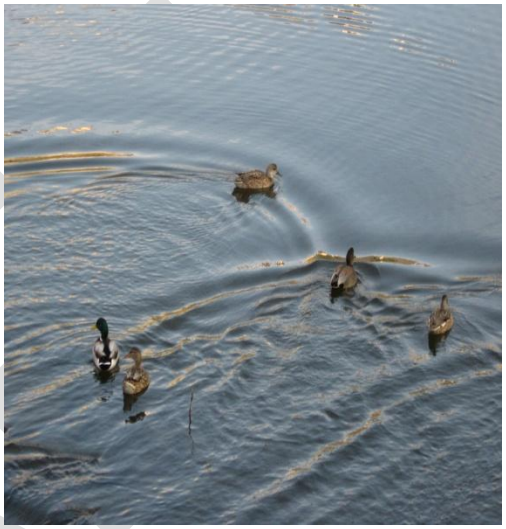
San Diego River Park
Master Plan



City of San Diego, California

DRAFT – May 2013

San Diego River Park Master Plan

The City of San Diego

Adopted by the:
Council of the City of San Diego
Draft: May 2013

Resolution Number: R-

San Diego River Park Master Plan Amendments

Amendment	Date Approved by Planning Commission	Resolution Number	Date Adopted by City Council	Resolution Number
San Diego River Park Master Plan				
Certified by the California Coastal Commission on				

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Citizens Coordinate for Century (C3)
Linda Vista Planning Group
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Mission Trails Regional Park Citizens Advisory Committee and Task Force
Navajo Community Planners
North Bay Community Planning Group
Ocean Beach Planning Board
Old Town Community Planning Committee
San Diego River Park Alliance
Tierrasanta Community Council
Uptown Planners
Wetlands Advisory Committee

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EXECUTIVE SUMMARY

The San Diego River has long been a source of life and vitality in the San Diego region. The water and the rich alluvial floodplain have drawn humans to the valley for thousands of years. As recently as the 1950's, the San Diego River Valley provided green relief from the surrounding urban environment as a rich agricultural plain.

Since then, the river has suffered under the region's increasing development pressure. Commercial, residential and industrial uses have expanded into the valley, pushing ever closer to the water's edge. Extensive mining operations have excavated the river bed for sand and gravel. The proximity of current development threatens the integrity of both the river and the wildlife habitat it supports. Yet, despite the proximity, the river and the land uses adjacent to it are disconnected; the river is no longer the focus of the communities through which it flows.

The San Diego River Park Master Plan (Master Plan) provides the vision and guidance to reverse this condition, to restore a symbiotic relationship between the river and surrounding communities by creating a river-long park, stretching from the San Diego River headwaters near Julian, to the Pacific Ocean at Ocean Beach. This plan is the result of the grass roots community efforts begun by the San Diego River Park Alliance (2001) and the San Diego River Park Foundation working in partnership with the City of San Diego.

This Master Plan is closely aligned with the City's General Plan goals for land use, mobility, urban design, economic prosperity, public facilities, recreation, conservation and historic preservation. The San Diego River Park vision, principles, recommendations and implementation strategy included in this Master Plan provide the City with a strong policy document for the future development along the river. The major components of the Master Plan are described on the following pages.

VISION AND PRINCIPLES

Creating the San Diego River Park requires a new and innovative vision. This vision must form a comprehensive and integrated approach to addressing physical needs, such as improving water quality and river health, expanding wildlife habitat, as well as harder-to-quantify social and cultural opportunities, such as revealing the river's rich history and bringing people to the river. The vision for the river park is:

Reclaim the valley as a common, a synergy of water, wildlife and people.

This vision is supported by five principles that are the guiding ideas against which future design and implementation decisions will be measured. The five principles are:

- Restore and maintain a healthy river system
- Unify fragmented lands and habitats
- Create a connected continuum, with a sequence of unique places and experiences
- Reveal the river valley history
- Reorient development toward the river to create value and opportunities for people to embrace the river.

Unique places create opportunities to engage with the river

Mission Trails Regional Park offers opportunities to explore both nature and the history of the region

RECOMMENDATIONS

The Master Plan's recommendations are divided into general recommendations for the entire river park area and specific reach recommendations for the six distinct geographic areas of the river (Estuary, Lower Valley, Confluence, Upper Valley, Gorge and Plateau). General recommendations for the entire river park are organized as they relate to each of the five principles. The specific reach recommendations provide an overview of the area and recommendations on how to achieve the principles. Within some reaches, key sites are identified where special opportunities exist, or where conditions define the site as a critical component to the implementation of the Master Plan.

