of a statewide plan
<i>Type of Plan</i>	Regional Habitat Recovery Plan

### ***Brief description of how this plan supports an IRWM Plan.***

- A. South Coast Wildlands brings a collaborative approach to regional planning, working with biologists and conservation scientists to develop platforms that engage biological experts in the region with methods for identifying and designing movement corridors that functionally connect habitats and sustain ecosystem processes.
- B. The South Coast Missing Linkages Project is producing conservation designs for 15 key habitat linkages associated with the [South Coast Ecoregion](#).

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>1</sup>.***

Key objective is to identify linkages and create conservation designs. Image of identified linkages on page 2

### ***This Plan should be considered:***

A good background document on the problems faced



## **4.04 Missing Linkages**

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>2</sup>.

Document does not provide substantial information in this topic area

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>3</sup>.

Document does not provide substantial information in this topic area

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>4</sup>.

Document identifies habitat connections for potential long-term linkages within the water planning area.

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>5</sup>.

Document does not provide substantial information in this topic area

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>6</sup>.

Document does not provide substantial information in this topic area

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>7</sup>.

Document does not provide substantial information in this topic area

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>8</sup>

Document does not provide substantial information in this topic area

### **End of Document Review**

## 4.05 Rio Hondo Vision Plan

<b><i>IRWM Plan Type</i></b>	<b>Primary Land Use and Habitat Document</b>
<b><i>Name of Plan</i></b>	Rio Hondo Vision Plan (with the Emerald Necklace Concept)
<b><i>Preparing Agency or Entity</i></b>	Amigos de los Rios and the Sierra Club
<b><i>Other Agency Coordination</i></b>	Friends of the Angeles Chapter Foundation of the Sierra Club, City of El Monte, Los Angeles County Department of Public Works, the Upper San Gabriel Valley Water District, Metropolitan Water District, the Rivers and Mountains Conservancy.
<b><i>Date of the Plan</i></b>	2004
<b><i>Contact Information</i></b>	Claire Robinson, Amigos de los Rios (310) 676-5027
<b><i>Reviewer</i></b>	J. Eulate, MIG

### ***Subwatershed(s) Addressed<sup>1</sup>***

Rio Hondo Subwatershed

### ***Geographic Area Described***

Rio Hondo and San Gabriel Rivers

### ***Type of Plan<sup>2</sup>***

Vision Plan with the “Emerald Necklace” river park network Concept

### ***Brief Summary of Plan Intent***

The Plan articulates a vision for a 1,500 acre, 17-mile riverfront urban park network connecting 10 cities and benefiting nearly ½ million residents along the Rio Hondo and San Gabriel Rivers. The purpose of the Emerald Necklace portion of the Plan is to describe the proposed park network that would include multi-use trails, parks, open spaces and habitat corridors and would re-connect the historically linked Rio Hondo and San Gabriel Rivers.

### ***Brief description of how this plan supports an IRWM Plan.***

The Plan merges recreational goals and projects with environmental enhancement and habitat improvement goals and projects. Some impacts and benefits are described per segment and per project. The Plan describes communities served by proposed recreation/restoration projects (some disadvantaged communities) and identifies local jurisdictions affected by proposed projects.

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

The objective of the study was to reach out to neighborhoods and communities along the river, encourage them to examine the river, and to recognize its existing and potential values to their neighborhoods, communities and lives.

Overarching goals for the Plan include:

- Connecting existing parks and creating new ones;
- Providing much-needed recreational areas for communities suffering from the effects of urban density (including obesity, asthma, type II diabetes and hypertension);

## 4.05 Rio Hondo Vision Plan

- Restoring river heritage, re-connecting the historically linked Rio Hondo and San Gabriel Rivers (which were essential features in the daily lives of the Gabrielino-Tongva Native Americans);
- Nurturing wildlife and enhancing clean water; and
- Providing recreational spaces and respite from urban living.

The Plan describes proposed projects or “jewels” of the “necklace” that lie along the San Gabriel River, Rio Hondo and their principal tributaries. Each project includes a description of the area (with natural and cultural history, acreage available and jurisdictions covered), goals and objectives for the segment and the particular project, opportunities and constraints, communities served, proposed program elements and project phasing (in some instances). Key projects include: Lashbrook, Park, Peck Road Water Conservation Park, Rio Vista Park, Rio Hondo River Park, Alhambra Wash restoration, Lario Creek rebuild, San Gabriel River Discovery Center, San Jose Creek restoration, Woodland Wilderness Park restoration and a Bike Trail Connection between the San Gabriel River and Peck Park, and a Metrolink Trail through Downtown El Monte. Additional projects are specified per Rio Hondo Greenbelt segment (see project list per segment in following matrix under *Recreation and Public Access*).

Goals and objectives are provided per defined segments of the Rio Hondo Greenbelt in relation to habitat restoration, recreation, water quality and trails. Goals and objectives are also identified for each of the specific projects within these segments.

***Stakeholder Involvement*** - during preparation of Plan<sup>4</sup>

Amigos de los Rios, the San Gabriel River Task Force of Sierra Club, Friends of the Angeles Chapter Foundation of the Sierra Club, North East Trees, the City of El Monte, Los Angeles County Department of Public Works, the Upper San Gabriel Valley Water District, the Metropolitan Water District, the Lower Los Angeles and San Gabriel Rivers and Mountains Conservancy, and community members.

***This Plan should be considered:***

A supporting document clarifying goals, objectives, or specific projects

***Water management strategies addressed in this Plan***

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “***Required Categories to be addressed in the IRWM Plan***” are shown in ***Bold Italics***\* with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 4.05 Rio Hondo Vision Plan

Table 1:

	Rio Hondo Vision Plan – Emerald Necklace	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I WATER MANAGEMENT</b>		
<b>Water Supply Reliability*</b>		
<b>Groundwater management*</b>		Groundwater hydrology description ( <i>Natural History Chapter</i> ) – Note that this Plan does not have page numbers.
<i>Conjunctive use</i>		
<b>Storm water capture and management*</b>		
<i>Surface Storage</i>		Surface hydrology description ( <i>Natural History Chapter</i> ).
<b>Water quality protection and improvement*</b>		See <b>goals/objectives</b> related to <b>water quality</b> for segments of the Rio Hondo Greenbelt ( <i>Project Description Chapter</i> ): <ul style="list-style-type: none"> <li>▪ 1.4 mile segment between Alhambra Wash and Rubio Wash</li> <li>▪ .8 mile segment between Rubio Wash and Eaton Wash</li> <li>▪ .5 mile segment between Eaton Wash and I-10 Freeway</li> <li>▪ .9 mile segment between I-10 Freeway and Railroad Bridge</li> <li>▪ 1 mile segment between Railroad Bridge and Arcadia Wash</li> <li>▪ 2.3 mile segment between Arcadia Wash and Sawpit Wash</li> <li>▪ 1.2 mile segment between Sawpit Wash and San Gabriel River</li> </ul> See <b>projects</b> related to <b>water quality</b> improvement for segments of the Rio Hondo Greenbelt ( <i>Project Description Chapter</i> ).
<i>NPS pollution control</i>		
<b>Flood management*</b>		
<b>Water conservation*</b>		
<i>Imported water</i>		

## 4.05 Rio Hondo Vision Plan

Rio Hondo Vision Plan – Emerald Necklace		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Water recycling*</i>		
<i>Desalination</i>		
<b>Category II HABITAT IMPROVEMENT</b>		
<i>Environmental and habitat protection and improvement*</i>		<p>Flora, fauna and sensitive species descriptions (<i>Natural History</i> Chapter) with plant palette photographs.</p> <p>Short project summaries in first two pages of <i>Introduction</i> Chapter</p> <p>See <b>goals/objectives</b> related to habitat restoration for segments of the Rio Hondo Greenbelt (<i>Project Description</i> Chapter):</p> <ul style="list-style-type: none"> <li>▪ 1.4 mile segment between Alhambra Wash and Rubio Wash</li> <li>▪ .8 mile segment between Rubio Wash and Eaton Wash</li> <li>▪ .5 mile segment between Eaton Wash and I-10 Freeway</li> <li>▪ .9 mile segment between I-10 Freeway and Railroad Bridge</li> <li>▪ 1 mile segment between Railroad Bridge and Arcadia Wash</li> <li>▪ 2.3 mile segment between Arcadia Wash and Sawpit Wash</li> <li>▪ 1.2 mile segment between Sawpit Wash and San Gabriel River</li> </ul> <p>See <b>restoration projects</b> for segments of the Rio Hondo Greenbelt (<i>Project Description</i> Chapter)</p>
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		
<b>Category III LAND USE - RECREATION</b>		



## 4.05 Rio Hondo Vision Plan

<b>Rio Hondo Vision Plan – Emerald Necklace</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Recreation and public access*</i>		<p>Short project summaries in first two pages of <i>Introduction</i> Chapter.</p> <p>See <b>projects</b> and <b>goals/objectives</b> related to <b>recreation</b> and <b>trails</b> for the following segments of the Rio Hondo Greenbelt (<i>Project Description</i> Chapter)</p> <ul style="list-style-type: none"> <li>▪ 1.4 mile segment between Alhambra Wash and Rubio Wash (projects: Alhambra Wash box Channel Naturalization, Alhambra Oasis)</li> <li>▪ .8 mile segment between Rubio Wash and Eaton Wash (projects: Rubio Confluence Mini Park Lashbrook Park, Brockway Green Infrastructure and Beautification)</li> <li>▪ .5 mile segment between Eaton Wash and I-10 Freeway (project: Eaton Confluence Park)</li> <li>▪ .9 mile segment between I-10 Freeway and Railroad Bridge (projects: Wetlands Park, Fletcher Park, Pioneer Park, River Promenade and Urban River Connections, Gibson Park)</li> <li>▪ 1 mile segment between Railroad Bridge and Arcadia Wash (projects: Rio Vista Park and Riverfront Trail, Rock Habitat Garden at El Monte Airport)</li> <li>▪ 2.3 mile segment between Arcadia Wash and Sawpit Wash (project: Peck Water Conservation Park)</li> <li>▪ 1.2 mile segment between Sawpit Wash and San Gabriel River (projects: Bike Trail Connection/Quarry, Quarry Park)</li> </ul>
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b>OTHER</b>		

## 4.05 Rio Hondo Vision Plan

	Rio Hondo Vision Plan – Emerald Necklace	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Cultural History</i>		Cultural history and historic timeline for the San Gabriel River and the Rio Hondo ( <i>Cultural History Chapter</i> )

\* *Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

Document does not provide substantial information in this topic area

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

Document does not provide substantial information in this topic area

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Document does not provide substantial information in this topic area

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

The Plan describes communities served by proposed recreation/restoration projects (some of which are disadvantaged communities) and identifies local jurisdictions affected by proposed projects.

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Document does not provide substantial information in this topic area

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Document does not provide substantial information in this topic area

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>11</sup>

Document does not provide substantial information in this topic area

### **End of Document Review**

## **4.06 Rim of the Valley Trail Corridor Master Plan**

<b><i>IRWM Plan Type</i></b>	<b>Primary Land Use and Habitat Document</b>
<b><i>Name of Plan</i></b>	Rim of the Valley Trail Corridor Master Plan
<b><i>Preparing Agency or Entity</i></b>	Santa Monica Mountains Conservancy
<b><i>Other Agency Coordination</i></b>	Other agencies not identified, but elected officials and other agency representatives attended 11 public meetings to help develop the Plan.
<b><i>Date of the Plan</i></b>	June 28, 1990
<b><i>Contact Information</i></b>	Rorie Skie, Santa Monica Mountains Conservancy, 310-589-3200 x112
<b><i>Reviewer</i></b>	Mark Sillings, MIG

### ***Subwatershed(s) Addressed<sup>1</sup>***

Upper portions of both the Los Angeles and San Gabriel River watersheds, including the upper portions of the following subwatersheds - Tujunga Wash, Pacoima Wash, Verdugo Washes, and portions of the Rio Hondo, Arroyo Seco and Upper San Gabriel River

### ***Geographic Area Described***

The study area includes the Rim of the Valley Trail Corridor which is a broad band circling the north, east, and west edges of the San Fernando and La Crescenta Valleys. It also includes an interlocking system of wildlife habitats and open space areas which provide a corridor connection between the Santa Monica Mountains, the Santa Susana Mountains, the Sespe Mountains, and the San Gabriel Mountains.

### ***Type of Plan<sup>2</sup>***

Habitat conservation plan (and other regional planning effort)

### ***Brief Summary of Plan Intent***

To develop an overall, coordinated master plan for the recreational and environmental resources of the Corridor area by defining objectives and criteria for developing a system of trails and other recreation facilities, and for preserving viable wildlife areas and corridors.

### ***Brief description of how this plan supports an IRWM Plan.***

The plan is designed to create an interlocking and complementary system of wildlife habitat and recreation facilities in the greater mountain and foothill landscape surrounding the valleys of the Los Angeles area. By doing so it addresses at least two of the key strategies of an IRWM Plan - environmental and habitat protection and improvement, and recreation and public access.

## 4.06 Rim of the Valley Trail Corridor Master Plan

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

The Corridor Master Plan is divided into four categories: wildlife habitat, recreation, programs and boundary adjustments, which together share the following objectives:

*Continuity* - continuity or linkage between all elements of a system, whether natural or man made, must be maintained if the system is to survive. An interlocking, continuous system of parks, trails and areas of preserved wildlife habitat, provides maximum opportunities for recreation and is more likely to support the survival of native flora and fauna.

*Diversity* - Habitat must provide a variety of food sources and shelter in order to support the mass and diversity of wildlife necessary to a self sustaining ecological system. The recreation needs and preferences of a large urban population are also diverse.

*Access* - facilities to provide convenient access from population centers in the Corridor are necessary.

Each of the major components of the Master Plan also has specific objectives:

### Wildlife habitat

- Conserve biological diversity
- Minimize impacts to sensitive, threatened and endangered species
- Maintain scenic resources, and contribute to recreational resources which enhance residents quality of life
- Recreation defines objectives for each type of recreational facility including trails and trail corridors
- Provide opportunities for lineal recreation in a natural setting
- Ensure continuity throughout the system

Objectives for the main Rim of the Valley Trail are to:

- To provide the major physical link among the ecologically and aesthetically important areas in the Corridor system
- To provide opportunities for multi-use trail recreation in a naturalistic setting
- To generate the interest, challenge and variety possible with a long distance trail

### Program Objectives

- Provide support for existing and proposed wildlife and recreation projects within the Rim of the Valley Corridor
- Stimulate coordination of planning efforts and standards for improvement and management
- Provide information on the Rim of the Valley Trail system, parks, and wildlife habitat
- Increase understanding and appreciation of the environmental resources of the Corridor
- Boundaries - make adjustments to Corridor boundaries to assist in the realization of proposed wildlife habitat and recreation projects

Objectives were defined in part by the requirements of AB 1516 which was signed by the Governor in 1989 directing the Conservancy to prepare a Master Plan for this area. Also, there was an extensive public input process

## 4.06 Rim of the Valley Trail Corridor Master Plan

*Stakeholder Involvement* - during preparation of Plan<sup>4</sup>

Eleven public hearings were held. These were well attended by elected officials, agency and group representatives as well as the general public. The suggestions and ideas regarding plan elements and needs of the area (that emerged from this process) make up the backbone of the Master Plan.

*This Plan should be considered:*

A supporting document clarifying goals, objectives, or specific projects

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “**Required Categories to be addressed in the IRWM Plan**” are shown in **Bold Italics\*** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 4.06 Rim of the Valley Trail Corridor Master Plan

Table 1:

	<i>Rim of the Valley Trail Corridor Master Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>	This plan does not directly address any of the water management strategies listed below. However, its efforts to expand and preserve open space for both habitat and recreation in the upper reaches of the proposed IRWMP project area would indirectly support these water management strategies.	
<i>Water Supply Reliability*</i>		
<i>Groundwater management*</i>		
<i>Conjunctive use</i>		
<i>Storm water capture and management*</i>		
<i>Surface Storage</i>		
<i>Water quality protection and improvement*</i>		
<i>NPS pollution control</i>		
<i>Flood management*</i>		
<i>Water conservation*</i>		
<i>Imported water</i>		
<i>Water recycling*</i>		
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>	A primary component of the plan is an interlocking system of wildlife habitats to provide a corridor connection	
<i>Environmental and habitat protection and improvement*</i>	Wildlife habitat objectives and criteria discussed pages 11 to 12, but is also weaved throughout the document	
<i>Ecosystem Restoration*</i>	Ecosystem restoration not specifically discussed but may be an aspect of projects listed in the	

## 4.06 Rim of the Valley Trail Corridor Master Plan

	<i>Rim of the Valley Trail Corridor Master Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
	appendices	
<i>Wetlands enhancement and creation*</i>	Not addressed	
<i>Category III LAND USE - RECREATION</i>	Overall plan designed to preserve and protect open space areas which can provide recreation (as well as habitat protection)	
<i>Recreation and public access*</i>	Recreation is focused on pages 12 17	
<i>Land use planning</i>	Implementation of the Plan requires land use planning	
<i>Watershed planning</i>	Not addressed	

\* *Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

## **4.06 Rim of the Valley Trail Corridor Master Plan**

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

<Insert>

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

<Insert>

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

<Insert>

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

<Insert>

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Document does not provide substantial information in this topic area

**Data Management** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Document does not provide substantial information in this topic area

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>11</sup>

<Insert>

### **End of Document Review**



# Section 5

## Supporting Documents

5.01 Floodplain Management Plan

5.02 San Gabriel Canyon Sediment Management Plan: Draft Supplemental EIR

5.03 Long Beach Stormwater Management Plan

5.04 The Los Angeles River: Reshaping the Urban Landscape

5.05 Grounds for Renewal: The Revitalization of Compton Creek

5.06 Watershed Management Plan Characterization Report for Coastal Southern California

5.07 Managing Mosquitoes in Stormwater Treatment Devices

5.08 Managing Mosquitoes in Surface-Flow Constructed Treatment Wetlands

5.09 Western Snowy Plover Pacific Coast Population Draft Recovery

5.10 Recovery Plan for the Vernal Pools of Southern California

## 5.01 Floodplain Management Plan

<b><i>IRWM P Plan Type</i></b>	<b>Supporting Document</b>
<b><i>Name of Plan</i></b>	Floodplain Management Plan
<b><i>Preparing Agency or Entity</i></b>	City of Los Angeles
<b><i>Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	July 2001
<b><i>Contact Information</i></b>	

***Reviewer*** Teresa Raine, CDM

***Peer Review***

### ***Subwatershed(s) Addressed<sup>1</sup>***

Lower LA River

### ***Geographic Area Described***

City of Los Angeles

### ***Type of Plan<sup>2</sup>***

Floodplain Management

### ***Brief Summary of Plan Intent***

“The Floodplain Management Plan (FMP) has been developed to (1) identify the City’s known flood problem areas, (2) establish goals, objectives, policies and implementation programs to reduce flooding and flood related hazards, and (3) ensure the natural and beneficial functions of our floodplains are protected.”

### ***Brief description of how this plan supports an IRWM Plan.***

The plan provides an understanding of the Floodplain Management strategies for the portions of the IRWMP Study area.

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

The objectives and goals set as part of this Floodplain management plan were:

- “GOAL 1 - Protect human life and property, to the greatest extent catastrophic events, such as tsunamis, coastal flooding, or the rupture containing infrastructure, such as dams, reservoirs, and water tanks.
- GOAL 2 – To the greatest extent possible, reduce the risk from flood hazards, including shallow flooding and mud/debris flow, to life, property, public investment and social order in the City.”

## 5.01 Floodplain Management Plan

### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

Stakeholder involvement and public outreach are detailed in Section 2 (pages 6-10) of this document. The FMP Committee was comprised of city/agency members in addition to citizen members identified through a public outreach program. Committee meetings, public questionnaires and meetings are all detailed in Section 2 extensively.

### ***This plan should be considered:***

A supporting document clarifying goals, objectives, or specific projects.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial

## 5.01 Floodplain Management Plan

	<i>Floodplain Management Plan, City of Los Angeles</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I</i></b> <b><i>WATER MANAGEMENT</i></b>		
<i>Water Supply Reliability*</i>		
<i>Groundwater management*</i>		
<i>Conjunctive use</i>		
<i>Storm water capture and management*</i>		
<i>Surface Storage</i>		
<i>Water quality protection and improvement*</i>		
<i>NPS pollution control</i>		
<i>Flood management*</i>	This is the main purpose of this document	
<i>Water conservation*</i>		
<i>Imported water</i>		
<i>Water recycling*</i>		
<i>Desalination</i>		
<b><i>Category II</i></b> <b><i>HABITAT IMPROVEMENT</i></b>		
<i>Environmental and habitat protection and improvement*</i>		
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		
<b><i>Category III</i></b> <b><i>LAND USE - RECREATION</i></b>		
<i>Recreation and public</i>		

## 5.01 Floodplain Management Plan

	<i>Floodplain Management Plan, City of Los Angeles</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>access*</i>		
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b><i>OTHER</i></b>		

**\* Required Categories to be addressed in the IRWM Plan**

*Optional Categories*

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

Not well covered

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

The Implementation plan for this document is detailed in Section 8 (pages 79 to 97)

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Not well covered

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Not well covered

**Technical Analysis and Plan Performance** - *is based on sound scientific and technical analysis and includes measures to assess performance*<sup>9</sup>.

**Assessment methodology has been detailed in Section 6 of this document.**

**Data Management** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Not well covered

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>11</sup>

Not well covered

### **End of Document Review**

## **5.02 San Gabriel Canyon Sediment Management Plan-Draft Supplemental EIR**

<b><i>IRWM Plan Type</i></b>	<b>Supporting Document</b>
<b><i>Name of Plan</i></b>	San Gabriel Canyon Sediment Management Plan-Draft Supplemental EIR
<b><i>Preparing Agency or Entity</i></b>	Los Angeles County Department of Public Works
<b><i>Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	July 2003
<b><i>Contact Information</i></b>	Michele Chimienti LADPW 900 South Fremont Ave., 2 <sup>nd</sup> Floor Alhambra, CA 91803 626-458-6111
<b><i>Reviewer</i></b>	Teresa Raine, CDM
<b><i>Peer Review</i></b>	

### ***Subwatershed(s) Addressed<sup>1</sup>***

Lower Los Angeles and Rio Hondo

### ***Geographic Area Described***

The San Gabriel Canyon

### ***Type of Plan<sup>2</sup>***

Sediment Management Plan

### ***Brief Summary of Plan Intent***

Sediment removal is an integral part of maintaining flood control capabilities and conserve water as part of dam and reservoir operations. The plan details reservoir cleanouts at various locations (SG Dam and reservoir and Morris Dam and reservoir) under normal (routine) and major cleanout conditions. The plan details the amount of sediment removed in addition to environmental impacts associated with the program.

### ***Brief description of how this plan supports an IRWM Plan.***

Provides background information on flood water management and storm water management as well as information on how these strategies are met and maintained through sedimentation removal.

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

## 5.02 San Gabriel Canyon Sediment Management Plan-Draft Supplemental EIR

The SG Canyon Sedimentation Management Plan (SMP) as it stands in this Supplemental EIR outlines:

Routine reservoir cleanouts under normal conditions.

Major cleanouts under emergency conditions

Major cleanouts resulting from major sedimentation events.

The cleanout events described in this EIR improves water quality by reducing sediment loads in storm waters and improving flood management, and conserves water for groundwater recharge usage.

### **Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

As required for an EIR, the SMP SEIR received comments on the Draft SEIR and provided responses to comments as part of the Final SEIR.

### ***This plan should be considered:***

A supporting document clarifying goals, objectives, or specific projects.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "***Required Categories to be addressed in the IRWM Plan***" are shown in ***Bold Italics***\* with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial

## 5.02 San Gabriel Canyon Sediment Management Plan-Draft Supplemental EIR

	<i>SMP EIR</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>		
<b><i>Groundwater management*</i></b>		(pgs 58-61) brief discussion of impacts to groundwater hydrology. In general, no impact is projected for each alternative
<i>Conjunctive use</i>		
<b><i>Storm water capture and management*</i></b>	This is the focus of the SMP. A variety of alternatives are presented in the text	
<i>Surface Storage</i>		
<b><i>Water quality protection and improvement*</i></b>	(pgs 65-67) Water Quality Impacts for each alternative.  (pgs 97-101) mitigation measures for WQ by alternative  (pgs 5-6, Enclosure B) Water Quality summary of impacts and mitigation measures.	
<i>NPS pollution control</i>		
<b><i>Flood management*</i></b>	This is the focus of the SMP. A variety of alternatives are presented in the text  (pgs. 1-7)Background and basic project information  (pgs 1-4, Enclosure A) Project summary and description	
<b><i>Water conservation*</i></b>		
<i>Imported water</i>		
<b><i>Water recycling*</i></b>		
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat</i></b>	(pgs 101-103) mitigation	(pgs 67-73) impacts to aquatic



## 5.02 San Gabriel Canyon Sediment Management Plan-Draft Supplemental EIR

	<i>SMP EIR</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>protection and improvement*</i>	measures for biological issues by alternative  (pgs 7-9, Enclosure B) Summary of biological issues associated with the plan (including habitat and species impact and mitigation measures)	and terrestrial habitats/biota
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		
<b>Category III LAND USE - RECREATION</b>		
<i>Recreation and public access*</i>	(pgs. 109-111) mitigation measures for recreation/aesthetics by alternative  (pg 11, Enclosure B) Summary of impact and mitigation measures to aesthetic viewsheds.	(pgs 81-84) Impacts to recreation/aesthetics for each alternative.
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b>OTHER</b>		

\* *Required Categories to be addressed in the IRWM Plan*

*Optional Categories*

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

While the focus of this plan is to provide improved flood management and control, the EIR documentation lists information on how the plan interacts with other water and habitat strategies and issues and details on how potential impacts can be mitigated to provided an integrated plan with minimal impact on the environmental surroundings.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

## **5.02 San Gabriel Canyon Sediment Management Plan-Draft Supplemental EIR**

The mitigation measures effecting water quality, biology and recreation are all proposed projects that are incorporated into this plan in addition to the central purpose of the plan: sediment removal strategy to maintain a proper level of storm water management and flood control

*Impacts and Benefits* – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

Impacts to the surrounding environment and area are detailed in Chapter 5 and summarized in Enclosure B.

*Disadvantaged Communities* – Discuss how this plan serves disadvantaged communities<sup>8</sup>. No impact to Disadvantaged Communities is listed or mitigated in the Socioeconomic or Cultural impact discussion

*Technical Analysis and Plan Performance* - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Technical information can be found in the CEIR, provided as Appendix 1 to this plan.

*Data Management* – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Technical information can be found in the CEIR, provided as Appendix 1 to this plan.

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>11</sup>

While coordination is not mentioned, a certain amount of coordination is required due to the EIR comment period and certification process.

### **End of Document Review**

## 5.03 Long Beach Stormwater Management Plan

<i>IRWM Plan Type</i>	<b>Supporting Document</b>
<i>Name of Plan</i>	Long Beach Stormwater Management Plan
<i>Preparing Agency or Entity</i>	City of Long Beach
<i>Other Agency Coordination</i>	
<i>Date of the Plan</i>	August 2001
<i>Contact Information</i>	

*Reviewer* Carrie Buckman/Teresa Raine, CDM

*Peer Review*

### *Subwatershed(s) Addressed<sup>1</sup>*

Portions of Lower Los Angeles River, Coyote Creek, and Lower San Gabriel River

### *Geographic Area Described*

City of Long Beach

### *Type of Plan<sup>2</sup>*

Stormwater Management Plan

### *Brief Summary of Plan Intent*

*Brief description of how this plan supports an IRWM Plan.*

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

*This plan should be considered:*

**A supporting document** clarifying goals, objectives, or specific projects.

Table 1 below is categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "**Required Categories to be addressed in the IRWM Plan**" are shown in

## **5.03 Long Beach Stormwater Management Plan**

***Bold Italics\**** with an asterisk. The Optional Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank the document did not provide substantial

## 5.03 Long Beach Stormwater Management Plan

	<i>Long Beach Stormwater Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>		
<b><i>Groundwater management*</i></b>		
<b><i>Conjunctive use</i></b>		
<b><i>Storm water capture and management*</i></b>	<p>Existing activities (Section 4) include trash and greenwaste control, code enforcement, street maintenance, sewage system operations and maintenance, storm drain systems operation and maintenance, municipal facilities maintenance, public construction activities, landscape maintenance, and special events management.</p> <p>Plan establishes a management program and guidelines for new construction (Section 5).</p> <p>Plan establishes a management program for illicit discharges (Section 6).</p> <p>Public information and education (Section 7).</p>	
<b><i>Surface Storage</i></b>		
<b><i>Water quality protection and improvement*</i></b>		
<b><i>NPS pollution control</i></b>		
<b><i>Flood management*</i></b>		
<b><i>Water conservation*</i></b>		
<b><i>Imported water</i></b>		
<b><i>Water recycling*</i></b>		
<b><i>Desalination</i></b>		

## 5.03 Long Beach Stormwater Management Plan

	<i>Long Beach Stormwater Management Plan</i>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category II</b> <b>HABITAT IMPROVEMENT</b>		
<i>Environmental and habitat protection and improvement*</i>		
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		
<b>Category III</b> <b>LAND USE - RECREATION</b>		
<i>Recreation and public access*</i>		
<i>Land use planning</i>		
<i>Watershed planning</i>		
<b>OTHER</b>		

*\* Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

The plan is defined as a stormwater management plan, and the actions are defined as stormwater management actions. These actions, however, benefit a variety of water resources such as flood control.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

This Plan establishes policy for the city to use during planning and approval for projects within its jurisdiction.

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

### **5.03 Long Beach Stormwater Management Plan**

Not well covered.

*Disadvantaged Communities* – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Not well covered.

*Technical Analysis and Plan Performance* - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Not well covered.

*Data Management* – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Not well covered.

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>11</sup>

Not well covered.

#### **End of Document Review**

## 5.04 The Los Angeles River: Reshaping the Urban Landscape

<i>IRWM Plan Type</i>	<b>Supporting Document</b>
<i>Name of Plan</i>	The Los Angeles River: Reshaping the Urban Landscape
<i>Preparing Agency or Entity</i>	Arthur Golding, Chair of the Los Angeles River Task Force of the American Institute of Architects, Los Angeles Chapter
<i>Other Agency Coordination</i>	Los Angeles River Connection (Learning Exchange)
<i>Date of the Plan</i>	1998
<i>Contact Information</i>	315 W. 9 <sup>th</sup> St., Ste. 1110, Los Angeles, CA 90015 (213) 629-5288
<i>Reviewer</i>	J. Eulate, MIG

### ***Geographic Area Described***

Areas where the Los Angeles River interfaces with the City

### ***Type of Plan<sup>1</sup>***

Periodical, *Target Science Magazine*

### ***Brief Summary of Plan Intent***

To review history of Los Angeles development as it related to the river; to show that while conditions in Los Angeles have changed dramatically since the 1930s (when the River was channelized by the Corp), the Corp's more recent flood control proposals simply represent outmoded, single-purpose planning and cost modeling; and to endorse/propose more progressive planning objectives.

### ***Brief description of how this plan supports an IRWM Plan.***

The document proposes that L.A.'s changing urban conditions, continuing densification and impending flood hazards present an opportunity to rethink the river and reform the regional approach to stormwater management.

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>2</sup>.***

Based on a review of physical and social history, outcomes from the Mayor's Los Angeles River Task Force Report, and on other recent L.A. River Master Plan planning, the author proposes the following objectives:

- Avoid outmoded single-purpose planning and cost modeling
- Recognize that dramatically changing conditions in Los Angeles present an opportunity to rethink the river and reform the regional approach to stormwater management
- Dramatically change the way we deal with rainwater on individual properties
- Reverse and remediate our approach to storm water management, to begin to use public policy and public investment to improve both the physical and economic environment, rather than to perpetuate the myopic engineering of the late 1930s
- Meet flood control needs while restoring the river's natural ecosystem wherever possible
- Maximize public uses and recreation opportunities along the river
- Incorporate the river into a City-wide regional open space network
- Protect riverside rights-of-way and improvements for public access
- Improve river aesthetics
- Restore environmental resources
- Involve public participation
- Coordinate all relevant jurisdictions



## 5.04 The Los Angeles River: Reshaping the Urban Landscape

- Reconnect neighborhoods and communities to natural landscape and history
- Evaluate acquisition of properties to create parks and trails along the river
- Promote economic development potential of a revitalized river corridor
- Accommodate miles of frontage for residential and commercial development together w/active and passive recreation and a renewed riparian habitat

*Stakeholder Involvement* - during preparation of Plan<sup>3</sup>

None, magazine article

*This Plan should be considered:*

A supporting document clarifying goals, objectives, or specific projects

### **Additional Proposition 50 Criteria**

*Integration* - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>4</sup>.

Document does not provide substantial information in this topic area

*Implementation* – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>5</sup>.

Document does not provide substantial information in this topic area

*Impacts and Benefits* – Discuss at a screening level the impact and benefits from Plan implementation<sup>6</sup>.

Document does not provide substantial information in this topic area

*Disadvantaged Communities* – Discuss how this plan serves disadvantaged communities<sup>7</sup>.

Document does not provide substantial information in this topic area

*Technical Analysis and Plan Performance* - is based on sound scientific and technical analysis and includes measures to assess performance<sup>8</sup>.

Document does not provide substantial information in this topic area

*Data Management* – Provision for management of data generated during plan development and implementation<sup>9</sup>.

Document does not provide substantial information in this topic area

*Relation to Local Planning* –Is the Plan coordinated with local planning and management?<sup>10</sup>

Document does not provide substantial information in this topic area

### **End of Document Review**

## 5.05 Grounds for Renewal: The Revitalization of Compton Creek

<i>IRWM Plan Type</i>	<b>Supporting Document</b>
<i>Name of Plan</i>	Grounds for Renewal: The Revitalization of Compton Creek
<i>Preparing Agency or Entity</i>	Santa Monica Mountains Conservancy; document prepared by Zack D. Freedman, UC Berkeley, Department of Landscape Architecture
<i>Other Agency Coordination</i>	The document draws upon planning efforts of other organizations such as the Compton Creek Task Force, the Rivers and Mountains Conservancy, and the City of Compton.
<i>Date of the Plan</i>	2003
<i>Contact Information</i>	Santa Monica Mountains Conservancy (310) 589-3200
<i>Reviewer</i>	Mark Sillings, MIG
<i>Subwatershed(s) Addressed<sup>1</sup></i>	Compton Creek Watershed
<i>Geographic Area Described</i>	<p>Compton Creek is the largest lower tributary of the Los Angeles River. It is 8.5 miles long and drains a flat, densely developed residential and industrial area of 22.6 miles in southern Los Angeles. The creek is highly impacted by urbanization and channelization.</p>
<i>Type of Plan<sup>2</sup></i>	Other regional planning effort - a river revitalization and open space planning document
<i>Brief Summary of Plan Intent</i>	<p>Outlines a vision for the adaptive reuse of Compton Creek where the creek becomes the spine of for a network of parks and open space areas - that together will form a multi-use recreational greenway meandering through impoverished neighborhoods, reconnecting communities with a natural sense of place, while providing additional flood protection, aquifer recharge and air and water quality improvements</p>
<i>Brief description of how this plan supports an IRWM Plan.</i>	<p>Residential, industrial, and commercial development have severely impacted the land surrounding Compton Creek. A majority of the watershed ground surface is non-porous materials which results in large flows of surface run-off into Compton Creek during rain events, leaving little opportunity for natural infiltration. When implemented the Compton Creek plan will enhance open space and recreational opportunities for communities that are currently starved for such resources, while at the same time providing opportunities to treat contaminated creek water, and encouraging infiltration.</p> <p>This Plan does not directly address water supply, water conservation needs or the need to reduce imported water. However, subsequent plans that build on the foundation provided by this plan are likely to do so, to the extent that there are such opportunities within this geographic area.</p>
<i>Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.</i>	<p>Plan objectives are derived from a new vision for Compton Creek that recalls the original meandering character of the tributary system. Habitat, recreational, and educational opportunities, as well as an aesthetically pleasing natural experience can be recaptured by</p>

## 5.05 Grounds for Renewal: The Revitalization of Compton Creek

connecting the existing parks, schools and available open space from the surrounding areas into the Compton Creek Greenway. With these actions the creek is transformed into a functional component of the urban fabric, laying the framework for future open space decisions within the watershed

Goals for the adaptive reuse of the creek:

- Connect Compton Creek to Regional Los Angeles River Greenway
- Create Natural Open Space Destination Areas
- Introduce Watershed Education Opportunities
- Improve Water Quality and Flood Protection
- Enhance Avian Habitat

***Stakeholder Involvement*** - during preparation of Plan<sup>4</sup>

This report documents results stemming from a variety of stakeholder planning efforts, but it is not clear to what extent these stakeholders contributed directly to the preparation of this Plan. :

The Santa Monica Mountains Conservancy, Compton Creek Task Force, and the Rivers and Mountains Conservancy are developing a strategy on the city, regional, and community level to restore Compton Creek to a functioning habitat and an aesthetically pleasing multi-use recreational experience for area residents.

The Compton Creek Task Force, comprising of representatives from the City of Compton, the Los Angeles County Sheriff Department, the Los Angeles County Department of Public Works, and the U.S. Army Corp of Engineers, are working together to develop a strategy to stop illegal dumping and implement more effective debris removal strategies

The Compton Creek Task Force is working with the County of Los Angeles, the Army Corp of Engineers and the Santa Monica Mountains Conservancy to develop a regional park and urban trail network along the footwall of the Compton Creek channel.

***This Plan should be considered:***

A supporting document clarifying goals, objectives, or specific projects. This document will most likely support other future planning efforts including a more in depth comprehensive sub-watershed plan, developed with stakeholder and public participation.

***Water management strategies addressed in this Plan***

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “***Required Categories to be addressed in the IRWM Plan***” are shown in ***Bold Italics***\* with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 5.05 Grounds for Renewal: The Revitalization of Compton Creek

Table 1:

	<b>Grounds for Renewal: the Revitalization of Compton Creek</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I WATER MANAGEMENT</i></b>	Impact of channelization and urbanization on creek system – page 3 Existing channel and water quality conditions described on page 3 Opportunities for improving water quality described in pages 29 through 32	
<b><i>Water Supply Reliability*</i></b>	Does not address water supply reliability	
<b><i>Groundwater management*</i></b>	Discusses opportunities to increase natural infiltration but does not define the extent of potential groundwater storage, if any.	
<b><i>Conjunctive use</i></b>	Not discussed	
<b><i>Storm water capture and management*</i></b>	Discusses various low-tech, low-cost BMPs to mitigate stormwater pollution, etc. on page 29	
<b><i>Surface Storage</i></b>	Not discussed	
<b><i>Water quality protection and improvement*</i></b>	Pages 29 through 32	
<b><i>NPS pollution control</i></b>	Does not directly discuss this concept but several of identified BMPs constitute forms of NPS pollution control	
<b><i>Flood management*</i></b>	Flood management is addressed in conjunction with improved water quality on pages 29 through 32.  Compton Creek Regional Park Program – open space fields to serve as spreading grounds during flood events (page 31)  Additional flood protection options on page 35	
<b><i>Water conservation*</i></b>	Does not discuss	
<b><i>Imported water</i></b>	Does not discuss	
<b><i>Water recycling*</i></b>	Does not discuss	

## 5.05 Grounds for Renewal: The Revitalization of Compton Creek

<b>Grounds for Renewal: the Revitalization of Compton Creek</b>		
	<b><i>Sections that establish Primary Structure for IRWM Plan</i></b>	<b><i>Information that is Supportive to other plans - Identify Plan</i></b>
<i>Desalination</i>	Does not discuss	
<b><i>Category II HABITAT IMPROVEMENT</i></b>	<p>Current avian habitat conditions described on page 14- the soft bottom portion of Compton Creek supports a large wading bird population, and represents the focus of potential habitat improvements</p> <p>Opportunities for enhancing avian habitat described on pages 33 through 36.</p>	
<b><i>Environmental and habitat protection and improvement*</i></b>	See above	
<b><i>Ecosystem Restoration*</i></b>	Overall plan attempts to recall the original meandering character of the tributary system; new parks and open space designed for recreation with natural habitat in places where feasible	
<b><i>Wetlands enhancement and creation*</i></b>	Seasonal wetland opportunity (page 35)	
<b><i>Category III LAND USE - RECREATION</i></b>	Land use and recreation is the primary focus of this plan; designs to enhance limited open space and acquire other potential open space opportunities in an area that significantly lacks this resource.	
<b><i>Recreation and public access*</i></b>	<p>Overall plan is designed to integrate the creek into surrounding communities for improved public access and recreation</p> <p>Creating a Compton Creek Greenway and connecting it to the LA River Greenway described on page 21; a major element of the plan</p> <p>Opportunities to create natural open space destinations and parks detailed on pages 23 through 26</p>	

## 5.05 Grounds for Renewal: The Revitalization of Compton Creek

<b>Grounds for Renewal: the Revitalization of Compton Creek</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
	Outdoor environmental educational opportunities and watershed demonstration projects starting on page 27.	
<i>Land use planning</i>	Plan is designed to correct land use planning mistakes of the past	
<i>Watershed planning</i>	Plan focuses on restoration of Compton Creek but envisions effort benefiting watershed as a whole	

**\* Required Categories to be addressed in the IRWM Plan**

*Optional Categories*

## **5.05 Grounds for Renewal: The Revitalization of Compton Creek**

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

The plan provides some information on how these various strategies will work together. Chapter 3 – Design, Strategies, and Guidelines – describes each of the five primary goals for achieving the overall vision of the Plan, and then provides a qualitative description of actions and proposed projects/programs for achieving these goals. In addition, Appendix G includes a table – Compton Creek Adaptive Reuse Goals – that provides an overall picture of how these strategies work together.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

Projects and opportunities are described in a narrative portion of the plan, painting a visual story of how the Plan can unfold in coming years to achieve its vision of a revitalized and restored Compton Creek. Some of these are specific project proposals, while others are general opportunities for future improvement.

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

The overall document is designed to visually demonstrate the potential to achieve real positive changes in an area that has been significantly impacted by urban development and decades of neglect. Success in achieving these changes here at a local, sub-regional level may be able to encourage other similar transformations elsewhere in the region.

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

The area that is the focus of this Plan is characterized by many low-income, disadvantaged communities. Restoring and revitalizing this significant tributary to the Los Angeles River will directly benefit all of these communities.

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Most of the plan is qualitative in nature but the appendices does include quantitative flood data.

**Data Management** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Document does not provide substantial information in this topic area

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>11</sup>

Document does not provide substantial information in this topic area

### **End of Document Review**

## **5.06 Watershed Management Plan Characterization Report for Coastal Southern California**

<b><i>IRWM Plan Type</i></b>	<b>Supporting Document</b>
<b><i>Name of Plan</i></b>	Watershed Management Plan Characterization Report for Coastal Southern California
<b><i>Preparing Agency or Entity</i></b>	Environment Now/Southern California Wetlands Recovery Project
<b><i>Other Agency Coordination</i></b>	State of California Water Resources Control Board
<b><i>Date of the Plan</i></b>	November, 2002
<b><i>Contact Information</i></b>	Mary Small 510-286-4181 msmall@scc.ca.gov
<b><i>Reviewer</i></b>	J. Eulate, MIG

### ***Subwatershed(s) Addressed<sup>1</sup>***

Those subwatersheds relevant to our study include:

- Los Angeles County subwatersheds: San Gabriel River, L.A. River and Dominguez Channel
- Orange County subwatersheds: Westminster and San Gabriel River/Coyote and Carbon Creeks

### ***Geographic Area Described***

The region examined includes five counties (Santa Barbara, Ventura, Los Angeles, Orange and San Diego), and stretches from Point Conception in the south coast of Santa Barbara County to the border with Mexico, including 39 watersheds that drain into the Southern California Bight of the Pacific Ocean. Los Angeles County and Orange County and their associated subwatersheds apply to our study.

### ***Type of Plan<sup>2</sup>***

Overview of past Watershed Management documents through 2002

### ***Brief Summary of Plan Intent***

The purpose of the report is to provide a snapshot of watershed planning efforts in coastal Southern California at the close of 2002. The report characterizes watershed planning documents and analyzes existing watershed management plans for the region. The document aims to further a regional perspective on watershed planning in coastal Southern California in the hopes of promoting greater efficiency and effectiveness in planning and in attracting resources commensurate with the region's needs and value.

### ***Brief description of how this plan supports an IRWM Plan.***

Only in an organizational sense - the report supports our comprehensive plan review efforts by providing an overview of watershed management documents through 2002. The work supports the overall goal of moving toward integrated regional watershed management.



## 5.06 Watershed Management Plan Characterization Report for Coastal Southern California

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

A key objective of this review is to enable people throughout the region to share information more readily and to further the goal of integrated watershed management. The report provides summaries of watershed management plan content (regionally and by county), as well as narrative information about the plans, including issues, data gaps and planning processes.

The watershed documents are organized by county and watershed area, and associated with the following categories: assessments (rapid stream or comprehensive), scientific studies (# of citations), critical issue plans, watershed plans (entire watershed or partial watershed or draft).

*This Plan should be considered:*

A supporting document clarifying goals, objectives, or specific projects

*Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “**Required Categories to be addressed in the IRWM Plan**” are shown in **Bold Italics\*** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 5.06 Watershed Management Plan Characterization Report for Coastal Southern California

Table 1:

Watershed Management Plan Characterization Report for Coastal Southern California		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I</b> <b>WATER MANAGEMENT</b>		
<i>Water Supply Reliability*</i>		
<i>Groundwater management*</i>		
<i>Conjunctive use</i>		
<i>Storm water capture and management*</i>		New (2002) watershed based stormwater permits will force cities to think beyond their borders, but local government could benefit from incentives, especially staff support and other resources to incorporate watershed concerns into their existing programs (p.28).
<i>Surface Storage</i>		
<i>Water quality protection and improvement*</i>		
<i>NPS pollution control</i>		
<i>Flood management*</i>		
<i>Water conservation*</i>		
<i>Imported water</i>		
<i>Water recycling*</i>		
<i>Desalination</i>		
<b>Category II</b> <b>HABITAT IMPROVEMENT</b>		
<i>Environmental and habitat protection and improvement*</i>		
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		

## 5.06 Watershed Management Plan Characterization Report for Coastal Southern California

<b>Watershed Management Plan Characterization Report for Coastal Southern California</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category III LAND USE - RECREATION</i></b>		
<b><i>Recreation and public access*</i></b>		
<i>Land use planning</i>		<p>Watershed planning hinges on land use decisions – plans must feed back into local planning processes (p.28).</p> <p>Very few plans addressed land use in a way that integrated with other local planning activities (p.25). Only 6 of 20 completed plans attempted to do this. There is an overall lack of institutional capacity to overlay the plans with logical action programs.</p> <p>The key is to synthesize GIS data according to watersheds (p.26), which is not how local government agencies are organized.</p> <p>Watershed plans often fail to acknowledge patterns and constraints related to private ownership (p.26).</p>
<i>Watershed planning</i>		<p>Watershed management Plan defined (p.25).</p> <p>Watershed planning study conclusions (pp.26-28).</p> <p>List of pre-2003 watershed planning documents related to San Gabriel River, Los Angeles River and Dominguez Channel (Table I-1, p.16).</p> <p>Los Angeles County plan document lists, issues addressed and overall conclusions (pp.55-67).</p> <p>Orange County plan document</p>

## 5.06 Watershed Management Plan Characterization Report for Coastal Southern California

<b>Watershed Management Plan Characterization Report for Coastal Southern California</b>	
<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
	<p>lists, issues addressed and overall conclusions (pp.68-78).</p> <p>Coastal Conservancy's planning framework (p.56) includes: watershed assessment, focused studies, identification of actions,</p> <p>Successful watershed planning needs to engage at least: state agencies (resources), local government (context), non-profit and community organizations (energy) and key land owners and managers (legitimacy). Any one can take the lead, but each must be prepared to elicit the involvement of others (p.27).</p> <p>Recommendations to Legislature about how the state could better support watershed management throughout CA (especially through community-based efforts) in report: <i>Assessing the Need to Protect California's Watersheds: Working in Partnerships</i> (p.4).</p> <p>Coastal Southern California's distinctive setting requires that a great deal of information exchange must occur within the region because models from outside do not apply in this climatic and highly urbanized regime (p.4).</p> <p>WRP identified 11 completed watershed and subwatershed management plans within Los Angeles County and 8 pending or proposed through 2002 (Ch.4 p.55).</p> <p>WRP identified 7 completed watershed management plans within Orange County: 2 complete, 3 draft and 2 in preparation through 2002 (Ch.5 p.68).</p> <p>Watershed planning in Coastal</p>

## 5.06 Watershed Management Plan Characterization Report for Coastal Southern California

Watershed Management Plan Characterization Report for Coastal Southern California		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
		<p>Southern CA (p.5)</p> <p>Brief watershed planning history for LA County (p.22); and for Orange County (pp.23, 24).</p> <p>Watershed planning has tended to focus on the coast – now need to attend to upland areas that affect waterways (p.28).</p> <p>The process is not linear and needs to allow for work to start where the energy is (often a small targeted area). More comprehensive plans can follow (p. 27).</p> <p>Process needs to target small enough geographic areas that locals can become invested (p.27).</p> <p>Non-profit organizations can maximize capacity of smaller groups by offering administrative support and technical assistance (p.28).</p>
<b><i>OTHER</i></b>		
	<b><i>Data Gaps</i></b>	<p>Collectively, the most frequently addressed issues in the plans included (listed from highest frequency to lowest): resource issues, water supply, species status, river parkways, non-native species, flood control, land use, sediment, and physical stream parameters. <u>Physical stream parameters</u> received the least amount of attention (only 6 plans). (P.25)</p> <p>Many plans identify problems, but fail to address the source of those problems (p. 26). More coordinated, region-specific <u>science</u> would improve planning to address causes of problems, not just symptoms.</p> <p>All plans stated objectives, but</p>

## 5.06 Watershed Management Plan Characterization Report for Coastal Southern California

Watershed Management Plan Characterization Report for Coastal Southern California		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
		<p>many did not state a mission (p.26).</p> <p>Only half the plans described the ongoing decision-making processes that would govern future planning and implementation activities (p. 26).</p> <p>Most plans described actions, but only about half described funding needs and plans (p. 26).</p> <p>Very few plans addressed land use in a way that integrated with other local planning activities (p.25). Only 6 of 20 completed plans attempted to do this. There is an overall lack of institutional capacity to overlay the plans with logical action programs.</p> <p>The key is to synthesize GIS data according to watersheds (p.26), which is not how local government agencies are organized.</p> <p>Watershed plans often fail to acknowledge patterns and constraints related to private ownership (p.26).</p>
<i>Scientific Studies</i>		<p>San Gabriel River: 39 scientific studies cited in planning documents pre-2003 (Table I-1, p.14).</p> <p>L.A. River: 48 scientific studies cited (Table I-1, p.14).</p> <p>Dominguez Channel Machado Lake: 12 scientific studies cited (Table I-1, p.15).</p>

*\* Required Categories to be addressed in the IRWM Plan*  
*Optional Categories*

## **5.06 Watershed Management Plan Characterization Report for Coastal Southern California**

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>4</sup>.

Document does not provide substantial information in this topic area

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>5</sup>.

Document does not provide substantial information in this topic area

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>6</sup>.

Document does not provide substantial information in this topic area

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>7</sup>.

Document does not provide substantial information in this topic area

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>8</sup>.

Document does not provide substantial information in this topic area

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>9</sup>.

Document does not provide substantial information in this topic area

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>10</sup>

Document does not provide substantial information in this topic area

### **End of Document Review**

## 5.07 Managing Mosquitoes in Stormwater Treatment Devices

<i>IRWM Plan Type</i>	<b>Supporting/Background Data</b>
<i>Name of Plan</i>	Managing Mosquitoes in Stormwater Treatment Devices
<i>Preparing Agency or Entity</i>	University of California, Division of Agriculture and Natural Resources
<i>Other Agency Coordination</i>	UCIMP, Mosquito and Vector Control Association of California, California Department of Health Services
<i>Date of the Plan</i>	2004
<i>Contact Information</i>	Kelly Middleton kmiddleton@sgvmosquito.org
<i>Reviewer</i>	Teresa Raine, CDM
<i>Peer Review</i>	

### *Subwatershed(s) Addressed<sup>1</sup>*

applicable to all watersheds

### *Geographic Area Described*

No specific geographic area defined

### *Type of Plan<sup>2</sup>*

Stormwater Vector/Pest Control

### *Brief Summary of Plan Intent*

This report reviews issues associated with the implementation of Best Management Practices devices for stormwater treatment and the unintended consequence of providing an environment suitable for mosquitoes. The report provides guidelines for BMP devices and mosquito management strategies.

### *Brief description of how this plan supports an IRWM Plan.*

The report provides guidelines for how to include stormwater treatment devices without causing the a negative impact on habitat or recreational uses, providing an approach that can meet stormwater management strategies without impacting other integrated strategies.

### *Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

The objective of this report is to:

- increase awareness of mosquito and vector control strategies
- define types of BMP devices
- provide guidelines for mosquito management



## **5.07 Managing Mosquitoes in Stormwater Treatment Devices**

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

Stakeholder involvement is not provided with this report.

*This plan should be considered:*

A good **background document** on the problems faced

*Not integral to building the IRWMP Functional Equivalent. No further review is required*

## 5.08 Managing Mosquitoes in Surface-flow Constructed Treatment Wetlands

<i>IRWM Plan Type</i>	<b>Background Supporting Document</b>
<i>Name of Plan</i>	Managing Mosquitoes in Surface-flow Constructed Treatment Wetlands
<i>Preparing Agency or Entity</i>	University of California, Division of Agriculture and Natural Resources
<i>Other Agency Coordination</i>	UCIMP, Mosquito and Vector Control Association of California
<i>Date of the Plan</i>	2003
<i>Contact Information</i>	Kelly Middleton kmiddleton@sgvmosquito.org

*Reviewer* Teresa Raine, CDM

*Peer Review*

*Subwatershed(s) Addressed<sup>1</sup>*

applicable to all watersheds

*Geographic Area Described*

No specific geographic area defined

*Type of Plan<sup>2</sup>*

Stormwater Vector/Pest Control

*Brief Summary of Plan Intent*

This report discusses the issues associated with treatment wetlands and mosquito populations. The report discusses how to incorporate treatment wetlands while minimizing mosquito populations. The intent is to suggest design features that decrease mosquito populations instead of later on requiring more costly and occasionally damaging mosquito spraying controls.

*Brief description of how this plan supports an IRWM Plan.*

The report provides guidelines for how to include treatment wetlands without causing a negative impact on habitat, recreational uses, or other water management strategies

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

The objective of this report is to:

- Identify the mosquito population issues
- Provide guidance on wetland siting and pretreatment options
- Suggest design and operational criteria for treatment wetlands

## **5.08 Managing Mosquitoes in Surface-flow Constructed Treatment Wetlands**

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

Stakeholder involvement is not provided with this report

*This plan should be considered:*

A good **background document** on the problems faced

*Not integral to building the IRWMP Functional Equivalent. No further review is required*

## 5.09 Western Snowy Plover Pacific Coast Population Draft Recovery

<i>IRWM Plan Type</i>	<b>Background Supporting Document</b>
<i>Name of Plan</i>	Western Snowy Plover Pacific Coast Population Draft Recovery
<i>Preparing Agency or Entity</i>	Sacramento Fish & Wildlife Office
<i>Other Agency Coordination</i>	.
<i>Date of the Plan</i>	8/14/01
<i>Contact Information</i>	Sacramento Fish and Wildlife Office

*Reviewer* Wendy Katagi, CDM

*Peer Review*

*Subwatershed(s) Addressed*<sup>1</sup> Possibly Lower LAR and Lower SGR

*Geographic Area Described* Estuaries and bays from southern Washington to southern Baja California, Mexico.

*Type of Plan*<sup>2</sup>

Recovery Plan to protect the Western Snowy Plover

*Brief Summary of Plan Intent*

To stabilize and maintain populations throughout the range of the Western Snowy Plover by protecting sufficient breeding and nonbreeding habitat.

*Brief description of how this plan supports an IRWM Plan.*

*Plan Objectives – Identify Plan objectives and the manner in which they were determined*<sup>3</sup>.

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

*This plan should be considered:*

**Not supporting to the development of regional water management strategies.**

***Not integral to building the IRWMP Functional Equivalent. No further review is required***

## 5.10 Vernal Pools of Southern California Recovery Plan

<i>IRWM Plan Type</i>	<b>Background Supporting Document</b>
<i>Name of Plan</i>	Vernal Pools of Southern California Recovery Plan
<i>Preparing Agency or Entity</i>	US Fish & Wildlife Service, Portland (publisher); prepared by Ellen Bauder, PhD, Ann Kreager, and Scott McMillan (San Diego State University and USFWS Carlsbad Field Office)
<i>Other Agency Coordination</i>	US Army Corps of Engineers, Camp Pendleton, San Diego Association of Governments, CDFG, CDOT, Counties of SD, Orange, Riverside, and the Metropolitan Water District.
<i>Date of the Plan</i>	September 1998
<i>Contact Information</i>	US Fish and Wildlife, Carlsbad Office
<i>Reviewer</i>	Wendy Katagi, CDM
<i>Peer Review</i>	

*Subwatershed(s) Addressed*<sup>1</sup> Extirpated vernal pools or vernal pools complexes in the Lower San Gabriel River (Coyote Creek subwatershed). Recovery Plan is not focused on recovering vernal pools within the WCA study area.

### *Geographic Area Described*

Camp Pendleton to Baja California, Mexico (Ensenada) and a small area in Riverside County between Temecula and Murrieta.

### *Type of Plan*<sup>2</sup>

Recovery Plan to protect Vernal Pools and Fairy Shrimp

### *Brief Summary of Plan Intent*

To conserve and enhance southern California vernal pool ecosystems with specific emphasis on stabilizing and protecting existing populations of San Diego and Riverside fairy shrimp so that these species may be reclassified from endangered to threatened status.

### *Brief description of how this plan supports an IRWM Plan.*

*Plan Objectives – Identify Plan objectives and the manner in which they were determined*<sup>3</sup>.

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

### *This should plan be considered:*

Not supporting to the development of regional water management strategies.

***Not integral to building the IRWMP Functional Equivalent. No further review is required***

# Section 6

## Background Information Documents

6.01 Toward a sustainable Water Future: Water Supply and Management in the Los Angeles Area

6.02 MET Prop 50 list (Tier 1)

6.03 Hydrology/Sedimentation Manual

6.04 Re-envisioning the LA River and LA Urban Environment-Mayoral Debate

6.05 Re-envisioning the LA River: A Program of Community and Ecological Revitalization

6.06 Coyote and Carbon Canyon Creek Watershed Feasibility Study

## **6.01 Toward a Sustainable Water Future: Water Supply/Mngmt. In the L.A. Area**

### ***IRWM Plan Type***

### **Background Document**

#### ***Name of Plan***

Toward a Sustainable Water Future: Water Supply and Management in the Los Angeles Area (*Working Title*)

#### ***Preparing Agency or Entity***

Dorothy Green

#### ***Date of the Plan***

July, 2004

#### ***Contact Information***

dorgreen@adelphia.net

#### ***Reviewer***

J. Eulate, MIG

### ***Geographic Area Described***

The 1,394 square mile region discussed encompasses most of Los Angeles County, the San Gabriel and San Fernando Valleys and the Los Angeles Coastal Basin, including the Los Angeles and San Gabriel Rivers watershed and the small coastal watersheds from Palos Verdes to the Santa Monica Mountains that drain into the Santa Monica Bay.

### ***Type of Plan<sup>1</sup>***

Regional Water Supply and Management Book (*Working Draft*)

### ***Brief Summary of Plan Intent***

The purpose of the book is to provide information (about water supply and management in the Los Angeles area) for decision makers and interested citizens to meet future water needs. The work provides a comprehensive overview of: today's water supply and how it has evolved over time, current decision-making processes related to water supply; the past and present political environment, water supply issues and organizational challenges to providing integrated management. The book also reviews tradeoffs associated with various management approaches and inadequacies of current planning processes.

### ***Brief description of how this plan supports an IRWM Plan.***

The Book supports an IRWM Plan in its aim to examine how current water management occurs, and to determine what an integrated water management policy might look like. This book provides the background and logic necessary for making decisions, and proposes some key principles for statewide integrated water management, but does *not* provide how-to detailed level, action steps for implementing goals.

## **6.01 Toward a Sustainable Water Future: Water Supply/Mngmt. In the L.A. Area**

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>2</sup>.*

A major objective of the book is to determine how to best allocate limited water supply, and how to think about sustainability for our economy and life style, and the needs of an abused environment. This study results in a number of principles related to water policy. Following are 15 elements (or principles) of a proposed statewide water policy (pp. 196-197):

1. Local water resources are the most dependable, least costly, and most drought resistant. Therefore they must be carefully managed, protected and used sustainably.
2. Conservation is the cheapest next source of water, providing the least environmental damage. This applies to both urban and agricultural sectors.
3. Groundwater is closely tied to surface water and must be managed conjunctively with surface water, and in a sustainable way, preventing any further overdrafts. Groundwater must not be exported until safe yield and sustainability have been determined, as well the social and economic impacts of such an export.
4. DWR computer models of both surface and groundwater must be first of all consistent, so that one data collection and mapping system is used statewide. The data collected and the models for predicting the future must be subjected to peer review, be predictable, accurate and truly reflect realities. The current Calsim II model does not recognize the connections between ground and surface water. Therefore, there is no current limit on what can be sucked from the ground, as if groundwater is infinite.
5. Reuse of highly treated wastewater, especially for groundwater recharge and even direct potable reuse, must be encouraged. This is the most economical way to reuse massive amounts of water.
6. A portion of water saved by conservation and reuse must be reserved for the environment, for stream and fisheries restorations and possibly to recharge overdrafted groundwater basins. The City of LA has established the precedent of dedicating a third of the water formerly taken from the eastern Sierra for environmental purposes. Therefore, at least a third of what is saved is a good place to start.
7. Delta water quality standards and minimum stream flows must be determined and enforced. This means no more pumping out of the delta or exporting waters from rivers that are already devastated by transfers.
8. There is great need to consolidate water supply and delivery agencies, to make them more accountable, more responsive, and more responsible in their behavior. With thousands of supply agencies in the state, it is impossible for citizens to monitor and have input to water decisions or to even know what many of these agencies do. The experience of the Los Angeles area is that larger agencies do a much better job of conservation, planning and public accountability than many smaller agencies. There are also many economies of scale to be had, and savings from not having to support so many boards of directors and their life styles. Regional agencies at the watershed level might make sense in some locations.
9. Watershed management must move front and center. It includes more and better communication between and among the various kinds of water agencies, capturing stormwater where it falls for recharge especially in urban areas, and a host of other management techniques, including land use planning, habitat restoration, while improving local quality of life and property values.
10. Agriculture is facing international competition for some basic crops, such as cotton, that consume much of the developed water in the state. J.G. Boswell has predicted that ten



## 6.01 Toward a Sustainable Water Future: Water Supply/Mngmt. In the L.A. Area

years from now cotton will no longer be grown in the San Joaquin Valley. This will free up an enormous amount of water that can be earmarked to restore the San Joaquin River and the delta. As cropping patterns change and farms conserve, a third of this conserved water must also be reserved for the environment.

11. Some farmers manage their land in ways that are environmentally beneficial. Some rice growers flood their fields after harvest so that migratory birds can feed on the left over rice and fertilize the fields for next year's crop. Other farmers should be encouraged to find ways to benefit themselves and the environment as well.
12. Some agricultural land should be retired to protect against ag tail water full of bromide and selenium, or because there is a clay lens under the surface that causes water to collect in the root zone of what is grown. An ag drain is not the answer. There is not place for it to drain to. The water saved by retiring this land must also be subject to the "at least one third" rule.
13. The areas of origin must be protected so that they have the option to grow as they wish.
14. Beware of multi-national corporations who are looking to buy into California's water districts to turn our water resources into a commodity to be sold to the highest bidder. Our publicly owned water must remain in public hands and be used only for the health and welfare of the people of California and not the bottom line of multi-national corporations.
15. The people of California must have a prominent voice in the development of any water policy. There must be an end to water officials meeting behind closed doors.

### *Stakeholder Involvement* - during preparation of Plan<sup>3</sup>

The book was reviewed by representatives from the following organizations and agencies:

Los Angeles and San Gabriel Rivers Watershed Council; County Sanitation Districts of Southern California; Los Angeles Department of Water and Power, Upper Los Angeles River Area Watermaster, Water Replenishment District of Southern California, State Department of Water Resources, Watershed Management Division of County Public Works; U.S. Forest Service; California Urban Water Conservation Council; TreePeople; Irvine Ranch Water District, San Gabriel River Water Committee; and Cal State Long Beach.

### *This Plan should be considered:*

A supporting document clarifying goals, objectives, or specific projects

### *Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as "**Required Categories to be addressed in the IRWM Plan**" are shown in **Bold Italics**\* with an asterisk. The *Optional Categories* described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

## 6.01 Toward a Sustainable Water Future: Water Supply/Mngmt. In the L.A. Area

Table 1:

	<b>Toward a Sustainable Water Future: Water Supply and Management in the Los Angeles Area</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b>Category I WATER MANAGEMENT</b>		
<i>Water Supply Reliability*</i>		LA area water supply (pp.18-49).
<i>Groundwater management*</i>		Groundwater (pp.26-34) Strategies for managing groundwater basins (pp.32,34).  Water management: LA area agencies in charge, their functions and inter-relationships (pp.50-89): water suppliers, groundwater management agencies, wastewater management agencies, stormwater management agencies, water quality agencies.  Water management issues (population, accountability, communication, coordination) (pp.85-89).  Water management Cooperation strategies (p.88) and conclusions (pp.88,89).
<i>Conjunctive use</i>		Conjunctive use (pp.114-115)
<i>Storm water capture and management*</i>		Infiltrating stormwater on-site – advantages/disadvantages (pp.24,25).
<i>Surface Storage</i>		
<i>Water quality protection and improvement*</i>		Drinking water quality (pp.128- 170): regulatory overview; drinking water standards and monitoring requirements; water clean-up processes; potential types of contaminants found in drinking water sources; water quality issues by source; coordinated efforts to clean up drinking water in L.A.; and water quality conclusions (p.168,169).
<i>NPS pollution control</i>		
<i>Flood management*</i>		

## 6.01 Toward a Sustainable Water Future: Water Supply/Mngmt. In the L.A. Area

	<b>Toward a Sustainable Water Future: Water Supply and Management in the Los Angeles Area</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<i>Water conservation*</i>		Water quality current contaminants for LA and Orange Counties (Table pp.150,151).  Water use efficiency (pp.90-127): conservation; bmp; reclamation and reuse; conjunctive use; watershed management; water transfers; drought management and planning; new technologies; and water use conclusions (pp.125-126).
<i>Imported water</i>		Imported water (pp.35-48).
<i>Water recycling*</i>		
<i>Desalination</i>		
<b><i>Category II HABITAT IMPROVEMENT</i></b>		
<i>Environmental and habitat protection and improvement*</i>		
<i>Ecosystem Restoration*</i>		
<i>Wetlands enhancement and creation*</i>		
<b><i>Category III LAND USE - RECREATION</i></b>		
<i>Recreation and public access*</i>		
<i>Land use planning</i>		State policy and the L.A. Area (pp.188-198).
<i>Watershed planning</i>		Watershed management (pp.117-122); strategies for cooperation (p.88).  State policy and the LA Area (pp.170-198): statewide uncertainties; population growth; projected aqueduct shortages;

## 6.01 Toward a Sustainable Water Future: Water Supply/Mngmt. In the L.A. Area

<b>Toward a Sustainable Water Future: Water Supply and Management in the Los Angeles Area</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
		statewide efficiencies; water transfers or water marketing; planning processes; issues neglected in the planning process; conclusions (193-196) and proposed elements of statewide water policy (pp.196-198).
<b>OTHER</b>		
<b>Additional Data</b>		Bibliography pp. 199-211 Glossary pp. 212-222 Suggested readings pp. 223-224 Websites of interest pp. 225-226

\* **Required Categories to be addressed in the IRWM Plan**

*Optional Categories*

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>4</sup>.

Document does not provide substantial information in this topic area

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>5</sup>.

Document does not provide substantial information in this topic area

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>6</sup>.

Document does not provide substantial information in this topic area

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>7</sup>.

Document does not provide substantial information in this topic area

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>8</sup>.

Document does not provide substantial information in this topic area

**Data Management** – Provision for management of data generated during plan development and implementation<sup>9</sup>.

Document does not provide substantial information in this topic area

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>10</sup>

Document does not provide substantial information in this topic area

**End of Document Review**

## 6.02 MWD Regional Inventory of Projects

<b><i>IRWM Plan Type</i></b>	<b>Background Document</b>
<b><i>Name of Plan</i></b>	MWD Regional Inventory of Projects
<b><i>Preparing Agency or Entity</i></b>	Metropolitan Water District of Southern California
<b><i>C Other Agency Coordination</i></b>	
<b><i>Date of the Plan</i></b>	2003
<b><i>Contact Information</i></b>	

***Reviewer*** Teresa Raine, CDM

***Peer Review***

### ***Subwatershed(s) Addressed<sup>1</sup>***

All subwatersheds included

### ***Geographic Area Described***

The MWD service area which includes Los Angeles, Orange, Riverside, San Bernadino, San Diego , and Ventura Counties.

### ***Type of Plan<sup>2</sup>***

This is a background document providing information and a listing of the projects deemed feasible in the short-term.

### ***Brief Summary of Plan Intent***

The MWD Regional project helps to provide the coordination between MWD, its member public agencies, and the numerous local retail water agencies. Projects on the listed include a variety benefits to the MWD service areas.

### ***Brief description of how this plan supports an IRWM Plan.***

This document provides a listing of projects that are feasible and provided integrated water resources and regional benefits. This listing of documents include projects that overlap with many areas including the SGLLAR IRWMP area.

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.***

To provide a listing of feasible projects, as determined by the MWD/Member Agency Workgroup, that meet Proposition 50 criteria and goals in addition to having local support and providing tangible regional benefits.

### ***Stakeholder Involvement - during preparation of Plan<sup>4</sup>***

This is not well detailed in this document.

## 6.02 MWD Regional Inventory of Projects

*This should this be considered:*

A good **background document** on the problems faced.

*Not integral to building the IRWMP Functional Equivalent. No further review is required*

## 6.03 Hydrology/Sedimentation Manual

<i>IRWM Plan Type</i>	Management Strategies
<i>Name of Plan</i>	Hydrology/Sedimentation Manua
<i>Preparing Agency or Entity</i>	Los Angeles County Department of Public Works
<i>Other Agency Coordination</i>	
<i>Date of the Plan</i>	December 1991
<i>Contact Information</i>	Los Angeles County Department of Public Works 900 South Fremont Avenue Alhambra, CA 91803

*Reviewer* Teresa Raine, CDM

*Peer Review*

### *Subwatershed(s) Addressed<sup>1</sup>*

Los Angeles River Basin, San Gabriel River Basin (in addition to Ballona Creek, Santa Clara River, and Antelope Valley Basins located outside of the IRWMP study area)

### *Geographic Area Described*

The county of Los Angeles

### *Type of Plan<sup>2</sup>*

This document provides background information on the technical analysis required to understand the urban hydrology of the County of Los Angeles Area.

### *Brief Summary of Plan Intent*

The purpose of the document is to update the previous hydrology manual and provide guidance when calculating design flows for local storm drains, retention and detention basins, pump stations, and major channel projects. These methodologies can also be used to identify storm drain deficiencies and flood hazards.

### *Brief description of how this plan supports an IRWM Plan.*

This guidance document provides guidance on the technical data needed to support the IRWMP efforts.

### *Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>3</sup>.*

The objective of this guidance is to provide an understanding of the hydrological flow calculations to be used for the county of Los Angeles Area.

**Stakeholder Involvement** - during preparation of Plan<sup>4</sup>

## **6.03 Hydrology/Sedimentation Manual**

Not well covered in this guidance.

*This plan should be considered:*

**Not supporting to the development of regional water management strategies.**

***Not integral to building the IRWMP Functional Equivalent. No further review is required***



## 6.04 Re-envisioning the Los Angeles River & the Los Angeles Urban Environment

<i>IRWM Plan Type</i>	<b>Background Document</b>
<i>Name of Plan</i>	Re-envisioning the Los Angeles River and the Los Angeles Urban Environment: Mayoral Debate (Working Paper)
<i>Preparing Agency or Entity</i>	Urban & Environmental Policy Institute at Occidental College
<i>Other Agency Coordination</i>	Progressive Los Angeles (PLAN) and co-sponsoring organizations
<i>Date of the Plan</i>	September 14, 2000
<i>Contact Information</i>	lariver@oxy.edu (323) 259-2566
<i>Reviewer</i>	J. Eulate, MIG

### ***Geographic Area Described***

The Los Angeles and San Gabriel Rivers

### ***Type of Plan<sup>1</sup>***

A working issues briefing paper for the Los Angeles mayoral debate that was held in preparation for the April 2001 mayoral election. The debate was held as part of a year-long discussion/event series hosted by the Urban and Environmental Policy institute at Occidental College (1999-2000), revolving around the Los Angeles River. Also see book on the *Re-Envisioning* series, MIT Press, 2002.

### ***Brief Summary of Plan Intent***

The issues briefing paper on the L.A. River and the Urban Environment and the corresponding questions for candidates, seek to provide a broader context for understanding and addressing the issues that speak to the question of whether Los Angeles can be made more *livable*.

### ***Brief description of how this plan supports an IRWM Plan.***

The paper touches on current issues that are at the heart of the community, including recreation, land use planning and a healthy environment. The work provides a policy perspective, providing policy options related to re-envisioning the river and adjacent lands. Local priorities and concerns of disadvantaged communities are discussed (especially in relation to the 47- acre Cornfield/Chinatown Yards site adjacent to the River (former railyard vacant, contaminated brownfield site) proximate to Chinatown, Lincoln Heights and William Mead Housing Project (areas that lack adequate housing, schools, jobs and open space). One key goal identified is to link decisions about affordable housing development, the creation of living-wage jobs and the siting of schools and parks to strategies that promote a cleaner, healthier environment. (Note: For more on the topic of linking a healthy environment to claims for justice and livable communities, see Orion Afield article by Robert Gottlieb, *Rediscovering the River*, 2002 and Gottlieb's book, *Environmentalism Unbound*).

## **6.04 Re-envisioning the Los Angeles River & the Los Angeles Urban Environment**

*Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>2</sup>.*

The briefing paper reviews key issues and explores policy options related to the following topics:

### **Re-envisioning the Los Angeles River**

- Involving policymakers more formally in identifying policy issues and options that would contribute to re-envisioning the river
- Exploring community development and the river – opportunity site: the 47- acre Cornfield/Chinatown Yards adjacent to the River (former railyard vacant, contaminated brownfield site). Proximity to Chinatown, Lincoln Heights and William Mead Housing Project (areas that lack adequate housing, schools, jobs and open space)
- Re-greening the L.A. River
- Community art projects/murals along the river
- L.A. River bikeway

### **Planning a Livable City**

- Access to information and decision-making
- Parks and community places
- Community development and brownfields

### **Wastes and Hazards: Detoxifying the Urban Environment**

### **Resource Issues: Water, Energy and Food**

### **Transportation and Land Use**

*Stakeholder Involvement* - during preparation of Plan<sup>3</sup>

The debate was held as part of a series with 56 co-sponsors, the Urban and Environmental Policy Institute and its co-host, the Friends of the Los Angeles River.

### ***This Plan should be considered:***

A supporting document clarifying goals, objectives, or specific projects

## **6.04 Re-envisioning the Los Angeles River & the Los Angeles Urban Environment**

### **Additional Proposition 50 Criteria**

***Integration*** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>4</sup>.

Document does not provide substantial information in this topic area

***Implementation*** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>5</sup>.

Document does not provide substantial information in this topic area

***Impacts and Benefits*** – Discuss at a screening level the impact and benefits from Plan implementation<sup>6</sup>.

Document does not provide substantial information in this topic area

***Disadvantaged Communities*** – Discuss how this plan serves disadvantaged communities<sup>7</sup>.

Concerns of disadvantaged communities are discussed. A key goal is proposed to link decisions about affordable housing development, the creation of living-wage jobs, and the siting of schools and parks to strategies that promote a cleaner, healthier environment. Sites relevant to disadvantaged communities are discussed, such as the 47-acre Cornfield/Chinatown Yards site adjacent to the river (vacant, contaminated, former railyard).

***Technical Analysis and Plan Performance*** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>8</sup>.

Document does not provide substantial information in this topic area

***Data Management*** – Provision for management of data generated during plan development and implementation<sup>9</sup>.

Document does not provide substantial information in this topic area

***Relation to Local Planning*** –Is the Plan coordinated with local planning and management?<sup>10</sup>

Document does not provide substantial information in this topic area

### **End of Document Review**

## **6.05 Re-envisioning the Los Angeles River: A Program of Community and Ecological Revitalization**

<b><i>IRWM Plan Type</i></b>	<b>Background Document</b>
<b><i>Name of Plan</i></b>	Re-envisioning the Los Angeles River: A Program of Community and Ecological Revitalization
<b><i>Preparing Agency or Entity</i></b>	Urban & Environmental Policy Institute and the Friends of the Los Angeles River
<b><i>Date of the Plan</i></b>	August, 2001
<b><i>Contact Information</i></b>	Andrea Azuma, Project Manager, Friends of the L.A. River
<b><i>Reviewer</i></b>	J. Eulate, MIG

### ***Geographic Area Described***

The Los Angeles and San Gabriel Rivers.

### ***Type of Plan<sup>1</sup>***

A report, documenting a year-long discussion/event series revolving around the Los Angeles River. Also see book on the *Re-Envisioning* series, MIT Press, 2002.

### ***Brief Summary of Plan Intent***

The purpose of the report is to document the lectures (40), forums, events and activities that were held as part of a year-long Los Angeles River series hosted by the Urban and Environmental Policy institute at Occidental College (1999-2000).

### ***Plan Objectives – Identify Plan objectives and the manner in which they were determined<sup>2</sup>.***

The primary objective of the series was to explore broad perspectives on the evolution of the Los Angeles River, and encourage action for community and ecological revitalization. The exploration included over 40 lectures, as well as forums, panel discussions, art installations, organized walks, tours and bike rides. The series drew on historical, cultural, political, community, environmental and engineering perspectives.

### ***Stakeholder Involvement - during preparation of Plan<sup>3</sup>***

The series was a multi-disciplinary, community-oriented undertaking with 56 co-sponsors, the Urban and Environmental Policy Institute and its co-host, the Friends of the Los Angeles River. involved an impressive list of panelists, speakers and participants, drawing together public agencies, environmental organizations, politicians, advocacy groups, artists, teachers, students and community members (speakers, panelists listed throughout pp. 4-30).

### ***This Plan should be considered:***

A supporting document clarifying goals, objectives, or specific projects

## 6.05 Re-envisioning the Los Angeles River: A Program of Community and Ecological Revitalization

### *Water management strategies addressed in this Plan*

Table 1 below categorizes the water management strategies described in the Proposition 50 guidelines into four categories; Water Management, Habitat Improvement, and Land Use and Recreation, and Other. The strategies identified in the guidelines as “***Required Categories to be addressed in the IRWM Plan***” are shown in ***Bold Italics\**** with an asterisk. The *Optional* Categories described in the guidelines are *italicized* but not bold. References to where those water management strategies are described within the document are shown in the matrix. If sections are left blank, the document did not provide substantial information for that category. For comparison and integration of information this water management strategy table could be combined with that of other plans, or multiple plans, to evaluate common threads of information.

