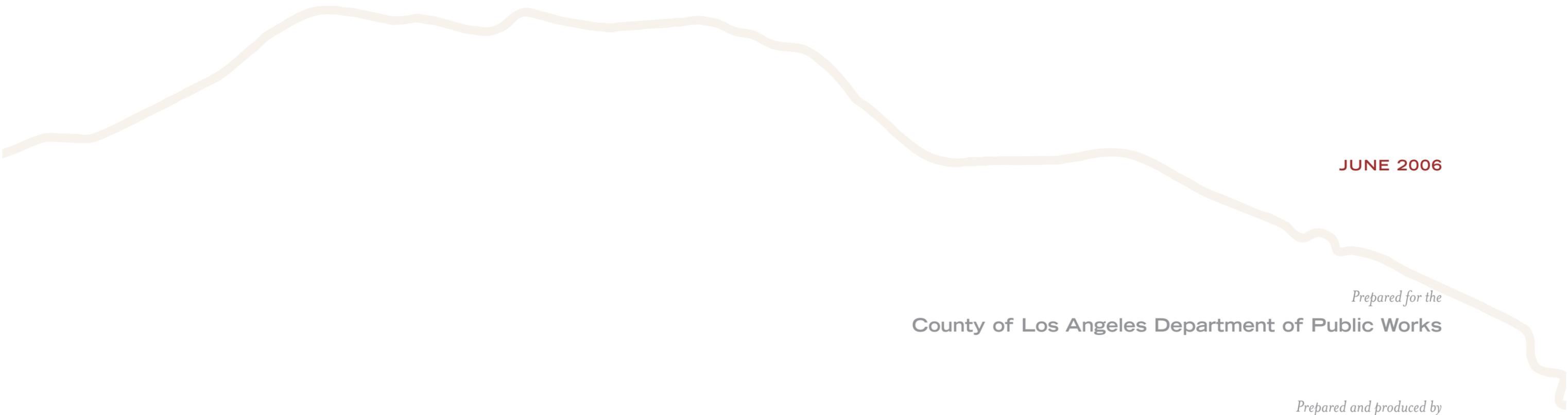




a common thread rediscovered

san gabriel river
corridor master plan

JUNE 2006



**a common thread
rediscovered**
san gabriel river corridor master plan

JUNE 2006

Prepared for the
County of Los Angeles Department of Public Works

Prepared and produced by
Moore Iacofano Goltsman, Inc.

san gabriel river corridor master plan steering committee

planning team



County of Los Angeles
Department of Public Works
Donald L. Wolfe, Director



County of Los Angeles
Department of Regional Planning



County of Los Angeles
Department of Parks and Recreation



State of California
San Gabriel and Lower Los Angeles
Rivers and Mountains Conservancy



National Park Service
Rivers, Trails & Conservation
Assistance Program



County of Los Angeles
Board of Supervisors
Supervisor Michael D. Antonovich
Supervisor Don Knabe
Supervisor Gloria Molina

planning team members

Daniel Rynn, Watershed Manager, County of Los Angeles Department of Public Works

Jerry L. Burke, County of Los Angeles Department of Public Works

Martin Moreno, County of Los Angeles Department of Public Works

Scott Schales, County of Los Angeles Department of Public Works

Rama Rydman, County of Los Angeles Department of Public Works

Bruce Hamamoto, County of Los Angeles Department of Public Works

Daniel Bobadilla, County of Los Angeles Department of Public Works

Tonda Lay, County of Los Angeles Department of Parks and Recreation

Mark Child and Harriet Lang, County of Los Angeles Department of Regional Planning
Belinda Faustinos, Executive Officer, San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy

Anne Dove and Peg Henderson, National Park Service, Rivers, Trails and Conservation Assistance Program

represented agencies and organizations

Aera Energy

American Society of Landscape Architects

Amigos de los Rios

Assemblymember Rudy Bermudez

Assemblymember Ronald Calderon

Assemblymember Ed Chavez

Assemblymember Judy Chu

Assemblymember Hector De La Torre

Assemblymember Tom Harman

Assemblymember Bob Huff

Assemblymember Betty Karnette

Assemblymember Carol Liu

Assemblymember Dennis Mountjoy

Assemblymember Jenny Oropeza

Audubon Society

Azusa Canyon Off Roaders Association

California American Water Company

California Department of Fish and Game

California Department of Health Services

California Department of Parks and Recreation

California Department of Water Resources

California Exotic Pest Control

California Off-Road Vehicles Association

California State Parks

Caltrans

Central Basin Municipal Water District

City of Arcadia

City of Azusa

City of Baldwin Park

City of Bellflower

City of Cerritos

City of Downey

City of Duarte

City of El Monte

City of Industry

City of Irwindale

City of Lakewood

City of Long Beach

City of Los Alamitos

City of Monrovia

City of Norwalk

City of Pico Rivera

City of Rosemead

City of Santa Fe Springs

City of Seal Beach

City of South El Monte

City of Whittier

Congressman David Dreier

Congresswoman Grace Napolitano

Congressman Dana Rohrabacher

Congresswoman Lucille Roybal-Allard

Congressman Edward Royce

Congresswoman Linda Sanchez

Congresswoman Hilda Solis

County of Los Angeles Department of Health Services

County of Los Angeles Sheriffs Department

County of Orange

County Sanitation Districts of Los Angeles County

Downey Fly Fishers

Equestrian Trails Incorporated

Fisheries Resource Volunteer Corps

Fly Fishers Club of Orange County

Friends of Pio Pico State Historic Park

Friends of the San Gabriel River

Gateway Cities Council of Government

Greater Los Angeles County Vector Control District

Hanson Aggregates West

Inland Valley Land Trust

Los Angeles and San Gabriel Rivers Watershed Council

Los Angeles City Bicycle Coalition

Los Angeles County Bicycle Coalition

Los Angeles County Metropolitan Transportation Authority

Los Angeles Regional Water Quality Control Board

Los Cerritos Wetlands Task Force

Main San Gabriel Basin Watermaster

Metropolitan Water District of Southern California

North East Trees

Orange County Supervisor James Silva

Public Lands for the People

Puente Hills Landfill Native Habitat Preservation Authority

Riverlands Preservation Trust of the Rio San Gabriel (Rio Trust)

San Gabriel Mountains Regional Conservancy

San Gabriel River Water Committee

San Gabriel River Watermaster

San Gabriel Valley Conservation Corps

San Gabriel Valley Council of Governments

San Gabriel Valley Gun Club

San Gabriel Valley Mosquito and Vector Control District

San Gabriel Valley Municipal Water District

San Gabriel Valley Protective Association

San Gabriel Valley Water Association

Sierra Club

South Coast Wildlands Project

Southeast Water Coalition

Southern California Edison

State Senator John Campbell

State Senator Martha Escutia

State Senator Alan Lowenthal

State Senator Bob Margett

State Senator Gloria Romero

Surfrider Foundation

Team Arundo-Los Angeles

Three Valleys Municipal Water District

Trust for Public Land

United Rock Products Corporation

Upper San Gabriel Valley Municipal Water District

US Army Corps of Engineers

US Fish and Wildlife Service

US Forest Service-Angeles National Forest

US Senator Barbara Boxer

US Senator Dianne Feinstein

Vulcan Materials Company

Water Replenishment District

West Basin Municipal Water District

consultant team

Moore Iacofano Goltsman (MIG), Inc.
Prime Consultant

Daniel Iacofano, Principal-In-Charge and Project Manager

Mark Sillings, Deputy Project Manager

Jane Kelly, Project Administrator

Eileen Takata, Rivers and Watersheds Planner

Ed Canalin, Art Director

Catherine Courtenaye, Lisa Tyler, Tim Lehane, Graphic Designers

Carie DeRuiter, Director of Communications

Dave Dickson, Public Funding Advisor

Kim Donahue, Production Manager

Antonio Gonzalez, Project Associate

Eric Phillips, GIS Analyst

Brent Reichers, GIS Intern

Jeanine Strickland, Landscape Architect

Joyce Vollmer, Editor

Larry Wight, Illustrator

BonTerra Consulting

Habitat Planning

Tom Smith, Principal

Brian Daniels, Project Manager

Ann Johnston, Principal Biologist

Kristin Keeling, Assistant Project Manager

Legacy/Land Design and Planning

Historical Analysis

Rick Thomas, Partner

Montgomery Watson Harza

Environmental Impact/Hydrology

Inge Wiersema, Senior Engineer

Sarah Garber, Supervising Environmental Scientist

Akiko Kawaguchi, Associate Environmental Scientist

Chip Paulsen, Hydrologist

Tracy Wilcox, Project Engineer

images

Azusa Historical Society

The Bancroft Library, University of California, Berkeley

BonTerra Consulting

Margo Bors, contributor to CalPhotos & CalFlora, Digital Library Project, University of California, Berkeley

