

Section 3

Project Description

3.1 INTRODUCTION

The San Gabriel River Corridor Master Plan (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. The Master Plan describes general guidelines for the development of specific projects in the planning area. The Steering Committee and the County of Los Angeles Department of Public Works (LADPW) representatives also collaborated to develop an extensive list of potential projects within the Master Plan corridor to include on a Project Action Grid (see Appendix A of the Master Plan). Using a collaborative process, five of these projects were considered further as Concept Design Studies - projects that were deemed to best meet the Master Plan objectives. As available, additional detail is provided on the Concept Design Studies.

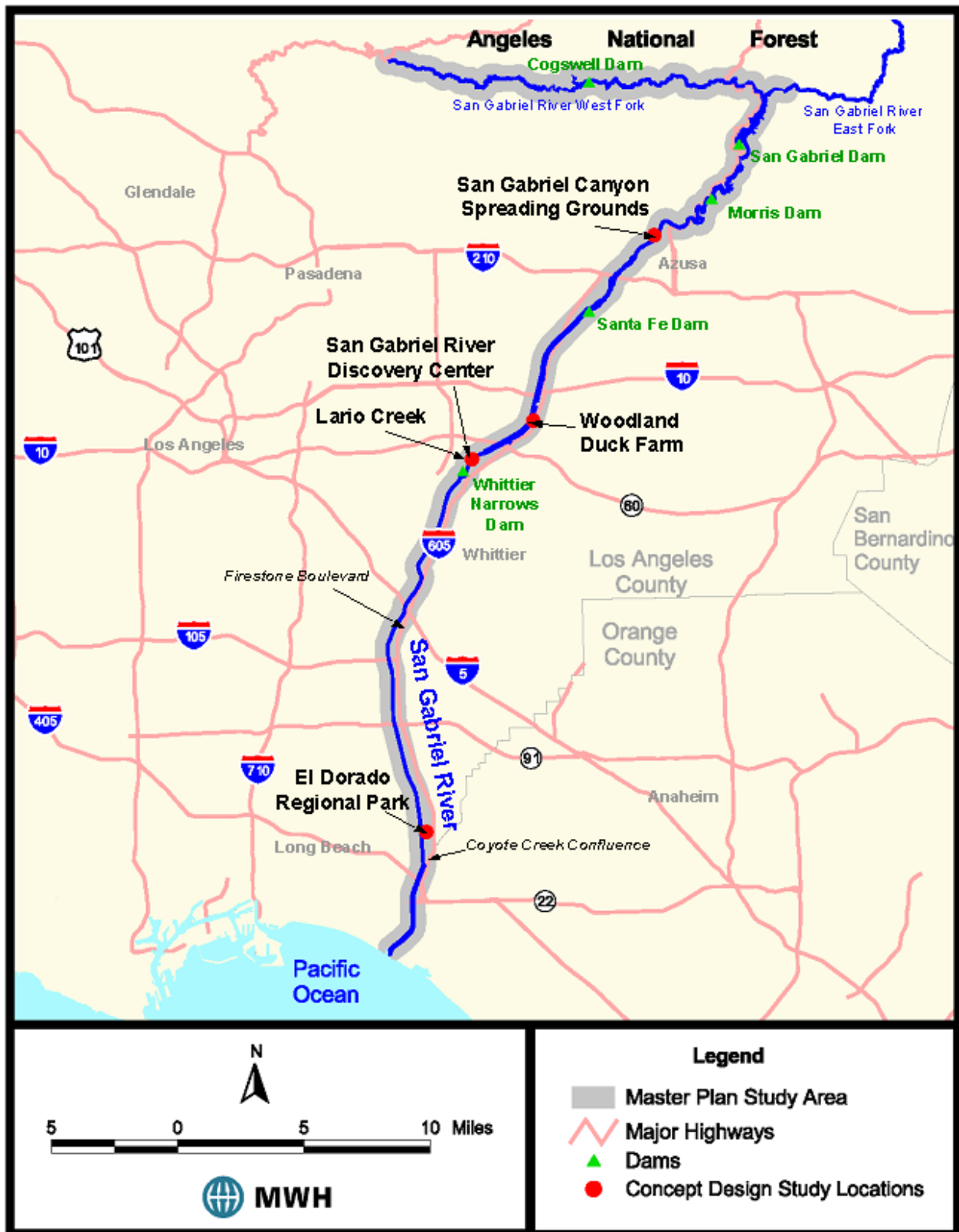
3.2 PROJECT LOCATION

3.2.1 River Corridor Plan Area

The Master Plan project area lies along 58 river miles of the San Gabriel River in southern California, from its headwaters in the Angeles National Forest to its terminus at the Pacific Ocean between Long Beach in Los Angeles County and Seal Beach in Orange County (**Figure 3-1**). The headwaters extend from the West Fork of the San Gabriel River upstream of Cogswell Dam, and include the portion of the river upstream of Morris Dam under Los Angeles County jurisdiction including Morris Dam, San Gabriel Dam and Cogswell Dam. The Master Plan area includes 19 cities and unincorporated areas of Los Angeles County and Orange County. The Master Plan area is almost entirely in Los Angeles County. The portion within Orange County is located along the reach where the river separates Orange County from Los Angeles County for approximately 3 miles at the river's southern end. Additional maps detailing the various reaches along the river corridor are included in the Master Plan.

For the Master Plan, a corridor width of 0.5 mile on either side of the river was chosen to bound the study area. Based on this corridor width, the project area encompasses approximately 58 square miles. This study area provides a necessary focus for the Master Plan but is not meant to be a totally exclusive boundary. Some projects and programs located nearby but outside the 1-mile wide study area are included if they are designed to contribute to the vision and goals of the Master Plan.

Figure 3-1
Regional Location Map



3.2.2 Master Plan Study Reaches

The Master Plan divides the San Gabriel River geographically into seven reaches:

1. Headwaters
2. San Gabriel Canyon
3. Upper San Gabriel Valley
4. Lower San Gabriel Valley
5. Upper Coastal Plain
6. Lower Coastal Plain
7. Zone of Tidal Influence

The system of dams and reservoirs and the increase in impervious surface area in the watershed has modified the natural pattern of flow in the river in many of the reaches. Only in its headwaters does the river remain largely unaltered.

1. Headwaters – The first reach of the river is the headwaters along the West Fork in the Angeles National Forest, on the south side of the San Gabriel Mountains. The San Gabriel Mountains are characterized by wide, deep canyons with steep slopes. The river runs through undisturbed riparian and woodland habitats in the San Gabriel Mountains, and passes through Cogswell Dam, a flood control facility. The reach along the West Fork is largely uninhabited. The East Fork and lower North Fork (not included in the Master Plan study area) of the San Gabriel River are subject to heavy recreational use. The lower one-quarter mile of the West Fork is also subject to heavy recreational use.

2. San Gabriel Canyon – The San Gabriel Canyon reach begins at the point where the West, North, and East Forks of the river join, and ends at Morris Dam. Land uses in this reach include open space/recreation (Angeles National Forest) and public facilities related to flood control and water resource management (e.g., San Gabriel Dam, Morris Dam, and pipelines for conveyance of imported water). Upstream of Morris Dam, the River remains mostly in its natural state, flowing through the deep, wide canyons of the San Gabriel Mountains.

3. Upper San Gabriel Valley – The Upper San Gabriel Valley reach extends from Morris Dam north of Glendora, passes through unincorporated Los Angeles County and Azusa, and ends at the Santa Fe Dam in Irwindale. Santa Fe Dam is located about 4 miles south of the mouth of San Gabriel Canyon. While it is primarily a U.S. Army Corps of Engineers (COE) flood control facility and part of the Los Angeles County Drainage Area (LACDA) flood control system, portion of the nearly 31,000 acre-feet capacity reservoir are leased by the County of Los Angeles Departments of Public Works (for water conservation) and Parks and Recreation ((for recreation). Recreational activities including sailing, swimming, and fishing. The Santa Fe Dam Recreation Area in Irwindale shares borders with Duarte and Monrovia, and includes park facilities for picnicking, trails for biking and hiking, and campsites.

Downstream of Morris Dam, the river descends into the San Gabriel Valley where the terrain flattens. In reaches below Morris Dam, the river has been modified from its natural shallow and wide state. The river has been deepened, narrowed, and straightened to allow increased

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development up to the river's edge. The native vegetation has been replaced in some areas by channel walls reinforced with stone or concrete. Raised levees provide flood protection, but also obstruct the view of the water from the ground surface.

4. Lower San Gabriel Valley – The Lower San Gabriel Valley reach runs between the Santa Fe Dam and Whittier Narrows Dam in unincorporated Los Angeles County north of Pico Rivera, passing through Baldwin Park, Arcadia, El Monte, the City of Industry, South El Monte, and Bassett in unincorporated Los Angeles County. The dam is located at the geographic feature known as the “Whittier Narrows.” The Whittier Narrows are a natural gap in the hills that form the southern boundary of the San Gabriel Valley, through which the Rio Hondo and San Gabriel Rivers pass and are impounded in the Whittier Narrows Reservoir. This dam is also a COE flood control facility in the LACDA system, and provides flood control and water conservation benefits. Whittier Narrows Recreation area in unincorporated Los Angeles County provides opportunities for biking, fishing, hiking, horseback riding, picnicking, and wildlife viewing. The channel in this reach is trapezoidal in shape, with grouted stone sidewalls and an earthen bottom.

5. Upper Coastal Plain – This reach begins at the outlet of the Whittier Narrows Dam and ends where the San Gabriel River crosses Firestone Boulevard in Norwalk, near the 605 Freeway. This reach includes portions of Pico Rivera, Whittier, West Whittier and Los Nietos in unincorporated Los Angeles County, Santa Fe Springs, Downey, and Norwalk. The channel in this reach is trapezoidal in shape, with grouted stone sidewalls and an earthen bottom.

6. Lower Coastal Plain – This reach begins at Firestone Boulevard and extends to the confluence of Coyote Creek and the San Gabriel River in Rossmoor, located in unincorporated Orange County. The San Gabriel River passes through Downey, Norwalk, Bellflower, Cerritos, Lakewood, and Long Beach in this reach. The 10-mile reach from just south of Firestone Boulevard to the confluence with Coyote Creek in Long Beach is a trapezoidal channel lined with concrete both on the sides and the bottom.