**Table 1:**

	Re-envisioning the Los Angeles River	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
<b><i>Category I</i></b> <b><i>WATER MANAGEMENT</i></b>		
<b><i>Water Supply Reliability*</i></b>		
<b><i>Groundwater management*</i></b>		
<i>Conjunctive use</i>		
<b><i>Storm water capture and management*</i></b>		
<i>Surface Storage</i>		
<b><i>Water quality protection and improvement*</i></b>		Panel discussion: <i>Water Quality and the Watershed</i> (pp.26,27).
<i>NPS pollution control</i>		
<b><i>Flood management*</i></b>		Panel discussion: <i>New Strategies for Flood Protection</i> (pp.6-8).
<b><i>Water conservation*</i></b>		
<i>Imported water</i>		
<b><i>Water recycling*</i></b>		
<i>Desalination</i>		
<b><i>Category II</i></b> <b><i>HABITAT IMPROVEMENT</i></b>		
<b><i>Environmental and habitat protection and improvement*</i></b>		One-day conference: Re-Envisioning the San Gabriel River (pp.13-15). Hosted by the Municipal Water District w/multi-disciplinary group of

**6.05 Re-envisioning the Los Angeles River:  
A Program of Community and Ecological Revitalization**

<b>Re-envisioning the Los Angeles River</b>		
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
		speakers and panelists. Also see San Gabriel Valley Daily Tribune article Dec. 7 <sup>th</sup> '99.  Presentations: <i>Arroyo Seco: Restoring the Arroyo Stream</i> (pp.20-21).  Lecture, Mary Nichols: <i>Revitalizing the River</i> (p.5).
<i>Ecosystem Restoration*</i>		Panel discussion: <i>River Restoration and Downstream Issues</i> (pp. 27, 28).
<i>Wetlands enhancement and creation*</i>		
<b>Category III LAND USE - RECREATION</b>		
<i>Recreation and public access*</i>		Events: <i>Bike along the River</i> (pp.8,9,22-23, 29)/
<i>Land use planning</i>		Community Forum: <i>The River and the Community</i> (pp.24, 25). Innovative land use revitalization projects in Southeastern communities along the river.
<i>Watershed planning</i>		
<b>OTHER</b>		
<i>Stewardship</i>		Activity: <i>Celebrate the San Gabriel River</i> (p.17) As an outcome of the earlier conference, <i>Envisioning the San Gabriel River</i> , a day of activities at the Santa Fe Dam Recreation Area was held - This area is considered one of the key undeveloped open spaces in the watershed. The event was intended to encourage community advocates and stewards of this area.
<i>Disadvantaged Communities</i>		Community Forum: <i>The River and the Community</i> (pp.24, 25). Innovative land use revitalization

**6.05 Re-envisioning the Los Angeles River:  
A Program of Community and Ecological Revitalization**

	<b>Re-envisioning the Los Angeles River</b>	
	<i>Sections that establish Primary Structure for IRWM Plan</i>	<i>Information that is Supportive to other plans - Identify Plan</i>
		projects in Southeastern communities along the river.

\* **Required Categories to be addressed in the IRWM Plan**  
*Optional Categories*

**Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>4</sup>.

Document does not provide substantial information in this topic area

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>5</sup>.

Document does not provide substantial information in this topic area

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>6</sup>.

Document does not provide substantial information in this topic area

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>7</sup>.

A community forum reviewed in the document revolved around innovative land use revitalization projects in Southeastern (some of which can be characterized as disadvantaged) communities along the river.

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>8</sup>.

Document does not provide substantial information in this topic area

**Data Management** – Provision for management of data generated during plan development and implementation<sup>9</sup>.

Document does not provide substantial information in this topic area

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>10</sup>

Document does not provide substantial information in this topic area

**End of Document Review**

## 6.06 Coyote and Carbon Creeks Watershed Feasibility Study

<b><i>IRWM Plan Type</i></b>	<b>Background Document</b>
<b><i>Name of Plan</i></b>	Coyote and Carbon Creeks Watershed Feasibility Study
<b><i>Preparing Agency or Entity</i></b>	U.S. Army Corps of Engineers South Pacific Division Los Angeles District
<b><i>Other Agency Coordination</i></b>	County of Orange
<b><i>Date of the Plan</i></b>	September 26, 2002
<b><i>Contact Information</i></b>	Krista Sloniowski, U.S. Army Corp of Engineers, 911 Wilshire Blvd., Los Angeles, CA 90017 (213)452-3802  Eileen Takata, County of Orange, Watershed & Coastal Resources Division (714) 834-4786
<b><i>Reviewer</i></b>	Mark Sillings, MIG
<b><i>Subwatershed(s) Addressed<sup>1</sup></i></b>	Coyote Creek Watershed; Carbon Creek Watershed

### ***Geographic Area Describe***

The overall study area is described within the study document as 165 square miles, but information from the County of Orange Website for both watersheds defines it as a much smaller area as follows:

The Coyote Creek Watershed covers 41.3 square miles in the northwest corner of Orange County. It includes portions of the cities of Brea, Buena Park, Fullerton, La Habra, and La Palma. Coyote Creek, its main tributary, flows from Riverside County and empties into the San Gabriel River.

The Carbon Creek Watershed covers 21.4 square miles in west Orange County. It includes portions of the cities of Anaheim, Brea, Buena Park, Cypress, Fullerton, La Palma, and Los Alamitos. Carbon Creek, its main tributary, begins in the foothills and empties into the San Gabriel River."

### ***Type of Plan<sup>2</sup>***

Other regional planning effort

### ***Brief Summary of Plan Intent***

This document is a Project Management Plan (PMP). It describes the work that is to be conducted during the feasibility phase, including the scope, critical assumptions, methodologies, and the level of detail for the studies that are to be conducted during the feasibility study. It is a study management tool that will be used to determine if the resulting documents have been developed in accordance with established procedures and agreements. However, the document reviewed is not the report, which will result from the feasibility study, nor is it an actual watershed plan. It is essentially a workplan. The findings generated by the studies and other planning efforts described here will later provide the basis for a future watershed planning effort.

### ***Brief description of how this plan supports an IRWM Plan.***

By itself, the document reviewed here does not support an IRWM Plan, simply because it is a workplan, and not the study report to be produced by this planning process. Instead, it describes



## 6.06 Coyote and Carbon Creeks Watershed Feasibility Study

regional planning activities that were scheduled to be underway starting in the fall of 2002, findings from which could provide the basis for a future watershed planning effort. It appears that the feasibility study may have been delayed for funding reasons. However, the watershed planning effort is now being launched by the County of Orange in early 2005, and is scheduled for completion by March 2007. This watershed management plan is a component of the Corps Feasibility Study, and is also known as Phase I of the Feasibility Study.

***Plan Objectives*** – *Identify Plan objectives and the manner in which they were determined*<sup>3</sup>.

The Westminster Reconnaissance Study is the second chapter of this document, which also encompassed in addition to the Westminster Watershed both the Coyote and Carbon Creek Watersheds. This chapter outlines planning objectives that reflect problems and opportunities identified by this study. These objectives will likely provide the planning framework for any watershed plan developed for this area in the future. These planning objectives are as follows:

### Coyote Creek Watershed:

- To increase the quantity and quality of wetland and riparian habitats in Coyote Creek Watershed
- To reduce concentrations of ammonia and silver and address coliform, algae and abnormal fish histology in Coyote Creek Watershed; and restore beneficial uses designated by the Water Quality Regional Control Board
- To increase passive and active recreation opportunities in Coyote Creek Watershed
- Improve beach nourishment opportunities from sources in Coyote Creek Watershed
- Educate the public on watershed related issues
- To improve the aesthetic conditions in flood control channels

### Carbon Creek Watershed:

- To increase the quantity and quality of wetland and riparian habitats in Carbon Creek Watershed
- To reduce minor flood damages at Miller Retarding Basin and behind Carbon Canyon Dam at the County of Orange Canyon Regional Park
- To reduce the presence of invasive exotic species, including arundo donax, behind Carbon Canyon Dam at the County of Orange Carbon Canyon Regional Park
- To increase passive and active recreation opportunities in Carbon Creek Watershed
- Improve beach nourishment opportunities from sources in Carbon Creek Watershed
- Educate the public on watershed related issues
- To improve the aesthetic conditions in flood control channels

***Stakeholder Involvement*** - during preparation of Plan<sup>4</sup>

The PMP identifies two public forums to be held to receive public input during the study. The first of these is an initial public workshop to present the study to the public, obtain input and public opinions, and fulfill NEPA scoping meeting requirements. This public scoping meeting is now scheduled for April 2005. The second is a final public meeting to be scheduled after the release of the draft report for public review and is an opportunity to present the findings of the draft report to the public and receive public comment. In addition, six public outreach meetings per year are scheduled.

***This Plan should be considered:***

A supporting document clarifying goals, objectives, or specific projects

## **6.06 Coyote and Carbon Creeks Watershed Feasibility Study**

### **Additional Proposition 50 Criteria**

**Integration** - Briefly describe how these strategies work together to provide reliable water supply, protect or improve water quality, and achieve other objectives<sup>5</sup>.

As a feasibility study, the document provides limited information on this topic area, but outlines multiple objectives which in the future will be folded into an integrated watershed management plan.

**Implementation** – Describe the set of actions, projects, and studies, ongoing or planned, by which the Plan will be implemented<sup>6</sup>.

The feasibility study provides some information on upcoming studies and planning activities, which will result in a watershed plan

**Impacts and Benefits** – Discuss at a screening level the impact and benefits from Plan implementation<sup>7</sup>.

By identifying Plan objectives, the document provides some information on anticipated benefits from the future watershed plan.

**Disadvantaged Communities** – Discuss how this plan serves disadvantaged communities<sup>8</sup>.

Document does not provide substantial information in this topic area

**Technical Analysis and Plan Performance** - is based on sound scientific and technical analysis and includes measures to assess performance<sup>9</sup>.

Document does not provide substantial information in this topic area

**Data Management** – Provision for management of data generated during plan development and implementation<sup>10</sup>.

Document does not provide substantial information in this topic area

**Relation to Local Planning** –Is the Plan coordinated with local planning and management?<sup>11</sup>

Document does not provide substantial information in this topic area

### **End of Document Review**

FRAMEWORK INTEGRATED REGIONAL WATER MANAGEMENT PLAN  
**APPENDIX B – Project Identification Forms**

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
San Gabriel and Lower Los Angeles Rivers Watershed Plan Area  
Project Identification Form**

**Lead Agency Information**

Agency Name: Amigos de los Ríos	
Address: Amigos de los Ríos: 1001 Malcolm Avenue, Los Angeles, CA 90024	
Contact Name: Claire Robinson	
Telephone: (310) 470-3258	E-Mail: <a href="mailto:claire@amigosdelosrios.org">claire@amigosdelosrios.org</a>
Fax: (310) 441-9028	Web Site: <a href="http://www.amigosdelosrios.org">www.amigosdelosrios.org</a>

**Summary of Proposed Project Information**

Project Title: <b>Alhambra Wash Naturalization Project</b>	
Proposed Start Date: Nov. 2005	Proposed Completion Date: Nov. 2008
Proposed CEQA Completion Date: April 2006	
Location (Long. & Lat.): 34°03.032'N 118°04.847'W 34°03.643'N 118°05.374'W	Sub Watershed Río Hondo
<p>Project Description:</p> <p>The Alhambra Wash exists in an above-ground 25 foot wide rectangular concrete channel, creating a highly artificial environment. It runs through the Whittier Narrows Golf Course for a 0.5 mile stretch. At the end of the box channel a source pool has formed to create a 2.5 acre pool know as the “oasis”, the only entirely natural area of the Río Hondo. There is no bridge at the confluence of Alhambra Wash and the Río Hondo. A sizable flow exists in this channel even in the summer time, making crossing difficult. The flow of water from the channel enters 1 mile of natural stream of the Río Hondo. We propose to clean up the trail and remove exotics from the “oasis” and restore 50 acres of the natural river area in conjunction with Alhambra Wash Naturalization.</p> <p>Amigos de los Ríos is currently developing a feasibility study to remove the last half-mile of this wash from its concrete and release it as a free-flowing 12 mile braided stream interweaving among the 45 acres of the golf course. Since this area is now located within the flood zone behind Whittier Narrows Dam, this channel only protects the infrastructure of the golf course. Naturalizing this stream will create a pleasant environment of stream channels, trails and native plants, integrated into the layout of the golf course with water conservation and water quality benefits. The integration of the braided stream with the Alhambra Oasis will approximately double the size of the existing area.</p> <p>Based on the results of the Alhambra Wash Feasibility Study Phase 1, this project includes construction drawings, permitting and implementation funds for removing the box channel and replacing it with a natural braided channel as well as monitoring. Key features include a series of bioengineered swales featuring native landscaping, connections to the regional trail system, and trail amenities including bridges, benches, and educational interpretive signage. Potential benefits include water quality protection, water conservation, habitat, recreational and educational opportunities.</p>	
<p>Primary Objectives Addressed by the Project:</p> <ul style="list-style-type: none"> <li>• To transform box channel into 50-acre multi-benefit naturalized stream ½ mile to Rio Hondo</li> <li>• To restore native plants and habitat value of area by introducing braided stream</li> <li>• To restore habitat areas of 50 acres of naturalized portion of the Río Hondo area known as the Alhambra Oasis</li> <li>• To enhance golf course experience and to enhance recreational trails</li> </ul>	

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
San Gabriel and Lower Los Angeles Rivers Watershed Plan Area  
Project Identification Form**

<ul style="list-style-type: none"> <li>To solve regional Total Maximum Daily Load [TMDL] <sup>1</sup> of pollutants issues with a combination of green infrastructure and bioengineered solutions</li> <li>To double the effective size of the naturalized area to approximately 100 acres</li> <li>To provide teaching, restoration and field trip opportunities for local school age children</li> </ul>	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input checked="" type="checkbox"/> Ecosystem Restoration*	<input checked="" type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input checked="" type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input checked="" type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input checked="" type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input checked="" type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	<u>Braided Stream</u> \$427,500 <u>Oasis Restoration</u> \$200,000		<input type="checkbox"/> In Kind \$591,500
Construction & Materials		<u>Braided Stream</u> \$4,837,500 <u>Oasis Restoration</u> \$2,800,000	<input type="checkbox"/> Cash \$2,000,000 Mitigation Funds
Other (Describe)	<u>Permitting</u> \$50,000	<u>Monitoring/AMP</u> \$100,000	<input type="checkbox"/> Other Grants \$ _____
Totals	\$677,500	\$7,737,500	\$2,591,500

Estimated Total Budget (Request & Match): \$8,415,000

Estimated Annual O & M Budget: \$ 250,000

**1. How does your project develop or conserve local water resources?**

- Local water resources would be distributed through the natural-channel-bottom habitat at the confluence with the Rio Hondo. Additionally, recycled water will be incorporated for irrigation purposes. Plants installed at this project will be native to the climate and will not require additional irrigation after the establishment period.

<sup>1</sup> Total Maximum Daily Load is the highest level of certain contaminants, such as trash, heavy metals, some bacteria, and sediment, permissible by the Regional Water Quality Control board entering into Southern California waterways

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
San Gabriel and Lower Los Angeles Rivers Watershed Plan Area  
Project Identification Form**

**2. How does this project address water reliability?**

- The water reliability is being addressed with the use of the recycled water.
- Achieves efficiency by separating drinking water usage from landscape uses
- Promotes storm water infiltration, cleansing and preservation
- Provides watershed educational opportunities
- Underscores precious nature of water in region

**3. How does your project protect, improve or enhance water quality?**

- Water quality enhancements are provided by removing trash at the upstream end of the site; and polishing water through shallow groundwater infiltration, phytoremediation and vegetated waterways before discharging into the Rio Hondo at the Alhambra Oasis.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

- Ecosystem restoration – potential ecosystem restoration includes the removal of trash from the Alhambra “Oasis”
- Environmental habitat protection and improvement – Additional riparian wildlife habitat will be created when the concrete box is removed and native riparian and flood plain vegetation is installed. The length of proposed channels is about 20,000 feet in the area of the golf course. This area will be contiguous with the existing habitat at Rio Hondo and create a bit more of a buffer for the “Oasis”.
- Flood management – Flood water elevations are currently being controlled by the Whittier Narrows Dam. Although the project would alter the flood lines, the general elevation of the flood waters would be maintained.
- Recreation and public access – Recreation is offered through the public golf course on the site. The project will be enhancing the golf course play by introducing hazards to the otherwise unobstructed play. Additionally, the project would allow for an enhanced trail system around the existing golf course that would connect to the Emerald Necklace. It will also provide an educational opportunity for students in nearby schools to learn the natural heritage of the Rio Hondo from the river environment including an opportunity to discover an oasis of nature in the urban core. Many children who visit this park may be discovering the natural world for the first time.
- Storm water capture and management – The storm water up to a 5-yr discharge would be routed through the main enhanced channel. Up to a 20-yr discharge, would be routed through the floodways. In the floodways, water would be allowed to infiltrate into the shallow groundwater and report to the Rio Hondo at varying discharge locations.
- Water conservation and Water Recycling - Water conservation and recycling will be incorporated into this project through the reuse water for irrigation. Plant installation within the channels will not need irrigation once established, however the golf course itself will be maintained with these waters.
- Wetlands enhancement and creation – Waters of the United States and flood plain wetlands will be created when the concrete is removed, native plants established and the storm events are conveyed through earth-bottom channels.

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
San Gabriel and Lower Los Angeles Rivers Watershed Plan Area  
Project Identification Form**

- Conjunctive use – Water will infiltrate into the shallow groundwater zone. Returns to the Rio Hondo will be more representative of a natural stream in that the return-flow hydrograph will be spread out over a longer period of time.
- Land use planning – The native vegetation proposed in the enhanced channel as well as the floodways will be designed not only for the environments in which they grow, but also
- NPS pollution control – NPS pollution control will be addressed
- Surface storage – The design currently contains a small surface water pond. The water in this pond will be recirculated during the dry months, and will offer an aesthetically-pleasing feature to the golf course. The size of this feature is not large enough to offer any additional retention during a storm event.
- Watershed planning – This project benefits the watershed as it is at the end of Alhambra Wash. It offers the potential to treat water outside of the concrete box while not significantly altering the flooding potential. It also offers a link to other streams in the watershed through the Emerald Necklace.

**5. What is the status of your project readiness? (check as appropriate)**

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/> May 2005	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input checked="" type="checkbox"/> May 2005	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/> December 2006	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> April 2006
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> January 2007
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> December 2007

**6. Identify the regional or strategic planning document that identifies this project.**

- Río Hondo Sub Watershed Plan
- Upper San Gabriel River Watershed Management Plan (TBD)

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

- The current technical advisory committee for the project includes the head of Hydrology from the Department of Public Works, and members of the Watershed Protection and Flood Maintenance Division, as well as the head of County Planning for Recreation and Parks, the head of golf course planning for County Recreation and Parks, and the general manager of Alhambra Golf Course. We have also reviewed the project with the Army Corp of Engineers. The TAC members are well engaged and have provided critical parameters for success for the project which have been integrated into the feasibility study.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife**

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**habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

- The golf course is landscaped with grass and mostly non native trees, as such it may be the habitat for certain birds - but none of threatened status. The Oasis at the end of the Box channel is an area frequented by birds. This water in this area will remain constant. Invasive plants have been delivered to the oasis by the stormwater for years to this location. The naturalization project will prohibit this disposition from occurring. The restoration proposal of this area includes removal of invasive exotics around the scour pool and through out the nature river area of the Rio Hondo that extends north for 75 acres. Habitat Restoration of a great portion of this area will take place, and the remaining area will be planted with native plants and outfitted with trails, interpretive signs and recreation amenities. This project will be biologically significant by creating 75 acres of riparian and flood plain wildlife habitat adjacent to an existing and protected open space.

**9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

- Water quality improvements will be measured for the first 3 years of after implementation. We will establish baseline information by sampling the storm and nuisance water in the channel at appropriate representative levels including first flush, nuisance flow and modest storms at the inlet. Post implementation we will record the level of trash caught at the inlet and other first flush pollutants including the following constituents: heavy metals, hydrocarbons, bacteria, N-P-K and other pollutants.
- We will measure the same constituents and the end of the naturalized channel to gauge the effectiveness of the plants to perform phytoremediation of metals in area soils, and bio remediation of other TMDLs will be tested.
- Initial Biological and vegetative surveys have been conducted during project feasibility. Full baseline Surveys of the Golf course and Rio Hondo natural river area will be completed as part of the permit process. Although not anticipated, the presence of any threatened and or endangered species will be protected by a qualified biologist during project construction; native vegetation will be monitored for five years in accordance to legal restoration standards. In accordance with a River Post-construction biological monitoring of the naturalized channel will take place approximately three times a year for a minimum duration of five years. Wildlife surveys will be conducted and vegetation transects installed to determine wildlife presence and vegetation survival.

**10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

- We will develop an adaptive management plan and a natural river management plan as part of the permitting process.

**11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**



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- Data would be kept on a series of CD's. Currently information is distributed on a regular basis to RMC. Additionally, Amigos will keep a record of the available information that can be accessed as requested. As a part of the Emerald Necklace, data would be made available to all members of the TAC as wells as Entities who have signed the MOU.

**12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?**

- Yes, Alhambra Wash Naturalization provides a direct benefit to disadvantaged communities of highly dense areas with a low proportion of open space relative to its population. It provides residents suffering from a wide variety of social, environmental, and health issues such as high rate of poverty, obesity, asthma, hypertension, and Type II diabetes. The creation of 100 acres of cultural and natural habitat areas will provide pleasant walking and picnic spaces as well as opportunities to enjoy wildlife in their native habitat for residents. It will also provide residents including children and a significant low-income population with limited access to open space with opportunities to discover an oasis for nature in the urban core and to interpret the river history - characteristic braided channel.
- The 10% matching funds requirement will not pose a hardship to this disadvantaged community.

**13. What percentage of the project funding has been secured?**

- A feasibility study has been funded in the amount of \$40,000.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

**1. Project Schedule/Timeline including all major milestones**

Conceptual Design (in process)	January to May 2005
Land Tenure	May 2005
Preliminary Plans	November 2005 to December 2006
CEQA / NEPA	December 2006
Permitting	January 2007
Construction Drawings	December 2006 to December 2007
Implementation	November 2008

**2. Cost Estimate of major project elements including the identification of major funding sources.**

- Please see the attached cost estimate, Exhibit C.

**EXHIBIT C  
COST ESTIMATE**

Cost Estimate Sheet				
Proposal Title: Integrated Regional Water Management Plan (Prop 50, Ch.8)				
Project Title: Alhambra Wash, Whittier Narrows Golf Course				
Budget Category		Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	\$ 7,500	\$ 67,500	\$ 75,000
(b)	Land Purchase/Easement	\$ -	\$ -	\$ -
(c)	Planning / Design / Engineering / Environmental Documentation	\$ 64,000	\$ 576,000	\$ 640,000
(d)	Restoration of 50 acres @ \$50k/acre	\$ 2,000,000	\$ 500,000	\$ 2,500,000
(e)	Construction/Implementation	\$ 420,000	\$ 3,780,000	\$ 4,200,000
(f)	Environmental Compliance / Mitigation / Enhancement	\$ -	\$ -	\$ -
(g)	Project Summary [Sum (a) through (f) for each column]	\$ 2,491,500	\$ 4,923,500	\$ 7,415,000
(h)	Construction Administration	\$ 25,000	\$ 225,000	\$ 250,000
(i)	Other	\$ -	\$ -	\$ -
	<i>Construction/Implementation Contingency</i>	\$ 75,000	\$ 675,000	\$ 750,000
(j)	Grant Total [Sum (g) through (k) for each column]	\$ 2,591,500	\$ 5,823,500	\$ 8,415,000
Source of funds for Non-State Share (Funding Match)				

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 Lead Agency Information**

Agency Name: Amigos de los Ríos	
Address: 1001 Malcolm Avenue Los Angeles, CA 90024	
Contact Name: Claire Robinson	
Telephone: (310) 470-3258	E-Mail: <a href="mailto:claire@amigosdelosrios.org">claire@amigosdelosrios.org</a>
Fax: (310) 441-9028	Web Site: <a href="http://www.amigosdelosrios.org">www.amigosdelosrios.org</a>

**Summary of Proposed Project Information**

Project Title: <b>Arcadia Wash Naturalization</b>	
Proposed Start Date: November 2005	Proposed Completion Date: February 2009
Proposed CEQA Completion Date: December 2006	
Location (Long. & Lat.): 34°08.958'N 118°03.230'W 34°07.937'N 118°02.225'W	Sub Watershed Rio Hondo

**Project Description:**  
 The Arcadia Wash Naturalization project is a creek restoration project that will improve water quality, add to the reliability of water supply in the region by recharging in excess of 60 acre-ft of water per year to the regional aquifer, and add to water conservation within the regional context. Additionally, restoration of the creek will provide new areas for relaxation and enjoyment within the regional context. The Arboretum, a popular tourist spot, will have an additional attractive feature displaying the behavior of a typical California stream discharging through the center, lined with natural vegetation. Additionally, the naturalized stream through the parking area at the Santa Anita Racetrack will provide a new natural location for relaxation and a corridor for hiking.

The project includes transforming a concrete channel into a natural channel that is stabilized by vegetation that will provide water quality benefits by cleaning first flush flows, which occurs 80% of the time on a frequency basis. It therefore has a huge impact on water quality as the native plants that will be planted in the stream will purify the water. Additionally, the water will be discharged into a unique underground storage facility below the lake in the Los Angeles Arboretum, while still maintaining the lake itself on its top. The additional discharge of water into the underground facility (a cistern) will result in about a maximum 14+ acre-feet of additional water per storm seeping into the aquifer.

The project entails naturalizing the wash through the Los Angeles Arboretum, discharging water into a specially designed cistern below the lake in the Arboretum to discharge into the regional aquifer below. The native vegetation in the naturalized creek in the Arboretum will purify the first flush and remove pollutants. Regional impacts are therefore provided from both water quality and aquifer recharge points of view. Downstream of the Arboretum, the same wash will be naturalized through the parking area of the Santa Anita Race Track. This will provide various benefits; it will provide a focal point for community involvement, lead to water purification of the first flush through the presence of natural vegetation in the creek, and will additionally add to the recharging the regional aquifer by development of a similar cistern below the naturalized creek. The portion of Arcadia Wash flowing through the Santa Anita golf course is anticipated to have similar benefits, i.e. the water quality will be improved for the first flush with native vegetation planted in the creek, and a similar underground storage facility will allow recharge of the regional aquifer.

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In totality the amount of additional water discharged into the regional aquifer will most probably be on the order of about 60+ acre-feet of water (more than one storm event will occur during the course of a year). This is enough water to supply about 120 + households per year in California, thus increasing the general reliability of water supply.

- Primary Objectives Addressed by the Project:
- o To transform box channel into multi benefit naturalized stream
  - o To restore and conserve the natural system]
  - o To improve water quality and water conservation
  - o To restore native plants and habitat value of area
  - o To offer an interactive location for the public
  - o To solve regional Total Maximum Daily Load [TMDL] <sup>1</sup>of pollutants issues with a combination of green infrastructure and bio solutions
  - o To add significant additional volumes of water to the regional aquifer underlying the Arcadia Wash in the general vicinity of the Arboretum, Santa Anita Race Track and the Santa Anita Golf Course.

**Water Management Strategies Addressed:** (Check all that Apply)

<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input checked="" type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Potential Match Contribution
Personnel, Consultants	<u>Arboretum</u> \$597,975 <u>Race Track</u> \$660,240 <u>Golf Course</u> \$361,800		In Kind
Construction & Materials		<u>Arboretum</u> \$5,176,200 <u>Race Track</u> \$3,887,900 <u>Golf Course</u> \$2,631,500	
Other (Describe)	<u>Permitting</u> \$100,000 Arboretum	<u>Monitoring / AMP</u> \$200,000 Arboretum	Other Grants

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	\$80,000 Race Track \$75,000 Golf Course	\$150,000 Race Track \$100,000 Golf Course	
Totals	\$1,875,015	\$12,145,600	TBD

Estimated Total Budget (Request & Match): \$14,020,615  
 Estimated Annual O & M Budget: \$ 420,000

**1. How does your project develop or conserve local water resources?**

Santa Anita Golf Course: Local water resources would be distributed through a channel with a tiered floodplain containing native vegetation. The bottom of the channel would be a biotechnical design that combines concrete blocks and native herbaceous plants. Below the channel a large cistern will be provided that will allow water discharging into it to recharge the regional aquifer in the region. This will add significantly to the total ground water resources.

Santa Anita Race Track: Local water resources would be distributed through the natural-channel-bottom habitat at a northwest and central portion of the site. Plants installed at this project will be native to the climate and will not require additional irrigation after the establishment period. The goal of the naturalized channel is to offer an interactive location for the public, i.e. to restore and conserve the natural system. A similar cistern that will allow water discharging into it to recharge the aquifer in the region.

Los Angeles County Arboretum: Local water resources would be distributed through the natural-channel-bottom habitat at a northwest and central portion of the site. Plants installed at this project will be native to the climate and will not require additional irrigation after the establishment period. A portion of the created meandering channel will be installed with cisterns to store water and reuse during dry seasons and act as a educational tool for the population who visit the Los Angeles County Arboretum.

The dry pond at the Arboretum represents an excellent opportunity for creating a small ecosystem yet allowing for potential groundwater infiltration. The pond can be developed into a dual system. The upper half of the lake will be lined and recirculated water will be utilized to create a 3.5-acre, standing water ecosystem. Additionally, the lower half of the system will be constructed using a porous media such that groundwater infiltration can be achieved. The potential storage is 17 acre-ft that could feasibly be infiltrated into the groundwater system over a few days.

In total, we estimate that the cisterns in the project will provide an additional 60+ acre-ft of water to regional groundwater systems. (All three cisterns will be filled more than once per year). This water is enough to supply about 120 + households per year in California.

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**2. How does this project address water reliability?**

Santa Anita Golf Course: The water reliability can potentially be addressed with the use of the recycled water for irrigation of the golf course. It will be enhanced by the cistern that will be constructed below the creek.

Santa Anita Race Track: The water reliability is being addressed with the use of the recycled water. It will also add to water reliability by the water seeping in to the aquifer from the cistern that will be constructed below it.

Los Angeles County Arboretum: The water reliability is being addressed with the use of the recycled water. Additionally regional water reliability will be improved by large volumes of water seeping into the groundwater from the cistern that will be designed below the lake in the Arboretum.

In total a volume of 60+ acre-ft of water is expected to be added additionally to the regional aquifer per year by the cisterns that will be designed below these restored creeks and the lake in the Arboretum.

**3. How does your project protect, improve or enhance water quality?**

Santa Anita Golf Course: Water quality enhancements will be achieved by the flows traveling through a biotechnical and bioengineered channel. The water quality will be improved by directing flows through vegetated waterways thereby polishing them. The first flush will be cleaned on a regular basis.

Santa Anita Race Track: Water quality enhancements will be achieved by removing a portion of the flows from the concrete box and creating an earth-bottom meandering channel. The water quality will be improved by directing flows through vegetated waterways thereby polishing them. The first flush will be cleaned on a regular basis.

Los Angeles County Arboretum: Water quality enhancements will be achieved by removing a portion of the flows from the concrete box and creating an earth-bottom meandering channel. The water quality will be improved by directing flows through vegetated waterways thereby polishing them. The water will also be detained in two basins prior to discharging off-site. The first flush will be cleaned on a regular basis.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

**Santa Anita Golf Course:**

- o **Ecosystem restoration** – potential ecosystem restoration includes the treatment of dissolved or suspended TMDLs with the vegetation.

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- **Environmental habitat protection and improvement**– Additional riparian wildlife habitat will be created when flows are removed from the concrete box and native riparian and flood plain vegetation is installed. The area will be approximately 1655 feet long with natural vegetation on the tiers at about 25 feet wide and will result in about 1 acre of increased habitat and wildlife movement.
- **Flood management** – Floods will be managed within the proposed channel. Hydraulic modeling will be used to evaluate various vegetative conditions and maintenance to calculate water levels during flood events.
- **Recreation and public access** – Recreation is offered through the public golf course on the site. The project will be enhancing the golf course play by introducing hazards on about three fairways.
- **Storm water capture and management** – Storm water will be captured and managed by the existing facilities and the upgrades through this reach.
- **Water conservation and Water recycling** – Water conservation and recirculation could potentially be addressed by irrigating with recycled water.
- **Conjunctive use** – Water will infiltrate into the shallow groundwater zone. Returns to the groundwater are potential and will be further investigated.
- **Land use planning** – The native vegetation proposed in the enhanced channel as well as will be designed to propagate in the natural environment.
- **NPS pollution control** – NPS pollution control will be addressed
- **Watershed planning** – It offers a link to other streams in the watershed through the Emerald Necklace.

**Santa Anita Race Track:**

- **Ecosystem restoration** – The naturalized channel will essentially be treating the nuisance flows and the first flush for removal of dissolved TMDLs.
- **Environmental habitat protection and improvement** – Additional riparian wildlife habitat will be created when flows are removed from the concrete box and native riparian and flood plain vegetation is installed. The area will be approximately 3800 feet long and 50 feet wide and will result in about 4.3 acres of increased habitat and wildlife movement.
- **Flood management** – Floods will be managed with the existing system of concrete channels and culverts. The project will entail diverting a small amount of the total flood waters into the natural channel.
- **Recreation and public access** – Recreation and public access will be a key design feature. This section of the channel is envisioned as a location for the public to understand and have access to a riparian zone. The goal is to incorporate these designs with the landuse changes planned for the parking lot at the race track.
- **Storm water capture and management** – The first flush as well as nuisance flows will be treated in the naturalized channel. Flood waters will be maintained in the existing culvert system.
- **Wetlands enhancement and creation** – Waters of the United States and flood plain wetlands will be created when flows are removed from the concrete box, native plants established and the storm events are conveyed through earth-bottom channels.
- **Conjunctive use** – Water will infiltrate into the shallow groundwater zone. Returns to the groundwater are potential and will be further investigated.
- **Land use planning** – The native vegetation proposed in the enhanced channel as well as the floodways will be designed not only for the environments in which they grow, but also be used as an educational and perhaps focal point of the potential land development at this site.

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- **NPS pollution control** – NPS pollution control will be addressed
- **Surface storage** – Surface storage will not be a primary goal of this project. However, the surface water retention through this site will be increased due to the introduction of native vegetation in the channel.
- **Watershed planning** –It offers a link to other streams in the watershed through the Emerald Necklace.
- **Water and wastewater treatment** – Water treatment will occur as the nuisance flows and first flush are routed through the natural channel containing native vegetation and a soft bottom.

Los Angeles County Arboretum:

- **Environmental habitat protection and improvement** – additional riparian wildlife habitat will be created when flows are removed from the concrete box and native riparian and flood plain vegetation is installed. The area will be approximately 4752 feet long and 50 feet wide and will result in about 5.5 acres of increased habitat and wildlife movement. Flood management – Floods will be managed with the existing system of concrete channels and culverts. The project will entail diverting a small amount of the total flood waters into the natural channel.
- **Recreation and public access** – Public access will be managed by the Arboretum. The recreational activities include potential summer concert series, nature walk along a native riparian corridor, and viewing of the plant species at the Arboretum. Additionally, the design allows for access to the pond and viewing of a standing-water ecosystem.
- **Storm water capture and management** – The first flush as well as nuisance flows will be treated in the naturalized channel. Flood waters will be maintained in the existing culvert system.
- **Water conservation and Water recycling** – Water conservation and recirculation will be designed at both the small viewing pond (as incorporated in the Arboretum’s updated Master Plan) and at the existing dry pond.
- Wetlands enhancement and creation – Waters of the United States and flood plain wetlands will be created when flows are removed from the concrete box, native plants established and the storm events are conveyed through earth-bottom channels.
- **Conjunctive use** – Water will infiltrate into the shallow groundwater zone. Returns to the groundwater are potential and will be further investigated. A goal of the project is to infiltrate through the bottom of the dry pond.
- **Land use planning** – The native vegetation proposed in the enhanced channel as well as will be designed to propagate in the natural environment. The land use planning has been incorporated with the Arboretum’s revised Master Plan.
- **NPS pollution control** – NPS pollution control will be addressed
- **Surface storage** – The design currently contains a small surface water pond. The water in this pond will be recirculated during the dry months, and will offer an aesthetically-pleasing feature to the golf course. The size of this feature is not large enough to offer any additional retention during a storm event.
- **Watershed planning** – This project benefits the watershed as it is at the end of Alhambra Wash. It offers the potential to treat water outside of the concrete box while not significantly altering the flooding potential. It also offers a link to other streams in the watershed through the Emerald Necklace.



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**5. What is the status of your project readiness? (check as appropriate)**

<b>Item</b>	<b>Complete (Specify Date)</b>	<b>In process (Specify Est. Comp. Date)</b>	<b>Not initiated</b>
Conceptual Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings		<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6. Identify the regional or strategic planning document that identifies this project.**

- o Río Hondo Sub Watershed Plan
- o Upper San Gabriel River Watershed Management Plan (TBD)

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The current technical advisory committee for the project includes the head of Hydrology from the Department of Public Works, and members of the Watershed Protection and Flood Maintenance Division, as well as the head of County Planning for Recreation and Parks, the head of golf course planning for County Recreation and Parks, and the head of the Arboretum and Nancy Goslee Power, landscape architect for Arboretum Masterplan. The TAC members are well engaged and have provided critical parameters for success for the project which have been integrated into the feasibility study.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

Santa Anita Golf Course: This project will be biologically significant by creating 1 acre of riparian and flood plain wildlife habitat, as well as year-round ponding.

Santa Anita Race Track: This project will be biologically significant by creating 4.3 acres of riparian and flood plain wildlife habitat, and year-round ponding.

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Los Angeles County Arboretum: This project will be biologically significant by creating 5.5 acres of riparian and flood plain wildlife habitat, and year-round ponding.

**9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

Santa Anita Golf Course:

- Biological and vegetative surveys will be conducted during project design. The presence of threatened and or endangered species will be surveyed prior to project design and reported in a Biological Assessment. These species and other native species will be protected by a qualified biologist during project construction. Post-construction biological monitoring will take place approximately three times a year for a minimum duration of five years. Wildlife surveys will be conducted and vegetation transects installed to determine wildlife presence and vegetation survival.

Santa Anita Race Track:

- Biological and vegetative surveys will be conducted during project design. The presence of threatened and or endangered species will be surveyed prior to project design and reported in a Biological Assessment. These species and other native species will be protected by a qualified biologist during project construction. Post-construction biological monitoring will take place approximately three times a year for a minimum duration of five years. Wildlife surveys will be conducted and vegetation transects installed to determine wildlife presence and vegetation survival.

Los Angeles County Arboretum:

- Biological and vegetative surveys will be conducted during project design. The presence of threatened and or endangered species will be surveyed prior to project design and reported in a Biological Assessment. These species and other native species will be protected by a qualified biologist during project construction. Post-construction biological monitoring will take place approximately three times a year for a minimum duration of five years. Wildlife surveys will be conducted and vegetation transects installed to determine wildlife presence and vegetation survival.
- Ponds will be monitored for depth and duration of ponding.
- Erosion damage will be noted.

**10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

An adaptive management plan is under development. There will be a plan to respond to growing conditions of the site and to adjust what has been planted seasonally for the best success rates. Additionally, the water quality success will also be measured and modifications made to maximize the benefit that can

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be accomplished through time. The ground water recharge will be monitored, and if more water can be recharged on an annual basis, modifications will be made to accomplish the same.

**11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

Data would be kept on a series of CD's. Currently information is distributed on a regular basis to RMC. Additionally, Amigos will keep a record of the available information that can be accessed as requested. We will also post all the data on a website for download by anybody, including agencies and private individuals and companies. A newsletter will be developed to inform the public and agencies of new developments.

**12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?**

While all three projects reside in relatively affluent areas, each in it own way, attracts many visitors from surrounding areas, many of which are disadvantaged both economically and from access to natural areas. The Arboretum, in particular, attracts thousands of school children and visitors from around the region. Further, the downstream effects of these projects will be beneficial to those areas of the Emerald Necklace that are less advantaged. Arcadia Wash feeds into the Río Hondo in El Monte which passes on to Rosemead. The City of El Monte is significantly disadvantaged with a median household income of \$32,439 and 37% of the population living below the poverty line. Two-hundred meters north of where Arcadia Wash feeds into the Río Hondo, Peck Park is an impaired body of water listed on the U.S. E.P.A. 303(d) list and the Regional Water Quality Control Board TMDL Completed List. Improvements to water quality in Arcadia Wash will directly benefit these underserved communities.

The 10% matching funds requirement will not pose a hardship to any of the communities involved.

**13. What percentage of the project funding has been secured?**

A feasibility study, currently underway, has been funded by the Rivers and Mountains Conservancy in the amount of \$153,000 (one hundred and fifty three thousand dollars).

While all three projects reside in relatively affluent areas, each in it own way, attracts many visitors from surrounding areas, many of which are disadvantaged both economically and from access to natural areas. The Arboretum, in particular, attracts thousands of school children and visitors from around the region. Further, the downstream effects of these projects will be beneficial to those areas of **the Emerald Necklace** that are less advantaged. The 10%

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matching funds requirement will not pose a hardship to any of the communities involved.

**14. What percentage of the project funding has been secured?**

A feasibility study, currently underway, has been funded by the Rivers and Mountains Conservancy in the amount of \$153,000 (one hundred and fifty three thousand dollars).

The feasibility study for naturalizing Arcadia Wash, where it passes through the Los Angeles County Arboretum, has given the project team an opportunity to work with the Arboretum, Los Angeles County Department of Public Works, U.S. Army Corps of Engineers, Regional Water Quality Control Board, California Department of Fish and Game, and the City of Arcadia. Conceptual planning for the project occurs at an opportune time to participate in the development of the Arboretum's Master Plan, which involves patrons of the Arboretum, Los Angeles County Arboretum Foundation and local residents. As a project that will be viewed by hundreds of thousands of visitors to the Arboretum each year, we look forward to hosting stakeholder events that will give residents and visitors the opportunity to participate in the planning process, development, planting native habitat, and learning about our regional climate and watershed.

***Arcadia Wash: Arboretum***

The feasibility study for naturalizing Arcadia Wash where it passes through the Los Angeles County Arboretum has given the project team an opportunity to work with the Arboretum, Los Angeles County Department of Public Works, U.S. Army Corps of Engineers, Regional Water Quality Control Board, California Department of Fish and Game, and the City of Arcadia. Conceptual planning for the project occurs at an opportune time for participation in the development of the Arboretum's Master Plan, which involves patrons of the Arboretum, Los Angeles County Arboretum Foundation, and local residents. As a project that will be viewed by hundreds of thousands of visitors to the Arboretum each year, we look forward to hosting stakeholder events that will give residents and visitors opportunities to participate in the planning process, development, planting of native habitat, and to learn about our regional climate and watershed.

***Arcadia Wash: Racetrack***

The feasibility study for naturalizing Arcadia Wash where it passes through the Santa Anita Racetrack has given the project team an opportunity to work with the City of Arcadia, Caruso Development, Los Angeles County Department of Public Works, U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game. Conceptual planning for the project occurs at an opportune time to participate in the planning for a 50+ acre commercial and residential development for the site. With the City of Arcadia and Caruso Development, we are exploring ways to integrate a naturalized stream area, recreational opportunities, and habitat. The development of the project will be undertaken with input from residents, community days to plant trees, and educational opportunities to learn about the watershed.

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***Arcadia Wash: Golf Course***

The feasibility study for naturalizing Arcadia Wash where it passes through the Santa Anita Golf Course has given the project team an opportunity to work with the City of Arcadia, Los Angeles County Department of Parks and Recreation, L.A. County Dept. of Public Works, U.S. Army Corps of Engineers, Regional Water Quality Control Board, and California Department of Fish and Game. The agencies responsible for administration of the golf course have expressed an interest in exploring ways to improve aesthetics and meet challenges of the course through naturalization. The naturalization of this stretch of Arcadia Wash will offer more opportunities for public involvement, which we hope to capitalize on by involving golfers, residents, bicyclists, the Audubon Society, and local schools in learning about the watershed.

**15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

A diverse group of agencies manage the San Gabriel River and Los Angeles River Watersheds to provide reliable drinking water, flood protection, water quality, habitat, and open space preservation. This group includes the Los Angeles County Department of Public Works, U.S. Army Corps of Engineers, Metropolitan Water District and local water agencies, local governments, and conservation organizations. Drinking water for both watersheds comes from runoff in the San Gabriel and Santa Monica Mountains that recharges groundwater aquifers through a system of spreading basins, supplemented by imported water from the State Water Project and Colorado River, all of which are administered by the Watermasters and local water agencies. Using a system of concrete flood control channels and dams, flood protection is jointly administered by the Los Angeles County Department of Public Works and the U.S. Army Corps of Engineers. Water quality is monitored by the Los Angeles County DPW, local water agencies and conservation groups. As early as 1979, the presence of volatile organic compounds found in wells has presented a future challenge. Habitat restoration and open space protection are undertaken by in collaboration of all the agencies working on watershed management, with assistance from local conservation organizations.

Long-term regional watershed management needs include an increasing demand, and possible reductions in available potable water, increasing burdens on an aging flood management system, and continued loss of minimal open space and habitat areas. Volatile organic compounds contributing to several pollution plumes contaminating groundwater aquifers have reached such magnitude, that several wells have already been shut down--and some areas have been declared Superfund Sites by the U.S. Environmental Protection Agency. The flood management system, mostly built between the 1930s and 1950s (and in disrepair in parts), bears an increasing burden from regional development that will continue to increase runoff into the flood control channels as long as impermeable surfaces are built. The last remaining open and habitat spaces, which are also the last permeable surfaces, are threatened by the ongoing pressures of development in a region with a desperately low open space ratio of 0.5 acres per 1,000 residents. Meanwhile, population is projected to continue growth at a rate of 1 million

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new residents each year, placing an increasing demand on water, flood management, and habitat/open space resources.

The benefits of the Arcadia Wash Naturalization Project address the regional needs of the watershed by capturing non-point source pollution before it enters the Río Hondo channel, increasing stormwater infiltration in order to reduce the load on the storm drain system, and expanding open space and habitat resources. The innovative naturalized channel will feature bioengineering remediation technology to capture and remove trash and pollutants entering the storm drain system. Much of the water that passes through Arcadia Wash will infiltrate (except in the event of a capital storm), thereby reducing the flood load on the aging Rio Hondo flood control channel. Use of native plants in the bioswale and along the edge Arcadia Wash will provide an opportunity for wildlife habitat and for public viewing.

The regional economic, environmental, and fiscal impacts of the Arcadia Wash Naturalization Project include enhancements to the 50-acre residential and commercial project planned for the Santa Anita Racetrack area, enjoyment by visitors to the Arboretum and Golf Course, additional recreational opportunities, establishment of new habitat areas, and protection of regional air and water resources. The City of Arcadia is working with Caruso Development to create a multi-use 50 acre residential/commercial facility at the site of Santa Anita Wash. The original plans called for covering Arcadia Wash but this project will provide an opportunity to create a multi-benefit enhancement to the development which will improve aesthetics and reduce burden on the regional storm drain system. The Arboretum is also going through their Master Planning process and the naturalized channel will be an excellent complement and appeal to the grassy festival pad shown in conceptual plans for that area. The bioswale will capture trash and runoff from watering and fertilizers sprayed on the grass. Throughout the wash, native plants will provide habitat for wildlife while a new trail will create additional recreational opportunities and wildlife viewing. Capture of non-point source pollutants and carbon dioxide uptake will help improve regional air and water quality. Trees and shrubs planted along Arcadia Wash will prevent an estimated yearly total of 5 acre-feet of water from loading the storm drain system. Carbon dioxide sequestration from the plants is projected at 10 tons annually, resulting in a regional improvement in air quality.

Increasing demands made on limited water, flood management, and open space resources make this a crucial moment for innovative projects like the Arcadia Wash Naturalization. Average flood loads will continue to rise, forcing costly mitigation projects like the one recently undertaken in the City of Los Angeles to raise the height of the flood control levees. Increases in runoff will also increase the total daily loads of significant non-point source pollution, requiring more costly investments in catch basins and artificial filtration devices. The Arcadia Wash Naturalization project is the most cost effective investment in protecting the resources of our watershed.

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Required Attachments - Refer to:

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

**1. Project Schedule/Timeline including all major milestones.**

**Santa Anita Golf Course:**

Conceptual Design (in process)	January to July 2005
Land Tenure	May 2005
Preliminary Plans	January 2006 to July 2006
CEQA / NEPA	December 2006
Permitting	January 2007
Construction Drawings	January 2007 to October 2007
Implementation	April 2008 to July 2008
Post Implementation Monitoring	Five Years after Substantial Completion

**Santa Anita Race Track:**

Conceptual Design (in process)	January to July 2005
Land Tenure	May 2005
Preliminary Plans	October 2006 to April 2007
CEQA / NEPA	December 2006
Permitting	January 2008
Construction Drawings	October 2007 to July 2008
Implementation	April 2009 to October 2009
Post Implementation Monitoring	Five Years after Substantial Completion

**Los Angeles County Arboretum:**

Conceptual Design (in process)	January to July 2005
Land Tenure	May 2005
Preliminary Plans	January 2006 to July 2006
CEQA / NEPA	December 2006
Permitting	January 2007
Construction Drawings	July 2007 to January 2008
Implementation	July 2008 to January 2009
Post Implementation Monitoring	Five Years after Substantial Completion

**2. Cost Estimate of major project elements including the identification of major funding sources.**

Please see the three attached cost estimates, Exhibit C.







**EXHIBIT C  
COST ESTIMATE**

Cost Estimate Sheet				
Proposal Title: Integrated Regional Water Management Plan (Prop 50, Ch.8)				
Project Title: Arcadia Wash, Arboretum				
Budget Category		Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	\$ -	\$ 28,475	\$ 28,475
(b)	Land Purchase/Easement	\$ -	\$ -	\$ -
(c)	Planning/Design/Engineering/Environmental Documentation	\$ -	\$ 569,500	\$ 569,500
(d)	Construction/Implementation	\$ -	\$ 4,000,000	\$ 4,000,000
(e)	Environmental Compliance/Mitigation/Enhancement	\$ -	\$ -	\$ -
(f)	Project Summary [Sum (a) through (e) for each column]	\$ -	\$ 4,597,975	\$ 4,597,975
(g)	Construction Administration	\$ -	\$ 276,200	\$ 276,200
(h)	Other	\$ -	\$ -	\$ -
(i)	Construction/Implementation Contingency	\$ -	\$ 1,200,000	\$ 1,200,000
(j)	Grant Total [Sum (f) through (i) for each column]	\$ -	\$ 6,074,175	\$ 6,074,175
Source of funds for Non-State Share (Funding Match)				

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**Lead Agency Information**

<b>Agency Name:</b> Los Angeles County Flood Control District	
<b>Address:</b> 900 South Fremont Avenue Alhambra, CA 91803	
<b>Contact Name:</b> Vik Bapna	
<b>Telephone:</b> (626) 458-4636	<b>E-Mail:</b> vbapna@ladpw.org
<b>Fax:</b> (626) 458-3534	<b>Web Site:</b> www.ladpw.org

**Summary of Proposed Project Information**

<b>Project Title:</b> <i>Armstrong Multiuse Grounds</i>	
<b>Proposed Start Date:</b> May 2008	<b>Proposed Completion Date:</b> July 2009
<b>Proposed CEQA Completion Date:</b> February 2008	
<b>Location:</b> South Gate	<b>Sub Watershed:</b> Los Angeles River
<b>Long/Lat:</b> 33.95°N, 118.17°W	
<b>Project Description:</b> This project involves the acquisition and development of the Armstrong property located south of Fostoria Street and west of the Los Angeles River in the City of South Gate. The project would consist of constructing an approximate 8-acre stormwater detention basin with multi-use amenities.	
<b>Primary Objectives Addressed by the Project:</b> <u>Flood Management</u> – The project would resolve a localized flooding problem that occurs at the end of Fostoria Street and across the residential lots that are north of the Armstrong property. <u>Water Quality</u> – The project will provide swales to treat and percolate nuisance dry-weather runoff. <u>Recreation</u> - The project will promote passive recreational opportunities by constructing decomposed granite paths and seating areas, while educating visitor through the use of interpretive signage. In addition, the bottom of the detention basin would be a large open space area that could be used potentially for a ball field. <u>Water Conservation</u> – The project will include landscaping with drought tolerant and native plants. Once established, the native landscaping will be self-sustaining and require little or no irrigation. <u>Environmental Habitat Protection and Improvement</u> – Through the addition of native vegetation, this project will create habitat to support a variety of wildlife species. <u>Public Access</u> – The project will enable the public access an existing undeveloped private 8-acre lot.	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input checked="" type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input checked="" type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning

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<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel			<input type="checkbox"/> In Kind \$1,618,000
Construction		\$4,000,000	<input type="checkbox"/> Cash \$ _____
Materials			<input type="checkbox"/> Other Grants \$ _____
Other (Acquisition)	\$1,500,000		
Totals	\$1,500,000	\$4,000,000	

**Estimated Total Budget (Request & Match):** \$7,118,000  
**Estimated Annual O & M Budget:** \$ 20,000

**1. How does your project develop or conserve local water resources?**

A storm drain adjacent to the project site currently collects runoff from a 43-acre watershed. By constructing this project, some of the runoff will be captured at the site and recharge the groundwater. Water conservation will also be promoted through the use of native landscaping that is drought resistant and requires minimal water irrigation.

**2. How does this project address water reliability?**

The project would have minimal impact to water reliability.

**3. How does your project protect, improve or enhance water quality?**

Some nuisance water or dry-weather runoff will be retained on-site to percolate into the ground, resulting in a potential reduction of pollutants entering the Los Angeles River through the storm drain system. The project will also feature vegetated swales to treat runoff.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

The project will incorporate Ecosystem Restoration and Environmental and Habitat Protection and Improvement through the establishment of native plants similar to those that would have been found historically at the site and consistent with the Los Angeles River Master Plan Landscaping and Plant Palette Guidelines. Recreation and Public Access will be incorporated into the project by opening the previously restricted private right of way for public access and through the creation of a landscaped stormwater detention basin with pedestrian paths and seating areas. Flood Management will be addressed by diverting and collecting the stormwater flows that currently pond at Fostoria Street and River Road and across residential lots. The project is consistent with the Los Angeles

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River Master Plan, established recreational and habitat corridors, and with larger watershed planning efforts in the project area.

**5. What is the status of your project readiness? (check as appropriate)**

Item	Complete	In process	Not initiated
Conceptual Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6. Identify the plan(s) that include this project.**

The project is consistent with the objectives of the Los Angeles River Master Plan and the Common Ground, from the Mountains to the Sea Report. The Master Plan, which was adopted by the Board of Supervisors in 1996, promotes environmental and recreational enhancements and economic opportunities while recognizing the river’s primary purpose of flood protection. The Common Ground Report, which was adopted by the Rivers and Mountains Conservancy and the Santa Monica Mountains Conservancy in October 2001, provides goals which guide open space planning within watersheds.

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

Potential partners include the Cities of Cudahy and South Gate and Verde Vistas, a non-profit organization. No partnership commitments have been established. The District will enter into agreements with the Cities of South Gate and Cudahy for the development of additional recreational amenities such as recreation centers.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

The Los Angeles River currently sustains over 100 species of birds along with wildlife habitat. Historically, the River sustained steelhead trout, great blue herons, and other species which are considered sensitive species due to their extinction. The project will reestablish some of the indigenous native landscaping to promote sustainability of existing and future habitat that may be established by other restoration efforts in the watershed.

**9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

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The District may formulate a monitoring and assessment plan which requires soils testing and water quality sampling, as needed for measuring constituents such as Trash, Total and Fecal Coliform, pH, Chloride Nitrate, etc. Pre and post monitoring may be done by District staff to measure the success of the enhancements, such as the vegetated swales.

**10. Is there an adaptive management plan in place to address post project implementation operational variances?**

Adaptive Management will be used to ensure that the project is operated as efficiently as possible in order to maintain the project's flood protection functions, recreational use, water quality improvement, and habitat establishment. Best Management Practices, such as impervious pavements and vegetated swales, will be incorporated where necessary. The District proposes to use the soils and water quality monitoring data obtained after construction to determine whether or not modifications should be made.

**11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

District staff will track qualitative data for the project by creating regular summaries of operation and maintenance functions undertaken to ensure project sustainability. Summaries will be made available to all interested parties, including agencies and other local stakeholders such as environmental groups, and nearby residents via hard copy, e-mail, or the County of Los Angeles Department of Public Works website.

**12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?**

In accordance with the U.S. Department of Housing and Urban Development Census 2000 Data, more than half the population, in both the Cities of Cudahy and South Gate, falls in the low/moderate income categories. The project will provide direct benefits to the disadvantaged community by providing needed open space, resolving a localized flooding problem, and improving property values. The Flood Control District will provide matching funds so there will be no hardship on the disadvantaged community.

**13. What percentage of the project funding has been secured?**

Approximately fifteen percent of the project funding has been secured.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones and dependencies. See Attached.
2. Cost Estimate of major project elements including the identification of major funding sources. See Attached.

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**ADDITIONAL PROJECT QUESTIONS**

<b>Agency Name:</b> Los Angeles County Flood Control District	
<b>Address:</b> 900 South Fremont Avenue Alhambra, CA 91803	
<b>Contact Name:</b> Vik Bapna	
<b>Telephone:</b> (626) 458-4636	<b>E-Mail:</b> vbapna@ladpw.org
<b>Fax:</b> (626) 458-3534	<b>Web Site:</b> www.ladpw.org
<b>Project Title:</b> <i>Armstrong Multiuse Grounds</i>	

**1. Stakeholder Involvement: Please describe the stakeholder involvement in this project including provisions for on-going participation.**

In 1996, Proposition A funding was granted to the Cities of Cudahy and South Gate for acquisition of the Armstrong Property. The site is located in the City of South Gate but, due to railroad constraints on the south side of the property, access is only available through the City of Cudahy on the north side of the property. Trust for Public Land assisted with trying to acquire the property, but the owner was reluctant to sell.

Public Works and the Los Angeles River Master Plan are interested in continuing to pursue the acquisition and development of the Armstrong property because it is one of the largest available parcels along the Los Angeles River. In further planning and development efforts, Public Works will involve the Cities of Cudahy and South Gate, community groups, and other interested Master Plan Advisory Committee members.

**2. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

On a regional basis, the project will contribute to a watershed wide effort of reducing and treating stormwater runoff flows to improve the Los Angeles River water quality, to not impact the River's flood protection capacity, and to promote water conservation. The Los Angeles River is a regional flood protection system that drains an 834 square mile watershed. When the River flows reach a certain height level at the project location, water is prevented from entering the River and it collects above the project location and flows across residential lots. The project will divert, treat, and recharge some of these flows.

**3. Disadvantage Communities: What percentage of your service region is disadvantaged and how does this compare to the total regional population?**

In accordance with the U.S. Department of Housing and Urban Development Census 2000 Data, 70 percent of the Cudahy population and 56 percent of the South Gate population falls in the low/moderate income categories.

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**ADDITIONAL PROJECT QUESTIONS**





# ARMSTRONG MULTIUSE GROUNDS

## EXHIBIT C COST ESTIMATE FORMAT

Complete the following table for each project contained within the proposal and a table showing the estimated costs for the entire proposal.

Cost Estimate Sheet				
Proposal Title:				
Project Title:				
	Budget Category	Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	<b>\$48,000</b>		<b>\$48,000</b>
(b)	Land Purchase/Easement		<b>\$1,500,000</b>	
(c)	Planning/Design/Engineering/Environmental Documentation	<b>\$170,000</b>		<b>\$170,000</b>
(d)	Construction/Implementation		<b>\$4,000,000</b>	<b>\$4,000,000</b>
(e)	Environmental Compliance/Mitigation/Enhancement			
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$218,000</b>	<b>\$5,500,000</b>	<b>\$5,718,000</b>
(g)	Construction Administration	<b>\$600,000</b>		<b>\$600,000</b>
(h)	Other			
(i)	Construction/Implementation Contingency (20%)	<b>\$800,000</b>		<b>\$800,000</b>
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$1,618,000</b>	<b>\$5,500,000</b>	<b>\$7,118,000</b>
Source of funds for Non-State Share (Funding Match)		Los Angeles County Flood Control District		

## Budget Category Explanations

- (a) *Direct Project Administration Costs* – Includes: salaries, wages, fringe benefits, office supplies, and equipment needed to support the project, staff travel costs (at or below the rate allowed for unrepresented State employees), and preparation of required quarterly and final reports. Actual costs directly related to the project will be reimbursed.
- (b) *Land Purchase/Easement* – If land acquisition is to be included in the Non-State share, include whether it is a proposed acquisition, or if the land is already owned by an IRWM Plan participant. Prior purchase of land can be included in an applicant's funding match if purchased after November 5, 2002. Land acquisition costs will not be considered a reimbursable item if purchased prior to the effective date of the grant agreement. For land purchased prior to the date of the application include the date of purchase and purchase price of the land. Costs for easements will be handled similarly as for land purchases.
- (c) *Planning/Design/Engineering/Environmental Documentation* – Differentiate costs between consulting services and/or agency/organization staff costs for these efforts. Planning costs include: planning efforts, reconnaissance studies, feasibility studies, and preliminary reports. Design and engineering costs include: conceptual, preliminary and final design efforts, geotechnical reports, hydraulic studies, water quality investigations and efforts, and other engineering types of work. Include the costs of bid preparation and processing here. Environmental documentation costs include all efforts involved in the CEQA or NEPA process up to the point of the Notice of Determination, Finding of no Significant Impact, or Record of Decision.
- (d) *Construction/Implementation* – Includes the summary of labor, materials, equipment purchases and/or rentals. After bids are received these costs will be the actual construction cost awarded to the low bidder. The construction or implementation costs for Pilot Projects should be included here.
- (e) *Environmental Compliance/Mitigation/Enhancement* – Includes those costs required by a CEQA/NEPA document to offset any potential damages caused by the proposal. If these costs are included in the contract awarded for construction or implementation of the proposal, differentiate such costs for purposes of this budget.
- (f) *Project Summary* – The summation of the costs for items (a) through (e) above.
- (g) *Construction Administration* – Includes those costs required to supervise and administer the construction or implementation of the project(s). Differentiate costs between consulting services and agency staff costs to perform this work.
- (h) *Other* – Includes costs for legal services, license fees, permits, any implementation verification costs, and any monitoring and assessment costs required during the construction/implementation of the proposal. Do not include monitoring and assessment costs for efforts required after construction/implementation of the proposal is complete. These costs are considered to be operation and maintenance costs and are not reimbursable.
- (i) *Construction/Implementation Contingency* – Includes any contingency costs for the construction/implementation of the proposal. Specify the percentage used for this contingency cost. For all other contingency costs, i.e. design, land purchase, etc., include those contingencies in the appropriate cost category.

For the Step 2 submittal, detail will be expected for each of the above cost categories explaining how the total cost was derived.

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**Lead Agency Information**

Agency Name: LOS ANGELES COUNTY FLOOD CONTROL DISTRICT (DISTRICT)	
Address: 900 South Fremont Avenue, Alhambra, CA 91803	
Contact Name Vik Bapna	
Telephone: (626) 458-4363	E-Mail: vbapna@ladpw.org
Fax: (626) 457-1526	Web Site: www.ladpw.org

**Summary of Proposed Project Information**

Project Title: Bell Riverfront Greenway Project	
Proposed Start Date: January 2006	Proposed Completion Date: January 2008
Proposed CEQA Completion Date: July 2006	
Location: In the City of Bell along the Los Angeles River	Sub Watershed Los Angeles River
<p>Project Description: The project involves landscaping, restoring and beautifying approximately 3,400 linear feet of the Flood Control District right-of-way along the Los Angeles River adjacent to River Drive in the City of Bell.</p>	
<p>Primary Objectives Addressed by the Project:</p> <p>The primary objectives of the Bell Riverfront Greenway Project are the provision of recreation, water conservation, and habitat restoration along a desolate area of the Los Angeles River which is highly visible to residents along River Drive as follows:</p> <p><b>Recreation</b> – The project will promote passive recreational opportunities with the development of landscaping improvements and sitting areas along the west side of the Los Angeles River and River Drive in the City of Bell.</p> <p><b>Water Conservation</b> – The project will include landscaping with drought tolerant and native plants. Once established, the native landscaping will be self-sustaining and require little irrigation.</p> <p><b>Habitat Restoration</b> –Through the addition of native vegetation, this project will create habitat to support a variety of wildlife species.</p>	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input checked="" type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment

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<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer
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\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel			<input checked="" type="checkbox"/> In Kind \$ 265,000
Construction		\$550,000	<input checked="" type="checkbox"/> Cash \$ 100,000
Materials			<input type="checkbox"/> Other Grants \$ _____
Other (Describe)			
Totals		\$550,000	\$365,000

Estimated Total Budget (Request & Match): \$915,000

Estimated Annual O & M Budget: \$10,000

**1. How does your project develop or conserve local water resources?**

The project conserves local water resources with drought tolerant native trees, plants, and efficient irrigation. Although, initially the plants will need irrigation, once installed, the native landscaping will be self sustaining and require little or no irrigation. The landscaped area will have the additional benefit of filtering and recharging some of the rainfall within the project area.

**2. How does this project address water reliability?**

The project will have a negligible impact on water reliability.

**3. How does your project protect, improve or enhance water quality?**

The planting of native vegetation will result in some incremental improvement in surface and groundwater quality by providing erosion control along the landscaped slope and reducing sediment deposition into the River and filtering polluted runoff.

The project will also include educational opportunities to help educate local residents on the various causes of pollution and how they can help prevent the contamination of the River.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

Environmental and Habitat Protection and Improvement and Ecosystem Restoration will be provided by establishing native plants that are indigenous to the Los Angeles River watershed and have the capability of sustaining existing wildlife habitat along the River corridor.

Water quality protection and improvement and water conservation would be promoted through the use of drought resistant landscaping plants and trees. The landscaped area will initially need irrigation. Once installed, the native landscaping will require little or no irrigation since it will be self sustaining. The

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landscaped area will also have the additional benefit of filtering and recharging some of the rainfall within the project area.

The project will provide opportunities for passive recreation with the establishment of the vegetations and amenities such as seating areas.

**5. What is the status of your project readiness? (check as appropriate)**

Item	Complete	In process	Not initiated
Conceptual Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CEQA/NEPA	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6. Identify the plan(s) that include this project.**

The project is identified in the Los Angeles River Master Plan, which was adopted by the Los Angeles County Board of Supervisors in June 1996. The Master Plan identifies the site as an opportunity for enhancing open space and linking the regional River greenway. The project will also be consistent with the Master Plan's supplemental documents which include Landscaping Guidelines, adopted by the Board of Supervisors in March 2004.

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The project is located within Los Angeles River right of way that is owned and maintained by the Los Angeles Flood Control District. The City of Bell has been notified of the project proposal and has expressed that this project is in concert with their objectives and goals.

The Los Angeles River Master Plan was developed and continues to be implemented by approximately 50 agencies which comprise an Advisory Committee. The District chairs the Advisory Committee which meets on a quarterly basis to review projects and oversee the development of projects along the River, such as the Landscaping and Signage Guidelines. Support from the Master Plan Advisory Committee will be critical for securing project funding, ensuring that the project meets the diverse needs of the community, and addressing future maintenance requirements of the site. Other stakeholders will include the residents and community groups that are immediately affected by the project. District staff will outreach to affected stakeholders at future City Town Hall meetings during the planning phase to incorporate their recommendations and concerns into the project design plans.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or**

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**restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

The project is not in an area of biological significance. However, by planting native vegetation, the project will provide habitat to support a variety of wildlife species in an area that currently has little existing habitat. The River historically sustained steelhead trout, great blue herons, and other species which would be considered sensitive species due to their extinction. The project will reestablish some of the indigenous native landscaping to promote sustainability of existing and future habitat that may be established by other restoration efforts in the watershed. The project will also provide a rest area for birds migrating along the Pacific Corridor.

- 9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

Project success will be measured by how well the vegetation establishes itself along the River. Maintenance of landscape amenities will be addressed through a monitoring and assessment plan which will require routine maintenance operations of the site.

Interpretive and educational signage will be used to educate the public about water and habitat concerns and may be used by schools to enhance educational opportunities. Plants and biological assessments may be made by the local schools. These assessments could also be used to estimate the project's success.

- 10. Is there an adaptive management plan in place to address post project implementation operational variances?**

Adaptive Management will be used to ensure that this landscaping and restoration project exists with minimal maintenance efforts. Periodic site surveys will be done to determine sustainability of native plants and to address security and maintenance issues. Revegetation and irrigation modification will be performed as determined necessary through survey sites. A maintenance period will be established in the landscaping construction contract to ensure the replacement of any planting which does not flourish. Regular sweeping of the public recreational bikeway will continue.

- 11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

District staff will track the project by creating regular summaries of operation performing maintenance functions to ensure project sustainability and tracking project development and success through progressive photographs and community feedback. It will be made available to all interested parties, including agencies and other local stakeholders via hard copy, email, or the web.

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- 12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?**

The City of Bell is not a disadvantaged community, but the project will benefit members of other surrounding disadvantaged communities that use the bikeway. The Flood Control District will provide matching funds so it will not pose a hardship to the community.

- 13. What percentage of the project funding has been secured?**

Eighteen percent of the funding has been secured. These costs include the planning, design plans, construction, construction engineering and contingencies.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones and dependencies.
2. Cost Estimate of major project elements including the identification of major funding sources.



**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
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**ADDITIONAL PROJECT QUESTIONS**

<b>Agency Name:</b> Los Angeles County Flood Control District	
<b>Address:</b> 900 South Fremont Avenue Alhambra, CA 91803	
<b>Contact Name:</b> Vik Bapna	
<b>Telephone:</b> (626) 458-4636	<b>E-Mail:</b> vbapna@ladpw.org
<b>Fax:</b> (626) 458-3534	<b>Web Site:</b> www.ladpw.org
<b>Project Title:</b> Bell Riverfront Greenway project	

**1. Stakeholder Involvement: Please describe the stakeholder involvement in this project including provisions for on-going participation.**

The project is located within Los Angeles River right of way that is owned and maintained by the Los Angeles Flood Control District. The City of Bell has been notified of the project proposal and has expressed that this project is in concert with their objectives and goals.

The Los Angeles River Master Plan was developed and continues to be implemented by approximately 50 agencies which comprise an Advisory Committee. The District chairs the Advisory Committee which meets on a quarterly basis to review projects and oversee the development of projects along the River, such as the Landscaping and Signage Guidelines. Support from the Master Plan Advisory Committee will be critical for securing project funding, ensuring that the project meets the diverse needs of the community, and addressing future maintenance requirements of the site. Other stakeholders will include the residents and community groups that are immediately affected by the project. District staff will outreach to affected stakeholders at future City Town Hall meetings during the planning phase to incorporate their recommendations and concerns into the project design plans.

Public Works and the Los Angeles River Master Plan are interested in continuing to pursue the development of this concept because it is one of the longest available parcels along the Los Angeles River. In further planning and development efforts, Public Works will involve the City of Bell, community groups, and other interested Master Plan Advisory Committee members.

**2. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

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**ADDITIONAL PROJECT QUESTIONS**

Water quality protection and improvement and water conservation would be promoted through the use of drought resistant landscaping plants and trees. The landscaped area will initially need irrigation. Once installed, the native landscaping will require little or no irrigation since it will be self sustaining. The landscaped area will also have the additional benefit of filtering and recharging some of the rainfall within the project area.

The project improves or enhances water quality by planting native vegetation that will result in some incremental improvement in surface and groundwater quality. Planting of native vegetation will improve water quality by providing erosion control along the landscaped slope, reduce sediment deposition into the River, and reduce water pollution by slowing and filtering polluted runoff.

Public access exists at bikeway access points along the River, and is in accordance with the American Disability Act (ADA) standards. Ornamental fencing is proposed to replace damaged and distressed fencing along the right-of-way and to enhance this area which is highly visible to residents along River Drive.

Planting native vegetation, the project will provide habitat to support a variety of wildlife species in an area that currently has little existing habitat. The River historically sustained steelhead trout, great blue herons, and other species which would be considered sensitive species due to their extinction. The project will re-establish some of the indigenous native landscaping to promote sustainability of existing and future habitat that may be established by other restoration efforts in the watershed. The project will also provide a rest area for birds migrating along the Pacific Corridor.

Environmental and habitat protection, improvement and ecosystem restoration will be provided by establishing native plants that are indigenous to the Los Angeles River watershed and that have a capability of sustaining existing wildlife habitat along the River corridor.

There will be critical impacts if this project is not implemented. The community will not be able to use this area with their family, heavy rainstorms will wash trash and other pollutants to the river, and birds and other species will not have enhanced space available along the migratory corridor in the area.

**3. Disadvantage Communities: What percentage of your service region is disadvantaged and how does this compare to the total regional population?**

The immediate project vicinity consists primarily of residential areas surrounded by industrial and retail businesses in the City of Bell. The project will benefit bikeway users and residential homes which are located on the west side of River Drive

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**ADDITIONAL PROJECT QUESTIONS**

parallel to the alignment of the proposed project in the City of Bell. City of Bell is not a disadvantaged community.

In accordance with the U.S. Department of Housing and Urban Development Census 2000 Data, 70 percent of the Cudahy population and 56 percent of the South Gate population falls in the low/moderate income categories.

# BELL RIVERFRONT GREENWAY AND RESTORATION PROJECT

## EXHIBIT C COST ESTIMATE FORMAT

Complete the following table for each project contained within the proposal and a table showing the estimated costs for the entire proposal.

Cost Estimate Sheet <b>A GREENWAY PROJECT</b> <b>Bell Riverfront Greenway and Restoration Project</b>				
Budget Category		Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	<b>\$15,000</b>	<b>\$0</b>	<b>\$15,000</b>
(b)	Land Purchase/Easement	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
(c)	Planning/Design/Engineering/Environmental Documentation	<b>\$120,000</b>	<b>\$0</b>	<b>\$120,000</b>
(d)	Construction/Implementation	<b>\$0</b>	<b>\$550,000</b>	<b>\$550,000</b>
(e)	Environmental Compliance/Mitigation/Enhancement	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$135,000</b>	<b>\$550,000</b>	<b>\$685,000</b>
(g)	Construction Administration	<b>\$130,000</b>	<b>\$0</b>	<b>\$130,000</b>
(h)	Other	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
(i)	Construction/Implementation Contingency (20%)	<b>\$100,000</b>	<b>\$0</b>	<b>\$100,000</b>
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$365,000</b>	<b>\$550,000</b>	<b>\$915,000</b>
Source of funds for Non-State Share (Funding Match)		Los Angeles County Flood Control District		

**Exhibit B - Task list and Timeline**  
**Bell Riverfront Greenway Project**

	2005												2006												2007							
	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug						
<b>Task 1 - Project Concept Design Phase</b>																																
1.1	Meet with Project Proponents (Review Project Details)																															
1.2	Progress Meetings (Monthly, ongoing)																															
1.3	Draft Project Concept Report																															
1.4	Review and Final Approval of Project Concept Report																															
1.5	DPW Administration/Review																															
<b>Task 2 - Detailed Conceptual Design Phase</b>																																
2.1	Kick-off Meeting																															
2.2	In-house Design 30%																															
2.3	Review and comments																															
2.4	Design 75%																															
2.5	Review and incorporate comments																															
2.6	Design 100%																															
2.7	DPW Administration/Review																															
<b>Task 3 - Construction</b>																																
3.1	Construction Advertisement																															
3.2	Construction Bids																															
3.3	Award																															
3.4	Notice to Proceed/Move in Period																															
3.5	Project Construction																															
3.6	90 Day Maintenance																															

## Budget Category Explanations

- (a) *Direct Project Administration Costs* – Includes: salaries, wages, fringe benefits, office supplies, and equipment needed to support the project, staff travel costs (at or below the rate allowed for unrepresented State employees), and preparation of required quarterly and final reports. Actual costs directly related to the project will be reimbursed.
- (b) *Land Purchase/Easement* – If land acquisition is to be included in the Non-State share, include whether it is a proposed acquisition, or if the land is already owned by an IRWM Plan participant. Prior purchase of land can be included in an applicant's funding match if purchased after November 5, 2002. Land acquisition costs will not be considered a reimbursable item if purchased prior to the effective date of the grant agreement. For land purchased prior to the date of the application include the date of purchase and purchase price of the land. Costs for easements will be handled similarly as for land purchases.
- (c) *Planning/Design/Engineering/Environmental Documentation* – Differentiate costs between consulting services and/or agency/organization staff costs for these efforts. Planning costs include: planning efforts, reconnaissance studies, feasibility studies, and preliminary reports. Design and engineering costs include: conceptual, preliminary and final design efforts, geotechnical reports, hydraulic studies, water quality investigations and efforts, and other engineering types of work. Include the costs of bid preparation and processing here. Environmental documentation costs include all efforts involved in the CEQA or NEPA process up to the point of the Notice of Determination, Finding of no Significant Impact, or Record of Decision.
- (d) *Construction/Implementation* – Includes the summary of labor, materials, equipment purchases and/or rentals. After bids are received these costs will be the actual construction cost awarded to the low bidder. The construction or implementation costs for Pilot Projects should be included here.
- (e) *Environmental Compliance/Mitigation/Enhancement* – Includes those costs required by a CEQA/NEPA document to offset any potential damages caused by the proposal. If these costs are included in the contract awarded for construction or implementation of the proposal, differentiate such costs for purposes of this budget.
- (f) *Project Summary* – The summation of the costs for items (a) through (e) above.
- (g) *Construction Administration* – Includes those costs required to supervise and administer the construction or implementation of the project(s). Differentiate costs between consulting services and agency staff costs to perform this work.
- (h) *Other* – Includes costs for legal services, license fees, permits, any implementation verification costs, and any monitoring and assessment costs required during the construction/implementation of the proposal. Do not include monitoring and assessment costs for efforts required after construction/implementation of the proposal is complete. These costs are considered to be operation and maintenance costs and are not reimbursable.
- (i) *Construction/Implementation Contingency* – Includes any contingency costs for the construction/implementation of the proposal. Specify the percentage used for this contingency cost. For all other contingency costs, i.e. design, land purchase, etc., include those contingencies in the appropriate cost category.

For the Step 2 submittal, detail will be expected for each of the above cost categories explaining how the total cost was derived.