Dan Burden, for the Image Library, Pedestrian and Bicycle Information Center

County of Los Angeles Department of Public Works

Paul DeMaio, City of Alexandria, for the Image Library, Pedestrian and Bicycle Information Center

Anne Dove, National Park Service, Rivers, Trails and Conservation Assistance Program

William Hammond Hall Papers, 91-07-04, 91-06-10, California State Archives

Graduate Department of Landscape Architecture, Cal Poly Pomona and Sierra Club

Elizabeth Karman, La Habra Heights

Main San Gabriel Basin Watermaster

Carolyn Martus, contributor to CalPhotos & CalFlora, Digital Library Project, University of California, Berkeley

Gabi McLean, Covina

Moore Iacofano Goltsman, Inc.

North East Trees

San Gabriel Mountains Regional Conservancy

San Gabriel Valley Mosquito and Vector Control District

Sierra Club

Dan Slater

Southern California Edison

Dr. Dean Willam Taylor, Jepson Herbarium, University of California, Berkeley

Vulcan Materials Company

Water Replenishment District

	<i>Map:</i> Preliminary Site Analysis	3-62
	<i>Map:</i> Preliminary Concept Design Alternative	3-63
3.8.4	Lario Creek/Zone 1 Ditch	3-64
	<i>Map:</i> Preliminary Site Analysis	3-66
	<i>Map:</i> Preliminary Concept Design Alternative	3-67
3.8.5	El Dorado Regional Park	3-68
	<i>Map:</i> Preliminary Site Analysis	3-70
	<i>Map:</i> Preliminary Concept Design Alternative	3-71
3.8.6	Lessons Learned	3-72

4 chapter four FUTURE MASTER PLAN PROJECT OPPORTUNITIES

4.1	Overview	4-1
4.2	Habitat Restoration and Linkages	4-1
	<i>Map:</i> Habitat Connectivity Opportunities	4-2
4.3	Trail Enhancements	4-4
	<i>Map:</i> Trail Enhancement Opportunities	4-6
4.4	Bridges and Gateways	4-8
	<i>Map:</i> Bridge Project Opportunities	4-10
4.5	Interpretive Facilities	4-11
	<i>Map:</i> Interpretive Facility Opportunities	4-13
4.6	Park Development	4-14
4.7	Open Space	4-16
4.8	Redevelopment and Reclamation	4-18
4.9	Flood Channel Enhancements	4-19
	<i>Map:</i> River-Bottom Habitat Restoration Opportunities	4-20
4.10	Groundwater Recharge	4-22
	<i>Map:</i> Groundwater Recharge Opportunities	4-23
4.11	Water Quality Improvement	4-24

5 chapter five MOVING FROM VISION TO REALITY

5.1	Overview	5-1
5.2	The Master Plan Implementation Team	5-1
	Inter-Agency Staff	5-1
	Steering Committee	5-1
5.3	Project Partnerships	5-1
	Large Public Land Owners	5-1
	Municipalities and Special Districts	5-1
	Non-Profits and Community-Based Organizations	5-1
	Private Property Owners	5-2
5.4	River Corridor Management Programs	5-2
	River Reach Project Management	5-2
	Legislative Caucus	5-2
	Private Trusts and Foundations	5-2
	Operations, Maintenance, Public Health and Safety	5-2
	Stable, Long-Term Revenue Stream	5-2
	Modify Single Purpose Land Use Restrictions	5-2
	Other Models for River Corridor Development	5-2
5.5	Financing the Master Plan	5-2
5.6	Potential Funding Sources	5-3
	Master Plan Funding Source Inventory	5-3

A B C D E appendices

	Appendix A. Master Plan Projects Action Grid	A-1
	Appendix B. Native Plants in the River Corridor	B-1
	Appendix C. Design Guideline Topic Areas	C-1
	Appendix D. Program EIR Summary	D-1
	Appendix E. References	E-1

chapter 1 **Introduction**



contents

section	page
1.1 Purpose of the Master Plan	I-I
Plan Organization	I-2
1.2 The River Setting	I-3
The Regional Context	I-3
San Gabriel River Watershed	I-3
Overview of Watersheds	I-4
River Corridor Boundary	I-4
<i>Map: River Corridor Boundary</i>	I-5
<i>Map: San Gabriel River Reaches</i>	I-6
The Seven Reaches	I-7
1.3 Past and Present Thinking About Rivers	I-7
1.4 History of the Planning Process	I-9
Master Plan Development Process	I-9
1.5 Relationship to Other Planning Processes	I-II

chapter I Introduction

1.1 PURPOSE OF THE MASTER PLAN

For many decades, the San Gabriel River effectively served the region by quietly performing essential flood protection, groundwater recharge and stormwater conservation functions. In recent years, there has been a growing desire to rediscover the river and offer more of its benefits to all the communities along its route, as well as to visitors from throughout the region. Communities want to establish and enhance habitat, recreational and open space resources along the river—in ways compatible with its core flood and water management functions.

In 1999, the County of Los Angeles Board of Supervisors directed the Department of Public Works to prepare a plan for the San Gabriel River corridor. During the past three years, a Steering Committee representing



Figure 1-1. The San Gabriel River offers spectacular views as it travels through the Angeles National Forest.

cities, other public agencies, water groups, and community and environmental groups has been meeting to develop a shared vision of the river and a plan for how to achieve it.

The consensus-based Master Plan that emerged from this stakeholder-driven process integrates many objectives: habitat, recreation, open space, flood control, water supply and economic development. In the past, planning had focused on only one or two of these elements and could not adequately address the inherent complexities of a river system. This new multi-objective and multi-user perspective to planning the long-term future of the San Gabriel River is the foundation and purpose for this Master Plan.

The Master Plan identifies priorities, provides guidance, and coordinates multiple goals of the many jurisdictions and other stakeholders that share the river—reflecting the consensus of all these stakeholders. It integrates over 130 independently sponsored enhancement projects that were identified by the 19 cities along the river, the County of Los Angeles and the public agencies and community organizations that participated in developing the Master Plan. It summarizes projects and programs already underway or proposed, enabling the entire river community to see what's being done and what remains to be done in the future.

The Plan also provides suggestions on the types of projects to pursue, as well as how to design a project that reflects the agreed on vision and principles. This includes performance criteria that project sponsors can use to assess potential projects and, once implemented, to measure their progress in meeting the goals and objectives. Finally, the Master Plan includes five Concept Design Studies that demonstrate the multi-objective approach applied at the project level—providing lessons that project sponsors can use to guide their own efforts.

This framework is meant to guide the efforts of all cities along the river, encouraging them to join with the County of Los Angeles, other public agencies, non-profit groups, business interests, community organizations and other stakeholders in designing and planning projects that will make their shared vision of the river a reality.



Figure 1-2. The river is encased in concrete for 10 miles.



Figure 1-3. Enhancement of the pedestrian and bicycle trail along the San Gabriel River corridor is one of the Master Plan's primary objectives.

This combination of what is possible and the Master Plan's overarching multi-objective framework are more likely to achieve the shared vision than many unrelated, independent efforts, no matter how well-conceived each might be.

A coordinated plan will also help establish eligibility for federal, state and local funding. Funding agencies are more likely to support projects linked to a larger, comprehensive plan than they are to individual, disconnected ones. To facilitate the funding process, the Master Plan also includes a catalog of funding resources, which project sponsors will want to explore further.

A final note. The integrated planning process that guided the Master Plan during the past few years is as important as the plan itself. By working together to craft this vision and plan, a diverse group of people, interests and organizations have developed a better understanding of each other and of each other's respective goals. This mutual understanding and respect establish the foundation for collective action that will ensure lasting, positive benefits and the future of this great river.