7. Zone of Tidal Influence – For the last 3.5 miles of the San Gabriel River from the confluence with Coyote Creek to the Pacific Ocean, the channel again has a soft bottom. The river flows between Long Beach in Los Angeles County and Seal Beach in Orange County, and borders portions of Los Alamitos and Rossmoor (unincorporated) in Orange County. In this reach, the river water mixes with ocean water in a natural estuary before its terminus at the Pacific Ocean.

For more information on the hydrology of the San Gabriel River, including descriptions of flood control dams and spreading basins, see Section 4 - Environmental Setting, Impacts, and Mitigation Measures.

3.3 PROJECT DESCRIPTION

This section serves as the general description of the project's technical, economic and environmental characteristics as required by CEQA Guidelines Section 15124(c).

The Master Plan includes:

- Vision statement and specific goals for the San Gabriel River Corridor developed by the Steering Committee over a three year period (vision, goals, objectives, and performance criteria).
- River corridor-wide efforts, policies, and guidelines intended to connect site-specific projects or address issues common to most Master Plan projects.
- A “design toolbox” or design guidelines to help projects integrate into the river corridor’s natural environment.
- Eight categories of projects developed from a collective review of all the proposed or planned projects along the San Gabriel River.
- A list of projects suggested or proposed by Steering Committee members (Project Action Grid, see Appendix A of the Master Plan). Five of the projects suggested by Steering Committee members were chosen for further development as Concept Design Studies.
- The results of a spatial analysis. The spatial analysis reviews existing conditions for a number of factors to identify potential opportunities in addition to the stakeholder projects already in development.

3.3.1 Master Plan Framework

3.3.1.1 Vision, Goals, and Objectives

As described in Section 2, the vision and goals of the Master Plan are to develop 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. In order to support the goals and vision of the Master Plan, the Steering Committee and LADPW defined multiple objectives for each goal. Performance criteria were then developed to measure progress toward those objectives. The final goals of the Master Plan (also referred to as Master Plan elements) are:

- **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.

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- **Economic Development** - Pursue economic development opportunities derived from and compatible with the natural aesthetic and environmental qualities of the river.

Each goal has multiple objectives and each objective contains multiple performance criteria. The objectives and performance criteria supporting the goals were developed during Steering Committee work sessions. The objectives and performance criteria for each Master Plan goal are presented in **Table 3-1** through **Table 3-6**. The performance of projects implemented for the Master Plan is to be assessed using the performance criteria. The projects can then be improved to better meet the performance criteria.

**Table 3-1
Objectives and Performance Criteria for the Habitat Goal**

Objectives	Performance Criteria
H1 – Protect existing high quality habitat and ecologically significant areas	H1.1 Supports Habitat conservation H1.2 Protects threatened and endangered species’ habitats, significant ecological areas and significant natural areas H1.3 Enhances specific species that have experienced decline H1.4 Protects habitats from in-compatible adjacent uses H1.5 Identifies indicator species, develops standards & monitoring systems H1.6 Balances wildlife and human uses/recreation H1.7 Controls litter and dumping
H2 – Restore/enhance aquatic and terrestrial riparian and upland habitat	H2.1 Ensures sufficient flow conditions to support riparian river habitats, aquatic species/fisheries H2.2 Uses reclaimed water for irrigation H2.3 Incorporates habitat areas into development on private and public lands and requires mitigation efforts for impacts to existing habitats H2.4 Protects native vegetation & encourage native plant restoration H2.5 Restores and enhances habitats without compromising flood protection, groundwater recharge, or public health H2.6 Reconciles habitat enhancement with water quality issues (i.e. some enhancement may cause increased coliform levels) H2.7 Increases acreage of coastal wetland habitats H2.8 Incorporates monitoring and maintenance procedures into restoration plans H2.9 Supports planting levees with native riparian vegetation wherever possible without compromising operation and maintenance of flood control capabilities and that vector breeding is not encouraged H2.10 Encourages development of new habitats without compromising essential public services including groundwater recharge, flood protection, or electrical power transmission by offering legal and operational safeguards such as memoranda of understanding that allow access for regular maintenance and emergency operations

**Table 3-1 (Continued)
Objectives and Performance Criteria for the Habitat Goal**

Objectives	Performance Criteria
H3 – Coordinate efforts to remove invasive species	H3.1 Prohibits planting of listed invasive/exotic plant species in parks, recreation, open space or habitat areas H3.2 Encourages use of native plants in parklands or river corridor and adjacent areas H3.3 Removes invasive species and prevents their spread or migration upstream H3.4 Utilizes Best Management Practices for management of habitat areas H3.5 Mediates issues between stock versus native fish
H4 – Maintain and enhance wildlife corridors as continuous linkages	H4.1 Reduces habitat fragmentation by establishing wildlife corridors and nodes H4.2 Minimizes the effects of barriers and choke points that create impediments to wildlife movement H4.3 Utilizes ecologically responsible techniques to maintain or reduce populations of wildlife meso-predators (raccoon, feral cats, opossum, skunk) and rodents that may transmit vector-borne diseases and discourages wildlife encroachment into surrounding urban areas H4.4 Maintains or increases the population of prey species (amphibians, reptiles, small mammals and birds) H4.5 Establishes habitat area design standards to meet the tolerances of the most sensitive species that might possibly use a corridor H4.6 Discourages urban development in floodplain & habitat areas H4.7 Enhances connections between remaining wildlife populations so genetic exchange between populations can resume (between Puente Hills, San Jose Hills, Santa Fe Dam floodplain, Whittier Narrows Recreational Area, Cleveland National Forest)
H5 – Educate private and public land owners about the use of appropriate plants to use for landscaping	H5.1 Forms business partnerships to encourage residents to use native plants and materials that reflect the river/watershed identity and provide some habitat value H5.2 Provides guidelines to coordinate habitat preservation efforts between agencies, jurisdictions, and private lands

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**Table 3-2
Objectives and Performance Criteria for the Recreation Goal**

Objectives	Performance Criteria
RC1 – Improve access to recreation for all communities.	RC1.1 Provides active and passive recreation opportunities RC1.2 Serves to improve the aesthetic quality of the corridor, the viewshed, and the adjacent communities RC1.3 Establishes interpretive centers at key nodes along the river system to provide a link between environmental education, recreation, habitat and open space RC1.4 Provides educational and interpretative elements that combine art and science for fun, expressive and meaningful exhibits about habitats and landscape processes
RC2 – Connect open space and recreation areas with a network of trails.	RC2.1 Provides continuous bike trail, equestrian and public access system along riverfronts RC2.2 Establishes design standards for trails to safely accommodate multiple users of all ages and abilities RC2.3 Includes shade, river access, rest areas, maps/signs, mile markers, landmarks, lighting, emergency call boxes and other amenities for trail users RC2.4 Provides for public safety and security along waterways and trails. RC2.5 Allows trail users to experience a positive sense of the adjacent community’s identity as they travel along the river corridor RC2.6 Provides a comprehensive network that connects river trails to mountain trails, urban trails, local dams, and beaches RC2.7 Connects recreation areas to transit access points RC2.8 Provides trails that are designed for low maintenance RC2.9 Provides access for routine maintenance and emergency use
RC3 – Clearly identify recreation destinations adjacent to the corridor as part of the riparian system.	RC3.1 Provides site signage and design details to orient visitors throughout the river corridor RC3.2 Provides interpretive opportunities, including informative signage (explaining topics such as natural history, historic landscapes, fire, habitat, stewardship, pollution, hydrology, water supply, etc.) are integrated with recreational facilities
RC4 – Coordinate recreational programming to reinforce other goals and objectives	RC4.1 Provides diverse recreational opportunities (horseback riding, environmental education, fishing, nature walks, clean-up activities, etc.) and engages individuals, interest groups, school groups and families with the River RC4.2 Provides programming, site design and signage to increase public awareness about riparian systems and engender stewardship of the land. RC4.3 Encourages Parks and Recreation Departments to incorporate community gardens and pocket parks, demonstration and restoration projects RC4.4 Educates public about catch and release fishing

**Table 3-2 (Continued)
Objectives and Performance Criteria for the Recreation Goal**

Objectives	Performance Criteria
RC5 – Plan facilities to meet multiple objectives	RC5.1 Provides habitat where possible and minimizes impacts to adjacent sensitive areas; also serves as a wildlife corridor where appropriate RC5.2 Optimizes water flow and sediment removal activities for fish habitat to support fishing activities RC5.3 Optimizes water flow and maintenance activities for wildlife habitat to support environmental education activities RC5.4 Provides for groundwater infiltration where possible to meet water quality goals RC5.5 Provides site design, planting, lighting and maintenance support habitat goals/objectives RC5.6 Provides a corridor-wide perspective to minimize use conflicts and mitigate impacts

**Table 3-3
Objectives and Performance Criteria for the Open Space Goal**

Objectives	Performance Criteria
O1 – Create, expand and improve public open space throughout the region	O1.1 Establishes priorities for land acquisition, coordinating targeted land acquisitions with land use planning O1.2 Recycles brownfields with agency collaboration O1.3 Coordinates land management policies and procedures among jurisdictions O1.4 Includes restored native habitats within open space
O2 – Improve access to open space and recreation for all communities	O2.1 Provides for active and passive recreational uses O2.2 Incorporates passive/low impact recreational uses and storm water re-capture O2.3 Evaluates access by population density, distance and time for each type of open space. O2.4 Meets site design standards for special user needs O2.5 Improves the aesthetic quality of the corridor, the viewshed, and the adjacent communities O2.6 Includes in all site programming adequate parking, access via public transportation, and facilities for buses
O3 – Promote stewardship of the landscape	O3.1 Utilizes drought tolerant and native plant materials O3.2 Supplies best Management Practices that support habitat and water quality goals O3.3 Identifies historical sites and cultural landscapes O3.4 Supports community gardens and water-wise and native plant gardens. O3.5 Uses conservation easements to provide incentives to expand open space

- Educational Centers
- Bridges, Gateways and Connections
- Parks and Open Space
- Redevelopment and Reclamation
- Habitat Enhancement
- Water Quality and Supply
- Studies

To assist with development of future project opportunities, a spatial analysis was conducted and is described in Chapter 4 of the Master Plan. The spatial analysis identifies opportunities for each Master Plan project category by evaluating the existing conditions in the river corridor. For example, factors such as soil permeability and availability of open space were considered to identify areas with opportunity for groundwater recharge projects.