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**Lead Agency Information**

Agency Name: Los Angeles County Flood Control District (District)	
Address: 900 South Fremont Ave	
Contact Name: William Saunders	
Telephone: 626-458-6187	E-Mail: wsaunder@ladpw.org
Fax: 626-979-5445	Web Site: www.ladpw.org

**Summary of Proposed Project Information**

Project Title: Citrus Spreading Grounds Modification Project	
Proposed Start Date: July 2007	Proposed Completion Date: November 2007
Proposed CEQA Completion Date: June 2007	
Location (Long. & Lat.): Lat: 34° 7' 22" Long: 117° 45' 5"	Sub Watershed: San Gabriel
Project Description: The District will install an inter basin conduit and slide gate to connect a third basin to the facility's existing two basins to increase its water conservation capability.	
Primary Objectives Addressed by the Project: The primary objectives of this project are to improve groundwater storage and recharge using storm runoff (that would otherwise be lost to the ocean). By installing the inter basin conduit and slide gate, the District will be able to capture and manage additional stormwater runoff to recharge the Main San Gabriel (groundwater) Basin which is a major of supply of water to the local residents, and reduce the demand for imported water for the region.	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$40,000		<input type="checkbox"/> In Kind <u>\$ 40,000</u>
Construction & Materials		\$163,000	<input checked="" type="checkbox"/> Cash <u>\$ 16,300</u>
Other (Describe):		\$0	<input type="checkbox"/> Other Grants    \$ _____
Totals	\$40,000	\$163,000	<u>\$16,300</u>

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Estimated Total Budget (Request & Match): \$ 203,000

Estimated Annual O & M Budget: \$ 40,000

1. How does your project develop or conserve local water resources?

Currently, there are two basins at Citrus Spreading Grounds that are being used for groundwater recharge purposes. This grant would enable the District to construct the inter basin drain and slide gate to connect to a third basin in order to conserve more water at this facility. The District anticipates that an additional 96 acre-feet of water worth \$31,296 will be percolated into the local aquifers annually. These aquifers are a major source of the local groundwater supply.

2. How does this project address water reliability?

This project will enable the District to increase the amount of storm runoff water captured to recharge the local aquifers. As a result, groundwater availability and reliability will be improved and the local water agencies who rely upon this resource for their water supply will benefit.

3. How does your project protect, improve or enhance water quality?

This project will reduce the amount of untreated storm runoff water that is conveyed to the ocean through the flood control system.

4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)

This project will provide improved groundwater strategies by increasing the amount of storm runoff that is recharged into local aquifers. This will increase the regions groundwater resources which is used for one third of the local water supply.

5. What is the status of your project readiness? (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	√ 10-03-04	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input type="checkbox"/>	√ Not required
Preliminary Plans	<input type="checkbox"/>	√ 7-2006	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	√ 7-2007	<input type="checkbox"/>
Permits	<input type="checkbox"/>	√ 7-2007	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	√ 1-2007	<input type="checkbox"/>

6. Identify the regional or strategic planning document that identifies this project.

This project is part of the District's capital improvement plan to improve our water conservation facilities.



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7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

The County and the Main San Gabriel Basin Watermaster are committed to improving ground water recharge of imported water and storm runoff to the underlying groundwater basins to improve the reliability of the local groundwater supply.

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?

The project is not in an area of special biological significance; therefore the project will not have detrimental effects.

9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.

Project success will be measured by the increased amount of storm water percolated into the local aquifers. This data is provided to the local water agencies (including the Main San Gabriel Basin Watermaster) on a periodic basis and published in the District's web page.

10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?

The District maintains an operating plan for all its facilities, including Citrus Spreading Grounds. The additional basin will be incorporated into the operating plan and that plan will be revised as needed.

11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.

Water conservation figures are kept and shared with outside agencies and published on the District's website.

12. Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantages community?

This project provides a direct benefit to disadvantage communities in that greater amounts of storm water runoff recharged into the local aquifers will enable the cost of drinking water to remain relatively inexpensive. Larger amounts of imported water at higher prices eventually hurt the disadvantaged consumer. Azusa which surrounds the facility has an average household income approximately equal to the overall County average. The District is providing the

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28% matching funds for the project. Since matching funds are provided by the District, there will be no hardship to any disadvantaged community.

13. What percentage of the project funding has been secured?

The District has secured 28% of the project funding from its capital improvement budget.

14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.

The Flood Control District owns and operates the Citrus Spreading Grounds. As such, it is responsible for maintenance and periodic improvement of the facility to better accomplish its water conservation goals and objectives. The Water Replenishment District is the responsible agency for recharging the underground basins by regulating groundwater pumping wells and implementing cooperative ventures to increase groundwater availability and reliability to the public.

15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.

This project will address long term regional water management needs by giving the District increased flexibility to percolate extra storm water from the wash which is currently limited to the first two basins which exist at the facility. If the project is not implemented then the percolation rate at the facility will remain at its current recharge rate and available fresh water within the wash will flow past the facility and possibly be wasted to the ocean. This being the case, the region will begin to rely on increased amounts of imported water for everyday use.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones.
2. Cost Estimate of major project elements including the identification of major funding sources.



# CITRUS SPREADING GROUNDS MODIFICATION PROJECT

## EXHIBIT C COST ESTIMATE FORMAT

Complete the following table for each project contained within the proposal and a table showing the estimated costs for the entire proposal.

Cost Estimate Sheet				
Proposal Title:				
Project Title: CITRUS SPREADING GROUNDS MODIFICATION PROJECT				
Budget Category		Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	<b>\$18,000</b>		<b>\$18,000</b>
(b)	Land Purchase/Easement			
(c)	Planning/Design/Engineering/Environmental Documentation	<b>\$2,000</b>		<b>\$2,000</b>
(d)	Construction/Implementation	<b>\$16,300</b>	<b>\$146,700</b>	<b>\$163,000</b>
(e)	Environmental Compliance/Mitigation/Enhancement			
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$36,300</b>	<b>\$146,700</b>	<b>\$183,000</b>
(g)	Construction Administration	<b>\$20,000</b>		<b>\$20,000</b>
(h)	Other			
(i)	Construction/Implementation Contingency			
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$56,300</b>	<b>\$146,700</b>	<b>\$203,000</b>
Source of funds for Non-State Share (Funding Match)		Los Angeles County Flood Control District		

## Budget Category Explanations

- (a) *Direct Project Administration Costs* – Includes: salaries, wages, fringe benefits, office supplies, and equipment needed to support the project, staff travel costs (at or below the rate allowed for unrepresented State employees), and preparation of required quarterly and final reports. Actual costs directly related to the project will be reimbursed.
- (b) *Land Purchase/Easement* – If land acquisition is to be included in the Non-State share, include whether it is a proposed acquisition, or if the land is already owned by an IRWM Plan participant. Prior purchase of land can be included in an applicant's funding match if purchased after November 5, 2002. Land acquisition costs will not be considered a reimbursable item if purchased prior to the effective date of the grant agreement. For land purchased prior to the date of the application include the date of purchase and purchase price of the land. Costs for easements will be handled similarly as for land purchases.
- (c) *Planning/Design/Engineering/Environmental Documentation* – Differentiate costs between consulting services and/or agency/organization staff costs for these efforts. Planning costs include: planning efforts, reconnaissance studies, feasibility studies, and preliminary reports. Design and engineering costs include: conceptual, preliminary and final design efforts, geotechnical reports, hydraulic studies, water quality investigations and efforts, and other engineering types of work. Include the costs of bid preparation and processing here. Environmental documentation costs include all efforts involved in the CEQA or NEPA process up to the point of the Notice of Determination, Finding of no Significant Impact, or Record of Decision.
- (d) *Construction/Implementation* – Includes the summary of labor, materials, equipment purchases and/or rentals. After bids are received these costs will be the actual construction cost awarded to the low bidder. The construction or implementation costs for Pilot Projects should be included here.
- (e) *Environmental Compliance/Mitigation/Enhancement* – Includes those costs required by a CEQA/NEPA document to offset any potential damages caused by the proposal. If these costs are included in the contract awarded for construction or implementation of the proposal, differentiate such costs for purposes of this budget.
- (f) *Project Summary* – The summation of the costs for items (a) through (e) above.
- (g) *Construction Administration* – Includes those costs required to supervise and administer the construction or implementation of the project(s). Differentiate costs between consulting services and agency staff costs to perform this work.
- (h) *Other* – Includes costs for legal services, license fees, permits, any implementation verification costs, and any monitoring and assessment costs required during the construction/implementation of the proposal. Do not include monitoring and assessment costs for efforts required after construction/implementation of the proposal is complete. These costs are considered to be operation and maintenance costs and are not reimbursable.
- (i) *Construction/Implementation Contingency* – Includes any contingency costs for the construction/implementation of the proposal. Specify the percentage used for this contingency cost. For all other contingency costs, i.e. design, land purchase, etc., include those contingencies in the appropriate cost category.

For the Step 2 submittal, detail will be expected for each of the above cost categories explaining how the total cost was derived.

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
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**Lead Agency Information**

Agency Name: City of Long Beach	
Address: Department of Public Works, 9 <sup>th</sup> Floor, 333 W. Ocean Blvd. Long Beach 90802	
Contact Name: Tom Leary, Stormwater Program Officer	
Telephone: 562-570-6023	E-Mail: <a href="mailto:tom_leary@longbeach.gov">tom_leary@longbeach.gov</a>
Fax: 562-570-6012	Web Site: <a href="http://www.longbeach.gov/pw/default.asp">www.longbeach.gov/pw/default.asp</a>

**Summary of Proposed Project Information**

<b>Project Title:</b> Colorado Lagoon Water, Sediment, Habitat, Restoration Master Plan	
Proposed Start Date: May 1, 2006	Proposed Completion Date: December 31, 2011
<b>Proposed CEQA Completion Date: June 2007</b>	
Location (Long. & Lat.): Long. 118.133W & Lat. 33.771N	Sub Watershed: San Gabriel Watershed , City of LB Basin 21
<b>Project Description:</b> The Colorado Lagoon is a 28.3 acre tidal lagoon that serves three main functions of hosting sensitive habitat, providing public recreation and retaining and conveying storm floods. With limited tidal flushing, and urban runoff from an 1100-acre watershed depositing into the lagoon the lagoon, sediment and water quality is degraded. Over time, the site has been degraded in many respects due to being overburdened by these competing uses. Completion of this Master Plan will restore the marine ecosystem and support safe recreation while improving water and sediment quality and managing storm water.	
<b>Primary Objectives Addressed by the Project:</b> In order for habitat restoration to fully succeed, remediation of the lagoon must be accomplished first. The first primary objective thus becomes the need to address water and sediment quality. Once this has been deemed successful, the second primary objective of improving and expanding the lagoon's natural habitat and to enhance the recreational enjoyment of the lagoon can be completed.	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input checked="" type="checkbox"/> Ecosystem Restoration*	<input checked="" type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input checked="" type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

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**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants		\$ 329,420	<input type="checkbox"/> In Kind \$ 32,942
Construction & Materials		\$ 6,588,400	<input type="checkbox"/> Cash \$558,840
Other (Describe)		\$ 0	<input type="checkbox"/> Other Grants \$100,000
Totals		\$ 6,917, 820	\$691,782

Estimated Total Budget (Request & Match): \$6,917,820  
Estimated Annual O & M Budget: \$ 84,522

1. How does your project develop or conserve local water resources?

Water quality and sediment quality improvements will restore this project area to the conditions that better support habitat and recreational and beneficial uses. Additionally watershed Best Management Practices (BMPs), which include, “Water Conservation” will be incorporated.

2. How does this project address water reliability?

N/A

3. How does your project protect, improve or enhance water quality?

The City contracted the services of Moffatt and Nichol to conduct a feasibility study. That study, “The Colorado Lagoon Restoration Feasibility Study” was completed in January 2005. The study clearly shows Lagoon water quality to be degraded. Lagoon water is murkier, and contains algal blooms and submergent plant growth (indicative of excess nutrients in the system from watershed runoff) while the Alamitos Bay is clear and contains no algal blooms and minimal submergent plant growth. Lagoon water quality exceeds AB411 standards several times per year.

The first solution to improving water quality is cleaning the existing culvert and optimizing the culvert tide gate operation. Water quality and flushing would be subsequently monitored. If monitoring indicates desired improvements do not occur, then the more expensive alternative of creating an open channel would be pursued. This proposal would generate maximum improvements to water quality. A main benefit is that this project will re-create a significant amount of intertidal habitat by increasing the tidal range, changing the site from a lagoon to an estuary, which is an underrepresented habitat type in this watershed. The culvert is significantly filled in with marine growth and partially restricted by tide gates at the Lagoon end, and by a sill on the Bay end. The effect of these restrictions is that tidal flushing is reduced and constituents in the Lagoon are not readily flushed to the Bay, therefore accumulating in the Lagoon and impairing the water quality.

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Second, the construction of bio-swales and berms around the Lagoon will mitigate storm water conveyance of pollutants from storm drains entering the Lagoon and remove pesticides from water runoff from the adjacent golf course.

Third, an aggressive campaign to implement BMP's throughout the watershed will be established as way to minimize source pollution loads into the Lagoon. Despite the fact that most PBT's have been banned for many years, current evidence suggests that certain areas of the urban landscape continue to contribute significant loads of these contaminants to urban storm drains and ultimately nearshore waters.

4. How does your project incorporate all other water management strategies checked above?

Ecosystem Restoration – This project will enhance the current ecosystem by ensuring that animal and plant species are increased or introduced. By improving water quality and removing contaminated sediment the Lagoon will be transformed into an area where biodiversity can be expected to thrive. The introduction or enhancement of plant and animal species will lead to the development of a complete ecosystem.

Environmental Habitat Protection and Improvement – The habitat will be protected from outside agents through the construction of bioswales and berms adjacent to the golf course and a perimeter trail around most of the Lagoon. Some asphalt near the western arm will be removed to minimize storm water runoff eroding the sandy beach and narrow parking area on north shore to create an island for nesting shorebirds. Habitat improvement will consist of recontouring side slopes for expansion of intertidal mud flats, replacing exotic vegetation with native plant vegetation, removing contaminated sediment and establish a sand nourishment plan.

Flood Management – During heavy rain events (e.g. 1995) the Lagoon has been known to flood the area on the south perimeter, thus a flood dike is necessary. This project proposes to construct a flood protection dike on the south side of the Lagoon adjacent to Eliot and Colorado Streets.

Recreation and Public Access – This project proposes to construct a limited perimeter trail with overlooks, educational signage and rebuilding of the short pier and platform just to the west of the lifeguard station. The perimeter trail would extend around the majority of the Lagoon, but would not be installed in the western arm ecological preserve area. On the northern shore the perimeter trail would stop at the restrooms and on the southern shore the perimeter trail would stop just to the west of the lifeguard station. The rebuilt pier would serve as a viewing platform for the western arm ecological preserve. Additional sign displays will be placed at the locations of lagoon transitions to inform visitors of appropriate use of the zones and to educate them about the flora and fauna and importance of natural wetlands.



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Storm Water Capture and Management/Water Quality Protection and Improvement (Regional Water Management) - The Los Angeles RWQCB Basin Plan lists several beneficial uses of the Colorado Lagoon. However, the Lagoon is also on the State 303(d) list as an impaired water body. This restoration plan will address this issue and provide data for eventual development of TMDLs for the Lagoon. If the project is not implemented, water and sediment quality issues will persist and the Lagoon will remain on the 303(d) list. Improvement of the multiple uses (public recreation, habitat and flood control) will benefit the entire region, from both public enjoyment and fiscal perspectives. The project is designed to be self-sustaining with minimal fiscal need for maintenance. The project includes infiltration of local irrigation around the Lagoon perimeter via bioswales, native plants, and permeable surfaces. (And thus minimizes water irrigation requirements for the site).

Wetlands Enhancement and Creation - this is done by taking a currently distressed wetland habitat area with restricted tidal flushing and accumulation of contaminants in the lagoons sediments and improving the habitat by restoring full tidal flushing, removing contaminant sediments and cleaning future discharges. Re-contouring of the lagoon's banks is also included to allow tidal marsh plant reestablishment.

NPS Pollution Control/Watershed Management – Based on stakeholder and regulatory guidance, management practices (BMPs) will be selected that are cost-effective, environmentally sound and sustainable over the long-term. Typically, successful watershed projects follow a logical progression through five phases. They are: problem identification and prioritization, assessment, planning, implementation and operation and maintenance. In addition to the City's NPDES Pollution Prevention and Education efforts, the recently completed feasibility study recommended starting with the following baseline Watershed BMPS: construction site, public education and outreach, residential and commercial (Golf course) water conservation practices, pesticide, herbicide and fertilizer management plans, and increased street sweeping.

5. What is the status of your project readiness? (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/> 1/31/05	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> N/A	<input checked="" type="checkbox"/> N/A
Preliminary Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> Initial checklist completed
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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6. Identify the regional or strategic planning document that identifies this project.

City of Long Beach Colorado Lagoon Restoration Feasibility Study (January 2005), San Gabriel River Master Plan and the Local Coastal Plan.

7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

During the creation of the City of Long Beach Colorado Lagoon Restoration Feasibility Study, several partner agencies were active members of the Technical Advisory Committee (TAC). These agencies include: LARWQCB, California Coastal Conservancy, California Department of Fish and Game, LA County Public Works, Rivers & Mountains Conservancy, National Marine Fisheries Service and the Aquarium of the Pacific. Interagency partnering, data sharing and in-kind services saved time and money in creation of this master plan for the Lagoon.

In addition, the local non-profit stakeholder group, Friends of Colorado Lagoon, has been a partner with the City. The TAC, FOCL, and representatives from the City's Departments of Public Works, Parks, Recreation and Marine and Planning and Building have committed to continued partnership with the City in order that all the study components of the CLRFS are implemented. FOCL members were actively involved in development of the restoration plan, through public meetings and written inputs. All of the FOCL comments were addressed in the final restoration plan. The plan includes several provisions for ongoing stakeholder participation, including hands-on monitoring, involvement in educational outreach at the Lagoon, and non-native plants control. It is anticipated that FOCL will continue to be involved in detailed planning.

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?

Restoration of this important biological area will be protected and enhanced through the creation of natural upland, intertidal and marine habitats, recontouring of slopes to provide an expanded intertidal zone, removal of non-native plants and replanting with native vegetation around the perimeter of the lagoon, creation of vegetated buffers and swales to isolate the lagoon from the adjacent golf course and install a limited perimeter trail.

The Colorado Lagoon provides a unique opportunity for creating an under-represented habitat type in this region. Migrating and wintering shorebirds have large energy needs and limited areas where they can forage without human disturbance. Intertidal mudflats have been greatly reduced in Southern California because the vast majority of estuaries have been filled for development or dredged to make harbors. Therefore, the creation of intertidal mudflat habitat at Colorado

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Lagoon and implementation of measures to protect it to the extent possible represents a significant benefit to migrating and wintering shorebirds. Further, this project has the potential to attract Belding's savannah sparrows, a State-listed endangered species to the site. Belding's savannah sparrows are dependent upon the existence of pickleweed habitat. The measures envisioned to expand and improve pickleweed habitat would increase the chances that the Colorado Lagoon could attract the Belding's savannah sparrow.

Detrimental biological impacts could occur if the increase in shorebird populations attracts mammalian predators including dogs, cats and raccoons. If Belding's savannah sparrows do start breeding at Colorado Lagoon, the Fish and Wildlife Service should be consulted about additional measures that might be taken to protect them, while maintaining the overall goal and objective of the restoration project.

9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.

In order to determine the success of the remediation project, data collected in the feasibility study will be used as a baseline for the pre-restoration monitoring program that has documented the existing conditions of the Lagoon and will be used to establish reference points for later comparison. Additional pre-restoration monitoring will be conducted as necessary. A post-restoration monitoring program will be implemented in order to measure restoration success.

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**The post-restoration monitoring program will measure:**

Constituent	Frequency	Target Goal
Bacteria	Weekly	Not to exceed AB411 criteria during dry season, morning hours, swim area, wading depth.
Contaminants in Sediment (Metals, PAH's, DDT's, PCB's, Chlordane, Dieldrin)	Once annually for five years.	Not to exceed Probable Effects Levels (PEL's), with the exception of DDE, which should be measured against the ERM.
Litter	Monthly	No litter accumulation at/near the culvert.
Dissolved Oxygen	Monthly	>5 mg/L, at depth of 3-5 feet, averaged across three samples in a given location, three locations total.
Algae Blooms	Once per Spring	No algae blooms that cover more than 25% of the lagoon between March 21-June 21.
Sediment	Once every ten years.	Minimal change to lagoon bathymetry, as measured by the change in the lagoon's storage capacity (requires bathymetric survey and analysis.
Birds	Once per season	Increase number and diversity of birds. Specific goals include increasing the number of shorebirds that use the Lagoon and increasing the diversity of land birds, particularly non-urban adapted species.
Fish	Twice per year	Increase the number of juvenile California halibut.
Invertebrates	Once annually.	Increase number of taxa in the western arm to more than 15 and increase Shannon-Wiener Diversity index in the west arm to greater than 1.5, by five years following completion of remediation.
Eelgrass	Twice per year	Establish one or more eelgrass beds in the lagoon
Spring tidal range	Twice per month	Increase the average spring tidal range by between 1 and 2 feet from the existing 3.5 feet. Measurements can occur using a staff mounted within the lagoon or a tidal meter.
Turbidity	Weekly	Decrease turbidity throughout the lagoon to levels that visually compare to those of Alamitos Bay using simple qualitative observations at several locations.

10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?

The project site will be maintained by the City of Long Beach Department of Parks Recreation and Marine. Stakeholder commitment and assistance from agencies like the Department of Fish and Game will expedite the development of the adaptive management plan during the preliminary design phase once funding has been secured.

11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.

AB411 data has been recorded, tracked and will continue to be reported by the City's Health Department. The AB411 data is reported to Heal The Bay and assists them in the creation of their Beach Report Card. Baseline data was also

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collected as part of the feasibility study and that, along with any new data, will be tracked through the accumulation and archiving of monitoring results. Data will be made available to other agencies and stakeholders either through electronic media dissemination or by posting the results on the City’s website. An example of how well the City is at tracking, monitoring and reporting the data may be found at <http://www.longbeach.gov/pw> (Colorado Lagoon Study)

12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?

City	Population	M. H. I.	D.M.H.I.	% of Pop
Cypress	46,229	\$64,377	\$37,994	6.6%
Hawaiian Gardens	14,779	\$34,500	\$37,994	2.1%
Lakewood	79,345	\$58,214	\$37,994	11.3%
<b>Long Beach</b>	<b>461,522</b>	<b>\$37,270</b>	<b>\$37,994</b>	<b>65.7%</b>
Los Alamitos	11,536	\$55,286	\$37,994	1.6%
Paramount	55,266	\$36,749	\$37,994	7.9%
Seal Beach	24,157	\$42,079	\$37,994	3.4%
Signal Hill	9,333	\$48,938	\$37,994	1.3%
<b>TOTAL</b>	<b>702,167</b>	<b>\$47,177</b>	<b>\$37,994</b>	<b>100.0%</b>
Disadvantaged	531,567			75.7%
Advantaged	170,600			24.3%

Of the total population (702,167) served by the Colorado Lagoon, 75.7% of the population (531,567) live in disadvantaged communities.

M.H.I. - Median Household Income

D.H.M.I. - Disadvantaged Median Household Income.

Statistics are based on 2000 Census.

<http://censtats.census.gov>

The City of Long Beach has had a continuing severe budget shortfall since FY 2002, when an annual structural shortage of \$100 million (compared to a \$350 million total budget) was projected for FY 2006. The City has implemented many actions to reduce the structural deficit through a three-year budget plan. That included eliminating all capital funding to the parks system in FY 2005. Thus, a 10% project match will be a hardship for the City.

The City of Long Beach is surrounded by disadvantaged communities and the Colorado Lagoon is an excellent regional resource for residents to use this recreational enjoyment at no cost. Additionally, it will introduce to members of these communities, perhaps for the first time, a better understanding of the impacts human behavior has on habitat and water quality and empower them to share that with family and friends when they return home. On most weekends diverse groups of families can be seen recreating at the Lagoon.

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13. What percentage of the project funding has been secured?

Due to meeting the disadvantaged communities' requirements, no match funding has been secured at this time, however, the City did secure \$200,000 in funding from the California Coastal Conservancy and in January 2005 completed the feasibility study which serves as the foundation of the conceptual plan of this submittal.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

1. Project Schedule/Timeline including all major milestones.
2. Cost Estimate of major project elements including the identification of major funding sources.

**1. Estimated Project Schedule**

Conceptual Plans – January 25, 2005

Preliminary Plans – December 31, 2006

CEQA/NEPA – June 30, 2007

Permits – December 31, 2007

Construction Drawings – December 31, 2008

Project Completion – December 31, 2011

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2.

<b>Cost Estimate Sheet</b>				
Proposal/Project Title: <b>Colorado Lagoon Water, Sediment, Habitat Restoration Master Plan</b>				
Budget Category		Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	\$25,340	\$228,060	\$253,400
(b)	Land Purchase/Easement			
(c)	Planning/Design/Engineering/Environmental Documentation	\$126,700	\$1,140,300	\$1,267,000
(d)	Construction/Implementation	\$329,420	\$2,850,750	\$3,180,170
(e)	Environmental Compliance/Mitigation/Enhancement	\$31,750	\$285,075	\$316,825
(f)	Project Summary [Sum (a) through (e) for each column]	\$500,465	\$4,504,185	5,004,650
(g)	Construction Administration	\$6,335	\$57,015	\$63,350
(h)	Other	26,607	239,463	266,070
(i)	Construction/Implementation Contingency	\$158,375	\$1,425,375	\$1,583,750
(j)	Grant Total [Sum (f) through (i) for each column]	\$691,782	\$6,226,038	\$6,917,820
Source of funds for Non-State Share (Funding Match)		City General Fund, AAWW Grant		

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**Lead Agency Information**

Agency Name: City of Long Beach, Department of Parks, Recreation and Marine	
Address: 2760 Studebaker Road, Long Beach, CA 90815	
Contact Name: Dennis Eschen	
Telephone: (562) 570-3130	E-Mail: <a href="mailto:dennis.Eschen@longbeach.gov">dennis.Eschen@longbeach.gov</a>
Fax: (562) 570-3119	Web Site:

**Summary of Proposed Project Information**

Project Title: DeForest Wetland Habitat Restoration	
Proposed Start Date: January 2006	Proposed Completion Date: April 2008
Proposed CEQA Completion Date: Nov. 2005	
Location (Long. & Lat.): Long.: - 118.2009553; Lat.:33.8222535	Sub Watershed: Lower Los Angeles River

**Project Description:** Conversion of a 33.6 acres flood water detention basin into a wetland habitat including open water, deep marsh, shallow marsh, riparian woodland and coastal scrub components. The water for the wetland would come from the low flow channel of the Los Angeles River, in addition to the urban run-off now entering the basin. Water would be returned to the LA River by an existing pumping system. One-third of the basin would be graded and planted as dry scrub habitat with vernal pools.

**Primary Objectives Addressed by the Project:** The primary objective of the project is habitat restoration for the vastly diminished fresh water wetland and supporting habitats in the Los Angeles Basin. A secondary objective is water quality improvements through natural wetland processes and through the implementation of trash collection screens and filters to clean the discharge of the storm drain lines that empty into the basin. Finally, the project intends to improve access to, and education about, nature in an inner city neighborhood through the inclusion of nature walk trails and educational displays. Docent guided tours are a potential future addition. The site is also being designed to allow modification to add a treatment wetland capable of reclaiming water for irrigation use in an adjacent park.

**Water Management Strategies Addressed: (Check all that Apply)**

<input checked="" type="checkbox"/> Ecosystem Restoration*	<input checked="" type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input checked="" type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input checked="" type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer



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\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants		\$1,382,930	X <input type="checkbox"/> In Kind \$20,000 X Cash \$118,293
Construction & Materials		\$4,800,000	X <input type="checkbox"/> Cash \$505,000
Other (Describe)		Contingency \$1,722,125	<input type="checkbox"/> Other Grants \$147,212
Totals		\$7,905,055	\$790,505

Estimated Total Budget (Request & Match): \$7,905,505  
Estimated Annual O & M Budget: \$ 230,000

- How does your project develop or conserve local water resources?**  
The project's primary objectives are habitat restoration and recreation/education Water resource development and conservation were originally part of the project, but have been postponed until a second phase and are not included in the cost estimate or schedule. The project is designed to use only existing water that is now discharged to the ocean to create the wetland habitats, and to return the water to the river. However, the project feasibility study demonstrated that the water output of the wetland could be cleaned to reclaimed water standards and the project is also designed to allow the later inclusion of more constructed wetland that will the water to be reclaimed for irrigation of the adjacent park.
- How does this project address water reliability?**  
Water reliability would be enhanced in a second phase of the project not included in this application. That second phase would enhance water reliability by replacing the use of potable water in the adjacent park with wastewater cleansed through the proposed wetland. Although not part of the current project, the current design specifically allows for the later inclusion of a wetland design that will reclaim the wastewater for park irrigation.
- How does your project protect, improve or enhance water quality?**  
The project will improve water quality by filtering the existing low flow wastewater in the Los Angeles River through wetland marshes before returning it to its flow to the sea. This will reduce organics and metals providing better water quality downstream. Screens and filters will also be installed in the storm drains entering the basin to protect the wetlands from trash and common urban run-off chemicals. Thus, the existing wastewater in the Los Angeles River that will be diverted for this project will be returned with many pollutants removed, and the storm run-off entering the detention basin, and eventually pumped into the River, will also be cleaned of the trash and pollutants it now carries.
- How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**  
The primary objectives of the project are **Ecosystem Restoration, Habitat Protection, Recreation and Public Access, and Wetland Creation.** This is

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done by taking a currently distressed wetland habitat area with either stagnant urban run-off pools, exotic tree species or maintained infertility and adding sufficient water for the pools to flow as a year round stream. The design will protect against erosion at discharge points to maintain the flow, replace exotic plants with natives and maintain the site as a multi-objective wetland habitat in a functioning flood detention basin. The project is being carefully engineered in partnership with the Los Angeles County Department of Public Works so that the project will not lower flood protection in a system that has been proven effective during the last heavy rain season. Additional pedestrian trails, observation points, and educational signage are also included in the design.

Additionally, the **Storm Water** that is now **Captured** in the detention basin will be better utilized to help restore a viable native wetland habitat instead a distressed habitat with vector control concerns.

In the first phase, the project will not help reduce the need for **Imported Water**. However, as the first phase is designed to be retrofitted with a second phase that will allow the water in the wetlands to be reclaimed for irrigation use, the project will ultimately reduce the need for imported water by two acre feet annually.

The project is an excellent example of enlightened **Land Use Planning** by converting a single use flood detention basin into a multi-use flood basin plus native habitat and recreational/educational open space. The project is also an example of wise planning by reusing wastewater to restore a regionally depleted freshwater wetland habitat.

The project will aid in **NPS Pollution Control** by installing trash screens and filters to protect the wetland habitat years before NPS mandates will require them and will also clean **Wastewater** by natural wetland functions while it is on its way to the ocean.

**5. What is the status of your project readiness? (check as appropriate)**

<b>Item</b>	<b>Complete (Specify Date)</b>	<b>In process (Specify Est. Comp. Date)</b>	<b>Not initiated</b>
Conceptual Plans	X <input type="checkbox"/> May 2002	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	X <input type="checkbox"/> 1978	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	X <input type="checkbox"/> April 2005	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	X <input type="checkbox"/> Nov 2005	<input type="checkbox"/>
Permits	<input type="checkbox"/>	X <input type="checkbox"/> Jan 2006	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	X <input type="checkbox"/>

**6. Identify the regional or strategic planning document that identifies this project.**

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Los Angeles River Master Plan, DeForest Nature Center and Sixth Street Wetland Feasibility Study, Open Space and Recreation Element of the Long Beach General Plan.

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The City of Long Beach Department of Parks, Recreation and Marine will be the end user and is the applicant. The Los Angeles County Department of Public Works has permitted the basin to the City of Long Beach for this use and is the lead agency on the Environmental Impact Report and Preliminary Design Plans that are currently underway. The California Coastal Conservancy has been a partner in the project since the beginning, providing the majority of funding of the feasibility study and of the Preliminary Plans and EIR. The San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy is also a funding partner providing part of the funding for the Preliminary Plans and the EIR.

The City of Long Beach Department of Parks, Recreation and Marine is fully committed to the completion of this project, but is unable to fund this regionally significant habitat restoration. The Long Beach Water Department is fully committed to implementing the second phase of the project for water reclamation when other water reclamation projects it is considering are completed.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

The project site is a highly distressed habitat. No species of special biological significance have been found on the site and it is not expected that the ongoing EIR will find that detrimental biological impacts will occur. No specific species of special significance have been targeted for the wetland restoration. However, the mosaic of habitats proposed is intended to help support several species of special significance which could possibly reestablish in the DeForest Wetland project site including Least Bell's Vireo, Southwestern Willow Flycatcher, Peregrine Falcon, California Brown Pelican, Yellow warbler, Loggerhead shrike, San Diego Horned Lizard, Southwestern Pond Turtle, Arroyo Chub, Monarch Butterfly, Parish's Brittlescale, Davidson's Saltscale, Brand's Phacelia.

**9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

The project's success will be measured by the degree to which native habitats are reestablished, the improvement in the quality of water entering the site versus being discharged from the site, and by the number of persons using the recreational trails. A five-year seasonal monitoring plan is included in the project budget to evaluate that success. The Long Beach branch of the Audubon Society has also been contacted regarding the project and has an ongoing program of bird inventory that will allow before and after comparisons on bird species.

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**10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

The project site will be maintained by the City of Long Beach Department of Parks, Recreation and Marine (PRM). Although habitat management is a new issue for the Department, PRM manages eight other native habitat areas, including two fresh water wetlands. Through this experience, through the advice of the California Department of Fish and Game, and through solicited consultant support, the Department's understanding and capabilities in habitat management are growing.

PRM fully endorses the concept of adaptive management and utilizes the concept in the existing habitat areas it maintains. No plan now exists, but development of the management plan will be a requirement of project's construction contract along with a one-year maintenance period.

**11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

Dissemination of habitat and water quality monitoring data will be by presentation on the PRM website. Presentation to interested organizations on request is expected, but is not specifically planned. Water use data and wetland water quality monitoring data will also be posted on the website.

The City is in process of developing a program evaluation system as part of a change to a performance budget. It is anticipated that surveys of user levels for public access and recreational use will be made and that it will be published with the City budget. Public presentation before the Parks and Recreation Commission is anticipated.

**12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?**

The project is located adjacent to north Long Beach. This is a community of lower middle to lower income households in predominately older housing. North Long Beach is a redevelopment project area and has a low level of recreational open space (less than one acre per 1,000 residents compared to 5.6 acres per 1,000 residents citywide). It is estimated that 70 percent of the individuals utilizing the site for recreational purposes will be disadvantaged.

The City of Long Beach as a whole is a disadvantaged community. The 2000 Census indicated the median household income in Long Beach was \$37,270, less than the \$37,994 that is the 80% of the statewide median income.

The City of Long Beach has had a continuing severe budget shortfall since FY 2002, when an annual structural shortage of \$100 million (compared to a \$350 million total budget) was projected for FY 2006. The City has implemented many actions to reduce the structural deficit through a three-year budget plan. Reductions in FY2005 included deletion of all non-dedicated capital funding to the parks system.

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The project is a regional serving recreational facility. Other communities in the service area are Carson, Compton, Paramount and the unincorporated area of Dominguez Hills. These communities are primarily disadvantaged communities. Similar to Long Beach users, about 70% of the regional uses will be disadvantaged.

Project benefits will extend to the entire region through habitat restoration. Indirect benefits will thus result to everyone in the Los Angeles region. It is estimated that 40% of the region are disadvantaged.

The ten percent match will not present an impossible hardship on the City of Long Beach.

**13. What percentage of the project funding has been secured?**

None of the project funding has been secured, excluding previous expenditures for a feasibility study, preliminary design and EIR. Those expenditures are about \$550,000 and are not included in the project budget.

**14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.**

The project began in the late 1970's as a citizen effort to provide an additional recreational opportunity for the community. The citizen's, at times without permission, raised funds and planted over 1,000 largely donated shrubs and trees and leveled walking trails in what had been a barren detention basin. Hundreds of citizens took part in the effort over several years.

Many of the same citizens have remained interested in the site and have followed the feasibility study and the ongoing environmental review carefully. Two community meetings were held as part of the feasibility study. These community meetings were attended by 50, and 20 citizens, respectively. One additional community meeting was held on the feasibility study after completion, and that meeting was attended by 20 citizens. Two community meetings have been held as part of the EIR and conceptual design. These two meetings were attended by 8 and 15 citizens, respectively. However, three additional community meetings have been held at the request of neighborhood or environmental organizations outside of the formal process attended by an average of 30 citizens. All community meetings have resulted with overwhelming community support for the project.

Throughout the process, the County of Los Angeles Department of Public Works and the Water Replenishment District have partnered with the Long Beach Departments of Water and Parks, Recreation and Marine. Other agencies participating in Technical Advisory Committees have been California Fish and Game, National Marine Fisheries, Los Angeles Regional Water Quality Control Board, and Natural History Museum. The project has also enjoyed funding partnerships with the California Coastal Conservancy and the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy. The project has also been presented to and received support from the Los Angeles and San Gabriel

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Rivers Watershed Council and the Southern California Wetlands Recovery Project.

15. **Need: Describe how this project will address long term water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impact will be if the project is not implemented.**

The project is mindful of long term water management needs by capturing storm water and non-storm urban run-off as water sources for a wetland habitat restoration. This is the creation of a new beneficial use from existing wastewater.

The project is intended to have significant regional environmental benefits. Because of the historic water management practices of the region, nearly all riparian and freshwater marsh plants and wildlife are threatened or endangered. The restoration of 33 acres of wetland and riparian habitat adjacent to the river channel is an important start to recovery for those plant and wildlife species. This becomes more important as it will be in addition to the 30 acres of wetland and riparian habitat restoration already funded at Dominguez Gap, immediately south of the project site. Together the two projects create a ribbon of restored greenway over two miles long adjacent to the developing flyway and habitat corridor of the Los Angeles River itself.

Direct economic benefits are not expected to result from the project. One of the City of Long Beach's economic development goals is to enhance tourism as one of the City's base industries. Successful habitat restoration and a more visually interesting community may help attract visitors to the City, but a significant "eco-tourism" draw is probably many years away as the plants and animals of these habitats are not large, visible or exotic enough to draw more than those knowledgeable in the uniqueness of the Mediterranean habitat groupings. Unanticipated economic benefits from as yet unknown uses of recovered plants and animals remain a possibility.

The project does not satisfy any regional fiscal needs. However, dual use of land acquired for flood control purposes to benefit habitat restoration and recreational uses is a wise use of fiscal resources. At current land prices, 33 acres of land for open space could easily cost \$30 to \$60 million to acquire in a park and open space disadvantaged community.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones.

Feasibility Study Complete	December 2002
30% Design Completion	May, 1 2005
Certification of EIR	November 2005
Initiation of Project Under Prop 50	January 1, 2006
Construction Design NTP	January 1, 2006
60% Design Completion	April 1, 2006

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90% Design Completion	September 1, 2006
Building Permits Approved	December 1, 2006
Construction Contracts Awarded	April 1, 2007
Complete Construction	April 1, 2008
Post Construction Monitoring	July 1, 2013

2. Cost Estimate of major project elements including the identification of major funding sources.

Budget Category	Non-State Share	State Share	Total
a. Direct Admin.	\$ 27,250	\$ 245,250	\$ 272,500
b. Land Purchase	\$ 0	\$ 0	\$ 0
c. Planning, Design			
Environmental	\$ 48,000	\$ 432,000	\$ 480,000
d. Construction	\$480,000	\$4,320,000	\$4,800,000
e. Mitigation			included in d.
f. Summary	\$555,250	\$4,997,250	\$5,552,500
g. Construction Admin	\$ 33,600	\$ 302,400	\$ 336,000
h. Indirect Admin	\$ 29,443	\$ 264,983	\$ 294,430
i. Contingency	\$147,212	\$1,324,913	\$1,722,125*
j. Grand Total	\$765,505	\$6,889,546	\$7,905,055

\* Includes \$250,000 for post construction monitoring.

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**Lead Agency Information**

Agency Name: Watershed Conservation Authority	
Address: 900 S. Fremont Avenue Alhambra, CA 91802	
Contact Name: Belinda V. Faustinos	
Telephone: (626) 458-4315	E-Mail: <a href="mailto:bfaustinos@rmc.ca.gov">bfaustinos@rmc.ca.gov</a>
Fax: (626) 979-5363	Web Site: <a href="http://www.rmc.ca.gov">www.rmc.ca.gov</a>

**Summary of Proposed Project Information**

Project Title: Duck Farm Improvements	
Proposed Start Date: Summer 2007	Proposed Completion Date: Summer 2009
Proposed CEQA Completion Date: Winter 2006	
Location (Long. & Lat.):	Sub Watershed: Walnut Creek
Project Description: This project will consist of improvements to a 57 acre site along a two mile stretch of the San Gabriel River. The project will include a water conservation element, habitat restoration, recreational trails and access, water quality treatment wetlands and other watershed improvements.	
Primary Objectives Addressed by the Project: Preliminary site planning will determine if one of the primary goals of water conservation can be achieved at the site.	

**Water Management Strategies Addressed: (Check all that Apply)**

<input checked="" type="checkbox"/> Ecosystem Restoration*	<input checked="" type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$2,000,000		<input checked="" type="checkbox"/> In Kind \$ 250,000
Construction & Materials		\$	<input type="checkbox"/> Cash \$ _____
Other (Describe)			<input checked="" type="checkbox"/> Other Grants \$ Will Apply for \$1.75
Totals	\$2,000,000	\$13,000,000	

Estimated Total Budget (Request & Match): \$15,000,000

Estimated Annual O & M Budget: \$150,000



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1. How does your project develop or conserve local water resources? Assuming that the site is suitable for groundwater recharge there are tremendous opportunities for improving local water supplies. The extent of these opportunities is under investigation.
2. How does this project address water reliability?
3. How does your project protect, improve or enhance water quality? This project will investigate the opportunities for improving water quality for the San Gabriel River main channel and tributaries by incorporating a constructed
4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)
5. What is the status of your project readiness? (check as appropriate)

<b>Item</b>	<b>Complete (Specify Date)</b>	<b>In process (Specify Est. Comp. Date)</b>	<b>Not initiated</b>
Conceptual Plans	<input checked="" type="checkbox"/> June 2006	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/> Dec. 2004	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

6. Identify the regional or strategic planning document that identifies this project.
7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.
8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?
9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.

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10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?
  
11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.
  
12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?
  
13. What percentage of the project funding has been secured?

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

1. Project Schedule/Timeline including all major milestones.
2. Cost Estimate of major project elements including the identification of major funding sources.

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**Lead Agency Information**

Agency Name: City of Long Beach, Department of Parks, Recreation and Marine	
Address: 2760 Studebaker Road, Long Beach, CA 90815	
Contact Name: Dennis Eschen	
Telephone: (562) 570-3130	E-Mail: <a href="mailto:dennis_Eschen@longbeach.gov">dennis_Eschen@longbeach.gov</a>
Fax: (562) 570-3119	Web Site:

**Summary of Proposed Project Information**

Project Title: El Dorado Park Lakes Water Usage and Wetlands Restoration	
Proposed Start Date: January 2006	Proposed Completion Date: April 2008
Proposed CEQA Completion Date: Nov. 2006	
Location (Long. & Lat.): Long.: -118.0866181; Lat.:33.8134843	Sub Watershed: Lower San Gabriel River

**Project Description:** Install a nano-filtration system, a proven technology for well over two years, to desalinate tertiary treated wastewater for use in streams and lakes in a 365 acres regional park and a 100-acre natural habitat. Utilize the existing storm overflow channel between the lakes to create a naturally flowing stream throughout El Dorado Regional Park and Nature Center while restoring riparian habitat along the stream in an urban park over 2 miles in length. The project will also intercept a storm drain from a 100-acre big-box shopping center and use its non-peak storm flows and urban run-off to create a new wetland habitat adjacent to the banks of the San Gabriel River. Finally, the project will create a new 22-acre wetland in a flood detention basin and restore the existing natural habitat in the Nature Center by removing exotic species and replanting with natives.

**Primary Objectives Addressed by the Project:** The primary objective of the project is water conservation. The existing 6 lakes consume 400-acre feet of potable water per year through transpiration and leaks to ground through cracks in the lake liners. This water use will be replaced with desalinated reclaimed wastewater. This reclaimed water is currently in excess of demand and is discharged to the ocean. This project adds desalination to the reclaimed water to make it usable in the lakes. The secondary objective is riparian habitat restoration through 365 acres of turf fields. The third objective is habitat restoration in the 100-acre nature center that was planted 30 years ago with a majority of non-native trees, now in decline, by removing exotics, replanting with natives and clustering plants into habitat groupings. Finally, the project will utilize non-peak storm flows and urban run-off from a shopping center to create a new wetland area and filter that run-off through a marsh system before discharging the run-off as cleaner water.

**Water Management Strategies Addressed: (Check all that Apply)**

<input checked="" type="checkbox"/> Ecosystem Restoration*	<input checked="" type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input checked="" type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input checked="" type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and	<input type="checkbox"/> Surface Storage

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Management*	
X <input type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
X <input type="checkbox"/> Water Quality Protection and Improvement*	X <input type="checkbox"/> Water and wastewater treatment
X <input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants		\$2,507,017	X <input type="checkbox"/> In Kind \$20,000 X Cash \$230,000
Construction & Materials		\$7,590,750	X <input type="checkbox"/> Cash \$467,110
Other (Describe)		Contingency \$2,373,342	X <input type="checkbox"/> Other Grants \$530,000
Totals		\$12,471,109	\$1,247,110

Estimated Total Budget (Request & Match): \$12,471,109  
Estimated Annual O & M Budget: \$ 230,000

- How does your project develop or conserve local water resources?**  
The project will conserve 400-acre feet of potable water annually that is now used to fill the park lakes. Instead the lakes will utilize a reclaimed water source that is now only partially used with the excess reclaimed water being discharged to the ocean. To a lesser extent the project will conserve water by replacing irrigated turf native plants and wetlands irrigated by run-off.
- How does this project address water reliability?**  
The project saves existing ground water supplies by switching from the use of ground water to reclaimed water.
- How does your project protect, improve or enhance water quality?**  
The project will improve water quality by desalinating the reclaimed water through a nano-filtration system. The project will also improve water quality by filtering run-off from an existing shopping center through natural marshes before it is discharged to San Gabriel River and the ocean. This will aid NPDES compliance and be an important demonstration project.
- How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**  
The primary objective of the project is water conservation. The other water management strategies addressed in the project are: Desalination, Ecosystem Restoration, Habitat Protection, Ground Water Management, Imported Water, Land Use Planning, NPS Pollution Control, Recreation and Public Access, Storm Water Capture, Water Recycling, and Wetland Creation as follows:

  - The project will use **Desalination** of reclaimed water to make it suitable for use in lakes and streams.
  - The project will **Restore** part of the riparian **Ecosystem** that formerly existed on the site before the San Gabriel River was channelized by

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recreating the steam flow between the lakes, the replanting of that stream with native plants, and the creation of new marsh habitats.

- The project will **Protect** the lake **Habitats** from excessive nitrogen loading, depleted oxygen and excessive heat now occurring due to the closed system design now in place.
- The project will conserve **Ground Water Resources** by switching from the use of groundwater to reclaimed water in the park lakes and streams.
- The project will reduce the need to **Import Water** to replace the depletion of ground water resources.
- The project will demonstrate better **Land Use Planning** techniques by **Capturing** non-peak **Storm Water** and urban run-off from a shopping center to create habitat and cleanse the discharge water through a wetland habitat helping to meet **NPS Pollution Control**.
- The project will increase **Recreational Use and Public Access** by developing unused or occasionally used sections of a public park with trails and educational displays. Also, 22 acres of storm detention basin will be converted to park wetlands with controlled public access.
- The project will **Recycle** existing reclaimed water for use in park lakes by desalinating the water to a level that will retain salt levels healthy for wildlife habitats.
- The project will **Create** two **Wetland** areas. The first will be in rarely used parkland through non-peak storm flows from a shopping center. This will be a constructed marsh wetland design to cleanse the run-off. The second will be in a 22-acre flood detention basin and will contain both marsh and deepwater habitats.

5. **What is the status of your project readiness?** (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	X <input type="checkbox"/> 12/23/04	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	X <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	X <input type="checkbox"/> June 2005	<input type="checkbox"/>
CEQA/NEPA	X <input type="checkbox"/> 1/25/02 Partially	<input type="checkbox"/>	X <input type="checkbox"/> Partially
Permits	<input type="checkbox"/>	<input type="checkbox"/>	X <input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	X <input type="checkbox"/>

6. **Identify the regional or strategic planning document that identifies this project.**

San Gabriel River Master Plan.

7. **Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The Long Beach Water Department and the Long Beach Department of Parks, Recreation and Marine are partnering on the project. The Long Beach Water Department is committed to moving the project forward to the next phase of project implementation and has identified this project as the single best direct water conservation opportunity. The Long Beach Department of Parks,

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Recreation and Marine is fully committed to implementing the full project. The Departments are jointly committed to meeting the match requirement.

8. **If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

Much of the project site is a disturbed artificial park habitat. No species of special biological significance have been found on the site and it is not expected that the project will have detrimental biological impacts. Tri-colored Blackbirds, a locally threatened species, has been observed nesting in one of the park lakes, but the improvement to the lake water quality is anticipated to be positive to that species. Peregrine Falcons have also been observed foraging in the vicinity of the project but area also expected to benefit from the project.

No specific species of special significance have been targeted for the wetland and riparian habitat restoration. However, the mosaic of habitats proposed is intended to help support several species of special significance which could possibly reestablish in El Dorado Park and Nature Center including Least Bell's Vireo, Southwestern Willow Flycatcher, Peregrine Falcon, Yellow warbler, Loggerhead shrike, San Diego Horned Lizard, Southwestern Pond Turtle, Arroyo Chub, Monarch Butterfly, Parish's Brittle scale, Davidson's Salt scale, Brand's Phacelia.

9. **How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

The project's success will be measured by the reduction in potable water use as metered and evaluated monthly by the Long Beach Water Department. Secondly, the water quality will be constantly monitored to insure the health of the lake and stream habitats. Thirdly, the improvement in water quality from the storm drain's diversion through the constructed wetland will be monitored for five years on a seasonal basis and baseline data will be collected during construction design to calibrate the improvement.

Finally, the success of the project will be measured by the native habitat reestablishment and by the number of persons using the recreational trails. Habitat areas will be monitored weekly for plant health. The Long Beach branch of the Audubon Society has been contacted regarding the project and has an ongoing bird inventory that will allow before and after comparisons on bird species. Recreational staff will control and count users of the new recreational trails through the new wetland areas. Finally, overall park usage is counted though the cars entering the park.

10. **Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

The project site will be maintained by the City of Long Beach Water Department and Department of Parks, Recreation and Marine. The Long Beach Water

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Department is a worldwide leader in nano-filtration technology and will apply this proven process for this lake water makeup.

Although wetland habitat management is a new issue for the Department of Parks Recreation and Marine (PRM), PRM does manage eight other native habitat areas, including two fresh water wetlands. PRM also has 30 years experiencing managing the Nature Center, including the fresh water lakes. Through this experience, through the advice of the California Department of Fish and Game, and through solicited consultant support, the PRM's understanding and capabilities in wetland habitat management are growing.

PRM wholehearted accepts the adaptive management philosophy and utilizes it in the habitat areas we currently maintain. No management plan is currently underway, but development of such a plan will be a requirement of the construction contractor along with one-year of site establishment maintenance.

**11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

Dissemination of habitat monitoring data will be by presentation on the Departmental website. Presentation to interested organizations on request is expected, but is not specifically planned. Water use data and wetland water quality monitoring data will also be posted on the website. Water quality data for the nano-filtration process is a technical control on the process and deviations for the planned water quality will be correct when detected. Thus, it is not considered to be of public interest but will be reported to other agencies on request.

**12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?**

The City of Long Beach as a whole is a disadvantaged community. The 2000 Census indicated the median household income in Long Beach was \$37,270, less than the \$37,994 that is the 80% of the statewide median income. All residents will benefit from the project by the reduced need for the Long Beach Water Department to pump groundwater or purchase imported water.

The City of Long Beach has had a continuing severe budget shortfall since FY 2002, when an annual structural shortage of \$100 million (compared to a \$350 million total budget) was projected for FY 2006. The City has implemented many actions to reduce the structural deficit through a three-year budget plan. Reductions in FY2005 included deletion of all non-dedicated capital funding to the parks system.

No survey of the users of El Dorado Park and Nature Center has been conducted to determine city of origin or economic status has ever been done. Given that the park is located in the northeast corner of the City, three quarters for the park's service radius is outside of the City of Long Beach. However, factoring in local knowledge and the heavy use of the Nature Center by students on environmental education programs, it is estimated that 50% of the park users and

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City residents and 50% are not. Given the overall economic profile of the City, and the observation that users skew toward children and the elderly, these two groups most likely to be disadvantaged make up the majority of park users.

The several of the cities within the service radius of the park also tend toward being disadvantaged communities. With the easiest regional access to the park being from the I-605 Freeway, most regional use is believed to come from Lakewood, Bellflower, Artesia, Cerritos, La Palma, Hawaiian Gardens, Cypress and Los Alamitos. As a whole these cities have a mix of middle income and disadvantaged populations, but with users skewed toward the demographic groups most likely to be disadvantaged. Thus, 50% or more of the park users are believed to be disadvantaged.

**13. What percentage of the project funding has been secured?**

The City has \$630,000 in previous grants and set aside funds for the project. This is eight percent of the project cost.

A additional grant has previous been submitted for a portion of the project, but that grant program awards have not been announced yet.

**14. Stakeholder Involvement: Please describe the Stakeholder involvement in the project.**

The involvement of the two prime stakeholders, the Long Beach Water Department and the Long Beach Department of Parks, Recreation and Marine, as water provider and site stewards have already been described.

Citizen stakeholders have been involved from the origination of the project concept. That began with the Nature Center Master Plan where over 125 persons attended a daylong planning workshop in February 2002. Two follow-up meetings crafting that input into the Master Plan included 30-35 citizens each including significant involvement from the Friends of the Nature Center, the Audubon Society and the Sierra Club members. The final plan was adopted by the Parks and Recreation Commission.

A feasibility study is underway of the expansion of the concept developed in the Nature Center Master Plan to the entire park. Public meetings were held in December 2004 and February 2005 on the project concept with approximately 40 attendees. An additional community meeting was held by a neighborhood association with approximately 70 citizens attending. When completed in June 2005, the plan developed from the feasibility study will be presented to the Parks and Recreation Commission for approval.

A technical advisory committee including Los Angeles County Department of Public Works, River and Mountains Conservancy, Los Angeles Regional Water Quality Control Board, California Department of Fish and Game, U.S. Army Corps of Engineers and Water Replenishment District have meet twice with the project consultants to steer and advise on the project.

**15. Need: Describe how this project will address long term water management needs and discuss how the project will meet regional economic,**



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**environmental and fiscal needs and what the impacts will be if the project is not implemented.**

Southern California imports water from throughout many states through the California-Federal Water Project and the Colorado River Water Project. Population growth throughout that region has increased demand for that finite resource, and more enlightened environmental policies are reducing the region-to-region transfers of water. Thus, water is becoming increasingly scarce and increasingly more expensive.

Implementation of this project will directly save 400-acre feet of water annually by reducing the use of potable water by replacing that use with reclaimed water made suitable for a new use by desalination. To a lesser degree, storm water will also be captured to create a wetland habitat in an area of irrigated turf. This will reduce the demand for water in this regional park, and reduce the overall need to import water into the region. To some extent, the project will also be a demonstration of the technology and approach, which in the long term, should result in the approach being adopted in additional parks and habitat areas, with additional water savings.

The economic and environmental health of southern California is highly dependent on the availability of affordable water. To maintain water affordability, many techniques will be needed to address the shrinking supply and growing demand. Recycling of that water so that a given unit of water can satisfy more than one demand will be essential to achieving that. This project encourages recycling by demonstrating the viability of reclaimed water and desalination technologies in the most sensitive of situations, a native wildlife habitat. It also helps demonstrate storm water capture and run-off reuse with the low technology of natural marsh habitats combined with the high technology of constructed wetland design. These two approaches will have a substantial demonstration impact through implementation in the widely known and heavily attended El Dorado Regional Park and Nature Center.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones.

Feasibility Study Complete	December 2002
30% Design Completion	May, 1 2005
Certification of EIR	November 2005
Initiation of Project Under Prop 50	January 1, 2006
Construction Design NTP	January 1, 2006
60% Design Completion	April 1, 2006
90% Design Completion	September 1, 2006
Building Permits Approved	December 1, 2006
Construction Contracts Awarded	April 1, 2007
Complete Construction	April 1, 2008

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2. Cost Estimate of major project elements including the identification of major funding sources.

Budget Category	Non-State Share	State Share	Total
a. Direct Admin.	\$ 37,953	\$ 341,584	\$ 379,538
b. Land Purchase	\$ 0	\$ 0	\$ 0
c. Planning, Design Environmental	\$ 91,089	\$ 819,801	\$ 910,890
d. Construction	\$ 759,075	\$ 6,831,675	\$ 7,590,750
e. Mitigation			included in d.
f. Summary	\$ 888,117	\$ 7,993,060	\$ 8,881,178
g. Construction Admin	\$ 138,861	\$ 1,249,751	\$ 1,388,613*
h. Indirect Admin	\$ 30,363	\$ 273,267	\$ 303,630
i. Contingency	\$ 189,768	\$ 1,707,919	\$ 1,897,688
j. Grand Total	\$1,247,110	\$11,223,997	\$12,471,109

\*Includes \$250,000 for 5-year post construction monitoring.

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**Lead Agency Information**

Agency Name: City of El Monte and Amigos de los Ríos	
Address: City of El Monte: City Hall West, 11333 Valley Boulevard, El Monte CA, 91731 Amigos de los Ríos: 1001 Malcolm Avenue, Los Angeles, CA 90024	
Contact Name: City of El Monte: Dante Hall Amigos de los Ríos: Claire Robinson	
Telephone: City of El Monte: (626) 580-2212 Amigos de los Ríos: (310) 470-3258	E-Mail: <a href="mailto:dhall@ci.el-monte.ca.us">dhall@ci.el-monte.ca.us</a> <a href="mailto:claire@amigosdelosrios.org">claire@amigosdelosrios.org</a> ;
Fax: City of El Monte: (626) 580-2293 Amigos de los Ríos: (310) 441-9028	Web Site: <a href="http://www.ci.el-monte.ca.us">www.ci.el-monte.ca.us</a> <a href="http://www.amigosdelosrios.org">www.amigosdelosrios.org</a>

**Summary of Proposed Project Information**

Project Title: <b>El Monte Storm Drain Daylighting / Green Infrastructure</b>	
Proposed Start Date: December 2005	Proposed Completion Date: Aug 2010
Proposed CEQA Completion Date: April 2006	
Location (Long. & Lat.): 34° 04. 915' N 118° 02.157' W	Sub Watershed Rio Hondo
<p>Project Description:</p> <p>The El Monte Storm Drain Daylighting &amp; Green Infrastructure project will transform the existing infrastructure along Old Valley Mall and the El Monte Airport by employing Best Management Practices for storm water throughout key areas of Downtown El Monte. Benefits will be achieved by daylighting two major storm drains to create innovative multi-benefit green infrastructure demonstration projects and the transformation of Old Valley Mall from a vehicular area to a pedestrian promenade.</p> <p>The first storm drain proposed for daylighting runs approximately .9 miles down Old Valley Mall under Santa Anita Boulevard and along an appropriate meander through Pioneer and Fletcher Parks adjacent to the Rio Hondo River. The second storm drain runs across Lower Azusa and would be daylit for approximately 1.1 miles through the excess acreage between the channel and the El Monte Airport.</p> <p>The project also includes strategic retrofitting of adjacent parking lots and street edges to increase the permeability of surface pavement and local water storage capacity. The intent of using permeable concrete paving and native plant vegetation for street edges, parking lots and parking islands is to decrease the amount of surface runoff into the stormwater system, and to clean this water as it runs through the permeable area and to reduce the heat island effect on the surrounding microclimate.</p> <p>The parking lot and street edge conversions are used in conjunction with the bioswale / stream naturalization projects to provide incremental water quality improvement benefits along the project area as well as reducing downstream impacts. The projects will address the current and future TMDL legislation as it emerges. The project will increase permeability and ground water infiltration, reduce the storm water load to the channel thereby addressing long term flood management issues and provide recycled water for irrigation, beautification and recreation.</p>	

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Primary Objectives Addressed by the Project:	
<ul style="list-style-type: none"> <li>o Multi Benefit Storm Water Management - A regional demonstration project with water quality and water conservation benefits.</li> <li>o The Storm drain daylighting and Green Infrastructure project reduces storm water load and pollutant load to the Flood Maintenance Channel while providing recycled water for beautification, recreation and watershed education purposes.</li> </ul>	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input checked="" type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$450K Old Valley Mall / El Monte Airport		<input type="checkbox"/> In Kind \$TBD City Engineer and Planning Staff Time
Construction & Materials		\$2,600 K Old Valley Mall \$1,900 K El Monte Airport	<input type="checkbox"/> Cash \$
Other (Describe)	\$ 50K Permit/CEQA \$190K Project Management \$750K Adaptive Management Retrofit		<input type="checkbox"/> Other Grants \$TBD Potential: NPDES, AB939, CDBG, Quimby, General Fund
Totals	\$1,440 K	\$4,500 K	TBD

Estimated Total Budget (Request & Match): \$ 5,940 K  
Estimated Annual O & M/Monitoring Budget (\*\$250K - first 3 years) : \$ 375 K

**1. How does your project develop or conserve local water resources?**

The project would conserve local water resources by intercepting storm water that would otherwise be wasted while loading the flood channel. The reclaimed water would be used to sustain a bioswale stream naturalization and native plant

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beautification effort. The adjacent Valley Mall area would also include permeable parking lot paving and permeable street edges to allow storm water capture and ground water infiltration.

**2. How does this project address water reliability?**

The project addresses water reliability by maintaining a reliable supply of water for all users - domestic, civic, and commercial efficiently separating potable from reclaimed water needs. The project promotes the conservation of water through infiltration and water quality through bioremediation and filtration. Further, the project will utilize nuisance flows of storm water for native vegetation as well as runoff capture through the selected use of cisterns in some parking areas. The project will also promote watershed protection and education.

**3. How does your project protect, improve or enhance water quality?**

The project protects water quality in the watershed by intercepting storm water and the pollutant loads carried by these flows before they reach the flood maintenance channel. Water quality is incrementally improved through a process of trash interception, phytoremediation and bioremediation which effectively addresses pollutants in the first flush. Native plants with a capacity to remove oil and hydrocarbons from soil through phytoremediation will be installed along with sand, eco-soil and gravel to achieve further benefits to the enhancement of water quality.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

The project incorporates environmental habitat protection and improvement by removing existing concrete over the storm drains to create an open bio-swale surrounded by drought-resistant native vegetation. The environment of downtown El Monte will be improved by a green waterway through the mall area, fostering a pedestrian walking street that utilizes its water resources and creates an urban link to the natural environment. Open green space has a multitude of health benefits for users and creates a healthy public space available for a variety of recreational activities. The integration of green projects into a dense urban area promotes recreation and public access, thus increasing the quality of life of residents through responsible land use planning. Storm drain daylighting and interpretive signage allows residents to better understand and appreciate their water supply and the water quality protection challenges involved.

**5. What is the status of your project readiness? (check as appropriate)**

<b>Item</b>	<b>Complete (Specify Date)</b>	<b>In process (Specify Est. Comp. Date)</b>	<b>Not initiated</b>
Conceptual Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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- 6. Identify the regional or strategic planning document that identifies this project.**

Rio Hondo Sub Watershed Management Plan & Upper San Gabriel River Watershed Management Plan – (TBD)

- 7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The City of El Monte is taking a leadership role in the implementation of the Emerald Necklace and in green infrastructure projects. The City of El Monte's Department of Public Works will collaborate with the Community Services Department and the CRA as well the Los Angeles County Department of Public Works. The LACDPW is familiar with the principles of green infrastructure and supportive of with the overall concept of the Emerald Necklace as developed by Amigos de los Rios.

- 8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

The areas of the project are highly urbanized and disturbed. There is currently no special biological significance. The storm drain daylighting project at the airport and Old Valley Mall will feature native plant habitat. The project will not have any known detrimental biological impacts.

- 9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

Pre project construction water samples from each of the single storm drains at representative levels of flow, including nuisance and first flush, will be taken as baseline data. Once in place, the effectiveness of the catch basin to remove trash and other first flush pollutants will be tested. The effectiveness of the plants to perform phytoremediation of metals in area soils as well as bioremediation of other TMDLs will be tested. The constituents to be measured in the water quality monitoring will include trash, heavy metals, hydrocarbons, bacteria, N-P-K and other pollutants. Monitoring will take place for the first 3 years after project construction at appropriate time periods to capture data of first flush, nuisance and minor storm events.

- 10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

An adaptive management plan is required and will be prepared to effectively respond to data on water quality collected during the monitoring project and to assess cost benefit of bioremediation for removing pollutants.

- 11. How will data for the project be tracked? Describe how data will be made available to other agencies and/or other stakeholders.**

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Water samples will be collected for the first 3 years on currently scheduled TMDLs including trash, metals, coliform, and N-P-K pollutant loads. The samples will be processed at a local laboratory with data recorded and shared with the County and other cities and entities of the Emerald Necklace and in the IRWP.

**12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?**

Yes, The City of El Monte is a high density city with a low proportion of open space relative to its population. The city also has a high rate of poverty, unemployment, and a disproportionate number of citizens challenged by health issues such as diabetes Type 2, asthma, obesity and hypertension. The 10% matching fund requirement will not impose a hardship on this community.

**13. What percentage of the project funding has been secured?**

0% -10% TBD

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

**1. Project Schedule/Timeline including all major milestones.**

**Schedule**

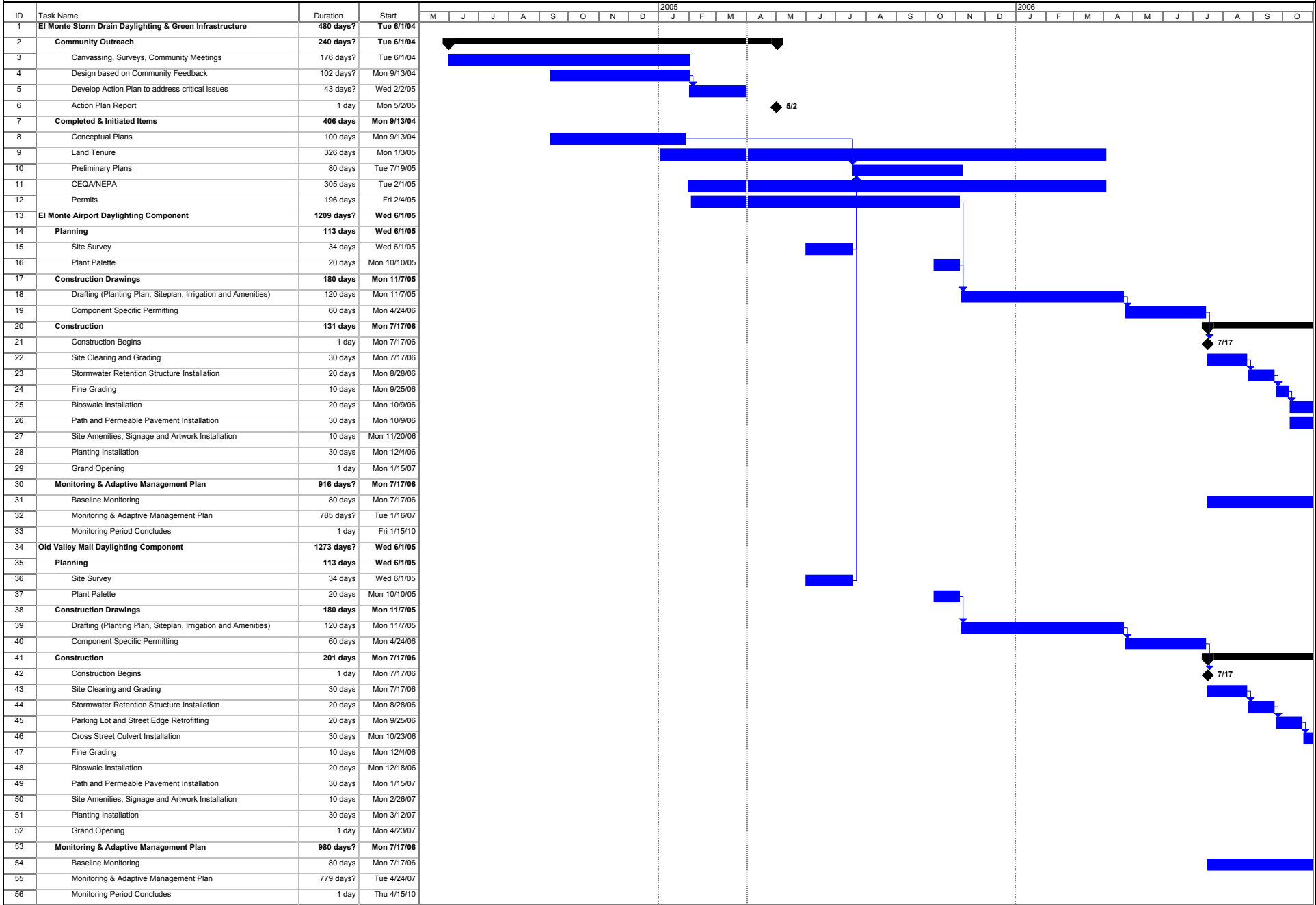
November	2005	Preliminary Design Begins
April	2006	CEQA Permitting
January to April	2006	Land Tenure & Lease Agreements
April	2006	Construction Drawings
January to August	2007	Construction Implementation
January to April	2007	Baseline Monitoring
August	2007 to 2010	Monitoring and Adaptive Management Retrofit

**2. Cost Estimate of major project elements including the identification of major funding sources.**

**Potential Funding Sources:**

NPDES  
AB939  
CDBG  
QUIMBY  
General Fund

El Monte Storm Drain Daylighting & Green Infrastructure

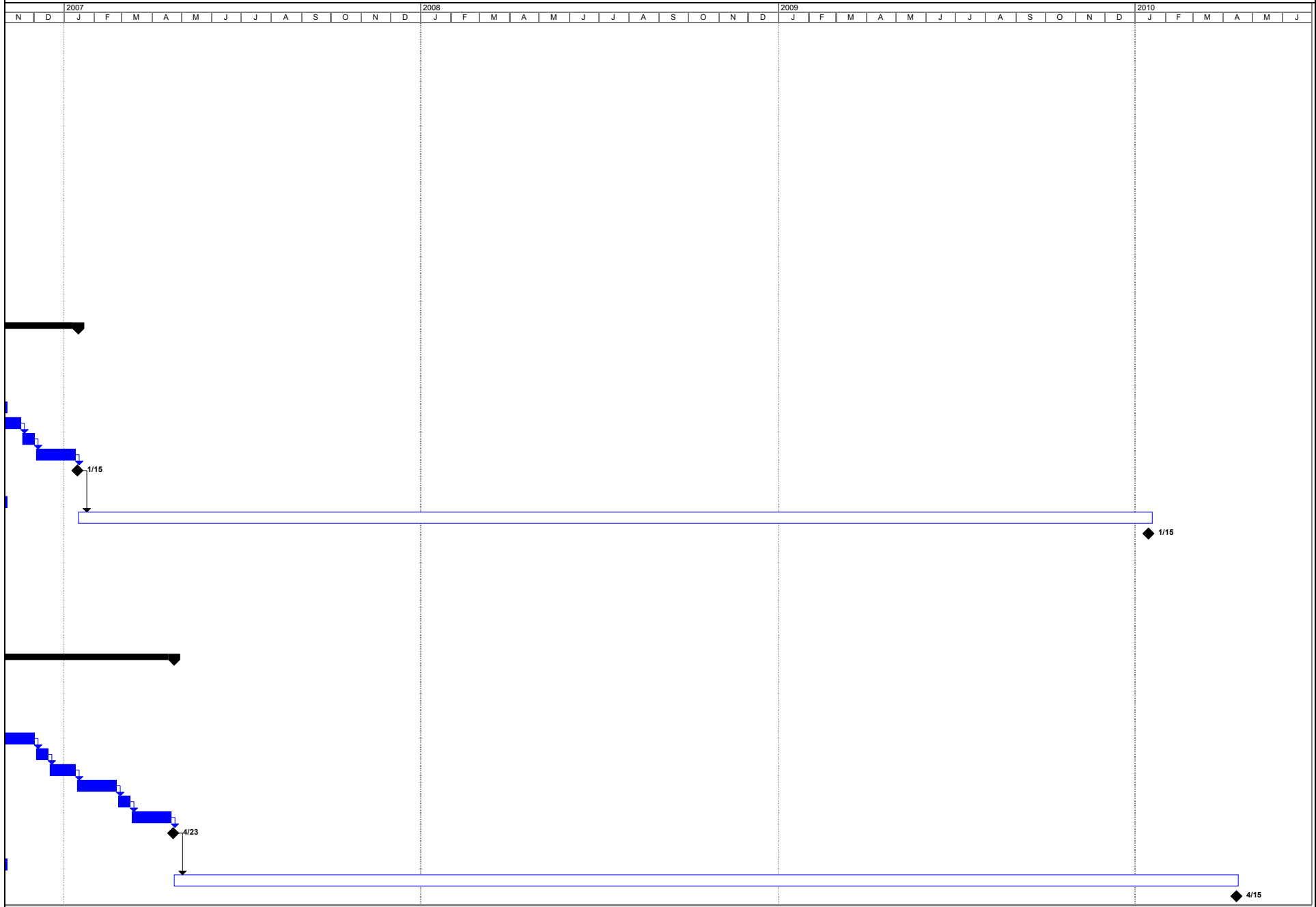


Project: GreenInfrastructure\_Gantt\_050  
Date: Fri 4/1/05

Task Progress Summary External Tasks Deadline Split Milestone Project Summary External Milestone



El Monte Storm Drain Daylighting & Green Infrastructure



Project: GreenInfrastructure\_Gantt\_050  
Date: Fri 4/1/05

Task		Progress		Summary		External Tasks		Deadline		
Split		Milestone		Project Summary		External Milestone				

**Cost Estimate Sheet**

**Proposal Title: Integrated Regional Water Management Plan (Prop 50, Ch.8)**

**Project Title: El Monte Storm Drain Daylighting / Green Infrastructure**

<b>Budget Category</b>		<b>Non-state Share (Funding Match)</b>	<b>State Share (Grant Funding)</b>	<b>Total</b>
a	Direct Project Administration Costs			
b	Land Purchase/Easement			
c	Planning/Design/Engineering/Environmental Documentation			
	<i>Old Valley Mall / El Monte Airport</i>	\$ 45 K	\$405 K	\$450 K
d	Construction/Implementation			
	<i>Old Valley Mall</i>	\$ 260 K	\$ 2,340 K	\$ 2,600 K
	<i>El Monte</i>	\$190 K	\$ 1,710 K	\$ 1,900 K
e	Environmental Compliance/Mitigation/Enhancement			
f	Project Summary [Sum a through e for each column]	\$495 K	\$4,455 K	\$4,950 K
g	Construction Administration			
h	Other			
	<i>Permit / CEQA</i>	\$ 5 K	\$ 45 K	\$ 50 K
	<i>Project Management</i>	\$ 19 K	\$ 171 K	\$ 190 K
i	Construction/Implementation Retrofit Contingency	\$75 K	\$675 K	\$750 K
j	Grant Total [Sum f through i for each column]	\$ 594K	\$5,346 K	\$5,940 K
Source of funds for Non-State Share (Funding Match)				

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**Lead Agency Information**

Agency Name: Amigos de los Ríos /City of El Monte	
Address: Amigos de los Ríos: 1001 Malcolm Avenue, Los Angeles, CA 90024 City of El Monte: 3130 Tyler Avenue, El Monte, CA 91731-3293	
Contact Name: Amigos de los Ríos: Claire Robinson City of El Monte: Tom Hatch	
Telephone: Amigos de los Ríos: (310) 470-3258 City of El Monte: (626) 580-2205	E-Mail: <a href="mailto:claire@amigosdelosrios.org">claire@amigosdelosrios.org</a> <a href="mailto:thatch@ci.el-monte.ca.us">thatch@ci.el-monte.ca.us</a>
Fax: Amigos de los Ríos: (310) 441-9028 City of El Monte: (626) 452-0458	Web Site: <a href="http://www.amigosdelosrios.org">www.amigosdelosrios.org</a> <a href="http://www.ci.el-monte.ca.us">www.ci.el-monte.ca.us</a>

**Summary of Proposed Project Information**

Project Title: <b>Emerald Necklace – Segment A: Alhambra Wash to Eaton Wash</b>	
Proposed Start Date: November 2003 (sic)	Proposed Completion Date: July 2007
Proposed CEQA Completion Date: August 2005	
Location (Long. & Lat.): 34°01.105'N 118°05.374'W 34°06.334'N 117°59.606'W	Sub Watershed Río Hondo and San Gabriel River
<p><b>Project Description:</b>  <b>Emerald Necklace Phase 1, Segment A: Alhambra Wash to Eaton Wash:</b> The project involves landscaping, restoring and beautifying 3 miles of Army Corp of Engineer and LA County Flood Control District right of way along the Río Hondo as it passes through Rosemead, El Monte and South El Monte in accordance with the LA River Landscaping Guidelines. This greening area is 10.7 acres in total and will include a stabilized DG path, lighting, gateways, interpretive signage, bioswale and other amenities.</p> <p><i><b>This segment is a construction ready piece of the Emerald Necklace which is a larger regional vision for a 17-mile interconnected network of multi-beneficial trails, parks and greenways touching 12 cities, parts of unincorporated Los Angeles and serving nearly one half million residents along the Río Hondo and San Gabriel Rivers; unifying more than 1,500 acres of parks, open spaces and habitat corridors while re-connecting the historically linked Río Hondo to the San Gabriel River.</b></i></p> <p><b>Primary Objectives Addressed by Emerald Necklace, Phase 1, Segment A Alhambra Wash to Eaton Wash Project:</b></p> <ul style="list-style-type: none"> <li>● <b>Recreation</b> – The project will provide much needed passive recreation opportunities for disadvantaged communities</li> <li>● <b>Water Conservation/Water Quality Protection</b> – The project will use native landscaping which does not require fertilization and consumes 1/8 the water of conventional landscapes. This segment of Greenbelt will be watered with recycled water.</li> </ul>	

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- **Habitat Restoration.** – The plant palette has been developed based on a biological assessment of the natural area of the Rio Hondo such that this greening effort will create habitat to support native fauna.