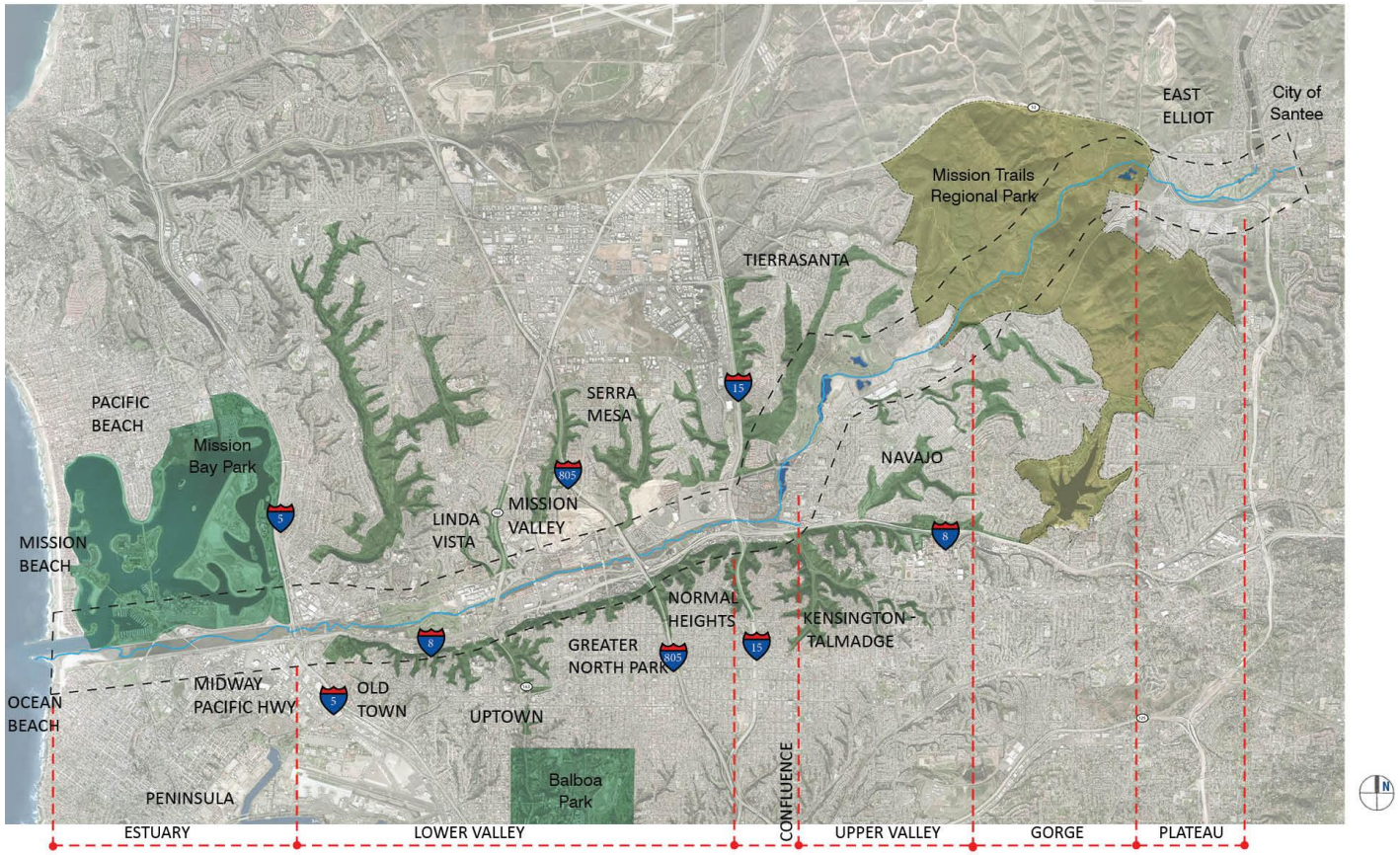


Figure 1. Six Distinct Reaches

DESIGN GUIDELINES

The purpose of the design guidelines is to provide written and graphic information to support the Master Plan's vision, principles, and recommendations, the goals of the Community Plans for Mission Valley, Navajo, Tierrasanta and East Elliott and to support the development regulations of the City's Land Development Code and the community-specific regulations: the Mission Valley Planned District Ordinance, the Community Plan Implementation Overlay Zone for the Navajo Community, and the Mission Trails Design District Ordinance. The design guidelines apply to the River Corridor Area and the River Influence Area only. The River Corridor Area is the 100-year Floodway (as mapped by the Federal Emergency Management Agency, FEMA), plus 35 feet on both sides of the floodway to accommodate a pathway corridor, see Figure 5. The River Influence Area extends 200 feet beyond the River Corridor Area on both sides of the river. The design guidelines for the River Corridor Area focus on the site planning of the floodway and the 35-foot wide pathway corridor, the design and materials for trails and the river pathway, recreational amenities within the pathway corridor and appropriate plant materials. Within this section of the guidelines is a discussion on how the River Corridor Area interfaces with the City's Multi-Habitat Planning Area (MHPA), Wetland Buffer overlay and what takes precedence. Expansion of the river habitat area is encouraged where possible. The River Corridor area must also comply with the Land Development Code for Storm Water Runoff and Drainage Regulations. For the River Influence Area, the guidelines provide information on building requirements such as building setbacks, building orientation, and type of access to the river park from adjacent development, building transparency and reflectivity, location for off-street parking, equipment and storage areas, and appropriate plant materials.

A continuous pathway will link from the Pacific Ocean to the City of Santee

A pathway corridor will be established adjacent to the 100 year floodway

IMPLEMENTATION

Along the 17.5 miles of the San Diego River within the City of San Diego are private and public land owners. Implementation of the Master Plan will rely on both private and public investment in the river valley. The implementation strategy includes an implementing framework, implementation tools, maintenance, management and security strategies, and public outreach/education methods to make the river park a success. The implementation framework looks at how the five principles have been implemented in the six reaches of the river and identifies areas where improvements are still needed. Federal, state and local funding sources, development tools and the required government approvals are discussed within the implementation tools. The maintenance, management and security section provides strategies for the future that could include a special maintenance district, a ranger program, an 'Adopt the River' program and the creation of a conservation corps or neighborhood youth corps program. In addition, public outreach and education that will foster stewardship of the river valley is also discussed as a means to implement the river park.

REGULATORY FRAMEWORK

The San Diego River Park Master plan is a policy document that provides recommendations and guidelines to be considered in concert with land use decisions within the River Corridor and River Influence Areas along the San Diego River. As community plan updates affecting communities along the San Diego River take place over time, there will be a need to evaluate and possibly propose amendments to the San Diego River Park Master Plan to ensure continued consistency. In addition, the river area is also governed by the policies and permits of the Federal, State and Local agencies. The regulatory framework section of the Master Plan provides details on the applicable citywide planning policy documents and applicable agency jurisdiction and permits for the San Diego River area.