3.3.2.2 Project Action Grid

Through meetings with cities and other stakeholders along the San Gabriel River corridor and the Steering Committee process, over 160 projects, ideas, and suggestions were gathered for inclusion in the Master Plan as part of the Project Action Grid. Another source of the project listing was RMC's project database. This list of 160 projects was modified by identifying projects that were repeated and eliminating those that were only broad concepts and were not associated with a specific site. The final Project Action Grid contains approximately 134 projects (see Appendix A of the Master Plan).

3.3.2.3 Selection Process for Concept Design Studies

Five Concept Design Studies were identified as part of the Master Plan process. The purpose of the Concept Design Studies is to illustrate, using concrete examples, how the Master Plan goals of habitat, recreation and open space can be simultaneously accomplished. The five Concept Design Studies were selected from projects in the Project Action Grid.

Initially, the planning team chose 24 candidate projects from the Project Action Grid using the following criteria:

- Project or program is well defined in terms of its proposed action, stated purpose, and expected outcomes.
- Project site can be located on a map of the San Gabriel River.
- Project or program has an agency or organizational sponsor.
- Program development is underway or planned in the next few years.

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**Table 3-3 (Continued)
Objectives and Performance Criteria for the Open Space Goal**

Objectives	Performance Criteria
O4 – Develop a cross-jurisdictional safety and maintenance program	O4.1 Establishes public safety measures to prevent crime in river corridor
	O4.2 Encourages connections with groups that sponsor volunteer cleanup activities
	O4.3 Promotes fire safety and awareness
	O4.4 Reduces debris flows
	O4.5 Reduces habitat and recreational conflicts
	O4.6 Reduce vector breeding potential and encourage public education of vector-borne diseases and precautions

**Table 3-4
Objectives and Performance Criteria for the Flood Protection Goal**

Objectives	Performance Criteria
FP1 – Maintain and improve flood protection	FP1.1 Maintains existing flood protection at all times
	FP1.2 Reduces volume and velocity of storm water runoff where feasible
	FP1.3 Maintain current or lower Water Surface Elevation (WSE) design standards
	FP1.4 Maintain or reduce floodwater velocity
	FP1.5 Develops networks of storm water detention areas
	FP1.6 Ensures liability is not increased
FP2 – Improve flood protection using natural processes	FP2.1 Utilizes non-structural flood control where feasible
	FP2.2 Identifies opportunities for use of naturalized low-flow streambeds
	FP2.3 Restores local streams
	FP2.4 Coordinates maintenance of the flood protection system with habitat needs
	FP2.5 Recycles sediments from sluicing and maintenance operations
	FP2.6 Reduces the amount of precipitation that is converted to urban runoff (decreases the acreage of impermeable surfaces)
FP3 – Improve the visual aesthetics of flood control elements	FP3.1 Fosters multi-purpose flood control infrastructure to accommodate recreation, trails and habitat
	FP3.2 Establishes visual design standards for flood control devices

**Table 3-5
Objectives and Performance Criteria for the Water Supply and Water Quality Goal**

Objectives	Performance Criteria
WQ1 – Improve quality of surface water & groundwater.	WQ1.1 Reduces dry weather urban runoff discharge into waterways. WQ1.2 Expands and enhances groundwater infiltration and recharge. WQ1.3 Utilizes on-site opportunities to reduce impermeable surfaces and increase infiltration. WQ1.4 Assists cities to meet water quality requirements for TMDLs and NPDES. WQ1.5 Employs phytoremediation to treat water.
WQ2 – Optimize water resources to reduce dependence on imported water.	WQ2.1 Expands groundwater recharge facilities to increase water supplies. WQ2.2 Extends the distribution and range of uses of reclaimed water. WQ2.3 Encourages onsite collection of stormwater for irrigation and percolation, where consistent with water rights. WQ2.4 Maintains conservation of local water.
WQ3 – Establish riverfront greenways to cleanse water, hold floodwaters, and extend open space.	WQ3.1 Utilizes open spaces and landscaped areas to filter and cleanse runoff. WQ3.2 Prevents reduction of water conservation facilities.

**Table 3-6
Objectives and Performance Criteria for the Economic Development Goal**

Objectives	Performance Criteria
ED1 – Connect communities to the waterways by extended greenways	ED 2.1 Creates new access points ED 2.2 Develops trails to and along the waterways ED 2.3 Promotes development of public spaces
ED2 – Implement design and development standards consistent with Master Plan goals.	ED 2.4 Provides incentives to participating adjacent landowners ED 2.5 Educates participating landowners about potential liability and protective measures

3.3.1.2 River Corridor Policies and Programs

In addition to the Master Plan goals, objectives and performance criteria described above, the Master Plan also outlines the need for development of river corridor policies and programs. Further reference to these river corridor policies and programs is not made in the environmental impact sections of this Program EIR since the policies and programs are to be defined in the future and would not have environmental impacts that are different from the Master Plan elements described above. The types of policies and programs to be developed as identified in the Master Plan are:

- Establish standard design guidelines
- Develop public access guidelines

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- Develop policies regarding permitted and prohibited uses
- Ensure compliance with Americans with Disabilities Act for structures and trails
- Maintain access for operations and maintenance needs
- Consider durability and maintenance requirements
- Support coordinated systematic exotic plant removal efforts
- Develop programs and policies to ensure the safety and security of visitors
- Coordinate with local mosquito and vector control agency. Design to avoid vector breeding that might create a risk to public health
- Encourage water quality and water supply BMP implementation
- Create opportunities for stormwater infiltration without adding contamination
- Recognize existing water rights
- Encourage water conservation education programs and policies
- Encourage reclaimed water use in commercial and industrial settings
- Consider habitat integration
- Consider public education regarding respecting wildlife
- Implement public awareness and information programs
- Serve the economic interests of cities along the corridor while also helping to achieve the Master Plan vision
- Acquire land within or near the river corridor to adapt for public open space, habitat, water conservation, and/or flood control functions

3.3.1.3 Design Guidelines

The design toolbox is comprised of design guidelines for each of the seven reaches of the San Gabriel River. The elements are specific to the topography and culture of the specific reach. The design toolbox focuses on color, texture, form, and materials. The design guidelines heavily reference the Los Angeles River design guidelines from a functional point of view (e.g., trail width). However, the aesthetic guidelines are specific to the San Gabriel River (e.g., style of signage, color and texture of building materials, and gate appearance).

3.3.2 Master Plan Projects

3.3.2.1 Categories of Master Plan Projects

Projects to be developed within the Master Plan study area fall into one or more of the following eight main categories:

- Trail Enhancements

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The proposed list of candidate projects was organized to facilitate a vote by the Steering Committee members that would narrow the projects down to a final list of ten. The candidate projects were divided by their geographic locations. In addition, Master Plan objectives and project categories that could be demonstrated by each candidate project were identified. Write-in candidate projects nominated by Steering Committee members were also added to the list.

The planning team suggested criteria that the Steering Committee members should consider when selecting projects. The planning team suggested that candidate projects be characterized by one or more of the following criteria, similar to criteria listed in “Common Ground, from the Mountains to the Sea” (California Resources Agency, et al., 2001), the watershed and open space plan for the Los Angeles and San Gabriel Rivers:

- Project is significant in terms of potential impact (regional or local), overall size, strategic location, high leverage, site features, or programmatic scope.
- Project addresses multiple Master Plan elements or strongly meets the goal, objectives, and performance criteria of at least one Master Plan element.
- Project is replicable, scalable, or addresses system wide needs.
- Project is one-of-a-kind.

The planning team also suggested that the overall list of candidate projects address the following needs:

- Projects are distributed along the river for geographic balance.
- All plan elements are represented.
- All project categories are represented.
- Projects represent a diversity of stakeholders, including cities, agencies and community organizations.

Ten candidate projects were then chosen by the Steering Committee members based on these criteria.

3.3.3 Concept Design Studies

From the top ten candidate projects that received the most votes from the Steering Committee members, the planning team then selected five projects to be highlighted in the Master Plan as Concept Design Studies. The top ten projects were evaluated on an individual basis. The five Concept Design Studies were selected since they had: a dedicated project sponsor, multiple plan elements, a sufficiently defined preliminary project description, and potential for substantial beneficial impacts.

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Two of the Concept Design Studies, San Gabriel Canyon Spreading Grounds and Lario Creek, will be implemented by LADPW. The other projects will be implemented by their respective sponsors.

The final five Concept Design Studies described in the Master Plan and their project sponsors are shown in **Table 3-7**.

**Table 3-7
Master Plan Concept Design Studies**

Project Name and Project Lead(s)	Project Description Summary	CEQA Project Objectives*					
		Habitat	Recreation	Open Space	Flood Protection	Water Supply and Water Quality	Economic Development
San Gabriel Canyon Spreading Grounds – City of Azusa and LADPW (Reach 3)	Amenities, habitat, and aesthetic improvement along San Gabriel River Regional Bike Path.	●	●	●	○	○	
Woodland Duck Farm – WCA (Reach 4)	Habitat, recreation, and open space and equestrian uses on newly purchased parcel.	●	●	●	○	●	●
San Gabriel River Discovery Center at Whittier Narrows – Upper San Gabriel Valley Municipal Water District, County of Los Angeles Department of Parks and Recreation, and RMC (Reach 4)	New Discovery Center building and aesthetic and habitat improvements to the Whittier Narrows Nature Area.	●	●	●	○	●	●
Lario Creek – LADPW and North East Trees (Reach 4)	Habitat and conveyance improvement to critical water conservation channel.	●	○	○	●	●	
El Dorado Regional Park – City of Long Beach (Reach 7)	Native habitat enhancement, urban runoff treatment, and improving connection to San Gabriel River at existing 500-acre park.	●	●	●	●	●	

- Primary objectives / definite opportunities
- Secondary objectives / potential opportunities
- * Detailed in **Section 2.2**.

The Concept Design Studies were defined to illustrate the types of multi-purpose projects to be fostered by the Master Plan. The conceptual project descriptions detailed below are the result of a Steering Committee exercise to help provide tangible examples of how the Master Plan multi-objective approach might apply to projects in the San Gabriel River corridor. These studies are intended for illustration purposes only and do not necessarily reflect the intent of the project

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sponsors. Environmental analysis in this Program EIR is based on the conceptual project descriptions in the Master Plan.