Figure 1-4. The County of Los Angeles Department of Public Works hosted dozens of Steering Committee meetings, bringing together diverse groups and developing this consensus-based Master Plan.

PLAN ORGANIZATION

Starting with this introductory chapter, the San Gabriel River Master Plan consists of five chapters and appendices.

Chapter One

This chapter introduces concepts underlying the planning process and provides the overall context for this planning effort. It describes the geographic setting of the San Gabriel River, including the seven reaches that define the changing characters of the river throughout the project area. It also discusses how thinking about rivers has changed and how this new way of thinking directed this planning effort. The chapter concludes with a history of the Master Plan development process and explains how the Master Plan complements and relates to other ongoing planning efforts in the San Gabriel River watershed and the region at large.

Chapter Two

The first half of this chapter describes the natural processes that created and shaped the river over millions of years and how human habitation and the effort to manage and control the river changed those natural conditions—reaping many benefits while setting the stage for new challenges to be solved.

The second half of the chapter presents the river as it exists today, the starting point for reaching the ideal future of the river as envisioned by the stakeholders.

Chapter Three

This is the heart of the Master Plan. It details current and proposed projects, programs and policies that can close the gap between present reality and a future that reflects the aspirations of those who have shaped this plan. The plan framework includes the vision statement and goal statements developed by the Steering Committee, the objectives that

underlie each goal, and performance criteria used to assess progress toward those goals and objectives.

Each of the 134 projects along the San Gabriel River, as proposed by project sponsors, is listed by the seven reaches, beginning in the San Gabriel Mountains near the river's headwaters and ending near its mouth at the Pacific Ocean. Additional corridor-wide projects, policies and programs reinforce the efforts underlying the more site-specific projects, and forge an identity for the river as a whole.

The chapter concludes with five Concept Design Studies, selected by the Steering Committee to illustrate how a multi-objective planning approach can be applied at the project level.

Chapter Four

Chapter Four builds on the projects outlined in the preceding chapter, identifying additional opportunities for river enhancement that can be pursued in the near- and long-term future. These opportunities complement the many stakeholder-driven projects described in Chapter Three.

Chapter Five

This chapter introduces the organizational and financial strategies that will be required to shift from planning to implementation of the Master Plan. It includes a summary of the full Environmental Impact Report that accompanies the Master Plan, and concludes with ideas to support the Master Plan and its vision over the long term.

Appendices

The appendices provide resources that will be useful for project sponsors and all those interested in the future of the San Gabriel River: a Project Action Grid of all 134 projects and other reference material.

1.2 THE RIVER SETTING

The San Gabriel River is the central backbone of the San Gabriel River Watershed—an area that is drained by the river and its tributaries. The watershed for the San Gabriel River is one of several coastal watersheds in Southern California that drain hundreds of square miles of mountainous and urban lands to the Pacific Ocean. The character of the river changes dramatically during its 58-mile journey from Cogswell Dam, near the headwaters of the San Gabriel's West Fork in the San Gabriel Mountains, to its mouth at the Pacific Ocean.

The Regional Context

The San Gabriel River Master Plan focuses on the main corridor and the West Fork of the San Gabriel River. It is a north-to-south oriented river system, flowing from its headwaters in the San Gabriel Mountains to the Pacific Ocean. On its run to the sea, it passes through 19 different cities. It traverses the rugged, diverse terrain of the San Gabriel Mountains and San Gabriel Canyon, major flood management and water conservation facilities, densely populated and ethnically-rich suburban communities of the inland valleys and coastal plain, and Southern California beach communities. Major historical, economic, natural and cultural resources



Figure 1-5. Downtown Los Angeles, as viewed from the San Gabriel Mountains above the City of Duarte.

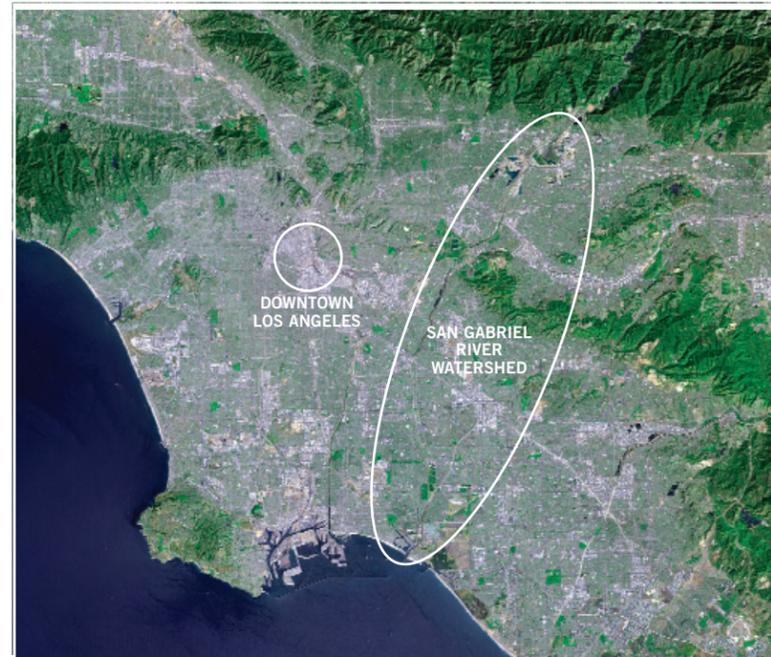


Figure 1-6. Los Angeles and vicinity from space.

along this corridor have had and continue to have profound impacts on all of Southern California.

The San Gabriel River is one of seven major watersheds partly or completely within Los Angeles County, bordering San Bernardino County, but a small section crosses northern Orange County. The other major watersheds in Los Angeles County are the Los Angeles River, the Santa Clara River, Antelope Valley/Mojave Basin, Malibu Creek, Ballona Creek/Santa Monica Bay, and Dominguez Channel Watersheds.

Three watersheds immediately surround the San Gabriel River Watershed. To the west is the Rio Hondo, a tributary and sub-watershed of the Los Angeles River Watershed, which totals 834 square miles. The Antelope Valley/Mojave Basin to the north covers 1,200 square miles within Los Angeles County and additional land in Kern and San Bernardino Counties. To the east, is the 2,800-square-mile Santa Ana River Watershed, which encompasses parts of Los Angeles, San Bernardino, Riverside and Orange Counties.

San Gabriel River Watershed

The entire San Gabriel River Watershed covers more than 640 square miles and includes portions of 37 cities in Los Angeles and Orange Counties, as well as communities in unincorporated Los Angeles County. More than one-third of the upper watershed falls within the Angeles National Forest, including significant portions of the San Gabriel Mountains. The watershed also contains the Merced and San Jose Hills, and the Puente-Chino Hills,

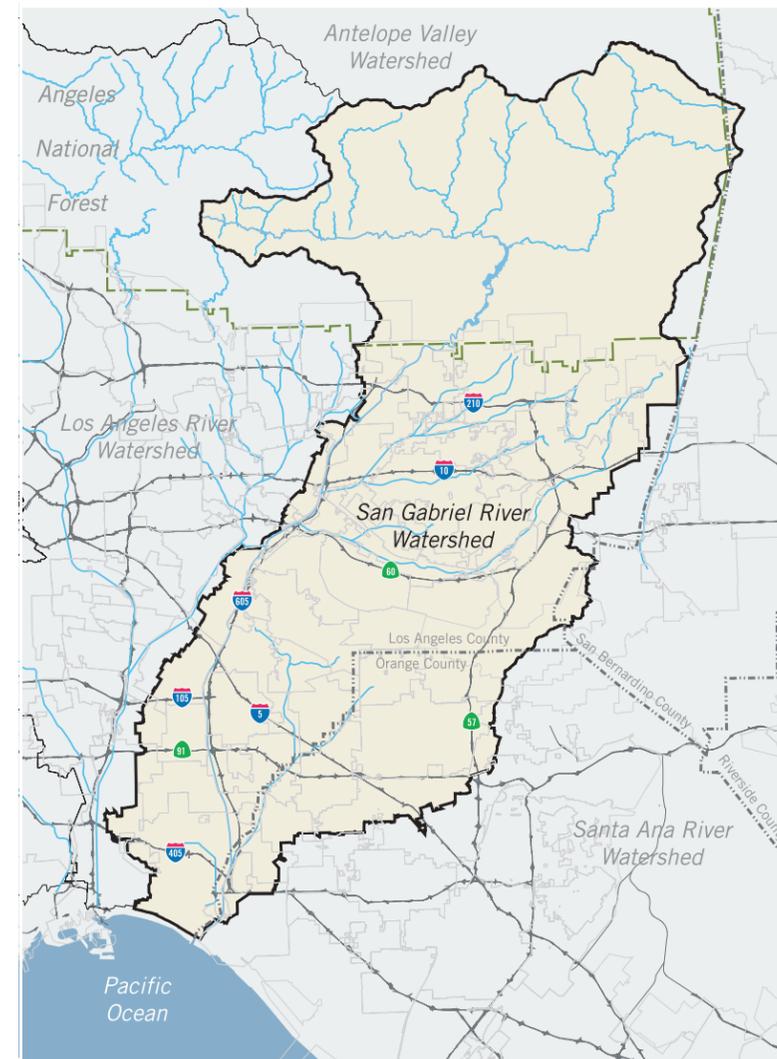


Figure 1-7. The 640 square miles of the San Gabriel River Watershed connect the San Gabriel Mountains and 37 communities with the Pacific Ocean.