*As a whole, the Emerald Necklace will provide a 1,500-2,000 acre buffer for **water conservation** and **water quality protection** that will greatly enhance the region’s water reliability. The greenbelt of inter-connected projects will **improve water quality** by separating potable and recycled water supply; **installing low water use irrigation systems**; using only drought resistant native plants, and **capturing storm water for bioremediation and infiltration**. The Emerald Necklace will **educate** regional residents on the value of water as a precious resource. The project brings **water conservation and water quality protection** to the region, and will **provide recreational opportunities for disadvantaged communities** suffering from the effects of urban density, environmental pollution, obesity, asthma, Type II diabetes and hypertension.*

**Water Management Strategies Addressed:** (Check all that Apply)

<input checked="" type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input checked="" type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input checked="" type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**ALHAMBRA WASH TO EATON WASH**

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$ 89,039		<input type="checkbox"/> In Kind 10% City of El Monte \$ 8,904
Construction & Materials		<u>Greening/Landscaping</u> 2 Gateways \$90,000 ALTA Survey \$12,000 Soil Testing \$ 750 Site Demolition and	<input type="checkbox"/> Cash 10% City of El Monte \$ 171,602

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		<u>Rough Grading</u> \$ 40,000 <u>Imported Fill</u> \$12,000 <u>Trail Lighting</u> \$65,000 <u>Final Grading</u> \$35,000 <u>Drip Irrigation</u> \$ 300,000 <u>Trees</u> \$ 267,504 <u>Shrubs</u> \$ 148,336 <u>Site Amenities</u> (Benches, trash cans, picnic tables) \$48,800 <u>10 Interpretive Signs</u> \$30,000 <u>DG Paths</u> \$346,500 <u>Boulders Masonry</u> <u>Features</u> \$ 35,000  <b><u>BMP</u></b> <u>BMP Swale</u> \$ 153,000 <u>BMP Water</u> <u>Storage/Drainage</u> \$ 35,000  <b>\$1,716,023</b>	
<b>TOTAL</b>  Construction Contingency/ Escalation			
Other (Describe)	<u>Permitting</u> \$6,000	<u>Maintenance / Monitoring during Construction</u> \$80,945	<input type="checkbox"/> Other Grants \$ 25,000 for conceptual planning
<b>Totals</b>	<b>\$ 95,039</b>	<b>\$ 1,796,968</b>	<b>\$ 205,505</b>

Estimated Total Budget (Request & Match): **\$ 1,892,008**  
 Estimated Annual O & M Budget: **\$ 35,000**

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**1. How does your project develop or conserve local water resources?**

This segment of the Emerald Necklace project develops and conserves local water resources by separating potable from recycled water with a new infrastructure that will benefit the region. Installation of low water use irrigation infrastructure. Environmental education/watershed perspective will be provided for regional residents; wide area conservation response expected over time. Groundwater will be recharged, infiltration and harvesting will add to conservation measures. Native vegetation will require less water. Institution of storm water best management practices throughout entire 17-mile loop and adjacent washes to Urban Rivers of the Emerald Necklace will conserve water throughout the region.

**2. How does this project address water reliability?**

Drinking water will be separated from landscape water usage. Storm water infiltration, cleansing and preservation will add a new resource to this section of the Emerald Necklace project. Watershed educational opportunities will inspire conservation of potable water throughout the 12-city and extended area. Reduction of water demand will reduce the need to import water, increasing water reliability over a wide area and for the foreseeable future, given the expected growth of the region. Coordinated cooperation of agencies will eliminate redundancies as a broad coalition attends to the region.

**3. How does your project protect, improve or enhance water quality?**

Native planting will reduce use of fertilizers, having a positive effect on the health of the channel and habitat. Educational aspects will increase awareness of the relationship between storm drains and water quality. Incremental water quality benefits will be achieved by addressing TMDLs through bioremediation and phytoremediation provided by greenbelt along the Emerald Necklace and adjacent "jewel" areas. Water quality will be improved by use of best management practices for storm water/NPS, and treating first flush pollutants before they enter the channel. Over time, given the benefits of water education, improved channels and removal of toxins; overall enhanced water quality will be significant and lasting.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

This section of the Emerald Necklace project is a major transformation; bringing native plant and drought-tolerant landscaping with locally propagated plants of high habitat value. Planting of native trees and shrubs in a highly urbanized area will create valuable green space. Residents of a wide area will be encouraged to remove grass and other exotics of no habitat value. The project promotes appreciation for the watershed and water resources; through water conservation, water quality protection, use of reclaimed water infrastructure, and storm water capture and treatment. Flood management will be enhanced by the reduction of flow reaching the channel. Enhanced groundwater management as the greenbelt provides opportunities for water infiltration. There will be recycling enhancement via reclaimed water infrastructure; including potential EPA superfund site shallow water pipeline and water recycling. The creation of a multi-benefit buffer zone around the Emerald Necklace will help protect water resources for generations to come. Pollution will be controlled through education on best management practices for storm water and NPS pollution. There will be a dramatic increase in storm water uptake of soil, by adding acres of mulch to the greenbelt. The project intercepts storm water and helps remove pollutant loads before they reach the flood maintenance channel.

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**5. What is the status of your project readiness? (check as appropriate)**

Item Per segments according to phases	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/> 11/03	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input checked="" type="checkbox"/> 08/04	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/> 08/05	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**6. Identify the regional or strategic planning document that identifies this project.**

- Río Hondo Sub Watershed Plan
- Upper San Gabriel River Watershed Management Plan - TBD

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The city of El Monte is committed to overseeing the development and maintaining this project. The Los Angeles County Department of Public Works is committed to this greening effort by review of our plans and initiation of necessary agreements for maintenance (between the City of El Monte and the County Dept. of Public Works, Watershed Division).

This segment of the Emerald Necklace is a critical part of the regional recreational vision being promoted by the emerging Emerald Necklace coalition. This coalition has coalesced from a desire to partner cities and agencies to create a regional, sustainable network of multi-benefit projects.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

- This segment of the Emerald Necklace is attempting to preserve and enhance (restore) a series of urban habitat islands in the San Gabriel Valley. The fact that there are so few natural or semi-natural habitat areas left in the region makes it all the more important that remaining areas be protected in perpetuity. Due to their size, Whittier Narrows, Peck Park, and Duck Farm, in particular, are very important habitats. Any fragmentation of the area would be a huge loss. Buffering any habitat area from further urban encroachment should be a priority. Bigger is always better in the case of habitat. When you cannot have a big area, a series of smaller, connected areas is the best alternative.
- Several species of special management significance will benefit from increased habitat protection and connectivity, and from restoration of degraded habitats throughout the

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Emerald Necklace project. Birds, particularly the Bell's Vireo will directly benefit, as well as the willow flycatcher, but this is less certain given the specific ecology of the species. Invertebrates, particularly insects, will definitely benefit from the improved habitat linkages.

- Structural habitat complexity of an area is sometimes more important than species composition, i.e., an older, tall non-native tree often has more importance than a sapling native species that will take years to reach the height of the non-native that was removed. Rather than total and arbitrary replanting of native species without regard for how non-native vegetation benefits the existing wildlife, there will be a carefully considered phasing-in of native vegetation.

**9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

Qualitatively, we will continue our community outreach to ensure that the recreation opportunities provided are well rec'd and enjoyed. Quantitatively, we will survey community members using the greenbelt, and record their responses to the amenities. Amigos de los Rios will monitor the vegetation survival rate, effectiveness of mulch and efficiency of irrigation, etc., using standard practices including mapping, field notes and field photography. In a log that will be posted to the net, we will track our water budgets, as well as tracking the quantity of mulch, exact number of replacement trees and shrubs. will be carefully monitored. Community and youth corps partners will be incorporated with the monitoring/maintenance process.

- Percentage of successful establishment per season
- Target water conservation budget
- Recreational use statistics
- Water Quality Monitoring for green BMP's in some locations
- Return of native fauna
- Storm water at end of swale will be measured where appropriate

**10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

We will use an adaptive management plan to assure success, we will plant in two or more phases; we will measure mortality rate of each season's plantings and the effectiveness of the mulch and irrigation. Based on what we have monitored, we will change our plant palette and mulching routine, change irrigation practices. Base on community survey input, we will change the recreation amenities accordingly. An adaptive management plan will be developed for green BMPs and for landscape. The plan will respond to growing conditions of various sites, and adjust successive plantings to what has shown the best success rate. The plan will assess and monitor effectiveness of green BMPs. We will respond to each variation in all monitored aspects of the plantings, swales and recreational areas with appropriate measures.



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**11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

Amigos de los Rios staff, as well as the City of El Monte Department of Recreation, will track key aspects of the project and generate regular update reports as mentioned in Question #8. Printed reports will be made to the city and coalition members, as well as web postings.

- Photography of the areas, field notes
- Keep exacting data on what species we planted and percentage of survival or replacement rates to inform our decisions in following planting year
- Keep track of methods such as weed suppression, seeding, sizes of plant, different grounds, patches, etc

We will share data and work closely with all Emerald Necklace cities in the MOU and Department of Community Services of El Monte and all relevant stakeholder agencies (including the County). Via this methodology, BMPs will be shared throughout the region.

**12. Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?**

A 17-mile loop of the Emerald Necklace provides a direct benefit to disadvantaged communities suffering from a disproportionately high incidence of social, environmental, and health issues ranging from crime to high teen birth and school drop-out rates, unemployment to obesity, asthma, hypertension, and Type II diabetes. In the majority of communities, within the area served by the Necklace, the youth population (under 24) exceeds forty percent of the population. (El Monte has the highest occurrence of obesity in CA., with 36% of all families living below the poverty level.) The Alhambra to Rubio Wash median household income is \$34, 697. The median household income of the entire 12-city regional population is \$36, 500 (U.S. Bureau of Census 2000). Thirty percent of residents are under age 18. Social challenges include high teen birthrate, high rate of high school dropout, unemployment, crime, and disenfranchised communities (63% Hispanic, 21% Asian American). In fragmented low-income communities suffering from a severe lack of open space and an overburdened infrastructure, the project provides access to safe parks and recreational facilities, promoting healthier lifestyles and helping to reverse detrimental health trends. The 10% matching funds requirement will not impose a hardship to this community.

The total regional population that will benefit from the Emerald Necklace is 495,187, of which 190,464 or nearly 40% are disadvantaged. The areas that are directly on, and will most benefit from the Emerald Necklace, have the highest percentage of disadvantaged communities due to historic discriminatory land use and development policies that pushed disadvantaged communities to the blighted areas closest to the urban rivers. The Median Household Income for the City of El Monte is \$32,439 and \$34,656 for the City of South El Monte, the two cities located between the San Gabriel River and Río Hondo that will most benefit from the Necklace.

Further analysis at the neighborhood level confirms the trend in disadvantaged communities living near the urban rivers who will benefit from the Necklace. The neighborhood from

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Alhambra Wash to Eaton Wash has a household income of \$36,298 the neighborhood from Eaton Wash to Arcadia Wash has a household income of \$37,236, and the community from Walnut Creek to Whittier Narrows has a household income of \$37,455. The presence of a U.S. E.P.A. V.O.C. Superfund Site and listing of Peck Lake (which feeds the Río Hondo) and the San Gabriel River on the E.P.A. 303(d) impaired water bodies list, indicate the extreme need of these communities for water quality improvements. Peck Lake, feeding the Río Hondo, is listed on the Los Angeles Regional Quality Control Board TMDL Completed List for trash. The open space and recreational resources for these communities are far below the national average of 10 acres per 1,000 residents at an astonishing 0.3 acres per 1,000 residents.

*The direct benefit of the Emerald Necklace to disadvantaged communities will be enormous. The communities most disadvantaged and affected by lack of open space, impaired water quality and air pollution will be able to walk to the Necklace to take advantage of clean air and new recreational opportunities. In particular, residents of the cities of El Monte and South El Monte in particular will benefit from an additional 100 acres of open space, more than tripling their current recreational opportunities. Cost-effective methods will be provided to disadvantaged communities methods to reduce non-point source pollution to meet their Total Daily Maximum Load requirements. Due to infrastructure updates to meet future demands, fiscal burdens to the disadvantaged communities of the Emerald Necklace, stormwater mitigation, and air and water contamination will be reduced.*

#### 13. What percentage of the project funding has been secured?

10% of funding has been secured.

#### 14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.

*This section of the Emerald Necklace is a direct response to the public demand for open space, recreational opportunities and natural environments within the communities that will most benefit from them, as determined through the broad-based*

*Emerald Necklace coalition.* Beneficiaries of the project are overwhelmingly low-income; affected by air pollution, brownfields, and an EPA Superfund Site that strongly desires safe and healthy communities. The desire for recreational and natural areas throughout the region became apparent while Amigos de los Ríos was performing outreach activities in several disparate communities. Safe communal spaces where families could enjoy recreation as well as the desire to see and experience natural areas (including trees, flowers and butterflies) emerged as consistent themes among all the communities in which Amigos was working in the last several years. The idea for the Emerald Necklace coalesced while working with stakeholders to seek innovative ways to meet the demand for open and natural spaces in a region deprived of them.

Amigos de los Ríos continues to actively nurture involvement by stakeholders of the Emerald Necklace on both a community and a regional level. On a neighborhood level, we are engaged in several projects that have offered residents an opportunity to express their interests and concerns through surveys, focus groups, and community meetings. **SEGMENT A:** Lashbrook Park, along the southwest side of the Necklace, has involved more than 300 residents, the local school, El Monte Police Department, and the Cities of El Monte and South El Monte. Public

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participation included a recent community event that brought 25 residents to the site to begin the process of park development by painting a neglected wall. More than 200 residents, business owners, and bus riders interested in enhancing their community are participating in the planning and development for a new bus wrap design.

Residents living throughout the Emerald Necklace have overwhelmingly requested these types of multi-benefit projects that will beautify their neighborhood with native plants, provide recreational space for families and offer educational opportunities for their children. In the last year, Amigos has met with and solicited input from over 4,000 residents in an effort to nurture stakeholder involvement in the Emerald Necklace in a variety of ways. We have worked with 3 different school districts at 7 school sites, 3 cultural and historical organizations, 20 local community groups, and a coalition of churches serving the region. We were the catalyst for uniting 12 cities and the County of Los Angeles to begin exploring ways to finance, develop, and administer the Emerald Necklace.

Emerald Necklace Coalition

The City of El Monte has initiated, with the City Attorney, the draft of an MOU for the development of the Emerald Necklace. The cooperating entities include:

- Los Angeles County Department of Public Works (supportive and engaged)
- Los Angeles County Department of Parks and Recreation (supportive and engaged)
- Numerous politicians, agencies and city council members throughout the 12 city area
- Thousands of involved community members
- The Rio Hondo portion is supported by the L.A. River Landscape Guidelines developed by the County of Los Angeles
- San Gabriel River portion is supported by the San Gabriel River Corridor Master Plan
- Congresswoman Solis, State Senator Romero, State Assemblymember Chu, Supervisors Antonovich and Molina, City Council Members from El Monte, South El Monte, Baldwin Park, and other members of the Emerald Necklace Coalition currently building momentum
- Army Corps of Engineers (supportive of multi-benefit approach)
- Tribal Council of the Tongva Gabriolino (planting, environment)

Including general support and/or assistance from:

- Boy Scouts of America
- Local neighborhood councils
- Sierra Club
- Los Angeles County Department of Health Services
- Los Angeles Conservation Corps
- San Gabriel Conservation Corps
- California Conservation Corps
- El Monte Historical Society
- La Historia
- San Gabriel Valley Tribune
- El Monte Education Center
- El Monte Chamber of Commerce
- Olive Branches
- UC Cooperative Extension

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- Cal Poly Pomona
- El Monte Unified High School District
- Mountain View School District

As a project that emerged from a demand by stakeholders for open space and recreational opportunities, public involvement will continue to be a critical component of the Emerald Necklace. Each section of the project will be developed with the local community in that area so that the project addresses their needs. We will offer opportunities for involvement of residents through the use of surveys, neighborhood canvassing, focus groups, community meetings, and collaboration with local organizations. The development of each phase of the project will involve community service days, social events on or near the project sites, and community participation in developing interpretive programs and public art components. After the completion of each section, or goal is to have built a network of local residents that will take ownership of their local project and continue to care for it. Regionally, we will continue to facilitate collaboration among public agencies to develop funding and maintenance agreements, cooperative use agreements, funding sources, and further development of the Emerald Necklace.

**15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

Long-term regional watershed management needs include an increasing demand, and possible reductions in available potable water, increasing burdens on an aging flood management system, and continued loss of minimal open space and habitat areas. Water quality challenges, such as the TMDLs and volatile organic compounds contribute to several pollution plumes contaminating groundwater aquifers and have reached such magnitude, that several wells have already been shut down--and some areas have been declared Superfund Sites by the U.S. Environmental Protection Agency. The flood management system, mostly built between the 1930s and 1950s (and in disrepair in parts), bears a burgeoning burden from regional development that will continue to increase runoff into the flood control channels as long as impermeable surfaces are built. The last remaining open and habitat spaces, which are also the last permeable surfaces, are threatened by the ongoing pressures of development in a region with a desperately low open space ratio of 0.5 acres per 1,000 residents. Meanwhile, population is projected to continue growth at a rate of 1 million new residents each year, placing an increasing demand on water, flood management, and habitat/open space resources.

The infrastructure for this segment of the Emerald Necklace will benefit from reclaimed water for developing the greenbelt, thereby decreasing demand for drinking water with an effective separation of recycled and potable water sources. This segment of the Emerald Necklace directly address the long term needs of the watershed by reducing the burden on the flood control system, protecting and maintaining permeable surfaces for groundwater recharge, and expanding open space and habitat resources. Separation of reclaimed from potable water will preserve precious drinking water resources. Use of native planting will protect water quality by diminishing the need for fertilizers and pesticides. Preservation of undeveloped parcels along the San Gabriel River and Río Hondo for parks and trails will preserve these areas as permeable surfaces to reduce impact on flood control channels. Habitat restoration along the Emerald Necklace will increase open space areas as well as increase stormwater capture to

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decrease the volume of water entering the flood control channels. The new connections it will establish for residential communities and commercial areas will expand the opportunities for recreation and appreciation of habitat areas in the preserved open spaces.

The projected regional economic, environmental, and fiscal impacts of this segment of the Emerald Necklace include a significant increase in property values, substantial gains in commercial revenue, establishment of regional wildlife corridors and protection of air and water quality, and a regional infusion of funding for watershed management and open space preservation. Based on case studies of similar open space and beautification projects, retail business in areas adjacent to the Emerald Necklace could increase by as much as thirty percent. As a result of the collective Emerald Necklace enhancements, an increase in property values for the San Gabriel Valley is estimated to be \$1 billion.

By connecting Whittier Narrows Nature Area, Puente and Montebello Hills, Peck Park, and eventually Santa Fe Dam Recreational Area and the San Gabriel Mountains, the Necklace will create a unified wildlife corridor able to provide habitat for native birds, reptiles, insects, and small mammals. Trees and shrubs planted along the Emerald Necklace will prevent an estimated yearly total of 185 acre-feet of water from loading the storm drain system. Carbon dioxide sequestration from plants is projected at 3,300 tons annually, and an additional 100 tons of pollutants (including ozone and particulates) will be absorbed annually, providing a significant improvement to regional air quality. The project is expected to improve fiscal stability for watershed management via cooperative agreements between agencies. This will improve administrative efficiencies, and provide an infusion of funding from diverse sources; including the federal government and private foundations. There will also be a resultant streamlining of maintenance funding and operations.

A diverse group of agencies manage the San Gabriel River and Los Angeles River Watersheds to provide reliable drinking water, flood protection, water quality, habitat, and open space preservation. This group includes the Los Angeles County Department of Public Works, U.S. Army Corps of Engineers, Metropolitan Water District and local water agencies, local governments, and conservation organizations. Drinking water for both watersheds comes (in small part) from runoff in the San Gabriel and Santa Monica Mountains that recharges groundwater aquifers through a system of spreading basins, supplemented by imported water from the State Water Project and Colorado River, all of which are administered by the Watermasters and local water agencies. Using a system of concrete flood control channels and dams, flood protection is jointly administered by the Los Angeles County Department of Public Works and the U.S. Army Corps of Engineers. Water quality is monitored by the Los Angeles County DPW, local water agencies and conservation groups. As early as 1979, the presence of volatile organic compounds found in wells has presented a future challenge. Habitat restoration and open space protection are undertaken by in collaboration of all the agencies working on watershed management, with assistance from local conservation organizations.

Increasing demands made on limited water supply, pollutant loads, flood management, and open space resources *make this a crucial moment for innovative projects like the Emerald Necklace*. The critical impacts that we will see without development of the Necklace may include: total loss of the last remaining open space and habitat parcels, and costly capital improvement projects to update the flood control, groundwater recharge, and water quality management systems costing hundreds of millions or billions of dollars. Continued development will place increasing pressure to develop the remaining open space parcels, which will also reduce their groundwater recharge capacity and runoff capture. Average flood loads will rise, forcing costly mitigation projects like the one recently undertaken in the City of Los

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Angeles to raise the height of the flood control levees. Groundwater spreading basins will bear an increasing burden for groundwater recharge as natural recharge is reduced and eliminated. Increases in runoff will also increase the total daily loads of significant non-point source pollution, requiring more costly investments in catch basins and artificial filtration devices. The Emerald Necklace is a multi-benefit and highly cost effective investment in protecting the resources of our watershed and creating a sustainable future for generations to come.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf)** for further details on the required elements of these documents.

- 1. Project Schedule/Timeline including all major milestones**

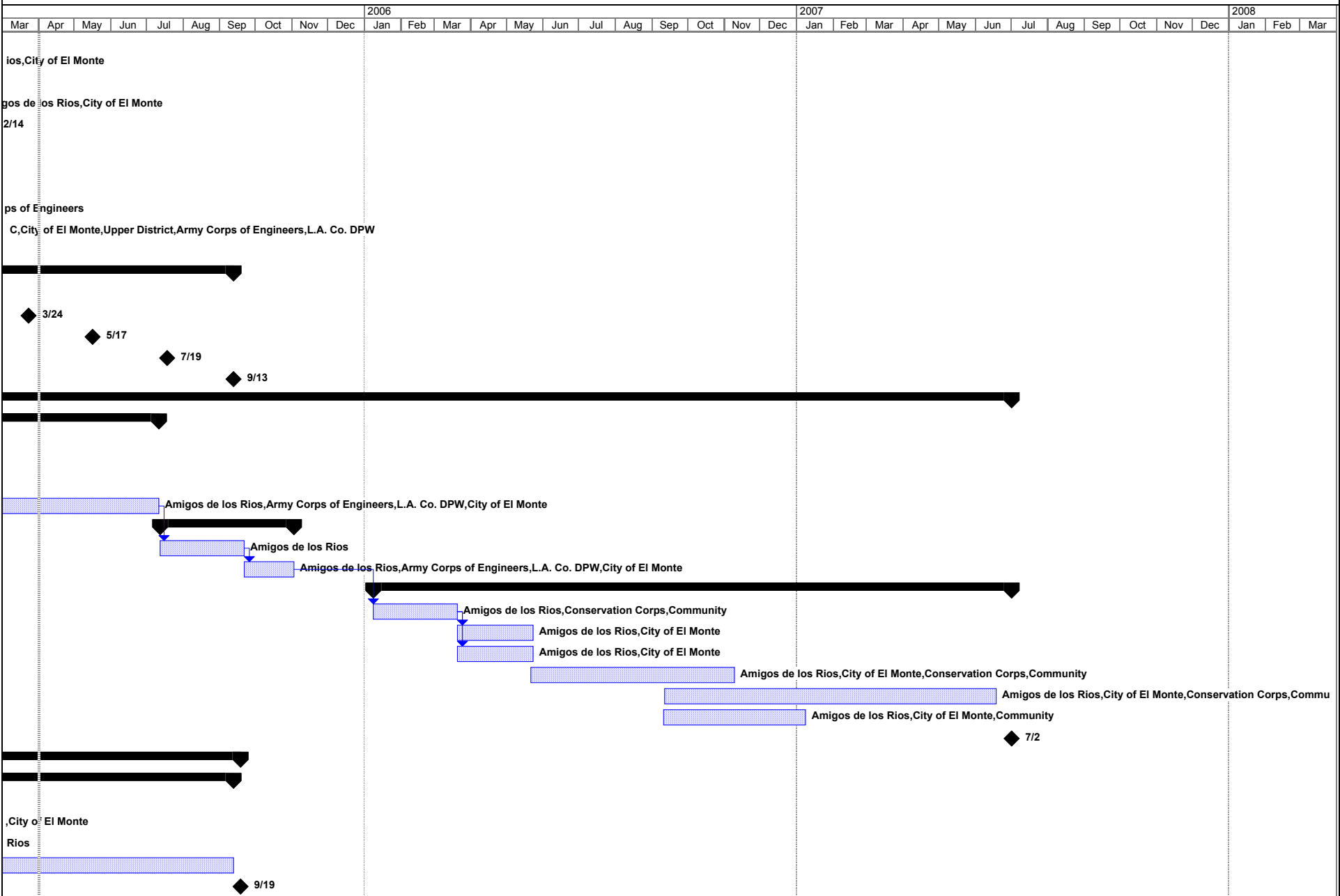
**(see attached)**

- 2. Cost Estimate of major project elements including the identification of major funding sources.**

**See attached**



# Emerald Necklace Schedule - Segment A



Project: Emerald Necklace Schedule- S  
 Date: Fri 4/1/05

Task Progress Summary External Tasks Deadline

Split Milestone Project Summary External Milestone



**Exhibit C: Cost Estimate Sheet**

**Proposal Title: Emerald Necklace**

**Project Title: A. Alhambra Wash to Eaton**

<b>Budget Category</b>		<b>Non-state Share (Funding Match)</b>
a	Direct Project Administration Costs	
b	Land Purchase/Easement	
c	Planning/Design/Engineering/Environmental Documentation	\$ 33,904
d	Construction/Implementation	\$ 171,602
	<i>Greening and Landscaping</i>	
	<i>2 Gateways</i>	
	<i>ALTA Survey</i>	
	<i>Soil Testing</i>	
	<i>Site Demolition and Rough Grading</i>	
	<i>Imported Fill</i>	
	<i>Trail Lighting</i>	
	<i>Final Grading</i>	
	<i>Drip Irrigation</i>	
	<i>Trees</i>	
	<i>Shrubs</i>	
	<i>Site Amenities (12 benches, 12 trash cans, 10 picnic tables)</i>	
	<i>10 Interpretive Signs</i>	
	<i>DG Paths</i>	
	<i>Boulders Masonry Features</i>	
	<i>BMP</i>	
	<i>BMP Swale</i>	
	<i>BMP Water Storage/Drainage</i>	
e	Environmental Compliance/Mitigation/Enhancement	
f	Project Summary [Sum a through e for each column]	
g	Construction Administration	
h	Other	
	<i>Maintenance during Establishment Period</i>	
	<i>Permitting</i>	
i	Construction/Implementation Contingency	
<b>j</b>	<b>Grant Total [Sum f through i for each column]</b>	<b>\$ 205,506</b>
	Source of funds for Non-State Share (Funding Match)	

**Wash**

<b>State Share Funding)</b>	<b>(Grant</b>	<b>Total</b>
\$	48,567	\$ 48,567
\$	55,135	\$ 89,039
<b>\$</b>	<b>1,447,288</b>	<b>\$ 1,618,890</b>
\$	90,000	\$ 90,000
\$	12,000	\$ 12,000
\$	750	\$ 750
\$	40,000	\$ 40,000
\$	12,000	\$ 12,000
\$	65,000	\$ 65,000
\$	35,000	\$ 35,000
\$	300,000	\$ 300,000
\$	267,504	\$ 267,504
\$	148,336	\$ 148,336
\$	48,800	\$ 48,800
\$	30,000	\$ 30,000
\$	346,500	\$ 346,500
\$	35,000	\$ 35,000
\$	153,000	\$ 153,000
\$	35,000	\$ 35,000
\$	1,550,990	\$ 1,756,496
\$	48,567	\$ 48,567
\$	80,945	\$ 80,945
\$	6,000	\$ 6,000
<b>\$</b>	<b>1,686,502</b>	<b>\$ 1,892,008</b>

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**Lead Agency Information**

Agency Name: Amigos de los Ríos /City of El Monte	
Address: Amigos de los Ríos: 1001 Malcolm Avenue, Los Angeles, CA 90024 City of El Monte: 3130 Tyler Avenue, El Monte, CA 91731-3293	
Contact Name: Amigos de los Ríos: Claire Robinson City of El Monte: Tom Hatch	
Telephone: Amigos de los Ríos: (310) 470-3258 City of El Monte: (626) 580-2205	E-Mail: <a href="mailto:claire@amigosdelosrios.org">claire@amigosdelosrios.org</a> <a href="mailto:thatch@ci.el-monte.ca.us">thatch@ci.el-monte.ca.us</a>
Fax: Amigos de los Ríos: (310) 441-9028 City of El Monte: (626) 452-0458	Web Site: <a href="http://www.amigosdelosrios.org">www.amigosdelosrios.org</a> <a href="http://www.ci.el-monte.ca.us">www.ci.el-monte.ca.us</a>

**Summary of Proposed Project Information**

Project Title: <b>Emerald Necklace – Segment B: Eaton Wash to South Edge of Peck Park</b>	
Proposed Start Date: November 2003 (sic)	Proposed Completion Date: July 2007
Proposed CEQA Completion Date: August 2005	
Location (Long. & Lat.): 34°01.105'N 118°05.374'W 34°06.334'N 117°59.606'W	Sub Watershed Río Hondo and San Gabriel River

**Project Description:**

**Emerald Necklace Phase 1, Segment B: Eaton Wash to South Edge of Peck Park.** The project involves landscaping, restoring and beautifying 7 miles of the LA County Flood Control District right of way along the Río Hondo as it passes through El Monte in accordance with the LA River Landscaping Guidelines. This greening area is 13 acres in total, and will include a stabilized DG path, lighting, gateways, interpretive signage, bioswale and other amenities.

***This segment is a construction ready piece of the Emerald Necklace which is a larger regional vision for a 17-mile interconnected network of multi-beneficial trails, parks and greenways touching 12 cities, parts of unincorporated Los Angeles and serving nearly one half million residents along the Río Hondo and San Gabriel Rivers; unifying more than 1,500 acres of parks, open spaces and habitat corridors while re-connecting the historically linked Río Hondo to the San Gabriel River.***

**Proposed Plan, Segment B: Eaton Wash to South Edge of Peck Park:**

**Primary Objectives Addressed by Emerald Necklace, Phase 1, Segment B Eaton Wash to South Edge of Peck Park :**

- **Recreation** – The project will provide much needed passive recreation opportunities for disadvantaged communities
- **Water Conservation/Water Quality Protection** – The project will use native landscaping which does not require fertilization and consumes 1/8 the water of conventional landscapes. This segment of Greenbelt will be watered with recycled water.

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- **Habitat Restoration.** – The plant palette has been developed based on a biological assessment of the natural area of the Rio Hondo such that this greening effort will create habitat to support native fauna.

*The Emerald Necklace will provide a 1,500-2,000 acre buffer for **water conservation and water quality protection** that will greatly enhance the region’s water reliability. The greenbelt of inter-connected projects will **improve water quality** by separating potable and recycled water supply; **installing low water use irrigation systems**; using only drought resistant native plants, and **capturing storm water for bioremediation and infiltration**. The Emerald Necklace will **educate** regional residents on the value of water as a precious resource. The project brings **water conservation and water quality protection** to the region, and will **provide recreational opportunities for disadvantaged communities** suffering from the effects of urban density, environmental pollution, obesity, asthma, Type II diabetes and hypertension.*

**Water Management Strategies Addressed: (Check all that Apply)**

<input checked="" type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input checked="" type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input checked="" type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**EATON WASH TO SOUTH EDGE OF PECK PARK**

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$ 252,982		<input type="checkbox"/> In Kind \$ 25,298
Construction & Materials		<u><b>Greening/Landscaping</b></u> <u>4 Gateways</u> \$ 60,000 <u>ALTA Survey</u> \$18,000 <u>Soil Testing</u> \$ 1,000 <u>Site Demolition and Rough Grading</u> \$ 50,000	<input type="checkbox"/> Cash 10% City of El Monte \$ 487,566

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<p><b>TOTAL</b></p> <p>Construction Contingency/ Escalation</p>		<p><u>Imported Fill</u> \$16,000 <u>Trail Lighting</u> \$110,000 <u>Final Grading</u> \$50,000 <u>Drip Irrigation</u> \$ 384,820 <u>Trees</u> \$ 362,915 <u>Shrubs</u> \$ 241,943 <u>Site Amenities</u> (Benches, trash cans, picnic tables) \$ 65,200 <u>18 Interpretive Signs</u> \$54,000 <u>DG Paths</u> \$744,000 <u>Boulders Masonry</u> <u>Features</u> \$ 85,000</p> <p><b><u>Infrastructure</u></b> <u>Union Pacific Channel</u> <u>Invert</u> \$ 1,000,000 <u>Freeway 10 Underpass</u> \$ 750,000</p> <p><u>Recycled Water</u> <u>Pipeline</u> \$ 500,000 <b>\$ 4,875,659</b></p>	
<p>Other (Describe)</p> <p><b>TOTAL</b></p>	<p><b><u>Permitting:</u></b> <b><u>Greening:</u></b> \$12,000</p> <p><b><u>Infrastructure:</u></b> \$12,000</p> <p><b>\$24,000</b></p>	<p><b><u>Maintenance /</u></b> <b><u>Monitoring during</u></b> <b><u>Construction</u></b> \$ 117,484</p>	<p><input type="checkbox"/> Other Grants \$ \$ 25,000 for conceptual planning</p>
<p><b>Totals</b></p>	<p><b>\$ 276,982</b></p>	<p><b>\$ 4,993,143</b></p>	<p><b>\$537,864</b></p>

Estimated Total Budget (Request & Match): \$ 5,270,125

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Estimated Annual O & M Budget:

\$ 60,000

**1. How does your project develop or conserve local water resources?**

This segment of the Emerald Necklace project develops and conserves local water resources by separating potable from recycled water with a new infrastructure that will benefit the region. Installation of low water use irrigation infrastructure. Environmental education/watershed perspective will be provided for regional residents; wide area conservation response expected over time. Groundwater will be recharged, infiltration and harvesting will add to conservation measures. Native vegetation will require less water. Institution of storm water best management practices throughout entire 17-mile loop and adjacent washes to Urban Rivers of the Emerald Necklace will conserve water throughout the region.

**2. How does this project address water reliability?**

Drinking water will be separated from landscape water usage. Storm water infiltration, cleansing and preservation will add a new resource to this segment of the Emerald Necklace project. Watershed educational opportunities will inspire conservation of potable water throughout the 12-city and extended area. Reduction of water demand will reduce the need to import water, increasing water reliability over a wide area and for the foreseeable future, given the expected growth of the region. Coordinated cooperation of agencies will eliminate redundancies as a broad coalition attends to the region.

**3. How does your project protect, improve or enhance water quality?**

Native planting will reduce use of fertilizers, having a positive effect on the health of the channel and habitat. Educational aspects will increase awareness of the relationship between storm drains and water quality. Incremental water quality benefits will be achieved by addressing TMDLs through bioremediation and phytoremediation provided by greenbelt along this segment of the Emerald Necklace and adjacent "jewel" areas. Water quality will be improved by use of best management practices for storm water/NPS, and treating first flush pollutants before they enter the channel. Over time, given the benefits of water education, improved channels and removal of toxins; overall enhanced water quality will be significant and lasting.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

This segment of the Emerald Necklace project is a major transformation; bringing native plant and drought-tolerant landscaping with locally propagated plants of high habitat value. Planting of native trees and shrubs in a highly urbanized area will create valuable green space. Residents of a wide area will be encouraged to remove grass and other exotics of no habitat value. The project promotes appreciation for the watershed and water resources; through water conservation, water quality protection, use of reclaimed water infrastructure, and storm water capture and treatment. Flood management will be enhanced by the reduction of flow reaching the channel. Enhanced groundwater management as the greenbelt provides opportunities for water infiltration. There will be recycling enhancement via reclaimed water infrastructure;

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including potential EPA superfund site shallow water pipeline and water recycling. The creation of a multi-benefit buffer zone around the Emerald Necklace will help protect water resources for generations to come. Pollution will be controlled through education on best management practices for storm water and NPS pollution. There will be a dramatic increase in storm water uptake of soil, by adding acres of mulch to the greenbelt. The project intercepts storm water and helps remove pollutant loads before they reach the flood maintenance channel.

**5. What is the status of your project readiness? (check as appropriate)**

<b>Item</b> Per segments according to phases	<b>Complete</b> <b>(Specify Date)</b>	<b>In process</b> <b>(Specify Est. Comp. Date)</b>	<b>Not initiated</b>
Conceptual Plans	<input checked="" type="checkbox"/> 11/03	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input checked="" type="checkbox"/> 08/04	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/> 08/05	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**6. Identify the regional or strategic planning document that identifies this project.**

- Río Hondo Sub Watershed Plan
- Upper San Gabriel River Watershed Management Plan - TBD

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The city of El Monte is committed to overseeing the development and maintaining this project. The Los Angeles County Department of Public Works is committed to this greening effort by review of our plans and initiation of necessary agreements for maintenance (between the City of El Monte and the County Dept. of Public Works, Watershed Division).

This segment of the Emerald Necklace is a critical part of the regional recreational vision being promoted by the emerging Emerald Necklace coalition. This coalition has coalesced from a desire to partner cities and agencies to create a regional, sustainable network of multi-benefit projects.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

- This segment of the Emerald Necklace is attempting to preserve and enhance (restore) a series of urban habitat islands in the San Gabriel Valley. The fact that there are so few natural or semi-natural habitat areas left in the region makes it all the more important that remaining areas be protected in perpetuity. Due to their size, Whittier Narrows,

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Peck Park, and Duck Farm, in particular, are very important habitats. Any fragmentation of the area would be a huge loss. Buffering any habitat area from further urban encroachment should be a priority. Bigger is always better in the case of habitat. When you cannot have a big area, a series of smaller, connected areas is the best alternative.

- Several species of special management significance will benefit from increased habitat protection and connectivity, and from restoration of degraded habitats throughout the Emerald Necklace project. Birds, particularly the Bell's Vireo will directly benefit, as well as the willow flycatcher, but this is less certain given the specific ecology of the species. Invertebrates, particularly insects, will definitely benefit from the improved habitat linkages.
- Structural habitat complexity of an area is sometimes more important than species composition, i.e., an older, tall non-native tree often has more importance than a sapling native species that will take years to reach the height of the non-native that was removed. Rather than total and arbitrary replanting of native species without regard for how non-native vegetation benefits the existing wildlife, there will be a carefully considered phasing-in of native vegetation.

**9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

Qualitatively, we will continue our community outreach to ensure that the recreation opportunities provided are well rec'd and enjoyed. Quantitatively, we will survey community members using the greenbelt, and record their responses to the amenities. Amigos de los Rios will monitor the vegetation survival rate, effectiveness of mulch and efficiency of irrigation, etc., using standard practices including mapping, field notes and field photography. In a log that will be posted to the net, we will track our water budgets, as well as tracking the quantity of mulch, exact number of replacement trees and shrubs. will be carefully monitored. Community and youth corps partners will be incorporated with the monitoring/maintenance process.

- Percentage of successful establishment per season
- Target water conservation budget
- Recreational use statistics
- Water Quality Monitoring for green BMP's in some locations
- Return of native fauna
- Storm water at end of swale will be measured where appropriate

**10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

We will use an adaptive management plan to assure success, we will plant in two or more phases; we will measure mortality rate of each season's plantings and the effectiveness of the mulch and irrigation. Based on what we have monitored, we will change our plant palette and mulching routine, change irrigation practices. Base on community survey input, we will change the recreation amenities accordingly. An adaptive management plan will be developed for green BMPs and for landscape. The plan will respond to growing conditions



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of various sites, and adjust successive plantings to what has shown the best success rate. The plan will assess and monitor effectiveness of green BMPs. We will respond to each variation in all monitored aspects of the plantings, swales and recreational areas with appropriate measures.

**11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

Amigos de los Rios staff, as well as the City of El Monte Department of Recreation, will track key aspects of the project and generate regular update reports as mentioned in Question #8. Printed reports will be made to the city and coalition members, as well as web postings.

- Photography of the areas, field notes
- Keep exacting data on what species we planted and percentage of survival or replacement rates to inform our decisions in following planting year
- Keep track of methods such as weed suppression, seeding, sizes of plant, different grounds, patches, etc

We will share data and work closely with all Emerald Necklace cities in the MOU and Department of Community Services of El Monte and all relevant stakeholder agencies (including the County). Via this methodology, BMPs will be shared throughout the region.

**12. Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?**

A 17-mile loop of the jNecklace provides a direct benefit to disadvantaged communities suffering from a disproportionately high incidence of social, environmental, and health issues ranging from crime to high teen birth and school drop-out rates, unemployment to obesity, asthma, hypertension, and Type II diabetes. In the majority of communities, within the area served by the Necklace, the youth population (under 24) exceeds forty percent of the population. (El Monte has the highest occurrence of obesity in CA., with 36% of all families living below the poverty level.) In this segment of the necklace, he Alhambra to Rubio Wash median household income is \$34, 697. The median household income of the entire 12-city regional population is \$36, 500 (U.S. Bureau of Census 2000). Thirty percent of residents are under age 18. Social challenges include high teen birthrate, high rate of high school dropout, unemployment, crime, and disenfranchised communities (63% Hispanic, 21% Asian American). In fragmented low-income communities suffering from a severe lack of open space and an overburdened infrastructure, the project provides access to safe parks and recreational facilities, promoting healthier lifestyles and helping to reverse detrimental health trends. The 10% matching funds requirement will not impose a hardship to this community.

The total regional population that will benefit from the Emerald Necklace is 495,187, of which 190,464 or nearly 40% are disadvantaged. The areas that are directly on, and will most benefit from this and all segments of the Emerald Necklace, have the highest percentage of disadvantaged communities due to historic discriminatory land use and development policies that pushed disadvantaged communities to the blighted areas closest

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to the urban rivers. The Median Household Income for the City of El Monte is \$32,439 and \$34,656 for the City of South El Monte, the two cities located between the San Gabriel River and Río Hondo that will most benefit from the Necklace.

Further analysis at the neighborhood level confirms the trend in disadvantaged communities living near the urban rivers who will benefit from the Necklace. The neighborhood from Alhambra Wash to Eaton Wash has a household income of \$36,298 the neighborhood from Eaton Wash to Arcadia Wash has a household income of \$37,236, and the community from Walnut Creek to Whittier Narrows has a household income of \$37,455. The presence of a U.S. E.P.A. V.O.C. Superfund Site and listing of Peck Lake (which feeds the Río Hondo) and the San Gabriel River on the E.P.A. 303(d) impaired water bodies list, indicate the extreme need of these communities for water quality improvements. Peck Lake, feeding the Río Hondo, is listed on the Los Angeles Regional Quality Control Board TMDL Completed List for trash. The open space and recreational resources for these communities are far below the national average of 10 acres per 1,000 residents at an astonishing 0.3 acres per 1,000 residents.

*The direct benefit of the Emerald Necklace to disadvantaged communities will be enormous. The communities most disadvantaged and affected by lack of open space, impaired water quality and air pollution will be able to walk to the Necklace to take advantage of clean air and new recreational opportunities. In particular, residents of the cities of El Monte and South El Monte in particular will benefit from an additional 100 acres of open space, more than tripling their current recreational opportunities. Cost-effective methods will be provided to disadvantaged communities methods to reduce non-point source pollution to meet their Total Daily Maximum Load requirements. Due to infrastructure updates to meet future demands, fiscal burdens to the disadvantaged communities of this and other segments of the Emerald Necklace, stormwater mitigation, and air and water contamination will be reduced.*

#### **13. What percentage of the project funding has been secured?**

10% of funding has been secured.

#### **14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.**

*This section of the Emerald Necklace is a direct response to the public demand for open space, recreational opportunities and natural environments within the communities that will most benefit from them, as determined through the broad-based*

*Emerald Necklace coalition. Beneficiaries of the project are overwhelmingly low-income; affected by air pollution, brownfields, and an EPA Superfund Site that strongly desires safe and healthy communities. The desire for recreational and natural areas throughout the region became apparent while Amigos de los Ríos was performing outreach activities in several disparate communities. Safe communal spaces where families could enjoy recreation as well as the desire to see and experience natural areas (including trees, flowers and butterflies) emerged as consistent themes among all the communities in which Amigos was working in the last several years. The idea for the Emerald Necklace coalesced while working with stakeholders to seek innovative ways to meet the demand for open and natural spaces in a region deprived of them.*

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Amigos de los Ríos continues to actively nurture involvement by stakeholders of the Emerald Necklace on both a community and a regional level. On a neighborhood level, we are engaged in several projects that have offered residents an opportunity to express their interests and concerns through surveys, focus groups, and community meetings. **SEGMENT B:** Renovations to Río Vista Park (on the west side of the Necklace) are being undertaken with the participation of neighboring Río Vista School, Tongva-Gabrielino Tribal Council, La Historia Society, the El Monte Historical Society, and residents of the neighborhood.

Residents living throughout this segment of the Emerald Necklace have overwhelmingly requested these types of multi-benefit projects that will beautify their neighborhood with native plants, provide recreational space for families and offer educational opportunities for their children. In the last year, Amigos has met with and solicited input from over 4,000 residents in an effort to nurture stakeholder involvement in the Emerald Necklace in a variety of ways. We have worked with 3 different school districts at 7 school sites, 3 cultural and historical organizations, 20 local community groups, and a coalition of churches serving the region. We were the catalyst for uniting 12 cities and the County of Los Angeles to begin exploring ways to finance, develop, and administer the Emerald Necklace.

### Emerald Necklace Coalition

The City of El Monte has initiated, with the City Attorney, the draft of an MOU for the development of the Emerald Necklace. The cooperating entities include:

- Los Angeles County Department of Public Works (supportive and engaged)
- Los Angeles County Department of Parks and Recreation (supportive and engaged)
- Numerous politicians, agencies and city council members throughout the 12 city area
- Thousands of involved community members
- The Rio Hondo portion is supported by the L.A. River Landscape Guidelines developed by the County of Los Angeles
- San Gabriel River portion is supported by the San Gabriel River Corridor Master Plan
- Congresswoman Solis, State Senator Romero, State Assemblymember Chu, Supervisors Antonovich and Molina, City Council Members from El Monte, South El Monte, Baldwin Park, and other members of the Emerald Necklace Coalition currently building momentum
- Army Corps of Engineers (supportive of multi-benefit approach)
- Tribal Council of the Tongva Gabriolino (planting, environment)

### Including general support and/or assistance from:

- Boy Scouts of America
- Local neighborhood councils
- Sierra Club
- Los Angeles County Department of Health Services
- Los Angeles Conservation Corps
- San Gabriel Conservation Corps
- California Conservation Corps
- El Monte Historical Society
- La Historia
- San Gabriel Valley Tribune

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- El Monte Education Center
- El Monte Chamber of Commerce
- Olive Branches
- UC Cooperative Extension
- Cal Poly Pomona
- El Monte Unified High School District
- Mountain View School District

As a project that emerged from a demand by stakeholders for open space and recreational opportunities, public involvement will continue to be a critical component of this segment of Emerald Necklace. Each section of the project will be developed with the local community in that area so that the project addresses their needs. We will offer opportunities for involvement of residents through the use of surveys, neighborhood canvassing, focus groups, community meetings, and collaboration with local organizations. The development of each phase of the project will involve community service days, social events on or near the project sites, and community participation in developing interpretive programs and public art components. After the completion of each section, our goal is to have built a network of local residents that will take ownership of their local project and continue to care for it. Regionally, we will continue to facilitate collaboration among public agencies to develop funding and maintenance agreements, cooperative use agreements, funding sources, and further development of this Emerald Necklace.

**15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

Long-term regional watershed management needs include an increasing demand, and possible reductions in available potable water, increasing burdens on an aging flood management system, and continued loss of minimal open space and habitat areas. Water quality challenges, such as the TMDLs and volatile organic compounds contribute to several pollution plumes contaminating groundwater aquifers and have reached such magnitude, that several wells have already been shut down--and some areas have been declared Superfund Sites by the U.S. Environmental Protection Agency. The flood management system, mostly built between the 1930s and 1950s (and in disrepair in parts), bears a burgeoning burden from regional development that will continue to increase runoff into the flood control channels as long as impermeable surfaces are built. The last remaining open and habitat spaces, which are also the last permeable surfaces, are threatened by the ongoing pressures of development in a region with a desperately low open space ratio of 0.5 acres per 1,000 residents. Meanwhile, population is projected to continue growth at a rate of 1 million new residents each year, placing an increasing demand on water, flood management, and habitat/open space resources.

The infrastructure for this segment of the Emerald Necklace will benefit from reclaimed water for developing the greenbelt, thereby decreasing demand for drinking water with an effective separation of recycled and potable water sources. This segment of the Emerald Necklace directly address the long term needs of the watershed by reducing the burden on the flood control system, protecting and maintaining permeable surfaces for groundwater recharge, and expanding open space and habitat resources. Separation of reclaimed from potable water will

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preserve precious drinking water resources. Use of native planting will protect water quality by diminishing the need for fertilizers and pesticides. Preservation of undeveloped parcels along the San Gabriel River and Río Hondo for parks and trails will preserve these areas as permeable surfaces to reduce impact on flood control channels. Habitat restoration along this and other segments of the Necklace will increase open space areas as well as increase stormwater capture to decrease the volume of water entering the flood control channels. The new connections it will establish for residential communities and commercial areas will expand the opportunities for recreation and appreciation of habitat areas in the preserved open spaces.

The projected regional economic, environmental, and fiscal impacts of this segment of the Emerald Necklace include a significant increase in property values, substantial gains in commercial revenue, establishment of regional wildlife corridors and protection of air and water quality, and a regional infusion of funding for watershed management and open space preservation. Based on case studies of similar open space and beautification projects, retail business in areas adjacent to the Emerald Necklace could increase by as much as thirty percent. As a result of the collective Emerald Necklace enhancements, an increase in property values for the San Gabriel Valley is estimated to be \$1 billion.

By connecting Whittier Narrows Nature Area, Puente and Montebello Hills, Peck Park, and eventually Santa Fe Dam Recreational Area and the San Gabriel Mountains, the Necklace will create a unified wildlife corridor able to provide habitat for native birds, reptiles, insects, and small mammals. Trees and shrubs planted along the Emerald Necklace will prevent an estimated yearly total of 185 acre-feet of water from loading the storm drain system. Carbon dioxide sequestration from plants is projected at 3,300 tons annually, and an additional 100 tons of pollutants (including ozone and particulates) will be absorbed annually, providing a significant improvement to regional air quality. The project is expected to improve fiscal stability for watershed management via cooperative agreements between agencies. This will improve administrative efficiencies, and provide an infusion of funding from diverse sources; including the federal government and private foundations. There will also be a resultant streamlining of maintenance funding and operations.

A diverse group of agencies manage the San Gabriel River and Los Angeles River Watersheds to provide reliable drinking water, flood protection, water quality, habitat, and open space preservation. This group includes the Los Angeles County Department of Public Works, U.S. Army Corps of Engineers, Metropolitan Water District and local water agencies, local governments, and conservation organizations. Drinking water for both watersheds comes (in small part) from runoff in the San Gabriel and Santa Monica Mountains that recharges groundwater aquifers through a system of spreading basins, supplemented by imported water from the State Water Project and Colorado River, all of which are administered by the Watermasters and local water agencies. Using a system of concrete flood control channels and dams, flood protection is jointly administered by the Los Angeles County Department of Public Works and the U.S. Army Corps of Engineers. Water quality is monitored by the Los Angeles County DPW, local water agencies and conservation groups. As early as 1979, the presence of volatile organic compounds found in wells has presented a future challenge. Habitat restoration and open space protection are undertaken by in collaboration of all the agencies working on watershed management, with assistance from local conservation organizations.

Increasing demands made on limited water supply, pollutant loads, flood management, and open space resources *make this a crucial moment for innovative projects like the Emerald Necklace*. The critical impacts that we will see without development of the Necklace may include: total loss of the last remaining open space and habitat parcels, and costly capital

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improvement projects to update the flood control, groundwater recharge, and water quality management systems costing hundreds of millions or billions of dollars. Continued development will place increasing pressure to develop the remaining open space parcels, which will also reduce their groundwater recharge capacity and runoff capture. Average flood loads will rise, forcing costly mitigation projects like the one recently undertaken in the City of Los Angeles to raise the height of the flood control levees. Groundwater spreading basins will bear an increasing burden for groundwater recharge as natural recharge is reduced and eliminated. Increases in runoff will also increase the total daily loads of significant non-point source pollution, requiring more costly investments in catch basins and artificial filtration devices. The Emerald Necklace is a multi-benefit and highly cost effective investment in protecting the resources of our watershed and creating a sustainable future for generations to come.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

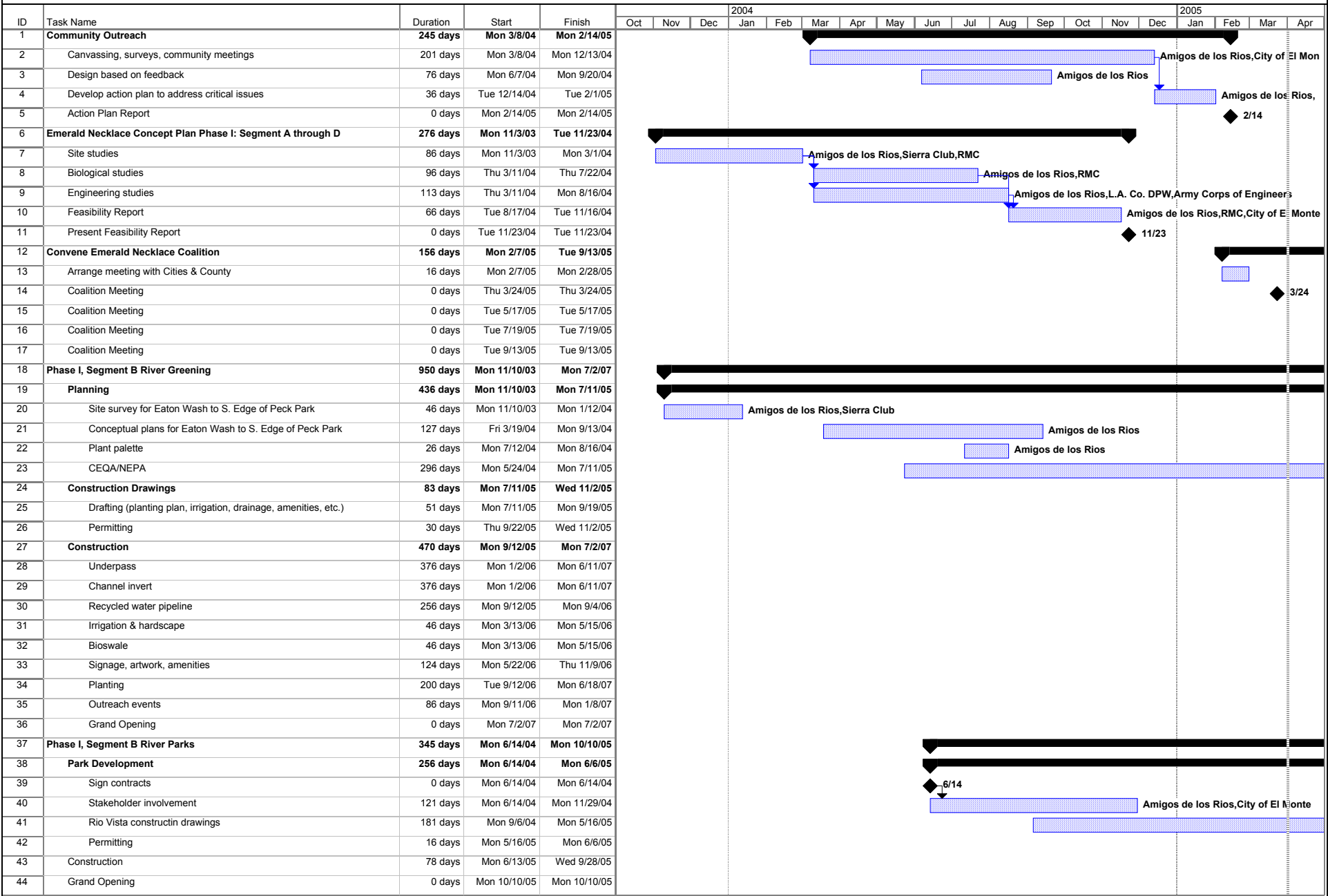
**1. Project Schedule/Timeline including all major milestones**

(see attached)

**2. Cost Estimate of major project elements including the identification of major funding sources.**

**See attached**

Emerald Necklace Schedule - Segment B

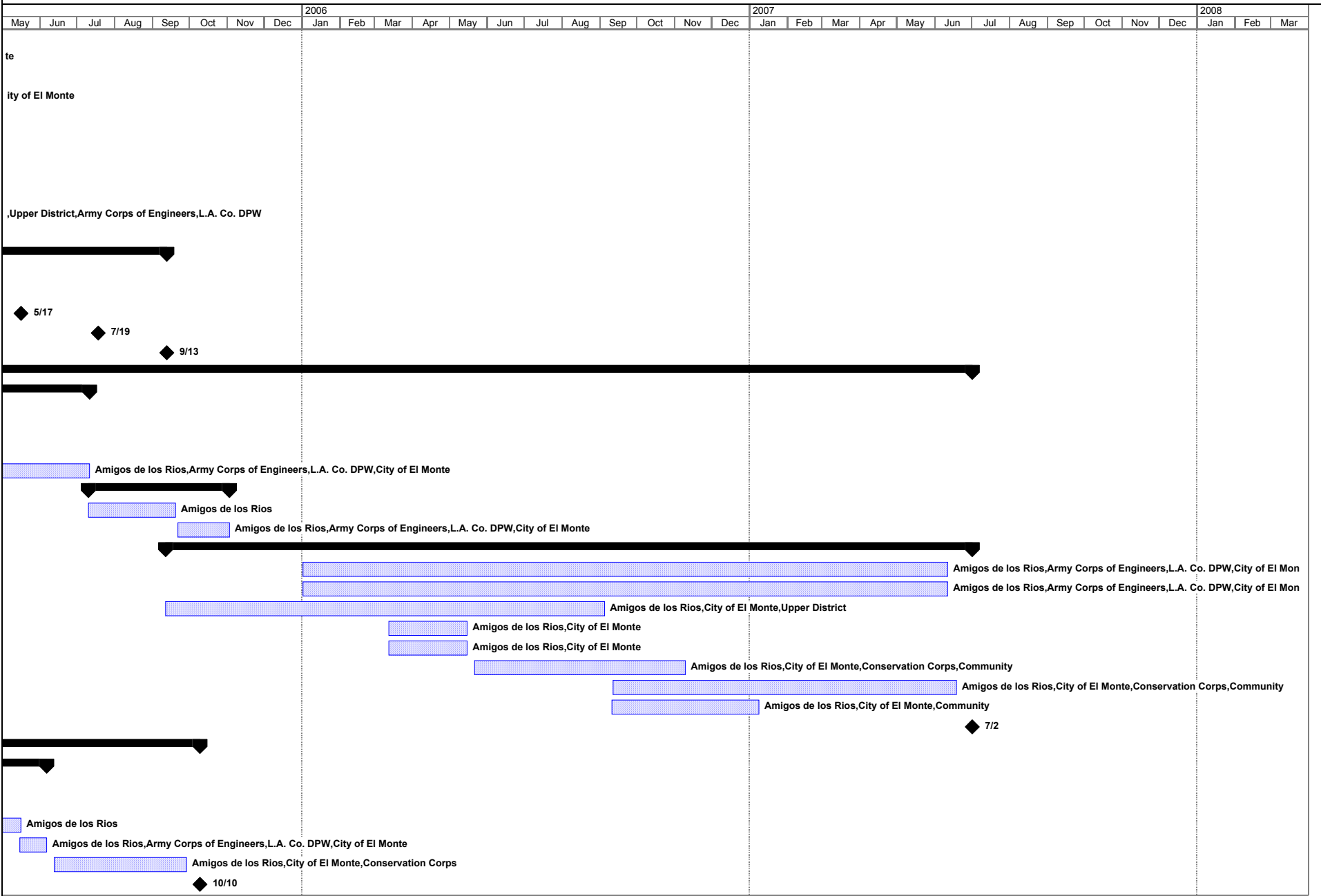


Project: Emerald Necklace Schedule - S  
Date: Fri 4/1/05

Task Progress Summary External Tasks Deadline

Split Milestone Project Summary External Milestone

Emerald Necklace Schedule - Segment B



Project: Emerald Necklace Schedule- S  
Date: Fri 4/1/05

Task		Progress		Summary		External Tasks		Deadline	
Split		Milestone		Project Summary		External Milestone			



## Exhibit C: Cost Estimate Sheet

Proposal Title: Emerald Necklace

Project Title: B. Eaton Wash to South Edge of Peck Pa

	Budget Category	Non-state Share (Funding Match)
a	Direct Project Administration Costs	
b	Land Purchase/Easement	
c	Planning/Design/Engineering/Environmental Documentation	\$ 8,904
d	Construction/Implementation	\$ 171,602
	<u>Greening and Landscaping</u>	
	<i>4 Gateways</i>	
	<i>ALTA Survey</i>	
	<i>Soil Testing</i>	
	<i>Site Demolition and Rough Grading</i>	
	<i>Imported Fill</i>	
	<i>Trail Lighting</i>	
	<i>Final Grading</i>	
	<i>Drip Irrigation</i>	
	<i>Trees</i>	
	<i>Shrubs</i>	
	<i>Site Amenities ( benches, trash cans, picnic tables)</i>	
	<i>18 Interpretive Signs</i>	
	<i>DG Paths</i>	
	<i>Boulders Masonry Features</i>	
	<u>Infrastructure</u>	
	<i>Union Pacific Channel Invert</i>	
	<i>Freeway 10 Underpass</i>	
	<i>Recycled Water Pipeline</i>	
e	Environmental Compliance/Mitigation/Enhancement	
f	Project Summary [Sum a through e for each column]	\$ 180,506
g	Construction Administration	
h	Other	\$ 25,000
	<i>Maintenance during Establishment Period</i>	
	<i>Permitting</i>	
i	Construction/Implementation Contingency	
j	<b>Grant Total [Sum f through i for each column]</b>	<b>\$ 205,506</b>
	Source of funds for Non-State Share (Funding Match)	

rk

<b>State Share (Grant Funding)</b>	<b>Total</b>
\$ 137,990	\$ 137,990
\$ 244,078	\$ 252,982
\$ 4,428,076	\$ 4,599,678
\$ 166,800	\$ 166,800
\$ 18,000	\$ 18,000
\$ 1,000	\$ 1,000
\$ 50,000	\$ 50,000
\$ 16,000	\$ 16,000
\$ 110,000	\$ 110,000
\$ 50,000	\$ 50,000
\$ 384,820	\$ 384,820
\$ 362,915	\$ 362,915
\$ 241,943	\$ 241,943
\$ 65,200	\$ 65,200
\$ 54,000	\$ 54,000
\$ 744,000	\$ 744,000
\$ 85,000	\$ 85,000
\$ 1,000,000	\$ 1,000,000
\$ 750,000	\$ 750,000
\$ 500,000	\$ 500,000
\$ 4,810,144	\$ 4,990,650
\$ 137,990	\$ 137,990
\$ 116,484	\$ 141,484
\$ 117,484	\$ 117,484
\$ 24,000	\$ 24,000
\$ 5,064,618	\$ 5,270,124

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
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**Lead Agency Information**

Agency Name: Amigos de los Ríos /City of El Monte	
Address: Amigos de los Ríos: 1001 Malcolm Avenue, Los Angeles, CA 90024 City of El Monte: 3130 Tyler Avenue, El Monte, CA 91731-3293	
Contact Name: Amigos de los Ríos: Claire Robinson City of El Monte: Tom Hatch	
Telephone: Amigos de los Ríos: (310) 470-3258 City of El Monte: (626) 580-2205	E-Mail: <a href="mailto:claire@amigosdelosrios.org">claire@amigosdelosrios.org</a> <a href="mailto:thatch@ci.el-monte.ca.us">thatch@ci.el-monte.ca.us</a>
Fax: Amigos de los Ríos: (310) 441-9028 City of El Monte: (626) 452-0458	Web Site: <a href="http://www.amigosdelosrios.org">www.amigosdelosrios.org</a> <a href="http://www.ci.el-monte.ca.us">www.ci.el-monte.ca.us</a>

**Summary of Proposed Project Information**

Project Title: <b>Emerald Necklace- Segment C: Peck Road Water Conservation Park to San Gabriel River</b>	
Proposed Start Date: November 2003 (sic)	Proposed Completion Date: July 2007
Proposed CEQA Completion Date: August 2005	
Location (Long. & Lat.): 34°01.105'N 118°05.374'W 34°06.334'N 117°59.606'W	Sub Watershed Río Hondo and San Gabriel River
<p><b>Project Description:</b>  <b>Emerald Necklace Phase 1, Segment C: Peck Park to San Gabriel River:</b> The project involves landscaping, restoring and beautifying a critical 1.7 mile segment of land adjacent to the South edge of the Hanson Quarry which links the Río Hondo and San Gabriel Rivers. This greening area is 6 acres in total and will include a community habitat park; multi benefit trails including a stabilized decomposed granite path, lighting, gateway, interpretive signage, bioswale and other amenities.</p> <p><i><b>This segment is a construction ready piece of the Emerald Necklace which is a critical element of larger regional vision for a 17-mile interconnected network of multi-beneficial trails, parks and greenways touching 12 cities, parts of unincorporated Los Angeles and serving nearly one half million residents along the Río Hondo and San Gabriel Rivers; unifying more than 1,500 acres of parks, open spaces and habitat corridors while re-connecting the historically linked Río Hondo to the San Gabriel River.</b></i></p> <p><b>Primary Objectives Addressed by Emerald Necklace, Phase 1, Segment C Peck Water Conservation Park to San Gabriel River</b>– The project will provide much needed passive recreation opportunities for disadvantaged communities as well as creating a critical link between the regional open space resources of the Río Hondo and San Gabriel Rivers.</p> <ul style="list-style-type: none"> <li>• <b>Water Conservation/Water Quality Protection</b> – The project will use native landscaping which does not require fertilization and consumes 1/8 the water of conventional landscapes.</li> <li>• <b>Habitat Restoration.</b> – The plant palette has been developed based on a biological</li> </ul>	

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assessment of the natural area of the Quarry land bridge such that this greening effort will create habitat to support native fauna.

*As a whole, the Emerald Necklace will provide a 1,500-2,000 acre buffer for **water conservation** and **water quality protection** that will greatly enhance the region's water reliability. The greenbelt of inter-connected projects will **improve water quality** by separating potable and recycled water supply; **installing low water use irrigation systems**; using only drought resistant native plants, and **capturing storm water for bioremediation and infiltration**. The Emerald Necklace will **educate** regional residents on the value of water as a precious resource. The project brings **water conservation and water quality protection** to the region, and will **provide recreational opportunities for disadvantaged communities** suffering from the effects of urban density, environmental pollution, obesity, asthma, Type II diabetes and hypertension.*

**Water Management Strategies Addressed: (Check all that Apply)**

<input checked="" type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input checked="" type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input checked="" type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Peck Road/Water Conservation Park to San Gabriel River**

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$ 61,467		<input type="checkbox"/> In Kind \$ 6,147
Construction & Materials		<u><b>Greening/Landscaping</b></u> <u>Gateway</u> \$54,000 <u>ALTA Survey</u> \$10,000 <u>Soil Testing</u> \$ 500 <u>Site Demolition and Rough Grading</u> \$ 30,000	<input type="checkbox"/> Cash 10% City of El Monte \$124,051

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		<u>Imported Fill</u> \$10,000 <u>Trail Lighting</u> \$45,000 <u>Final Grading</u> \$20,000 <u>Drip Irrigation</u> \$ 94,500 <u>Trees</u> \$ 88,107 <u>Shrubs</u> \$ 46,990 <u>Site Amenities</u> (Benches, trash cans, picnic tables) \$44,000 <u>10 Interpretive Signs</u> \$30,000 <u>DG Paths</u> \$396,482 <u>Boulders Masonry</u> <u>Features</u> \$ 60,000  <b><u>BMP</u></b> <u>BMP Swale</u> \$ 153,000 <u>BMP Water</u> <u>Storage/Drainage</u> \$ 35,000  <b>\$1,184,634</b>	
<b>TOTAL</b>			
Construction Contingency/ Escalation			
Other (Describe)	<u>Permitting</u> \$ 10,000	<u>Maintenance / Monitoring during Construction</u> \$ 55,879	<input type="checkbox"/> Other Grants \$ 25,000 for conceptual planning
<b>Totals</b>	<b>\$ 71,467</b>	<b>\$ 1,240,513</b>	<b>\$155,198</b>

Estimated Total Budget (Request & Match):           \$ 1,311,980  
 Estimated Annual O & M Budget:                     \$   20,000

**1. How does your project develop or conserve local water resources?**

This segment of the Emerald Necklace project conserves local water resources through the installation of low water use irrigation infrastructure. Through interpretive signage the

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environmental education/watershed perspective will be provided for regional residents. The Native vegetation installed will require less water and no fertilizers or pesticides. Institution of storm water best management practices throughout this segment will improve storm water run off.

**2. How does this project address water reliability?**

Storm water infiltration, cleansing and preservation will add a new resource to this segment of the Emerald Necklace project. Watershed educational opportunities will inspire conservation of potable water throughout the 12-city and extended area. Reduction of water demand will reduce the need to import water, increasing water reliability over a wide area and for the foreseeable future, given the expected growth of the region. Coordinated cooperation of agencies will eliminate redundancies as a broad coalition attends to the region.

**3. How does your project protect, improve or enhance water quality?**

Native planting will reduce use of fertilizers, having a positive effect on the health of the quarry which is in direct contact with ground water and on habitat. Educational aspects will increase awareness of the relationship between San Gabriel River as our regional delivery source for drinking water. Incremental water quality benefits will be achieved by addressing the TMDLs in interpretive signage with a vista to the River. Over time, given the benefits of water education, creating multi benefit channels and incremental removal of toxins in the water; overall enhanced water quality will be significant and lasting.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

This segment of the Emerald Necklace project is a major greening transformation; bringing native plant and drought-tolerant landscaping with locally propagated plants of high habitat value to the area. Planting of native trees and shrubs in a highly urbanized area will create valuable green space. Residents of a wide area will be encouraged to remove grass and other exotics of no habitat value. The project promotes appreciation for the watershed and water resources; through water conservation, water quality protection, use of reclaimed water infrastructure, and storm water capture and treatment. Flood management will be enhanced by the reduction of flow reaching the channel. Enhanced groundwater management as the greenbelt provides opportunities for water infiltration. Pollution will be controlled through education on best management practices for storm water and NPS pollution. There will be a dramatic increase in storm water uptake of soil, by adding acres of mulch to the greenbelt. The project intercepts storm water and helps remove pollutant loads before they reach the quarry.

**5. What is the status of your project readiness? (check as appropriate)**

Item Per segments according to phases	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/> 11/03	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input checked="" type="checkbox"/> 03/05	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/> 09/06	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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**6. Identify the regional or strategic planning document that identifies this project.**

- Río Hondo Sub Watershed Plan
- Upper San Gabriel River Watershed Management Plan - TBD

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The city of El Monte and other cities of the Emerald Necklace Coalition in conjunction with the owners of Hanson Quarry are committed to overseeing the development of and maintenance of this project.

This segment of the Emerald Necklace is a critical part of the regional recreational vision being promoted by the emerging Emerald Necklace coalition. This coalition has coalesced from a desire to partner cities and agencies to create a regional, sustainable network of multi-benefit projects.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

- This segment of the Emerald Necklace includes 6 acres of potential habitat restoration which is an important link in a series of urban habitat islands in the San Gabriel Valley. The fact that there are so few natural or semi-natural habitat areas left in the region makes it all the more important that remaining areas be protected in perpetuity. Due to their size, Whittier Narrows, Peck Park, and Duck Farm, in particular, are very important habitats. Any fragmentation of the area would be a huge loss. Buffering any habitat area from further urban encroachment should be a priority. Bigger is always better in the case of habitat. When you cannot have a big area, a series of smaller, connected areas is the best alternative.
- Several species of special management significance will benefit from increased habitat protection and connectivity, and from restoration of degraded habitats throughout the Emerald Necklace project. Birds, particularly the Bell's Vireo will directly benefit, as well as the willow flycatcher, but this is less certain given the specific ecology of the species. Invertebrates, particularly insects, will definitely benefit from the improved habitat linkages.
- Structural habitat complexity of an area is sometimes more important than species composition, i.e., an older, tall non-native tree often has more importance than a sapling native species that will take years to reach the height of the non-native that was removed. Rather than total and arbitrary replanting of native species without regard for how non-native vegetation benefits the existing wildlife, there will be a carefully considered phasing-in of native vegetation.

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- 9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

Qualitatively, we will continue our community outreach to ensure that the recreation opportunities provided are well rec'd and enjoyed. Quantitatively, we will survey community members using the greenbelt, and record their responses to the amenities. Amigos de los Rios will monitor the vegetation survival rate, effectiveness of mulch and efficiency of irrigation, etc., using standard practices including mapping, field notes and field photography. In a log that will be posted to the net, we will track our water budgets, as well as tracking the quantity of mulch, exact number of replacement trees and shrubs. will be carefully monitored. Community and youth corps partners will be incorporated with the monitoring/maintenance process.

- Percentage of successful establishment per season
- Target water conservation budget
- Recreational use statistics
- Water Quality Monitoring for green BMP's in some locations
- Return of native fauna
- Storm water at end of swale will be measured where appropriate

- 10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

We will use an adaptive management plan to assure success, we will plant in two or more phases; we will measure mortality rate of each season's plantings and the effectiveness of the mulch and irrigation. Based on what we have monitored, we will change our plant palette and mulching routine, change irrigation practices. Base on community survey input, we will change the recreation amenities accordingly. An adaptive management plan will be developed for green BMPs and for landscape. The plan will respond to growing conditions of various sites, and adjust successive plantings to what has shown the best success rate. The plan will assess and monitor effectiveness of green BMPs. We will respond to each variation in all monitored aspects of the plantings, swales and recreational areas with appropriate measures.

- 11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

Amigos de los Rios staff, as well as the City of El Monte Department of Recreation, will track key aspects of the project and generate regular update reports as mentioned in Question #8. Printed reports will be made to the city and coalition members, as well as web postings.

- Photography of the areas, field notes
- Keep exacting data on what species we planted and percentage of survival or replacement rates to inform our decisions in following planting year
- Keep track of methods such as weed suppression, seeding, sizes of plant, different grounds, patches, etc



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We will share data and work closely with all Emerald Necklace cities in the MOU and Department of Community Services of El Monte and all relevant stakeholder agencies (including the County). Via this methodology, BMPs will be shared throughout the region.

**12. Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?**

This segment of the Emerald Necklace includes the disadvantaged communities living near the urban rivers who will benefit from the Necklace. The neighborhood from Alhambra Wash to Eaton Wash has a household income of \$36,298 the neighborhood from Eaton Wash to Arcadia Wash has a household income of \$37,236, and the community from Walnut Creek to Whittier Narrows has a household income of \$37,455. The presence of a U.S. E.P.A. V.O.C. Superfund Site and listing of Peck Lake (which feeds the Río Hondo) and the San Gabriel River on the E.P.A. 303(d) impaired water bodies list, indicate the extreme need of these communities for water quality improvements. Peck Lake, feeding the Río Hondo, is listed on the Los Angeles Regional Quality Control Board TMDL Completed List for trash. The open space and recreational resources for these communities are far below the national average of 10 acres per 1,000 residents at an astonishing 0.3 acres per 1,000 residents

A 17-mile loop of the Emerald Necklace provides a direct benefit to disadvantaged communities suffering from a disproportionately high incidence of social, environmental, and health issues ranging from crime to high teen birth and school drop-out rates, unemployment to obesity, asthma, hypertension, and Type II diabetes. In the majority of communities, within the area served by the Necklace, the youth population (under 24) exceeds forty percent of the population. (El Monte has the highest occurrence of obesity in CA., with 36% of all families living below the poverty level.) The Alhambra to Rubio Wash median household income is \$34, 697. The median household income of the entire 12-city regional population is \$36, 500 (U.S. Bureau of Census 2000). Thirty percent of residents are under age 18. Social challenges include high teen birthrate, high rate of high school dropout, unemployment, crime, and disenfranchised communities (63% Hispanic, 21% Asian American). In fragmented low-income communities suffering from a severe lack of open space and an overburdened infrastructure, the project provides access to safe parks and recreational facilities, promoting healthier lifestyles and helping to reverse detrimental health trends. The 10% matching funds requirement will not impose a hardship to this community.

The total regional population that will benefit from the Emerald Necklace is 495,187, of which 190,464 or nearly 40% are disadvantaged. The areas that are directly on, and will most benefit from the Emerald Necklace, have the highest percentage of disadvantaged communities due to historic discriminatory land use and development policies that pushed disadvantaged communities to the blighted areas closest to the urban rivers. The Median Household Income for the City of El Monte is \$32,439 and \$34,656 for the City of South El Monte, the two cities located between the San Gabriel River and Río Hondo that will most benefit from the Necklace.

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*The direct benefit of the Emerald Necklace to disadvantaged communities will be enormous. The communities most disadvantaged and affected by lack of open space, impaired water quality and air pollution will be able to walk to the Necklace to take advantage of clean air and new recreational opportunities. In particular, residents of the cities of El Monte and South El Monte in particular will benefit from an additional 100 acres of open space, more than tripling their current recreational opportunities. Cost-effective methods will be provided to disadvantaged communities methods to reduce non-point source pollution to meet their Total Daily Maximum Load requirements. Due to infrastructure updates to meet future demands, fiscal burdens to the disadvantaged communities of the Emerald Necklace, stormwater mitigation, and air and water contamination will be reduced.*

**13. What percentage of the project funding has been secured?**

10% of funding has been secured.

**14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.**

*This section of the Emerald Necklace is a direct response to the public demand for open space, recreational opportunities and natural environments within the communities that will most benefit from them, as determined through the broad-based*

*Emerald Necklace coalition.* Beneficiaries of the project are overwhelmingly low-income; affected by air pollution, brownfields, and an EPA Superfund Site that strongly desires safe and healthy communities. The desire for recreational and natural areas throughout the region became apparent while Amigos de los Ríos was performing outreach activities in several disparate communities. Safe communal spaces where families could enjoy recreation as well as the desire to see and experience natural areas (including trees, flowers and butterflies) emerged as consistent themes among all the communities in which Amigos was working in the last several years. The idea for the Emerald Necklace coalesced while working with stakeholders to seek innovative ways to meet the demand for open and natural spaces in a region deprived of them.

Amigos de los Ríos continues to actively nurture involvement by stakeholders of the Emerald Necklace on both a community and a regional level. On a neighborhood level, we are engaged in several projects that have offered residents an opportunity to express their interests and concerns through surveys, focus groups, and community meetings. We have had several fruitful discussions with the management of Hanson Quarry.

Residents living throughout the Emerald Necklace have overwhelmingly requested these types of multi-benefit projects that will beautify their neighborhood with native plants, provide recreational space for families and offer educational opportunities for their children. In the last year, Amigos has met with and solicited input from over 4,000 residents in an effort to nurture stakeholder involvement in the Emerald Necklace in a variety of ways. We have worked with 3 different school districts at 7 school sites, 3 cultural and historical organizations, 20 local community groups, and a coalition of churches serving the region. We were the catalyst for uniting 12 cities and the County of Los Angeles to begin exploring ways to finance, develop, and administer the Emerald Necklace.