For each of these sites, the actual planning process by project sponsors still needs to be carried out or is ongoing, including appropriate public involvement and CEQA compliance. For several sites (e.g., Woodland Duck Farm and El Dorado Regional Park), potential project elements that are different from the concept designs described in the Master Plan have been identified during the planning process by project sponsors.

3.3.3.1 San Gabriel Canyon Spreading Grounds

Existing Setting. The San Gabriel Canyon Spreading Grounds are located in the City of Azusa below the mouth of San Gabriel Canyon (Reach 3). The project site is bound by the San Gabriel River on the west side (**Figure 3-2**; see also Map 3-10 in Chapter 3.8.1 of the Master Plan). The Azusa Greens Golf Course and a residential area surround the site on the south and east. San Gabriel Canyon Road is approximately 500 feet east of the project boundary. A new warehouse development is adjacent to the southwest.

The proposed project site is approximately 165 acres including the two spreading basins operated by LADPW for groundwater recharge (Basins I and II). A 14-acre parcel located between the two basins is owned by City of Azusa, and contains water storage tanks, wells, and pumps operated by Azusa Light and Power. Access to the spreading grounds and existing site is from San Gabriel Canyon Road at the north end of the site.

The two deep basins that comprise the spreading grounds were once gravel quarries, and have very steep side slopes. The spreading grounds are recharged with water from the San Gabriel River, imported water, and surplus flows from San Gabriel River Water Committee diversions upstream (LADPW, 2003c). An open channel conveys water from the north end of the site along the west side of Basin I to supply both Basin I and Basin II. The water added to the spreading basins mixes directly with groundwater in the Main San Gabriel Basin.

The site itself has many industrial features. A conveyor belt is located in the southern end of the site and runs on the east side of the San Gabriel River Bike Trail and crosses the river at the midpoint of the site to the Azusa Rock Quarry. Power poles run along the site between the spreading grounds and the river. The site is largely without vegetation. **Figure 3-3** shows the industrial nature of the site in its current condition. The figure is a picture of Basin II as viewed from the southwest corner. The bike trail and San Gabriel River are between the spreading basins and the mountains.

Surrounding Land Uses. The surrounding area to the northwest is largely industrial. The views from the site to the northwest are an industrial mining operation and the rugged San Gabriel Mountains. The Azusa Rock Quarry is located across the river. The surrounding area to the southeast is largely residential. The views to the southwest include homes and a golf course. Hodge Elementary School is located in the residential area south of the site.

Existing Conditions of the River. The river has a wide flood plain with an earthen bottom. The riverbed contains alluvial fan sage scrub and riparian habitat in some areas. The west bank

of the river is reinforced with grouted stone, but the east bank of the San Gabriel River is not well defined due to the mining operations. Drop structures are located in the channel approximately every 1,000 feet (COE, 1975). The drop structures were installed to decrease the slope of the river channel and reduce erosive forces.

Figure 3-2
 Preliminary Concept Design – San Gabriel Canyon Spreading Grounds

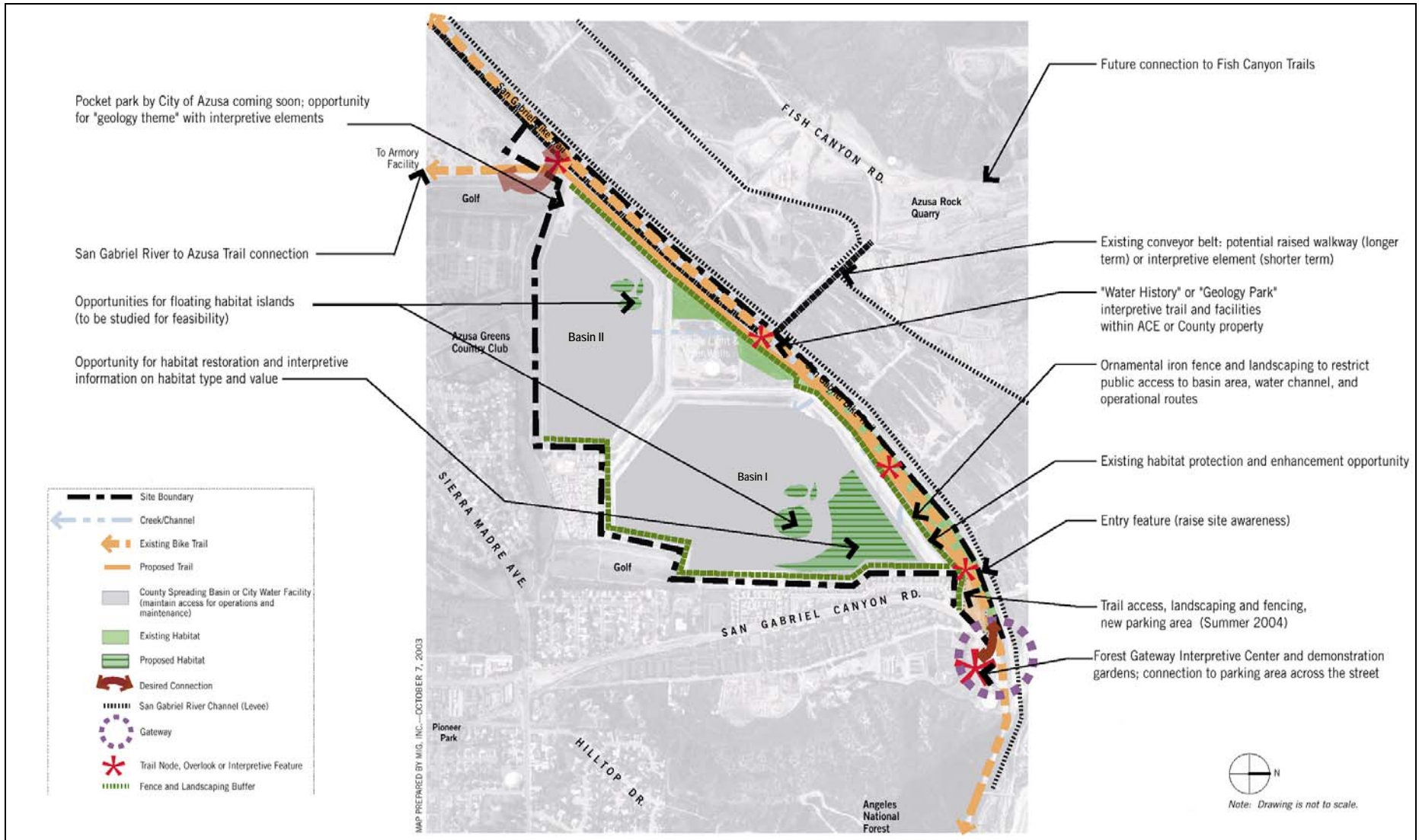


Figure 3-3
Existing Conditions of the San Gabriel Canyon Spreading Grounds



Source: MIG, July 2003.

Proposed Project. The San Gabriel Canyon Spreading Grounds project, proposed by the City of Azusa and LADPW, focuses on improving the aesthetics of the area between the river and the spreading basins and adding public amenities adjacent to the bike path (see **Figure 3-2**). No change to the existing spreading grounds operations is proposed. Public access will remain restricted near the basins and the City of Azusa parcel to maintain public safety and water quality.

The proposed project will complement improvements already planned near the San Gabriel Canyon Spreading Grounds. The spreading grounds are a part of North East Trees project for the City of Azusa, called “Rio San Gabriel: Vision Plan and Design Guidelines.” A Gateway Interpretive Center for the Angeles National Forest is being constructed northeast of the spreading grounds on San Gabriel Canyon Road. A parking lot is proposed on the west side of the road between the Gateway Education Center and the spreading grounds. The project is part of the San Gabriel Mountains Regional Conservancy education corridor program. A geology-themed pocket park is proposed by the City of Azusa at the southern end of the site.

Proposed improvements at the site include public access trails, educational elements, landscaping and other aesthetic improvements, and habitat restoration. Entry features near the parking lot would improve awareness of the site. A meandering trail will be added between the bike path and the spreading grounds. Chain link fencing around the basins would be replaced by more decorative fencing. Interpretive elements and landscaping may be added. Possible topics for interpretive elements are water history and geology. This area has views of the spreading basins on three sides and Fish Canyon and the San Gabriel River to the northwest.

A new City of Azusa parking area at the north end of the site from San Gabriel Canyon Road is proposed to facilitate safe site access. The south end of the site provides bike trail connections to the rest of the San Gabriel River Bike Trail and the Puente Largo Bridge. The City of Azusa plans to connect the site with Sierra Madre Avenue and the City of Azusa. There will be no access to the site via the golf course or the residential area on the east side to maintain public safety.

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As a potential element of this Concept Design Study, floating islands were proposed in the spreading basins for habitat and educational purposes. These islands could be connected by a cable and weight system connected to the bottom of the basin. The islands could be planted with wetland vegetation providing habitat for breeding and migrating bird species. Kiosks could provide information on wetland habitats and wildlife. However, if floating islands ultimately become part of this project, any potential conflicts between the existing operation and maintenance activities for groundwater recharge and the introduction and maintenance of habitat (including water quality, water supply, and regulatory issues) will be investigated in detail.

The existing native habitat (alluvial fan sage scrub) can be enhanced and supplemented near the spreading grounds. The area on the north side of Basin I and the triangle between the two basins are the largest areas at the site for potential habitat restoration (**Figure 3-2**). The shallow corners and edges of the spreading basins may be enhanced with riparian vegetation including willow trees, mule fat scrub, and baccharis scrub. The drier upper levels of the basins could be vegetated with coastal sage scrub.

3.3.3.2 Woodland Duck Farm

Project Site. The Woodland Duck Farm project area is located on a long narrow strip of land adjacent to the San Gabriel River just north of the confluence with San Jose Creek and south of the confluence with Walnut Creek (**Figure 3-4**; see also Map 3-12 in Chapter 3.8.2 of the Master Plan). The total project area is approximately 57 acres; 45 acres are located west of the 605 Freeway adjacent to the River, and 12 acres are on the east side of the freeway south of Valley Boulevard. The two areas are connected by an underpass below the 605 Freeway.