Applicable Citywide Planning Policy Documents include:

- General Plan
- Community Plans and Specific Plans
- Park Master Plans
- Multiple Species Conservation Program Subarea Plan
- San Diego River Watershed Urban Runoff Management Plan
- Bicycle Master Plan
- Pedestrian Master Plan

Local, state and federal agencies also have direct or indirect involvement with the land planning, resource protection and permit approvals for the San Diego river area. Depending on the type of project proposed within the river valley, these agencies may need to be consulted and in some cases permits may be required.

Applicable Agency Jurisdiction and Permits:

- United States Army Corps of Engineers
- United States Fish and Wildlife Service
- California Coastal Commission
- California Department of Fish and Wildlife
- Regional Water Quality Control Board
- Surface Mining and Reclamation Act of 1975
- City of San Diego Municipal Code and Land Development Code

1.0 INTRODUCTION

Adoption of the San Diego River Park Master Plan presents an unprecedented opportunity to take the first steps toward reconnecting the San Diego region with its namesake waterway. The experience of nature and city will be joined together in the San Diego River Park system, creating a natural corridor within the urban milieu. Like San Diego's other great parks -- Balboa Park, Mission Trails Regional Park and Mission Bay Park -- the San Diego River Park will provide another great natural park for the city: a place of the city rather than a place apart from the city. And like other regional river parks -- the San Dieguito, the Otay Valley and the Tijuana -- the San Diego River Park will provide a refuge for nature and people. The City of San Diego is at the forefront of this effort, with guidance from the San Diego River Park Foundation and support from the San Diego River Coalition, the San Diego River Conservancy, the San Diego River Park Alliance, and the people and members of interested organizations who live within the watershed. The San Diego River Park Master Plan envisions a waterway that is healthy, accessible to the public and inhabited with wildlife. The plan provides guidance on how the San Diego River can be reasserted as the focus of the river valley and become an asset to the community.

1.1 MASTER PLAN ORIGINS

The San Diego River is severely altered and constrained by mining, flood control and development. Commercial, residential and industrial uses have expanded on the valley floor, encroaching into the river's edge. Although mining activities are being phased out of the river valley, flood control and development pressure remain constant issues. These conflicting uses have not only compromised the integrity of the river and the wildlife habitat it supports, but also its value as a community resource.

KEY PLAYERS

San Diego River Park Foundation

The Foundation is a 501 (c) (3) non-profit organization that is the host and chair of the San Diego River Coalition meetings. It acts in the capacity of a resource to the numerous groups working to establish the San Diego River Park and to the community in general. It is a central repository and clearinghouse for information and maintains the www.sandiegoriver.org website.

San Diego River Coalition

The mission of the San Diego River Coalition is to preserve and enhance the San Diego River, its watershed, and its natural, cultural, and recreational resources. This coalition of non-governmental organizations acts as the Citizens' Advisory Committee for the San Diego River Park. The coalition holds public meetings to discuss progress and potential projects with many of the governmental and quasi-governmental entities working on river issues with active citizen participation.

The establishment of the San Diego River Park can reverse this trend; by returning the river to the people and integrating the river valley into the life and landscape of San Diego. As the water and the rich alluvial floodplain drew the people to the valley thousands of years ago, a healthy riparian environment interspersed with trails, parks and open space, united by a flowing, clean river, will draw people of the San Diego region back to the river.

The river park will be composed of a string of parks linked by open space, pathways, and green corridors: a multi-layered system that will serve a variety of needs, offering recreational, environmental and habitat benefits. This system of interconnected parks has proven successful across the nation, such as Minneapolis' Chain of Lakes, Boston's Emerald Necklace and Esplanade, and Denver's Park and Parkway system.

The San Diego River Park includes design guidelines that seek to highlight San Diego's coastal location by enhancing the ocean edge that has historically defined the City and extending this character inland, transitioning to the upland character of Mission Trails Regional Park. As the plan is implemented, people will be able to see and interpret the river's natural transitions as it flows from mountain to canyon to ocean, making the river processes visible and accessible to all visitors. For the plan's vision to be fully implemented, attention must be given to areas beyond the bounds of the City and this Master Plan study area so that the health of the entire watershed system, including the canyons and creeks that are tributaries to the San Diego River, is addressed. The efforts to clean the river and create habitat connectivity and trail continuity must consider all of the areas that link to it and all waters that flow into it.

The creation of the San Diego River Park is the culmination of many years of effort, discussion by dedicated members of surrounding communities and governmental and quasi-governmental organizations. The concept of preserving the river valley as a dedicated and protected open space first generated discussion in 1974 in the report, *Temporary Paradise?, A Look at the Special Landscape of the San Diego Region*, prepared by Kevin Lynch and

San Diego River Conservancy

The conservancy's nine-member governing board consists of both state and local representatives. The board's diversity reflects its commitment to conserve an area of statewide significance. The San Diego River Conservancy is one of nine California conservancies. It was established by California Legislature (AB 2156, Kehoe) to preserve, restore, and enhance the San Diego River Area. The conservancy is an independent, non-regulatory organization within the Resource Agency and maintains the www.sdrc.ca.gov web site.

San Diego River Park Alliance (Inactive)

Formed and chaired by Mayor Dick Murphy, this organization addressed policy issues relative to the establishment of the San Diego River Park. Members of the alliance included local, state and federal elected officials, the Executive Director of the San Diego River Park Foundation, and Helix Water District, which has significant land holdings along the San Diego River.