Emerald Necklace Coalition

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The City of El Monte has initiated, with the City Attorney, the draft of an MOU for the development of the Emerald Necklace. The cooperating entities include:

- Los Angeles County Department of Public Works (supportive and engaged)
- Los Angeles County Department of Parks and Recreation (supportive and engaged)
- Numerous politicians, agencies and city council members throughout the 12 city area
- Thousands of involved community members
- The Rio Hondo portion is supported by the L.A. River Landscape Guidelines developed by the County of Los Angeles
- San Gabriel River portion is supported by the San Gabriel River Corridor Master Plan
- Congresswoman Solis, State Senator Romero, State Assembly member Chu, Supervisors Antonovich and Molina, City Council Members from El Monte, South El Monte, Baldwin Park, and other members of the Emerald Necklace Coalition currently building momentum
- Army Corps of Engineers (supportive of multi-benefit approach)
- Tribal Council of the Tongva (planting, environment)

Including general support and/or assistance from:

- Boy Scouts of America
- Local neighborhood councils
- Sierra Club
- Los Angeles County Department of Health Services
- Los Angeles Conservation Corps
- San Gabriel Conservation Corps
- California Conservation Corps
- El Monte Historical Society
- La Historia
- San Gabriel Valley Tribune
- El Monte Education Center
- El Monte Chamber of Commerce
- Olive Branches
- UC Cooperative Extension
- Cal Poly Pomona
- El Monte Unified High School District
- Mountain View School District

As a project that emerged from a demand by stakeholders for open space and recreational opportunities, public involvement will continue to be a critical component of the Emerald Necklace. Each section of the project will be developed with the local community in that area so that the project addresses their needs. We will offer opportunities for involvement of residents through the use of surveys, neighborhood canvassing, focus groups, community meetings, and collaboration with local organizations. The development of each phase of the project will involve community service days, social events on or near the project sites, and community participation in developing interpretive programs and public art components. After the completion of each section, or goal is to have built a network of local residents that will take ownership of their local project and continue to care for it. Regionally, we will continue to facilitate collaboration among

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public agencies to develop funding and maintenance agreements, cooperative use agreements, funding sources, and further development of the Emerald Necklace.

**15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

Long-term regional watershed management needs include an increasing demand, and possible reductions in available potable water, increasing burdens on an aging flood management system, and continued loss of minimal open space and habitat areas. Water quality challenges, such as the TMDLs and volatile organic compounds contribute to several pollution plumes contaminating groundwater aquifers and have reached such magnitude, that several wells have already been shut down--and some areas have been declared Superfund Sites by the U.S. Environmental Protection Agency. The flood management system, mostly built between the 1930s and 1950s (and in disrepair in parts), bears a burgeoning burden from regional development that will continue to increase runoff into the flood control channels as long as impermeable surfaces are built. The last remaining open and habitat spaces, which are also the last permeable surfaces, are threatened by the ongoing pressures of development in a region with a desperately low open space ratio of 0.5 acres per 1,000 residents. Meanwhile, population is projected to continue growth at a rate of 1 million new residents each year, placing an increasing demand on water, flood management, and habitat/open space resources.

The infrastructure for this segment of the Emerald Necklace will benefit from reclaimed water for developing the greenbelt, thereby decreasing demand for drinking water with an effective separation of recycled and potable water sources. This segment of the Emerald Necklace directly address the long term needs of the watershed by reducing the burden on the flood control system, protecting and maintaining permeable surfaces for groundwater recharge, and expanding open space and habitat resources. Separation of reclaimed from potable water will preserve precious drinking water resources. Use of native planting will protect water quality by diminishing the need for fertilizers and pesticides. Preservation of undeveloped parcels along the San Gabriel River and Río Hondo for parks and trails will preserve these areas as permeable surfaces to reduce impact on flood control channels. Habitat restoration along the Emerald Necklace will increase open space areas as well as increase stormwater capture to decrease the volume of water entering the flood control channels. The new connections it will establish for residential communities and commercial areas will expand the opportunities for recreation and appreciation of habitat areas in the preserved open spaces.

The projected regional economic, environmental, and fiscal impacts of this segment of the Emerald Necklace include a significant increase in property values, substantial gains in commercial revenue, establishment of regional wildlife corridors and protection of air and water quality, and a regional infusion of funding for watershed management and open space preservation. Based on case studies of similar open space and beautification projects, retail business in areas adjacent to the Emerald Necklace could increase by as much as thirty percent. As a result of the collective Emerald Necklace enhancements, an increase in property values for the San Gabriel Valley is estimated to be \$1 billion.

By connecting Whittier Narrows Nature Area, Puente and Montebello Hills, Peck Park, and eventually Santa Fe Dam Recreational Area and the San Gabriel Mountains, the Necklace will create a unified wildlife corridor able to provide habitat for native birds, reptiles, insects, and

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small mammals. Trees and shrubs planted along the Emerald Necklace will prevent an estimated yearly total of 185 acre-feet of water from loading the storm drain system. Carbon dioxide sequestration from plants is projected at 3,300 tons annually, and an additional 100 tons of pollutants (including ozone and particulates) will be absorbed annually, providing a significant improvement to regional air quality. The project is expected to improve fiscal stability for watershed management via cooperative agreements between agencies. This will improve administrative efficiencies, and provide an infusion of funding from diverse sources; including the federal government and private foundations. There will also be a resultant streamlining of maintenance funding and operations.

A diverse group of agencies manage the San Gabriel River and Los Angeles River Watersheds to provide reliable drinking water, flood protection, water quality, habitat, and open space preservation. This group includes the Los Angeles County Department of Public Works, U.S. Army Corps of Engineers, Metropolitan Water District and local water agencies, local governments, and conservation organizations. Drinking water for both watersheds comes (in small part) from runoff in the San Gabriel and Santa Monica Mountains that recharges groundwater aquifers through a system of spreading basins, supplemented by imported water from the State Water Project and Colorado River, all of which are administered by the Watermasters and local water agencies. Using a system of concrete flood control channels and dams, flood protection is jointly administered by the Los Angeles County Department of Public Works and the U.S. Army Corps of Engineers. Water quality is monitored by the Los Angeles County DPW, local water agencies and conservation groups. As early as 1979, the presence of volatile organic compounds found in wells has presented a future challenge. Habitat restoration and open space protection are undertaken by in collaboration of all the agencies working on watershed management, with assistance from local conservation organizations.

Increasing demands made on limited water supply, pollutant loads, flood management, and open space resources *make this a crucial moment for innovative projects like the Emerald Necklace*. The critical impacts that we will see without development of the Necklace may include: total loss of the last remaining open space and habitat parcels, and costly capital improvement projects to update the flood control, groundwater recharge, and water quality management systems costing hundreds of millions or billions of dollars. Continued development will place increasing pressure to develop the remaining open space parcels, which will also reduce their groundwater recharge capacity and runoff capture. Average flood loads will rise, forcing costly mitigation projects like the one recently undertaken in the City of Los Angeles to raise the height of the flood control levees. Groundwater spreading basins will bear an increasing burden for groundwater recharge as natural recharge is reduced and eliminated. Increases in runoff will also increase the total daily loads of significant non-point source pollution, requiring more costly investments in catch basins and artificial filtration devices. The Emerald Necklace is a multi-benefit and highly cost effective investment in protecting the resources of our watershed and creating a sustainable future for generations to come.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

- 1. Project Schedule/Timeline including all major milestones**

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**Multi phase project**

Phase I – 2 year

03/04 – 01/06

Phase II – 4 year

02/06 – 01/10

- 2. Cost Estimate of major project elements including the identification of major funding sources.**

**See attached**

## Exhibit C: Cost Estimate Sheet

Proposal Title: Emerald Necklace

Project Title: C. Peck Road/Water Conservation Park to

	Budget Category	Non-state Share (Funding Match)
a	Direct Project Administration Costs	
b	Land Purchase/Easement	
c	Planning/Design/Engineering/Environmental Documentat	\$ 6,147
d	Construction/Implementation	\$ 124,051
	<u>Greening and Landscaping</u>	
	<i>Gateway</i>	
	<i>ALTA Survey</i>	
	<i>Soil Testing</i>	
	<i>Site Demolition and Rough Grading</i>	
	<i>Imported Fill</i>	
	<i>Trail Lighting</i>	
	<i>Final Grading</i>	
	<i>Drip Irrigation</i>	
	<i>Trees</i>	
	<i>Shrubs</i>	
	<i>Site Amenities (benches, rash cans, picnic tables)</i>	
	<i>10 Interpretive Signs</i>	
	<i>DG Paths</i>	
	<i>Boulders Masonry Features</i>	
	<u>BMP</u>	
	<i>BMP Swale</i>	
	<i>BMP Water Storage/Drainage</i>	
e	Environmental Compliance/Mitigation/Enhancement	
f	Project Summary [Sum a through e for each column]	
g	Construction Administration	
h	Other	
	<i>Maintenance during Establishment Period</i>	
	<i>Permitting</i>	
i	Construction/Implementation Contingency	
<b>j</b>	<b>Grant Total [Sum f through i for each column]</b>	<b>\$ 130,198</b>
	Source of funds for Non-State Share (Funding Match)	

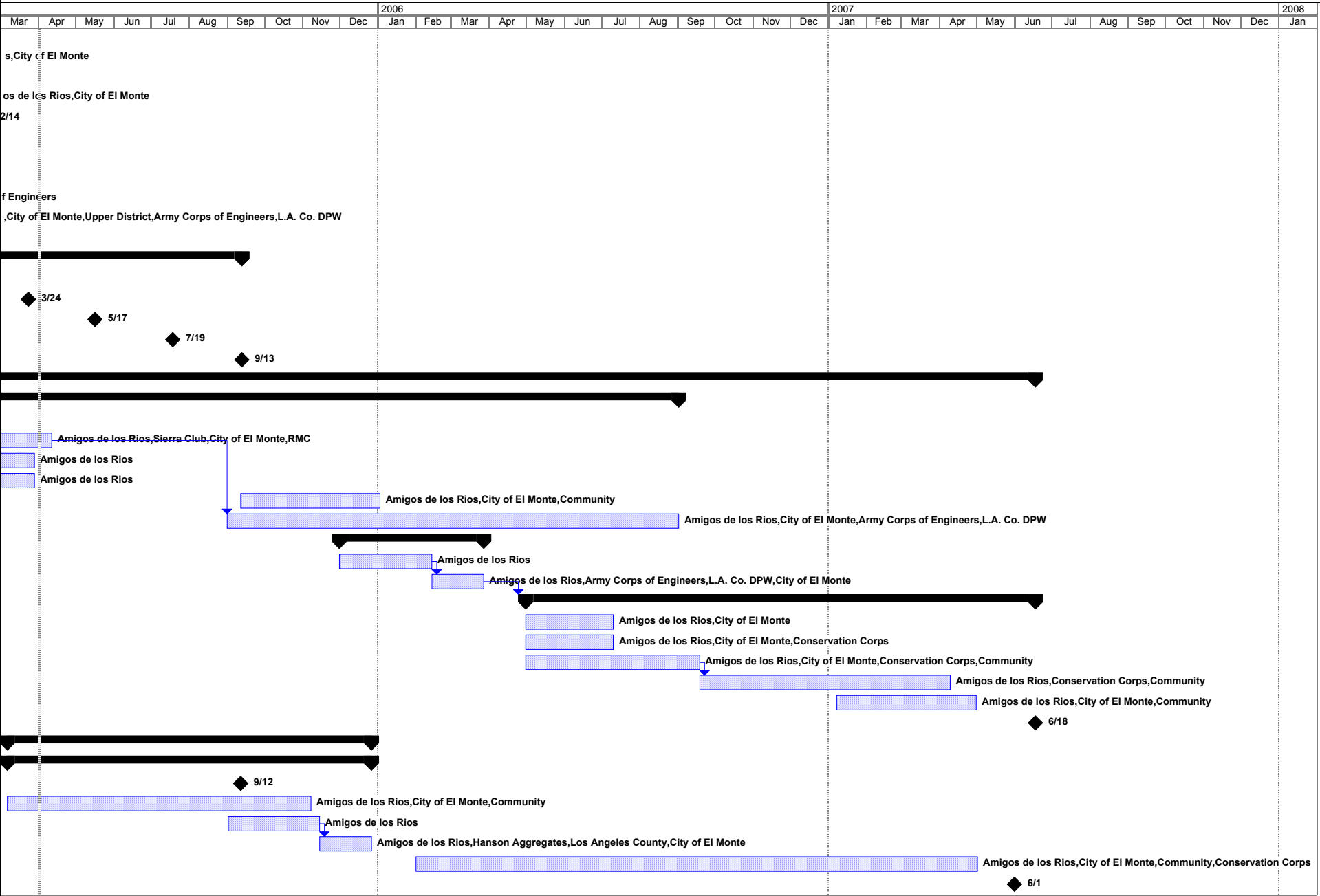
**San Gabriel River**

<b>State Share (Grant Funding)</b>	<b>Total</b>
\$ 33,527	\$ 33,527
\$ 55,320	\$ 61,467
<b>\$ 993,528</b>	<b>\$ 1,117,579</b>
\$ 54,000	\$ 54,000
\$ 10,000	\$ 10,000
\$ 500	\$ 500
\$ 30,000	\$ 30,000
\$ 10,000	\$ 10,000
\$ 45,000	\$ 45,000
\$ 20,000	\$ 20,000
\$ 94,500	\$ 94,500
\$ 88,107	\$ 88,107
\$ 46,990	\$ 46,990
\$ 44,000	\$ 44,000
\$ 30,000	\$ 30,000
\$ 396,482	\$ 396,482
\$ 60,000	\$ 60,000
\$ 153,000	\$ 153,000
\$ 35,000	\$ 35,000
\$ 1,082,375	\$ 1,212,573
\$ 48,567	\$ 33,527
\$ 80,945	\$ 55,879
\$ 6,000	\$ 10,000
<b>\$ 1,217,887</b>	<b>\$ 1,311,979</b>





Emerald Necklace Schedule - Segment C



Project: Emerald Necklace Schedule-S  
Date: Fri 4/1/05

Task Progress Summary External Tasks Deadline   
Split Milestone Project Summary External Milestone

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
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**Lead Agency Information**

Agency Name: Amigos de los Ríos /City of El Monte	
Address: Amigos de los Ríos: 1001 Malcolm Avenue, Los Angeles, CA 90024 City of El Monte: 3130 Tyler Avenue, El Monte, CA 91731-3293	
Contact Name: Amigos de los Ríos: Claire Robinson City of El Monte: Tom Hatch	
Telephone: Amigos de los Ríos: (310) 470-3258 City of El Monte: (626) 580-2205	E-Mail: <a href="mailto:claire@amigosdelosrios.org">claire@amigosdelosrios.org</a> <a href="mailto:thatch@ci.el-monte.ca.us">thatch@ci.el-monte.ca.us</a>
Fax: Amigos de los Ríos: (310) 441-9028 City of El Monte: (626) 452-0458	Web Site: <a href="http://www.amigosdelosrios.org">www.amigosdelosrios.org</a> <a href="http://www.ci.el-monte.ca.us">www.ci.el-monte.ca.us</a>

**Summary of Proposed Project Information**

Project Title: <b>Emerald Necklace – SEGMENT D: San Gabriel River to Walnut Creek</b>	
Proposed Start Date: November 2003 (sic)	Proposed Completion Date: January 2007
Proposed CEQA Completion Date: August 2005	
Location (Long. & Lat.): 34°01.105'N 118°05.374'W 34°06.334'N 117°59.606'W	Sub Watershed Río Hondo and San Gabriel River
<p><b>Project Description:</b>  <b>Emerald Necklace Phase 1, Segment D: San Gabriel River to Walnut Creek:</b> The project involves landscaping, restoring and beautifying 2.7 miles of Army Corp of Engineer and LA County Flood Control District right of way along the San Gabriel River as it passes through El Monte and Baldwin Park. This greening area is 8 acres in total and will include a multi benefit trail including stabilized DG path, lighting, gateways, interpretive signage, bioswale and other amenities.</p> <p><i><b>This segment is a construction ready piece of the Emerald Necklace which is a larger regional vision for a 17-mile interconnected network of multi-beneficial trails, parks and greenways touching 12 cities, parts of unincorporated Los Angeles and serving nearly one half million residents along the Río Hondo and San Gabriel Rivers; unifying more than 1,500 acres of parks, open spaces and habitat corridors while re-connecting the historically linked Río Hondo to the San Gabriel River.</b></i></p> <p><b>Primary Objectives Addressed by Emerald Necklace, Phase 1, Segment A Alhambra Wash to Eaton Wash Project:</b></p> <ul style="list-style-type: none"> <li>● <b>Recreation</b> – The project will provide much needed passive recreation opportunities for disadvantaged communities</li> <li>● <b>Water Conservation/Water Quality Protection</b> – The project will use native landscaping which does not require fertilization and consumes 1/8 the water of conventional landscapes. This segment of Greenbelt will be watered with recycled water.</li> <li>● <b>Habitat Restoration.</b> – The plant palette has been developed based on a biological assessment of the natural area of the Rio Hondo such that this greening effort will</li> </ul>	

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create habitat to support native fauna.

*The Emerald Necklace will provide a 1,500-2,000 acre buffer for **water conservation** and **water quality protection** that will greatly enhance the region's water reliability. The greenbelt of inter-connected projects will **improve water quality** by separating potable and recycled water supply; **installing low water use irrigation systems**; using only drought resistant native plants, and **capturing storm water for bioremediation and infiltration**. The Emerald Necklace will **educate** regional residents on the value of water as a precious resource. The project brings **water conservation and water quality protection** to the region, and will **provide recreational opportunities for disadvantaged communities** suffering from the effects of urban density, environmental pollution, obesity, asthma, Type II diabetes and hypertension.*

**Water Management Strategies Addressed:** (Check all that Apply)

<input checked="" type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input checked="" type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input checked="" type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Hanson Quarry Trail/San Gabriel River to Walnut Creek  
Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$ 83,051		<input type="checkbox"/> In Kind 10% City of El Monte \$ 8,305
Construction & Materials		<u><b>Greening/Landscaping</b></u> <u>Gateway</u> \$54,000 <u>ALTA Survey</u> \$15,000 <u>Soil Testing</u> \$ 750 <u>Site Demolition and Rough Grading</u> \$ 30,000 <u>Imported Fill</u> \$10,000	<input type="checkbox"/> Cash 10% City of El Monte \$ 160,061

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		<u>Trail Lighting</u> \$45,000 <u>Final Grading</u> \$20,000 <u>Drip Irrigation</u> \$ 121,500 <u>Trees</u> \$ 141,673 <u>Shrubs</u> \$ 75,559 <u>Site Amenities</u> <u>(Benches, trash cans,</u> <u>picnic tables)</u> \$ 66,000 <u>15 Interpretive Signs</u> \$45,000 <u>DG Paths</u> \$ 637,529 <u>Boulders Masonry</u> <u>Features</u> \$ 60,000  <u><b>BMP</b></u> <u>BMP Swale</u> \$ 153,000 <u>BMP Water</u> <u>Storage/Drainage</u> \$ 35,000  <b>\$ 1,600,611</b>	
<b>TOTAL</b>  Construction Contingency/ Escalation			
Other (Describe)	<u>Permitting</u> \$ 10,000	<u>Maintenance /</u> <u>Monitoring during</u> <u>Construction</u> \$75,501	<input type="checkbox"/> Other Grants \$ 25,000 for conceptual planning
<b>Totals</b>	<b>\$ 93,051</b>	<b>\$ 1,676,112</b>	<b>\$ 193,366</b>

Estimated Total Budget (Request & Match):           \$ 1,769,163  
Estimated Annual O & M Budget:                         \$   35,000

**1. How does your project develop or conserve local water resources?**

This segment of the Emerald Necklace project develops and conserves local water resources by separating potable from recycled water with a new infrastructure that will result in reduced water consumption. In addition Installation of low water use irrigation infrastructure will increase conservation. The interpretive signage along the trail will provide an environmental

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education/watershed perspective for local trail users and regional residents; with wide area conservation response expected over time. Groundwater will be recharged, infiltration and harvesting will add to conservation measures. Native vegetation will require less water. Institution of storm water best management practices throughout this segment of the Emerald Necklace will also conserve water.

**2. How does this project address water reliability?**

Storm water infiltration, cleansing and preservation of storm water and urban runoff will add a new resource to this segment of the Emerald Necklace. Watershed educational opportunities will inspire conservation of potable water for local communities and throughout the 12-city and extended area. Reduction of water demand will reduce the need to import water, increasing water reliability over a wide area and for the foreseeable future, given the expected growth of the region. Coordinated cooperation of agencies will eliminate redundancies as a broad coalition attends to the region. The green belt connects to an outdoor classroom at Durfee Thompson School, which once built will be an additional source of information on Watershed Health.

**3. How does your project protect, improve or enhance water quality?**

Native planting will reduce use of fertilizers, having a positive effect on the health of the channel and habitat. Educational aspects will increase awareness of the relationship between storm drains and water quality. Incremental water quality benefits will be achieved by addressing TMDLs through bioremediation and phytoremediation provided by greenbelt along the Emerald Necklace and adjacent "jewel" areas. Water quality will be improved by use of best management practices for storm water/NPS, and treating first flush pollutants before they enter the channel. Over time, given the benefits of water education, improved channels and removal of toxins; overall enhanced water quality will be significant and lasting.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

This segment of the Emerald Necklace project is a major greening transformation; bringing native plant and drought-tolerant landscaping with locally propagated plants of high habitat value. Planting of native trees and shrubs in a highly urbanized area will create valuable green space. Residents of a wide area will be encouraged to remove grass and other exotics of no habitat value. The project promotes appreciation for the watershed and water resources; through water conservation, water quality protection, use of reclaimed water infrastructure, and storm water capture and treatment. Flood management will be enhanced by the reduction of flow reaching the channel. Enhanced groundwater management as the greenbelt provides opportunities for water infiltration. The creation of this segment of the multi-benefit buffer zone around the San Gabriel River Channel will help protect water resources for generations to come. Pollution will be controlled through education on best management practices for storm water and NPS pollution. There will be a dramatic increase in storm water uptake of soil, by adding acres of mulch to the greenbelt. The project intercepts storm water and helps remove pollutant loads before they reach the flood maintenance channel.

**5. What is the status of your project readiness? (check as appropriate)**

Item	Complete	In process	Not initiated
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Per segments according to phases	(Specify Date)	(Specify Est. Comp. Date)	
Conceptual Plans	<input checked="" type="checkbox"/> 11/03	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input checked="" type="checkbox"/> 08/04	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/> 08/05	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**6. Identify the regional or strategic planning document that identifies this project.**

- Río Hondo Sub Watershed Plan
- Upper San Gabriel River Watershed Management Plan - TBD

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The city of El Monte is committed to overseeing the development and maintaining this project. The Los Angeles County Department of Public Works and the ACE are committed to this greening effort by review of our plans and initiation of necessary agreements for maintenance (between the City of El Monte and ACE).

This segment of the Emerald Necklace is a critical part of the regional recreational vision being promoted by the emerging Emerald Necklace coalition. This coalition has coalesced from a desire to partner cities and agencies to create a regional, sustainable network of multi-benefit projects.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

- This segment of the Emerald Necklace will to preserve and enhance (restore) 8 acres of land in a series of urban habitat islands in the San Gabriel Valley. The fact that there are so few natural or semi-natural habitat areas left in the region makes it all the more important that remaining areas be protected in perpetuity. Due to their size, Whittier Narrows, Peck Park, and Duck Farm, in particular, are very important habitats. Any fragmentation of the area would be a huge loss. Buffering any habitat area from further urban encroachment should be a priority. Bigger is always better in the case of habitat. When you cannot have a big area, a series of smaller, connected areas is the best alternative.
- Several species of special management significance will benefit from increased habitat protection and connectivity, and from restoration of degraded habitats throughout the Emerald Necklace project. Birds, particularly the Bell's Vireo will directly benefit, as well as the willow flycatcher, but this is less certain given the specific ecology of the species. Invertebrates, particularly insects, will definitely benefit from the improved habitat linkages. No species will be adversely affected.

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- Structural habitat complexity of an area is sometimes more important than species composition, i.e., an older, tall non-native tree often has more importance than a sapling native species that will take years to reach the height of the non-native that was removed. Rather than total and arbitrary replanting of native species without regard for how non-native vegetation benefits the existing wildlife, there will be a carefully considered phasing-in of native vegetation.

**9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

Qualitatively, we will continue our community outreach to ensure that the recreation opportunities provided are well received and enjoyed. Quantitatively, we will survey community members using the greenbelt, and record their responses to the amenities. Amigos de los Rios will monitor the vegetation survival rate, effectiveness of mulch and efficiency of irrigation, etc., using standard practices including mapping, field notes and field photography. In a log that will be posted to the net, we will track our water budgets, as well as tracking the quantity of mulch, exact number of replacement trees and shrubs. will be carefully monitored. Community and youth corps partners will be incorporated with the monitoring/maintenance process.

- Percentage of successful establishment per season
- Target water conservation budget
- Recreational use statistics
- Water Quality Monitoring for green BMP's in some locations
- Return of native fauna
- Storm water at end of swale will be measured where appropriate

**10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

We will use an adaptive management plan to assure success, we will plant in two or more phases; we will measure mortality rate of each season's plantings and the effectiveness of the mulch and irrigation. Based on what we have monitored, we will change our plant palette and mulching routine, change irrigation practices. Base on community survey input, we will change the recreation amenities accordingly. An adaptive management plan will be developed for green BMPs and for landscape. The plan will respond to growing conditions of various sites, and adjust successive plantings to what has shown the best success rate. The plan will assess and monitor effectiveness of green BMPs. We will respond to each variation in all monitored aspects of the plantings, swales and recreational areas with appropriate measures.

**11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**



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Amigos de los Rios staff, as well as the City of El Monte Department of Recreation, will track key aspects of the project and generate regular update reports as mentioned in Question #8. Printed reports will be made to the city and coalition members, as well as web postings.

- Photography of the areas, field notes
- Keep exacting data on what species we planted and percentage of survival or replacement rates to inform our decisions in following planting year
- Keep track of methods such as weed suppression, seeding, sizes of plant, different grounds, patches, etc

We will share data and work closely with all Emerald Necklace cities in the MOU and Department of Community Services of El Monte and all relevant stakeholder agencies (including the County). Via this methodology, BMPs will be shared throughout the region.

**12. Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?**

This segment of the Emerald Necklace provides a direct benefit to disadvantaged communities suffering from a disproportionately high incidence of social, environmental, and health issues ranging from crime to high teen birth and school drop-out rates, unemployment to obesity, asthma, hypertension, and Type II diabetes. In the majority of communities, within the area served by the Necklace, the youth population (under 24) exceeds forty percent of the population. (El Monte has the highest occurrence of obesity in CA., with 36% of all families living below the poverty level.) The Alhambra to Rubio Wash median household income is \$34, 697. The median household income of the entire 12-city regional population is \$36, 500 (U.S. Bureau of Census 2000). Thirty percent of residents are under age 18. Social challenges include high teen birthrate, high rate of high school dropout, unemployment, crime, and disenfranchised communities (63% Hispanic, 21% Asian American). In fragmented low-income communities suffering from a severe lack of open space and an overburdened infrastructure, the project provides access to safe parks and recreational facilities, promoting healthier lifestyles and helping to reverse detrimental health trends. The 10% matching funds requirement will not impose a hardship to this community.

The total regional population that will benefit from the Emerald Necklace is 495,187, of which 190,464 or nearly 40% are disadvantaged. The areas that are directly on, and will most benefit from the Emerald Necklace, have the highest percentage of disadvantaged communities due to historic discriminatory land use and development policies that pushed disadvantaged communities to the blighted areas closest to the urban rivers. The Median Household Income for the City of El Monte is \$32,439 and \$34,656 for the City of South El Monte, the two cities located between the San Gabriel River and Río Hondo that will most benefit from the Necklace.

Further analysis at the neighborhood level confirms the trend in disadvantaged communities living near the urban rivers who will benefit from the Necklace. The neighborhood from Alhambra Wash to Eaton Wash has a household income of \$36,298 the neighborhood from Eaton Wash to Arcadia Wash has a household income of \$37,236, and the community from Walnut Creek to Whittier Narrows has a household income of \$37,455. The presence of a

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U.S. E.P.A. V.O.C. Superfund Site and listing of Peck Lake (which feeds the Río Hondo) and the San Gabriel River on the E.P.A. 303(d) impaired water bodies list, indicate the extreme need of these communities for water quality improvements. Peck Lake, feeding the Río Hondo, is listed on the Los Angeles Regional Quality Control Board TMDL Completed List for trash. The open space and recreational resources for these communities are far below the national average of 10 acres per 1,000 residents at an astonishing 0.3 acres per 1,000 residents.

*The direct benefit of the Emerald Necklace to disadvantaged communities will be enormous. The communities most disadvantaged and affected by lack of open space, impaired water quality and air pollution will be able to walk to the Necklace to take advantage of clean air and new recreational opportunities. In particular, residents of the cities of El Monte and South El Monte in particular will benefit from an additional 100 acres of open space, more than tripling their current recreational opportunities. Cost-effective methods will be provided to disadvantaged communities methods to reduce non-point source pollution to meet their Total Daily Maximum Load requirements. Due to infrastructure updates to meet future demands, fiscal burdens to the disadvantaged communities of the Emerald Necklace, stormwater mitigation, and air and water contamination will be reduced.*

**13. What percentage of the project funding has been secured?**

10% of funding has been secured.

**14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.**

*This section of the Emerald Necklace is a direct response to the public demand for open space, recreational opportunities and natural environments within the communities that will most benefit from them, as determined through the broad-based Emerald Necklace coalition.* Beneficiaries of the project are overwhelmingly low-income; affected by air pollution, brownfields, and an EPA Superfund Site that strongly desires safe and healthy communities. The desire for recreational and natural areas throughout the region became apparent while Amigos de los Ríos was performing outreach activities in several disparate communities. Safe communal spaces where families could enjoy recreation as well as the desire to see and experience natural areas (including trees, flowers and butterflies) emerged as consistent themes among all the communities in which Amigos was working in the last several years. The idea for the Emerald Necklace coalesced while working with stakeholders to seek innovative ways to meet the demand for open and natural spaces in a region deprived of them.

Amigos de los Ríos continues to actively nurture involvement by stakeholders of the Emerald Necklace on both a community and a regional level. On a neighborhood level, we are engaged in several projects that have offered residents an opportunity to express their interests and concerns through surveys, focus groups, and community meetings.

**SEGMENT D:** The Durfee-Thompson Park, planned for the site shared by Durfee and Thompson Elementary Schools, was developed with input from more than 100 local residents, teachers, specialists in orthopedically challenged education, and equestrians and includes an outdoor habitat education classroom and native tree grove.

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Residents living throughout the Emerald Necklace have overwhelmingly requested these types of multi-benefit projects that will beautify their neighborhood with native plants, provide recreational space for families and offer educational opportunities for their children. In the last year, Amigos has met with and solicited input from over 4,000 residents in an effort to nurture stakeholder involvement in the Emerald Necklace in a variety of ways. We have worked with 3 different school districts at 7 school sites, 3 cultural and historical organizations, 20 local community groups, and a coalition of churches serving the region. We were the catalyst for uniting 12 cities and the County of Los Angeles to begin exploring ways to finance, develop, and administer the Emerald Necklace.

#### Emerald Necklace Coalition

The City of El Monte has initiated, with the City Attorney, the draft of an MOU for the development of the Emerald Necklace. The cooperating entities include:

- Los Angeles County Department of Public Works (supportive and engaged)
- Los Angeles County Department of Parks and Recreation (supportive and engaged)
- Numerous politicians, agencies and city council members throughout the 12 city area
- Thousands of involved community members
- The Rio Hondo portion is supported by the L.A. River Landscape Guidelines developed by the County of Los Angeles
- San Gabriel River portion is supported by the San Gabriel River Corridor Master Plan
- Congresswoman Solis, State Senator Romero, State Assembly member Chu, Supervisors Antonovich and Molina, City Council Members from El Monte, South El Monte, Baldwin Park, and other members of the Emerald Necklace Coalition currently building momentum
- Army Corps of Engineers (supportive of multi-benefit approach)
- Tribal Council of the Tongva Gabriellono (planting, environment)

#### Including general support and/or assistance from:

- Boy Scouts of America
- Local neighborhood councils
- Sierra Club
- Los Angeles County Department of Health Services
- Los Angeles Conservation Corps
- San Gabriel Conservation Corps
- California Conservation Corps
- El Monte Historical Society
- La Historia
- San Gabriel Valley Tribune
- El Monte Education Center
- El Monte Chamber of Commerce
- Olive Branches
- UC Cooperative Extension
- Cal Poly Pomona
- El Monte Unified High School District
- Mountain View School District

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As a project that emerged from a demand by stakeholders for open space and recreational opportunities, public involvement will continue to be a critical component of the Emerald Necklace. Each section of the project will be developed with the local community in that area so that the project addresses their needs. We will offer opportunities for involvement of residents through the use of surveys, neighborhood canvassing, focus groups, community meetings, and collaboration with local organizations. The development of each phase of the project will involve community service days, social events on or near the project sites, and community participation in developing interpretive programs and public art components. After the completion of each section, or goal is to have built a network of local residents that will take ownership of their local project and continue to care for it. Regionally, we will continue to facilitate collaboration among public agencies to develop funding and maintenance agreements, cooperative use agreements, funding sources, and further development of the Emerald Necklace.

**15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

Long-term regional watershed management needs include an increasing demand, and possible reductions in available potable water, increasing burdens on an aging flood management system, and continued loss of minimal open space and habitat areas. Water quality challenges, such as the TMDLs and volatile organic compounds contribute to several pollution plumes contaminating groundwater aquifers and have reached such magnitude, that several wells have already been shut down--and some areas have been declared Superfund Sites by the U.S. Environmental Protection Agency. The flood management system, mostly built between the 1930s and 1950s (and in disrepair in parts), bears a burgeoning burden from regional development that will continue to increase runoff into the flood control channels as long as impermeable surfaces are built. The last remaining open and habitat spaces, which are also the last permeable surfaces, are threatened by the ongoing pressures of development in a region with a desperately low open space ratio of 0.5 acres per 1,000 residents. Meanwhile, population is projected to continue growth at a rate of 1 million new residents each year, placing an increasing demand on water, flood management, and habitat/open space resources.

The infrastructure for this segment of the Emerald Necklace will benefit from reclaimed water for developing the greenbelt, thereby decreasing demand for drinking water with an effective separation of recycled and potable water sources. This segment of the Emerald Necklace directly address the long term needs of the watershed by reducing the burden on the flood control system, protecting and maintaining permeable surfaces for groundwater recharge, and expanding open space and habitat resources. Separation of reclaimed from potable water will preserve precious drinking water resources. Use of native planting will protect water quality by diminishing the need for fertilizers and pesticides. Preservation of undeveloped parcels along the San Gabriel River and Río Hondo for parks and trails will preserve these areas as permeable surfaces to reduce impact on flood control channels. Habitat restoration along the Emerald Necklace will increase open space areas as well as increase stormwater capture to decrease the volume of water entering the flood control channels. The new connections it will establish for residential communities and commercial areas will expand the opportunities for recreation and appreciation of habitat areas in the preserved open spaces.

## **INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8) San Gabriel and Lower Los Angeles Rivers Watershed Plan Area Project Identification Form**

The projected regional economic, environmental, and fiscal impacts of this segment of the Emerald Necklace include a significant increase in property values, substantial gains in commercial revenue, establishment of regional wildlife corridors and protection of air and water quality, and a regional infusion of funding for watershed management and open space preservation. Based on case studies of similar open space and beautification projects, retail business in areas adjacent to the Emerald Necklace could increase by as much as thirty percent. As a result of the collective Emerald Necklace enhancements, an increase in property values for the San Gabriel Valley is estimated to be \$1 billion.

By connecting Whittier Narrows Nature Area, Puente and Montebello Hills, Peck Park, and eventually Santa Fe Dam Recreational Area and the San Gabriel Mountains, the Necklace will create a unified wildlife corridor able to provide habitat for native birds, reptiles, insects, and small mammals. Trees and shrubs planted along the Emerald Necklace will prevent an estimated yearly total of 185 acre-feet of water from loading the storm drain system. Carbon dioxide sequestration from plants is projected at 3,300 tons annually, and an additional 100 tons of pollutants (including ozone and particulates) will be absorbed annually, providing a significant improvement to regional air quality. The project is expected to improve fiscal stability for watershed management via cooperative agreements between agencies. This will improve administrative efficiencies, and provide an infusion of funding from diverse sources; including the federal government and private foundations. There will also be a resultant streamlining of maintenance funding and operations.

A diverse group of agencies manage the San Gabriel River and Los Angeles River Watersheds to provide reliable drinking water, flood protection, water quality, habitat, and open space preservation. This group includes the Los Angeles County Department of Public Works, U.S. Army Corps of Engineers, Metropolitan Water District and local water agencies, local governments, and conservation organizations. Drinking water for both watersheds comes (in small part) from runoff in the San Gabriel and Santa Monica Mountains that recharges groundwater aquifers through a system of spreading basins, supplemented by imported water from the State Water Project and Colorado River, all of which are administered by the Watermasters and local water agencies. Using a system of concrete flood control channels and dams, flood protection is jointly administered by the Los Angeles County Department of Public Works and the U.S. Army Corps of Engineers. Water quality is monitored by the Los Angeles County DPW, local water agencies and conservation groups. As early as 1979, the presence of volatile organic compounds found in wells has presented a future challenge. Habitat restoration and open space protection are undertaken by in collaboration of all the agencies working on watershed management, with assistance from local conservation organizations.

Increasing demands made on limited water supply, pollutant loads, flood management, and open space resources *make this a crucial moment for innovative projects like the Emerald Necklace*. The critical impacts that we will see without development of the Necklace may include: total loss of the last remaining open space and habitat parcels, and costly capital improvement projects to update the flood control, groundwater recharge, and water quality management systems costing hundreds of millions or billions of dollars. Continued development will place increasing pressure to develop the remaining open space parcels, which will also reduce their groundwater recharge capacity and runoff capture. Average flood loads will rise, forcing costly mitigation projects like the one recently undertaken in the City of Los Angeles to raise the height of the flood control levees. Groundwater spreading basins will bear an increasing burden for groundwater recharge as natural recharge is reduced and eliminated. Increases in runoff will also increase the total daily loads of significant non-point source pollution, requiring more costly investments in catch basins and artificial filtration devices. The

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Emerald Necklace is a multi-benefit and highly cost effective investment in protecting the resources of our watershed and creating a sustainable future for generations to come.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf)** for further details on the required elements of these documents.

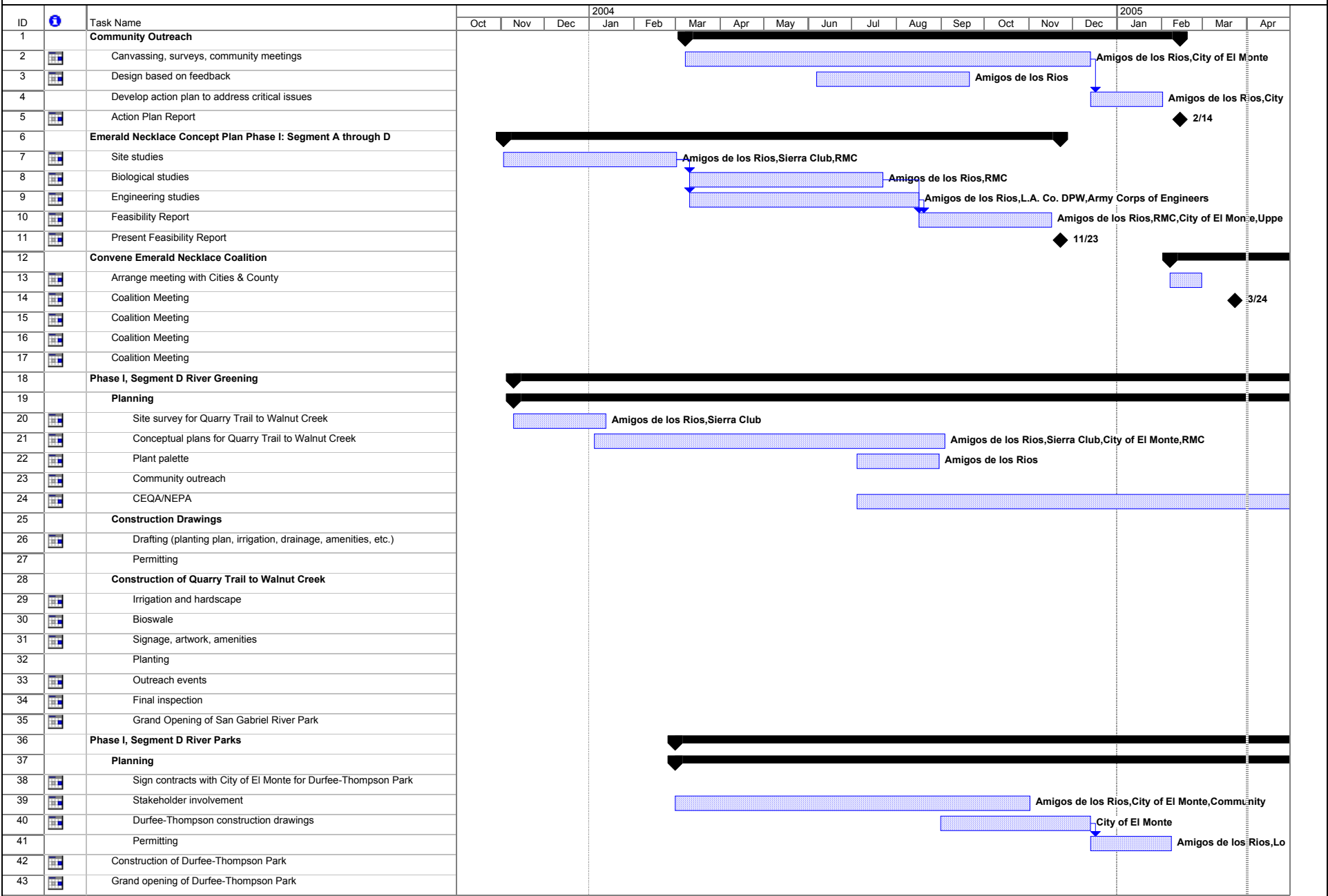
- 1. Project Schedule/Timeline including all major milestones**

**See attached**

- 2. Cost Estimate of major project elements including the identification of major funding sources.**

**See attached**

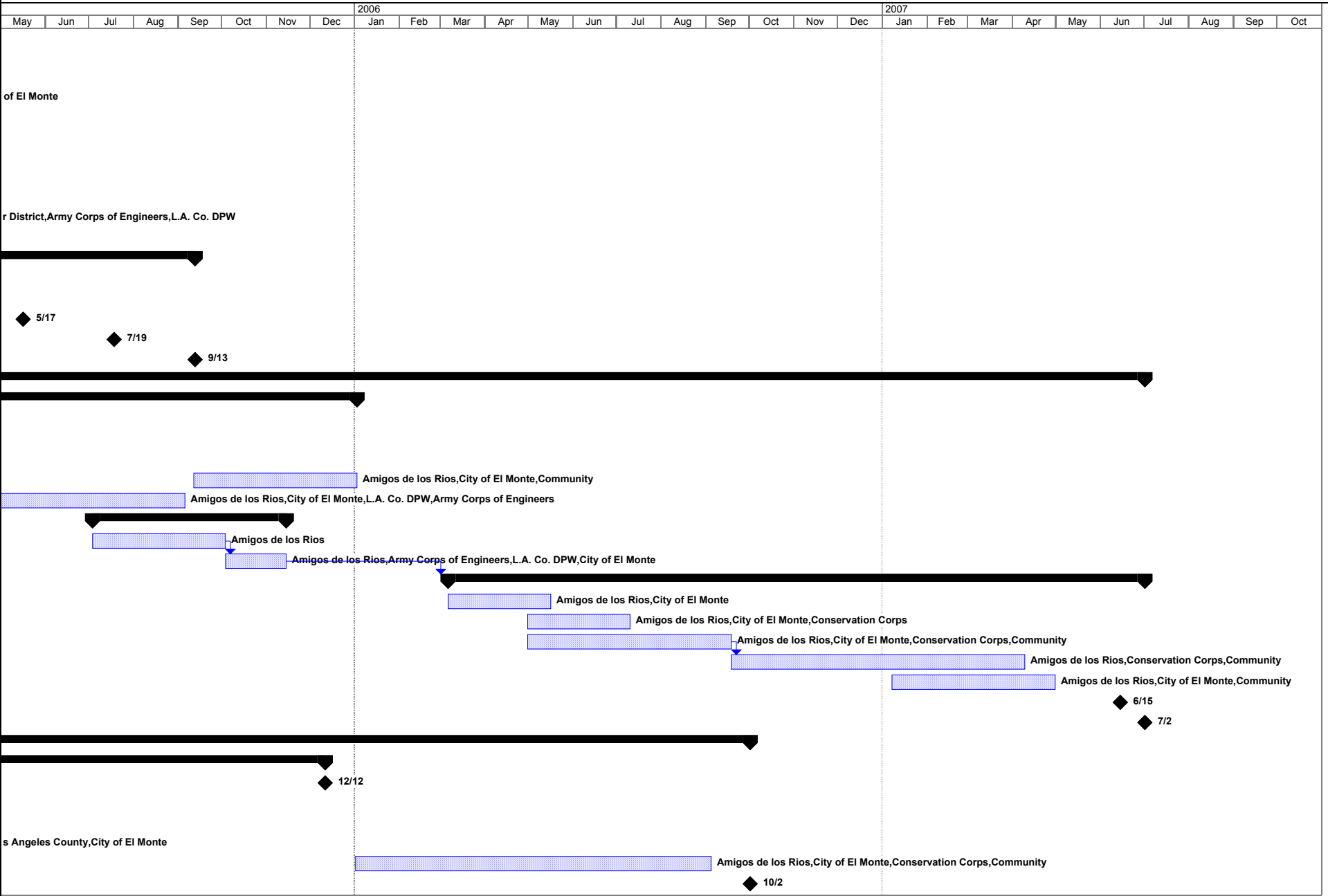
**Emerald Necklace Schedule - Segment D**



Project: Emerald Necklace Schedule- S  
Date: Fri 4/1/05

Task Progress Summary External Tasks Deadline   
Split Milestone Project Summary External Milestone

Emerald Necklace Schedule - Segment D



Project: Emerald Necklace Schedule-S  
Date: Fri 4/1/05

Task		Progress		Summary		External Tasks		Deadline	
Split		Milestone		Project Summary		External Milestone			



## Exhibit C: Cost Estimate Sheet

Proposal Title: Emerald Necklace

Project Title: D. Hanson Quarry Trail/San Gabriel River to Walnut Cre

	Budget Category	Non-state Share (Funding Match)	State Share (Grant Funding)
a	Direct Project Administration Costs		\$ 45,300
b	Land Purchase/Easement		
c	Planning/Design/Engineering/Environmental Documenta	\$ 8,305	\$ 74,746
d	Construction/Implementation	\$ 160,061	<b>\$ 1,349,950</b>
	<u>Greening and Landscaping</u>		
	<i>Gateway</i>		\$ 54,000
	<i>ALTA Survey</i>		\$ 15,000
	<i>Soil Testing</i>		\$ 750
	<i>Site Demolition and Rough Grading</i>		\$ 30,000
	<i>Imported Fill</i>		\$ 10,000
	<i>Trail Lighting</i>		\$ 45,000
	<i>Final Grading</i>		\$ 20,000
	<i>Drip Irrigation</i>		\$ 121,500
	<i>Trees</i>		\$ 141,673
	<i>Shrubs</i>		\$ 75,559
	<i>Site Amenities (benches, rash cans, picnic tables)</i>		\$ 66,000
	<i>15 Interpretive Signs</i>		\$ 45,000
	<i>DG Paths</i>		\$ 637,529
	<i>Boulders Masonry Features</i>		\$ 60,000
	<u>BMP</u>		
	<i>BMP Swale</i>		\$ 153,000
	<i>BMP Water Storage/Drainage</i>		\$ 35,000
e	Environmental Compliance/Mitigation/Enhancement		
f	Project Summary [Sum a through e for each column]		\$ 1,469,996
g	Construction Administration		\$ 45,300
h	Other		
	<i>Maintenance during Establishment Period</i>		\$ 75,501
	<i>Permitting</i>		\$ 10,000
i	Construction/Implementation Contingency		
<b>j</b>	<b>Grant Total [Sum f through i for each column]</b>	<b>\$ 168,366</b>	<b>\$ 1,600,797</b>
	Source of funds for Non-State Share (Funding Match)		

æk

<b>Total</b>	
\$	45,300
\$	83,051
<b>\$</b>	<b>1,510,011</b>
\$	54,000
\$	15,000
\$	750
\$	30,000
\$	10,000
\$	45,000
\$	20,000
\$	121,500
\$	141,673
\$	75,559
\$	66,000
\$	45,000
\$	637,529
\$	60,000
\$	153,000
\$	35,000
\$	1,638,362
\$	45,300
\$	75,501
\$	10,000
<b>\$</b>	<b>1,769,163</b>

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**Lead Agency Information**

<b>Agency Name:</b> LOS ANGELES COUNTY FLOOD CONTROL DISTRICT	
<b>Address:</b> 900 South Fremont Avenue, Alhambra, CA 91803	
<b>Contact Name</b> Vik Bapna	
<b>Telephone:</b> (626) 458-4363	<b>E-Mail:</b> vbapna@ladpw.org
<b>Fax:</b> (626) 457-1526	<b>Web Site:</b> www.ladpw.org

**Summary of Proposed Project Information**

<b>Project Title:</b> Full Capture Trash Removal Devices	
<b>Proposed Start Date:</b> The project concept is complete. Design starts in December 2005	<b>Proposed Completion Date:</b> April 2008
<b>Proposed CEQA Completion Date:</b> Negative declaration by September 2006	
<b>Location:</b> Various locations throughout the Los Angeles River Watershed	<b>Sub Watershed</b> Los Angeles River Watershed
<p><b>Project Description:</b></p> <p>The project consists of installing 11 trash removal devices on the storm drain system catch basins or pipes to meet the full capture criteria established by the Regional Water Quality Control Board in conjunction with the adopted Los Angeles River Trash TMDL. These full capture devices will also help in meeting a portion of future TMDLs to remove other pollutants such as metals and bacteria.</p>	
<p><b>Primary Objectives Addressed by the Project:</b></p> <p>The primary objective of this project is to meet the Trash TMDL requirements adopted by the Regional Water Quality Control Board to reduce the amount of trash discharged into the Los Angeles River and its downstream beaches and harbor in order to improve water quality, enhance aesthetics in the River and improve their beneficial uses. Installation of these trash removal devices will enable the Los Angeles County Flood Control District (District) to capture and retain all particles greater than 5mm before they reach the River, and beaches and harbor from these subwatersheds.</p> <p>Removal of trash from stormwater runoff results in a cleaner environment for the habitat in and adjacent to the Los Angeles River and its tributaries, and downstream beaches.</p>	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input checked="" type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning

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<input type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel			<input checked="" type="checkbox"/> In Kind \$2,360,000
Construction		\$4,400,000	<input type="checkbox"/> Cash \$ _____
Materials			<input checked="" type="checkbox"/> Change orders \$880,000
Other (Describe)			
Totals		\$4,400,000	\$3,240,000

Estimated Total Budget (Request & Match):           \$ 7,640,000  
Estimated Annual O & M Budget:                         \$ 70,000

**1. How does your project develop or conserve local water resources?**

The project does not develop or conserve water resources.

**2. How does this project address water reliability?**

The project does not address water reliability.

**3. How does your project protect, improve or enhance water quality?**

The project improves or enhances water quality by removing its trash and all other particles greater than 5 mm in size. The trash in the water has been identified as a primary pollutant by the Regional Water Quality Control Board.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

Ecosystem Restoration and Environmental and Habitat Protection and Improvement – Preventing the deposition of trash in the Los Angeles River and removing it from tributary storm drains will prevent it from negatively impacting downstream habitat and natural areas. This project will enhance the downstream environment and protect habitat and marine life in the areas downstream of the devices within the Los Angeles River and its tributaries.

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Water Quality Protection and Improvement and NPS Pollution Control - Trash has been identified by the Regional Water Quality Control Board as a primary pollutant impairing the beneficial uses of the Los Angeles River and its beaches. This project will comply with the Los Angeles River Trash TMDL, established to correct that water quality problem, by preventing the trash from going into the River, its tributaries and downstream beaches and Harbor.

**5. What is the status of your project readiness? (check as appropriate)**

<b>Item</b>	<b>Complete</b>	<b>In process</b>	<b>Not initiated</b>
Conceptual Plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6. Identify the plan(s) that include this project.**

This project is not identified in any plan.

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

As part of the compliance with the Trash TMDL adopted by Regional Water Quality Control Board, the District must reduce the amount of trash discharged in the rivers and tributary storm drains. No other commitments are needed from other agencies. To make the project successful, we will coordinate with neighboring cities and residents prior to construction of the project to address any concerns they may have. If necessary, permits will be obtained from incorporated cities to construct, operate, and maintain the project within their jurisdictions.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

This project will not be in an area of special biological significance, however it will provide protection for the areas of special biological significance in the downstream areas of the Los Angeles River by preventing trash from being discharged to those areas.

**9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

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The project success will be measured by compliance monitoring. We have already performed baseline monitoring for trash and developed a compliance monitoring plan for trash TMDL efforts that are under review by the Regional Water Quality Control Board. The results of these monitoring efforts will be reported back to the Board. After project implementation, we will monitor the devices and the trash collection after storm events. This monitoring will continue for the life of the project in compliance with the Trash TMDL.

**10. Is there an adaptive management plan in place to address post project implementation operational variances?**

The Flood Control District will manage and operate these new facilities. An adaptive management process will be used while carrying out those responsibilities to ensure that the implemented project will be operated as efficiently and effectively as possible with regard to the benefits it provides. Through monitoring results, the project treatment systems can be adjusted if necessary, along with maintenance operations guidelines and procedures.

**11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

The trash data will be continuously collected by District maintenance forces, and reported to the Regional Water Quality Control Board. It will also be available to all interested agencies and stakeholders.

**12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?**

There are many communities within the Los Angeles River watershed, especially in the unincorporated County areas, that meet the criteria of a disadvantaged community according to the 2000 census. The project will be located in various unincorporated areas, and provide a direct benefit to the disadvantaged community.

Matching funds will not be provided directly by the community, so it will not pose a hardship to the community itself.

**13. What percentage of the project funding has been secured?**

Forty two percent of the funding has been secured.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

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1. Project Schedule/Timeline including all major milestones and dependencies.
2. Cost Estimate of major project elements including the identification of major funding sources.

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**ADDITIONAL PROJECT QUESTIONS**

<b>Agency Name:</b> Los Angeles County Flood Control District	
<b>Address:</b> 900 South Fremont Avenue Alhambra, CA 91803	
<b>Contact Name:</b> Vik Bapna	
<b>Telephone:</b> (626) 458-4636	<b>E-Mail:</b> vbapna@ladpw.org
<b>Fax:</b> (626) 458-3534	<b>Web Site:</b> www.ladpw.org
<b>Project Title:</b> Trash Full Capture System	

**1. Stakeholder Involvement: Please describe the stakeholder involvement in this project including provisions for on-going participation.**

Installation of trash removal devices that will meet the full capture criteria established by the Regional Water Quality Control Board in conjunction with the adopted Los Angeles River Trash TMDL is being planned by Public Works and other agencies in Los Angeles County. Although, no other commitments are needed from other agencies, Public Works will coordinate with neighboring cities and residents prior to construction of the project to address any concerns they may have, and will obtain any necessary permits from jurisdictions to construct and operate this project within their boundaries.

**2. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

Trash has been identified by the Regional Water Quality Control Board as a primary pollutant impairing the beneficial uses of the Los Angeles River and its beaches and Harbor. This project will comply with the Los Angeles River Trash TMDL, established to rectify the water quality problem, by preventing the trash from going into the River, its tributaries and downstream beaches and Harbor. On a regional basis, the project will contribute to a watershed wide effort of reducing the trash and treating stormwater runoff flows to improve the Los Angeles River water quality.

Preventing the deposition of trash in the Los Angeles River and removing it from tributary storm drains will prevent it from negatively impacting downstream habitat and natural areas. This project will enhance the downstream environment and protect habitat and marine life in the areas downstream of the devices within the Los Angeles River and its tributaries.

Removal of trash from stormwater runoff results in a cleaner environment for the residents and habitat in and adjacent to the Los Angeles River and its tributaries, and downstream beaches and Harbor. These full capture devices can also be a portion of a future treatment train that is capable of removing other pollutants in



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**ADDITIONAL PROJECT QUESTIONS**

addition to trash which is useful for the upcoming TMDLs such as metals and bacteria.

There will be critical impacts if this project is not implemented. The stormwater runoff will continue to convey trash to the River, beaches, and harbors, which will have a negative aesthetic effect and impair the beneficial uses of the River, beaches, and harbor.

**3. Disadvantage Communities: What percentage of your service region is disadvantaged and how does this compare to the total regional population?**

There are many communities within the Los Angeles River watershed, especially in the unincorporated County areas, that meet the criteria of a disadvantaged community according to the U.S. Department of Housing and Urban Development 2000 Census data. The project will be located in various unincorporated areas, and provide a direct benefit to the disadvantaged community.



## EXHIBIT C COST ESTIMATE FORMAT

Complete the following table for each project contained within the proposal and a table showing the estimated costs for the entire proposal.

Cost Estimate Sheet <b>TRASH REMOVAL:</b> <b>Full Capture Trash Removal Project</b>				
Budget Category		Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	<b>\$50,000</b>	<b>\$0</b>	<b>\$50,000</b>
(b)	Land Purchase/Easement	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
(c)	Planning/Design/Engineering/Environmental Documentation	<b>\$1,650,000</b>	<b>\$0</b>	<b>\$1,650,000</b>
(d)	Construction/Implementation	<b>\$0</b>	<b>\$4,400,000</b>	<b>\$4,400,000</b>
(e)	Environmental Compliance/Mitigation/Enhancement	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$1,700,000</b>	<b>\$4,400,000</b>	<b>\$6,100,000</b>
(g)	Construction Administration	<b>\$660,000</b>	<b>\$0</b>	<b>\$660,000</b>
(h)	Other	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
(i)	Construction/Implementation Contingency (20%)	<b>\$880,000</b>	<b>\$0</b>	<b>\$880,000</b>
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$3,240,000</b>	<b>\$4,400,000</b>	<b>\$7,640,000</b>
Source of funds for Non-State Share (Funding Match)		Los Angeles County Flood Control District		

## Budget Category Explanations

- (a) *Direct Project Administration Costs* – Includes: salaries, wages, fringe benefits, office supplies, and equipment needed to support the project, staff travel costs (at or below the rate allowed for unrepresented State employees), and preparation of required quarterly and final reports. Actual costs directly related to the project will be reimbursed.
- (b) *Land Purchase/Easement* – If land acquisition is to be included in the Non-State share, include whether it is a proposed acquisition, or if the land is already owned by an IRWM Plan participant. Prior purchase of land can be included in an applicant's funding match if purchased after November 5, 2002. Land acquisition costs will not be considered a reimbursable item if purchased prior to the effective date of the grant agreement. For land purchased prior to the date of the application include the date of purchase and purchase price of the land. Costs for easements will be handled similarly as for land purchases.
- (c) *Planning/Design/Engineering/Environmental Documentation* – Differentiate costs between consulting services and/or agency/organization staff costs for these efforts. Planning costs include: planning efforts, reconnaissance studies, feasibility studies, and preliminary reports. Design and engineering costs include: conceptual, preliminary and final design efforts, geotechnical reports, hydraulic studies, water quality investigations and efforts, and other engineering types of work. Include the costs of bid preparation and processing here. Environmental documentation costs include all efforts involved in the CEQA or NEPA process up to the point of the Notice of Determination, Finding of no Significant Impact, or Record of Decision.
- (d) *Construction/Implementation* – Includes the summary of labor, materials, equipment purchases and/or rentals. After bids are received these costs will be the actual construction cost awarded to the low bidder. The construction or implementation costs for Pilot Projects should be included here.
- (e) *Environmental Compliance/Mitigation/Enhancement* – Includes those costs required by a CEQA/NEPA document to offset any potential damages caused by the proposal. If these costs are included in the contract awarded for construction or implementation of the proposal, differentiate such costs for purposes of this budget.
- (f) *Project Summary* – The summation of the costs for items (a) through (e) above.
- (g) *Construction Administration* – Includes those costs required to supervise and administer the construction or implementation of the project(s). Differentiate costs between consulting services and agency staff costs to perform this work.
- (h) *Other* – Includes costs for legal services, license fees, permits, any implementation verification costs, and any monitoring and assessment costs required during the construction/implementation of the proposal. Do not include monitoring and assessment costs for efforts required after construction/implementation of the proposal is complete. These costs are considered to be operation and maintenance costs and are not reimbursable.
- (i) *Construction/Implementation Contingency* – Includes any contingency costs for the construction/implementation of the proposal. Specify the percentage used for this contingency cost. For all other contingency costs, i.e. design, land purchase, etc., include those contingencies in the appropriate cost category.

For the Step 2 submittal, detail will be expected for each of the above cost categories explaining how the total cost was derived.

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**Lead Agency Information**

Agency Name: Water Replenishment District of Southern California	
Address: 12621 E. 166 <sup>th</sup> Street, Cerritos CA, 90703	
Contact Name: Jason Weeks	
Telephone: 562.921.5521	E-Mail: <a href="mailto:jweeks@wrd.org">jweeks@wrd.org</a>
Fax: 562.407.1906	Web Site: <a href="http://www.wrd.org">http://www.wrd.org</a>

**Summary of Proposed Project Information**

Project Title: I-105 Dewatering Wells Beneficial Use Project	
Proposed Start Date: March 2006	Proposed Completion Date: September 2008
Proposed CEQA Completion Date: December 2005	
Location (Long. & Lat.):	Sub Watershed: Central Basin
<p>Project Description: The I-105 Dewatering Wells Beneficial Use Project will utilize water that is currently being wasted to the ocean and use it to offset imported water demands at the Dominguez Gap Barrier. The Project consists of 24-inch diameter polyvinyl chloride (PVC) or high-density polyethylene (HDPE) pipe that connects existing extraction wells at the 105 Freeway to the Dominguez Gap Barrier. A pump station is required to overcome friction head losses and develop the required pressure for the barrier well system. Additionally, the District has assumed that a new well will be required to provide water to blend with and augment water produced from Caltrans dewatering wells and the need for an additional study of treatment alternatives.</p>	
<p>Primary Objectives Addressed by the Project: The primary objectives addressed by this project are increased utilization of local water resources and increasing water supply reliability. The water that is currently extracted as part of Caltrans' dewatering operations is currently discharged into the Los Angeles River and lost to the ocean. It is estimated that approximately 4,000 acre-feet per year of imported water from MWD will be offset as a result of this project.</p>	
<b>Water Management Strategies Addressed: (Check all that Apply)</b>	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

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**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants		\$3,600,000	<input type="checkbox"/> In Kind \$ - \$400,000
Construction & Materials		\$18,000,000	<input type="checkbox"/> Cash \$2,000,000
Other (Describe)			<input type="checkbox"/> Other Grants \$ _____
Totals		\$21,600,000	\$2,400,000

Estimated Total Budget (Request & Match): \$24,000,000  
Estimated Annual O & M Budget: \$2,000,000

- How does your project develop or conserve local water resources?  
This project conserves local water resources by injecting water that is currently wasted to the ocean into the Dominguez Gap Barrier. The water is available as a result of Caltrans' ongoing dewatering operation beneath the 105 Freeway in the City of Downey.
- How does this project address water reliability?  
This project increases water reliability to the State by offsetting 4,000 AF/year of imported water demands at the Dominguez Gap barrier with a local water source. In addition, the project improves local water reliability by providing an alternative supply to maintain the barrier's protective function during periods of MWD supply curtailment.
- How does your project protect, improve or enhance water quality?  
This project protects water quality by providing the Dominguez Gap Barrier with a local water source to halt seawater intrusion. Additionally, the quality of the local water being used at the barrier will be sent through the required treatment trains prior to injection.
- How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)  
**Groundwater management:** this project will aid the District in continuing its groundwater management function by providing local water resources at the Dominguez Gap Barrier. The purpose of this barrier is to halt seawater intrusion and to provide replenishment.  
**Imported water:** this project will offset imported water purchase by utilizing approximately 4,000 acre-feet per year of local water resources that are currently wasted to the ocean.
- What is the status of your project readiness? (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/> 8/05	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input checked="" type="checkbox"/> 12/05	<input type="checkbox"/>

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Preliminary Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/> 2/06	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/> 2/06	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

6. Identify the regional or strategic planning document that identifies this project.  
The I-105 Dewatering Wells Beneficial Use Project is included in the Water Replenishment District's Strategic Plan and 5-Year Capital Improvement Plan.
7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.  
In order to put the water delivered from the pipeline to beneficial use, the District will need to work cooperatively with the Los Angeles County Department of Public Works, which owns and operates the wells that comprise the Dominguez Gap Barrier.
8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?  
Not Applicable.
9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.  
The success of the project will be measured in terms of the District's ability to cost effectively reduce imported water purchases by 4,000 acre-feet per year. These benefits are expected to be realized as soon as the project is completed.
10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?  
There are not expected to be post project operational variances since this project is simply utilizing water that is currently wasted to the ocean via the Los Angeles and using it to offset imported water purchases at the Dominguez Gap Barrier.
11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.  
Data for the project will be tracked by the WRD as part of its annual Engineering Survey and Report. This report provides an summary of all groundwater related activities within the Central and West Coast Basins and is readily available on the District's web site.
12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?  
This project does not provide a direct benefit to disadvantaged communities and will not pose a hardship to them.
13. What percentage of the project funding has been secured?

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None of the project funding has been secured, however funds are included in the District's FY04/05 and FY05/06 budgets to continuing moving forward with this project.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

1. Project Schedule/Timeline including all major milestones.
2. Cost Estimate of major project elements including the identification of major funding sources.



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**Lead Agency Information**

Agency Name: Los Angeles & San Gabriel Rivers Watershed Council	
Address: LASGRWC, 700 N. Alameda St., Los Angeles, CA 90012	
Contact Name: Suzanne Dallman	
Telephone: 213-229-9947	E-Mail: Suzanne@lasgrwc.org
Fax: 213-229-9952	Web Site: www.lasgrwc.org

**Summary of Proposed Project Information**

Project Title: Invasive Weed Control in Riparian Habitat of San Gabriel Valley	
Proposed Start Date: Sept. 1, 2005	Proposed Completion: June 30, 2010
Proposed CEQA Completion Date: June 30, 2010	
Location (Long. & Lat.): W 117 deg 55' to 118 deg. 10'; N 34 deg. 2'-12'	Sub Watershed: San Gabriel River and Rio Hondo
<p>Project Description:</p> <p>To restore natural riparian habitat and enhance surface water flow to percolation basins in San Gabriel Valley, proposed project will remove 25 net acres of Arundo at average cost of \$8000/net acre at these locations:</p> <ul style="list-style-type: none"> <li>* Upper Walnut Creek and Bonelli Regional Park -- 1 acre</li> <li>* San Gabriel River channel at Whittier Narrows -- 10 acres</li> <li>* North side of crossover channel by Whittier Narrows Dam, east of Rosemead Blvd. -- 7 acres</li> <li>* Rio Hondo riparian corridor at Whittier Narrows, north of San Gabriel Blvd. -- 7 acres (if similar grant proposal for Arundo clearance and trash removal submitted by Los Angeles Conservation Corps is not funded).</li> </ul> <p>Additionally, to restore natural riparian habitat by selective herbicide applications without biomass removal, proposed project will control other invasive exotic plants -- including castor bean, Ailanthus, passion vine, small fan palms, small eucalyptus, tamarisk, perennial pepperweed, milk thistle, tree tobacco, fountain grass -- at locations listed above plus at Santa Fe Dam Basin, San Gabriel River channel in Azusa, and Eaton Canyon Park.</p>	
<p>Primary Objectives Addressed by the Project:</p> <p>Invasion of exotic weed species in riparian corridors and tributaries.</p>	
<b>Water Management Strategies Addressed: (Check all that Apply)</b>	
<input checked="" type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input checked="" type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment

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<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer
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\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$2K	\$200K	<input type="checkbox"/> In Kind \$ 30K
Construction & Materials	0	0	<input type="checkbox"/> Cash \$ 0
Other (Describe)	0	0	<input type="checkbox"/> Other Grants \$ 0
Totals	\$2K	\$200K	\$30K

Estimated Total Budget (Request & Match): \$ 232,000

Estimated Annual O & M Budget: \$ 0

1. How does your project develop or conserve local water resources?

*By removing dense Arundo infestations that consume 2-3 times more groundwater than native vegetation.*

2. How does this project address water reliability?

*By reducing groundwater consumption by Arundo and exotic trees.*

3. How does your project protect, improve or enhance water quality?

*By removing poisonous castor bean seeds from riparian environment.*

4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)

*Ecosystem restoration and habitat protection derive from preservation of native plant species from displacement by Arundo and exotic trees and vines, and reduction of fire hazard by Arundo clearance; enhancement of recreation and public access derives from native plant preservation and clearance of inaccessible dense Arundo stands.*

5. What is the status of your project readiness? (check as appropriate)

Conceptual Plans: *Completed -- Regional Arundo mapping completed in 2001 (see [www.smslrwma.org](http://www.smslrwma.org)); detailed Arundo mapping of Rio Hondo at Whittier Narrows completed in 2002 (see [www.lasgrwc.org](http://www.lasgrwc.org))*

Land Tenure: *Completed -- All property is owned and/or managed by U.S. Army Corps of Engineers or Los Angeles County Dept. Public Works or Dept. Parks & Recreation*

Preliminary Plans: *Does not apply*

CEQA/NEPA: *Completed -- U.S. Army Corps of Engineers Operations Branch issued Categorical Exclusion in February 2002.*

Permits: *Completed -- California Dept. Fish & Game issued Streambed Alteration Agreements in August 2000 and October 2002 (permit amendment will be needed for upper Walnut Creek).*

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Construction Drawings: *Does not apply*

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	X 2001/02*	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	X see above	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	X 2002*	<input type="checkbox"/>	<input type="checkbox"/>
Permits	X 2002*	<input type="checkbox"/>	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>

6. Identify the regional or strategic planning document that identifies this project.

*None*

7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

*Property owners -- ACOE ecologists, County park managers and County flood control staff -- endorse project and are supportive of contractor operations.*

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?

*Project enhances or restores wildlife habitat of small populations of least Bell's vireo. Project has no detrimental biological impacts.*

9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.

*Project success will be measured by number of wildland acres newly cleared of target weed species.*

10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?

*Negative*

11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.

*Progress reports will be e-mailed to stakeholders.*

12. Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare

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to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?

*Project will provide some temporary employment of "at-risk" young adults with Los Angeles Conservation Corps.*

13. What percentage of the project funding has been secured?

*No funding has been secured for proposed project. However in 2004, total of about \$110,000 was received by L.A. Conservation Corps or contractor Riparian Repairs for 17 acres of Arundo clearance at Whittier Narrows, to mitigate off-site construction.*

14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.

*Past progress reports have been sent to Team Arundo Angeles and L.A. County Weed Management Area.*

15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.

*If project is not implemented, invasive exotic weed populations will continue to expand and displace native riparian vegetation, with results including reduced groundwater supply, increased fire hazard, reduced public access, reduced wildlife habitat.*

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones.

*2005-08: Mow & mulch or foliar spray 6-10 acres/year of Arundo for 3 years, followed by herbicide treatment of Arundo resprouts.*

*2009-10: Continued treatment of Arundo resprouts as needed, until eradicated.*

*2005-10: Herbicide treatment of other targeted exotic trees and weeds, with goal of local eradication or greatly reduced abundance that can be maintained by minimal periodic retreatment.*

2. Cost Estimate of major project elements including the identification of major funding sources.

*Aside from 10 percent retained by LA&SGR Watershed Council for administration, project funds will go to contractors -- mower/mulcher operators and herbicide applicators -- experienced at invasive weed control and to chainsaw crews with L.A. Conservation Corps for removal of Arundo where not amenable to mass-clearance methods.*

*Future funding of Arundo removal to mitigate off-site construction projects is not identified but is expected, similar to the two mitigation projects started at Whittier Narrows in 2004.*

<b>Cost Estimate Sheet</b>			
<b>Project Title: Large Landscape Conservation/ Runoff Reduction Management Program</b>			
Budget Category	Non-State Share (Funding Match)	State Share (Grant Funding)	Total
(a) Direct Project Administration Costs	N/A	N/A	\$ -
(b) Land Purchase/Easement	N/A	N/A	\$ -
(c) Planning/Design/Engineering/Environmental Documentation	N/A	N/A	\$ -
(d) Construction/Implementation		\$ 2,064,000	\$ 2,064,000
(e) Environmental Compliance/Mitigation/Enhancement	N/A	N/A	\$ -
(f) Project Summary (Sum of A - E)	N/A	\$ 2,064,000	\$ 2,064,000
(g) Construction Administration	N/A	N/A	\$ -
(h) Other - MWD Cost Sharing	\$ 2,064,000		\$ 2,064,000
(i) Other - Database Mgmt. & Reporting		\$ 100,000	\$ 100,000
(j) Other - Run-off Reduction Study/Equipment		\$ 192,000	\$ 192,000
(k) Other - 1st Year Irrigation Mgmt. Fee		\$ 516,000	\$ 516,000
(l) Construction/Implementation Contingency	N/A	N/A	\$ -
(m) <b>Grant Total</b>	\$ 2,064,000	\$ 2,872,000	\$ 4,936,000
Source of funds for Non-State Share (Funding Match)			

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**Lead Agency Information**

Agency Name: <b>Central Basin Municipal Water District</b>	
Address: 17140 S. Avalon Blvd., Suite 210, Carson, CA 90746	
Contact Name: Gus Meza, Water Resources Analyst	
Telephone: 310-660-6209	E-Mail: <a href="mailto:gusm@wcbwater.org">gusm@wcbwater.org</a>
Fax: 310-516-1576	Web Site: <a href="http://www.centralbasin.org">www.centralbasin.org</a>

**Summary of Proposed Project Information**

Project Title: Large Landscape Conservation/Runoff Reduction Management Program	
Proposed Start Date: May 2005	Proposed Completion Date: May 2008
Proposed CEQA Completion Date: N/A	
Location (Long. & Lat.): -118.07, 34.00	Sub Watershed: <u>Lower San Gabriel River, Coyote Creek, Los Cerritos, Rio Hondo Channel, Lower LA River</u>

**Project Description:** This project will evaluate and implement a large landscape water management program utilizing centralized weather-based irrigation controllers and systems that link back to the local water and regional agencies regarding end-use water management. The program is designed to allow the local users (parks, schools, cities, etc.) to work with a water management company that utilizes the HydroEarth management system. Participants will be provided with centralized irrigation controllers and management tools to assist them with protecting the local watershed. HydroEarth is an environmentally minded company that provides multi-faceted solutions to conserve water and protect the environment.

Managing end-use water efficiently will reduce imported water needs from Northern California and the Colorado River and will also drastically reduce landscape runoff which contributes to loading the waterways with pollutants.

**Primary Objectives Addressed by the Project:** This project involves developing an accountability for large landscapes and street medians which will account for most of the runoff in the developed area. The strategy is to reduce total water use by 20%-50% and reduce runoff by 70% from the targeted areas. The accountability documentation trail will provide both a guideline and a legal tool in addressing those large landscape areas that do not comply. The project will include large landscapes and other areas that contribute to runoff pollution. The targeted landscape sites will include schools, parks, home owner associations, business parks, facility landscapes and street medians. The targeted aggregate acreage for a site will be 1 acre or greater of irrigated landscape.

**Water Management Strategies Addressed:** (Check all that Apply)

<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning

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<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants			√ In Kind \$113,520
Construction & Materials		\$2,064,000	√ Cash \$2,064,000
Other (Describe) Database Mgmt. & Reporting		\$100,000	<input type="checkbox"/> Other Grants \$_____
Other 1 <sup>st</sup> Year Irrigation Management Fee		\$516,000	
Other Run-off Reduction Study		\$192,000	
<b>Totals</b>		<b>\$2,872,000</b>	<b>\$2,177,520</b>

Estimated Total Budget (Request & Match): \$ 5,049,520  
Estimated Annual O & M Budget: \$ 520,000

1. How does your project develop or conserve local water resources?

This project will conserve local water resources by installing two-way centralized irrigation controllers and by providing water management training and services. The irrigation controllers contain weather sensors that capture the local weather conditions for a specific site. By providing plants and turf the right amount of water at the correct cycle and soak time intervals, the project plans on conserving an estimated 20% to 50% of water use.

2. How does this project address water reliability?

This is two fold. The water management system relies on Evapotranspiration (ET) or weather data. Thus, the volume of water used is constant with a standard deviation. The standard deviation would be the variation in the ET but the water supply would be based on the acreage of landscape under cultivation. Second, the drought situations would only impact the stand alone controller. The volume of water reduced to handle a drought could be shifted to less sensitive plant material which would scientifically save water and the cost of the plant material replacement. The reduction in water demand will reduce the need to import water, thus increasing water reliability.

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3. How does your project protect, improve or enhance water quality?

Previous studies demonstrate a potential of 70% reduction in the volume of runoff by selecting large landscape sites such as parks, playgrounds, and large residential sites (lots over 43,000 sq. ft. or approx. 1 acre). This strategy will slow the total migration of pollutants into the waterways and especially reduce landscape nutrients from entering the waterways.

**Environmental Habitat Protection and Improvement** - Water management systems effect the amount of runoff. Runoff is the principal carrier of pollution. This pollution migration can be reduced by 70%, as proven by previous studies, thus reducing the loading of downstream habitat and wetlands.

4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)

This project incorporates the latest technology and methods to achieve water conservation and runoff reduction. By providing end-use management, water will be applied based on real-time weather conditions and plant needs. Using scientific cycle and soak methods will reduce runoff and foster plants to develop deeper root zones. As part of this project, runoff reduction devices will be installed at several locations to measure the amount of runoff reduction that can be attributed to the project. This project helps meet the overall goals of improving water supply reliability and protecting water quality.

**Recreation and Public Access**- Water management systems increase the efficiency of the landscape management. The public benefits from cost reductions in the water bill and the labor to maintain the controllers. The science of irrigation decreases the amount of fertilizer needed while increasing the availability of parks and playgrounds for children.

**Water Conservation**- The ET method of irrigation has proven its effectiveness as the best management practice. The two-way communication controllers are highly effective tools to garner water conservation practices.

**Water Quality Protection and Improvement**- The previous efforts to develop feasible treatment of runoff in the watershed by Natural Treatment Systems have failed. The principal down fall is that the volume of water requires a large amount of land. The expense of the land in California limits this option. If water management reduces the volume of runoff by up to 70%, small wetlands can be developed in a cost effective manner. Runoff reduction evaluations through this project will help improve the water quality of the local waterways.

**Imported Water**-Weather-based irrigation controllers along with proper landscape management have been found to conserve between 20% to 50% of outdoor water use. The water savings from this project will translate directly into reduced purchased water from the Metropolitan Water District, who imports water from Northern California and the Colorado River.