PHOTO COURTESY OF ELIZABETH KARMAN

Figure 1-8. In La Habra Heights, houses coexist side by side with native habitat of the Puente Hills. This area drains to Coyote Creek.

as well as the major urban populations of the San Gabriel and Pomona Valleys and the coastal plain of the Los Angeles Basin.

About 26% of the watershed's total area is developed with urban and related land uses. The San Gabriel River consists of 22 creeks, washes and streams, including four major tributaries or sub-watersheds, which join to form the overall watershed:

- Upper San Gabriel River including the East, West and North Forks
- Walnut Creek
- San Jose Creek
- Coyote-Carbon Creek

The length of the main stem of the San Gabriel River, which begins where the West Fork and East Fork meet, is about 48 miles. The total length of this part of the river, including both the main stem of the river and its tributaries, is about 73 miles. The lower San Gabriel River also includes the Los Cerritos wetlands system, just upstream of its mouth at the Pacific Ocean.

Overview of Watersheds

Everyone, at all times, in any location, lives within a watershed. Wherever rainfall hits the ground, it travels as surface runoff over the ground until it enters a small stream or storm drain. These streams and storm drains collect into a larger stream, which eventually meets a major river, perhaps through a wetland, and then on to its final destination, a lake or ocean. In some cases, where there is no surface outlet, stormwater can pool and naturally percolate through the ground to reach the groundwater aquifer. These rivers and streams form the trunk and branches of a watershed.

Watersheds share similar characteristics, but every watershed is unique because of differences in local conditions. Land form and climate determine the size and form of a watershed, as well as the speed, direction and quantity of the flow of its rivers. Land forms such as mountain ranges, local hills and ridgelines and other high grounds, direct water one way or another and form the watershed boundary. Watersheds can be tiny or immense and are often composed of smaller sub-watersheds.

Each watershed begins at a headwaters and flows downstream to an outflow. As streams and rivers flow, they collect and deposit sediment, nutrients and velocity, or energy, which influence local ecosystem characteristics. Whether flowing through remote areas or through populous urban landscapes, rivers reflect the rocks and soils, the plants and wildlife, and the human communities through which they flow.

Landscape change is also part of a natural system. These changes are often climate-related, including drought, flood, storm and fire. Living plants and animals also induce change, for example, an insect infestation or the changing character of a maturing tree.

In the past, rivers and streams followed their own courses. Today, the natural water cycle and flow are often significantly altered in urban environments, primarily to protect urban communities from flood damage and to better use local water resources for urban and agricultural water supplies. Dams provide flood protection and water conservation benefits. Urban development increasingly covers land areas with impermeable surfaces, which eliminate opportunities for natural percolation. This increases stormwater runoff amounts and velocities, and creates river systems that can be unpredictably damaging to the urban, built community. So, beginning in the 1930s, urban area rivers and creeks were often placed in concrete channels to increase their ability to carry high velocity stormwater flows out to the ocean.

River Corridor Boundary

The project area lies along 58 miles of the San Gabriel River in Southern California from the Cogswell Dam in the Angeles National Forest to its terminus at the Pacific Ocean. This project area encompasses the portions of the river within the jurisdiction of the County of Los Angeles Department of Public Works (LADPW).

The uppermost section of the project area begins with the Cogswell Dam Reservoir and flows east 10 miles along the West Fork of the San Gabriel River until it reaches the main stem of the river, continuing south for another 48 miles towards the ocean. The project area is almost entirely in Los Angeles County, with a portion in Orange County where it borders the east side of the river for approximately three miles at its southern end.

The Master Plan envisions the river corridor as a regional, linear network of community green spaces adjacent to the river, including parks and open space areas. The “park” component of the Master Plan vision provides a useful standard for defining the parameters of the river corridor. The general rule for planning community parks is that the park should serve areas within a one half-mile walking distance of the park. That translates into a one-mile wide circle, with the park at its center. When applied to the San Gabriel River, this park-planning standard translates into a half-mile distance from the centerline of the river on either side, forming a one-mile wide corridor along the 58-mile length. Based on this one-mile corridor width, the project area for the Master Plan encompasses about 58