Donald Appleyard for the City of San Diego. This report reflects the authors' observations of the regional landscape and laid the groundwork to begin thinking of a long-term vision and plan for the river valley.

In 2001, City of San Diego Mayor Dick Murphy formed and chaired the San Diego River Park Alliance to provide a government organization to promote the establishment of the San Diego River Park. Members of the Alliance included local, state, and federal elected officials. As a starting point, the Alliance recommended preparation of a San Diego River Park master plan which the San Diego City Council subsequently authorized for the river within its jurisdiction. At the same time the San Diego River Park Foundation was formed to coordinate the efforts of the many community groups and other organizations dedicated to the San Diego River and to work toward making the San Diego River Park a reality. As a community-based, grassroots non-profit organization, the foundation provides organizational and financial support for projects that will help to establish this river park. The foundation works with local groups to encourage stewardship of the riparian environment and supports projects that will restore and enhance the river, provide community facilities, and create opportunities for citizens to learn about the rich history of the San Diego River.

Select Committee on Parks & River Restoration (Inactive)

Chaired by Assembly Member Christine Kehoe, this group included other members of the California Assembly interested in park and river issues. The Committee studied how the State of California could best assist with issues related to the San Diego River.

San Diego River Watershed Workgroup

A County-led workgroup, this body includes interested individuals, organizations, and agencies who are working to develop a management plan for the San Diego River Watershed. Although the workgroup's efforts are separate and distinct from the San Diego River Park, this group will incorporate the San Diego River Park into its plans.

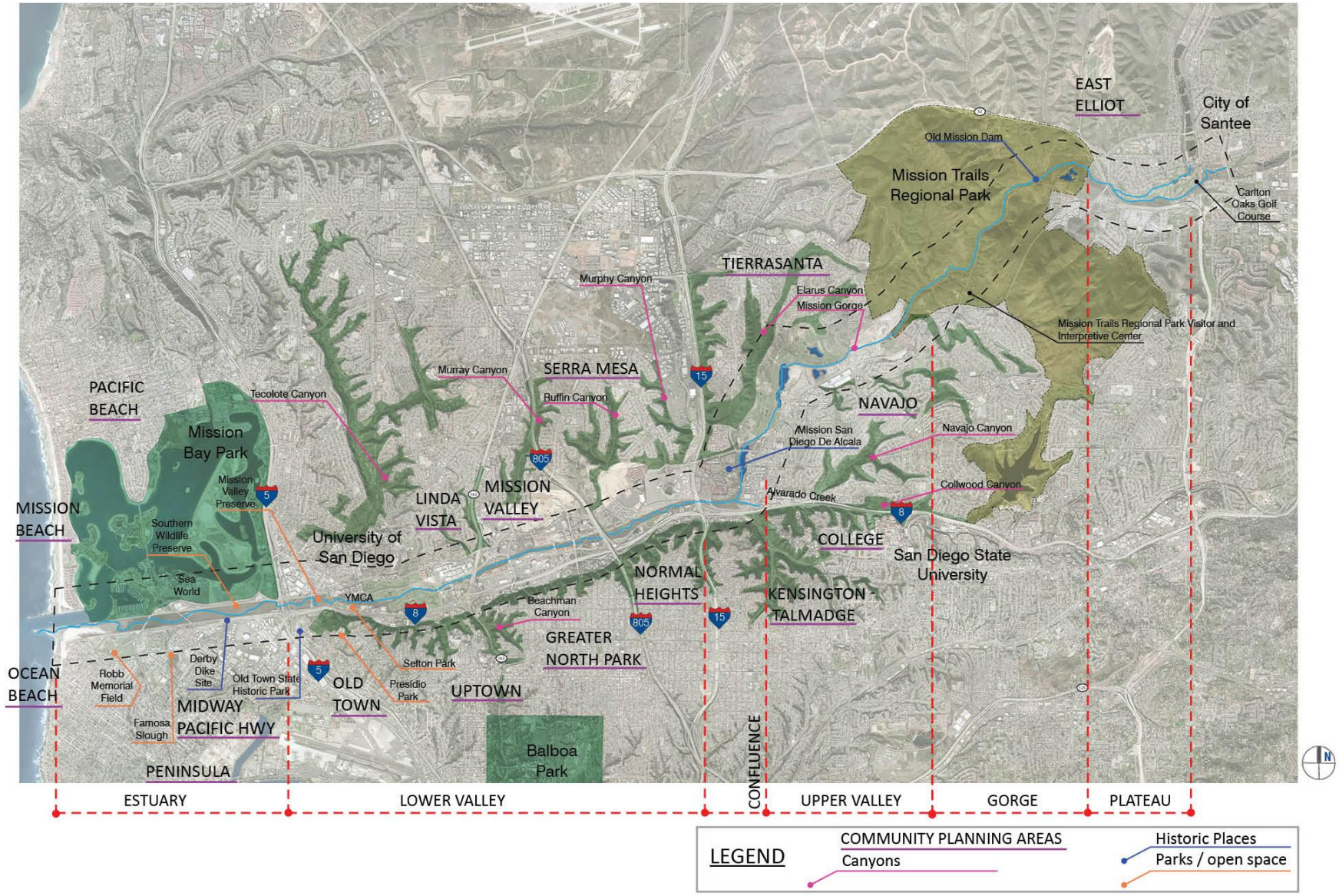


Figure 2. City of San Diego Context

1.2 MASTER PLAN PLANNING PROCESS AND PUBLIC INPUT

The City of San Diego initiated a nine-month study in 2003 to prepare a master plan for the San Diego River within the City of San Diego jurisdiction. An important goal of the planning process was to engage the public and build upon the momentum and enthusiasm generated by the Conceptual Plan that was prepared in 2001 by the public and graduate students from California State Polytechnic University at Pomona. Central to this effort were monthly meetings and workshops with the San Diego River Coalition; these meetings were advertised and open to the public and well-attended by community members. These public meetings and public workshops invited broader community input confirming key issues, exploring planning options and drafting recommendations.