The Woodland Duck Farm is bounded on the west by the San Gabriel River, on the north by Valley Boulevard and on the east by the 605 Freeway and the California Country Club. The portion of the duck farm roughly south of Avocado Creek is in the City of Industry, as is the portion of the site north of Valley Boulevard. The remaining area of the site is in the Bassett community of unincorporated Los Angeles County.

The project site is not easily accessible from a major road. The northern access to the Duck Farm is from Temple Avenue north of Valley Boulevard and under the 605 Freeway to the northwestern part of the site. The western 12 acres are accessed through the residential area in Bassett east of the 605 Freeway. The Bassett side of the property is not well marked and entrance from this side requires driving through neighborhood streets. An underpass under the 605 Freeway connects the eastern and western portions of the Duck Farm. There is a pedestrian access to the south side of the Duck Farm site through an underpass under the 605 Freeway. This entrance connects the site to the San Jose Creek Trail.

Under a lease agreement with the Trust for Public Land, one of the tenants operates an equestrian facility on the eastern 12 acres. This site contains equestrian facilities including horse stalls, rings and other riding areas. The equestrian program includes therapeutic riding, lessons, and horse boarding. The equestrian facility is integrated with the adjacent community which is zoned for equestrian uses (Musick, pers. comm., 2003). **Figure 3-5** shows the existing conditions at the equestrian facility and the underpass from the equestrian facility to the Duck Farm site.

The Duck Farm site was operated as a duck farm from the 1950s until 2001 when it was purchased by the Trust for Public Land. The RMC is planning to purchase the site through the Watershed Conservation Authority (WCA), a joint powers authority between the RMC and the Los Angeles County Flood Control District. The former Duck Farm site (area west of the 605 Freeway) is mostly cleared vacant land with remnant structures of the duck farm. Several residences, currently abandoned, are located on the site. In addition, there is a barn that was once used for show horses. Two nurseries and a tree trimming company are currently leasing the northeastern and southwestern portions of the site. LADWP and Southern California Edison power lines run the length of the site. **Figure 3-6** shows the existing conditions at the site including power lines, site access, and abandoned farm structures.

Existing vegetation on the site is dominated by non-native ruderal (weedy) vegetation. Some native species including Mexican elderberry are present. In the river channel adjacent to but outside of the project site, some riparian vegetation is present due to the outflow from the San Jose Creek Water Reclamation Plant. There is little protection from the noise of the 605 Freeway at the site.

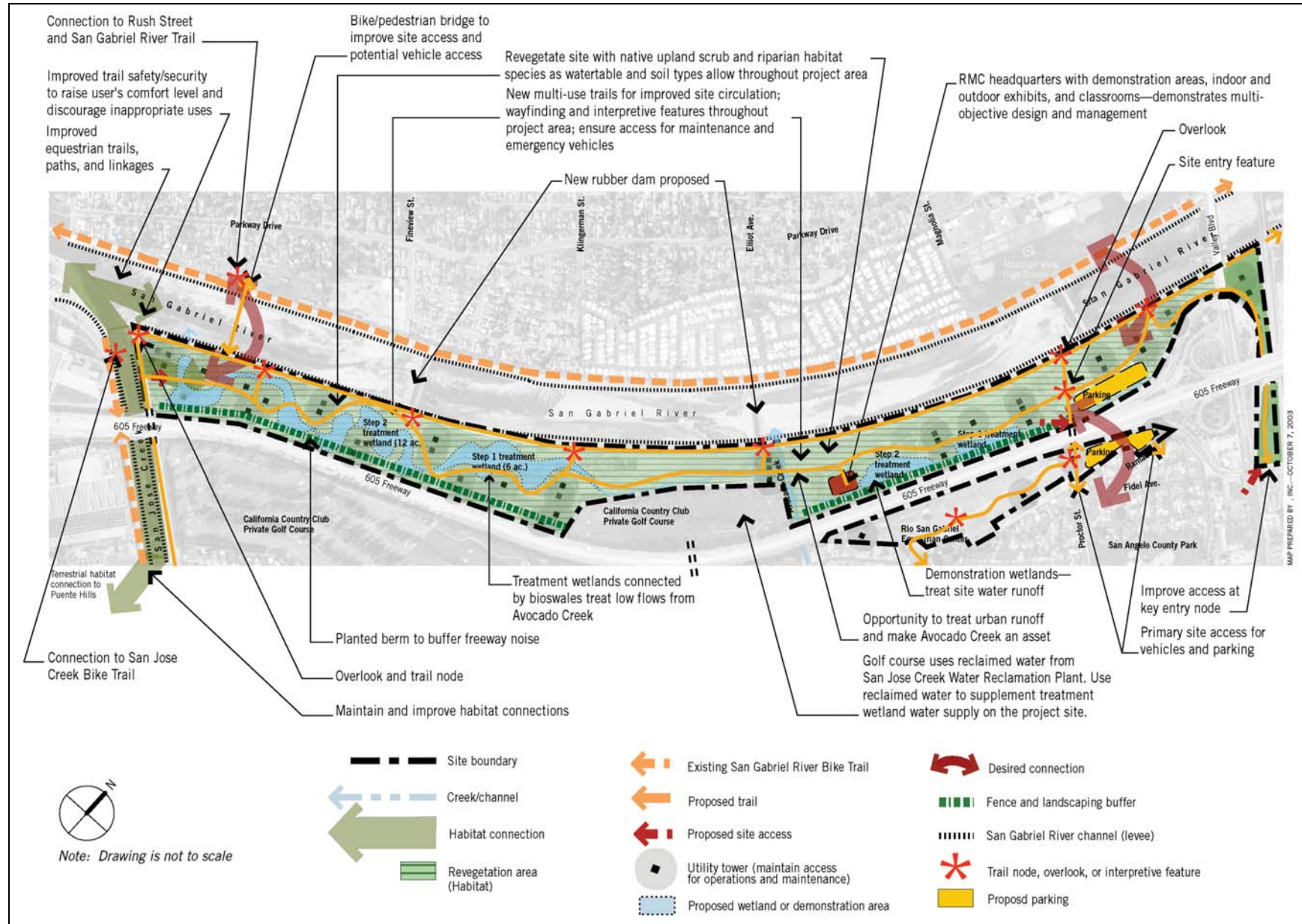
Surrounding Land Uses. The surrounding land uses to the east in the communities of Bassett, Avocado Heights and El Monte are mainly residential. Andrews Elementary and Don Julian Elementary are east of the site in Avocado Heights. A mobile home park is located on the west side of the river across from the site in City of El Monte. North of the mobile home park and on the western bank of the river are Mountain View High School and Madrid Middle School. The area just north of the site in Baldwin Park and the City of Industry is highly industrial. San Jose Creek Water Reclamation Plant is adjacent to the south on the east side of the river.

Existing Conditions of the River. The river adjacent to the project site is over 200 feet wide with an earth bottom and stone side slopes. The channel bottom is 15 to 18.5 feet below the top of the berm (COE, 1975). There is a rubber dam across the river south of Valley Boulevard. The rubber dam, when inflated, is used to capture stormwater runoff to recharge the groundwater basin. Two additional rubber dams are planned between the existing dam and the confluence with San Jose Creek (**Figure 3-4**).

Flows in this reach of the San Gabriel River tend to be low through most of the year. At the stream gauge north of Santa Fe Dam, regular flows between May and January are between 25 and 75 cfs. Much of this flow can infiltrate before reaching the portion of the river adjacent to the Woodland Farms site. No water quality impairments have been identified for the reach of the river adjacent to the site (SWRCB, 2003b).

Another water feature on the site is Avocado Creek. Avocado Creek is a concrete box channel situated approximately 15 feet below grade. It flows to the west near the southern margin of the eastern 12 acres and through the middle of the Duck Farm site, and empties into the San Gabriel River. During dry weather, there is little flow in Avocado Creek (Musick, pers. comm., July 2003).

**Figure 3-4
Preliminary Concept Design – Woodland Duck Farm**



**Figure 3-5
Equestrian Facility Existing Conditions**



Source: MIG, July 2003.

**Figure 3-6
Woodland Duck Farm Existing Conditions**



Source: MIG, July 2003.

Proposed Project. The project, which the RMC has initiated and is planning to pursue through the WCA, proposes to transform the abandoned duck farm site into an open space area with

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passive recreation and native habitat enhancements (see **Figure 3-4**). RMC's goals for the site are to provide facilities for passive recreation, improve the natural habitat, improve water quality, improve flood management, and connect the community to more open space (Simpson, pers. comm., July 2003). Potential project elements include trails, habitat, improved site access and parking, an educational center and watershed planning center, overlook points, and treatment wetlands. Potential sources of water for the treatment wetlands include Avocado Creek and San Jose Creek Water Reclamation Plant. In addition, WCA plans to modify one of the abandoned residential structures on the site for use as an RMC office.

The project would include improved access and circulation for the site. A pedestrian and bike bridge across the San Gabriel River is proposed near the confluence with San Jose Creek. This would provide a connection with the San Gabriel River Bike Trail on the west side of the river. The proposed project would also improve vehicular access to the site. A meandering trail with educational kiosks and connections to the San Gabriel River Bike Trail at key overlook points may be added.

The site is located within a potential habitat corridor that would connect the Puente Hills with Whittier Narrows. The weedy vegetation at the Duck Farm site could be replaced with native species. If the soils and groundwater levels are conducive to riparian habitat, a mosaic of willow, sycamore and cottonwood could be established. If riparian habitat is not feasible, a mosaic of upland scrub vegetation, including sage scrub, mule fat and elderberry woodland could be established.

The description of the proposed improvements provided above represents an initial concept for the project not an approved plan. WCA is undertaking a master plan for the site involving all stakeholders. This planning effort will examine all potential uses of the site, and will include a CEQA process.

3.3.3.3 San Gabriel River Discovery Center at Whittier Narrows

Project Site. The project site for the San Gabriel River Discovery Center encompasses the northeastern portion of the Nature Area within Whittier Narrows Dam Recreation Area (**Figure 3-7**; see also Map 3-14 in Chapter 3.8.3 of the Master Plan). The project site covers approximately 65 acres, and is bordered by Durfee Avenue to the north, Peck Road to the west, and the San Gabriel River to the south. This project site overlaps with the Lario Creek project site, described in **Section 3.3.3.4**.