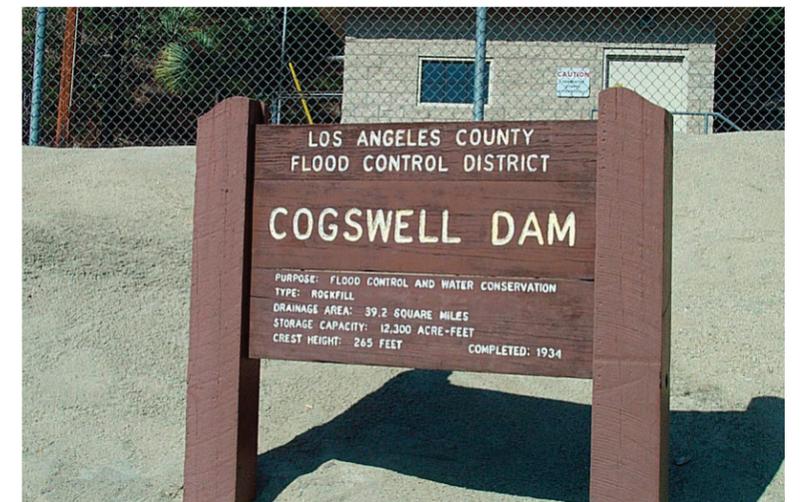
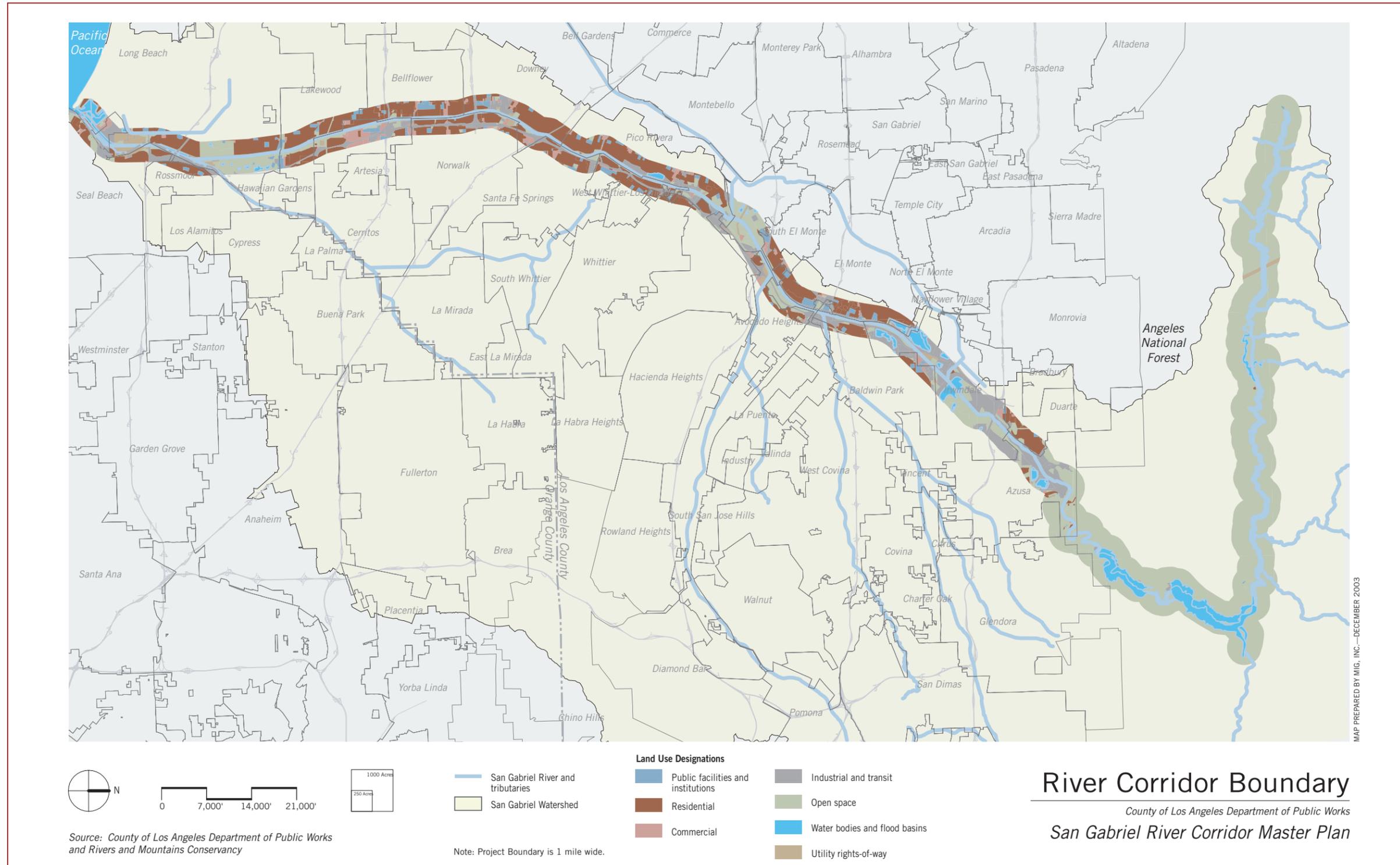
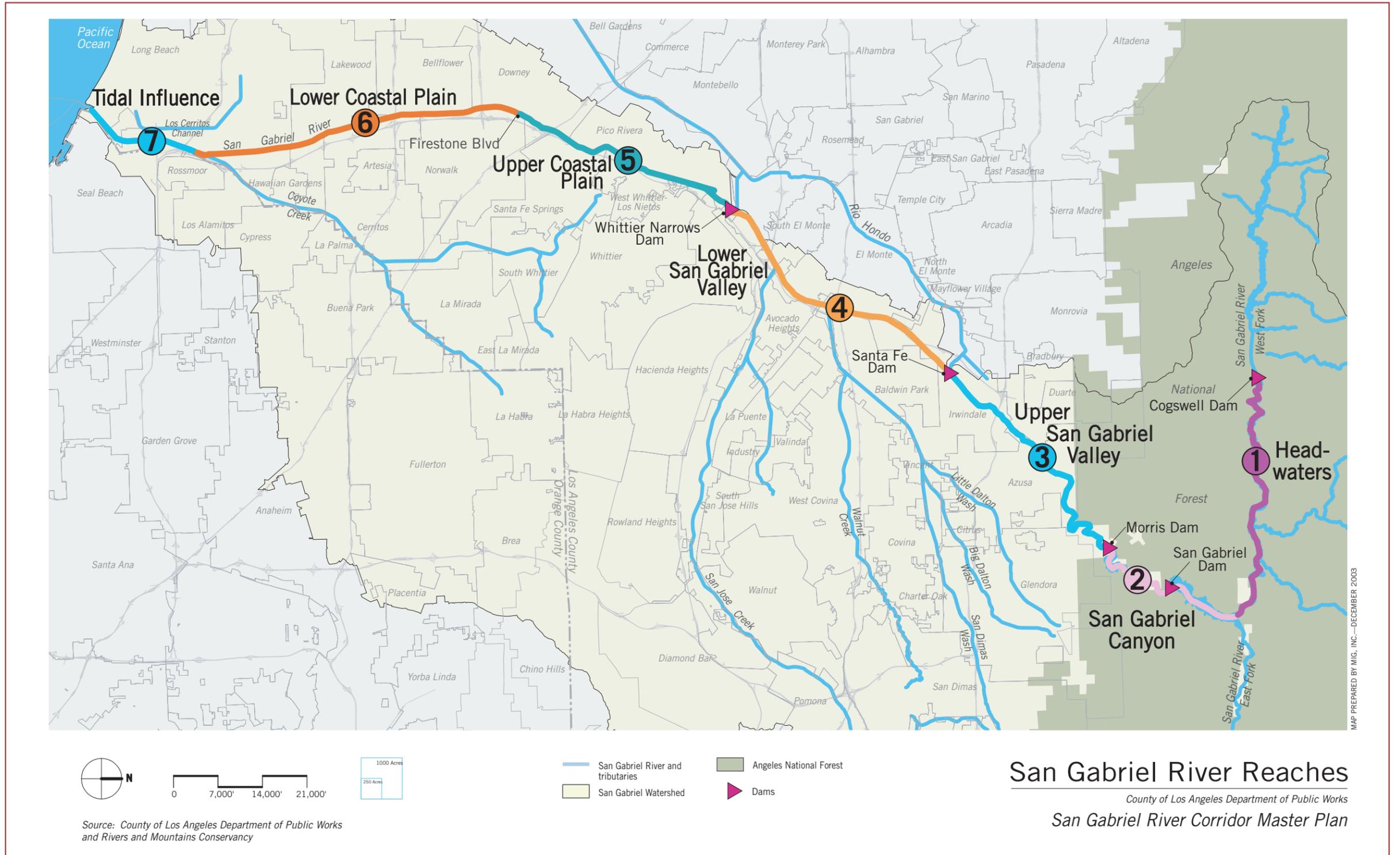


Figure 1-9. Cogswell Dam and Reservoir on the West Fork is the start of the project area.



Map 1-1. River Corridor boundary.



Map 1-2. San Gabriel River Reaches.

square miles. This one-mile corridor provides a necessary focus for the Master Plan study area but is not meant to be a totally exclusive boundary. Some projects and programs located nearby but outside the one-mile study are included in the Master Plan as they contribute to the vision and goals of the Plan. This one-mile wide corridor provides a necessary focus for the Master Plan study area but is not meant to be a totally exclusive boundary. Some projects and programs located nearby but outside the one-mile wide study are included if they are designed to contribute to the vision and goals of the Master Plan.

The Seven Reaches

The river environment changes dramatically during the 58-mile course. For this reason, the Plan divides the river into seven different reaches. Each reach is defined by distinct landscape, cultural, geological and hydrological features, which naturally change as the river flows from the mountains, through the valley, into the coastal plain, and eventually out to sea. The reach segments' individual characteristics and functions should guide future project designs:

1. **HEADWATERS.** The Angeles National Forest at the base of Cogswell Dam east to the confluence with the East Fork of the River.
2. **SAN GABRIEL CANYON.** Where the main stem of the river joins the East Fork south to the mouth of San Gabriel Canyon, just above the last developed land in Azusa.



Figure 1-10. The mouth of the river is at Seal Beach, near the River's End Café.



Figure 1-11. A bobcat viewing the San Gabriel River from the Puente Hills; original painting by Fariad.

3. **UPPER SAN GABRIEL VALLEY.** From the mouth of the San Gabriel Canyon above Azusa to the base of Santa Fe Dam in Irwindale.
4. **LOWER SAN GABRIEL VALLEY.** The base of the Santa Fe Dam to the base of the Whittier Narrows Dam.
5. **UPPER COASTAL PLAIN.** Whittier Narrows to where the river crosses Firestone Boulevard in Downey and Norwalk.
6. **LOWER COASTAL PLAIN.** Firestone Boulevard south to 500 yards below the Coyote Creek confluence.
7. **ZONE OF TIDAL INFLUENCE.** The final stretch of river, below the Coyote Creek confluence to the Pacific coast.