San Diego River Park Master Plan Public Workshop

1.3 PLANNING AREA

The Master Plan focuses on the 17.5-mile section of the San Diego River within the boundaries of the City of San Diego extending from the Pacific Ocean to the City limits shared with the City of Santee. The planning area is defined as a corridor extending one-half mile on each side of the river for the entire 17.5 miles. This corridor is consistent with the planning area defined by the San Diego River Conservancy to where state funding can be applied. To be comprehensive, the Master Plan must consider the adjacent areas of influence including the adjacent canyons and open spaces. Tecolote Canyon, Murphy Canyon, Murray Canyon, Ruffin Canyon, Alvarado Canyon and Navajo Canyon are all areas that offer significant potential to substantially improve connections between the canyons and the San Diego River.

The planning area contains two major parks, Mission Bay Park and Mission Trails Regional Park. These resource-based parks have significance not only to the City, but to the region and beyond, and can be linked by the San Diego River Park. The resulting context is an urban river corridor framed by the estuary of Mission Bay Park and the natural upland character of Mission Trails Regional Park.

One of the great challenges of creating the San Diego River Park lies in the fact that much of the land along the river is in private ownership. It is critical that efforts are made to work with the owners of these properties to open the river corridor to public access, either through acquisition of key parcels, or by establishing public access easements, and in turn, create or increase economic value for their private property. The river floodway, the area that has historically experienced periodic flooding, is of particular importance as it provides a water quality buffer, habitat, and recreational space. Additionally, a large amount of land adjacent to the river lies within highway, street and utility rights-of-way. This land, often considered “left-over” and factored out of the overall landscape equation, offers further opportunities to increase habitat and landscape connections.