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**NPS Pollution Control-** In essence, NPS means multiple sites contribute to the pollution. Each turf field and steep slope groundcover contributes a small share over a long period. The water management system monitors those turf field and steep slope areas. The monitoring controls the water flow every day of every month to reduce the damage of NPS pollution by prevention and improvement.

**Watershed Planning-** The water management system can document the usage through electronic files that are downloaded into servers. The data can establish coordination between the private and public sector. The coordinated data can help the IRWM groups to work to a common goal based on science and fact.

5. What is the status of your project readiness? (check as appropriate)

The proposed project is ready for implementation. HydroEarth is already in the process of installing irrigation controllers in smaller pilot projects within the service area. Prior case studies show significant savings. Funding is needed to launch this project on a larger scale in order to make a significant impact.

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/> March 2005	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input checked="" type="checkbox"/> March 2005	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>
Permits	<input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/> N/A	<input type="checkbox"/>	<input type="checkbox"/>

NEPA and CEQA are not required for the implementation of this project, therefore no permits are necessary.

6. Identify the regional or strategic planning document that identifies this project.

The project is identified by Central Basin as part of the 2005 Urban Water Management Plan for the basin. This grant would further the water district's efforts by providing money to the users to conserve in the manner that the education program and other district programs prescribe for effective water conservation in a healthy landscape environment. Several of the water purveyors, including Cental Basin, are also signatories to the Memorandum of Understanding "MOU" of the California Urban Water Conservation Council (CUWCC). As a signatory to the MOU, Central Basin, along with various water providers throughout the watershed, are committed to implementing the 14 Best Management Practices (BMPs). BMP #5 deals with conserving water in large landscapes.

7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

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Agencies recognize that weather-based irrigation controllers with centrally managed capabilities help to conserve water and reduce runoff. Central Basin held a Proposition 50 Workshop where many of the cities and water purveyors expressed interest in partnering on regional projects. Also, many cities and water providers do not have the resources to develop and apply for landscape programs and have expressed interest in being part of a larger regional program. Central Basin will contact and partner with its purveyors to identify suitable sites prior to installing devices within their cities. Environmental groups that are involved within the watersheds that this project affects will be informed on the pollution reduction by the irrigation controllers.

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?

This project is not in an area of biological significance; however the project is designed to manage irrigation systems of all types including those areas that need wildlife rehabilitation. In this case, we would focus on reducing runoff from the targeted landscape areas to see how much of the flow can be minimized. Our objective is to drastically reduce the flows.

9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.

The project success will be measured using several tools. The system software records water use information every minute on every controller. The water meters are also used to measure flow rates and are compared to the water flows at each valve. In the runoff case, we measured the exact amount of water that can be delivered before saturation, thus reducing the amount of runoff. However, we will also recommend runoff measurement devices in the appropriate drainage location to measure the runoff reduction. The types of constituents that will be measured include nutrient loads and fecal matter which contribute to bacterial growth.

On its staff, Hydroearth has a leading-edge runoff expert who will set up the runoff measurement equipment. A prior study was performed by Ted Hunt of HydroEarth, for the Environmental Protection Agency, the Municipal Water District of Orange County, and Irvine Ranch Water District. This residential runoff reduction study became the bench mark for the weather-based, or ET controller programs, in Southern California.

10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?

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The Management process is already in place with the HydroEarth Utility Management program. The system is set up to manage the irrigation system utilizing an automatic scheduling engine that utilizes all 19 irrigation association best management practices and both runoff equations. Currently, the system has 75 different reports that are already written and custom programs can be written for specific design purposes. The mission of the Utility Management Model is to allow the utility to send commands (emergency, peaking and drought), as well as obtain total water use data, and runoff data as needed. HydroEarth is designed to manage the controllers at a minimal cost. It is also designed to allow the landscape customer to manage their landscapes using ET or weather data. The irrigation controllers use both historical and real-time weather data. Each controller comes with a localized weather sensor which updates the watering schedules.

11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.

The information is stored and recorded into Microsoft Access which compiles the information on a minute-by-minute basis. The information will be compiled into monthly reports and these monthly reports will be made on a macro level for the entire region and on a micro level (customer). Upon proper approvals, the information can also be placed on a website for other agencies to review. The conditions of the program will require agencies to provide Central Basin and the funding partners with access to customer and water usage data. Central Basin will provide water usage and runoff reduction reports to the California Department of Water Resources, the State Water Resources Control Board and other stakeholders.

12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?

There are 20 cities located in Central Basin that have an annual household income below \$38,000; therefore this project does provide a direct benefit to those cities. Also, Central Basin will acquire cost-sharing from the Metropolitan Water District (MWD) for either \$500 per acre or up to 50% of the cost of the irrigation controllers. This cost sharing will assist the disadvantaged communities in participating in the program.

13. What percentage of the project funding has been secured?

Central Basin has an agreement with MWD to receive \$500 per acre or up to 50% of the cost of the irrigation controllers, to be determined per project site.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_Publi](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_Publi)



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HydroEarth Company will contribute an in-kind match for the following tasks: 1) assist participants with site selection criteria; 2) train participants on management solutions; 3) management of system installation; and 4) assist with report development for the Project.

**Proposition 50 Grant Request**

The total request from the State is \$2,872,000.

<b>Deliverable</b>	<b>Cost</b>
<b>Controller Cost</b> (Includes installation & auditing) 1,720 controllers x \$2,400 per controller = \$4,128,000	\$4,128,000
<b>MWD Matching Funding</b> 50% MWD Cost Sharing = \$2,064,000	(\$2,064,000)
<b>Database Management &amp; Reporting</b> \$100,000	\$100,000
<b>Central Basin In-Kind</b>	(\$113,520)
<b>O&amp;M Costs</b> \$300 per controller x 1,720 controllers	(\$520,000)
<b>1<sup>st</sup> Year Irrigation Management Fee</b> \$300 per year x 1,720 controllers	\$516,000
<b>Run-off Reduction Study</b> Equipment and Labor \$8,000 per site x 24 sites	\$192,000
<b>Total State Request (Excluding MWD Matching Fund, Central Basin In-Kind and O&amp;M )</b>	<b>\$2,872,000</b>

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**Lead Agency Information**

<b>Agency Name:</b> Los Angeles County Flood Control District	
<b>Address:</b> 900 South Fremont, Alhambra, CA 91803	
<b>Contact Name:</b> Vik Bapna	
<b>Telephone:</b> (626) 458-4363	<b>E-Mail:</b> <a href="mailto:Vbapna@ladpw.org">Vbapna@ladpw.org</a>
<b>Fax:</b> (626) 457-1526	<b>Web Site:</b> <a href="http://www.ladpw.org">www.ladpw.org</a>

**Summary of Proposed Project Information**

<b>Project Title:</b> Lower Los Angeles River Low Flow Diversions Project	
<b>Proposed Start Date:</b> Project Concept is already in progress	<b>Proposed Completion Date:</b> January 2010
<b>Proposed CEQA</b> Completion Date: December 2006, Categorically Exempt	
<b>Location:</b> In the unincorporated area of the Los Angeles River Watershed	<b>Sub Watershed:</b> Los Angeles River
<b>Project Description:</b> The project consists of constructing 3 storm drain low flow diversion systems to divert dry weather low flows to the sanitary sewer system to prevent it from entering Los Angeles River System. The Los Angeles River is listed in the 303(d) list of impaired waterbodies for bacteria and it is currently on schedule to have a TMDL established for bacterial indicators. By diverting the dry weather low flows into the sanitary sewer system for treatment, the project will improve the water quality and the beneficial uses of the Los Angeles River.	
<b>Primary Objectives Addressed by the Project:</b>  The primary objectives addressed by the project are Water Quality Protection and Improvement and Non-Point Source Pollution Control. With construction of this project, the Los Angeles County Flood Control District (District) will reduce dry weather bacterial indicator exceedances in the Los Angeles River by preventing polluted dry weather runoff from discharging into the Los Angeles River. Implementing this project will improve water quality and help to reduce bacteria exceedances at the local beaches.	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and	<input type="checkbox"/> Water and wastewater treatment

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Improvement*	
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel	----		<input checked="" type="checkbox"/> In Kind \$ 1,130,000
Construction	----	\$1,850,000 (Contract)	<input type="checkbox"/> Cash \$ _____
Materials	----	----	<input type="checkbox"/> Other Grants \$ _____
Other (Describe)	----	----	
Totals	----	\$1,850,000	\$1,130,000

Estimated Total Budget (Request & Match):           \$ 2,980,000  
 Estimated Annual O & M Budget:                         \$ 300,000

**1. How does your project develop or conserve local water resources?**

The project indirectly conserves local water resources. Through urbanization, there is continuous dry weather flow that is tributary to the Los Angeles River. This project will divert these flows to the sanitary sewer for water quality treatment and consequently provide an opportunity to conserve it as a local water resource for reuse or infiltration as opposed to wasting it to the ocean.

**2. How does this project address water reliability?**

The project indirectly addresses water reliability by providing a continuous source of dry weather flow tributary to the Los Angeles River for other potential uses. These flows occur due to overwatering of lawns, residents washing their cars in the driveways. The treated water can then be reused, among other uses, to replenish the groundwater.

**3. How does your project protect, improve or enhance water quality?**

The Los Angeles River is listed in the 303(d) list of impaired waterbodies for bacterial indicators and is currently on schedule to have a TMDL established for bacterial indicators. Constructing low flow diversion systems will divert the dry weather flows to the the Los Angeles County Sanitation District (LACSD)sewage treatment facility for water quality treatment in order to prevent dry weather bacteria indicator existing in the low flows from entering Los Angeles River and improve the overall water quality in the area.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

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Non-Point Source (NPS) Pollution Control is accomplished by diverting dry weather low flows from NPS stormdrain systems. The Water Quality Protection and Improvement and NPS Pollution Control water management strategies are met by constructing a storm drain low flow diversion to the sanitary sewer system for treatment.

**5. What is the status of your project readiness? (check as appropriate)**

Item	Complete	In process	Not initiated
Conceptual Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6. Identify the plan(s) that include this project.**

The project is identified in the "Dry Weather Discharge Treatment Feasibility Study" prepared by the Los Angeles County Department of Public Works on behalf of the Municipal Stormwater Permittees and the County Sanitation Districts. This report was created to evaluate the impact of low flow diversions on the capacity of the wastewater treatment plants.

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

To implement the projects we must work with the LACSD sewage treatment plant on permits and approvals for them to accept the low flows for treatment. No other commitments are needed from other agencies. To make the project successful, we will coordinate with LACSD, neighboring cities and residents prior to construction to address any concerns they may have. If necessary, permits will be obtained from incorporated cities to construct, operate, and maintain the project within their jurisdictions.

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

This project will not be in an area of special biological significance; however, the project will provide protection for the areas of special biological significance in the downstream areas of the Los Angeles River by preventing bacteria from reaching those areas. This project will not have any detrimental biological impacts.



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- 9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

Project success will be measured by water quality monitoring and compliance monitoring along the Los Angeles River and its tributaries where these systems are installed. Currently, the Flood Control District monitors bacteria and other constituent levels and we must develop a compliance monitoring plan for the upcoming Bacteria TMDL for reporting to the Regional Water Quality Control Board. This monitoring will provide an indication as to whether or not the low flow diversions are effectively reducing bacteria indicator levels.

- 10. Is there an adaptive management plan in place to address post project implementation operational variances?**

The Flood Control District has an adaptive management process in place to ensure continued project success. This process which is a key component of the Los Angeles River Bacteria TMDL Implementation, uses an iterative adaptive approach to monitor bacteria levels and evaluate the project's performance. Monitoring is used to determine the effectiveness and modifications are made in order to achieve the specific goals set for this project.

- 11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

Water quality monitoring data will be provided to the Regional Water Quality Control Board as part of the Los Angeles River Monitoring Plan. The data may also be available to the other agencies via hard copies or the Los Angeles County Department of Public Works website.

- 12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?**

None. The project does not provide a direct benefit to disadvantaged communities.

Matching funds will be provided by Flood Control District.

- 13. What percentage of the project funding has been secured?**

Thirty four percent of the funding has been secured.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_Publi](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_Publi)

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[cReviewVersion\\_01-24-05.pdf](#) for further details on the required elements of these documents.

1. Project Schedule/Timeline including all major milestones and dependencies.
2. Cost Estimate of major project elements including the identification of major funding sources.

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**ADDITIONAL PROJECT QUESTIONS**

<b>Agency Name:</b> Los Angeles County Flood Control District	
<b>Address:</b> 900 South Fremont Avenue Alhambra, CA 91803	
<b>Contact Name:</b> Vik Bapna	
<b>Telephone:</b> (626) 458-4636	<b>E-Mail:</b> vbapna@ladpw.org
<b>Fax:</b> (626) 458-3534	<b>Web Site:</b> www.ladpw.org
<b>Project Title:</b> Low Flow Diversion Systems	

**1. Stakeholder Involvement: Please describe the stakeholder involvement in this project including provisions for on-going participation.**

As part of the development of the Bacteria TMDL, all of the necessary agencies have committed to reducing the bacteria in the Los Angeles River, beaches, and harbor. Public Works will work with all jurisdictions to implement these systems. These low flow diversions will be placed in Los Angeles County Flood Control District storm drains. By diverting the dry weather low flows into the sanitary sewer system for treatment, the project will improve water quality in Los Angeles River, beaches, and harbor. The Los Angeles River is listed in the 303(d) list of impaired waterbodies for bacterial indicators.

**2. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

The water quality protection and improvement and Non-Point Source (NPS) Pollution Control strategies are employed by constructing a storm drain low flow diversion to the sanitary sewer system for treatment. NPS Pollution Control is accomplished by diverting low flows from NPS stormdrain systems. This project is to construct stormdrain low flow diversions to the sewer system and other Structural Best Management Practices, to eliminate dry weather low flows from entering Los Angeles River and eventually affecting water quality in the area. By diverting the dry weather low flows into the sanitary sewer system for treatment, the project will improve water quality in the River.

On a regional basis, the project will contribute to a watershed wide effort of reducing the bacteria and treating stormwater runoff flows to improve the Los Angeles River water quality. Regional economic impacts of this project will be distributed throughout Los Angeles River and its tributaries and are related to use by the residents and tourists of the downstream beaches. Environmental enhancements include the improved habitat for birds and mammals resulting from clean water since bacteria concentration has been identified by the Regional Water Quality Control Board as a primary pollutant.

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**ADDITIONAL PROJECT QUESTIONS**

Preventing the deposition of bacteria in the Los Angeles River and removing it from tributary storm drains will prevent it from negatively impacting downstream habitat and natural areas. This project will enhance the downstream environment and protect habitat and marine life in the areas downstream of the devices within the Los Angeles River and its tributaries.

There will be critical impacts if this project is not implemented. The stormwater runoff will continue to convey bacteria to the River, beaches, and harbors, which will have a negative aesthetic effect and impair the beneficial uses of the River, beaches, and harbor.

**3. Disadvantage Communities: What percentage of your service region is disadvantaged and how does this compare to the total regional population?**

There are many communities within the Los Angeles River watershed, especially in the unincorporated County areas, that meet the criteria of a disadvantaged community according to the U.S. Department of Housing and Urban Development 2000 Census data. This project will eliminate dry weather bacterial indicator exceedences and will be located in various unincorporated areas, and provide a direct benefit to the disadvantaged community.



## EXHIBIT C COST ESTIMATE FORMAT

Complete the following table for each project contained within the proposal and a table showing the estimated costs for the entire proposal.

Cost Estimate Sheet <b>LOW FLOW DIVERSION PROGRAM</b> <b>Los Angeles River Low Flow Diversion Program</b>				
Budget Category		Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	<b>\$40,000</b>	<b>\$0</b>	<b>\$40,000</b>
(b)	Land Purchase/Easement	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
(c)	Planning/Design/Engineering/Environmental Documentation	<b>\$400,000</b>	<b>\$0</b>	<b>\$400,000</b>
(d)	Construction/Implementation	<b>\$0</b>	<b>\$1,850,000</b>	<b>\$1,850,000</b>
(e)	Environmental Compliance/Mitigation/Enhancement	<b>\$20,000</b>	<b>\$0</b>	<b>\$20,000</b>
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$460,000</b>	<b>\$1,850,000</b>	<b>\$2,310,000</b>
(g)	Construction Administration	<b>\$300,000</b>	<b>\$0</b>	<b>\$300,000</b>
(h)	Other	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
(i)	Construction/Implementation Contingency (20%)	<b>\$370,000</b>	<b>\$0</b>	<b>\$370,000</b>
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$1,130,000</b>	<b>\$1,850,000</b>	<b>\$2,980,000</b>
Source of funds for Non-State Share (Funding Match)		L.A. County Flood Control District Funds		

## Budget Category Explanations

- (a) *Direct Project Administration Costs* – Includes: salaries, wages, fringe benefits, office supplies, and equipment needed to support the project, staff travel costs (at or below the rate allowed for unrepresented State employees), and preparation of required quarterly and final reports. Actual costs directly related to the project will be reimbursed.
- (b) *Land Purchase/Easement* – If land acquisition is to be included in the Non-State share, include whether it is a proposed acquisition, or if the land is already owned by an IRWM Plan participant. Prior purchase of land can be included in an applicant's funding match if purchased after November 5, 2002. Land acquisition costs will not be considered a reimbursable item if purchased prior to the effective date of the grant agreement. For land purchased prior to the date of the application include the date of purchase and purchase price of the land. Costs for easements will be handled similarly as for land purchases.
- (c) *Planning/Design/Engineering/Environmental Documentation* – Differentiate costs between consulting services and/or agency/organization staff costs for these efforts. Planning costs include: planning efforts, reconnaissance studies, feasibility studies, and preliminary reports. Design and engineering costs include: conceptual, preliminary and final design efforts, geotechnical reports, hydraulic studies, water quality investigations and efforts, and other engineering types of work. Include the costs of bid preparation and processing here. Environmental documentation costs include all efforts involved in the CEQA or NEPA process up to the point of the Notice of Determination, Finding of no Significant Impact, or Record of Decision.
- (d) *Construction/Implementation* – Includes the summary of labor, materials, equipment purchases and/or rentals. After bids are received these costs will be the actual construction cost awarded to the low bidder. The construction or implementation costs for Pilot Projects should be included here.
- (e) *Environmental Compliance/Mitigation/Enhancement* – Includes those costs required by a CEQA/NEPA document to offset any potential damages caused by the proposal. If these costs are included in the contract awarded for construction or implementation of the proposal, differentiate such costs for purposes of this budget.
- (f) *Project Summary* – The summation of the costs for items (a) through (e) above.
- (g) *Construction Administration* – Includes those costs required to supervise and administer the construction or implementation of the project(s). Differentiate costs between consulting services and agency staff costs to perform this work.
- (h) *Other* – Includes costs for legal services, license fees, permits, any implementation verification costs, and any monitoring and assessment costs required during the construction/implementation of the proposal. Do not include monitoring and assessment costs for efforts required after construction/implementation of the proposal is complete. These costs are considered to be operation and maintenance costs and are not reimbursable.
- (i) *Construction/Implementation Contingency* – Includes any contingency costs for the construction/implementation of the proposal. Specify the percentage used for this contingency cost. For all other contingency costs, i.e. design, land purchase, etc., include those contingencies in the appropriate cost category.

For the Step 2 submittal, detail will be expected for each of the above cost categories explaining how the total cost was derived.

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**Lead Agency Information**

Agency Name: Los Angeles County Sanitation Districts	
Address: 1955 Workman Mill Road, Whittier, CA 90601	
Contact Name: Martha Rincon	
Telephone: (562) 699-7411, extension 2830	E-Mail: mrincon@lacsds.org
Fax: (562) 908-4293	Web Site: www.lacsds.org

**Summary of Proposed Project Information**

Project Title: Montebello Forebay Dilution and Attenuation Studies	
Proposed Start Date: October 2004	Proposed Completion Date: March 2007
Proposed CEQA Completion Date: Not applicable	
Location (Long. & Lat.): The Montebello Forebay area is bounded to the north by the Whittier Narrows area, to the south by Firestone Blvd, to the east by the San Gabriel River and to the west by the Rio Hondo.	Sub Watershed: San Gabriel and Rio Hondo Rivers, Montebello Forebay
<p>Project Description: Hydrogeologic studies within the southern Main San Gabriel Basin and Montebello Forebay Groundwater Recharge Project (MFGRP) will be conducted to determine attenuation/dilution factors for various constituents with drinking water standards and the fate and transport of N-Nitrosodimethylamine (NDMA) from the Pomona, San Jose Creek and Whittier Narrows Water Reclamation Plants (WRPs). The MFGRP replenishes the Central Groundwater Basin (Central Basin) in Los Angeles County through the use of local stormwater, imported surface water and recycled water. The Central Basin provides groundwater used for drinking water purposes and provides 40% of the water demand for over 3 million people. At each final effluent discharge location, in downstream surface water (at 250 foot subcatchment intervals), and in underlying groundwater, the range of attenuation, mixing and dilution factors for NDMA will be determined to develop appropriate permit effluent limitations that will be protective of receiving water (surface water and groundwater) beneficial uses. NDMA is a chlorination disinfection byproduct and is generated at the Districts' WRPs. Currently, the only criterion for NDMA is an Action Level (now identified as a notification level) of 10 ng/L, which is applied to drinking water. The final effluent NDMA concentrations from the Districts' WRPs, exceed the 10 ng/L Action Level, however, there is significant NDMA dilution and attenuation that occurs between the final effluent discharge point and transit to the groundwater, which is a drinking water source. Mixing/dilution factors (i.e., water blending only) at the discharge locations, in downstream surface water, and in the underlying groundwater, will be determined and used to translate drinking water based criteria applicable to groundwater for appropriate NPDES permit effluent limitations that will be protective of receiving water beneficial uses. This work includes additional monitoring, well construction and modeling work. The discharge to waters of the US from the Districts' WRPs are regulated via NPDES permits applicable to each facility. Groundwater recharge at the Rio Hondo and San Gabriel River Spreading Grounds, and in the Montebello Forebay area is regulated under Water Reclamation Requirements (Order 91-100).</p>	
<p>Primary Objectives Addressed by the Project: This project will ensure that final effluent limitations included in Districts' NPDES permits for plants located within the MFGRP are protective of receiving water beneficial uses, which include the groundwater recharge beneficial use of the unlined Rio Hondo and San Gabriel Rivers and the municipal water</p>	



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supply use (MUN) of the groundwater. The study will allow the assessment of the fate and transport of NDMA, which is considered a contaminant of concern and is a chlorination disinfection byproduct generated during wastewater treatment. Adverse impacts to existing drinking water supplies as a result of the generation of NDMA at the Districts' WRPs have not been observed. This study will confirm these observations and will assess the fate and transport of NDMA after discharge to determine what final effluent concentration discharged to the environment will be protective of groundwater. NDMA levels in a water supply exceeding the notification level require notification to the Department of Health Services and to the public. If the NDMA levels in the water supply are 20 times the NDMA notification level, then a water purveyor is required to shut down a production well. The results of the monitoring and modeling efforts for this study will be used to identify and/or prevent any potential impacts to groundwater used for drinking water purposes as a result of surface water discharges. The continued discharge and use of recycled water within the Montebello Forebay lessens dependency on imported water, prevents groundwater basin overdraft, complements regional efforts for a more reliable, drought proof water supply and complements efforts for cost-effective, environmentally sound wastewater treatment and beneficial reuse of a valuable resource.

**Water Management Strategies Addressed:** (Check all that Apply)

<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input checked="" type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants			<input type="checkbox"/> In Kind \$ <u>1,200,000</u>
Construction & Materials			<input type="checkbox"/> Cash \$ <u>0</u>
Other (Describe)			<input type="checkbox"/> Other Grants \$ <u>0</u>
Totals		\$1.2 Million	\$1.2 million

Estimated Total Budget (Request & Match): \$ 2.4 Million  
Estimated Annual O & M Budget: \$ NA

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1. How does your project develop or conserve local water resources?

This project will provide information necessary to continue the use of recycled water for groundwater recharge. Currently, approximately 50,000 acre-feet of recycled water (based on a three year average) and up to a maximum of 60,000 acre-feet of recycled water are used for groundwater recharge within the MFGRP. Groundwater recharge is necessary to maintain groundwater levels and augment groundwater used for drinking water purposes. Successful completion of this project and determination of appropriate attenuation factors for surface discharge will ensure that the recycled water continues to be used in the area rather than being wasted to the ocean.

2. How does this project address water reliability?

The use of recycled water for this project provides a reliable source of water that is consistent and drought proof. Currently, recycled water, stormwater and imported surface water are used for groundwater recharge. Stormwater is only available during and immediately after storm events, which are not predictable on a year-to-year basis. Imported surface water is purchased from the Metropolitan Water District and is only available for groundwater recharge after all other potable demands are met. Consequently, the only source of recharge water that can be relied upon, in regards to volume and the timing for which it is available, is recycled water. The results of this project will be used to determine final effluent limitations, which are expected to be included in NPDES permits and Water Reclamation Requirements for continued discharge and use of this water for groundwater recharge.

3. How does your project protect, improve or enhance water quality?

This project ensures that final effluent limitations included in permits for discharge within the unlined Rio Hondo and San Gabriel Rivers are protective of receiving water beneficial uses, including the drinking water use that applies to the underlying groundwater basin. It will provide information that will be used by the Los Angeles Regional Water Quality Control Board (Regional Board) to set enforceable discharge limits in permits. Also, comprehensive surface water, recycled water and groundwater monitoring, in addition to current monitoring, may help identify potential water quality concerns that could be addressed as part of this project.

4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)

In addition to protecting water quality, adding reliability to water supply and conserving local resources, this project will result in the determination of permit limits that are site-specific, protective of all beneficial uses and may avoid unnecessary treatment plant upgrades that may not provide any additional protection to groundwater quality. Groundwater recharge is the largest use of recycled water for this region and this study would provide additional information to support this practice. In addition, groundwater recharge with recycled water is an important groundwater management strategy that prevents basin overdraft and is drought proof. If recycled water were not part of the groundwater management strategy, costly imported water, which may not be available when necessary, would have to be purchased. The results of this study will benefit millions of residents within the region.

5. What is the status of your project readiness? (check as appropriate)

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The following items presented in the table below are not applicable to this project due to the nature of this project since the work consists of monitoring, well construction, modeling with final deliverables being a model and a final report. This project was initiated in October 2004 and will be completed by March 2007. The Kennedy/Jenks/Todd proposal was selected in September 2004. The final work plan, budget and schedule (attached), which describe all the tasks to be conducted and deliverables, were prepared in November 2004. The final Sampling and Analyses Plan and Fieldwork Program Plan were completed in February 2005.

<b>Item</b>	<b>Complete (Specify Date)</b>	<b>In process (Specify Est. Comp. Date)</b>	<b>Not initiated</b>
Conceptual Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

6. Identify the regional or strategic planning document that identifies this project.

This project is being conducted as part of the Districts' efforts to implement the adopted NPDES permits for the San Jose Creek WRP (Order R4-2004-0097) and the Pomona WRP (Order R4-2004-0099). The NPDES permits include a permit provision (WDR Section V.H, page 46 in the Pomona WRP permit and Section V.8, page 46 for the San Jose Creek WRP permit) to re-open the NPDES permits three years from the effective date (July 2007) to re-evaluate and possibly modify final effluent limits for NDMA, based on the results of attenuation and dilution studies. The orders also identify the timeline for this project in Finding 48, page 25 for the San Jose Creek permit and Finding 47, page 26 of the Pomona permit. The results of this project could also impact groundwater recharge activities involving the use of recycled water, which are regulated under Water Reclamation Requirements for the Rio Hondo and San Gabriel River Spreading Grounds, and Montebello Forebay area (Order 91-100).

7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

The Water Replenishment District of Southern California (WRD) and the Los Angeles County Department of Public Works (LADPW) are co-permittees in Order 91-100, which includes the Water Reclamation Requirements applicable to the use of recycled water for groundwater recharge. The WRD ensures that a reliable supply of high quality groundwater is available within its service area while the LADPW is responsible for the operation of the spreading facilities and the conveyance of the recharge water through the rivers and spreading basins. Through their involvement in groundwater recharge activities, these entities are being consulted to support the work conducted under this project.

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?

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The monitoring, well construction and modeling work conducted for this study will not have any biological impacts.

9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.

This project includes the monitoring of compounds detected in the recycled water and/or surface water for which there exist NPDES limits and/or drinking water standards. The sampling will be conducted over a 20 to 24 month period as identified in the Sampling and Analysis Plan (February 2005) and is expected to be completed by December 2006. The results will be used to develop and calibrate a fate and transport model to assess attenuation and dilution of NDMA and dilution factors for other compounds with drinking water based standards.

10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?

No.

11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.

Water quality results will be collected and reported to the Regional Board through the plant final effluent permit monitoring and reporting programs as appropriate. In addition, quarterly updates will be provided to the Regional Board via reports submitted in accordance to the schedule identified in the NPDES permits. Upon completion of this project, a final report will be prepared and submitted to the Regional Board. In addition, once this document is submitted to the Regional Board, all groundwater model program files will be submitted and will be available in the public domain.

12. Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?

This project will benefit residents of several cities overlying the Central Basin in the vicinity of the Montebello Forebay, some of whom might be considered "disadvantaged communities." This area is bounded to the north by the Whittier Narrows, to the east by the San Gabriel River, to the west by the Rio Hondo and to the south by Firestone Blvd.

13. What percentage of the project funding has been secured?

At this point, the Districts are the only funding source for this project.

14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.

This project is being conducted in accordance to the NPDES permits for the Pomona and San Jose Creek WRPs with the direct recipient of the study results being the Regional Board. Direct input is being received from the WRD, LADPW, and EPA. Once

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NPDES permits are reopened, these will go through a public review process which provides the public the opportunity to provide comments. A public hearing prior to adoption of the permits is also conducted by the Regional Board.

15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.

If this project were not implemented, costly treatment plants upgrades to treat to NDMA concentrations in the final effluent may have to be constructed, yet such upgrades are premature because the appropriate levels needed to protect all designated beneficial uses and promote use of recycled water through groundwater recharge are unknown at this time. The cost of additional treatment would be borne by millions of residents within the region. The results of this study are necessary to determine site-specific permit limits that protective of all beneficial uses and are appropriate for the discharge of recycled water within the Montebello Forebay. In addition, if it is necessary to further limit the amount of recycled water used for groundwater recharge, the need for an alternate water supply, which is not available in the region, would be necessary.

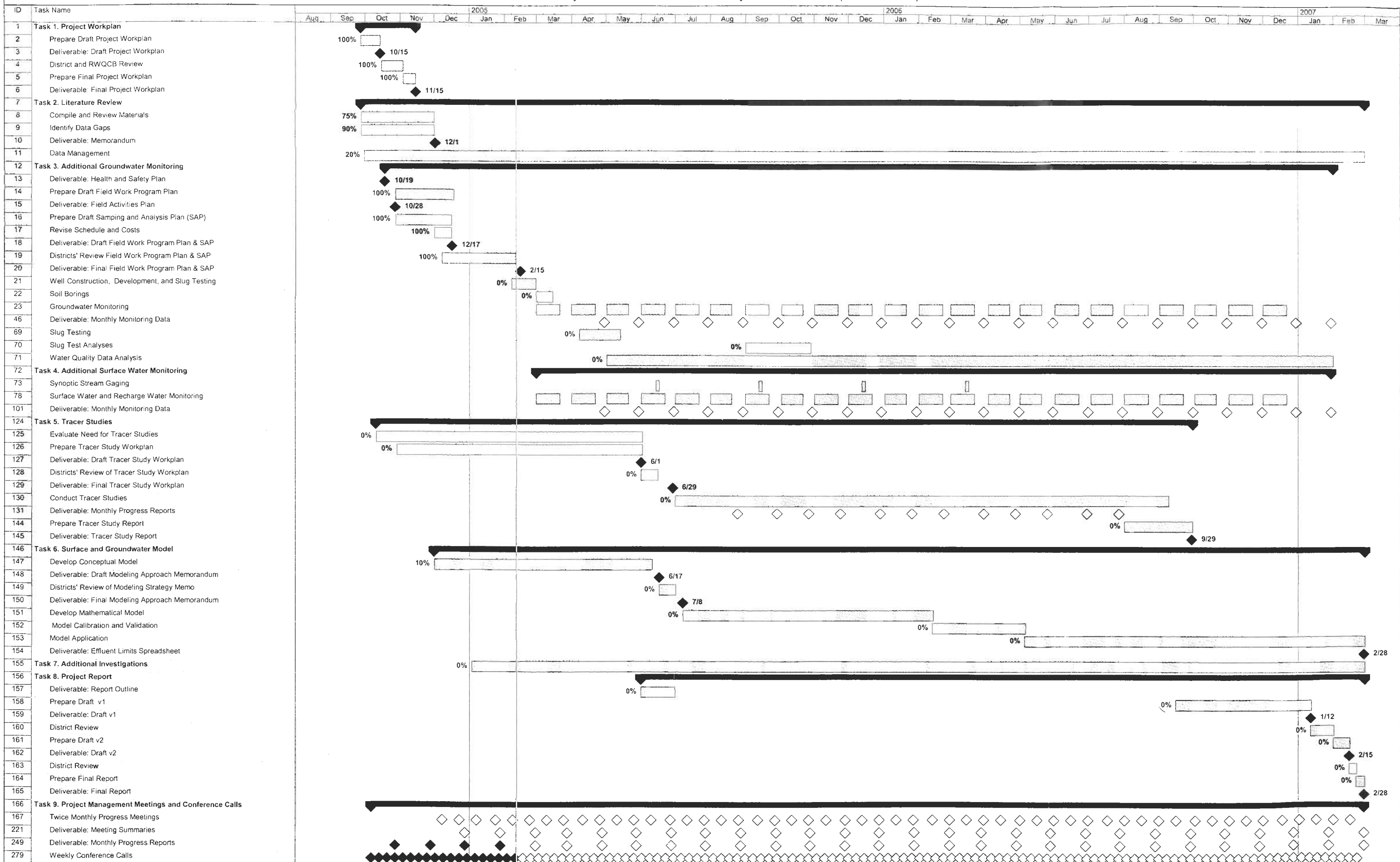
**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones. Attached.
2. Cost Estimate of major project elements including the identification of major funding sources. Attached.



Montebello Forebay Attenuation and Dilution Studies Project Revised Schedule (Revised 02/11/05)



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**Lead Agency Information**

Agency Name: Central Basin Municipal Water District (Central Basin)	
Address: 17140 S. Avalon Blvd., Suite 210 Carson CA 90746	
Contact Name: Paul Shoenberger	
Telephone: (310) 660-6218	E-Mail: pauls@wcbwater.org
Fax: (310) 217-2414	Web Site: www.centralbasin.org

**Summary of Proposed Project Information**

Project Title: Montebello Loop, Phase I Water Recycling Project	
Proposed Start Date: 8/2005	Proposed Completion Date: 5/2009
Proposed CEQA Completion Date: Updated CEQA Checklist completed 4/2005	
Location (Long. & Lat.): -118.07, 34.00	Sub Watershed: <u>Lower San Gabriel River, Coyote Creek, Los Cerritos, Rio Hondo Channel, Lower LA River</u>
Project Description: <u>The Montebello Loop Water Recycling Project is a connection of Central Basin's recycled water pipeline system from the City of Pico Rivera to the City of Vernon. The entire Montebello Loop Water Recycling Project (Project) will be constructed in two phases. Phase I of this connection will begin in the City of Pico Rivera and end at the Montebello Golf Course in the City of Montebello; this is the proposed project for this grant program. Phase II will start at the Montebello Golf Course and end in the City of Vernon. The Project will ultimately serve 28 potential public and private entity sites along the pipeline, including one anchor customer (Montebello Golf Course) at the terminal end of the pipeline, with over 800 acre-feet per year (AFY) of recycled water.</u>	
Primary Objectives Addressed by the Project: <u>The primary objective of the Project is to supply approximately 800 AFY of recycled water to customers within the cities of Pico Rivera and Montebello, and to eventually loop the system by extending this pipeline to the City of Vernon. The extension to Vernon will provide a total amount of approximately 5,600 AFY of recycled water. In the future, the recycled water distribution system will be looped and supply most of the cities in Central Basin with recycled water. This will reduce the amount of treated wastewater that is discharged into the San Gabriel River and ultimately to the ocean. Phase I of this project will also save 800 AFY of imported water from northern California, thereby reducing demand and creating a reliable source of water.</u>	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and	<input type="checkbox"/> Surface Storage



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Management*	
<input type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input checked="" type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$1,692,310		<input type="checkbox"/> In Kind \$ _____
Construction & Materials	\$338,462	\$11,000,015	<input type="checkbox"/> Cash \$ _____
Other (Describe)	\$1,861,541 (legal & contingencies)	\$338,392 (Land and Right-of-Way)	<input checked="" type="checkbox"/> Other Grants \$7,615,360
Totals	\$3,892,313	\$11,338,407	\$15,230,720

Estimated Total Budget (Request & Match): \$ 15,230,720  
Estimated Annual O & M Budget: \$ 145,800

- How does your project develop or conserve local water resources?  
One of the project's objective is to supply recycled water for non-potable use for landscape irrigation in an area that is easily accessible to a wastewater treatment plant. An extra 800 AFY of recycled water saves potable water for approximately 1600 families every year and reduces the amount of treated wastewater that is discharged into the ocean. Recycled water is beneficial in many different ways including: providing economic benefits to the cities that purchase recycled water, reducing demand on the Colorado River and the Bay-Delta, reducing the impact of wastewater on the ocean environment, reducing the amount of fertilizer in urban runoff, and providing a reliable source of water.
- How does this project address water reliability?  
Recycled water is a reliable source of non-potable water for irrigation, industrial and commercial use. Unlike imported water, recycled water is produced locally and is available for use year round as long as there is wastewater available. Water Supply Reliability is employed in this project because the use of recycled water is always available so long as there is a means of receiving it. Recycled water is much more reliable than imported water. Recycled water is a drought-free source of water that can be used for non-potable purposes, and most commonly for landscape irrigation.
- How does your project protect, improve or enhance water quality?  
This project directly improves the water quality of the San Gabriel River and the ocean by reducing the amount of treated wastewater that enters into these locations. Using secondary treated wastewater from the San Jose Creek Plant can alleviate two burdens: the burden of obtaining

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imported water and the burden of discharging secondary treated wastewater into the river and the ocean. By discharging less secondary treated wastewater into the river and ocean, there will be an improvement in water quality, which positively affects the environment, including the local and regional habitat and the public.

4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)

As previously stated, this project will reduce demand on imported water, making it available to those areas in California that do not have the capability of producing enough recycled water for their growing population demands, such as the Inland Empire. Water and Wastewater Treatment is employed in this project as a water management strategy because wastewater is treated to Title 22 standards at the San Jose Creek Wastewater Treatment Plant, owned and operated by the Los Angeles County Sanitation District, that will be used in this distribution system. Approximately 800 additional acre-feet will be treated at the plant and distributed to users along the Montebello Loop, Phase I pipeline. Water Recycling as a water management strategy is not only a local benefit, but a regional benefit as well. Using recycled water reduces demand on imported water and groundwater supplies for those areas that rely strictly on imported water as its sole water resource. Water Quality Protection and Improvement is explained in question 3.

5. What is the status of your project readiness? (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/> See below	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Alignment Study (Draft Preliminary Design Report) that was completed in 2003, illustrates the various alignment alternatives for the proposed project. The Final Design has not been created yet and is factored into the attached schedule. The development of a Master Plan for the entire basin and a subsequent Preliminary Design Report for the Montebello Loop will take place prior to the design of the Montebello Loop Project. An Initial Study/ Negative Declaration was performed in 1991 for the Century Reclamation Program, which the Montebello Loop alignment is a part of. In 1993, an addendum to the Initial Study/Negative Declaration was performed for the Rio Hondo Water Reclamation Program. In 1998, an addendum to the Negative Declaration for the Century Reclamation Program and the Rio Hondo Water Reclamation Program was completed. Currently, Central Basin is working on an

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updated CEQA checklist and Negative Declaration, which is anticipated to be completed by the end of April 2005.

6. Identify the regional or strategic planning document that identifies this project.  
This project is identified in the Central Basin Water Recycling Master Plan that was completed in August 2000.
7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.  
Central Basin has received letters of intent from the cities of Pico Rivera and Montebello. The Montebello Golf Course, the terminal user, has already retrofitted its site to hook up to recycled water. Therefore, the main pipeline, Phase I of this Project, will be ready to serve this customer upon completion. The other sites that intend to use recycled water will have to have laterals built off of the main pipeline in order to receive the recycled water.
8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?  
This project is not in an area of biological significance. This project will not have any detrimental biological impacts. Since it is a water recycling project, there is no enhancement or restoration of wildlife habitat.
9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.  
The success of the project will be measured by the amount of imported water replaced by recycled water by sites along the distribution pipeline. Each site that uses the recycled water will keep a monthly record of the amount of recycled water used, in which they will provide Central Basin with for its own monthly tracking. Technical analysis of the recycled water that is distributed and used along this pipeline is evaluated each and every month as data is compounded. A water recyclogn permit is required by the Regional Water Qaulity Control Board to measure constituents, in which quarterly and annual reports are submitted by the Los Angeles County Sanitation District. Central Basin purchases the recycled water from the Sanitation District, which is distributed via the San Jose Creek Wastewater Treatment Plant.
10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?  
N/A
11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.

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The data for the project will be tracked by Central Basin and made available to other agencies or stakeholders through our yearly Water Use Report as well as upon request.

12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?

Based on the 2004 data, the project does not provide a direct benefit to a disadvantaged community, although the City of Pico Rivera is on the borderline of the annual median household income level.

13. What percentage of the project funding has been secured?

50% through the U.S. Army Corps of Engineers

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones.
2. Cost Estimate of major project elements including the identification of major funding sources.

**Cost Estimate Sheet****Project Title: Montebello Loop, Phase I Water Recycling Project**

Budget Category		Non-State Share (Funding Match)	State Share (Grant Funding)
(a)	Direct Project Administration Costs	\$169,231	\$169,231
(b)	Land Purchase/Easement	\$169,196	\$169,196
(c)	Planning/Design/Engineering/Environmental Documentation	\$676,924	\$676,924
(d)	Construction/Implementation	\$5,500,008	\$5,500,008
(e)	Environmental Compliance/Mitigation/Enhancement	\$0	\$0
(f)	Project Summary	\$0	\$0
(g)	Construction Administration	\$169,231	\$169,231
(h)	Other	\$84,616	\$84,616
(i)	Construction/Implementation Contingency	\$846,155	\$846,155
(j)	Grant Total	\$7,615,360	\$7,615,360
Source of funds for Non-State Share (Funding Match)		U.S. Army Corps of Engineers	

Total
\$338,462
\$338,392
\$1,353,848
\$11,000,015
\$0
\$0
338,462
\$169,231
\$1,692,310
\$15,230,720

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**Lead Agency Information**

Agency Name: Los Angeles County Flood Control District	
Address: 900 S. Fremont Ave., Alhambra, CA 91801	
Contact Name: Michele Chimienti	
Telephone: 626 – 458-6111	E-Mail: <a href="mailto:mchimien@ladpw.org">mchimien@ladpw.org</a>
Fax: 626-979-5436	Web Site: <a href="http://www.ladpw.org">www.ladpw.org</a>

**Summary of Proposed Project Information**

Project Title: Morris Dam Inlet/Outlet Works Modification Project	
Proposed Start Date: August 2007	Proposed Completion Date: May 2008
Proposed CEQA Completion Date: Notice of Exemption to be filed in Sept 2006	
Location (Long. & Lat.): Lat 34° 10' 27" Long 117° 52' 49"	Sub Watershed: San Gabriel River

**Project Description:**  
The Project entails physical modifications to the Morris Dam Inlet/Outlet Works and control systems to facilitate a lower operational reservoir pool and the reliable conjunctive management of the resulting increased conserved. These modifications consist of constructing a new inlet location to take water from the reservoir at a different location (higher elevation) and replacing the river outlet valves with a more robust type of valve that is not as susceptible to damage and mis-operation if some sediment gets in the outflow. A low flow valve that can accommodate small releases will also be included. Modifications to the control systems includes the electrical upgrades needed to power the new valves electric motor operators and other systems, and intelligent controls to allow operations of the valves and gates to control outflows to match capacity of water conservation systems downstream. A control room to house the necessary control systems will be included.

**Primary Objectives Addressed by the Project:**  
The Project objectives are to increase available native water supply and accommodate its conjunctive management to augment surface and ground water supply, enhance habitat and reduce reliance on imported water. The project is intended to mitigate operational problems associated with sediment build up at the intake tower that would otherwise occur if we were to lower the operational pool at Morris Dam without the proposed modifications. The project shall also ensure reliability of river outlet valves for flood management and for water conservation purposes to increase the groundwater supply in the Main San Gabriel and Central (groundwater) Basins. Currently, the District maintains a 9720 acre-foot operational reservoir pool of water behind the dam to protect the outlet valves from damage or mis-operation from river flows with high sediment loads. This project will enable required pool to be reduced to 4000 acre-feet while still providing the same level of protection for the valves. As a result, 5720 acre-feet more water can be released from the dam for downstream groundwater recharge purposes to increase the groundwater supply. In addition it will potentially increase riparian habitat along the San Gabriel River corridor and provide extended flows for native aquatic species and recreational activities along the river.

<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input checked="" type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning

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<input checked="" type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input checked="" type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants		\$ 800,000	<input type="checkbox"/> In Kind _____
Construction & Materials		\$ 8,162,500	<input checked="" type="checkbox"/> Cash <u>\$1,000,000</u>
Other (Describe)			<input type="checkbox"/> Other Grants \$ _____
Totals		\$ 8,962,500	\$ 1,000,000

Estimated Total Budget (Request & Match): \$ 9,962,500  
Estimated Annual O & M Budget: \$ 100,000

1. How does your project develop or conserve local water resources?

The current minimum operational reservoir pool elevation was established to reduce the progression of sediment from the existing intake system. The existing valves are susceptible to damage and mis-operation if sediment enters the intake system. The modifications to the Intake System will result in lowering the minimum reservoir pool and result in additional storage volume in the reservoir for water conservation. Replacement of the existing valves with a more robust type of valve that can accommodate higher sediment loads will ensure their reliability under the proposed new operating plan. Modifications of the control systems will allow better conjunctive management of the additional water captured by releasing it to downstream spreading grounds as needed to recharge the groundwater basins. This results in an average of annual water conservation benefit of 5,720 acre-feet<sup>1</sup> per year, or an average of \$2 Million annually at today's water cost<sup>2</sup>.

2. How does this project address water reliability?

This project will increase water reliability by increasing the volume (5,720 Acre Feet) of local water conserved in the Main San Gabriel and Central San Gabriel Basins annually. Local precipitation can have a marked influence on groundwater supply and water in storage. The annual native water supply is dependent on two factors: the annual precipitation; and the retentive characteristics of the surrounding watershed. Morris Dam harnesses natural stormwater runoff from the San Gabriel River located in the San Gabriel Mountains. The Morris Dam Inlet/Outlet Rehabilitation Project will increase the

<sup>1</sup> Water Conservation Benefits based on a 10-year average between 1990 and 2000.

<sup>2</sup> Current rate for Untreated Imported Water is \$350/acre-foot.



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amount of natural resources (native water) that is captured and available for recharge within the Main and Central San Gabriel Groundwater Basins.

Currently the water needs within in the Main San Gabriel and Central San Gabriel Basins exceed the supply of locally generated water, as a result, water has to be imported. The Main San Gabriel Groundwater Basin is recharged by imported water obtained from the Metropolitan Water District of Southern California. This imported water consists primarily of State Project water, so these deliveries have the potential to impact the Delta-Bay system. Modifying the Inlet Works and River Outlets will decrease the current amount of imported water that is required to be spread within the region. Efficiently managing the San Gabriel watershed runoff will reduce this impact to the Delta-Bay system.

This project will result in more surface water being stored in the aquifers of the Central and Main San Gabriel Basin to improve local water supply and proportionally reduces the District's dependence on imported water.

3. How does your project protect, improve or enhance water quality?

Morris Dam and Reservoir allows water to be temporarily stored behind the dam thereby slowing the velocity of sediment-laden flows from the San Gabriel River. During periods of high flow during storms, the ponding of the water allows sediments to drop out and remain behind the dam as water passes through the valves downstream. This process also re-aerates the flow as water tumbles out the valves into the plunge pool and down the river and provides improved water quality downstream of the dam.

4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)

Currently, Morris Dam and Reservoir provides flood control benefits to downstream communities. The modifications to the intake structure and replacement of the valves and control system at the dam will increase operational reliability and will enhance the habitat. This project will enable the District to provide benefits for groundwater management, stormwater capture and management and surface storage. In addition, there may be benefits seen to riparian and aquatic habitat and recreational usage downstream of the dam.

5. What is the status of your project readiness? (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/> 2002	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/> Owned	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input checked="" type="checkbox"/> 08/2004	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input checked="" type="checkbox"/> 09/2006	<input type="checkbox"/>	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/> 12/2006	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input checked="" type="checkbox"/> 6/2006	<input type="checkbox"/>

6. Identify the regional or strategic planning document that identifies this project.

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This project is identified in the Upper San Gabriel Watershed Management Plan.

7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

While the District will be the sole agency to develop and construct this project, these improvements will benefit the Main San Gabriel Basin Watermaster and the Committee of Nine (a consortium of local water agencies) by increasing the local groundwater supply.

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?

The project is located along the San Gabriel River, a known corridor for a number of native species. The project will not have detrimental biological impacts along the San Gabriel River and will ensure that flows can be passed through the dam for the benefit of the downstream water agencies.

The Morris Dam Inlet/Outlet Rehabilitation Project will provide enhancement benefits for aquatic and riparian habitat along the San Gabriel River by allowing the District increased flexibility to provide native water within the river for extended periods of time which were historically prohibited due to operational restrictions at the Dam. This addition native flows will potentially increase riparian habitat along the San Gabriel River corridor and provide extended flows for native aquatic species.

9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.

Project success will be measured by monitoring the amount of water conserved within the District's downstream spreading basins.

10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?

The District maintains operating guidelines for all facilities, including Morris Dam and Reservoir. Operations of the dam and reservoir outside of storm events allows some flexibility to coordinate water releases with water agency activities to maximize water conservation. Improvements to the dam's outlet works and control systems, along with existing stream gages, and monitoring at spreading grounds, and monitoring by water agencies and resource agencies will allow for conjunctive management of the additional water made available by this project. We will implement adaptive management principles to maximize these project benefits.

11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.

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The District maintains records on dam valve operations and water conservation efforts at downstream spreading basins. These records are provided to State and local agencies in reports on a monthly, quarterly and annual basis.

12. Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?

The project provides a direct benefit to disadvantaged communities. The Main San Gabriel Basin and Central San Gabriel Basins will be the recipients of the increased conserved native waters as a result of this project. The disadvantaged communities within the service areas of these basins will benefit from increased water reliability and may anticipate additional benefits in the form of reduced water usage fees or forgone cost increases. In addition, the surrounding communities (from El Monte to Azusa) will benefit from the additional native waters within the San Gabriel River. The percent of disadvantaged communities within the service region (including the surrounding areas) is 44%. The District is providing the 11% matching funds for the project. These matching funds will not pose a hardship to these disadvantaged communities.

13. What percentage of the project funding has been secured?

The District has secured 11% of the project funding.

14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.

Above we have listed the agencies that will potentially benefit as a result of the project and these agencies are in constant communication with Operations Sections on water releases. In addition, various agencies will have input into monitoring reports, which are required monthly, quarterly and annually.

15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.

This project will address long term regional water management needs by giving the District increased flexibility to provide native water within the river for extended periods of time which were historically prohibited due to operational restrictions at the Dam. This will greatly enhance the reliability of local groundwater and surface water supplies, which is especially critical in years of low rainfall. These additional native flows will potentially increase riparian habitat along the San Gabriel River corridor and provide extended flows for native aquatic species. If the project is not implemented then the required storage pool behind the dam will remain at its current elevation and this native water must remain behind the dam to protect the outlet works of the facility. This being the case, the additional benefits of extended flows envisioned to the San Gabriel River downstream of the dam will not be possible and the region will continue to rely on increased imported water usage.

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**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf)** for further details on the required elements of these documents.

1. Project Schedule/Timeline including all major milestones.
2. Cost Estimate of major project elements including the identification of major funding sources.

P:\Users\Keith\Project ID Form - Morris-21.doc



# Morris Dam Inlet/Outlet Works Modification Project

## Exhibit C Cost Estimate Format

Complete the following table for each project contained within the proposal and a table showing the estimated costs for the entire proposal.

Cost Estimate Sheet				
Proposal Title:				
Project Title: Morris Dam Inlet/Outlet Works Modification Project				
	Budget Category	Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	\$612,000		\$612,000
(b)	Land Purchase/Easement			
(c)	Planning/Design/Engineering/Environmental Documentation		\$1,812,500	\$1,812,500
(d)	Construction/Implementation		\$5,437,500	\$5,437,500
(e)	Environmental Compliance/Mitigation/Enhancement			
(f)	Project Summary [Sum (a) through (e) for each column]	\$612,500	\$7,250,000	\$7,862,500
(g)	Construction Administration	\$221,250	\$218,750	\$440,000
(h)	Other			
(i)	Construction/Implementation Contingency (20%)	\$166,250	\$1,493,750	\$1,660,000
(j)	Grant Total [Sum (f) through (i) for each column]	\$1,000,000	\$8,962,500	\$9,962,500
Source of funds for Non-State Share (Funding Match)		Los Angeles County Flood Control District		

## Budget Category Explanations

- (a) *Direct Project Administration Costs* – Includes: salaries, wages, fringe benefits, office supplies, and equipment needed to support the project, staff travel costs (at or below the rate allowed for unrepresented State employees), and preparation of required quarterly and final reports. Actual costs directly related to the project will be reimbursed.
- (b) *Land Purchase/Easement* – If land acquisition is to be included in the Non-State share, include whether it is a proposed acquisition, or if the land is already owned by an IRWM Plan participant. Prior purchase of land can be included in an applicant's funding match if purchased after November 5, 2002. Land acquisition costs will not be considered a reimbursable item if purchased prior to the effective date of the grant agreement. For land purchased prior to the date of the application include the date of purchase and purchase price of the land. Costs for easements will be handled similarly as for land purchases.
- (c) *Planning/Design/Engineering/Environmental Documentation* – Differentiate costs between consulting services and/or agency/organization staff costs for these efforts. Planning costs include: planning efforts, reconnaissance studies, feasibility studies, and preliminary reports. Design and engineering costs include: conceptual, preliminary and final design efforts, geotechnical reports, hydraulic studies, water quality investigations and efforts, and other engineering types of work. Include the costs of bid preparation and processing here. Environmental documentation costs include all efforts involved in the CEQA or NEPA process up to the point of the Notice of Determination, Finding of no Significant Impact, or Record of Decision.
- (d) *Construction/Implementation* – Includes the summary of labor, materials, equipment purchases and/or rentals. After bids are received these costs will be the actual construction cost awarded to the low bidder. The construction or implementation costs for Pilot Projects should be included here.
- (e) *Environmental Compliance/Mitigation/Enhancement* – Includes those costs required by a CEQA/NEPA document to offset any potential damages caused by the proposal. If these costs are included in the contract awarded for construction or implementation of the proposal, differentiate such costs for purposes of this budget.
- (f) *Project Summary* – The summation of the costs for items (a) through (e) above.
- (g) *Construction Administration* – Includes those costs required to supervise and administer the construction or implementation of the project(s). Differentiate costs between consulting services and agency staff costs to perform this work.
- (h) *Other* – Includes costs for legal services, license fees, permits, any implementation verification costs, and any monitoring and assessment costs required during the construction/implementation of the proposal. Do not include monitoring and assessment costs for efforts required after construction/implementation of the proposal is complete. These costs are considered to be operation and maintenance costs and are not reimbursable.
- (i) *Construction/Implementation Contingency* – Includes any contingency costs for the construction/implementation of the proposal. Specify the percentage used for this contingency cost. For all other contingency costs, i.e. design, land purchase, etc., include those contingencies in the appropriate cost category.

For the Step 2 submittal, detail will be expected for each of the above cost categories explaining how the total cost was derived.

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**Lead Agency Information**

Agency Name: Los Angeles County Flood Control District	
Address: 900 South Fremont Avenue, Alhambra, CA 91803	
Contact Name: Vik Bapna	
Telephone: 626-458-4312	E-Mail: vbapna@ladpw.org
Fax: 626-457-1526	Web Site: www.ladpw.org/wmd

**1. Stakeholder Involvement: Please describe the stakeholder involvement in this project.**

Enhancing Peck Park was one of the key elements of the Rio Hondo Watershed Management Plan, which was recently completed with the input of over 35 agencies and organizations. Peck Park was identified as a regional project that would support a number of the watershed goals identified in the plan. As the Peck Park Wetlands and Enhanced Recharge Project progresses, there will be extensive stakeholder involvement to ensure the project's success.

During the project's conceptual development, the District will work with the Cities of Monrovia, Arcadia, and Sierra Madre to ensure that the project improvements are consistent with the regional trash best management practices that are being implemented upstream. The District will also coordinate with Amigos de los Rios, Sierra Club, and the City of El Monte during the project development to integrate the project's water quality, ecological, and groundwater recharge enhancements with the various park, habitat, and educational improvements proposed by these entities. In addition, the District will work with Parks and Recreation to ensure the project's operation and maintenance functions are coordinated with the existing park maintenance responsibilities. Finally, the District will work with the Main San Gabriel Basin Watermaster as well as the Regional Water Quality Control Board to address the improvements in groundwater recharge capacity and water quality as a result of this project.

**2. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

By the addition of a treatment wetlands system within Peck Lake, this project will improve the quality of groundwater and surface water through the removal of stormwater pollutants. By reducing the pollutant loads of constituents such as nutrients, bacteria, and metals, the project will aid in the compliance of current and future TMDLs for the Rio Hondo and Los Angeles River watersheds. Also, by enhancing the recharge capacity of Peck Lake, this project will increase local groundwater supplies and help reduce the reliance of imported water from the CALFED Bay-Delta region.

This project is a component of the Rio Hondo Watershed Management Plan. Once implemented, this project will meet many of goals identified in this stakeholder driven, regional plan. The project will also facilitate the ongoing



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effort of increasing the awareness of water supply and water quality issues through interpretive signage at the site.

Establishing functional wetland and riparian habitat will benefit the ecosystem by supporting a variety of different plant and wildlife species. This project will be coordinated with other planned projects for Peck Park to eventually serve as a key hub in connecting the Rio Hondo and San Gabriel River trails, as well as the ecosystems they support.

In addition, enhancing recharge capacity into the Main San Gabriel Groundwater Basin will increase local groundwater supplies and reduce the reliance on costly imported water, providing an economic benefit to this region.

If this project is not implemented, Peck Lake will remain at its current state – providing no water quality benefits and somewhat limited groundwater recharge benefits. Existing stormwater pollution levels would be maintained. Downward trends in groundwater levels will most likely continue and the area could become more reliant on imported supplies.

**3. Disadvantage Communities: What percentage of your service region is disadvantaged and how does this compare to the total regional population?**

The project provides a direct benefit to the disadvantaged community of the City of El Monte. According to an article in the San Gabriel Valley Tribune, the City of El Monte, located immediately south of the project area, is identified as the third densest city in the country, as measured by the percentage of overcrowded homes. Recent figures indicate an unemployment rate of 8% which is one of the highest rates in Los Angeles County.

Based on the Los Angeles Almanac for income data in 2000, the City of El Monte had a household income under \$32,500 and a per capita income under \$10,500. This is well below the Los Angeles County median household and per capita incomes of over \$42,000 and \$20,500, respectively. The project's service region could be defined as those cities that are directly adjacent to Peck Park. These include the Cities of El Monte, Arcadia, Monrovia, and Irwindale. According to 2000 Census figures, the disadvantaged City of El Monte comprises over 55% of the population in this service region.

City of El Monte would directly benefit by the resources that would be created and conserved by the Peck Park Wetlands and Enhanced Recharge Project. The City will not be contributing funds to implement this project. Therefore, the matching funds requirement will not pose a hardship to this community.

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## ATTACHMENT B COST ESTIMATE

Cost Estimate Sheet				
Project Title: Peck Park Wetlands and Enhanced Recharge Project				
Budget Category		Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	<b>\$325,000</b>		<b>\$325,000</b>
(b)	Land Purchase/Easement			<b>\$0</b>
(c)	Planning/Design/Engineering/Environmental Documentation		<b>\$1,300,000</b>	<b>\$1,300,000</b>
(d)	Construction/Implementation		<b>\$6,500,000</b>	<b>\$6,500,000</b>
(e)	Environmental Compliance/Mitigation/Enhancement			<b>\$0</b>
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$325,000</b>	<b>\$7,800,000</b>	<b>\$8,125,000</b>
(g)	Construction Administration	<b>\$975,000</b>		<b>\$975,000</b>
(h)	Other			<b>\$0</b>
(i)	Construction/Implementation Contingency (20%)	<b>\$1,300,000</b>		<b>\$1,300,000</b>
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$2,600,000</b>	<b>\$7,800,000</b>	<b>\$10,400,000</b>
Source of funds for Non-State Share (Funding Match)		Los Angeles County Flood Control District		

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**Lead Agency Information**

Agency Name: City of El Monte and Amigos de los Ríos	
Address: City of El Monte: 3130 Tyler Avenue, El Monte, CA 91731-3293 Amigos de los Ríos: 1001 Malcolm Avenue, Los Angeles, CA 90024	
Contact Name: City of El Monte: Tom Hatch Amigos de los Ríos: Claire Robinson	
Telephone: City of El Monte: (626) 580-2205 Amigos de los Ríos: (310) 470-3258	E-Mail: <a href="mailto:thatch@ci.el-monte.ca.us">thatch@ci.el-monte.ca.us</a> <a href="mailto:claire@amigosdelosrios.org">claire@amigosdelosrios.org</a>
Fax: City of El Monte: (626) 452-0458 Amigos de los Ríos: (310) 441-9028	Web Site: <a href="http://www.ci.el-monte.ca.us">www.ci.el-monte.ca.us</a> <a href="http://www.amigosdelosrios.org">www.amigosdelosrios.org</a>

**Summary of Proposed Project Information**

Project Title: <b>Peck Water Conservation Park</b>	
Proposed Start Date: Nov 2005	Proposed Completion Date: Dec 2009
Proposed CEQA Completion Date: January 2006	
Location (Long. & Lat.): 34°06.324'N 118°00.431'w	Sub Watershed Río Hondo
Project Description:	
<p><u>Peck Park Master Plan</u>  <i>Greening and habitat restoration of 90 acres.</i> The project is to restore and enhance value of the 200 acre park and turn it into a regional amenity. There are approximately 30 acres available for habitat restoration and 60 acres available for greening and enhancement. The project would include the installation of a reclaimed water pipeline from either an extension of the Upper San Gabriel Water District's new line or the Shallow water remediation plan of the EPA superfund site located West of the Río Hondo. Recently Peck Park has been the focus of a vision plan developed by Amigos de los Ríos for the Sierra Club in the context of the Río Hondo Sub Watershed Open Space Study. Amigos de los Ríos subsequently requests funding for restoration of habitat around the lake and for greening of the recreational areas.</p> <p><u>Peck Park Native Habitat Demonstration Garden</u>  A specific area of our greening program includes a Habitat Demonstration Garden, which will be located near the entrance of Peck Park to emphasize the connection between natural and urban environments. The Native Habitat Demonstration Garden provides examples of native and drought-tolerant plant palettes to home owners and other facilities operators visiting the park. The garden is divided into planting areas that vary in size and have the potential to shape the development of visitors' front, back and side yards. The plant palettes featured in these various garden segment plots represent typical plant associations of the Río Hondo/San Gabriel Watershed. The Demonstration Garden plots are divided into high, medium, and low water usage plants. The "Butterfly" shaped plan of the garden includes appropriate gathering spaces for students, detailed interpretive signage, and brochures indicating "take home" planting plants, as well as local sources for native plants. Reclaimed water will be employed in the demonstration garden.</p>	

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Peck Park Multi Benefit Nature Trails

There is a potential 1.8 mile multi-benefit trail that currently does not connect between the North and the South Shores of Peck lake. Providing a multi-use bridge or causeway to connect the shores will accommodate walking, biking, and equestrian travel along this loop. Connecting the land masses at the narrowest point (where the North and South lakes join at Peck Park will allow the multi-benefit perimeter trail to be completed as a complete loop of 1.8 miles. This trail and bridge allows for direct connection and access between key recreational areas of the lake, and surrounding communities'. Native plant landscaping and interpretive signage along the trails leading to the bridge is also proposed. The bridge will be designed to submerge during high flood periods. A underpass connection under Peck Road into the park is also proposed which would complete a 2.2 mile trail including the loop above and this extension towards San Gabriel River. This will link Peck Park and the Rio Hondo Side of the Emerald Necklace to the San Gabriel River Trail.

Peck Park Gateways to the Community – Recreation Access

Some funding will be used to develop and emphasize multiple entrances and access points featuring Peck Water Conservation Park / Emerald Necklace signage, native landscaping, decorative rocks, artistic gateways depicting local natural and cultural history, and benches where appropriate. Amigos de los Rios will seek local stakeholder input for each of the five entrances. The proposed additional access areas include: Arroyo High School and KARE Youth Center (where an ad hoc connection to park currently exists), El Monte residential neighborhood (where an easement would be required), enhancing the Peck Road entrance, and creating access from unincorporated community residential areas to the North. In addition, we will look at formalizing the entrances from the Río Hondo Channel / Emerald Necklace - East Bank of the Río Hondo "County Bike Path", and proposed West Bank "Multi-benefit trail". These enhanced access points will greatly increase accessibility to the rare and wonderful resources of Peck Park for thousands of regional park visitors.

Primary Objectives Addressed by the Project:

- o Habitat enhancement in highly dense urban area
- o Myriad Recreational and educational opportunities for residents of watershed
- o Water conservation and protection, education and training opportunities for disadvantage youth

**Water Management Strategies Addressed:** (Check all that Apply)

<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input checked="" type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

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**Fiscal Summary**

<b>Category</b>	<b>Planning</b>	<b>Implementation</b>	<b>Potential Match Contribution</b>
Personnel, Consultants	\$156,000		<input type="checkbox"/> In Kind \$ <i>City of El Monte</i> TBD
Construction & Materials		<i>Bridge/Trail connection:</i> \$1.6million <i>Underpass:</i> \$2million <i>Greening:</i> \$4.5 million <i>Habitat Restoration:</i> \$2.4 million	<input type="checkbox"/> Cash \$ <i>Department of Fish and Game – mitigation funds</i> \$2.4 M <u>TBD</u> <i>Other Grants - Urban Parks Recreation Trails, Habitat Trails</i> <u>TBD</u> <i>El Monte Staff and Maintenance Crew</i> <u>TBD</u>
Other (Describe)	<i>Permitting</i> \$15,000	<i>Monitoring/AMP</i> \$150,000	<input type="checkbox"/> Other Grants \$ <u>TBD</u>
<b>Totals</b>	<b>\$ 171,000</b>	<b>\$10.65 million</b>	<b>TBD</b>

Estimated Total Budget (Request & Match):                 \$ 10.82 million  
Estimated Annual O & M Budget:                                 \$ 306,603

**1. How does your project develop or conserve local water resources?**

- Demonstration garden – we are educating thousands of people on methods of water conservation
- Use of reclaimed/recycled water
- Use of drought tolerant native plants
- Low water use fixtures and low water irrigation systems
- Best practices in the parking lot - we can capture water and let it infiltrate by putting permeable stripe of a swale through the parking lot

**2. How does this project address water reliability?**

- Decreasing our demand through
  - low water use fixtures
  - low water use irrigation systems
  - appropriate drought tolerant native planting
  - harvesting/storing water
  - using reclaimed or EPA water instead of potable where appropriate
- If we work with the shallow water from the EPA superfund site, we are greening as we remediate – polishing the nitrates and TDS in the contaminated water.
- Water storage
  - Peck Park is an area where water is stored – we can educate visitors about water conservation in a recreational setting
- Water budget for park and for demonstration garden comparing relative water consumption of grass to that of native species, which is about an eight to one ratio.

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- Restroom facility with gray water
  - recirculates water from the sink to the toilets
  - low water use toilets, does not waste drinkable water
- Native Habitat Demonstration Garden
  - Practical and aesthetic didactic tool to instigate native landscape ethic
  - a tool to educate people about the precious value of water and about the use of drought tolerant plants for landscaping, therefore reducing water demand for landscape purposes

**3. How does your project protect, improve or enhance water quality?**

- Best Management Practices for the parking area
  - Prohibits oil, metal, and pollutants from entering Peck Lake by installing a best management practice such as a swale in the parking lot
- Native plants and native soil – does not use fertilizer that negatively impacts water quality
- Potential Use of EPA water – cleaning and improving the water

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

- Environmental Habitat Protection and Improvement
  - Peck Water Conservation Park contains approximately 30 acres of potential habitat restoration, preservation areas, and is home to a vast array of wildlife species, including insects, birds, amphibians, reptiles, and small mammals.
  - Many species of resident, migrant, and introduced species of birds utilize Peck Park throughout the year. 185 species have been documented as using the park. Commonly observed year-round, native resident species include the mourning dove (*Zenaida macroura*), the black phoebe (*Sayornis nigricans*), Bewick's wren (*Thryomanes bewickii*), the bushtit (*Psaltriparus minimus*), the western scrub jay (*Aphelocoma californica*), the song sparrow (*Melospiza melodia*), and the house finch (*Carpodacus mexicanus*).
- Flood Management
  - The park and educational improvements would complement the plans of the Watershed Management Division of the LA County Department of Public Works.
- Recreation and Public Access
  - Peck Water Conservation Park is one of the only areas where people can get close to the water in the region. It serves as a large regional resource in dense areas along the Emerald Necklace by providing a pleasant recreational environment for joggers, fishermen, bird enthusiasts, and residents. The lake is stocked with a variety of fish by the California Department of Fish and Game, attracting hundreds of migrant and wintering water, shore and diving birds year round. The park also provides exercise trails, pedestrian and equestrian trails and vistas across the lake.
- Water Recycling
  - Establishment of reclaimed water infrastructure, EPA superfund site and water recycling
  - Gray water in the restroom facility
- NPS Pollution Control



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- Off of the parking lot – facility used by many people, keep runoff from the parking lot rather than having it washed away into the ocean
- Educate park users on best management practices for storm water
- Add acres of mulch to swale in order to dramatically increase permeability
- Watershed Planning
  - Place park and recreation experience in larger perspective of the entire Watershed
  - Work with multiple constituents, including neighboring communities, to protect water supply, increase water quality/conservation, increase environmental education, and preserve open space.

**5. What is the status of your project readiness? (check as appropriate)**

<b>Item</b>	<b>Complete (Specify Date)</b>	<b>In process (Specify Est. Comp. Date)</b>	<b>Not initiated</b>
Conceptual Plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6. Identify the regional or strategic planning document that identifies this project.**

- Río Hondo Sub Watershed Plan
- Upper San Gabriel River Watershed Management Plan - TBD

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

- Los Angeles County Department of Public Works
- Watershed protection (Flood maintenance/management)
  - The park and educational improvements would complement the plans of the Watershed Management Division of the LA County Department of Public Works.
- Department of Fish and Game
  - Supportive of restoring the vegetation around the edge of the lake
  - Potential facilitation of approximately \$ 2.4 million for habitat restoration
- Los Angeles County Department of Recreation and Parks
  - In process of transferring park space to the City of El Monte

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

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- It is not the habitat of any endangered species. However, there are so few semi-natural habitat areas left in the region that it is imperative that we protect this area for its tremendous bird population.
- The project restores wildlife habitat for the area's rich variety of bird species.
- No, this project will not have any detrimental biological impacts.

**9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

- Department of Fish and Game's official measurement
  - 3<sup>rd</sup> year - cannot use supplemental irrigation
  - 5<sup>th</sup> year - 90% coverage of native and 5% of non-native and non-exotics in the habitat areas
  - For other greening areas - we will look for structure and coverage every year to insure effective planting.
- A water quality monitoring plan is the county's issue, with the exception of the parking lot water runoff which will have a water quality monitoring plan.

**10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

- Adaptive management plan under development
  - There will be plan to respond to growing conditions of the site and to adjust what has been planted seasonally for best success rates.

**11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

- Data on restoration will be kept by Amigos de los Rios and will meet with the Department of Fish and Game every year to monitor project.
  - Photographs of the areas and field notes
  - Keep careful data regarding types of species planted and percentage of survivors or replacements used to inform subsequent plantings.
  - Keep record of methods such as weed suppression, seeding, sizes of plant, different grounds, patches, etc
- We will share data with Department of Fish and Game, Department of Community Services of El Monte, and the Emerald Necklace coalition.

**12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?**

- Peck Water Conservation Park provides a direct benefit to disadvantaged communities suffering from a variety of social, environmental, and health issues ranging from high teen birth, high school drop-out rates, and unemployment to obesity, asthma, hypertension, and Type II diabetes in low income areas. It will

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- benefit residents by providing a recreational parkway to enjoy the river environment.
- The 10% matching funds requirement will not pose a hardship to this disadvantaged community

**13. What percentage of the project funding has been secured?**

- We have received \$35,000 for the initial conceptual plan.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

**1. Project Schedule / Timeline including all major milestones.**

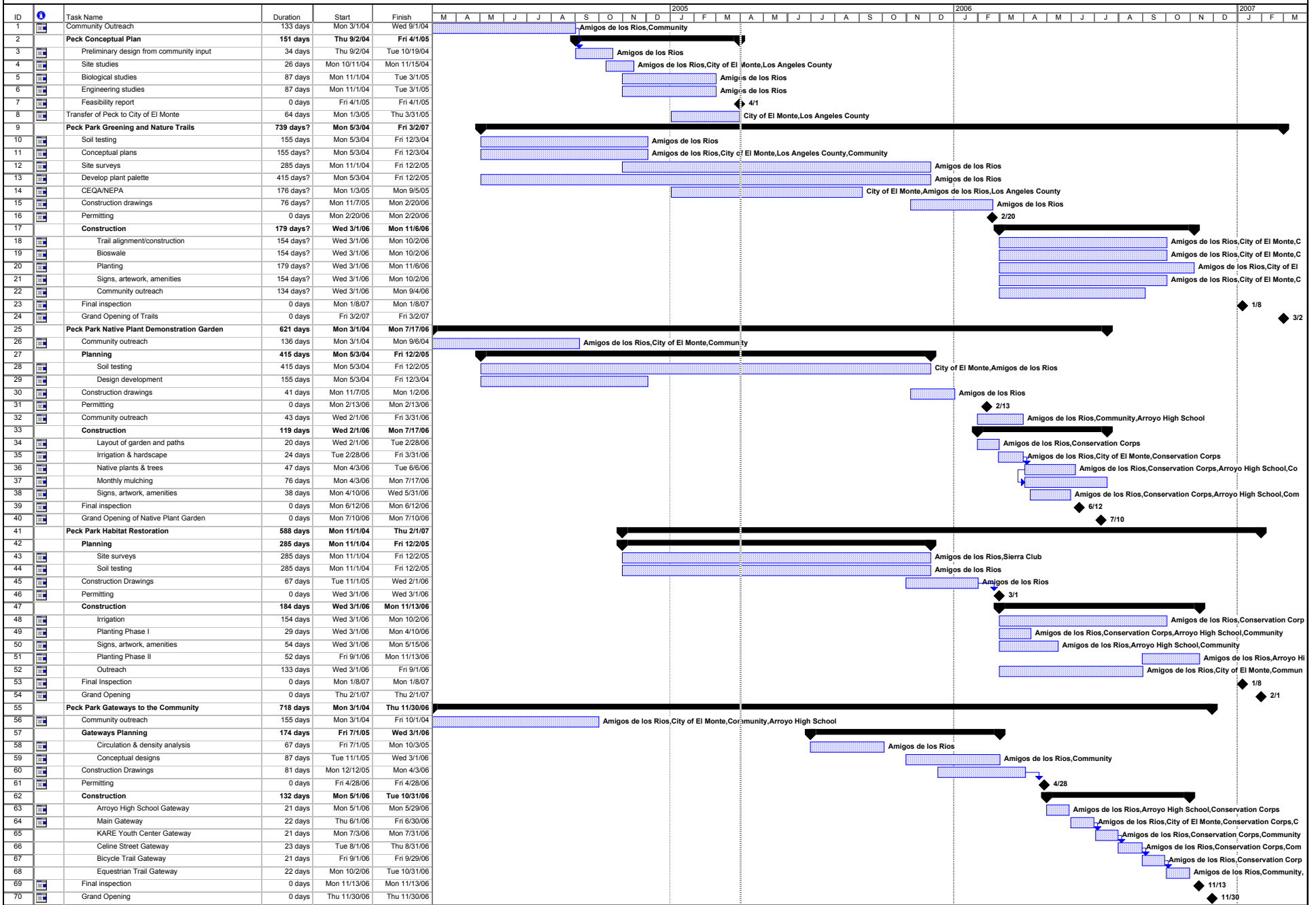
- November 2005                      Permitting & Land Tenure
- February 2006                      Design Complete & Construction Commencement
- June – December 2006              Bridge Construction
- February – May 2006                Second Planting Cycle
- June – December 2006              Underpass Construction
- February – May 2007                Third Planting Cycle
- 2007-2009                              Monitoring Period

**2. Cost Estimate of major project elements including the identification of major funding sources.**

**See Attached**

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Peck Water Conservation Park



Project: Peck Schedule  
Date: Fri 4/1/05

Task: [Blue bar] Progress: [Grey bar] Summary: [Black bar] External Tasks: [White bar] Deadline: [Green arrow]

Split: [Dotted bar] Milestone: [Diamond] Project Summary: [Grey bar] External Milestone: [Diamond]

Peck Water Conservation Park

ID	Task Name	Duration	Start	Finish	2005												2006												2007											
					M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M											
71	Peck Park Bridge	570 days	Mon 11/1/04	Mon 1/8/07	[Summary bar]																																			
72	Conceptual planning	71 days	Mon 11/1/04	Mon 2/7/05	[Progress bar] Amigos de los Rios, City of El Monte, Community																																			
73	CEQA/NEPA	46 days	Tue 11/1/05	Tue 1/3/06	[Progress bar] Amigos de los Rios																																			
74	Construction drawings	68 days	Tue 11/1/05	Thu 2/2/06	[Progress bar] Amigos de los Rios																																			
75	Permitting	23 days	Wed 3/1/06	Fri 3/31/06	[Progress bar] Amigos de los Rios, City of El Monte, Los Angeles County, Army Corps of Engine																																			
76	Construction	133 days	Mon 5/1/06	Wed 11/1/06	[Progress bar] Amigos de los Rios, City of El M																																			
77	Final inspection	0 days	Fri 12/1/06	Fri 12/1/06	[Milestone diamond] 12/1																																			
78	Grand Opening	0 days	Mon 1/8/07	Mon 1/8/07	[Milestone diamond] 1/8																																			

Project: Peck Schedule  
Date: Fri 4/1/05

Task Progress Summary External Tasks Deadline

Split Milestone Project Summary External Milestone

**Cost Estimate Sheet**

<b>Proposal Title: Integrated Regional Water Management Plan (Prop 50, Ch.8)</b>			
<b>Project Title: Peck Water Conservation Park Restoration</b>			
<b>Budget Category</b>	<b>Non-state Share (Funding Match) in \$ K</b>	<b>State Share (Grant Funding) in \$ K</b>	<b>Total in \$ K</b>
a Direct Project Administration Costs	\$ 50	\$ 450	\$ 500
b Land Purchase/Easement			
c Planning/Design/Engineering/Environmental Documentation	\$ 15.6	\$ 140	\$ 156
d Construction/Implementation			
<i>Bridge/Trail Connection</i>	\$ 140	\$ 1,260	\$ 1,400
<i>Underpass</i>	\$ 175	\$ 1,575	\$ 1,750
<i>Greening</i>	\$ 405	\$ 3,645	\$ 4,050
<i>Habitat Restoration</i>	\$ 2,200	\$ -	\$ 2,200
e Environmental Compliance/Mitigation/Enhancement			
f Project Summary [Sum a through e for each column]	\$ 2,986	\$ 7,070	\$ 9,556
g Construction Administration	\$ 60	\$ 540	\$ 600
h Other			
<i>Monitoring/Adaptive Management Plan during construction</i>	\$ 15	\$ 135	\$ 150
<i>Permitting</i>	\$ 1.5	\$ 13.5	\$ 15
i Construction/Implementation Contingency			
j Grant Total [Sum f through i for each column]	\$ 3,062	\$ 7,759	\$ 10,821
Source of funds for Non-State Share (Funding Match)			

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**Lead Agency Information**

Agency Name: Los Angeles County Flood Control District	
Address: 900 South Fremont Ave	
Contact Name: William Saunders	
Telephone: 626-458-6187	E-Mail: wsaunder@ladpw.org
Fax: 626-979-5445	Web Site: www.ladpw.org

**Summary of Proposed Project Information**

Project Title: Rio Hondo Coastal Spreading Grounds Vertical Drains	
Proposed Start Date: July 2007	Proposed Completion Date: November 2007
Proposed CEQA Completion Date: June 2007	
Location (Long. & Lat.): Lat 33° 58' 15" Long 118° 07' 58"	Sub Watershed: San Gabriel
Project Description: Currently, two of the Rio Hondo Spreading Grounds westside basins have impermeable soil layers below them. The purpose of this project is to construct 7 vertical trenches (6 feet wide, 100 feet long, 30-feet deep) in the west side basin Nos. 9 and 10. These trenches would be filled with permeable material to improve percolation of storm water runoff and recycled water.	
Primary Objectives Addressed by the Project: Improved groundwater recharge in the basins using recycled water and storm runoff that would otherwise be lost to the ocean. The project will improve the reliability of our groundwater supply in the Central Basin.	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$50,000	\$100,000	<input checked="" type="checkbox"/> In Kind <u>\$150,000</u>
Construction & Materials		\$900,000	<input checked="" type="checkbox"/> Cash <u>\$ 99,000</u>
Other (Describe): Contingency		\$90,000	<input type="checkbox"/> Other Grants \$ _____
Totals	\$50,000	\$1,090,000	\$249,000



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Estimated Total Budget (Request & Match): \$ 1,140,000  
Estimated Annual O & M Budget: \$ 60,000

1. How does your project develop or conserve local water resources?

By constructing the 7 vertical drain trenches and backfilling them with permeable soil in basins 9 and 10, more water can be conserved at the facility. The trenches will allow for the storm flows to effectively percolate through the impermeable soil layers in these basins and recharge the underlying aquifers. An additional 910 acre-feet of water worth \$296,660 is anticipated to be percolated into the local aquifers annually as a result of this project which will augment the local groundwater supply.