The river itself played a significant role in shaping this landscape; recognizing the distinctive characteristics of each reach will help us understand the river as it is today and how projects along it might be designed in the future. (See Section 3.6 for more detailed descriptions of the reaches.)

1.3 PAST AND PRESENT THINKING ABOUT RIVERS

During the past one hundred years, attitudes about rivers and watershed management have evolved greatly in the Los Angeles region. Before modern flood control structures were installed, the San Gabriel River emerged from the mountains onto the plain of the valley, often percolating through the alluvium that eroded from the growing San Gabriel Mountains. The river shifted frequently, resulting in dynamic, braided patterns of stream channels and terraces, which often intermingled with the Los Angeles River system. The vast groundwater basin and seasonal flows of water from the mountains provided all the water needed for human settlement.

With the development of agriculture and our increasing population, the landscape began to change rapidly. Irrigation systems, including tunnels, canals and ditches, were developed to convey the water to where it was needed to support these endeavors. Recognizing the value of the water resources from the river system, the rights to these waters were carefully

defined. Wetlands were often drained because of public health concerns associated with mosquito-borne diseases. The rich supply of rock, sand and gravel that flowed down from the San Gabriel Mountains provided raw materials to build structures such as homes, roads and public infrastructure. Aggregate mining to harvest these resources was established in the San Gabriel Valley in the early 1900s, soon becoming a major economic activity.

As settlement intensified through the early twentieth century, the risks associated with development in the river floodplains in the region became apparent, particularly following devastating floods in the 1910s and the 1930s. The Los Angeles County Flood Control District was created in 1915 to address this issue.

The disruption caused by these floods led to a widespread desire to control floodwaters. The result was a highly engineered series of flood



Figure 1-12. Irrigation ditches built with local river rocks brought river water to Los Angeles County citrus groves.



Figure 1-13. The 1938 flood reinforced the need for flood control systems.

management structures, primarily to move storm flows to the ocean as quickly as possible. Because of the complex surface and groundwater rights along the river, which over time have become completely allocated, the County also developed a role in managing the river system to conserve water. But there were trade-offs associated with managing the river for single purpose objectives. The most widespread impacts have been on habitat, particularly to aquatic and riparian species.

In the last few decades, technical knowledge has evolved and the limits of the single-purpose approaches are now better understood. It is clear that it is both possible and necessary to address multiple objectives in managing rivers, which involves consideration of environmental resources, community recreation and open space, as well as flood protection and water supply allocation.

The first major effort in Los Angeles County to incorporate multi-objective planning was the Los Angeles River Master Plan (1996), which considered factors such as habitat and recreation, and included a stakeholder-based, participatory planning process. Community-based groups concerned about improving and even restoring the Los Angeles River worked collaboratively with the County and other stakeholders to develop a plan that continues to serve as a foundation for current efforts on that river.

Building on the momentum of the Los Angeles River Master Plan and recognizing the potential for collaborative, stakeholder-based approaches to rivers and watersheds, The Los Angeles and San Gabriel Rivers Watershed Council was created in the mid-1990s as a forum for public and private stakeholders to explore issues and solutions related to the Los Angeles and San Gabriel River Watersheds. The Watershed Council's mission is to facilitate a comprehensive, multi-objective, stakeholder-driven consensus process to preserve, restore, and enhance the many beneficial uses—economic, social, environmental and biological—of the Los Angeles and San Gabriel Rivers Watersheds ecosystem through education, research, planning and mediation. The spirit embodied by this forum has set a collaborative tone for addressing all of the region's watersheds.

In the year 2000, LADPW reorganized to create a Watershed Management Division, bringing together services such as flood protection, water conservation, preservation and creation of open space for recreation and habitat, and reduction of pollution of water resources. This new division adopted its own mission statement:

“The Department of Public Works will lead the planning and implementation of watershed management in Los Angeles County. Working with those who have a stake in our watersheds' future, we will integrate flood protection, conscientious management of natural resources, water conservation and efforts to improve the quality of



Figure 1-14. The County of Los Angeles Department of Public Works Watershed Management Division was created in the year 2000.

stormwater runoff and groundwater. Our goal is to protect our communities and the environment, and provide a higher quality of life for the citizens of our County.”

Over the years, river and floodplain management evolved to address the most pressing issues of the day—and were largely consistent with the prevailing cultural values and technical knowledge of the time. As science sheds light on the complexities of these systems and as social values change with respect to the need for environmental resources protection and community recreation, management of these systems is also evolving. This requires building on the experience and knowledge of solutions implemented in the past, while continuing to grapple with new issues and challenges.

1.4 HISTORY OF THE PLANNING PROCESS

Given the complex political and social landscapes through which the river flows, the success of the planning process was dependent upon the active participation of all stakeholders. For this reason, the County of Los Angeles Board of Supervisors passed a motion to prepare a San Gabriel River Corridor Master Plan (Master Plan) and directed that LADPW establish a Steering Committee composed of cities along the river; water and regulatory agencies; interested community, business, and environmental groups; and other stakeholders to assist with plan preparation. The Steering Committee conducted a two-year information exchange and consensus-building process, leading to a common vision for the river's future. This consensus vision provided the foundation for the 18-month Master Planning process.

Master Plan Development Process

The process officially began on September 7, 1999, with an action of the County of Los Angeles Board of Supervisors that directed LADPW, in conjunction with the Department of Parks and Recreation and the Department of Regional Planning, to prepare a San Gabriel River Master Plan. The Board motion also included a request for assistance from the National Park Service Rivers, Trails and Conservation Assistance Program (NPS), and an instruction to the LADPW to invite the newly formed San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC)

and other stakeholders to participate. The Board specified that the Master Plan would address the issues of recreation, habitat and open space for the river corridor. On July 17, 2001, the Board provided additional direction that the Master Plan should also include the dams and reservoirs under the County's jurisdiction above Morris Dam. It should be noted, however, that the *river* reaches between these facilities are under the jurisdiction of the USDA Forest Service and thus are not part of the Master Plan scope.

The core planning team included the three county departments specified in the Board motion and a representative from NPS. To support the development of a stakeholder-driven planning effort, the San Gabriel River Master Plan Steering Committee was formed. The membership of the Steering Committee was open to anyone who was interested, but most of the participants represented organizations. The Steering Committee members met approximately 35 times during three years, spending over 10,000 hours of combined efforts developing elements of the Master Plan.

Throughout the process, about 300 groups were represented, 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 San Gabriel River Corridor Master Plan, providing staff and consultants regarding project development, reviewing and commenting on all work products, and encouraging broad community participation in the planning process.



Figure 1-15. During the July 2003 Steering Committee Meeting/Concept Design Charrette, participants discuss river enhancement opportunities for a series of projects along the San Gabriel River.

The Steering Committee followed a consensus-based process in developing the planning framework:

- **INTRODUCTION.** The project and planning process including the roles and responsibilities of participating committee members and a set of ground rules for the committee's activities.
- **EDUCATION.** To ensure that committee members were empowered with a common base of information through several means. The County provided background information about the agency's mission and mandates, as well as technical information on the river and its management. Committee members were invited to present information about their organization. A series of field trips brought the committee members together to explore the river corridor from the Angeles National Forest to its ocean outlet.
- **ISSUE IDENTIFICATION.** Stakeholders were asked to identify the key issues and concerns related to the river and the development of a Master Plan. Through group dialog and discussion, these issues and concerns were articulated and used to develop plan goals, objectives and project design criteria.
- **GOAL IDENTIFICATION.** Based on the issues identified by the stakeholders, the Steering Committee developed broad goals.
- **VISION DEVELOPMENT.** Based on the issues, concerns and goals developed by the group, the Steering Committee developed a broad vision statement that synthesized the diverse perspectives of the stakeholders. The vision set the overall tone and spirit of the development of the Master Plan.