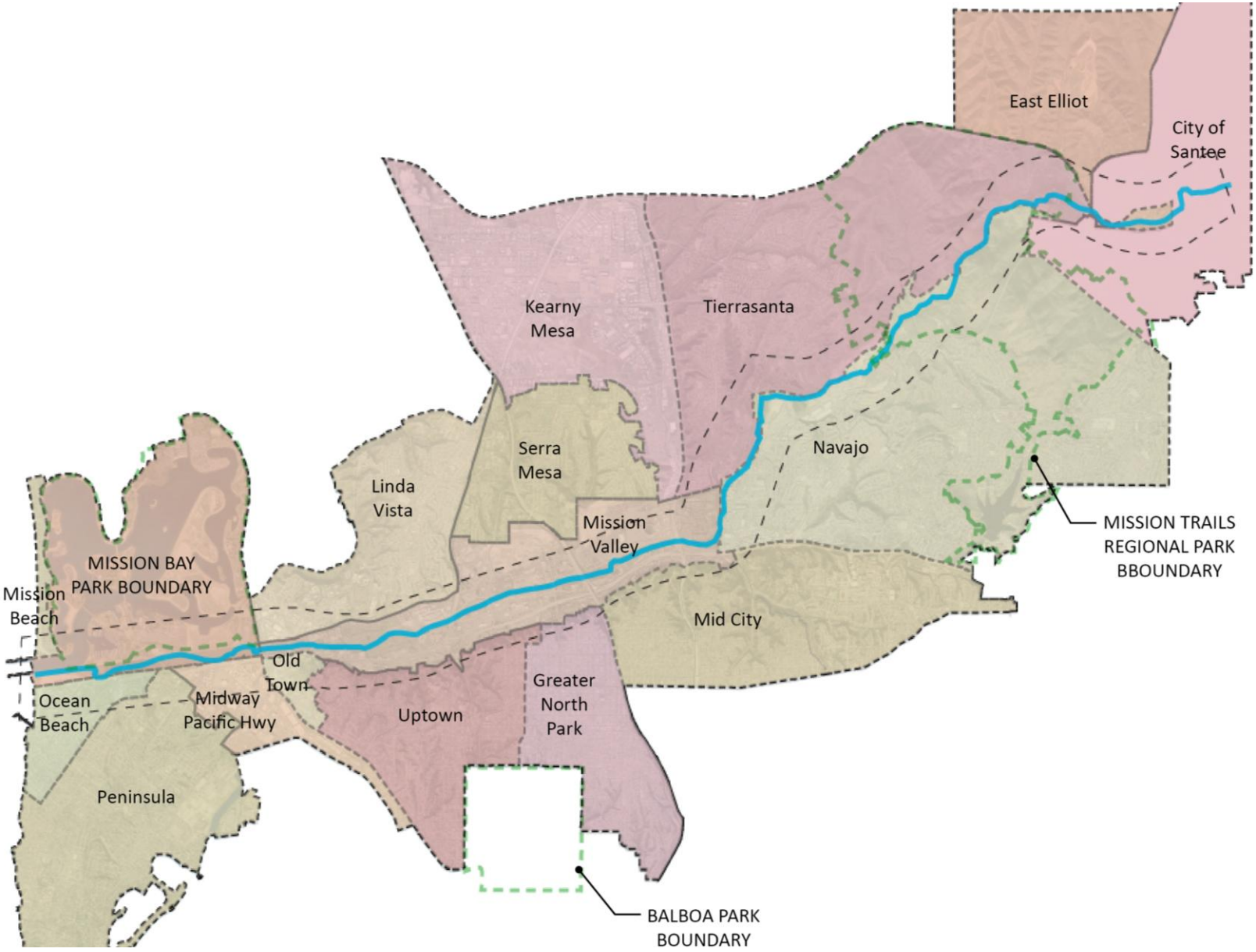
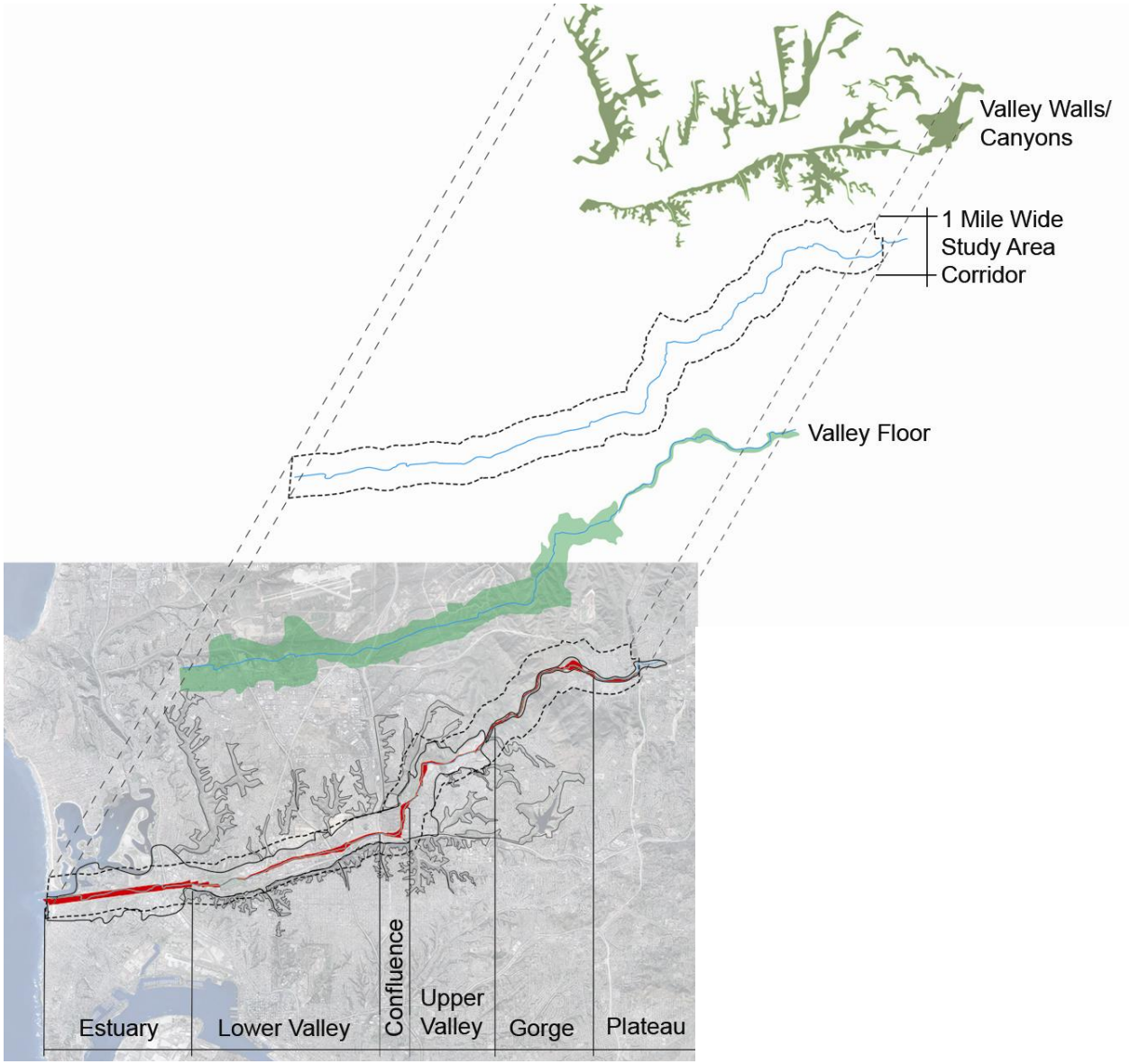


Figure 3 - Community Planning Areas

The Master Plan divides the San Diego River Park into six reaches, based upon topographic characteristics and river condition. These reaches include the Estuary (extending from the Pacific Ocean to the I-5), the Lower Valley (I-5 to I-15 and including Qualcomm Stadium site), the Confluence (from I-15 to Friars Road Bridge, where Alvarado and Murphy Creeks merge with the San Diego River), the Upper Valley (extending from Friars Road Bridge to Mission Trails Regional Park), the Gorge (within Mission Trails Regional Park), and the Plateau (east of Mission Trails Regional Park to the City's boundary with the City of Santee). There are issues and recommendations that are shared by all of the reaches, as well as those specific to each individual reach.

Within each of the six reaches, the Master Plan provides design guidelines for two specific planning areas referred to as the "River Corridor Area" and the "River Influence Area". The design guidelines focus on site planning, architecture and landscape architecture.



Master Planning Area

1.4 MASTER PLAN BENEFITS

San Diego's urban form is defined by the relationship between the built environment and its canyons, mesas, rivers and the ocean. The San Diego River Park will engage the ocean's edge and draw it inland to emphasize the large-scale role and function of the river. Much as Central Park defines New York City, the combined power of the river valley, its tributaries and the coastal beaches define San Diego and should be a part of the daily experience of the residents and visitors. The San Diego River Park will provide benefits for both residents and visitors. Benefits can be measured through the environmental, social and cultural, and economic value added to a community.