2. How does this project address water reliability?

This project will increase the recharge of recycled water and storm runoff (that would otherwise be wasted to the ocean) into the underlying aquifers. The augmented groundwater storage will provide reliable groundwater supply in the Central Basin. This groundwater basin supplies one third of the water supply to the local residents.

3. How does your project protect, improve or enhance water quality?

This project does not improve or degrade water quality.

4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)

Overall, the project improves the District's ability to increase the amount of water recharged and conserved. The water conservation benefits achieved by this project will aid in reducing the demand for imported water for Southern California.

5. What is the status of your project readiness? (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	√ 12-20-04	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input type="checkbox"/>	√ Not req'd
Preliminary Plans	<input type="checkbox"/>	√ 7-2006	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	√ 6-2007	<input type="checkbox"/>
Permits	<input type="checkbox"/>	√ 6-2007	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	√ 1-2007	<input type="checkbox"/>

6. Identify the regional or strategic planning document that identifies this project.

This project is part of the District's capital improvement plan to improve our water conservation facilities.

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7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

The Flood Control District and the Water Replenishment District (responsible agency for recharging the Central Basin) are committed to improving groundwater recharge within the underlying aquifers to improve the reliability of our groundwater supply.

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?

The project is not in an area of special biological significance, therefore the project will not have detrimental effects.

9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.

Project success will be measured by the increased amount of recycled and storm water percolated into the local aquifers. The District shares this information with local water agencies on a quarterly basis and publishes this information on its website.

10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?

The District maintains an operating plan for all its facilities, including Rio Hondo Spreading Grounds. The vertical drain improvements in basins 9 and 10 will be incorporated into the operating plan and that plan will be revised as needed.

11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.

Water conservation figures are kept and shared with outside agencies and published on the Districts' website.

12. Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantages community?

This project provides a direct benefit to disadvantage communities in that greater amounts of storm runoff and recycled water recharged into the local aquifers will enable the cost of drinking water to remain relatively inexpensive. Larger amounts of imported water at higher prices eventually hurt the disadvantaged consumer. Pico Rivera and Montebello, which surround the facility have average household incomes slightly below the overall County average. The District is providing the 22% matching funds for the project. Since matching funds are

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provided by the District, there will be no hardship to any disadvantaged community.

13. What percentage of the project funding has been secured?

The District has secured 22% of the project funding from its capital improvement budget.

14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.

The Flood Control District owns and operates the Rio Hondo Coastal Spreading Grounds. As such, it is responsible for maintenance and periodic improvement of the facility to better accomplish its water conservation goals and objectives. The Water Replenishment District is the responsible agency for recharging the Central Basin by regulating groundwater pumping wells and implementing cooperative ventures to increase groundwater availability and reliability to the public.

15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.

This project will address long term regional water management needs by giving the District increased flexibility to percolate extra storm, imported, and recycled water from the river which has historically been limited by underlying layers of clay. If the project is not implemented then the percolation rate at the facility will remain at its current recharge rate and available fresh water within the river will be wasted to the ocean. This being the case, the region will continue to rely on increased imported water usage.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

1. Project Schedule/Timeline including all major milestones.
2. Cost Estimate of major project elements including the identification of major funding sources.



# RIO HONDO COASTAL SPREADING GROUNDS VERTICAL DRAINS PROJECT

## EXHIBIT C COST ESTIMATE FORMAT

Complete the following table for each project contained within the proposal and a table showing the estimated costs for the entire proposal.

Cost Estimate Sheet				
Proposal Title:				
Project Title: RIO HONDO COASTAL SPREADING GROUNDS VERTICAL DRAINS				
	Budget Category	Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	<b>\$48,000</b>		<b>\$48,000</b>
(b)	Land Purchase/Easement			
(c)	Planning/Design/Engineering/Environmental Documentation	<b>\$2,000</b>		<b>\$2,000</b>
(d)	Construction/Implementation	<b>\$90,000</b>	<b>\$810,000</b>	<b>\$900,000</b>
(e)	Environmental Compliance/Mitigation/Enhancement			
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$140,000</b>	<b>\$810,000</b>	<b>\$912,000</b>
(g)	Construction Administration	<b>\$100,000</b>		<b>\$100,000</b>
(h)	Other			
(i)	Construction/Implementation Contingency (10%)	<b>\$9,000</b>	<b>\$81,000</b>	<b>\$90,000</b>
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$249,000</b>	<b>\$891,000</b>	<b>\$1,140,000</b>
Source of funds for Non-State Share (Funding Match)		Los Angeles County Flood Control District		

## Budget Category Explanations

- (a) *Direct Project Administration Costs* – Includes: salaries, wages, fringe benefits, office supplies, and equipment needed to support the project, staff travel costs (at or below the rate allowed for unrepresented State employees), and preparation of required quarterly and final reports. Actual costs directly related to the project will be reimbursed.
- (b) *Land Purchase/Easement* – If land acquisition is to be included in the Non-State share, include whether it is a proposed acquisition, or if the land is already owned by an IRWM Plan participant. Prior purchase of land can be included in an applicant's funding match if purchased after November 5, 2002. Land acquisition costs will not be considered a reimbursable item if purchased prior to the effective date of the grant agreement. For land purchased prior to the date of the application include the date of purchase and purchase price of the land. Costs for easements will be handled similarly as for land purchases.
- (c) *Planning/Design/Engineering/Environmental Documentation* – Differentiate costs between consulting services and/or agency/organization staff costs for these efforts. Planning costs include: planning efforts, reconnaissance studies, feasibility studies, and preliminary reports. Design and engineering costs include: conceptual, preliminary and final design efforts, geotechnical reports, hydraulic studies, water quality investigations and efforts, and other engineering types of work. Include the costs of bid preparation and processing here. Environmental documentation costs include all efforts involved in the CEQA or NEPA process up to the point of the Notice of Determination, Finding of no Significant Impact, or Record of Decision.
- (d) *Construction/Implementation* – Includes the summary of labor, materials, equipment purchases and/or rentals. After bids are received these costs will be the actual construction cost awarded to the low bidder. The construction or implementation costs for Pilot Projects should be included here.
- (e) *Environmental Compliance/Mitigation/Enhancement* – Includes those costs required by a CEQA/NEPA document to offset any potential damages caused by the proposal. If these costs are included in the contract awarded for construction or implementation of the proposal, differentiate such costs for purposes of this budget.
- (f) *Project Summary* – The summation of the costs for items (a) through (e) above.
- (g) *Construction Administration* – Includes those costs required to supervise and administer the construction or implementation of the project(s). Differentiate costs between consulting services and agency staff costs to perform this work.
- (h) *Other* – Includes costs for legal services, license fees, permits, any implementation verification costs, and any monitoring and assessment costs required during the construction/implementation of the proposal. Do not include monitoring and assessment costs for efforts required after construction/implementation of the proposal is complete. These costs are considered to be operation and maintenance costs and are not reimbursable.
- (i) *Construction/Implementation Contingency* – Includes any contingency costs for the construction/implementation of the proposal. Specify the percentage used for this contingency cost. For all other contingency costs, i.e. design, land purchase, etc., include those contingencies in the appropriate cost category.

For the Step 2 submittal, detail will be expected for each of the above cost categories explaining how the total cost was derived.

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**Lead Agency Information**

Agency Name: <b>Los Angeles County Flood Control District (District)</b>	
Address: <b>900 South Fremont Avenue, Alhambra, CA 91803</b>	
Contact Name: Youn Sim	
Telephone: 626-458-6137	E-Mail: <a href="mailto:ysim@ladpw.org">ysim@ladpw.org</a>
Fax: 626-979-5436	Web Site: <a href="http://www.ladpw.org">www.ladpw.org</a>

**Summary of Proposed Project Information**

Project Title: Seawater Barrier Water Supply Facilities Improvements	
Proposed Start Date: January 2006	Proposed Completion Date: Dec. 2006
Proposed CEQA Completion Date: July 2005	
Location (Long. & Lat.): W 118° 06' 08.5" & N 33° 46' 25.2"	Sub Watershed: Los Cerritos Channel and Alamitos Bay Water Management Area and San Gabriel Watershed

**Project Description:**

The proposed project consists of renovating the water supply system to enhance the reliability of water supply to the existing Alamitos seawater barrier project. The barrier project serves a dual purpose: 1) protecting groundwater resources from seawater intrusion and 2) recharging the groundwater reserve in the Central Groundwater Basins of the Los Angeles Coastal Plain and the East Coastal Plain area of Orange County.

After experiencing a series of water supply pipeline and appurtenance failures due to aging and active corrosion, recharging could not take place for an extensive period of time. The District subsequently hired a consultant to perform a comprehensive evaluation of the barrier's pipelines, valves, and connections. The resulting report recommended a complete renovation for each segment of the water supply system.

This project will construct a cathodic protection system to prevent corrosion on over five miles of existing water supply pipeline segments. Cathodic protection consists of connecting a series of magnesium anodes to the pipe surface to prevent active corrosion of the pipe. The total cost of the project is estimated at \$2.6 million.

**Primary Objectives Addressed by the Project:**

- The project proposes a complete renovation of the current water supply system to enhance the reliability of future water supply to the barrier projects to protect groundwater resources and increase groundwater reserve for future use.
- The proposed renovation will help prevent future operational failures to the seawater barrier.
- The proposed renovation will reduce long-term operation and maintenance costs. Interrupted operation has resulted in damage to, and a significant reduction in available groundwater resources. These losses to groundwater resources have resulted in millions of dollars in recovery costs.

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<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input checked="" type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants			<input type="checkbox"/> In Kind \$ 200,000
Construction & Materials		\$2,600,000 (contract)	<input type="checkbox"/> Cash \$ 260,000 (Construction Contingency)
Other (Describe)			<input type="checkbox"/> Other Grants \$ _____
Totals		\$2,600,000	\$ 460,000

Estimated Total Budget (Request & Match): \$ 3,060,000  
Estimated Annual O & M Budget: \$ 20,000

**1. How does your project develop or conserve local water resources?**

This project will enable the Los Angeles County Flood Control District (District) to effectively operate the Alamitos Barrier Project and prevent future pipeline failures. The project is critical since groundwater from the West and Central Groundwater Basins supplies approximately 30% of the drinking water demand in the coastal area of Los Angeles and Orange Counties. The seawater barrier conserves groundwater resources by preventing seawater intrusion and recharging groundwater basin.

**2. How does this project address water reliability?**

Extensive corrosion occurring on the barrier water supply pipelines caused a series of pipe failures which hinders the barrier's ability to protect the groundwater basin from seawater intrusion. This project will enable a more efficient operation of the seawater barrier and ensure a reliable source of drinking water for years to come.



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**3. How does your project protect, improve or enhance water quality?**

When pipe failures occur due to the corrosion of supply lines, barrier operations must be suspended until the pipes can be repaired. Consequently, fresh groundwater resources are exposed to seawater intrusion, sometimes for periods of several months at a time. This exposure damages a major drinking water source. This project will prevent such failures and facilitate reliable, sustained operation of the Alamitos Barrier Project to protect water quality in the basin.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

Groundwater Management: The efficient management of groundwater resources is maximized by preventing contamination by seawater intrusion.

Imported Water: By maximizing operations, the District will reduce the dependency on imported water (State Water Project and Colorado River water).

Water Recycling: A water recycling plant was recently constructed in the City of Long Beach to supply recycled water to the barrier's injection wells. The barrier will start receiving recycled water on July 1, 2005.

Water and wastewater treatment: The plant uses the tertiary treatment processes of Microfiltration and Reverse Osmosis filtrations to reach drinking water quality standards.

**5. What is the status of your project readiness? (check as appropriate)**

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/> Mar. 2003	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> N/A
Preliminary Plans	<input checked="" type="checkbox"/> Dec. 2004	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/> Jul 2005	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/> Sept2005	<input type="checkbox"/>
Construction Drawings	<input checked="" type="checkbox"/> Mar. 2005	<input type="checkbox"/>	<input type="checkbox"/>

**6. Identify the regional or strategic planning document that identifies this project.**

The Alamitos Barrier Project Joint Management Committee (ABPJMC) is currently pursuing this project. They identified an urgent need for a corrosion protection system for the Alamitos Barrier to protect groundwater resources. The design and construction of the cathodic protection system was approved in the FY 02-03 and FY 03-04 ABPJMC annual meetings. The project is also documented in the ABPJMC annual report.

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7. **Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The ABPJMC consists of the District, Orange County Water District (OCWD), Water Replenishment District of Southern California, Long Beach Water Company, and Southern California Water Company. Each agency in the ABPJMC has approved this project. The District and OCWD have financially supported the design phase.

8. **If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

This project is not in an area of special biological significance and will have no detrimental biological impacts.

9. **How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

The cathodic protection system includes 106 testing stations that monitor the electrical current in the system. An electrical current is necessary to ensure that the system is providing corrosion protection for the barrier supply lines. The electrical current will be measured at each testing station to verify that it meets design specifications. Maintenance personnel will test each testing station every 6 months.

10. **Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

Cathodic protection systems require regular maintenance to provide proper corrosion protection. As part of our contract, the contractors will prepare a detailed maintenance plan after they install the system. The maintenance plan can be modified as necessary in the future to ensure system functionality.

11. **How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**

The scheduled maintenance record obtained from the 106 testing stations will be made available to any agency upon request. Pipe failure records will also be available after installation of the cathodic protection system to demonstrate the improved water supply line reliability.

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- 12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?**

The project does not provide a direct benefit to disadvantage communities. The District is providing the 15% matching funds for the project.

- 13. What percentage of the project funding has been secured?**

The District has secured 15% of the project funding.

- 14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.**

The Alamitos Barrier Project is jointly managed by its stakeholders through the ABPJMC. ABPJMC includes public water agencies and private water company representing the interests of both public and privates sectors. The proposed project was endorsed by the ABPJMC based on its benefit to maintain the water supply to the barrier to protect the Central basin groundwater resources. The design plans have been completed through a joint review among the committee members.

- 15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

The Alamitos Barrier Project protects the groundwater resources in the Central Groundwater Basin. More than 30 percent of the central basin area depends on the groundwater as a drinking water source. Therefore, the proposed project helps conserve the drinking water source against contamination/degradation due to seawater intrusion. If the project is not implemented, the water supply system to the barrier will be degraded soon as it has failed several times during the past few years due to extensive corrosion on the water supply pipelines. Consequently, the barrier will not perform as it is intended to, which will eventually allow the contamination/degradation of the drinking water sources. The service area will then drastically rely on much more expensive imported water from State Water Project or Colorado River. It will pose a significant financial burden on the service area.

- 16. Disadvantaged Communities: What percentage of your service region is disadvantaged and how does this compare to the total regional population?**

The proportion of the disadvantaged communities within the service region (Central Basin) is 35 percent in terms of area and 42 percent in terms of population.

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
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**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones.  
SEE ATTACHMENT A
  
2. Cost Estimate of major project elements including the identification of major funding sources.  
SEE ATTACHMENT B

**ATTACHMENT A - Schedule**

**Project Title: Seawater Barrier Water Supply Facilities Improvements**

	2004												2005												2006											
	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec					
<b>Task 1 - Design</b>																																				
1.1 Preliminary investigation																																				
1.2 Field Investigation																																				
1.3 Design 25%																																				
1.4 Design 50%																																				
1.5 Design 75%																																				
1.6 Preliminary Submittal																																				
1.7 Final Submittal																																				
1.8 Final Design Plans and Specification completion																																				
<b>Task 2 - Environmental Documents / Permits</b>																																				
2.1 CQEA Clearance																																				
2.2 Right of Way /Easement Research																																				
2.3 Local City permits																																				
2.4 Utility Investigation																																				
2.5 Final Review																																				
<b>Task 3 - Construction **</b>																																				
3.1 Advertisement document preparation																																				
3.2 Construction Advertisement																																				
3.3 Construction Bids																																				
3.4 Award																																				
3.5 Project Construction																																				
3.6 Final Acceptance																																				

**\*\* The construction schedule to be changed by the grant award schedule**

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
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**ATTACHMENT B**  
Seawater Barrier Water Supply Facilities Improvements

Cost Estimate Sheet				
Project Title: Seawater Barrier Water Supply Facilities Improvements				
Budget Category		Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	\$30,000	0	\$30,000
(b)	Land Purchase/Easement	0	0	0
(c)	Planning/Design/Engineering/Environmental Documentation	\$120,000	0	\$120,000
(d)	Construction/Implementation	0	\$2,600,000	\$2,600,000
(e)	Environmental Compliance/Mitigation/Enhancement	0	0	0
(f)	Project Summary [Sum (a) through (e) for each column]	\$150,000	\$2,600,000	\$2,750,000
(g)	Construction Administration	\$50,000	0	\$50,000
(h)	Other	0	0	0
(i)	Construction/Implementation Contingency	\$260,000	0	\$260,000
(j)	Grant Total [Sum (f) through (i) for each column]	\$460,000	\$2,600,000	\$3,060,000
Source of funds for Non-State Share (Funding Match)		Flood Control Tax Assessment		

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
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**Lead Agency Information**

Agency Name: Los Angeles County Flood Control District (District)	
Address: 900 S. Fremont Ave., Alhambra, CA 91801	
Contact Name: Ken Zimmer	
Telephone: 626 – 458-6186	E-Mail: <a href="mailto:kzimmer@ladpw.org">kzimmer@ladpw.org</a>
Fax: 626-979-5436	Web Site: <a href="http://www.ladpw.org">www.ladpw.org</a>

**Summary of Proposed Project Information**

Project Title: San Gabriel River – Regional Spreading Grounds Telemetry Systems	
Proposed Start Date: October 2006	Proposed Completion Date: July 2007
Proposed CEQA Completion Date: August 2006	
Location: See Project Description	Sub Watershed: San Gabriel River
<p>Project Description:</p> <p>The project consists of telemetry systems to be installed at various groundwater recharge facilities for remote monitoring and operations. The telemetry systems will be installed at the following spreading grounds: Walnut (Lat 34° 4'25" Long 117° 52' 27") ; Forbes (34° 7' 6" &amp; 117° 50' 2"); Ben Lomond (34° 6' 9" &amp; 117° 52' 58"), Citrus (34° 6' 31" &amp; 117° 53' 39"); Irwindale/Manning (34° 5' 55" &amp; 117° 55' 54"); Little Dalton (34° 9' 17" &amp; 117° 50' 18"); Live Oak (34° 7' 16" &amp; 117° 44' 45"); Santa Fe (34° 7' 47" &amp; 117° 57' 57"); Eaton Wash (34° 9' 52" &amp; 118° 5' 8"); Peck (34° 5' 54" &amp; 118° 1' 6"); Eaton (34° 7' 32" &amp; 118° 4' 54"); San Dimas (34° 7' 52" &amp; 117° 46' 33"); Santa Fe Diversion (34° 6' 46" &amp; 117° 58' 23"); Sawpit (34° 9' 36" &amp; 117° 54' 25"); Santa Anita (34° 10' 2" &amp; 118° 1' 25"); and San Gabriel Canyon (34° 9' 18" &amp; 117° 54' 51"). The system will include:</p> <ul style="list-style-type: none"> <li>• Transducers to measure: basin water levels, percolation rates, and storm water flows entering the facility.</li> <li>• Monitoring and control units to log and transmit the electronically measured data and to initiate gate operations.</li> <li>• Radio and repeater systems to transmit the real time data to the District's telemetry base station.</li> </ul>	
<p>Primary Objectives Addressed by the Project:</p> <p>The telemetry system will provide for increased efficiency of the various recharge facilities and enable the District to increase conservation of storm runoff. Real time monitoring of storm water flows will be gained by this project for better management of storm water for water conservation and flood control purposes. This telemetry system will improve our conservation program and increase groundwater storage in the Main San Gabriel and Central (groundwater) Basins.</p>	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Mngmt*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input type="checkbox"/> Water Quality Protection and Impvmtt*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**INTEGRATED REGIONAL WATER MANAGEMENT PLAN (Prop 50, Ch. 8)  
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**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$220,000	\$	<input type="checkbox"/> In Kind <u>\$220,000</u>
Construction & Materials		\$ 1,940,000	<input type="checkbox"/> Cash
Other (Construction Administration)	\$120,000		<input type="checkbox"/> Other Grants \$ _____
Totals		\$ 1,940,000	\$ 340,000

Estimated Total Budget (Request & Match): \$ 2,280,000  
Estimated Annual O & M Budget: \$ 100,000

1. How does your project develop or conserve local water resources?

The project will improve water conservation efficiency by remotely monitoring and operating various groundwater recharge facilities. Real time data of storm flows in the channels and spreading basins will be monitored to better manage the District's flood control and water conservation system.

2. How does this project address water reliability?

The telemetry systems will enable the District to perform it's water conservation operations during storm events based on real time information. This will enable the District to optimize it's recharge operations with respect to the dynamic conditions occurring during storm events. This will enable the District to maximize capture of storm water runoff for recharge into the aquifers below the spreading ground facilities. This will improve storage in the groundwater basin that provides one third of the local water supply.

3. How does your project protect, improve or enhance water quality?

The telemetry system will enable the District to maximize its capture of storm runoff for to increase the amount of water conserved in our spreading operations. This will concurrently reduce the amount of untreated storm flows going to the ocean.

In the case of a hazardous waste spill into a channel, the telemetry system would enable the District to almost instantaneously close the spreading grounds avoiding possible contamination into the groundwater supply. In some cases the grounds could be closed, yet detain the concrete lined channel to aide cleanup efforts. Without the telemetry system the facility could not be operated until personnel were dispatched and arrived at the facility. In addition, the ability to make increased changes to the water conservation facilities with the proposed telemetry system will allow the District to work with the local Vector Control Agency to minimize favorable conditions for water born insects.



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4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)

The telemetry system will enable the District to increase the amount of storm flows captured for recharge into the aquifers below the spreading basins increasing the supply of groundwater.

5. What is the status of your project readiness? (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/> 05/2005	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/> Owned	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/> 9/2005	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/> 8/2005	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/> 9/2005	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input checked="" type="checkbox"/> 10/2005	<input type="checkbox"/>

6. Identify the regional or strategic planning document that identifies this project.

This project is part of the District's capital improvement plan to improve our water conservation facilities.

7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

The District will be the sole agency to develop and construct this project. However, this project would benefit a number of local water agencies including the Main San Gabriel Basin Watermaster.

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?

The project is not in an area of special biological significance; therefore the project will not have detrimental effects.

9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.

Project success will be measured by the increased amount of storm water percolated into the local aquifers. This data is provided to the local water agencies on a periodic basis and published in the District's web page.

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10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?

The District maintains an operating plan for all facilities, including the spreading grounds that will be instrumented with this telemetry system. The Telemetry system improvements in each spreading basin will be incorporated into their operating plans and it will be revised as needed.

11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.

The telemetry system has an extensive database that records all information from the facilities. This data is typically used by the County to provide information to various water agencies.

12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?

The project does not provide a direct benefit to disadvantage communities. The District is providing the 15% matching funds for the project.

13. What percentage of the project funding has been secured?

The District has secured 15% of the project funding.

14. Stakeholder Involvement: Please describe the stakeholder involvement in this project including provisions for on-going participation.

We have worked with the Main San Gabriel Watermaster to determine the need for more accurate flow data, key locations for stream gaging, and more aggressive water conservation operations. We will continue to work with the Watermaster, and other agencies such as San Gabriel Valley Metropolitan Water District, Metropolitan Water District, and Water Replenishment District which rely on accurate data for water rights accounting, and other studies.

15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.

The remote monitoring and operation of the spreading grounds along with new key stream gaging locations will provide real time data to enable the county to better manage storm flows for water conservation and flood control. The ability to monitor the spreading grounds remotely will allow the county to aggressively and safely pursue maximum water conservation at these facilities. The need to physically visit these facilities

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will be reduced by the telemetry system and therefore reduce automotive emissions in the region. If the project is not implemented, the county either cannot pursue aggressive water conservation at these facilities, or there will be an increase of physical visits. The increased visits will add to traffic congestion, automotive emissions, and the added salary of the workers required to monitor these facilities.

16. Disadvantage Communities: What percentage of your service region is disadvantaged and how does this compare to the total regional population?

The project provides a direct benefit to the Main San Gabriel, Raymond, Wayhill, and San Dimas Basins which are recipients of the native waters from this watershed. The disadvantaged communities within the service areas of these basins may anticipate benefits in the form of reduced water usage fees or forgone cost increases. The percent of disadvantaged communities which will benefit will be 44% of the surrounding areas.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones.
2. Cost Estimate of major project elements including the identification of major funding sources.

## San Gabriel River – Regional Spreading Grounds Telemetry Systems

### Project Schedule – Major Milestones

Design Concepts .....	05/18/05
Draft Design Plans and Specs .....	09/28/05
Final Design and Specs .....	10/19/05
Award Project .....	05/01/06
Project Complete .....	05/01/07

**SAN GABRIEL RIVER – REGIONAL SPREADING GROUNDS TELEMETRY SYSTEMS**

**EXHIBIT C  
COST ESTIMATE FORMAT**

Complete the following table for each project contained within the proposal and a table showing the estimated costs for the entire proposal.

Cost Estimate Sheet				
Proposal Title:				
Project Title: San Gabriel River – Regional Spreading Grounds Telemetry Systems				
Budget Category		Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	<b>\$75,000</b>		<b>\$75,000</b>
(b)	Land Purchase/Easement			
(c)	Planning/Design/Engineering/Environmental Documentation	<b>\$145,000</b>		<b>\$145,000</b>
(d)	Construction/Implementation		<b>\$1,600,000</b>	<b>\$1,600,000</b>
(e)	Environmental Compliance/Mitigation/Enhancement			
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$220,000</b>	<b>\$1,600,000</b>	<b>\$1,820,000</b>
(g)	Construction Administration	<b>\$120,000</b>		<b>\$120,000</b>
(h)	Other			
(i)	Construction/Implementation Contingency (20%)		<b>\$340,000</b>	<b>\$340,000</b>
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$340,000</b>	<b>\$1,940,000</b>	<b>\$2,280,000</b>
Source of funds for Non-State Share (Funding Match)		Los Angeles County Flood Control District		

## Budget Category Explanations

- (a) *Direct Project Administration Costs* – Includes: salaries, wages, fringe benefits, office supplies, and equipment needed to support the project, staff travel costs (at or below the rate allowed for unrepresented State employees), and preparation of required quarterly and final reports. Actual costs directly related to the project will be reimbursed.
- (b) *Land Purchase/Easement* – If land acquisition is to be included in the Non-State share, include whether it is a proposed acquisition, or if the land is already owned by an IRWM Plan participant. Prior purchase of land can be included in an applicant's funding match if purchased after November 5, 2002. Land acquisition costs will not be considered a reimbursable item if purchased prior to the effective date of the grant agreement. For land purchased prior to the date of the application include the date of purchase and purchase price of the land. Costs for easements will be handled similarly as for land purchases.
- (c) *Planning/Design/Engineering/Environmental Documentation* – Differentiate costs between consulting services and/or agency/organization staff costs for these efforts. Planning costs include: planning efforts, reconnaissance studies, feasibility studies, and preliminary reports. Design and engineering costs include: conceptual, preliminary and final design efforts, geotechnical reports, hydraulic studies, water quality investigations and efforts, and other engineering types of work. Include the costs of bid preparation and processing here. Environmental documentation costs include all efforts involved in the CEQA or NEPA process up to the point of the Notice of Determination, Finding of no Significant Impact, or Record of Decision.
- (d) *Construction/Implementation* – Includes the summary of labor, materials, equipment purchases and/or rentals. After bids are received these costs will be the actual construction cost awarded to the low bidder. The construction or implementation costs for Pilot Projects should be included here.
- (e) *Environmental Compliance/Mitigation/Enhancement* – Includes those costs required by a CEQA/NEPA document to offset any potential damages caused by the proposal. If these costs are included in the contract awarded for construction or implementation of the proposal, differentiate such costs for purposes of this budget.
- (f) *Project Summary* – The summation of the costs for items (a) through (e) above.
- (g) *Construction Administration* – Includes those costs required to supervise and administer the construction or implementation of the project(s). Differentiate costs between consulting services and agency staff costs to perform this work.
- (h) *Other* – Includes costs for legal services, license fees, permits, any implementation verification costs, and any monitoring and assessment costs required during the construction/implementation of the proposal. Do not include monitoring and assessment costs for efforts required after construction/implementation of the proposal is complete. These costs are considered to be operation and maintenance costs and are not reimbursable.
- (i) *Construction/Implementation Contingency* – Includes any contingency costs for the construction/implementation of the proposal. Specify the percentage used for this contingency cost. For all other contingency costs, i.e. design, land purchase, etc., include those contingencies in the appropriate cost category.

For the Step 2 submittal, detail will be expected for each of the above cost categories explaining how the total cost was derived.

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**Lead Agency Information**

Agency Name: Los Angeles County Flood Control District	
Address: 900 South Fremont Avenue, Alhambra CA 91803	
Contact Name: Travis Perry	
Telephone: (626) 458-4319	E-Mail: tperry@ladpw.org
Fax: (626) 457-1526	Web Site: ladpw.org/wmd

**Summary of Proposed Project Information**

Project Title: South Compton Creek Greenway and Bike Trail – Phase 1	
Proposed Start Date: September 2005	Proposed Completion Date: August 2007
Proposed CEQA Completion Date: December 2005	
Location (Lat/Long): 33° 52' 14"/ 118° 12' 50"	Sub Watershed: Compton Creek
<p><u>Project Description:</u> The 4,000-foot South Compton Creek Greenway and Bike Trail - Phase 1 project (see Exhibit A) extends from the LARIO Trail along the Los Angeles River to the intersection of Del Amo Boulevard and Compton Creek. The project includes greening of the Compton Creek levee through improved native landscaping and the addition of habitat, interpretive and educational signage, construction of underpasses at Del Amo Boulevard and the 710 freeway, and striping of the trail. The design and construction costs for the Phase 1 project are approximately \$1.4 million.</p> <p><u>Background</u> The Phase 1 greenway is part of a three-phase greenway project along Compton Creek's east levee. The three-phase project will connect the LARIO Trail to the City of Compton's bike path and greenway at Greenleaf Avenue. Phase 2 of the project, which extends from Del Amo Boulevard to just south of the 91 freeway, is currently under construction and is scheduled to be completed by August 2005. This phase is being constructed first because ease of construction and previously secured funding for this area. Phase 3 of the project extends from south of the 91 freeway to Greenleaf Avenue and currently has partial funding.</p> <p><u>Primary Objectives Addressed by the Project:</u> The district will address several primary objectives by constructing this project. First, by creating a greenway using native landscaping, this project will provide a habitat corridor along one of the few earthen bottom creeks remaining in the urban Los Angeles River Watershed. The project will also be used as an educational opportunity through the creation of interpretive and educational signage along the project length. Although access to the area is currently limited, environmental groups are already giving tours in the project area because of the unique habitat and wildlife found there.</p> <p>By creating a trail between the City of Compton's Bike Path and the LARIO Trail along the Los Angeles River, the project will provide a critical regional link for the Compton Creek Watershed and surrounding areas. In addition, the project will provide access to open space and habitat improvements along the Los Angeles River corridor, including the Dominguez Gap Wetlands project near the confluence of Compton Creek.</p>	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input checked="" type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*

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<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel	\$200,000		<input type="checkbox"/> In Kind \$ <u>300,000</u>
Construction		\$700,000	<input type="checkbox"/> Cash \$ <u>200,000</u>
Materials			<input type="checkbox"/> Other Grants \$ _____
Other (Describe)			
Totals	\$200,000	\$700,000	\$500,000

Estimated Total Budget (Request & Match): \$ 1.4 million  
Estimated Annual O & M Budget: \$ 10,000

- 1. How does your project develop or conserve local water resources?**  
Although initially the native plants will need irrigation, once established, the native landscaping will be self-sustaining and require little or no irrigation. Since this project will also maintain the current level of permeable surfaces, the project area's recharge potential will also be maintained.
- 2. How does this project address water reliability?**  
Although the project will not directly impact water reliability, the project will create little or no demand on the current water system.
- 3. How does your project protect, improve or enhance water quality?**  
The landscaped area will filter and recharge rainfall within the project area. The project will also create public education opportunities through the use of interpretive signage, river tours given by environmental groups, and the use of the project area as an outdoor classroom by local schools. These educational activities will improve awareness of water quality issues in the Compton Creek watershed, resulting in improved water quality overall.
- 4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**



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The project will incorporate **Ecosystem Restoration and Environmental and Habitat Protection and Improvement** through the establishment of native plants similar to those that would have been found historically at the site and consistent with the Los Angeles River Master Plan (LARMP) Landscaping Guidelines and Plant Palette. **Recreation and Public Access** will be incorporated into the project by opening the previously restricted Los Angeles County Flood Control District right of way for public access and through the creation of the trail that will be used for recreational purposes. The project is consistent with the City of Compton’s bike trail, the Compton Creek Watershed Management Plan, established recreational and habitat corridors, and with larger **Watershed Planning** efforts in the project area.

**5. What is the status of your project readiness? (check as appropriate)**

<b>Item</b>	<b>Complete</b>	<b>In process</b>	<b>Not initiated</b>
Conceptual Plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6. Identify the plan(s) that include this project.**

The Los Angeles and San Gabriel Rivers Watershed Council is currently developing the Compton Creek Watershed Management Plan (WMP). This plan includes the South Compton Creek Bike Trail project and identifies the earthen bottom portion of Compton Creek as a critical area within the Compton Creek Watershed.

Also, the LARMP, adopted in 1996, formulated a multi-objective program for the Los Angeles River. The Master Plan advocates multiuse projects that involve landscaping while enhancing habitat and recreation resources and improving water quality along the River and major tributaries, including Compton Creek. The LARMP identifies the bikeway project as a potential project for regional connectivity and as a multiuse project that enhances habitat and recreational resources.

Additionally, the City of Compton’s Compton Creek Master Plan (CCMP) is currently being developed in conjunction with the City of Compton’s Compton Creek Task Force and identifies the South Compton Creek Bike Trail as essential for connectivity and as a habitat resource.

**7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

The District will be the lead agency for the project. However, the project will be consistent with and connect to the City of Compton’s greenway and bike path project along Compton Creek. The City has expressed support for the three-

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phase greenway that would create a linkage from the City of Compton to open space along the earthen bottom portion of Compton Creek and to the Los Angeles River corridor improvements.

The Mountains Recreation Conservation Authority has committed funding for and will be the lead on Phase 3 of the greenway project. The State Resources Agency, the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, and the District provided funding for the Phase 2 project.

8. **If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

The project is in a biologically significant area because it is located along the earthen bottom portion of Compton Creek. This area represents one of the few earthen bottom creeks within the urban Los Angeles River Watershed and is one of the few habitat opportunities available within the Compton Creek Watershed. The project will enhance wildlife habitat by planting native flora and fauna.

The landscaping will help to bring awareness of the biological significance of the area and will provide opportunities for the public to observe native species, such as herons, along with plants that currently reside along the project length. This project will provide a rest area for birds migrating along the Pacific Corridor.

The greenway will provide a significant link to the Dominguez Gap Wetlands project that is currently under design. The wetlands project is located just south of Compton Creek's confluence on the Los Angeles River.

The bike trail will provide a connection from Compton Creek to the Los Angeles River, the LARIO Trail, the Long Beach Riverlink project, and other projects along the Los Angeles River Corridor. The project will have not detrimental biological impacts.

9. **How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

The project success will be measured through its use as a public resource. Interpretive and educational signage will be used to educate the public about water and habitat concerns and will be used by schools to enhance educational opportunities. Plant and biological assessments may be made by students in local school programs, such as the MESA (Mathematics, Engineering, and Science Achievement) group that is currently involved in planting native trees and shrubs for the first constructed phase of the project. These assessments could also be used to estimate the project's success.

As part of the Compton Creek WMP, a water quality monitoring programs will be recommended along Compton Creek, including the portion of Compton Creek within the project area.

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10. **Is there an adaptive management plan in place to address post project implementation operational variances?**  
Adaptive Management will be used to ensure the project is operated as efficiently as possible with regard to habitat, landscaping, and recreation. Periodic site surveys will be done to determine sustainability of native plants and to address security and maintenance issues. Re-vegetation and irrigation modifications will be performed as necessary based on site surveys. Site amenities and access points may be modified to address security and maintenance issues while maintaining maximum accessibility for visitors.
11. **How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.**  
The sustainability of the landscaping will be tracked through reports required by the maintenance agreements. Upon request, this information will be provided to interested agencies and organizations.
12. **Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantages community?**  
The project is located within the cities of Carson and Long Beach. These areas are not economically disadvantaged. However, there are areas that will be linked to the project, such as the City of Compton that do have disadvantaged populations. The community immediately surrounding the project area is approximately 23 percent low to moderate income. This is compared to approximately 45 percent of the population of the County of Los Angeles that is low to moderate income. The areas impacted by the project are very park poor and lack public access to open space. The matching funds will be provided by the District and will not pose a hardship to the local jurisdictions.
13. **What percentage of the project funding has been secured?**  
The District has secured 35% of the funding needed for this project.
14. **Stakeholder Involvement: Please describe the stakeholder involvement in this project.**  
A number of stakeholders have been very involved in the completion of this project. The three-phase bike trail and greenway will create a regional linkage that is important to stakeholders both within the Compton Creek Watershed and along the Los Angeles River Corridor. We have received funding for Phase 2 construction from Proposition 12 (the State Resources Agency), Proposition 40 (the Watershed Conservation Authority), and Los Angeles County Flood Control District Funds. The project is identified in the Compton Creek WMP as critical to the overall watershed. The WMP was developed through a comprehensive stakeholder process that included, local community members, governmental agencies, environmental groups, and other community-based organizations.

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15. **Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

The project will address long term regional water management needs by creating educational opportunities along a unique section of waterway within urban Los Angeles County. The project is an important environmental regional need, as it will physically create a linkage from the Los Angeles River to the Compton Creek Watershed. The project will enable the community to connect with important environmental project occurring along the Los Angeles River corridor, such as the Dominguez Gap Wetlands project, and will connect the regional population to one of the few earthen-bottom creeks remaining in urban Los Angeles County. If this project is funded, local funds could then be used to encourage use of the facilities and create additional educational opportunities along the creek.

If the project is not implemented, there will continue to be a lack of connection to this important ecological section of the Compton Creek. There will also continue to be a physical barrier between the LARIO Trail and the City of Compton's bike path.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones and dependencies.
2. Cost Estimate of major project elements including the identification of major funding sources.

**Exhibit B - Tasklist and Timeline**  
**South Compton Creek Greenway and Bike Trail - Phase 1**

	2005				2006								2007											
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
<b>Task 1 - Project Concept Design Phase</b>																								
1.1 Project Review	■	■																						
1.2 Progress Meetings (Monthly)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1.3 Project Site Visit			■	■																				
1.4 DPW Administration/Review			■	■																				
1.5 CEQA Completion				■																				
<b>Task 2 - Detailed Conceptual Design Phase</b>																								
2.1 Kick-off Meeting				■																				
2.2 In-house Design 30%					■	■																		
2.3 Review and comments							■																	
2.4 Design 75%							■	■																
2.5 Review and incorporate comments									■															
2.6 Design 100%									■	■	■													
2.7 DPW Administration/Review											■													
<b>Task 3 - Constuction</b>																								
3.1 Construction Advertisement													■											
3.2 Construction Bids													■	■										
3.3 Award															■									
3.4 Project Construction																■	■	■	■	■	■	■	■	■
3.5 90 Day Maintenance																						■	■	■

## EXHIBIT C COST ESTIMATE FORMAT

Complete the following table for each project contained within the proposal and a table showing the estimated costs for the entire proposal.

Cost Estimate Sheet				
Proposal Title: South Compton Creek Greenway and Bike Trail				
Project Title: South Compton Creek Greenway and Bike Trail – Phase 1				
	Budget Category	Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	<b>\$80,000</b>		<b>\$80,000</b>
(b)	Land Purchase/Easement			
(c)	Planning/Design/Engineering/Environmental Documentation	<b>\$220,000</b>		<b>\$220,000</b>
(d)	Construction/Implementation		<b>\$770,000</b>	<b>\$770,000</b>
(e)	Environmental Compliance/Mitigation/Enhancement			
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$300,000</b>	<b>\$770,000</b>	<b>\$1,070,000</b>
(g)	Construction Administration	<b>\$180,000</b>		<b>\$180,000</b>
(h)	Other			
(i)	Construction/Implementation Contingency (20%)	<b>\$20,000</b>	<b>\$130,000</b>	<b>\$150,000</b>
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$500,000</b>	<b>\$900,000</b>	<b>\$1,400,000</b>
Source of funds for Non-State Share (Funding Match)		Los Angeles County Flood Control District		

## Budget Category Explanations

- (a) *Direct Project Administration Costs* – Includes: salaries, wages, fringe benefits, office supplies, and equipment needed to support the project, staff travel costs (at or below the rate allowed for unrepresented State employees), and preparation of required quarterly and final reports. Actual costs directly related to the project will be reimbursed.
- (b) *Land Purchase/Easement* – If land acquisition is to be included in the Non-State share, include whether it is a proposed acquisition, or if the land is already owned by an IRWM Plan participant. Prior purchase of land can be included in an applicant's funding match if purchased after November 5, 2002. Land acquisition costs will not be considered a reimbursable item if purchased prior to the effective date of the grant agreement. For land purchased prior to the date of the application include the date of purchase and purchase price of the land. Costs for easements will be handled similarly as for land purchases.
- (c) *Planning/Design/Engineering/Environmental Documentation* – Differentiate costs between consulting services and/or agency/organization staff costs for these efforts. Planning costs include: planning efforts, reconnaissance studies, feasibility studies, and preliminary reports. Design and engineering costs include: conceptual, preliminary and final design efforts, geotechnical reports, hydraulic studies, water quality investigations and efforts, and other engineering types of work. Include the costs of bid preparation and processing here. Environmental documentation costs include all efforts involved in the CEQA or NEPA process up to the point of the Notice of Determination, Finding of no Significant Impact, or Record of Decision.
- (d) *Construction/Implementation* – Includes the summary of labor, materials, equipment purchases and/or rentals. After bids are received these costs will be the actual construction cost awarded to the low bidder. The construction or implementation costs for Pilot Projects should be included here.
- (e) *Environmental Compliance/Mitigation/Enhancement* – Includes those costs required by a CEQA/NEPA document to offset any potential damages caused by the proposal. If these costs are included in the contract awarded for construction or implementation of the proposal, differentiate such costs for purposes of this budget.
- (f) *Project Summary* – The summation of the costs for items (a) through (e) above.
- (g) *Construction Administration* – Includes those costs required to supervise and administer the construction or implementation of the project(s). Differentiate costs between consulting services and agency staff costs to perform this work.
- (h) *Other* – Includes costs for legal services, license fees, permits, any implementation verification costs, and any monitoring and assessment costs required during the construction/implementation of the proposal. Do not include monitoring and assessment costs for efforts required after construction/implementation of the proposal is complete. These costs are considered to be operation and maintenance costs and are not reimbursable.
- (i) *Construction/Implementation Contingency* – Includes any contingency costs for the construction/implementation of the proposal. Specify the percentage used for this contingency cost. For all other contingency costs, i.e. design, land purchase, etc., include those contingencies in the appropriate cost category.

For the Step 2 submittal, detail will be expected for each of the above cost categories explaining how the total cost was derived.

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**Lead Agency Information**

Agency Name: Central Basin Municipal Water District (Central Basin)	
Address: 17140 S. Avalon Blvd., Suite 210 Carson CA 90746	
Contact Name: Paul Shoenberger	
Telephone: (310) 660-6218	E-Mail:pauls@wcbwater.org
Fax: (310) 217-2414	Web Site: www.centralbasin.org

**Summary of Proposed Project Information**

Project Title: Southeast Water Reliability Project Phase II (SWRP), formerly the Montebello Loop, Water Recycling Project	
Proposed Start Date: 2/2006	Proposed Completion Date: 1/2010
Proposed CEQA Completion Date: <u>Initial Study/ Negative Declaration for the Century Reclamation Program completed December 1990. Initial Study/ Negative Declaration for the Rio Hondo Reclamation Program completed December 1991. Updated Negative Declaration for both Programs completed January 1998. Updating new CEQA Checklist to be completed 8/2005.</u>	
Location (Long. & Lat.): -118.07, 34.00	Sub Watershed: <u>Lower San Gabriel River, Coyote Creek, Los Cerritos, Rio Hondo Channel, Lower LA River</u>
Project Description: <u>The Southeast Water Reliability Project, Phase II Water Recycling Project is a connection of Central Basin’s recycled water pipeline system from the City of Montebello to the City of Vernon. The entire Southeast Water Reliability Project (Project) will be constructed in two phases. Phase I of this connection will begin in the City of Pico Rivera and end at the Montebello Golf Course in the City of Montebello. Phase II will start at the Montebello Golf Course and end in the City of Vernon; this is the proposed project for this grant program. Phase II, in combination with Phase I of the SWRP, will ultimately serve 100 total potential public and private entity sites along the pipeline, with over 5,600 acre-feet per year (AFY) of recycled water combined. Phase II alone will serve approximately 4,800 acre-feet per year of recycled water to sites in three cities: Commerce, East Los Angeles, and Vernon.</u>	
Primary Objectives Addressed by the Project: <u>The primary objective of the Project is to supply approximately 4,800 acre-feet per year of recycled water to customers within the cities of Commerce, East Los Angeles and Vernon, in which there are a total of 4,000 AFY in Vernon alone due to the large industrial use. The 5,600 AFY is the total amount of recycled water that will be delivered when the system is connected from the City of Pico Rivera to the City of Vernon. The extension to Vernon will create a completely “looped” recycled water distribution system to supply most of the cities in Central Basin with recycled water. This will reduce the amount of treated wastewater that is discharged into the San Gabriel River and ultimately to the ocean. Phase II of this project will also save approximately 4,800 AFY of imported water from northern California, thereby reducing demand and creating a reliable source of water.</u>	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*



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<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input type="checkbox"/> Water Quality Protection and Improvement*	<input checked="" type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	<b>\$2,507,100</b>	<b>\$557,133</b>	<input type="checkbox"/> In Kind \$ _____
Construction & Materials	<b>\$557,133</b>	<b>\$20,056,800</b>	<input type="checkbox"/> Cash \$ _____
Other (Describe)	<b>\$3,621,366 (legal &amp; contingencies)</b>	<b>\$557,133 (Land and Right-of-Way)</b>	<input checked="" type="checkbox"/> Other Grants <b>\$13,928,332</b>
Totals	<b>\$6,685,599</b>	<b>\$21,171,066</b>	<b>\$13,928,332</b>

Estimated Total Budget (Request & Match): **\$27,856,665**  
Estimated Annual O & M Budget: **\$ 1,070,400**

- How does your project develop or conserve local water resources?  
One of the project's objective is to supply recycled water for non-potable use for landscape irrigation in an area that is easily accessible to a wastewater treatment plant. Recycled water is beneficial in many different ways including: providing economic benefits to the cities that purchase recycled water, reducing demand on the Colorado River and the Bay-Delta, reducing the impact of wastewater on the ocean environment, reducing the amount of fertilizer in urban runoff, and providing a reliable source of water.
- How does this project address water reliability?  
Recycled water is a reliable source of non-potable water for irrigation, industrial and commercial use. Unlike imported water, recycled water is produced locally and is available for use year round as long as there is wastewater available. Water Supply Reliability is employed in this project because the use of recycled water is always available so long as there is a means of receiving it. Recycled water is much more reliable than imported water. Recycled water is a drought-free source of water that can be used for non-potable purposes, and most commonly for landscape irrigation.

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3. How does your project protect, improve or enhance water quality?  
This project directly improves the water quality of the San Gabriel River and the ocean by reducing the amount of treated wastewater that enters into these locations by further treating it to recycled water standards. By diverting the treated wastewater from the wastewater treatment plant to recycled water users, approximately 5,600 acre-feet of water will not enter into the local river system that leads to the ocean with the construction of phase I and II.
4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)  
As previously stated, this project will reduce demand on imported water, making it available to those areas in California that do not have the capability of producing enough recycled water for their growing population demands, such as the Inland Empire. Water and Wastewater Treatment is employed in this project as a water management strategy because wastewater is treated to Title 22 standards at the San Jose Creek Wastewater Treatment Plant, owned and operated by the Los Angeles County Sanitation District, that will be used in this distribution system. Approximately 4,800 additional acre-feet will be treated at the plant and distributed to users along the Southeast Water Reliability Project pipeline, along with an additional 800 AFY from Phase I of the Project. Water Recycling as a water management strategy is not only a local benefit, but a regional benefit as well. Using recycled water reduces demand on imported water and groundwater supplies for those areas that rely strictly on imported water as its sole water resource.
5. What is the status of your project readiness? (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/> See below	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

The Alignment Study (Draft Preliminary Design Report) that was completed in 2003, illustrates the various alignment alternatives for the proposed project. The Final Design has not been created yet and is factored into the attached schedule. The development of a Master Plan for the entire basin and a subsequent Preliminary Design Report for the Southeast Water Reliability Project will take place prior to the design of Phase I and Phase II of the Project. An Initial Study/ Negative Declaration were performed in 1991 for the Century Reclamation Program, which Phase I and II alignments are a part of. In 1993, an addendum to the Initial Study/Negative Declaration was performed for the Rio Hondo

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Water Reclamation Program. In 1998, an addendum to the Negative Declaration for the Century Reclamation Program and the Rio Hondo Water Reclamation Program was completed. Currently, Central Basin is working on an updated CEQA checklist and Negative Declaration, which is anticipated to be completed August 2005.

6. Identify the regional or strategic planning document that identifies this project.  
This project is identified in the Central Basin Water Recycling Master Plan that was completed in August 2000.

7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

Central Basin has been pursuing customers to receive recycled water via the pipeline being constructed for Montebello Loop, Phase I of this project. In this process, Central Basin has received letters of intent from the cities of Pico Rivera and Montebello. Therefore, the main pipeline, Phase I of this Project, will be ready to serve customers along this stretch of pipeline.

For Phase II, there have not been any agreements signed for customers along this stretch of pipeline; however, the City of Vernon has recently adopted a recycled water rate for its city. This is the first step in hooking up customers to receive recycled water in this city, which is heavily industrial and would receive approximately 4,000 AFY alone. The other two cities that the Phase II pipeline will serve, the City of Commerce and East Los Angeles, have yet to adopt a recycled water rate. However, Central Basin is working with these cities to develop a recycled water rate structure, which is the first step in committing to use recycled water. The other sites that intend to use recycled water will have to have laterals built off of the main pipeline in order to receive the recycled water.

A major accomplishment that recently occurred was the commitment of the City of Vernon to use recycled water by the development of a recycled water rate for users within the city. Central Basin is moving forward with construction of the Malburg Generating Station in the City of Vernon, which after years of negotiation, has enabled the project to move due to the adoption of a recycled water rate. This project will provide an estimated 1,200 to 1,500 acre-feet per year of recycled water to many industrial sites within the city. This will enable us to bring Malburg Generating Station online in the near future.

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?

This project is not in an area of biological significance. This project will not have any detrimental biological impacts. Since it is a water recycling project, there is no enhancement or restoration of wildlife habitat.

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9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.  
The success of the project will be measured by the amount of imported water replaced by recycled water by sites along the distribution pipeline.
10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?  
N/A
11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.  
The data for the project will be tracked by Central Basin and made available to other agencies or stakeholders through our yearly Water Use Report as well as upon request.
12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?  
Based on the 2000 data, the project does provide a direct benefit to disadvantaged communities. They include the City of Commerce, with a median household income of \$34, 040, and the City of East Los Angeles, with a median household income of \$28,544. The City of Vernon is not considered to be disadvantaged, but the cities surrounding this project are including: Maywood, Huntington Park, Bell, and Bell Gardens, as well as other cities on the western side of Central Basin. The 10% matching funds requirement does not pose a hardship to these disadvantaged communities.
13. What percentage of the project funding has been secured?  
50% through the U.S. Army Corps of Engineers
14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.  
The City of Montebello has written a letter of intent to use the recycled water once it becomes available through Phase I of the Project. Since the intent of Phase I is to continue the pipeline, by way of Phase II, to the City of Vernon, thereby “looping” the Central Basin Recycled Water Distribution System, the City of Montebello’s cooperation is necessary. The City of Vernon has recently adopted a recycled water rate, after years of encouragement by Central Basin, since the city is largely industrial; the need for recycled water is vast. Central Basin is currently working with the cities of Commerce and East Los Angeles to develop a recycled water rate structure.
15. Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic,

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environmental and fiscal needs and what the impacts will be if the project is not implemented.

This project will address long term regional water management needs by providing a reliable source of water for irrigation and industrial uses. Especially in a city like Vernon, where a majority of the city is comprised of industrial facilities, recycled water is beneficial by being more reliable, less expensive, and it reduces the amount of potable water supplies. The Southeast Water Reliability Project, Phase II is part of the Harbor/South Bay Water Recycling Project, a federally funded partnership project between Central Basin and the U.S. Army Corps of Engineers. Customers served by Phase II will include parks and schools in the cities of Commerce and East Los Angeles, and industrial sites in the City of Vernon. There is potentially 5,600 acre-feet per year of recycled water that can be used by the construction of Phase I and the subsequent connection to Phase II. The pipeline will be located next to other pipes in the public streets, therefore no environmental impacts will occur. If the project is not implemented, approximately 4,800 acre-feet per year of potable water will continue to be used by sites along the pipeline that will be paying more for an unreliable source of supply. Also, Phase II will save 4,800 acre-feet per year of treated wastewater that enters into the local river system, which eventually drains to the ocean.

Phase I and Phase II is a “looping” of the Central Basin Water Recycling System, making it more efficient, more reliable, and provide more opportunity for laterals to be constructed off of the main pipeline in order to serve more customers in the future.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.

1. Project Schedule/Timeline including all major milestones.
2. Cost Estimate of major project elements including the identification of major funding sources.

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**Tentative Schedule**  
**Montebello Loop, Phase II Water Recycling Project**

<b>Task Name</b>	<b>Start</b>	<b>Finish</b>
Initial Funding Authorization from SWRCB	1/30/2006	1/30/2006
Task 1 - Project Authorization	2/3/2006	2/27/2009
Task 2 - Planning	2/3/2006	1/28/2009
Task 3 - Design (Final Plans and Specifications)	2/3/2006	8/20/2007
Task 4 - Construction	8/6/2007	1/8/2010
Task 5 - Initiation of Operation	12/1/2009	2/1/2010
Task 6 - Quality Assurance/Quality Control (QA/QC)	2/3/2006	1/1/2010
Task 7 - Public Outreach	2/3/2006	1/1/2010
Task 8 - Reporting	5/3/2006	8/26/2010

**Cost Estimate Sheet**  
**Project Title: Montebello Loop, Phase II Water Recycling Project**

Budget Category		Non-State Share (Funding Match)	(Grant Funding)
(a)	Direct Project Administration Costs	\$278,567	\$278,567
(b)	Land Purchase/Easement	\$278,567	\$278,567
(c)	Planning/Design/Engineering/Environmental Documentation	\$1,253,550	\$1,253,550
(d)	Construction/Implementation	\$10,028,400	\$10,028,400
(e)	Environmental Compliance/Mitigation/Enhancement	\$0	\$0
(f)	Project Summary	\$0	\$0
(g)	Construction Administration	\$278,567	\$278,567
(h)	Other (Legal)	\$278,567	\$278,567
(i)	Construction/Implementation Contingency	\$1,532,117	\$1,532,117
(j)	Grant Total	\$13,928,333	\$13,928,333
Source of funds for Non-State Share (Funding Match)		U.S. Army Corps of Engineers	



Total
\$557,133
\$557,133
\$2,507,100
\$20,056,800
\$0
\$0
\$557,133
\$557,133
\$3,064,233
\$27,856,666

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**Lead Agency Information**

Agency Name: Walnut Park Mutual Water Company	
Address: 2460 E. Florence Ave. Huntington Park CA 90255	
Contact Name: Dr. Mike R. Gomez	
Telephone: 323-581-3226	E-Mail: drmg@sbcglobal.net
Fax: 323-585-0203	Web Site:

**Summary of Proposed Project Information**

Project Title: Well #12 Installation	
Proposed Start Date: September 2005	Proposed Completion Date: January 2005
Proposed CEQA Completion Date:	
Location (Long. & Lat.): 118.13, 33.58	Sub Watershed: Lower Los Angeles River
<p>Project Description:  <u>This project is the installation of a new well of approximately 1200' depth and 20" in diameter. Production is projected at 4,500 gallons per minute. This new well is to replace two existing older wells, #10 and #11. The new well is designed with a stainless steel casing.</u></p>	
<p>Primary Objectives Addressed by the Project:  <u>The primary objectives of this project are to secure a dependable water supply from groundwater and to sustain pumping groundwater rights of 996 acre-feet per year.</u></p>	
<b>Water Management Strategies Addressed:</b> (Check all that Apply)	
<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants	\$125,000	\$300,000	<input type="checkbox"/> In Kind \$ 0_____
Construction & Materials	Inspection/permits	\$700,000	X Cash \$ 500,000
Other (Describe)	\$15,000		<input type="checkbox"/> Other Grants \$0_____
Totals	\$140,000	\$1,000,000	

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Estimated Total Budget (Request & Match): \$1,140,000  
Estimated Annual O & M Budget: \$65,000

1. How does your project develop or conserve local water resources?  
By securing our groundwater source, we conserve local surface water via water from Metropolitan Water District.
2. How does this project address water reliability?  
The reliability of our two remaining wells #10 and #11 are uncertain due to the age of the wells. Well #10 was drilled in 1977 and #11 in 1966.
3. How does your project protect, improve or enhance water quality?  
The new well #12 project protects and secures groundwater sources for over 17,000 residents and businesses.
4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)  
The water management strategy involves a mix of groundwater from our aquifer and surface water from imported water via Metropolitan Water District. We have completed to date a 3 million gallon tank farm and a state-of-the-art variable speed pump station with 300kb diesel generating backup power supply.
5. What is the status of your project readiness? (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/> 2000	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input checked="" type="checkbox"/> 2004	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Permits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Construction Drawings	<input checked="" type="checkbox"/> 2005	<input type="checkbox"/>	<input type="checkbox"/>

6. Identify the regional or strategic planning document that identifies this project.  
This project is part of the Walnut Park Mutual Water Company Master Plan, completed in 2000, which is continually being updated. Steven Andrews Engineering: Tel# 714-571-5500, Fax# 714-571-5599.
7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.  
N/A
8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?  
Our facility is in an urban setting with no special biological significance. It will not have any detrimental biological impacts.

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9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.  
The success of our well project will be measured by sustained well water production which allows us to provide a reliable source of water to our customers.
10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?  
No.
11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.  
Data is tracked on a monthly basis because we are an adjudicated basin and have to monitor the amount of water used.
12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?  
Our community may be classified as a disadvantaged community in that it is identified as a predominantly low-income area. We are in an unincorporated area of Los Angeles County, located in Walnut Park, which is only one square mile in area.
13. What percentage of the project funding has been secured?  
44%

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones.  
See Page 1
2. Cost Estimate of major project elements including the identification of major funding sources.  
See Page 1

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**Cost Estimate Sheet**  
**Project Title: Walnut Park MWC- Well #12 Installation**

Budget Category		Non-State Share (Funding Match)
(a)	Direct Project Administration Costs	\$150,000
(b)	Land Purchase/Easement	\$0
(c)	Planning/Design/Engineering/Environmental Documentation	\$125,000
(d)	Construction/Implementation	\$350,000
(e)	Environmental Compliance/Mitigation/Enhancement	\$15,000
(f)	Project Summary [Sum (a) through (e) for each column]	\$640,000
(g)	Construction Administration	\$0
(h)	Other	\$0
(i)	Construction/Implementation Contingency	\$0
(j)	Grant Total [Sum (f) through (i) for each column]	\$640,000
Source of funds for Non-State Share (Funding Match)		Cash Contribution

State Share (Grant Funding)	Total
\$150,000	\$300,000
\$0	\$0
\$0	\$125,000
\$350,000	\$700,000
\$0	\$15,000
\$500,000	\$1,140,000
\$0	\$0
\$0	\$0
\$0	\$0
\$500,000	\$1,140,000

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**Lead Agency Information**

<b>Agency Name:</b> County Sanitation Districts of Los Angeles County (LACSD)	
<b>Address:</b> 1955 Workman Mill Road, Whittier, CA 90601	
<b>Contact Name:</b> Mark Pettit	
Telephone: (562) 699-7411, extension 2111	E-Mail: mpettit@lacsds.org
Fax: (562) 699-4515	Web Site: www.lacsds.org

**Summary of Proposed Project Information**

<b>Project Title:</b> Whittier Narrows Water Reclamation Plant - UV Disinfection Facilities	
<b>Proposed Start Date:</b> October 2003	<b>Proposed Completion Date:</b> May 2007
<b>Proposed CEQA Completion Date:</b> August 2005	
<b>Location (Long. &amp; Lat.):</b> CA State Plane Coordinate Values N 1,833,866; E 6,541,023	<b>Sub Watershed:</b> San Gabriel and Rio Hondo Rivers, Montebello Forebay
<p><b>Project Description:</b> This project would change the disinfection practices at the Whittier Narrows Water Reclamation Plant (WNWRP). Currently the tertiary treated filtered effluent that this plant produces is disinfected to Title 22 standards by chloramination, which requires the addition of chlorine and ammonia. The vast majority of this water is currently discharged to the Rio Hondo and San Gabriel River Spreading Basins. There it is blended with other water supplies to recharge the groundwater in the Central Basin. This groundwater, after subsequent pumping and treatment, ultimately becomes the drinking water supply for over one million residents in the greater Los Angeles area.</p> <p>In the past few years, LACSD has successfully converted, and continues to convert, a number of wastewater plants similar to the WNWRP to a nitrogen removal process. Federal and state authorities mandated these changes, and implementation deadlines were required to be met. While the new nitrogen removal process has been successful at lowering effluent ammonia levels, making the effluent less toxic to aquatic life, an unintended consequence of the newly implemented treatment process is that higher levels of N-Nitrosodimethylamine (NDMA) are produced in the final disinfection step. NDMA has been observed at the EPA's shallow groundwater monitoring wells in the Whittier Narrows area, and have been linked to the WNWRP effluent. This project would change the disinfection practice from chloramination to one where the effluent is irradiated with ultraviolet (UV) light. UV disinfection is a more environmentally friendly disinfection alternative and one that naturally occurs with sunlight. UV disinfection will not only prevent NDMA generation, but will also destruct a significant portion of the NDMA that is normally in the effluent. This should restore the groundwater to lower NDMA levels that were typical before the nitrogen removal processes were implemented. Additionally, the UV process will reduce or eliminate other disinfection byproducts, including cyanide, residual chlorine, ammonia, and chloride.</p> <p>It should be noted that the UV disinfection project at the Whittier Narrows WRP is a pivotal project because it is the first of many such projects at the Districts' water reclamation plants. The overall projected capital cost for the conversion of the seven water reclamation plants is approximately \$100M. Lessons learned from the WNWRP conversion will be used to perform UV modifications at the other plants more cost effectively.</p>	
<b>Primary Objectives Addressed by the Project:</b>	



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- To adhere to regional and state priorities for water recycling, beneficial use of water and protection of public health by reducing disinfection byproducts (DBPs);
- To make timely process modifications in order to be able to continue to meet NPDES, Reclamation and Reuse permit requirements;
- To improve overall receiving water quality and maintain current levels of water reuse;
- To specifically reduce the potential for NDMA generation and allow for reduction of NDMA by UV destruction;
- To further enhance the aquatic ecosystem by reducing cyanide levels and enhance compliance with final effluent limits as required in NPDES permits;
- To further enhance the aquatic ecosystem by reducing residual chlorine exceedences by eliminating chlorine;
- To further enhance the aquatic ecosystem by eliminating ammonia addition, thereby reducing ammonia exceedences;
- To enhance the reuse potential of the effluent by reducing chloride levels with the elimination of chlorine addition; and
- To more effectively protect the public from the potential for waterborne outbreaks of Cryptosporidium and Giardia.

**Water Management Strategies Addressed:** (Check all that Apply)

<input type="checkbox"/> Ecosystem Restoration*	<input checked="" type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input checked="" type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input checked="" type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input checked="" type="checkbox"/> Water and wastewater treatment
<input checked="" type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants		\$ 415,000	<input type="checkbox"/> In Kind \$ 415,000
Construction & Materials		\$ 2,860,000	<input type="checkbox"/> Cash \$ 2,860,000
Other (Describe)			<input type="checkbox"/> Other Grants \$ <u>0</u>
Totals		\$ 3,275,000	\$ 3,275,000

Estimated Total Budget (Request & Match): \$ 6,550,000  
Estimated Annual O & M Budget: \$ 200,000

1. How does your project develop or conserve local water resources?

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This project conserves local water resources by protecting the WNW RP effluent as a resource for beneficial use. By providing the necessary disinfection without the generation of unwanted disinfection byproducts, this will allow the tertiary treated effluent of the WNW RP to continue to be recycled through groundwater recharge in order to reduce the need for imported water in this area. For every gallon of water that is not recycled, it has to be replaced with local water resources or imported water. That ultimately means less water for storage reservoirs and more susceptibility to drought.

**2. How does this project address water reliability?**

Water reliability is increased because the WNW RP treats approximately the same volume of water every day to Title 22 standards, and thus can be considered to be a reliable and renewable resource. Currently the plant produces approximately 9 million gallons per day (MGD) of effluent. This is reduced from the permitted plant capacity of 15 MGD because of the nitrogen removal process that was implemented several years ago to comply with ammonia reduction requirements. Capital projects are in the design phase to increase plant capacity back up to 13 MGD. Assuming a per capita water demand of 100 gpd, recycled water from the WNW RP will sustain the water needs of 130,000 people in the Los Angeles area indefinitely. This project complements the capital investments that the Districts have made and continue to make to discharge to receiving waters of the U.S. and perform their obligations to their ratepayers. The use of recycled effluent from WNW RP is also complimentary to the conjunctive use and watershed planning efforts in the region. Utilization of recycled water for groundwater recharge makes the region more drought-proof and less reliant on imported water.

**3. How does your project protect, improve or enhance water quality?**

The UV disinfection project at Whittier Narrows WRP improves and enhances water quality in the following ways:

- With UV disinfection, the NDMA will not be formed as it is currently during the existing disinfection process (chloramination).
- A significant amount of NDMA that is naturally formed during the wastewater treatment process, and unavoidably present in the influent waste stream, will be destroyed.
- Ammonia, which is a target compound known to affect aquatic life, will not have to be added back to the disinfection process to make the disinfecting agent chloramine. Thus the overall amount of ammonia in the effluent will decrease, thereby enhancing protection of aquatic life.
- Cyanide compounds, which are also known to be produced during the chloramination process and for which lower limits are scheduled to go into effect in the next several years, will not be formed with UV disinfection and will allow the plant to meet all applicable NPDES and Title 22 standards.
- The level of chloride ions, which among other things, results from the addition of chlorine to water and is known to interfere with the reuse potential of water, will be lower with UV disinfection.
- UV disinfection also offers greater protection from Cryptosporidium and Giardia, both of which are difficult to inactivate with chlorination and have

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been associated with numerous waterborne outbreaks around the country.

**4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)**

Other water management strategies are incorporated into the WNWRP UV Facilities project in the following ways:

- Environmental Habitat Protection and Improvement – the local aquatic biology in the unlined portion of the Rio Hondo and the holding pool upstream of the Whittier Narrows Dam will be enhanced because of reduced ammonia and cyanide levels and the reduced potential for chlorine residual exceedences that can be caused by occasional instrument malfunction of the dechlorination equipment at the treatment plant.
- Wetlands Enhancement - the conservation pool upstream of the Whittier Narrows Dam and the Zone 1 Ditch are examples of riparian environments that will be enhanced by the change to UV disinfection.
- Recreation – the effluent from the WNWRP will be used to irrigate the Whittier Narrows Recreation Area, since the well that is currently operated by the City of L.A. Parks and Recreation will be shut down in the near future, as one of the groundwater contamination plumes in the San Gabriel Basin is expected to affect it. This irrigation includes the park facilities and golf course. By enhancing the aquatic life in the Whittier Narrows Recreational Area, bird life will also be enhanced and other existing recreational facilities will be more enjoyable, such as river bike trails and nature centers.
- Groundwater Management and Imported Water – the groundwater basins are fully adjudicated, meaning that certain amounts of water are withdrawn and recharged by law. The recharge consists of a blend of surface waters, release of reservoir impoundments, storm water and recycled water. Whatever shortfall occurs from local supplies must be made up with imported water, which has become increasingly more costly and scarce due to water rights issues with Northern California and other states, and increased demand due to population growth.
- Watershed Planning and Conjunctive Use – The use of the WNWRP effluent for groundwater recharge over the course of over 40 years epitomizes the strategy of conjunctive use of surface and groundwater, in both the San Gabriel and Rio Hondo/L.A. River watersheds. By combining the use of surface water, storm runoff and recycled water, the water supply/demand balance of the watershed is optimized. This project seeks to protect the continued strategy of conjunctive use.
- Water and wastewater treatment –The Districts have been researching the NDMA issue and UV disinfection for some time and are at the leading edge of decision-making in the wastewater industry. The Districts have

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collaborated with federal and state authorities on the NDMA problem and this project reflects the aim to find a solution.

**5. What is the status of your project readiness? (check as appropriate)**

The project is in the final stages of conceptual development following from the results of UV pilot plant testing. During the UV pilot plant testing, it was decided to experimentally validate a wider lamp spacing that would be more efficient for the higher quality effluent characteristic of the WNWRP. Even though the manufacturer's equipment has not changed, the new lamp spacing requires the validation to be approved by the California Department of Health Services (DHS). The validation report was submitted the DHS in early March 2005. When this validation is approved, it should benefit all water reuse agencies that are considering UV disinfection in California and elsewhere. Please note that land acquisition is not required, as the UV facilities will be incorporated into existing structures.

Another concern of the Districts that has influenced the schedule of the UV project is the possible presence of UV resistant organisms (Adenovirus) in the UV disinfected effluent. Additional research is under way in March and April 2005 that is focused on a combination of UV disinfection and free chlorine (at a low dose and contact time) that may affect the ultimate design of the project.

A companion project at the WNWRP that redirects some of the effluent to irrigation reuse in the San Gabriel Basin, and sponsored by the Upper San Gabriel Municipal Water District, is progressing. The CEQA and NEPA documents for this project are scheduled to be approved in early April 2005, at which time the notice to proceed will be given to the contractor. Much effort has been expended to make the irrigation reuse project and the UV disinfection project be collectively designed to complement one another. Because of an operational startup deadline tied to funding, the irrigation reuse project has been given schedule priority.

<b>Item</b>	<b>Complete (Specify Date)</b>	<b>In process (Specify Est. Comp. Date)</b>	<b>Not initiated</b>
Conceptual Plans	<input checked="" type="checkbox"/> 10/04	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/> N.A.	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/> 5/05	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/> 8/05	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/> 3/07	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**6. Identify the regional or strategic planning document that identifies this project.**

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This project is being conducted as part of the Districts' efforts to implement the requirements of adopted NPDES permits for two other plants that discharge into the same watersheds and used for groundwater recharge at the Montebello Forebay and the San Gabriel River Spreading Basins. These are the San Jose Creek WRP (Order R4-2004-0097) and the Pomona WRP (Order R4-2004-0099). The NPDES permits include provisions to re-open the NPDES permits three years from the effective date to re-evaluate and possibly modify final effluent limits for NDMA, based on the results of attenuation and dilution studies and results of the WNWRP UV Disinfection Facilities project. The Orders also identify the timeline for this project.

Although this project is not specifically identified in some existing planning documents because NDMA has recently emerged as an issue, because of the issues of beneficial use, water recycling and watershed management, this project is also consistent with the following planning documents:

- Joint Outfall System – 2010 Master Facilities Plan (LACSD)
- 1977 Joint Outfall System Facilities Plan (LACSD)
- 1963 A Plan For Water Reuse (LACSD -rationale for inland water reclamation)
- 1965 Plan A (LACSD -plan for the Joint Outfall System)
- Los Angeles County General Plan – land use in the WN area
- Recreational Master Plan for Whittier Narrows Flood Control Reservoir
- Metropolitan Water District - Groundwater Recovery Program
- Metropolitan Water District - Local Projects Program
- Basin Plan for the Coastal Watersheds for the Los Angeles and Ventura Counties (LARWQCB)
- 2001 Triennial Review (LARWQCB)
- Amendment to Revise the Early Life Stage Provision of the Freshwater Ammonia Objectives for Inland Surface Waters (LARWQCB)
- Nutrient TMDL 2004 (LARWQCB)
- Rio Hondo Watershed Management Plan (SGVCOG and RMC)
- Rivers and Greenway Management Plan (RMC)
- Watershed Management Initiative (State and LARWQCBs)
- California Water Plan Update 2003 (DWR)
- Southern California Water Recycling Projects Initiative (DWR)
- California Agencies Watershed Strategic Plan

### **7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.**

- Federal Environmental Protection Agency - in agreement for WNWRP to implement UV disinfection to protect use of monitoring wells associated with the Whittier Narrows Operable Unit (WNOU)
- Los Angeles Regional Water Quality Control Boards - in agreement for WNWRP to implement UV disinfection
- California Department of Health Services - enforcement of Title 22 Standards and validation of UV technology
- U.S. Army Corps of Engineers - owns land on which WNWRP is situated

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- Los Angeles County Department of Public Works - operates the Rio Hondo and San Gabriel River Spreading Basins and co-permittee with LACSD
- Water Replenishment District of Southern California - co-permittee with LACSD for Montebello Forebay groundwater recharge project, and oversees groundwater replenishment in this basin
- Upper San Gabriel Valley Municipal Water District – wholesaler of WNWRP recycled water for irrigation project, and currently constructing reuse pump station at WNWRP
- San Gabriel Valley Water Company - retailer of WNWRP recycled water for irrigation supplying water to WN Recreation Area
- County of Los Angeles Dept. of Parks and Recreation – committed to using the WNWRP irrigation water
- City of Whittier – investigating the possible use of groundwater for domestic supply from wells associated with EPA’s WN Operable Unit
- Norman’s Nursery – continued use of WNWRP recycled water for irrigation

**8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?**

This project should have not have any detrimental biological impacts. The WNWRP discharges into the Rio Hondo upstream of the Whittier Narrows Dam and this area is considered to be a critical wildlife habitat in the Los Angeles area. The reduced levels of cyanide and ammonia, and reduced potential for chlorine, should enhance the aquatic life of the San Gabriel River, the Rio Hondo and the water retention area upstream of the Whittier Narrows Dam.

**9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.**

Project success of the UV disinfection project will be measured by meeting the requirements of the SJCWRP, Pomona WRP, and WNWRP NPDES permits, as well as the requirements of the Water Reclamation Permit of the Rio Hondo and San Gabriel River Spreading Grounds (File No. 71-67, Order 91-100) and the Reuse Permit (File No. 88-107, CI 6844). The WNWRP effluent is required to meet the Title 22 requirements for unrestricted reuse. Specifically, constituents that are affected by this project are already required to be monitored and include the following:

- Coliforms - sampled daily
- Cyanide - sampled monthly
- Ammonia nitrogen - sampled weekly
- Chlorine residual – sampled daily
- Chloride – sampled monthly
- NDMA – sampled quarterly

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- Total enteric viruses – sampled quarterly
- Cryptosporidium and Giardia - not required (sampled as needed)

Note: These constituents are currently monitored and will continue to be monitored indefinitely (pre- and post-project). Normally, these constituents are monitored more frequently when research needs arise. NDMA research has included split samples that have been shared with the USEPA.

**10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?**

The adaptive management plan in place thus far consists of the routine monitoring already mandated by federal and state laws to be able to discharge treated effluent to waters of the U.S. Additionally, post-project implementation and operational variances will be dealt with during the Sustained Performance Monitoring phase of the project, which was agreed to with the EPA and RWQCB, and is contained in the project schedule.