Once the overall direction and planning framework was established, the County retained the services of Moore Iacofano Goltsman (MIG), Inc., and its subconsultants to facilitate the process and to develop the Master Plan. For nearly a four year period between July 2002 and June 2006, the Steering Committee and Planning Team continued to meet on a periodic basis, providing essential input and guidance to the MIG consultant team through each of the five phases of plan development:

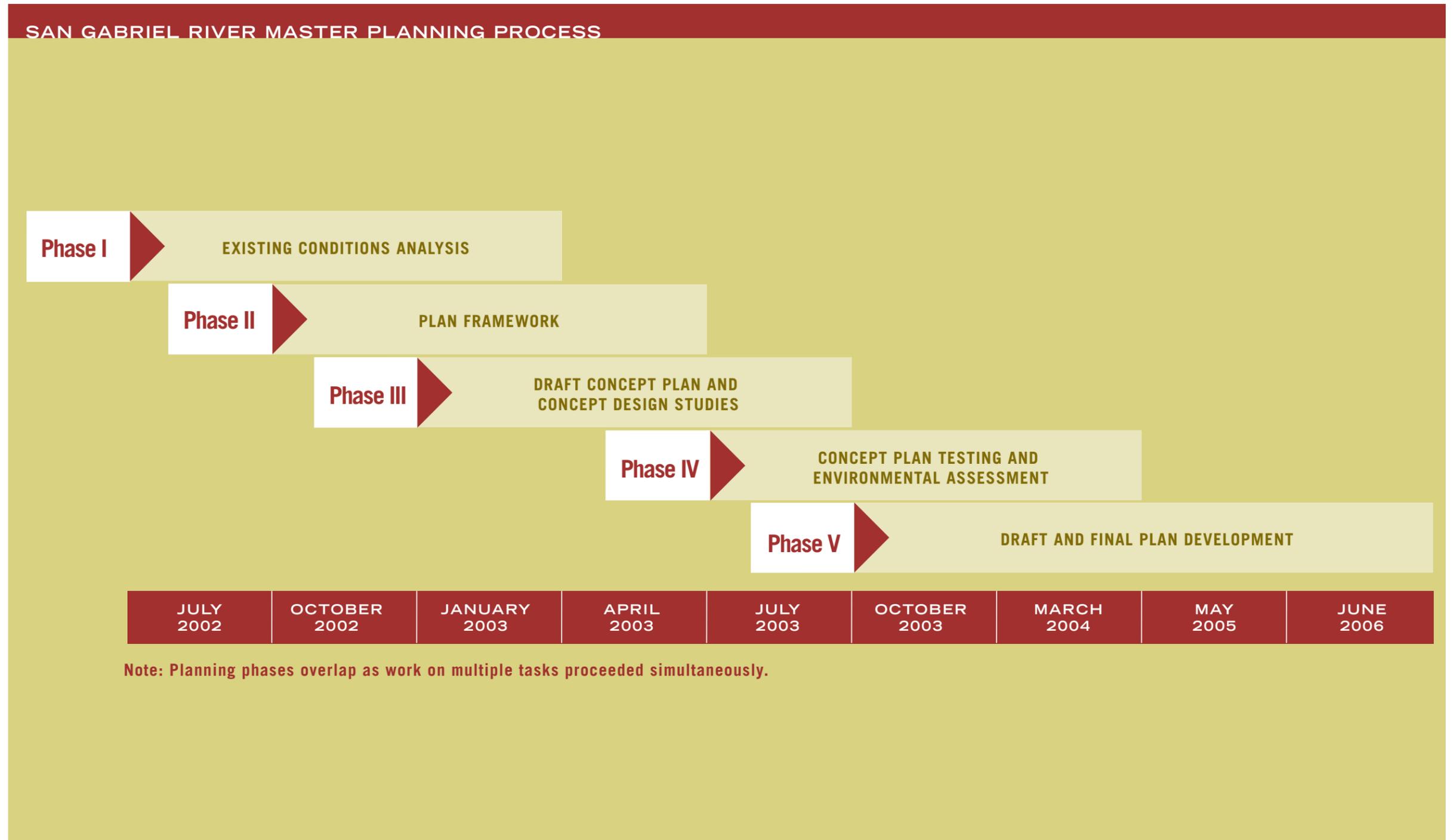


Figure 1-16. The Master Plan development process consisted of five major phases.

- I. Existing Conditions Analysis
- II. Plan Framework
- III. Draft Concept Plan and Concept Design Studies
- IV. Concept Plan Testing and Environmental Assessment
- V. Draft and Final Plan Development

Phase I: Existing Conditions Analysis

The existing conditions analysis used all available data along with new field assessments to identify current opportunities and constraints to project development along the river corridor. The process also involved stakeholder interviews with representatives from all 19 cities along the corridor, and other state and federal public agencies such as the RMC, the U.S. Forest Service, and the U.S. Army Corps of Engineers (COE). Interviews were also conducted with Southern California Edison (SCE), water agencies such as the Main San Gabriel Basin Watermaster and the Upper San Gabriel Valley Municipal Water District, and non-profit groups, including the Sierra Club, North East Trees, the San Gabriel Mountains Regional Conservancy (SGMRC) and others representing a wide spectrum of environmental and recreational interests. These interviews provided information on current and proposed projects being pursued, as well as issues and concerns to be addressed by the Master Plan.

This data was combined with GIS spatial analysis to develop a series of environmental assessment maps identifying potential opportunities in addition to those already being pursued by the stakeholders. These maps identify constraints to be considered for both current and future projects. This analysis provides an in-depth, multi-faceted picture of the river, and the many current and proposed activities along its banks, as well as a framework for the realization of future project development opportunities.

Phase II: Plan Framework

The plan framework was created by translating the stakeholder vision and goals into specific, actionable objectives and performance criteria. The goals and performance criteria are used to help select projects for development and to evaluate the extent to which projects are achieving the overall vision and goals of the Master Plan. A master project grid grouped all 134 stakeholder projects by the seven geographic reaches of the river and according to the six major goals, or Plan Elements. This classification system strengthens the portrayal of the San Gabriel River

as a unified, comprehensive and integrated system of projects which taken together advances the shared vision for the river.

Phase III: Draft Concept Plan and Concept Design Studies

The Draft Concept Plan established the overall direction for the Master Plan, integrating stakeholder perspectives with the physical opportunities and constraints identified along the river corridor. Analysis led to eight project enhancement categories—prototype enhancements that could be duplicated along the river. The Steering Committee used that information to select five concept design studies from among the projects and to conduct a design charrette focused on those five projects. The design studies demonstrate how to apply the multi-objective approach to the design of actual projects intended to to achieve the goals of habitat, recreation and open space, while also maintaining existing flood protection, water quality and water supply functions. This planning approach is fundamental to the vision and goals of the Master Plan.

Phase IV: Concept Plan Testing and Environmental Assessment

During this phase, the Master Plan was refined and additional river enhancement opportunities were identified. At the same time, a Program Environmental Impact Report (EIR) was prepared. The EIR discloses any significant or potentially significant environmental effects of implementing the San Gabriel River Corridor Master Plan; identifies possible ways to avoid or reduce those impacts; and describes reasonable alternatives to the proposed project. This analysis is compliant with the California Environmental Quality Act (CEQA). A funding opportunities analysis was also conducted.

Phase V: Draft and Final Plan Development

The final Master Plan and EIR were completed and approved during this phase of the project. Following completion of County Counsel’s initial review of the EIR, and a subsequent 60-day public review period, comments received from the County of Los Angeles Department of Public Works, other members of the Planning Team, the Steering Committee, and the public were incorporated into the Master Plan. After a second County Counsel review, additional changes to the Master Plan reflecting progress made on specific projects as well as other stakeholder input were included. The final Master Plan and EIR were then subsequently presented to the Los Angeles County Board of Supervisors for adoption in June 2006.

1.5 RELATIONSHIP TO OTHER PLANNING PROCESSES

A number of other planning efforts have recently been completed or are currently being developed throughout the San Gabriel River Watershed. “Recent Planning Studies” focus on all or parts of the San Gabriel River Watershed, and were completed three to fifteen years ago. “Current Planning Studies” focus on ongoing planning efforts. The majority of these plans are watershed-based, that is, they provide recommendations focused on regions defined by the natural functioning of watersheds, rather than by the traditional boundaries that define political jurisdictions. The Master Plan was developed in coordination with these plans to ensure consistency and minimize duplication. Ongoing coordination with these plans will be needed as the San Gabriel River Corridor Master Plan moves forward to implementation.