1.4.1 ENVIRONMENTAL BENEFITS

The environmental benefits added by improvements to the river can be measured by the degree to which the improvements add to the sustainability of the river corridor. Within this Master Plan the following environmental benefits focus on:

Creating a Healthy River System

Historically an ephemeral waterway, the river volume varied significantly from seasonal flooding to negligible flow. Human activities, such as impounding, flow diversion, mining, urban runoff and flood control, have altered this pattern and created a channelized, perennial waterway. The San Diego River Park planning effort seeks to identify viable patterns appropriate to each reach that will improve water quality, sediment transport, and ground water recharge, while also expanding riparian habitat. The value of the river and the River Park is dependent on its water quality.

Reconnect Existing Habitats

The wildlife habitats within the river valley are disconnected, impaired and isolated from upland habitat. The San Diego River Park provides a strategy to reconnect existing habitat within and across the river valley. By reconnecting wildlife habitat, the ecological health of this system can be improved. To be successful, much of the habitat must remain protected; a balance must be found between protecting this fragile system and allowing access that educates river valley visitors about the wildlife and habitat of the river valley.

1.4.2 SOCIAL AND CULTURAL BENEFITS

The social and cultural benefits of well-designed projects along the river add to the recreational, scenic and image-making value of the site. This Master Plan provides for the following social and cultural benefits:

Linkages

The San Diego River Park will unify the City. Every neighborhood in and adjacent to the river valley should connect to the San Diego River Park, linking each of these neighborhoods to the City's other great parks and to each other. In addition, developed parks are proposed along the river, offering an even larger spectrum of experiences to park users. The river park will also connect isolated pockets of development along the river with established neighborhoods, knitting the valley as a whole and cultivating a river valley identity.

A New Identity

The San Diego River Park's most significant benefit may be its ability to create a new way to see the City. By linking two of the area's richest natural and recreational resources, Mission Bay Park and Mission Trails Regional Park, the San Diego River Park will offer a new way to recreate and move within the City. The San Diego River Park stands to become as vital a resource as the City's other great parks. Together with these two existing parks, the San Diego River Park will create a distinctive and identifiable park infrastructure which will become a source of pride and contribute to a new identity for the City.

2001 Platte River Corridor "before" - Denver, CO
Contaminated industrial land separated the City from the river

2003 Platte River Corridor "after"- Denver, CO

River Education

A majority of the native habitat along the river is out of sight and out of reach of humans, and is therefore disconnected from the daily experience of San Diego visitors and residents. The creation of the San Diego River Park offers many opportunities to educate communities about the river's natural systems and its historic significance. Many community groups are already involved in this effort; the process of creating the San Diego River Park increases the opportunities for these groups to become engaged with improving these resources by increasing visibility, access and awareness.

Schools and universities can also benefit from the first-hand experience of using the San Diego River as an outdoor classroom. By engaging Scripps Institution of Oceanography, San Diego State University, the University of San Diego and other institutions, a science-based coalition can be created that can study the river and build upon each others' work in the river valley, and give input to the park's design and management.

Fox River Corridor through the city of Waukesha, WI
The project relates specifically to a bike and pedestrian trail system along the Fox River and a future community park

1.4.3 ECONOMIC BENEFITS

The economic benefits added by improvements to the built environment can be rated by evaluating their contribution to the business, sales and tourism tax revenues, and financial return on privately-funded projects. Within this Master Plan the following economic benefits focus on:

The Iowa River Corridor provides a framework of quality open space and a unique identity for the University of Iowa where open space along the river is used as an outdoor classroom

Property Value adjacent to Open Space and the Reorientation of Development to the River

The effect on property values of a location near a park or open space has been the subject of several studies. Statistical analyses have been a common method of attempting to measure this effect. These analyses attempt to isolate the effect of open space from other variables that can affect property values, such as age, square footage, and condition of structures/buildings. Isolating the effect of open space can be difficult and results have been varied. Nevertheless, many studies have revealed increases in property values in instances where the property is located near or adjacent to open spaces. The effects of proximity to open space are not simply quantified; many studies have found the potential for an increase in property value depends upon the characteristics of the open space and the orientation of surrounding properties. Property value increases are likely to be highest near:

- Development that incorporates a park or open space as a primary amenity rather than “left-over” space
- Development that is designed to frame views of a park or open space
- Open space with recreation amenities and limited vehicular access
- Open space that incorporates views of a river
- Open space with effective maintenance, surveillance and security

By creating the San Diego River Park and improving the condition of the river's health, property values will be enhanced. The river park will become an asset that will leverage higher quality design, land uses and development in the future. There are a number of sites along the river that are isolated from the adjacent neighborhoods. The river park will give these properties an identity and will encourage redevelopment with an orientation to the river.

There will be direct benefits to the City from the river park with the increase in property values and property tax revenues, and from the increase in pedestrian/tourist activity. Further benefit should be anticipated by an increase in private reinvestment in the river park corridor by providing a variety of amenities, such as enhanced views, open space preservation, and access to convenient recreation opportunities. The value of these amenities to the public can be reflected in increased real property values and increased marketability for property located near the river park. Developers recognize these values and typically incorporate parks and open space into planning, design, and marketing of new and redeveloped properties.

2.0 VISION AND PRINCIPLES

A successful planning process demands the communication of a common vision and principles, not just recommended actions, to guide decision-making and implementation. A unified vision is essential to guide current and future planning efforts, in order to ensure that the master plan can respond to and accommodate changing conditions.