The Nature Area is an open space area owned by COE for flood control purposes, and is leased to the County for multiple uses. It includes a total of 320 acres of natural woodland and lakes used by migrating waterfowl. An existing Nature Center is located on the northeastern portion of the Nature Area. The Nature Center is located on a 0.5-acre parcel owned by County of Los Angeles Department of Parks and Recreation (LACDPR), and has a museum with displays of animal and plant life, a small gift shop and a library. The Nature Center staff conduct recreational and educational programs such as hay rides, lectures, ranger tours, and school field trips (LACDPR, 2003). An existing parking area provides space for approximately 40 cars and two buses (COE, 1996). Water to supply the four lakes on the property for wildlife habitat is

provided by wells on the property. Lario Creek passes through the Nature Area (see **Section 3.3.3.4**). **Figure 3-8** shows the Nature Center and vicinity.

The primary purpose of Whittier Narrows Dam as authorized in the Flood Control Act of 1941 is flood control. The secondary purpose as authorized in the Flood Control Act of 1944 is recreation. A third purpose of the dam is water conservation as set forth by the Chief of Engineers in 1956 (COE, 1996). The COE maintains the dam and all flood control facilities. Local agencies with leases in the basin are required to operate and maintain their own recreation facilities (COE, 1996). Any development within the recreation area cannot impede the primary purpose of flood control.

Surrounding Land Uses. The primary surrounding land uses of the project site are open space and recreation (Whittier Narrows Dam Recreation Area, Pico Rivera Park, and Pico Rivera Golf Course). South El Monte High School is located to the north across Durfee Avenue. The Pomona Freeway (State Highway 60), Interstate 605, and Rosemead Boulevard (State Highway 19) provide primary vehicular access to the site.

**Figure 3-7
Preliminary Concept Design – San Gabriel River Discovery Center**



Figure 3-8
Existing Conditions of Whittier Narrows Nature Center



Source: MIG, July 2003.

Proposed Project. Under the proposed project, the existing Nature Center will be replaced with a new San Gabriel River Discovery Center. The project was initiated by Sierra Club, whose efforts generated a partnership between LACDPR, RMC, and the Upper San Gabriel Valley Municipal Water District (USGVMWD). In April 2003, the three agencies entered into a cooperative agreement to advance the design and planning of the Discovery Center.

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The new San Gabriel River Discovery Center will be a regional indoor/outdoor museum and conference center. The project includes a new Discovery Center building (approximately 16,000 square feet), modifications to the site entrance and parking area, and improvements to the surrounding Nature Area including a constructed stormwater treatment wetland. Discovery Center programs will focus on watershed and water-related topics. The Discovery Center will include indoor and outdoor exhibits and a museum, a reception area, orientation center, sales/retail area, auditorium, restrooms, meeting room, library, kitchen, offices, and a theater. The parking lot will be expanded to accommodate staff and visitors (see **Figure 3-7**).

The Nature Area surrounding the Discovery Center will be enhanced to provide native habitat. A constructed treatment wetland could replace areas currently dominated by ruderal (low-value) vegetation. The treatment wetland could treat urban runoff from upstream areas. Removal of invasive species and streamlining of the trail system will provide enhanced opportunities for wildlife foraging and nesting. Removal of redundant trails and improved trail signage would further improve the native habitat. Facilities proposed at this Concept Design Study site would need to be designed to accommodate the possibility that the project site may be inundated during large storms since it is located in a flood control basin.

The Whittier Narrows Dam Master Plan prepared by COE (1996) lays out a number of recreation and environmental resource objectives for the Whittier Narrows Recreation Area (**Table 3-8**). The Discovery Center project should reinforce these recreation and environmental resource objectives.

Table 3-8
Whittier Narrows Dam Recreation and Environmental Resource Objectives

Recreation Resource Objectives	Environmental Resource Objectives
<ul style="list-style-type: none">• To provide affordable water-oriented recreational opportunities.• To provide open space for sports activities.• To provide non-motorized circulation opportunities, including hiking, bicycling, and equestrian paths.• To provide opportunities for special-use recreational facilities, including spectator-oriented activities.• To provide recreational uses that promote revenue generation to offset the costs of maintaining, replacing, and developing park facilities.• To provide passive recreation areas.• To contribute to recreational diversity within the region.	<ul style="list-style-type: none">• To provide wildlife resource management, including preservation and enhancement, with particular attention to federal or state listed endangered and threatened species or other sensitive species and/or their habitats.• To provide vegetation management which preserves and enhances wildlife habitat, and protects valuable plant communities.• To enhance or re-establish native vegetation as a mitigation measure for increased recreational or other resource use.• To provide and maintain plant materials within the public use areas that are compatible with public safety.

Source: COE, 1996.

3.3.3.4 Lario Creek

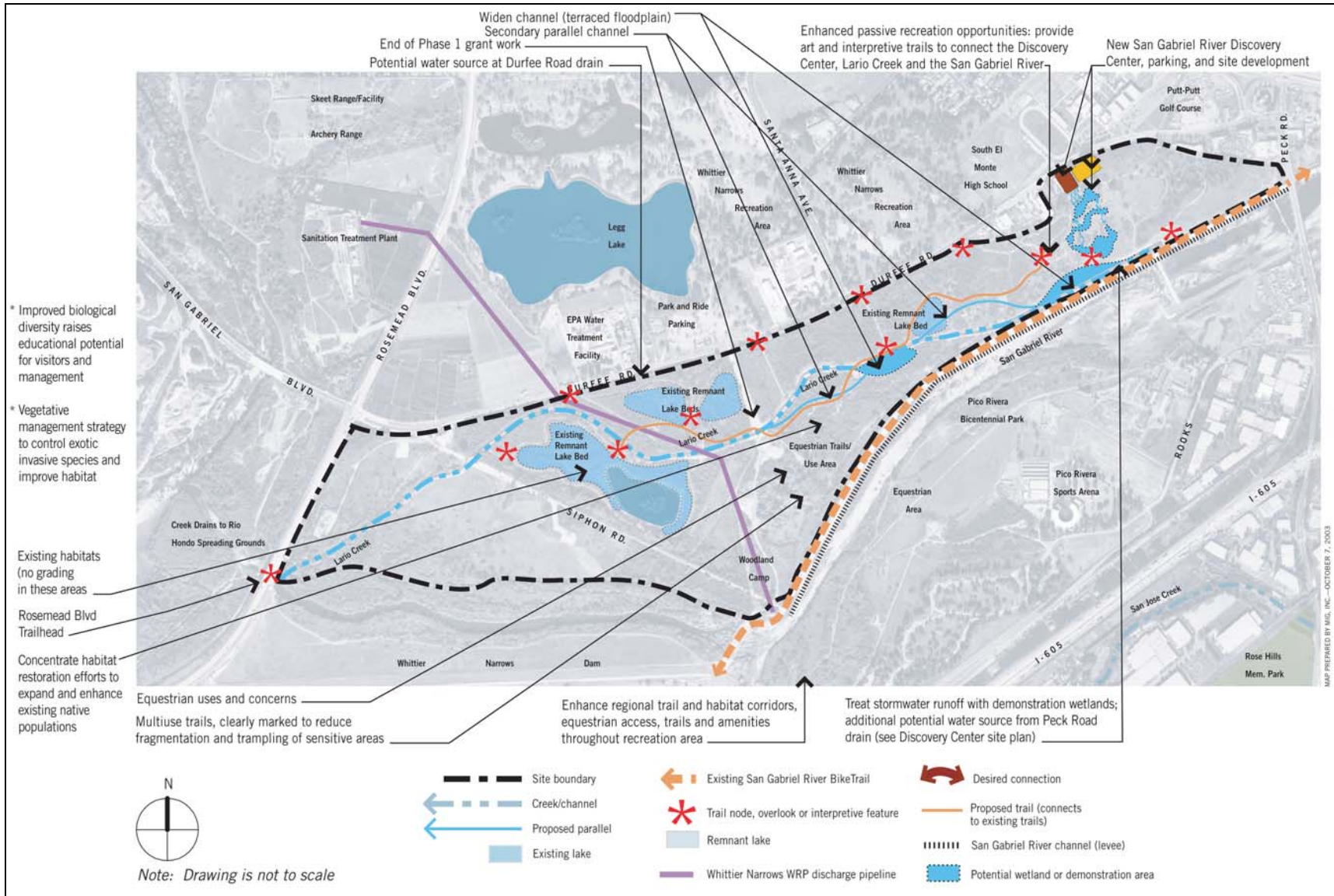
Project Site. Lario Creek (originally named the Zone 1 Ditch) is a man-made conveyance structure operated by LADPW to divert water from the San Gabriel River to the Rio Hondo through the Whittier Narrows Flood Control Basin. The project site includes the entire length of Lario Creek and the surrounding area referred to as the Nature Area, encompassing approximately 328 acres (**Figure 3-9**; see also Map 3-16 in Chapter 3.8.4 of the Master Plan). The site is bordered by Durfee Avenue to the north, the San Gabriel River to the east, the Crossover Channel to the south and Rosemead Boulevard to the west. The project site is owned by COE but is operated by LADPW. LADPW has a 100 foot wide easement along Lario Creek.

Lario Creek stretches approximately 0.85 mile from the intake on the San Gabriel River to Rosemead Boulevard. The Lario Creek intake is located near the Whittier Narrows Nature Center on the west side of the San Gabriel River just south of Peck Road and the Pomona Freeway (Interstate 60). Lario Creek heads southwest paralleling Durfee Road toward the Rio Hondo, and empties into the Rio Hondo on the west side of Rosemead Boulevard.

Currently, Lario Creek is used solely for water conveyance. **Figure 3-10** shows the existing conditions of the channel. The slope of the channel is gradual and the water is slow moving (Gomez, 2003). The channel has steep sides with highly compacted and barren stream banks, which are reinforced with rip rap in some locations. Flows in Lario Creek are critical to the water conservation operations and goals of LADPW and the Water Replenishment District of Southern California (WRD). Water that flows through Lario Creek is eventually spread in the Rio Hondo Spreading Grounds south of the Whittier Narrows Dam on the Rio Hondo. LADPW operates the spreading grounds. LADPW works with COE to retain stormwater in excess of the spreading grounds capacity in the Rio Hondo Conservation Pool behind the Whittier Narrows Dam.