Recent Planning Studies

Long-Term Management Plan West Fork San Gabriel River *West Fork Working Group (May 1989)*

The West Fork Working Group (WFWG) consists of the Angeles National Forest, the California Department of Fish and Game, LADPW, and California Trout. It was formed through a cooperative agreement on April 4, 1986, to create a mechanism for these entities to work together to improve water resources management in the West Fork of the San Gabriel River. The group developed a plan to integrate flood management, water conservation, fisheries management, stream habitat improvement, and recreational enhancement. The plan was also signed by various local water interests, the San Gabriel River Water Committee, the San Gabriel Valley Protective Association, and the San Gabriel Basin Water Master. The plan’s primary goal is to manage Cogswell Reservoir and the West Fork of the San Gabriel River drainage to provide a balance of resource uses while minimizing conflict between users through cooperation, commitment and agreement.

Puente Hills Corridor: Greenspace Connectivity for Wildlife and People

California State Polytechnic University Pomona, Graduate Department of Landscape Architecture-606 Studio, College of Environmental Design (June 1997)

This study explores the issues facing the Puente Hills as a wildlife corridor within the context of a greater regional greenspace system that can simultaneously provide for the biological needs of wildlife and the recreational needs of people.

Reconnecting the San Gabriel Valley: A Planning Approach for the Creation of Interconnected Urban Wildlife Corridor Networks

California State Polytechnic University Pomona, Graduate Department of Landscape Architecture-606 Studio, College of Environmental Design (June 2000)

This study, prepared for the SGMRC, presents a regional network planning process for prioritizing different areas within the San Gabriel Valley region for conservation efforts. The study includes recommendations for creating networks that support wildlife connectivity. This study, which received awards from the County and the American Planning Association, was the first to examine the main stem of the Upper San Gabriel River as a whole for multiple objectives. More information on this project can be found at www.sgmrc.org.

Los Angeles and San Gabriel Rivers Watershed Feasibility Study

US Army Corps of Engineers (July 2001)

COE and LADPW undertook this study as a partnership “to gather and evaluate available information, to look for opportunities for watershed improvement, and to initiate thinking on a future integrated Watershed Management Plan.” A task force was established, which included cities, local governments, water agencies, and state and federal organizations. The primary goals were to provide adequate flood protection, conserve stormwater for groundwater recharge, improve water quality, increase recreation and open space, increase and restore wildlife habitat, and revitalize areas within the watersheds, by locating multi-objective opportunities, identifying partnering resources, and increasing knowledge of watershed issues. As a result of this study, six pilot projects were identified and taken to the next level of detailed assessment, including the Arroyo Seco Watershed, the Headworks project in Glendale and San Creek at Cal Poly Pomona.

Common Ground: From the Mountains to the Sea

San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy (RMC) and Santa Monica Mountains Conservancy (October 2001)

This joint plan, undertaken by two California state conservancies, articulates a vision for the future of the San Gabriel and Los Angeles Rivers Watersheds and provides a framework for future watershed and open space planning. The overall vision is to “restore balance between natural and human systems in the watershed.” The key component of the plan is a

set of guiding principles, which provide over-arching goals to guide future open space planning in the dual watershed.

San Gabriel Confluence Park: A River Based Urban Nature Network

California State Polytechnic University Pomona, Graduate Department of Landscape Architecture-606 Studio, College of Environmental Design (June 2000)

This planning study was prepared for the Sierra Club, which has taken an active interest in the San Gabriel River. The study examines the potential for a network of open space around the San Jose Creek/San Gabriel River Confluence area.

Current Planning Studies

Forest Master Plan Update

USDA Forest Service-Angeles National Forest

The US Forest Service is updating its Forest Plans for Southern California, including, from north to south, the Los Padres, Angeles, San Bernardino and Cleveland National Forests. The Forest Plans set policies for the types of activities and special designations that can occur within each forest. The headwaters of the San Gabriel River fall within the boundaries of the Angeles National Forest. This process is scheduled to be completed in 2004.

San Gabriel River Watershed Special Resource Study

US Department of the Interior

Legislation enacted in July 2003 directed the Secretary of the Interior to conduct a special resource study of the San Gabriel River and sections of the San Gabriel Mountains, including the City of Santa Fe Springs. NPS will lead this effort and will begin the study process in 2004. The study will evaluate the significance of the natural and cultural resources of the area and consider whether any portion of the area should be added to the national park system. The study may also assess opportunities for additional education and interpretation, low-impact recreation, trails and other access to urban open space, habitat protection and restoration, and watershed improvements. Based on the complex land ownership and jurisdictional boundaries in the area, NPS anticipates that recommendations would emphasize public-private partnerships. The legislation provides direction to coordinate with RMC and other federal, state and local agencies, such as the Angeles National Forest, and to take into

consideration flood control, drainage and public infrastructure needs. Public involvement and participation will be included at key steps in the study process. The Department of the Interior has three years to complete the study and report its findings to Congress.

Rivers/Tributaries Parkway Plan

San Gabriel and Lower Los Angeles Rivers and Mountains Conservancy

Building from the Common Ground planning report, RMC is developing a rivers and tributaries parkway plan. This effort will largely draw upon the relevant portions of the San Gabriel River Corridor Master Plan to avoid duplicative efforts and expense.

Watershed Management Plan for the San Gabriel River Above Whittier Narrows

San Gabriel Mountains Regional Conservancy

This planning effort focuses on the upper half of the San Gabriel River Watershed, including three important sub-watersheds: Upper San Gabriel River, Walnut Creek, and San Jose Creek. It will address opportunities and challenges in a comprehensive watershed management plan. The plan is intended to provide a foundation and framework to facilitate planning and implementation efforts beyond the scope of this plan. Future programs already identified include: implementation of identified pilot projects; citizen-based land stewardship programs; local land conservation and resource management plans; citizen-based water quality monitoring coordinated with watershed-wide monitoring efforts anticipated by the Los Angeles Regional Water Quality Control Board and the LA and San Gabriel Rivers Watershed Council; and formation of the “San Gabriel River Tributaries Land Trust.”

Rio Hondo Watershed Management Plan

San Gabriel Valley Council of Governments

The San Gabriel Valley Council of Governments, in partnership with RMC, has been awarded Proposition 13 grant funds from the State Water Resources Control Board to prepare the Rio Hondo Watershed Management Plan. This multi-objective project will integrate issues of land use, water supply, water quality, recreation and habitat.

Coyote and Carbon Creeks Watershed Management Plan

County of Orange, Public Facilities and Resources Department

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. In 2001, COE initiated a comprehensive watershed study. The first step involved the Reconnaissance Phase, which was completed in June 2001. The “Westminster Watershed Reconnaissance Study” covers three Orange County watersheds: Coyote Creek, Carbon Creek, and Westminster. In fall 2002, COE began the Feasibility Phase, which will cover both the Coyote Creek and Carbon Creek Watersheds.

San Gabriel River Watershed Non-Point Source Pollution Reduction Program

Upper San Gabriel Municipal Water District

This program will address non-point source pollution issues such as trash, nutrients and coliform. It will focus on two locations in the Angeles National Forest: San Gabriel Canyon and Chantry Flats. Measures will include trash reduction, retrofit of lavatories, stream clearance to remove blockages caused by sedimentation and debris build-up, clearance/rehabilitation of designated trails, stream bank stabilization and public outreach.

Water Quality Assessment, Source Identification and Management Action Evaluation of the San Gabriel River

Southern California Coastal Water Research Project

This study is one component of the 2003 Regional Monitoring Survey that will assess the overall environmental health of the Southern California

Bight, the coastal region that extends from Point Conception to Cabo Colnet in Baja California. A part of this survey, conducted on a recurring five-year basis, will address the impact of stormwater plumes on coastal ocean water quality. SCCWRP received an \$800,000 grant for the San Gabriel River component of the study.

Southern California Wetlands Recovery Project

California Coastal Conservancy

This project is a partnership of public agencies working cooperatively to acquire, restore and enhance coastal wetlands between Point Conception and the border with Mexico. The goal is to develop and implement a regional prioritization plan that will accelerate acquisition and restoration.

Sediment Management Plan

County of Los Angeles Department of Public Works and California State Polytechnic University Pomona

Sedimentation deposits at the three dams in the upper San Gabriel River have drastically reduced the capacity of these reservoirs. This study will evaluate the potential adverse effects resulting from the current sluicing method for removing sediments and assess the feasibility of alternate sediment management plans.