**11. How will data for the project be tracked? Describe how data will be made available to other agencies and or other stakeholders.**

Groundwater quality will be monitored by LACSD and the USEPA in the Whittier Narrows Operable Unit area. In the Montebello Forebay and San Gabriel River Spreading Grounds, the LACSD, the LACDPW, theRWQCB, SDPR and the Water Replenishment District will monitor the groundwater. WNW RP effluent data is contained in monthly and annual reports to theRWQCB. These data are in the public domain and will be provided to stakeholders and the general public on request. The District has also commissioned a consulting engineering firm to study the attenuation and dilution of NDMA in soil aquifers. The report will be shared with the appropriate agencies and public on request.

**12. Does the project provide a direct benefit to disadvantaged communities? What percentage of your service region is disadvantaged and how does this compare to the total regional population? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?**

In protecting the quality of drinking water for over one million residents in the eastern portion of the Los Angeles area, it should be pointed out that those residents, particularly those who are disadvantaged and cannot afford bottled water, are the primary benefactors of this project. Being able to drink high quality water directly from the tap is a fundamental right and speaks directly to the cause of environmental justice. LACSD, however, is not asking for a waiver of the 10% matching funds.

**13. What percentage of the project funding has been secured?**

The matching funds for the project (50% of the projected budget) are secured by revenues generated by LACSD's customers.

**14. Stakeholder Involvement: Please describe the stakeholder involvement in this project.**

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- U.S. Environmental Protection Agency – monitoring wells that are to be put in production service (replacing contaminated San Gabriel Basin wells) are affected by current WNWRP effluent NDMA levels.
- Regional Water Quality Control Board – oversees water quality concerns and permits of the WNWRP
- California Department of Health Services – oversees compliance with public health requirements, develops Title 22 criteria and validates UV equipment
- U.S. Army Corps of Engineers – owns the land in the Whittier Narrows Flood Control Area on which the WNWRP, EPA monitoring wells and SGR spreading grounds are situated
- Los Angeles County Department of Public Works – operates the spreading grounds and co-permittee for Montebello Forebay groundwater recharge project
- Upper San Gabriel Valley Municipal Water District – water wholesaler that intends to use recycled water generated by WNWRP for unrestricted use and irrigation
- San Gabriel Valley Water Company - water retailer that serves recycled water generated by WNWRP for unrestricted use and irrigation
- Water Replenishment District of Southern California - co-permittee for Montebello Forebay groundwater recharge project
- County of Los Angeles County of Parks and Recreation
- City of Whittier – interested in possible use of water from the EPA’s monitoring wells once they are able to be put into production for domestic use
- Norman’s Nursery – currently uses recycled water to irrigate plants

15. **Need: Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.**

This project addresses the following long term regional water management needs:

- Local water supplies will be enhanced through delivery of a new water supply to the City of Whittier.
- The Districts will be able to continue to supply recycled water to the Montebello Forebay groundwater recharge project will be able to continue, which provides over one million residents with a renewable source of water that augments the groundwater supply and imported water supplies.
- The local water crisis caused by the shutting down of water wells in the San Gabriel Basin because of organic pollution will continue to be mitigated to some degree by the beneficial use of the WNWRP effluent.

If this project is not implemented, it is possible that wastewater would have to be diverted away from the upstream water reclamation plants to the District’s Joint Water Pollution Control Plant in Carson, because groundwater recharge would no longer be possible. The water would then receive secondary treatment and disinfection before being pumped to the ocean for disposal. This means that the



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water would not be reclaimed or reused, and a major water resource would be wasted. Redirecting the WNWRP effluent could cause the Rio Hondo to essentially dry up during the summer and fall and negatively affect the oasis of life that currently exists in the area. The drier conditions would ultimately result in a larger threat of fire in an area of biological significance. The overall cost of water would have to increase in the area since there would be a greater reliance on imported water, which would have a negative fiscal impact and tend to stagnate the local economy.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

- 1. Project Schedule/Timeline including all major milestones.**  
(See Attached)
- 2. Cost Estimate of major project elements including the identification of major funding sources.**

**Other Attachments**

See additional attachments related to WNWRP permits and monitoring requirements, water reuse and reclamation.

**Cost Estimate Sheet**

Proposal Title:

Project Title: **Whittier Narrows Water Reclamation Plant - U.V. Disinfection Facilities**

Budget Category		Non-state Share (Funding Match)
(a)	Direct Project Administration Costs	\$5,000
(b)	Land Purchase/Easement	\$0
(c)	Planning/Design/Engineering/Environmental Documentation	\$200,000
(d)	Construction/Implementation	\$2,600,000
(e)	Environmental Compliance/Mitigation/Enhancement	\$10,000
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$2,815,000</b>
(g)	Construction Administration	\$200,000
(h)	Other	\$0
(i)	Construction/Implementation Contingency	\$260,000
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$3,275,000</b>
Source of funds for Non-State Share (Funding Match): LACSD Revenues		

General Matching Fund %

**50**

State Share (Grant Funding)	Total
\$5,000	\$10,000
\$0	\$0
\$200,000	\$400,000
\$2,600,000	\$5,200,000
\$10,000	\$20,000
<b>\$2,815,000</b>	<b>\$5,630,000</b>
\$200,000	\$400,000
\$0	\$0
\$260,000	\$520,000
<b>\$3,275,000</b>	<b>\$6,550,000</b>

%

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**Lead Agency Information**

Agency Name: Water Replenishment District of Southern California	
Address: 12621 E. 166 <sup>th</sup> Street, Cerritos CA, 90703	
Contact Name: Jason Weeks	
Telephone: 562.921.5521	E-Mail: <a href="mailto:jweeks@wrdd.org">jweeks@wrdd.org</a>
Fax: 562.407.1906	Web Site: <a href="http://www.wrdd.org">http://www.wrdd.org</a>

**Summary of Proposed Project Information**

Project Title: Whittier Narrows Conservation Pool Improvements	
Proposed Start Date: March 2006	Proposed Completion Date: September 2007
Proposed CEQA Completion Date: December 2005	
Location (Long. & Lat.):	Sub Watershed: Central Basin

**Project Description:**

The Whittier Narrows Dam provides flood control, recreation and water conservation for Los Angeles County. Construction of the dam was completed in March 1957 and since that time, the dam has provided a reliable means of capturing storm water flows that would otherwise be wasted to the ocean. These captured storm water flows are later released and conserved in the Montebello Forebay Spreading Grounds for groundwater replenishment purposes.

Upon completion of the dam in 1957, the conservation pool was established at an elevation of 195.5 feet, with a corresponding storage of 1,000 acre-feet and a maximum conservation release of 600 cubic feet per second. In 1977, the conservation pool was increased to 2,500 acre-feet by increasing the conservation pool elevation to the present maximum of 201.6 feet. The 201.6 foot elevation has not been used in recent years due to potential contamination from oil wells that would be inundated if the maximum elevation were reached. Lawsuits filed by the Los Angeles County Department of Public Works, of which WRD was a party, have recently been settled and the oil wells are slated to be properly abandoned in early 2004. The abandonment of these wells will allow the 201.6 foot elevation to be safely utilized without risk of compromising water quality.

In addition to the resolution of the potential contamination from oil wells, the U.S. Army Corps of Engineers (USCOE) is interested in further expanding the conservation elevation above the 201.6 foot maximum. In July 1998, the USCOE and Los Angeles County Department of Public Works (LACDPW) completed the Los Angeles County Drainage Area Water Conservation and Supply Santa Fe – Whittier Narrows Dams Feasibility Study (Study). The purpose of this Study was to investigate the water conservation potential of the two dams by identifying alternatives for study and recommending an implementation plan.

The preferred alternative recommends increasing the conservation pool elevation of the Dam to 209.0 feet, resulting in an estimated increase in local storm water conservation of 2,900 acre-feet per year. The preferred alternative identified in the Study involves modifications to facilities and infrastructure that would be adversely affected at the 209.0 foot level. The plan would use the existing conservation pool, up to an elevation of 201.6 feet, for water conservation during the flood season. During the flood season, impounded water would be allowed to encroach upon the flood pool – up to elevation 209 feet – for water conservation purposes; this is termed the buffer pool. During the

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non-flood season, water would be held up to elevation 209 feet for water conservation purposes; this is termed the seasonal pool. The buffer and seasonal pools would have a storage volume of approximately 5,777 acre-feet at elevation 209 feet. This would result in an increase of 2,900 acre-feet in the average annual water yield.

To accommodate an increase in the conservation pool elevation, nearby infrastructure would require modification. In general, the elevation of two roadways adjacent to the dam would need to be increased. Additionally, a berm would need to be constructed around the Whittier Narrows Water Reclamation Plant. Descriptions of each of these are provided in the Study

**Primary Objectives Addressed by the Project:**  
The primary objectives addressed by this project are increased utilization of local water resources and increasing water supply reliability. It is estimated that this project would result in the conservation of 2,900 acre-feet per year, which would directly offset imported water purchases currently made by the District.

**Water Management Strategies Addressed:** (Check all that Apply)

<input type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input checked="" type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input checked="" type="checkbox"/> Imported Water
<input checked="" type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input checked="" type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel, Consultants		\$720,000	<input type="checkbox"/> In Kind \$80,000
Construction & Materials		\$3,600,000	<input type="checkbox"/> Cash \$400,000
Other (Describe)			<input type="checkbox"/> Other Grants \$_____
Totals		\$4,320,000	\$480,000

Estimated Total Budget (Request & Match): \$4,800,000  
Estimated Annual O & M Budget: \$334,000

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1. How does your project develop or conserve local water resources?  
This project conserves local water resources by increase the conservation pool capacity behind the Whittier Narrows Dam, thereby allowing an additional 2,900 acre-feet per year to be conserved. This water stored in the conservation pool will be slowly released from behind the dam for conservation in the Rio Honda and San Gabriel River Spreading Grounds and ultimate use by the Central Basin groundwater producers.
  
2. How does this project address water reliability?  
This project increases reliability by offsetting imported water demands at the Rio Hondo and San Gabriel River Spreading Grounds with a local water source, thereby reducing the region's reliance on imported water supplies.
  
3. How does your project protect, improve or enhance water quality?  
This project improves water quality by capturing urban water runoff that would otherwise be wasted to the ocean. By conserving this water in the spreading grounds, the natural soil-aquifer treatment that occurs produces potable water available for extraction by Central Basin groundwater producers.
  
4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)  
**Groundwater management:** this project will aid the District in continuing its groundwater management function by providing local water resources for conservation at the Rio Hondo and San Gabriel River Spreading Grounds.  
**Imported water:** this project will offset imported water purchase by utilizing approximately 2,900 acre-feet per year of local water resources that are currently wasted to the ocean.  
**Storm water Capture and Management:** this project will allow additional storm water to be captured behind the Whittier Narrows Dam.

Flood Control?

5. What is the status of your project readiness? (check as appropriate)

Item	Complete (Specify Date)	In process (Specify Est. Comp. Date)	Not initiated
Conceptual Plans	<input checked="" type="checkbox"/> 1998	<input type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/> 1998	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input checked="" type="checkbox"/> 1998	<input type="checkbox"/>	<input type="checkbox"/>
CEQA/NEPA	<input type="checkbox"/>	<input checked="" type="checkbox"/> 12/05	<input type="checkbox"/>
Permits	<input type="checkbox"/>	<input checked="" type="checkbox"/> 12/05	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/> 2/05

6. Identify the regional or strategic planning document that identifies this project.  
The Whittier Narrows Conservation Pool Improvements project is included in the Water Replenishment District's Strategic Plan and 5-Year Capital Improvement Plan.
  
7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

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In order to implement this project, the District will work closely with the US Corps of Engineers in the development of a new operational manual for the dam when the improvements are implemented. This District will also work closely with the Los Angeles County Department of Public Works, which own and operate the Rio Hondo and San Gabriel River Spreading Grounds.

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?  
Not Applicable.
9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.  
The success of the project will be measured in terms of the District's ability to cost effectively reduce imported water purchases by 2,900 acre-feet per year. These benefits are expected to be realized as soon as the project is completed. It is expected that the District will reduce its MWD imported water purchases as a result of this project; the additional recharge as a result of this project will be considered in the annual water balance thereby reducing the quantity of artificial replenishment that is required.
10. Is there an adaptive management plan in place, or under development, to address post project implementation operational variances?  
There are not expected to be post project operational variances since this project is simply utilizing water that is currently wasted to the ocean and using it to offset imported water purchases at the Rio Hondo and San Gabriel River Spreading Grounds.
11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.  
Data for the project will be tracked by the WRD as part of its annual Engineering Survey and Report. This report provides an summary of all groundwater related activities within the Central and West Coast Basins and is readily available on the District's web site.
12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantages community?  
This project does not provide a direct benefit to disadvantaged communities and will not pose a hardship to them.
13. What percentage of the project funding has been secured?  
None of the project funding has been secured, however, funds are included in the FY05/06 budget to continue moving forward with this project.

**Required Attachments - Refer to:**

[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_Publi](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_Publi)

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**[cReviewVersion\\_01-24-05.pdf](#) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones. Missing. Again, can just add to question 5 answer with construction completion date.
2. Cost Estimate of major project elements including the identification of major funding sources. See the cost worksheet I gave to you previously.



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**Lead Agency Information**

Agency Name: Los Angeles County Flood Control District	
Address: 900 South Fremont Avenue, Alhambra, California, 91803	
Contact Name: Vik Bapna	
Telephone: (626) 458 – 4363	E-Mail: vbapna@ladpw.org
Fax: (626) 457 – 1526	Web Site: http://ladpw.org/wmd/watershed/LA/

**Summary of Proposed Project Information**

Project Title: Wrigley Greenbelt	
Proposed Start Date: December 2006	Proposed Completion Date: August 2007
Proposed CEQA Completion Date: August 2006	
Location: 33.82°N, 118.20°W	Sub Watershed: Los Angeles River
<p><b>Project Description:</b></p> <p>The Wrigley Greenbelt project is located in the City of Long Beach along the east bank of the Los Angeles River between Willow and 34th Streets. The property is approximately one mile long by 75 feet wide and covers nearly eight acres of land owned by the Los Angeles County Flood Control District. Currently, the site consists of a barren area with minimal landscaping and groundcover. The Wrigley Greenbelt project will enhance the area by landscaping the site with native plant gardens, a stormwater runoff swale, a multipurpose trail, rest stop amenities, calisthenics stations, and interpretive signage.</p>	
<p><b>Primary Objectives Addressed by the Project:</b></p> <p><b>Environmental Habitat Protection and Improvement:</b> Through the addition of native vegetation, this project will create habitat to support a variety of wildlife species.</p> <p><b>Recreation and Public Access:</b> The project will promote passive recreational and educational opportunities through the creation of decomposed granite paths, seating areas, and interpretive signage.</p> <p><b>Water Conservation:</b> The project will include landscaping with drought tolerant and native plants. Once established, the native landscaping will be self-sustaining and require little or no irrigation.</p> <p><b>Water Quality Protection and Improvement:</b> The project will provide swales to treat and percolate nuisance dry-weather runoff.</p>	
<b>Water Management Strategies Addressed: (Check all that Apply)</b>	
<input checked="" type="checkbox"/> Ecosystem Restoration*	<input type="checkbox"/> Wetlands Enhancement and Creation*
<input checked="" type="checkbox"/> Environmental Habitat Protection and Improvement*	<input type="checkbox"/> Conjunctive Use
<input type="checkbox"/> Water Supply Reliability*	<input type="checkbox"/> Desalination
<input type="checkbox"/> Flood Management*	<input type="checkbox"/> Imported Water
<input type="checkbox"/> Groundwater Management*	<input type="checkbox"/> Land Use Planning
<input checked="" type="checkbox"/> Recreation and Public Access*	<input type="checkbox"/> NPS Pollution Control
<input type="checkbox"/> Storm Water Capture and Management*	<input type="checkbox"/> Surface Storage
<input checked="" type="checkbox"/> Water Conservation*	<input type="checkbox"/> Watershed Planning
<input checked="" type="checkbox"/> Water Quality Protection and Improvement*	<input type="checkbox"/> Water and wastewater treatment
<input type="checkbox"/> Water Recycling*	<input type="checkbox"/> Water transfer

\*These strategies must be addressed to meet minimum IRWM Plan standards

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**Fiscal Summary**

Category	Planning	Implementation	Match Contribution
Personnel			<input type="checkbox"/> In Kind \$ 347,000
Construction			<input type="checkbox"/> Cash \$ 340,000
Materials			<input type="checkbox"/> Other Grants \$ _____
Other (Describe)			
Totals	\$ 0	\$ 1,700,000	\$ 687,000

Estimated Total Budget (Request & Match): \$ 2,387,000

Estimated Annual O & M Budget: \$ 20,000

1. How does your project develop or conserve local water resources?

The project promotes water conservation through the use of native landscaping that is drought resistant and requires little or no water irrigation. In addition, the landscaped area will have the benefit of filtering and recharging some of the rainfall within the project area.

2. How does this project address water reliability?

The project will have a negligible impact on water reliability.

3. How does your project protect, improve or enhance water quality?

The project can enhance water quality through the coordinated maintenance of the project area to remove trash pollutants that might otherwise be deposited in the Los Angeles River. Interpretive signage may also be used to help educate local residents on the causes of pollution and how they can help prevent the contamination of the River. Additionally, the use of native vegetation and vegetated swales will lead to incremental improvements in surface and groundwater quality.

4. How does your project incorporate all other water management strategies checked above? (excluding items 1, 2 & 3)

The project will incorporate Ecosystem Restoration and Environmental and Habitat protection and Improvement through the establishment of native plants similar to those that would have been found historically at the site and are consistent with the Los Angeles River Master Plan Landscaping and Plant Palette Guidelines. Recreation and Public Access will be addressed by offering patrons passive activities and amenities designed to enhance the overall character of the River environment. Seating areas and American Disabilities Act compliant access points combined with interpretive signage depicting information about the River's flood protection capabilities and the importance of water conservation, will enable visitors to enjoy the River as an outdoor classroom. The area will also provide adults and children alike with an area to view urban wildlife. The project is consistent with the Los Angeles River Master Plan, established recreational and habitat corridors, and with larger watershed planning efforts in the project area.

5. What is the status of your project readiness? (check as appropriate)

Item	Complete	In process	Not initiated
Conceptual Plans	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Land Tenure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preliminary Plans	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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CEQA/NEPA	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Permits	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction Drawings	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

6. Identify the plan(s) that include this project.

This project is identified in both the Los Angeles River Master Plan and the Long Beach Strategic Plan 2010.

7. Describe the level of commitment of partner agencies to the project. Identify end user commitments if appropriate.

A partnership with the City of Long Beach will be critical to the successful implementation of this project. The City of Long Beach has committed to maintaining the site upon completion of the Wrigley Greenbelt project.

8. If the project is in an area of special biological significance please describe how these areas will be protected and/or enhanced. Does it enhance or restore wildlife habitat, in particular that of threatened or endangered species? Will this project have any detrimental biological impacts?

The Los Angeles River currently sustains over 100 species of birds along with other wildlife. Historically, the River sustained steelhead trout, great blue herons, and other species that, due to their extinction, are considered sensitive species. The project will reestablish some of the indigenous native landscaping to promote sustainability of existing and future habitat.

9. How will project success be measured? Describe both qualitative and quantitative measures. If a water quality monitoring plan will be employed, describe the constituents that will be measured, frequency and duration of monitoring including pre and post project monitoring.

The project's success will be measured through its use as a public resource and through the establishment of a site monitoring and assessment program. Interpretive and educational signage may be used as a resource to educate the general public about water and habitat concerns. Students at local schools may utilize site resources to conduct plant and biological assessments of established self-sustained vegetation. The implementation of a monitoring and assessment plan to address site maintenance needs can ensure public enjoyment of an aesthetically pleasing site.

10. Is there an adaptive management plan in place to address post project implementation operational variances?

Adaptive Management will be used to ensure the project is functioning well with regard to habitat, education, and recreation. Periodic site surveys will be done to determine the sustainability of native plants and to address security and maintenance issues. Re-vegetation and irrigation modifications will be made as necessary. Site amenities and access points may be modified to address security and maintenance issues while maintaining maximum accessibility to the public.

11. How will data for the project be tracked? Describe how data will it be made available to other agencies and or other stakeholders.

District staff will track qualitative data for the project by creating regular summaries of operation and maintenance functions undertaken to ensure project sustainability. Summaries will be made available to all interested parties, including agencies and other local stakeholders such as

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environmental groups, and nearby residents via hard copy, e-mail, or the County of Los Angeles Department of Public Works website.

12. Does the project provide a direct benefit to disadvantaged communities? Will the 10% matching funds requirement pose a hardship to this disadvantaged community?

The project is located in a park-deficient community. The project will provide direct benefits to the disadvantaged community by providing needed open space, improving water quality and increasing property values. The Flood Control District will provide matching funds so as to not pose a hardship for the disadvantaged community.

13. What percentage of the project funding has been secured?

Fifteen percent of the project funding has been secured.

**Required Attachments - Refer to:**

**[http://www.grantsloans.water.ca.gov/docs/Prop50\\_DraftImplementationPSP\\_PublicReviewVersion\\_01-24-05.pdf](http://www.grantsloans.water.ca.gov/docs/Prop50_DraftImplementationPSP_PublicReviewVersion_01-24-05.pdf) for further details on the required elements of these documents.**

1. Project Schedule/Timeline including all major milestones and dependencies.
2. Cost Estimate of major project elements including the identification of major funding sources.

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**ADDITIONAL PROJECT QUESTIONS**

**Lead Agency Information**

<b>Agency Name:</b> Los Angeles County Flood Control District	
<b>Address:</b> 900 South Fremont Avenue Alhambra, CA 91803	
<b>Contact Name:</b> Vik Bapna	
<b>Telephone:</b> (626) 458-4636	<b>E-Mail:</b> vbapna@ladpw.org
<b>Fax:</b> (626) 458-3534	<b>Web Site:</b> www.ladpw.org
<b>Project Title:</b> <i>Wrigley Greenbelt</i>	

1. **Stakeholder Involvement:** Please describe the stakeholder involvement in this project.

This project is identified in the Los Angeles River Master Plan (LARMP). The LARMP and its supplemental documents were created by the LARMP Advisory Committee, a committee of more than forty agencies which is chaired by District staff. District staff will facilitate ongoing support from stakeholders, involved in the LARMP Advisory Committee and other community groups. This support has been, and will continue to be, critical in securing project funding, ensuring that the project meets the diverse need of the community, and addressing future maintenance requirements for the site.

2. **Need:** Describe how this project will address long term regional water management needs and discuss how the project will meet regional economic, environmental and fiscal needs and what the impacts will be if the project is not implemented.

This project is part of an overall effort to create much needed open space and passive recreational amenities, such as trails, in park-deficient urban areas located in the Los Angeles River watershed. The creation of open space in densely populated areas will have numerous benefits including, but not limited to, recreational, health, economic, environmental, and educational improvements. For example, residents unable to travel distances to existing recreational facilities will now be able to enjoy this nearby outdoor experience. In addition, families will have the opportunity for stress-reducing exercise which contributes to improved overall health and well-being. The addition of open space to an area may increase property values, and, therefore, economic opportunities, near these openspaces as well. The addition native landscaping and trails will have positive environmental impacts on the area by mitigating water and air pollution and, residents both young and old alike, will be able to learn more about the River and its environment through outdoor classrooms and urban wildlife viewing.

3. **Disadvantage Communities:** What percentage of your service region is disadvantaged and how does this compare to the total regional population?

In accordance with the U.S. Department of Housing and Urban Development Census 2000 Data, 50 percent of the population in the City of Long Beach falls in the low/moderate income categories. In the total regional population, region defined as Los Angeles County, 45 percent falls in the low/moderate income categories.

**Exhibit B - Tasklist and Timeline**  
**Wrigley Greenbelt**

		2005				2006								2007											
		Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	mar	Apr	May	Jun	Jul	Aug
<b>Task 1 - Project Concept Design Phase</b>																									
1.1	Project Review	■	■																						
1.2	Progress Meetings (Monthly, ongoing)	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
1.3	Project Site Visit			■																					
1.4	DPW Administration/Review			■	■																				
<b>Task 2 - Detailed Conceptual Design Phase</b>																									
2.1	Kick-off Meeting				■																				
2.2	In-house Design 30%					■	■																		
2.3	Review and comments							■																	
2.4	Design 75%							■	■																
2.5	Review and incorporate comments									■															
2.6	Design 100%									■	■	■													
2.7	DPW Administration/Review											■													
<b>Task 3 - Constuction</b>																									
3.1	Construction Advertisement												■												
3.2	Construction Bids													■	■										
3.3	Award															■									
3.4	Project Construction																■	■	■	■	■	■	■	■	■
3.5	90 Day Maintenance																						■	■	■

# WRIGLEY GREENBELT

## EXHIBIT C COST ESTIMATE FORMAT

Complete the following table for each project contained within the proposal and a table showing the estimated costs for the entire proposal.

Cost Estimate Sheet				
Proposal Title:				
Project Title:				
	Budget Category	Non-state Share (Funding Match)	State Share (Grant Funding)	Total
(a)	Direct Project Administration Costs	<b>\$20,000</b>		<b>\$20,000</b>
(b)	Land Purchase/Easement			
(c)	Planning/Design/Engineering/Environmental Documentation	<b>\$72,000</b>		<b>\$72,000</b>
(d)	Construction/Implementation		<b>\$1,700,000</b>	<b>\$1,700,000</b>
(e)	Environmental Compliance/Mitigation/Enhancement			
(f)	Project Summary [Sum (a) through (e) for each column]	<b>\$92,000</b>	<b>\$1,700,000</b>	<b>\$1,792,000</b>
(g)	Construction Administration	<b>\$255,000</b>		<b>\$255,000</b>
(h)	Other			
(i)	Construction/Implementation Contingency (20%)	<b>\$340,000</b>		<b>\$340,000</b>
(j)	Grant Total [Sum (f) through (i) for each column]	<b>\$687,000</b>	<b>\$1,700,000</b>	<b>\$2,387,000</b>
Source of funds for Non-State Share (Funding Match)		Los Angeles County Flood Control District		

## Budget Category Explanations

- (a) *Direct Project Administration Costs* – Includes: salaries, wages, fringe benefits, office supplies, and equipment needed to support the project, staff travel costs (at or below the rate allowed for unrepresented State employees), and preparation of required quarterly and final reports. Actual costs directly related to the project will be reimbursed.
- (b) *Land Purchase/Easement* – If land acquisition is to be included in the Non-State share, include whether it is a proposed acquisition, or if the land is already owned by an IRWM Plan participant. Prior purchase of land can be included in an applicant's funding match if purchased after November 5, 2002. Land acquisition costs will not be considered a reimbursable item if purchased prior to the effective date of the grant agreement. For land purchased prior to the date of the application include the date of purchase and purchase price of the land. Costs for easements will be handled similarly as for land purchases.
- (c) *Planning/Design/Engineering/Environmental Documentation* – Differentiate costs between consulting services and/or agency/organization staff costs for these efforts. Planning costs include: planning efforts, reconnaissance studies, feasibility studies, and preliminary reports. Design and engineering costs include: conceptual, preliminary and final design efforts, geotechnical reports, hydraulic studies, water quality investigations and efforts, and other engineering types of work. Include the costs of bid preparation and processing here. Environmental documentation costs include all efforts involved in the CEQA or NEPA process up to the point of the Notice of Determination, Finding of no Significant Impact, or Record of Decision.
- (d) *Construction/Implementation* – Includes the summary of labor, materials, equipment purchases and/or rentals. After bids are received these costs will be the actual construction cost awarded to the low bidder. The construction or implementation costs for Pilot Projects should be included here.
- (e) *Environmental Compliance/Mitigation/Enhancement* – Includes those costs required by a CEQA/NEPA document to offset any potential damages caused by the proposal. If these costs are included in the contract awarded for construction or implementation of the proposal, differentiate such costs for purposes of this budget.
- (f) *Project Summary* – The summation of the costs for items (a) through (e) above.
- (g) *Construction Administration* – Includes those costs required to supervise and administer the construction or implementation of the project(s). Differentiate costs between consulting services and agency staff costs to perform this work.
- (h) *Other* – Includes costs for legal services, license fees, permits, any implementation verification costs, and any monitoring and assessment costs required during the construction/implementation of the proposal. Do not include monitoring and assessment costs for efforts required after construction/implementation of the proposal is complete. These costs are considered to be operation and maintenance costs and are not reimbursable.
- (i) *Construction/Implementation Contingency* – Includes any contingency costs for the construction/implementation of the proposal. Specify the percentage used for this contingency cost. For all other contingency costs, i.e. design, land purchase, etc., include those contingencies in the appropriate cost category.

For the Step 2 submittal, detail will be expected for each of the above cost categories explaining how the total cost was derived.



FRAMEWORK INTEGRATED REGIONAL WATER MANAGEMENT PLAN  
**APPENDIX C – Project Criteria and Scoring**

## INITIAL PROJECT SCREENING TOOL

Categories taken from Proposal Solicitation Package for Implementation Grants pages 14-15

### Adequacy of IRWM Plan

Criteria	Score
<b>Consistency with Minimum IRWM Standards</b>	
Project is not a part of an IRWM Plan per Proposition 50, Chapter 8	Fail
Project is part of an IRWM Plan per Proposition 50, Chapter 8	Pass
<b>Region</b>	
Project is not within the LA River, Ballona, Dominguez Channel or Santa Monica Bay Watersheds	Fail
Project is within the LA River, Ballona, Dominguez Channel or Santa Monica Bay Watersheds	Pass
<b>Objectives</b>	
The project objectives are clearly defined	1
The project objectives are clearly defined and address regional objectives	3
The project objectives are clearly defined and address regional objectives and statewide priorities	5
<b>Water Management Strategies and Integration (See Guidelines Table A-1 p.15)</b>	
Project meets only one of the required water management strategies	1
Project meets at least two of these water management strategies	2
Project meets at least three of these water management strategies	3
Project meets at least four of these water management strategies	4
Project meets at least four of these water management strategies, in addition to at least one of the strategies not required.	5
<b>Priorities and Schedule</b>	
Conceptual level planning is completed	1
Conceptual planning is complete and land is acquired or rights of way are obtained	2
Construction documents and construction schedules are completed	4
All construction documents and schedules have been completed and all construction permits have been obtained	5
<b>CEQA/NEPA</b>	
Project has not started CEQA/NEPA process	0
Project is in CEQA/NEPA process	3

Project is Exempt, Negative Declaration or CEQA/NEPA process has been completed 5

**Implementation**

A lead agency has committed to implementing the project 1

Additional agencies necessary for implementation have committed 2

**Impacts and Regional Benefits**

Project reduces water pollution in a water body on the Clean Water Act 303(d) list 1

Project reduces pollution in an environmentally sensitive habitat area 2

Project significantly reduces pollution in an environmentally sensitive habitat area 4

Project eliminates pollution in an environmentally sensitive habitat area 5

**Technical Analysis and Plan Performance**

A qualitative process has been identified to measure success 1

A quantitative process has been identified to measure success including pre- and post-project monitoring 3

An adaptive management process has been integrated into the project to adapt post-project operations 5

**Data Management**

A methodology has been identified to track data 1

A methodology has been identified to track data and is available to other agencies 3

A methodology has been identified to track data and is available to other agencies and stakeholders 5

**Financing**

No funding has been secured 0

Local funding has been secured and is equal to 10% of project costs 2

Local funding has been secured and is equal to 35% of project costs 3

Local funding has been secured and is equal to 60% of project costs 5

**Relation to Local Planning & Sustainability**

Project is not a part of local planning (e.g. general plans) 0

Project is consistent with local planning (e.g. general plans) 1

**Stakeholder Involvement & Coordination**

Project has no stakeholder involvement 0

Project has minimal stakeholder involvement 3

Project is part of ongoing stakeholder process 5

## Adequacy of Proposal

### Funding Match

Project does not have minimum 10% funding match

Fail

Project does have minimum 10% funding match

Pass

### Description of Proposal (Select as many that apply)

The proposal is sufficiently detailed to understand its relationship to implementation of the IRWM Plan

3

The project is a part of a larger program that provides multiple benefits consistent with IRWM plan objectives

5

Clear metrics have been articulated that show measurable improvements in water quality or water supply

4

Project addresses the nine elements of a watershed-based plan as defined by the EPA Clean Water Act Section 319(h)

3

### Cost Estimate

Only planning level costs are estimated

1

Costs have been estimated but do not fully conform to the requirements of the PSP Exhibit C

3

Costs have been estimated and fully conform to the requirements of the PSP Exhibit C

5

### Schedule

An overall schedule describing the length of the project has been prepared

1

Schedule with milestones and dependencies is provided

3

Schedule with milestones and dependencies is provided in a Gantt chart

5

### Need

The project addresses regional economic, environmental and fiscal impacts

5

The project addresses regional economic, environmental and fiscal impacts and critical impacts that will occur if the project is not implemented

10

### Disadvantaged Communities (Select all that apply)

The project(s) will provide a direct benefit to a disadvantaged community (per the PSP page 12)

5

The 10% matching requirement would pose a hardship to this disadvantaged community

5

### Total Points

### Water Management Strategies From Guidelines, p15, Table A-1

Ecosystem Restoration\*

Environmental and habitat protection and improvement\*  
Water Supply Reliability\*  
Flood management\*  
Groundwater management\*  
Recreation and public access\*  
Storm water capture and management\*  
Water conservation\*  
Water quality protection and improvement\*  
Water recycling\*  
Wetlands enhancement and creation\*  
Conjunctive use  
Desalination  
Imported water  
Land use planning  
NPS pollution control  
Surface storage  
Watershed planning  
Water and wastewater treatment  
Water transfers

\*-Pursuant to CWC §§ 79562.5 and 79564, these water management strategies must be considered to meet the minimum IRWM Plan Standards.

FRAMEWORK INTEGRATED REGIONAL WATER MANAGEMENT PLAN  
**APPENDIX D - IRWM Plan Work Plan**

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## **Section 1 – Work Items**

This Work Plan outlines the process by which an IRWM Plan would be completed for the Region by subtask.

### **1.1 Project Coordination and Administration**

This subtask provides the overall communication and coordination structure for the tasks and deliverables described throughout this section of the Work Plan. The WCA will be responsible for managing and reporting the progress of this Work Plan. As the lead agency, WCA will also be responsible for communicating progress and soliciting additional input from stakeholder agencies in the Region.

Agency coordination includes cooperation with the RMC, LACDPW, Water Replenishment District of Southern California, City of Long Beach Water Department, Central Basin Municipal Water District, Sanitation Districts of Los Angeles County, Gateway Cities Council of Governments, State Coastal Conservancy, Mountains Recreation and Conservation Authority, and a number of other stakeholders. These agencies have agreed to adopt an MOU in this regard.

In addition, the Regional Group will coordinate with the Department of Water Resources (DWR), State Water Resources Control Board (SWRCB), Regional Water Quality Control Boards, and other local, regional, state, and federal agencies as appropriate.

Three different groups of participants will be identified for the purpose of providing various levels of input into the development of the IRWM Plan. These three groups are:

#### *Regional Water Management Group (Regional Group):*

As described in the Framework IRWM Plan, entities included in this group at this time are:

- RMC
- LACDPW
- Central Basin Municipal Water District
- City of Long Beach Water Department
- Water Replenishment District of Southern California
- Sanitation Districts of Los Angeles County
- Gateway Cities Council of Governments
- Mountains Recreation and Conservation Authority
- Los Angeles and San Gabriel Rivers Watershed Council
- California Coastal Conservancy
- City of Los Angeles
- Tree People
- City of El Monte
- Amigos de Los Ríos



The Regional Group will meet quarterly, at a minimum, to discuss issues that affect the overall IRMWP process as well to further develop regional implementation projects.

*Water Management Focus Area Subcommittees:*

This group will be comprised of representatives from the Regional Group as well as other stakeholders involved with issues relating to one of the five Water Management Focus Areas that are discussed in Section 1.3 of this Work Plan. Members will be identified by the Regional Group. Subcommittee meetings will be scheduled on an as-needed basis to obtain technical input and discuss the integration of water management strategies during the development of the IRWM Plan.

*Stakeholders:*

This group will include those stakeholders that have been involved in the development and adoption of a significant number of water resource plans, watershed management plans, baseline documents, land use/habitat/recreation plans, and supporting documents that will form the basis of the IRWM Plan. Stakeholder workshops will be held during the Draft IRWM Plan process as detailed in Sections 1.2, 1.4, 1.6, and 1.9 of this Work Plan.

This task also provides the overall administration of the tasks and deliverables presented in this work plan. This task also includes maintaining and updating the project budget and schedule status to ensure the IRWM Plan is completed on schedule and within budget. Updates to the budget and schedule will be included in the quarterly reports. Quarterly reports will be provided on the following dates:

- March 2006
- June 2006
- September 2006
- January 2007

Communication and coordination will continue throughout the length of the proposed Work Plan.

***Deliverables:***

- Kickoff meeting
- Quarterly meetings (agendas, minutes)
- Quarterly Reports (progress, budget and schedule)

***Schedule:*** June 2005 through December 2006. A kickoff meeting with DWR and/or SWRCB representatives is proposed for January 2006.

***Budget:*** The overall budget for this task is detailed in the table below:

1.1 Project Coordination and	Total
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Administration	Budget
TOTAL	\$72,000

## 1.2 IRWM Plan Objectives

Regional planning objectives are outlined in Section 4 of the Framework IRWM Plan. These objectives have been grouped by Water Management Focus Areas, which are classifications that combine similar water management strategies. These objectives were derived from various stakeholder-driven watershed management planning efforts throughout the Region.

As part of this task, the objectives presented in each Water Management Focus Area will be reviewed, refined, and integrated by the appropriate subcommittees to develop a comprehensive list of regional objectives addressing all water-related issues including, but not limited to water supply, surface and groundwater management, ecosystem restoration, and water quality.

The IRWM Plan objectives will be further refined based on additional stakeholder input through a workshop attended by representatives from key agencies with authority over water-related issues and other stakeholder groups in the Region. The Regional Group will refine these objectives to gain consensus among the stakeholders in the Region while maintaining compliance with the following Statewide Priorities:

- Reduce conflict between water users or resolve water rights disputes, including interregional water rights issues
- Implementation of Total Maximum Daily Loads that are established or under development
- Implementation of Regional Water Quality Control Board (RWQCB) Watershed Management Initiative Chapters, plans, and policies
- Implementation of the SWRCB's Non-point Source (NPS) Pollution Plan
- Assist in meeting Delta Water Quality Objectives
- Implementation of recommendations of the floodplain management task force, desalination task force, recycling task force, or state species recovery plan
- Address environmental justice concerns
- Assist in achieving one or more goals of the CALFED Bay-Delta Program

### ***Deliverables:***

- Stakeholder Workshop #1 (agenda, summary)

- Final IRWM Plan Objectives

**Schedule:** June 2005 through September 2005. Stakeholder Workshop #1 is scheduled for August 2005.

**Budget:** The overall budget for this task is detailed in the table below:

1.2 IRWM Plan Objectives	Total Budget
TOTAL	\$12,000

### 1.3 Development of Water Management Focus Areas

This task involves integrating similar water management strategies into five Water Management Focus Areas. Entities within the Regional Group, as well as other stakeholders, will form subcommittees as appropriate to address the issues within these focus areas, in order to facilitate the development of an IRWM Plan. By including this intermediate step to group similar water management strategies, the integration and implementation of these strategies on a regional basis, as detailed in Sections 1.4 and 1.5 of this Work Plan, will be facilitated.

Subcommittees for each of the Water Management Focus Areas will review and compile regional documentation related to the specific areas. Technical memorandums will be prepared for each of the focus areas to identify data gaps, and aid in the integration of strategies and the development of the IRWM Plan. The Water Management Focus Areas are described below:

#### 1.3.1 Water Supply Reliability and Water Quality Protection

This subtask focuses on effectively addressing the water management strategies outlined by DWR and the SWRCB as it pertains to the Water Supply Reliability and Water Quality Protection and Improvement focus area, including:

- Water Supply Reliability
- Water Quality Protection and Improvement
- Desalination
- Imported Water
- NPS Pollution Control
- Surface Storage

- Water and Wastewater Treatment
- Water Transfers

The development of this Water Management Focus Area will build upon work already completed within the Region, including reviewing and summarizing existing local and regional plans, and supporting this information by:

- Using updated information on population, water supplies and water demand forecasts currently being developed as part of various agencies' 2005 Urban Water Management Plans.
- Including any new projects identified to meet water supply and water quality needs for the Region as well as utilizing documents that evaluate water quality and water supply as identified in the matrix.
- Preliminarily assessing the impacts and benefits from the implementation of plans and projects on a regional level.

*Work already reviewed and summarized:* As shown in the Document Matrix presented in Section 3 of the Framework IRWM Plan, numerous plans focusing on the various water management strategies have been reviewed and categorized, including numerous multi-objective plans, and the primary water documents including several urban water management plans and local water resource plans.

*Work that is underway or planned:* This focus area will address upcoming TMDLs and other related water quality regulations. It will also draw from the ASCE Regional Infrastructure Funding Workgroup (discussed in Section 7.3 of the Framework IRWM Plan) in terms of coordination of work scope elements and implementation process, because of the workgroup's focus on water quality and related projects.

### **1.3.2 Groundwater Management and Conjunctive Use**

This subtask focuses on effectively addressing the water management strategies outlined by DWR and the SWRCB as it pertains to the Groundwater Management and Conjunctive Use focus area.

The development of this Water Management Focus Area will detail the available groundwater-related information and plans that already exist locally within the region and address any missing data gaps relating to groundwater and conjunctive use needs within the Region.

In particular, updates to groundwater management and conjunctive use documents from the Water Replenishment District of Southern California, Metropolitan Water District of Southern California, Central and West Basin

Municipal Water Districts, City of Los Angeles Department of Water and Power, Main San Gabriel Basin Watermaster, and others should be compiled to address all groundwater management goals, objectives, and recommendations.

Conjunctive use strategies will be included from a regional perspective with specific recommendations relative to fostering more coordination and collaboration across jurisdictional boundaries to produce conjunctive use projects that provide maximum benefit for the Region. A specific timeline for implementation of these strategies and actions would be identified.

### **1.3.3 Stormwater Management and Flood Protection**

This subtask focuses on effectively addressing the water management strategies outlined by DWR and the SWRCB as it pertains to the Stormwater Management and Flood Protection focus area, including:

- Stormwater Capture and Management
- Surface Storage
- Flood Management

This subtask will address any gaps within the Region relating to this Water Management Focus Area. Opportunities oriented toward increasing stormwater capture, particularly wet weather run off, ranging from enhancing large flood protection projects to expanding local on-site and neighborhood scale solutions should be addressed from a regional perspective. There is also a strong need for the Region to address upper and lower basin strategies collectively to improve stormwater capture, surface storage, and flood management to reduce the reliance on imported water supplies. A specific timeline for implementation of these strategies and actions should be identified.

### **1.3.4 Watershed Management, Habitat, and Recreation**

This subtask focuses on effectively addressing the water management strategies outlined by DWR and the SWRCB as it pertains to the Watershed Management, Habitat, and Recreation focus area, including:

- Ecosystem Restoration
- Environmental Habitat Protection and Improvement
- Wetlands Enhancement and Creation
- Watershed Planning

This subtask will address any gaps within the Region relating to this Water Management Focus Area. This effort will include reviewing the Compton Creek Watershed Management Plan, the Watershed Management Plan for the San Gabriel River Above Whittier Narrows (public draft release and final when complete), San Gabriel River Corridor Master Plan and EIR, Rio Hondo Watershed Management Plan, and Coyote Creek Watershed Management Plan (in preparation), Wetlands Recovery Project documents, Common Ground, and other relevant documents. This will aid in determining how this focus area can not only identify programmatic watershed elements, objectives, goals, recommendations, and actions for the entire San Gabriel and Lower Los Angeles Rivers Watershed, but also to implement region-wide coordination and collaboration relative to agreed upon goals, objectives, and recommendations. In this way, governance, watershed management, implementation, and monitoring associated with individual planning efforts will be more holistically approached. A specific timeline for implementation of these strategies and actions should be identified.

### **1.3.5 Water Recycling, Reclamation, and Conservation**

This subtask focuses on effectively addressing the water management strategies outlined by DWR and the SWRCB as it pertains to the Water Recycling, Reclamation, and Conservation focus area, including:

- Water Recycling
- Water and Wastewater Treatment
- Water Conservation

This subtask will address any gaps within the region relating to this Water Management Focus Area. Each of these areas will be addressed by updated 2005 Urban Water Management Plans and other agency documents, such as Central Basin's Water Recycling Program Master Plan. Documents pertaining to water recycling, water reclamation and water conservation for the Region should be compiled. Regional objectives, goals, and recommendations to maximize retention of local water resources and reduce need for imported water will be addressed. A specific timeline for implementation of these strategies and actions should be identified.

#### ***Deliverables:***

- Subcommittee Meetings (agendas, summaries)
- Document Review Forms
- Technical Memorandum (5) for each Water Management Focus Areas

***Schedule:*** June 2005 through March 2006

**Budget:** The overall budget for this subtask is detailed in the table below:

1.3 Development of Water Management Focus Areas	Total Budget
TOTAL	\$392,000

## 1.4 Integration of Water Management Strategies

As part of this task, the technical memorandums for the five Water Management Focus Areas identified in Task 1.3 will be reviewed to identify potential synergies or linkages between them. Such interrelationships will form the basis for development of regional projects meeting multiple benefits.

There are numerous baseline documents that help form the foundation for the integration of strategies in the Region. Several multi-objective documents also lay the groundwork for water management strategies in the Region, including Common Ground, Watershed Management Initiative Chapter, San Gabriel River Corridor Master Plan, Watershed Management Plan for the San Gabriel River Above Whittier Narrows, Rio Hondo Watershed Management Plan, and Los Angeles River Master Plan.

In addition to these baseline documents, numerous plans addressing specific water management strategies have been reviewed by the Regional Group and will continue to be as part of Task 1.3. A listing of documents reviewed and the strategies they include is summarized in a document matrix in Section 3 of the Framework IRWM Plan. The document matrix will be further developed to confirm the water management strategies addressed in the Region, determine any overlapping plans and/or projects, and assist with the integration of plans and projects across a range of water management strategies.

Geographic Information System (GIS) mapping applications will be used to clarify the areas covered by local plans and proposed projects. GIS will be used both to determine if any geographic overlapping exists between proposed projects and to illustrate that once integrated, water management strategies provide benefits across the entire Region.

Stakeholder Workshop #2 will be held to obtain input regarding opportunities for integration of water management strategies and associated projects. Such examples may include incorporating flood protection or water recycling aspects into environmental enhancement opportunities. While developing the strategies for water management integration, specific attention will be focused on ensuring that these strategies meet the IRWM standards.

### **Deliverables:**

- Document/Strategies Matrix
- GIS Mapping

- Stakeholder Workshop #2 (agenda, summary)
- Integration Strategies Table

**Schedule:** October 2005 through May 2006. Stakeholder Workshop #2 is scheduled for March 2006.

**Budget:** The overall budget for this task is detailed in the table below:

1.4 Integration of Water Management Strategies	Total Budget
TOTAL	\$50,000

## 1.5 IRWM Plan Implementation

This task involves the identification of regional projects that address the criteria established in the Proposition 50, Chapter 8 guidelines. Many of these tasks have already been completed. The following bulleted items identify the process to determine and prioritize these multi-objective projects:

- Preparation of a project identification form
- Distribute form to stakeholders throughout the Region
- Develop specific project ranking criteria based on the IRWM guidelines, including compliance with Statewide Priorities
- Rank various projects based on the established criteria
- Determine projects to be defined as Tier 1, indicating compliance with Statewide Priorities, project readiness, disadvantaged community impacts, and other criteria
- Refine the Tier 1 projects to address as many water management strategies as possible
- Develop a specific implementation schedule for the Tier 1 projects as a whole
- Include Tier 1 projects in the submittal for the Proposition 50, Chapter 8 Implementation Grant

An implementation strategy will be developed for the Tier 1 projects and will be included in the IRWM Plan. The implementation strategy will identify the lead Regional Agency and the institutional structure and funding mechanism that is in place to ensure the various Tier 1 projects will be implemented, as well as operated and maintained for life of the projects. The implementation strategy will also provide a mechanism to evaluate the performance of the plan as well as a strategy for future modifications and



amendments to it. Finally, the IRWM Plan will also address how these projects address the regional and statewide goals and objectives with regards to water management.

**Deliverables:**

- Project Identification Forms
- Matrix with Project Rankings and Ranking Criteria
- Tier 1 Project Identification and Implementation Schedule

**Schedule:** June 2005 through August 2006.

**Budget:** The overall budget for this task is detailed in the table below:

1.5 IRWM Plan Implementation	Total Budget
TOTAL	\$35,000

## 1.6 Impacts and Benefits

As part of this task, potential impacts and benefits associated with implementation of the prioritized projects included in Section 1.5 will be documented based on information included in the Water Management Focus Area technical memorandums developed in Section 1.3. The analysis of benefits will include attention to:

- Water benefits, including conservation, reduced dependency on imported water, increased supply reliability and improvement to regional water quality
- Environmental advantages, both directly and indirectly attributable to the implemented project
- Cost benefits, including project costs, project controls, challenges to the regional implementation and integration of projects, and socio/economic advantages

Potential impacts and benefits will be presented at Stakeholder Workshop #3 for feedback and comment by the Regional Group and other regional stakeholders. Impacts for each implemented project will be detailed in the implementation plan developed in Section 1.5 of this Work Plan. Since CEQA compliance will be a requirement for implementation of a given project, any potential impacts identified will be addressed and mitigated. CEQA compliance will be summarized within the implementation plan portion of the IRWM Plan.

**Deliverables:**

- Stakeholder Workshop #3 (agenda, summary)
- Final Impacts and Benefits Table

**Schedule:** January 2006 through July 2006

**Budget:** The overall budget for this task is detailed in the table below:

1.6 Impacts and Benefits	Total Budget
TOTAL	\$19,000

## 1.7 Data and Technical Analysis

As part of this task, the data, technical methods and analysis used in the development of the technical memorandums for the five Water Management Focus Areas will be documented. In addition, the need for any additional water supply or water quality monitoring, as well as other data gaps will be identified. Local agency and regional performance measures will be compiled and reviewed to identify those that are most relevant to the IRWM Plan. Existing data from modeling efforts, and current monitoring programs will be included and detailed. Each plan reviewed and included in the document matrix will include either a summary of technical data gathered and analyzed or include the technical reference appropriate to that plan.

A variety of technical studies have been conducted throughout the Region that will assist in the implementation of the IRWM Plan. A hydraulic/hydrologic model of the Los Angeles and San Gabriel Rivers System, currently being developed by the U.S. Army Corps of Engineers and LACDPW, will provide an integral baseline model to assess development and other impacts to the river system. The Watershed-Wide Monitoring Program for the San Gabriel Watershed program is focused on unifying all relevant data collection and monitoring efforts in the watershed and making this data available to interested parties. These two programs may be used as the basis for integrating other technical analyses within the Region.

Although sporadic stormwater quality monitoring events have been conducted by a variety of stakeholders, each serving different purposes; as a Region, there is currently a lack of comprehensive data. A water quality monitoring program would need to be developed to address current and future TMDLs for the San Gabriel River and the Los Angeles River Watersheds. This program may integrate the various monitoring efforts ongoing by LACDPW, Sanitation Districts of Los Angeles County, and other agencies. Citizen or volunteer monitoring may also be integrated to supplement agency efforts.

As described in Section 1.4, GIS mapping applications will be utilized to illustrate not only what data is available throughout the Region, but also be used as a tool to determine if any geographic or water management strategy gaps exist. For those areas where a gap is identified based on the existing data and technical analyses, it will be determined if a study is currently planned for that area, or if corrective actions as part of the IRWM Plan implementation will be needed.

A technical memorandum will be developed as part of this task to identify the studies and assessments that currently exist within the Region, as well as those that are scheduled to be developed by regional stakeholders.

**Deliverables:**

- GIS Mapping
- Water Quality Monitoring Program
- Technical Memorandum on Regional Studies/Assessments

**Schedule:** August 2005 through May 2006

**Budget:** The overall budget for this task is detailed in the table below:

1.7 Data and Technical Analysis	Total Budget
TOTAL	\$54,000

## 1.8 Data Management

Based on the existing and proposed technical studies and programs that would be identified within Section 1.7 of this Work Plan, the Regional Group will develop a database by which data, including regional and project related monitoring efforts, can be tracked. This information would be made available through agency websites as well as through periodic stakeholder meetings that would occur during the IRWM Plan implementation.

The development of this regional database will be formatted to facilitate integration into the SWRCB's statewide data management efforts (e.g., data specific to surface water quality monitoring efforts will be made available to the SWRCB's Surface Water Ambient Monitoring Program, data specific to groundwater quality monitoring efforts will be made available to the SWRCB's Groundwater Ambient Monitoring and Assessment Program, etc).

As appropriate, GIS mapping will be used to create visual displays of data collected.

**Deliverables:**

- Regional Water Management Database

**Schedule:** October 2005 through July 2006

**Budget:** The overall budget for this task is detailed in the table below:

1.8 Data Management	Total Budget
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TOTAL	\$22,000
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## 1.9 Stakeholder Involvement

This task involves general outreach activities to regional stakeholders throughout the development of the IRWM Plan. The Regional Group will develop a comprehensive list of stakeholders to be included in the IRWM Plan process. The stakeholder contact list will be updated to reflect any new stakeholders identified during the development and implementation of the IRWM Plan. Information related to the IRWM Plan development will be shared with stakeholders through an IRWM Plan website, e-mail announcements, and periodic stakeholder meetings as appropriate. Mass mailings will be utilized to inform stakeholders of the IRWM Plan Public Meeting described in Section 1.10 of this Work Plan.

The process for identifying project stakeholders and involving them throughout the development of the IRWM Plan will be documented. In addition to Stakeholder Workshops #1, #2, and #3 identified in this Work Plan, it is anticipated that a significant amount of additional efforts will be made to engage the diverse set of stakeholders throughout the Region to assist in guiding the plan development. The IRWM Plan will also identify processes in which stakeholders may participate in the implementation of the plan; e.g., citizen/volunteer monitoring events.

### **Deliverables:**

- Stakeholder List
- General communication materials (e.g., public notices, e-mail announcements, website updates, etc.)

**Schedule:** June 2005 through December 2006

**Budget:** The overall budget for this task is detailed in the table below:

1.9 Stakeholder Involvement	Total Budget
TOTAL	\$55,000

## 1.10 Prepare IRWM Plan

This task involves incorporating comments from the Regional Group, Water Management Focus Area subcommittees, and other stakeholders to prepare an Administrative Draft, Public Draft, and Final IRWM Plan. The Administrative Draft will be reviewed by the Regional Group. Comments from the Regional Group will be incorporated into the Public Draft. This draft document will be made available to the full stakeholder list (established in Section 1.9) for review and comment. In addition, a

Public Meeting will be held to present the draft IRWM Plan to the stakeholders to solicit additional input and encourage participation in the IRWM Plan implementation.

Stakeholder comments will be incorporated into the Final IRWM Plan, which will then be made available to all participating agencies and organizations, DWR and SWRCB, and other interested stakeholders. The Final IRWM Plan will be completed and adopted by all appropriate entities, including the WCA Governing Board, RMC Governing Board, and Board of Supervisors of the County of Los Angeles, by December 15, 2006.

***Deliverables:***

- Administrative Draft IRWM Plan
- Public Draft IRWM Plan
- Public Meeting
- Final IRWM Plan

***Schedule:*** June 2005 through October 2006. A Public Meeting is scheduled for August 2006 to present the draft document to all interested stakeholders. Formal IRWM Plan adoption will take place between November 2006 and December 2006.

***Budget:*** The overall budget for this task is detailed in the table below:

1.10 Prepare IRWM Plan	Total Budget
TOTAL	\$89,000

## **Section 2 – Budget**

Total budget is indicated for each task identified in Section 1 of this Work Plan. The estimated total budget for the development of an IRWM Plan for the San Gabriel and Lower Los Angeles Rivers Watershed Region is \$800,000. A budget summary is indicated in the table below:

Task	Total Budget
1.1 Project Coordination and Administration	\$72,000
1.2 IRWM Plan Objectives	\$12,000
1.3 Development of Water Management Focus Areas	\$392,000
1.4 Integration of Water Management Strategies	\$50,000
1.5 IRWM Plan Implementation	\$35,000
1.6 Impacts and Benefits	\$19,000
1.7 Data and Technical Analysis	\$54,000
1.8 Data Management	\$22,000
1.9 Stakeholder Involvement	\$55,000
1.10 Prepare IRWM Plan	\$89,000
<b>TOTAL</b>	<b>\$800,000</b>

### **Section 3 – Schedule**

The time duration to complete each task identified in this Work Plan is indicated in Section 1. Specific months for stakeholder workshops and public meetings are also indicated. An overall schedule, organized by proposed tasks, is shown in the Gantt Schedule on the following page of this Work Plan.

The total project duration is estimated at 19 months (June 2005 through December 2006). Completion of the Final IRWM Plan is scheduled for October 2006 with final adoption by participating agencies by December 2006.

### SECTION 3

## SAN GABRIEL AND LOWER LOS ANGELES RIVERS WATERSHED IRWM PLAN SCHEDULE

ID	Task Name	Start	Finish	2005												2006													
				May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan					
1	<b>1.1 Project Coordination and Administration</b>	Wed 06/01/05	Fri 12/29/06	06/01	[Blue bar from 06/01 to 12/29]																								12/29
2	<b>1.2 IRWM Plan Objectives</b>	Wed 06/01/05	Fri 09/30/05	06/01	[Blue bar from 06/01 to 09/30]												09/30												
3	Stakeholder workshop #1	Wed 08/31/05	Wed 08/31/05					08/31																					
4	<b>1.3 Development of Water Management Focus Areas</b>	Wed 06/01/05	Thu 03/30/06	06/01	[Blue bar from 06/01 to 03/30]												03/30												
5	<b>1.4 Integration of Water Management Strategies</b>	Mon 10/03/05	Wed 05/31/06						10/03	[Blue bar from 10/03 to 05/31]												05/31							
6	Stakeholder workshop #2	Fri 03/31/06	Fri 03/31/06																										
7	<b>1.5 IRWM Plan Implementation</b>	Mon 06/06/05	Thu 08/31/06	06/06	[Blue bar from 06/06 to 08/31]																								08/31
8	<b>1.6 Impacts and Benefits</b>	Tue 01/03/06	Mon 07/31/06																										
9	Stakeholder workshop #3	Fri 06/30/06	Fri 06/30/06																										
10	<b>1.7 Data and Technical Analysis</b>	Mon 08/01/05	Wed 05/31/06																										
11	<b>1.8 Data Management</b>	Mon 10/03/05	Mon 07/31/06																										
12	<b>1.9 Stakeholder Involvement</b>	Wed 06/01/05	Fri 12/15/06	06/01	[Blue bar from 06/01 to 12/15]																								12/15
13	<b>1.10 Prepare IRWM Plan</b>	Wed 06/01/05	Tue 10/31/06	06/01	[Blue bar from 06/01 to 10/31]																								10/31
14	Public Meeting	Thu 08/31/06	Thu 08/31/06																										
15	IRWM Plan Adoption	Wed 11/01/06	Fri 12/15/06																										

#### LEGEND

Task Name



Stakeholder Workshops



Public Meeting





FRAMEWORK INTEGRATED REGIONAL WATER MANAGEMENT PLAN  
**APPENDIX E – Memorandum of Understanding**

**MEMORANDUM OF UNDERSTANDING  
FOR THE ESTABLISHMENT OF AN INTEGRATED REGIONAL WATER  
MANAGEMENT GROUP FOR THE SAN GABRIEL AND  
LOWER LOS ANGELES RIVERS WATERSHED**

THIS MEMORANDUM OF UNDERSTANDING (the "MOU") is made and entered into this \_\_\_\_ day of \_\_\_\_\_, 2005, by and among the San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy, Los Angeles County Flood Control District, Watershed Conservation Authority, Sanitation Districts of Los Angeles County, City of Long Beach, Gateway Cities Council of Governments, Water Replenishment District, Central Basin Municipal Water District, City of El Monte, Amigos de los Rios, Los Angeles and San Gabriel Rivers Watershed Council, Tree People, Mountains Recreation and Conservation Authority and the California Coastal Conservancy. These entities are referred to collectively as the "PARTIES" and individually as the "PARTY."

WITNESSETH

WHEREAS, in November 2002 the voters of California enacted the Water Security, Clean Drinking Water, Coastal and Beach Protection Act of 2002 ("Proposition 50"), adding provisions to the California Water Code;

WHEREAS, Chapter 8 of Proposition 50, commencing with Water Code section 79560, authorizes the Legislature to appropriate \$500 million for Integrated Regional Water Management (IRWM) projects;

WHEREAS, the intent of the IRWM program is to encourage integrated regional strategies for the management of water resources, and to provide funding, through competitive grants, for projects that protect communities from drought, improve water reliability, protect and improve water quality, and improve local water security by reducing dependence on imported water;

WHEREAS, The California Department of Water Resources and the State Water Resources Control Board in November 2004 issued Integrated Regional Water Management Grant Program Guidelines ("the Guidelines") to establish the process and criteria that these agencies will use jointly to solicit applications, evaluate proposals, and award grants under the IRWM Grant Program:

WHEREAS, eligible grant recipients under the Guidelines are "public agencies" defined as a city, county, city and county, district, joint powers authority, state agency or department or other political subdivision of the state, and "non-profit" organizations defined as any California corporation organized under Section 501(c)(3), 501(c)(4), or 501(c)(5) of the federal Internal Revenue

Code. Other entities may be part of the regional water management group responsible for applying for the grant and may perform work funded by the grant;

WHEREAS, under the Guidelines, the IRWM Grant Program will consist of two separate solicitations: 1) for planning and 2) implementation proposals. Implementation grants must be submitted by a regional water management group or regional agency and must: 1) document a formally adopted IRWM Plan (Plan), 2) demonstrate consistency with Plan Standards (Water Code § 79562.5(b)), 3) describe specific implementation projects for which funding is being requested, 4) prioritize proposed projects listed in the Plan, and 5) identify matching funding;

WHEREAS, under the Guidelines, the IRWM Grant Program application must: 1) identify a regional water management group or regional agency responsible for development and implementation of the plan and demonstrate that all agencies and organizations necessary to address the objectives and water management strategies of the plan were involved in the planning process, 2) identify the integrated regional water management region and explain why that region is appropriate, and 3) identify Plan objectives, the manner in which they were determined, and address major water related objectives and conflicts within the region including, at a minimum, water supply, groundwater management, ecosystem restoration, and water quality;

WHEREAS, under the Guidelines, a regional water management group, for the purpose of qualifying for a IRWM grant, is defined as three or more local public agencies where at least two of which have statutory authority over water management, which may include but is not limited to water supply, water quality, flood control, or storm water management. Other public agencies or community based organizations may also be members of a regional water management group.

WHEREAS, the PARTIES have the desire and interest to undertake the development, implementation and administration of an IRWM plan for the San Gabriel and Lower Los Angeles Rivers Watershed.

WHEREAS, other entities including, but not limited to, non-profit organizations, municipalities, and public interest groups (collectively, "STAKEHOLDERS") desire to join in the development and administration of the IRWM plan;

WHEREAS, the PARTIES desire that the stakeholders act as an advisory body for the PARTIES;

WHEREAS, the PARTIES agree to work together to apply for and solicit local, state, and federal funding, along with self-funding, as each Party deems appropriate, for implementation of the IRWM plan.

NOW, THEREFORE, IN CONSIDERATION OF THE MUTUAL COVENANTS AND PROMISES OF THE PARTIES HERETO, AND THE PROVISIONS, CONDITIONS AND TERMS PROVIDED FOR HEREIN, THE PARTIES AGREE AS FOLLOWS:

**SECTION 1. PURPOSE:**

The PARTIES hereby enter into this MOU for the purpose of advancing the planning, implementation and administration of the IRWM plan for the San Gabriel and Lower Los Angeles Rivers Watershed, as each party deems appropriate.

**SECTION 2. TERM:**

This MOU shall have a term of five years, which shall commence when all the PARTIES have approved and duly executed the MOU (the "Execution Date"). The MOU may be extended by mutual written agreement of the PARTIES.

**SECTION 3. STEERING COMMITTEE:**

3.1 Formation: Within sixty days of the Execution Date, the PARTIES shall form a Steering Committee (the "Steering Committee") composed of one (1) representative from each PARTY. Each PARTY shall appoint one member to represent it on the Steering Committee. Each PARTY member shall serve at the pleasure of the appointing PARTY. Each Steering Committee member shall have one vote.

3.2 Duties & Powers: The Steering Committee shall:

- A. Meet regularly, but no less than every other month. Members of the Steering Committee shall attend meetings called by the Steering Committee Chair or any of the PARTIES.
- B. Establish, as necessary, subcommittees charged with studying, investigating and soliciting information that will advance the completion of a IRWM Plan for the San Gabriel and Lower Los Angeles Rivers Watershed.
- C. \*Establish project-evaluation criteria and project priorities consistent with the requirements of the IRWM Plan.
- D. Identify reliable and long-term funding sources for the implementation of the IRWM Plan and actively solicit funds from these sources.

- E. Prepare periodic reports for the PARTIES and STAKEHOLDERS describing the progress of the Steering Committee.
  - G. To select one of its members to be the recipient of any monies received from the State of California.
  - H. To share to the extent not otherwise prohibited by law, privilege, or previous lawful agreement, all information required to develop, prepare, and submit documents for the IRWM Plan, including monitoring data, CADD and GIS or other electronic data. Such sharing shall be subject to any applicable license agreements or other restrictions. All data shared among the PARTIES shall be provided “as is” and without warranties as to accuracy or as to any other characteristics, whether expressed or implied. The intent of this data-sharing provision is to facilitate the development of the IRWM Plan, and not to authorize use of this data for tasks unrelated to the IRWM Plan.
- 3.3 Organization of Steering Committee: The members of the Steering Committee shall elect from among themselves one (1) chairman and one (1) vice-chairman (the “Chair” and “Vice-Chair,” respectively) of the Steering Committee. The Chair and Vice-Chair shall serve for terms of one (1) year. The Chair shall preside at all meetings of the Steering Committee and the Vice-Chair shall preside in the Chair’s absence.
- 3.4 Compensation for Committee Members: Each PARTY shall be responsible for the compensation of its respective Steering Committee representative and may adopt internal polices providing for such compensation.
- 3.5 Quorum: The presence of a majority of the Steering Committee members at any meeting of the Steering Committee shall constitute a quorum for the purposes of conducting business.
- 3.6 Steering Committee Action: The affirmative vote of eight members of the Steering Committee is required for all decisions and recommendations of the Steering Committee.
- 3.7 Project Selection: The Steering Committee shall determine which proposed projects will receive grant funding acquired pursuant to the MOU. The Steering Committee will also determine which party will receive such funding.
- 3.8 Subcommittees: The Steering Committee, in its sole discretion, may from time to time create any number of subcommittees to assist the Steering Committee. The subcommittees shall be subject to the oversight of the

Steering Committee and no recommendation or finding of a sub-committee shall be binding upon the Steering Committee. Sub-committees shall be composed of any number of persons the Steering Committee sees fit in its sole discretion. Sub-committee members shall be selected from among the officers, officials, employees and members in good standing of the PARTIES and the STAKEHOLDERS.

- 3.9 Meetings: All meetings of the Steering Committee will be noticed and conducted in conformance with the Brown Act. (California Government Code § 54950, *et seq.*)

#### **SECTION 4. FISCAL PROCEDURES:**

The Steering Committee shall adopt fiscal procedures as necessary to administer grant funds that may be awarded for purposes of implementation of the IWRM Plan.

#### **SECTION 5. ADDITIONAL PARTIES:**

Other qualified nonprofit organizations and public entities may participate as PARTIES under this MOU if their admission is (a) unanimously approved by the existing PARTIES and (b) they become signatories to this MOU.

#### **SECTION 6. STAKEHOLDERS:**

For the purposes of this MOU, the term "STAKEHOLDER" shall mean any organization or entity other than a PARTY, whose vision, insight and expertise are intended to assist the Steering Committee and the PARTIES in planning for the IRWM Plan. Any organization or entity may become a STAKEHOLDER, provided: 1) its membership is unanimously approved by the Steering Committee, and 2) the organization or entity becomes a signatory to the Stakeholders' Participation MOU (the "Participation MOU"), the form of which is attached hereto as Exhibit A. STAKEHOLDERS shall be committed to active participation and failure to participate in three consecutive meetings may be cause for revocation of an entity's STAKEHOLDER status by the Steering Committee.

#### **SECTION 7. GRANTS:**

All PARTIES and STAKEHOLDERS shall use their best efforts to identify grant funding sources for implementation of the IRWM Plan and shall lend their support to Steering Committee efforts to apply for and procure such grant funds, as each PARTY deems appropriate. PARTIES and STAKEHOLDERS may also choose to contribute funds to support any and all phases of the work to be performed under this MOU.

**SECTION 8. MODIFICATION:**

This MOU shall not be amended or modified, unless by mutual written consent of all the PARTIES.

**SECTION 9. TERMINATION:**

- 9.1 Voluntary Termination: Any PARTY may terminate its participation in this MOU upon sixty (60) days' written notice to the Chair of the Steering Committee.
- 9.2 Involuntary Termination: A PARTY'S participation under this MOU may be terminated by majority vote of the PARTIES for any material breach of this MOU by the PARTY being terminated.

**SECTION 10. NO THIRD PARTY BENEFICIARIES:**

Nothing in this MOU shall be construed to give any person, other than the PARTIES hereto, and any legal or equitable right, remedy or claim under or in respect of this MOU or any provisions herein contained. This MOU and conditions and provisions hereof are intended to be and are for the sole and exclusive benefit of the PARTIES.

**SECTION 11. REFERENCE TO CALENDAR DAYS:**

Except as otherwise provided herein, any reference to the word "day" or "days" herein shall mean calendar day or calendar days, respectively.

**SECTION 12. SEVERABILITY:**

If any provision of this MOU is held, determined or adjudicated to be illegal, void, or unenforceable by a court of competent jurisdiction, the remainder of this MOU shall be given effect to the fullest extent reasonably possible.

**SECTION 13. SUCCESSORS AND ASSIGNS:**

The terms and provisions of this MOU shall be binding upon and insure to the benefit of the PARTIES hereto and their successors and assigns.

**SECTION 14. NOTICES:**

All notices required or desired to be given under this MOU shall be in writing and (a) delivered personally, or (b) sent by certified mail, return receipt to the addresses specified below, provided each PARTY may change the

address for notices by giving the other PARTIES at least ten (10) days' prior written notice of the new address. Notices shall be deemed received when actually received on the date shown on the receipt of the U.S. Postal Service, or other person making the delivery.

San Gabriel and Lower Los Angeles Rivers  
and Mountains Conservancy  
Attention: Belinda V. Faustinos  
900 S. Fremont Avenue  
Alhambra, CA 91803  
FAX (626) 959-5363

Los Angeles County Flood Control  
District  
Attention: Terri Grant  
900 S. Fremont Avenue  
Alhambra, CA 91803

Watershed Conservation Authority  
Attention: Belinda V. Faustinos  
900 S. Fremont Avenue  
Alhambra, Ca 91803

Sanitation Districts of Los Angeles County  
Attention: Mary Zauner  
1955 Workman Mill Road  
Whittier, CA 90601-1400

Central Basin Municipal Water District  
Attention: Richard Nagel  
17140 S. Avalon Blvd. Suite 210  
Carson, CA 90746-2414

Water Replenishment District of Southern California  
Attention: Robb Whitaker, General Manager  
12621 E. 166<sup>th</sup> Street  
Cerritos, CA 90703

Gateway Cities Council of Governments  
Attention: Deborah Chankin  
16401 Paramount Blvd.  
Paramount, CA 90723

City of El Monte  
Attention: Tom Hatch  
11333 Valley Blvd.



El Monte, CA 91731-3293

Mountains Recreation and Conservation Authority  
Attention: Dash Stolarz  
570 W. Avenue 26  
Los Angeles, CA 90065

California Coastal Conservancy  
Attention: Chris Kroll  
1330 Broadway, Suite 1100  
Oakland, CA 94612

City of Long Beach  
Attention: Dennis Eschen  
2760 Studebaker Road  
Long Beach, CA 90815

Los Angeles & San Gabriel Rivers Watershed Council  
Attention: Suzanne Dallman  
700 N. Alameda Street  
Los Angeles, CA 90012

TreePeople  
Attention: Rebecca Drayse  
12601 Mulholland Drive  
Beverly Hills, CA 90210

Amigos de los Rios  
Attention: Claire Robinson  
1001 Malcolm Avenue  
Los Angeles, CA 90024

**SECTION 15. EXECUTION OF MOU:**

This MOU may be executed in counterparts and the signed counterparts shall constitute a single instrument. The signatories to this MOU represent that they have the authority to bind their respective PARTY to this MOU.

IN WITNESS WHEREOF, the PARTIES hereto have executed this MOU on the dates opposite their respective signatures:

**-COUNTERPART SIGNATURE PAGES-**

EXHIBIT A  
**STAKEHOLDER MEMORANDUM OF UNDERSTANDING (MOU)**  
**BY AND BETWEEN**  
**THE STAKEHOLDER SIGNATORIES**  
**AND**

**THE PARTIES TO THE MEMORANDUM OF UNDERSTANDING FOR THE**  
**ESTABLISHMENT OF A INTEGRATED REGIONAL WATERSHED**  
**MANAGEMENT GROUP FOR THE SAN GABRIEL AND LOWER LOS**  
**ANGELES RIVERS WATERSHED**

This Stakeholder MOU (the "Stakeholder MOU") is executed this \_\_\_\_ day of \_\_\_\_\_, 2005 by and between the various entities who have become signatories as Stakeholders to this Stakeholder MOU (collectively, the "Stakeholders"; individually, "Stakeholder") and the Parties (hereinafter referred to as the "Steering Committee") to the Memorandum of Understanding for the Establishment of an Integrated Regional Watershed Management Group for the San Gabriel and Lower Los Angeles Rivers Watershed (the "IRWM MOU") executed by and between the Parties on \_\_\_\_\_, 2005.

**RECITALS**

WHEREAS, the Stakeholders have an interest and desire to contribute their insight and expertise to encourage integrated regional strategies for the management of water resources and funding for projects that protect communities from drought, protect and improve water quality, and improve local water security by reducing dependence on imported water;

WHEREAS, the purpose of this Stakeholder MOU is to establish the responsibilities of the Stakeholders.

NOW, THEREFORE, the Stakeholders, their respective successors and assigns hereby covenant and agree as follows:

**ARTICLE I**

**REPRESENTATIONS OF STAKEHOLDER**

- 1.1. General Stakeholder Pledge: Each Stakeholder pledges its insight and expertise to encourage integrated regional strategies for the management of water resources and provide funding, through competitive grants, for projects that protect communities from drought, improve water reliability, protect and improve water quality, and improve local water security by reducing dependence on imported water.
- 1.2. Scope of Stakeholder Undertakings: Each Stakeholder agrees to:

- (a) Provide its insight and expertise to an advisory committee (hereinafter, the "Advisory Committee") created under this Stakeholder MOU and any Subcommittees created by the Parties to the IRWM MOU.
- (b) Work closely with the Parties to advance the objectives of the IRWM MOU.
- (c) Work closely with other community groups, governmental agencies, elected representatives and those participating on the Advisory Committee to advance the purposes of the IRWM MOU.

1.3 Stakeholder Guidelines: Each Stakeholder agrees to the following:

- (a) To appoint a designated representative who shall participate on the Advisory Committee as provided in this Stakeholder MOU, with the understanding that Stakeholder appointment to the Advisory Committee is conditioned on a prospective Stakeholder (a) receiving the approval of the Steering Committee under the IRWM MOU; and (b) becoming a signatory to this Stakeholder MOU.
- (b) A Stakeholder's unexcused failure to participate by attendance of a representative at three consecutive Advisory Committee meetings shall be considered cause to terminate a Stakeholder's status as a Stakeholder.
- (c) The IRWM MOU Steering Committee, by simple majority vote, may revoke a Stakeholder's status as a Stakeholder with or without cause.

1.4. Internal Organization: Collectively, the Stakeholders shall constitute the Advisory Committee to the Parties to the IRWM MOU. Subject to this Stakeholder MOU and the IRWM MOU, the Stakeholders, collectively, shall devise an internal governing structure for the Advisory Committee. However, the Stakeholders shall vote to elect a Chair of the Stakeholder Advisory Committee, with each Stakeholder having one vote. The Advisory Committee shall also elect a Vice-Chair, who shall assume the duties of Chair in his or her absence. The Advisory Committee shall also elect a Secretary who shall record all actions taken by the Advisory Committee. The Vice-Chair and Secretary shall be elected in a manner identical to that for the election of Chair.

1.5. Representation on the Steering Committee of the IRWM. The Chair of the Stakeholder Advisory Committee shall serve as the Stakeholders' representative to the Steering Committee of the IRWM MOU.

1.6. Advisory Committee Responsibilities: The Advisory Committee shall function in an advisory capacity to the Steering Committee on technical matters when such input is solicited. Stakeholders on the Advisory Committee may offer varied technical skills or expertise which may provide assistance to the Parties to the IRWM MOU in developing and implementing the Integrated Regional Watershed Management Plan (the Plan). In addition, Stakeholder representatives may provide a valuable resource in communicating information about the Plan to groups they represent. The Advisory Committee shall provide its recommendations to the Steering Committee through its Chair or through special presentations of its findings. All commitments, encumbrances, and key facility design decisions shall be made by the Parties to the IRWM MOU.

- 1.7. Withdrawal From IRWM Stakeholder MOU: Any Stakeholder may withdraw from the Stakeholder MOU, without obligation, upon fifteen (15) days' prior written notice to the Chair of the Advisory Committee.

## **ARTICLE II**

### **PARTIES**

- 2.1. Change of Stakeholder Status: Any Stakeholder who becomes a signatory to the IRWM MOU or any future permanent IRWM MOU shall automatically cease to be a Stakeholder and may no longer participate as a Stakeholder.

## **ARTICLE III MISCELLANEOUS**

- 3.1. Notice: Notices under this Stakeholder MOU shall be sufficient if in writing and addressed to the Chair of the Advisory Committee and/or the Chair of the Steering Committee under the IRWM MOU, as applicable.
- 3.2. Modification: This Stakeholder MOU may only be modified by mutual written consent of all the Stakeholders and to the Steering Committee under the IRWM MOU.
- 3.3. Non-Assignment: No Stakeholder may assign its rights or obligations under this Stakeholder MOU without the unanimous consent of the members of the Parties.
- 3.4. Authorization to Sign: Each person signing this Stakeholder MOU on behalf of a prospective Stakeholder warrants that he or she has been duly authorized to sign on that entities' behalf and bind the entity to the terms and conditions contained herein.
- 3.5. Execution: Each prospective Stakeholder may execute by submitting the signature page of this Stakeholder MOU to the Chair of the Advisory Committee. The Advisory Committee shall retain a copy and submit the original to the Chair of the IRWM MOU Steering Committee. The signature pages shall be collected and shall remain on file.

IN WITNESS WHEREOF, the Parties have executed this Stakeholder MOU on the date first indicated above.