The current capacity of Lario Creek is approximately 250 cfs (Gomez, 2003). Records from the last six years indicate that the mean daily flow is approximately 40 cfs (LADPW, 2003c), although flows can vary at different times from close to zero to over 100 cfs. The maximum recorded flow at F313B-R was 227 cfs (recorded on 12/28/2002). The water conveyed through Lario Creek includes imported water, reclaimed water, stormwater, and a temporary EPA groundwater treatment discharge. There is no clear seasonal pattern to flows. During dry weather, flows in Lario Creek are predominantly reclaimed water (Gomez, 2003). Water from the San Jose Creek Water Reclamation Plant (WRP) can be discharged to the west side of the San Gabriel River upstream of Lario Creek. Water from the Whittier Narrows WRP can be discharged directly to Lario Creek south of Legg Lake (LACSD, 2001). A temporary EPA outfall into Lario Creek is located near Siphon Road. The outfall discharges treated water from the Whittier Narrows Operating Unit, which treats groundwater contaminated with volatile organic compounds.

Figure 3-9
Preliminary Concept Design – Lario Creek



**Figure 3-10
Lario Creek Existing Conditions**



Source: MIG, July 2003.

Proposed Project. North East Trees, a non-profit organization and LADPW are the project proponents. The objectives of the project is to increase the capacity of Lario Creek while enhancing the habitat value of the channel. In addition, the proposed improvements would include trails, signage, channel modification, stormwater treatment wetlands, and removal of exotic species along the channel (see **Figure 3-9**). Facilities proposed at this Concept Design Study site would need to be designed to accommodate the possibility that the project site may be inundated during large storms since it is located in a flood control basin.

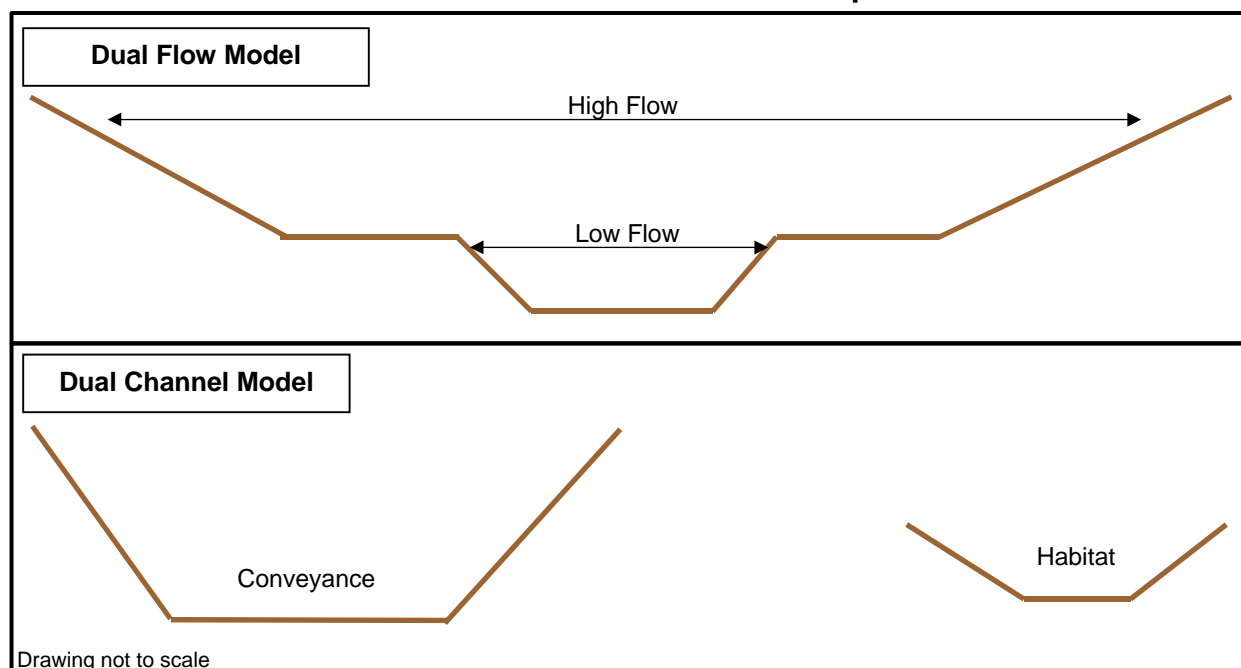
An upstream rubber dam on the San Gabriel River at Valley Boulevard can release up to 400 cfs (Gomez, 2003). Increasing the capacity of Lario Creek from the existing 250 cfs up to 400 cfs would allow more flexibility for LADPW in its groundwater recharge operations. A minimum increase to 350 cfs is currently envisioned by LADPW.

The Master Plan Concept Design Study describes two alternatives for modifying Lario Creek -- a dual flow model and a dual channel model (**Figure 3-11**). The dual flow model is a stepped channel design with a deep and narrow low flow channel and a wider high flow channel. The

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high flow channel would be designed to meet the capacity requirements of LADPW with vegetation in the channel. The dual channel model utilizes two parallel channels, one for conveyance, and one for habitat and aesthetic enhancements. The conveyance channel would not be vegetated. The habitat channel would be vegetated and meandering to resemble a natural creek. The habitat channel could potentially provide a water source for the dry lake beds shown in **Figure 3-9** and treatment wetlands to be located near the proposed San Gabriel River Discovery Center. The dry lake beds will be lined to prevent infiltration. Use of water in Lario Creek for any use other than groundwater recharge would require an agreement from the water right holders.

Figure 3-11
Lario Creek Channel Modification Options



Southeast of the existing Nature Center is an area dominated by weedy vegetation that could be replaced with a constructed wetland designed to treat urban runoff. The wetland may be supplied by water from Lario Creek during periods of dry weather. Another potential year-round water source is Whittier Narrows WRP effluent. The wetland would be a continuous flow-through system that delivers water for downstream uses.

The project could remove exotic and invasive non-native species from areas directly adjacent to Lario Creek and within the project area. The area at the north end of Lario Creek west of the San Gabriel River is significantly degraded, and could be improved with plantings of native species. The removal of exotics and extension of the natural habitats would provide enhanced opportunities for wildlife foraging and nesting, and potentially attract species such as the willow flycatcher and the yellow-billed cuckoo.

Proposed trail improvements aim to improve the experience for trail users (bike riders, horses, and pedestrians) as well as to protect high quality habitats.

3.3.3.5 El Dorado Regional Park

Project Site. El Dorado Regional Park is a 500-acre park owned and operated by the City of Long Beach (**Figure 3-12**; see also Map 3-18 in Chapter 3.8.5 of the Master Plan). The park is bordered by the San Gabriel River on the west, Coyote Creek on the south, the 605 Freeway on the east, and Long Beach Town Center on the north. The Long Beach Town Center is a shopping center located south of Carson Street.

The park is divided into four sections by three major streets: Willow Street, Spring Street, and Wardlow Road. The sections from south to north are referred to as “South of Willow”, Area 1, Area 2, and Area 3. Areas 1, 2, and 3 are characterized by trails and artificial lakes, which are supplied with potable water. Swimming in the lakes is not allowed. The top photographs in **Figure 3-13** show that some of the lakes are rimmed in concrete while some are rimmed in earth with boulder reinforcement. **Table 3-9** describes the characteristics, amenities and activities in each area.

**Table 3-9
Characteristics of El Dorado Regional Park Areas**

South of Willow	Area 1	Area 2	Area 3
<ul style="list-style-type: none"> • Undeveloped • Spreading basins 	<ul style="list-style-type: none"> • Nature Center 	<ul style="list-style-type: none"> • Archery range • Model boating • Youth campground 	<ul style="list-style-type: none"> • Playgrounds • Glider hill • Railroad • Paddle boats • Lake stocked with carp, catfish, & trout for fishing

Surrounding Land Uses. Surrounding land uses to the north include the Long Beach Police Academy, the Long Beach Town Center and additional commercial uses, the Lakewood Equestrian Center and Charter Community Hospital north of Carson Street. Directly on the west side of the river is a residential area, a nursery, and the El Dorado Regional Park Golf Course. Across the 605 freeway to the east is a residential area. A maintenance yard, Society for the Prevention of Cruelty to Animals (SPCA) facility, and community gardens are located adjacent to the southeast portion of the park. The Long Beach WRP, which discharges its effluent into Coyote Creek, is located south of Willow Street, adjacent to the southeast corner of the site. Landscaped areas of the park are irrigated by reclaimed water from the Long Beach WRP. Adjacent to the Long Beach WRP is a WRD facility that injects water into the coastal groundwater basin to prevent saltwater intrusion (Mendiola, pers. comm., 2003).

Existing Conditions of the River. The park borders the San Gabriel River for approximately 2 miles. However, there is little connection between activities in the park and the river. There are two access points to the San Gabriel River Trail along the river, at Wardlow Road and Spring

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Street. The berms along the river preclude views of the river from the park. Power lines run along the park's western side 200-300 feet from the riverbank.

The reach of the San Gabriel River adjacent to the park is concrete lined. The width of the San Gabriel River is approximately 100 feet and the depth is 12.5 to 18 feet. There is a low flow channel in the center approximately 10 feet wide and 2 feet deep. There are roadway berms on both sides of the river where the San Gabriel River Trail is located (COE, 1975). Flow in this reach of the river is consistently between 100 and 150 cfs. The primary source of this water is effluent from the Los Coyotes WRP. The channel capacity is 58,800 cfs, greater than the 100-year discharge of 55,900 cfs (LADPW, 1991).

The reach of the San Gabriel River adjacent to El Dorado Regional Park is just upstream of the zone of tidal influence. The estuary begins just downstream of the confluence with Coyote Creek where the channel again returns to soft bottom. The reach of the river adjacent to the park is considered impaired for algae, abnormal fish histology, and high coliform count (SWRCB, 2003b).

Figure 3-12
Preliminary Concept Design – El Dorado Regional Park

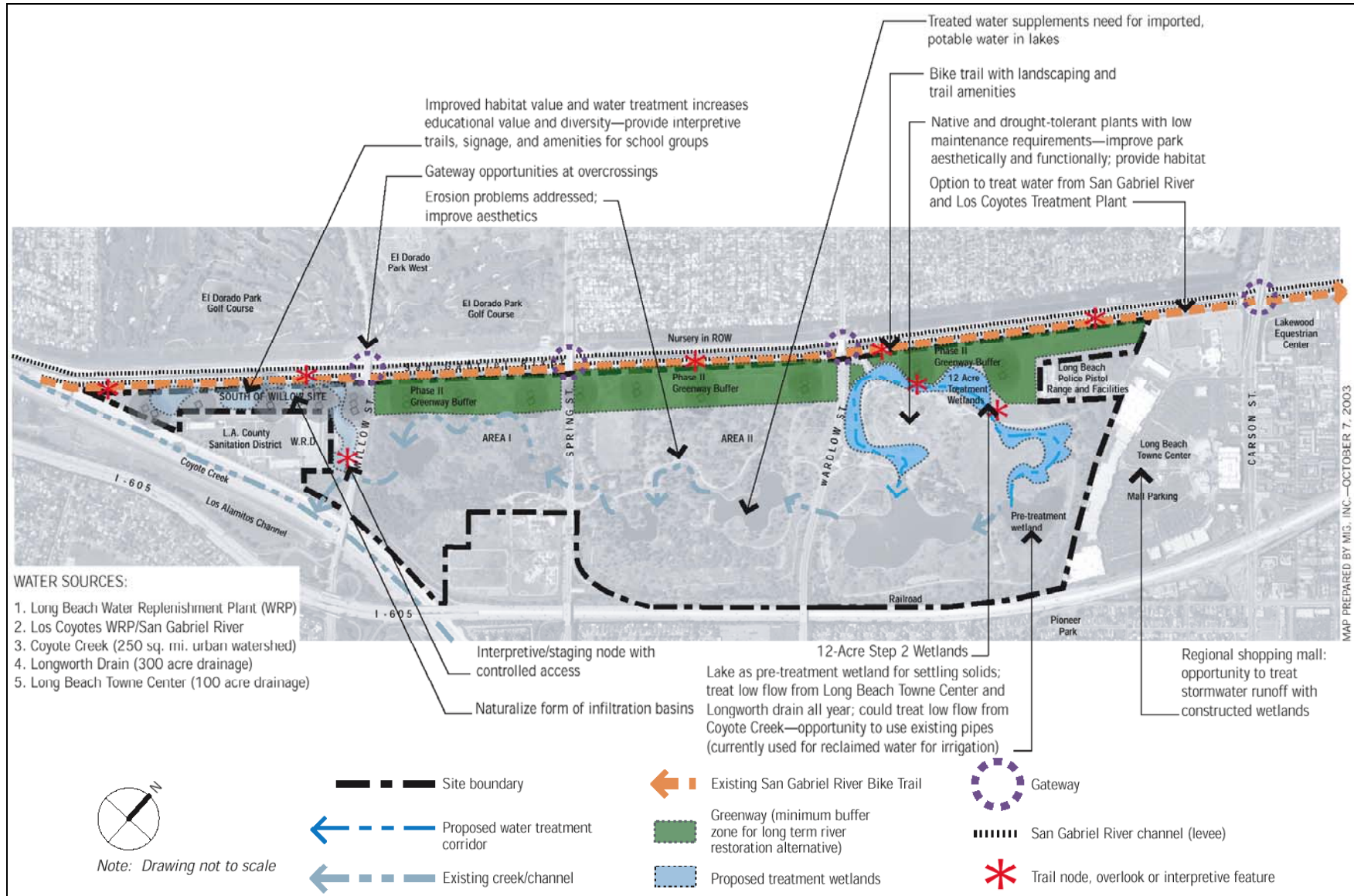
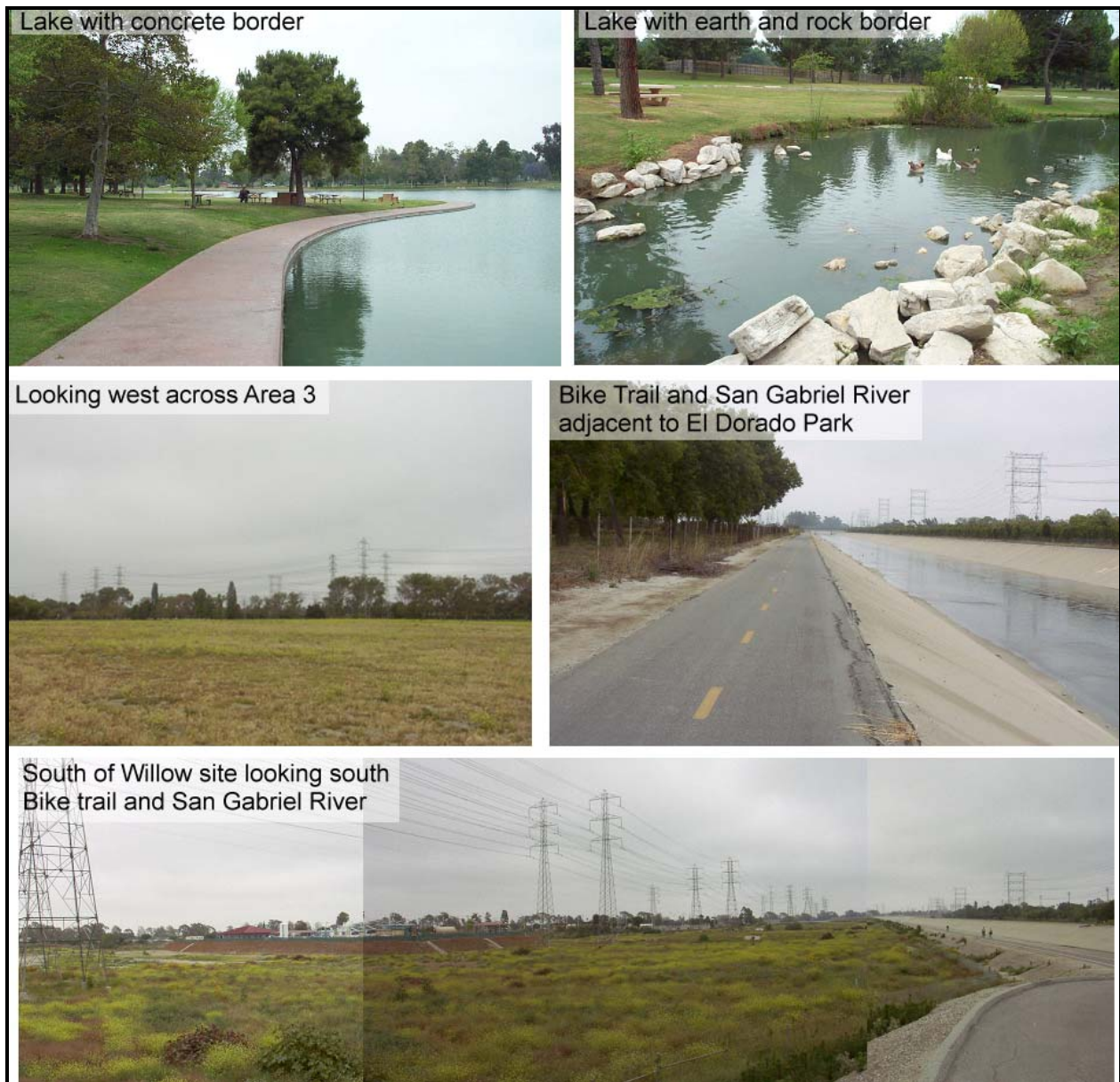


Figure 3-13
El Dorado Regional Park Existing Conditions



Source: MIG, July 2003.

Proposed Project. The project, proposed by the City of Long Beach, will provide an opportunity to connect users of El Dorado Regional Park with the San Gabriel River. Potential elements of the Master Plan’s conceptual design include the following (see **Figure 3-12**):

- Constructed stormwater treatment wetlands at the north and south ends of the park and adjacent to power lines
- Replace the water supply for the lakes with a non-potable source

- Replace exotic plant species with native species
- Create wetland/riparian habitat
- Improve trail system with signage
- Explore the possibility of replacing concrete bottom with soft bottom in San Gabriel River adjacent to site

This project will create wetlands and/or riparian habitat adjacent to the San Gabriel River in the northern half of the park. The wetlands would be designed to create habitat and treat river water and stormwater runoff. Potential water sources are runoff from the Long Beach Town Center and the upstream urban areas of the City of Lakewood, San Gabriel River, and Coyote Creek. It may be necessary to pump water from these sources if current topography would not allow gravity flow. Reclaimed or potable water may be used to supplement these water sources during dry periods. The construction of wetlands in Area 3 can be an opportunity to redesign the existing lakes to improve their function.

Wetlands or riparian habitat are also proposed in the South of Willow area. The wetlands could be used to treat urban runoff from Coyote Creek. The habitat areas can be designed to meet the access requirements of Southern California Edison and promote the Master Plan objective of multiple uses of utility corridor rights of way.

The project also proposes to replace the current potable water source for the lakes with either San Gabriel River water or reclaimed water in order to promote water conservation. Water quality will have to be sufficient to support the fish in the stocked lakes.

The project will also enhance passive recreation within the regional park and increase educational opportunities at the existing El Dorado Nature Center. (A master plan for the Nature Center and the South of Willow site was funded by WRD prior to the development of the San Gabriel River Corridor Master Plan.) Trail signage, artwork and shade trees will improve the trail experience and emphasize the connection to the San Gabriel River Trail. Overlook and vista points of the San Gabriel River can be highlighted. The water quality and water conservation aspects of the park can be used as additional educational opportunities. A debris boom on Coyote Creek is one of the proposed projects in the Project Action Grid. If the project is implemented adjacent to El Dorado Regional Park, it could be another topic for educational programs.

The project may include phasing out existing ornamental landscaping and replacing it with a native drought-tolerant plants. Potential habitat changes could involve revegetating the land directly adjacent to the eastern bank of the San Gabriel River by adding native trees and understory such as gooseberry and mule fat, which can attract numerous bird species. Proposed wetlands and mudflats could also attract bird species and provide more foraging habitat for shorebirds. Although the land on the western bank of the San Gabriel River is not owned by the City of Long Beach, stakeholders proposed replacing the current nursery land use with a mosaic of upland scrub vegetation.

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The Master Plan design concept identifies removal of concrete from this reach of the river as a long-term goal that would require extensive modeling of the river corridor. Near-term improvements for this site, currently being planned by the project sponsors, are not anticipated to include a concrete removal element. However, El Dorado Regional Park is a unique opportunity where there is a long stretch of open space along a concrete lined section. Concrete removal, if specifically proposed in the future, would require a larger channel to have the same flood control capacity as the existing design.