Key to the success of the San Diego River Park is to build a synergy that best serves the entire river valley and its many inhabitants, including people, animals and plants. Each of these inhabitants have a place within the multi-faceted system that is the river valley, and the San Diego River Park must be designed for and welcome all of them. The river system today is very much out of balance; water quality is severely degraded, the river pattern is constrained by culverts and channelization, the land is fragmented by different land uses, and the development has turned its back to the river.

Creating a synergy for the river requires a shift in the balance toward recovery, protection, preservation and prevention of further degradation. Re-establishing the health of the river and the habitats that adjoin it is essential to creating the San Diego River Park. There are places where development is appropriate and places where undeveloped land may best serve the broader community as open space. There are places that are essential to establishing habitat continuity, and others that are essential to linking pathways and recreation. The potential of the river park to serve as an educational tool unites all of these different places. Such delineations must be made fairly and equitably. A balanced San Diego River Park will satisfy these diverse concerns.

2.1 VISION

RECLAIM THE VALLEY AS A COMMON, A SYNERGY OF WATER, WILDLIFE AND PEOPLE

As recently as the 1950's, sections of the San Diego River were composed of farmlands and open pastures. As the land uses changed from agriculture to shopping malls and offices, open space and a sense of a vast river valley were lost. Creating the San Diego River Park offers the potential to again have the river corridor be a place that all residents of the City can come to enjoy and experience the river, nature and each other. By seeking to create open space along the river and to restore the river's riparian integrity, people can be reconnected with nature, and a distinct and identifiable river park can be created.

Key to establishing a river park identity is defining an appropriate space. The river park must be wide enough to support the natural landscape, which includes the water and adjacent habitats, and provide common space for people to use.

Building upon the 2001 Conceptual Plan and discussions with the adjacent communities, the following five principles were identified at the public meetings and workshops. These principles express the essential elements of the San Diego River Park vision, address the role of the river park in the City and in the region, and serve as a guide against which all future development proposals should be tested.

Mission Trails Regional Park offers opportunities to access, to view and to learn about the San Diego River, the natural environment and the history of the region

These five principles will guide ecological, social, cultural, and economic development of the San Diego River Park:

Principle One: Restore and maintain a healthy river system

Principle Two: Unify fragmented lands and habitats

Principle Three: Create a connected continuum, with a sequence of unique places and experiences

Principle Four: Reveal the river valley history

Principle Five: Reorient development toward the river to create value and opportunities for people to embrace the river

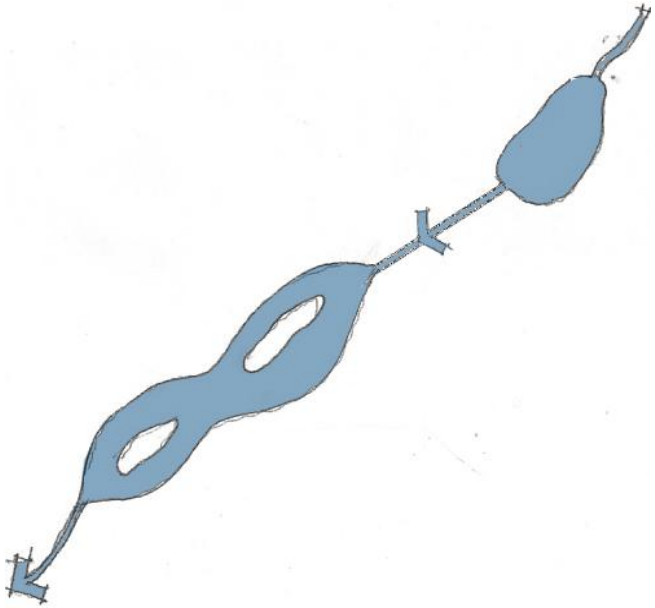
A free flowing San Diego River offers a healthier habitat for plants, wildlife and people

2.2 PRINCIPLE ONE:

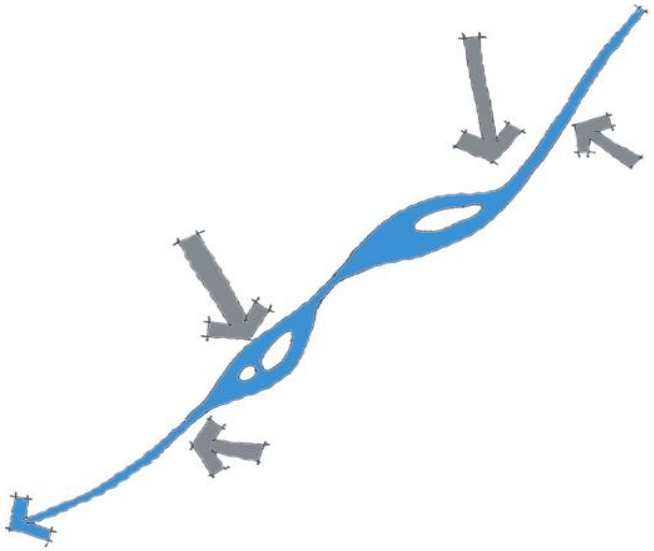
RESTORE AND MAINTAIN A HEALTHY RIVER SYSTEM

The San Diego River Park Maser Plan seeks to return the San Diego River to a cleaner, healthier condition that showcases a natural California river within the City's urban setting that invites people to experience a riparian environment. A healthy San Diego River will become the symbol and embodiment of the river's natural character. The creation of the San Diego River Park in the City of San Diego will not lead to a cleaner river on its own. The river is impacted along its entire length and the entire watershed must be considered, as the impacts of inland sources of pollutants impair water quality downstream and in coastal environments many miles away. To restore the San Diego River to a healthy condition, specific benchmarks must be met:

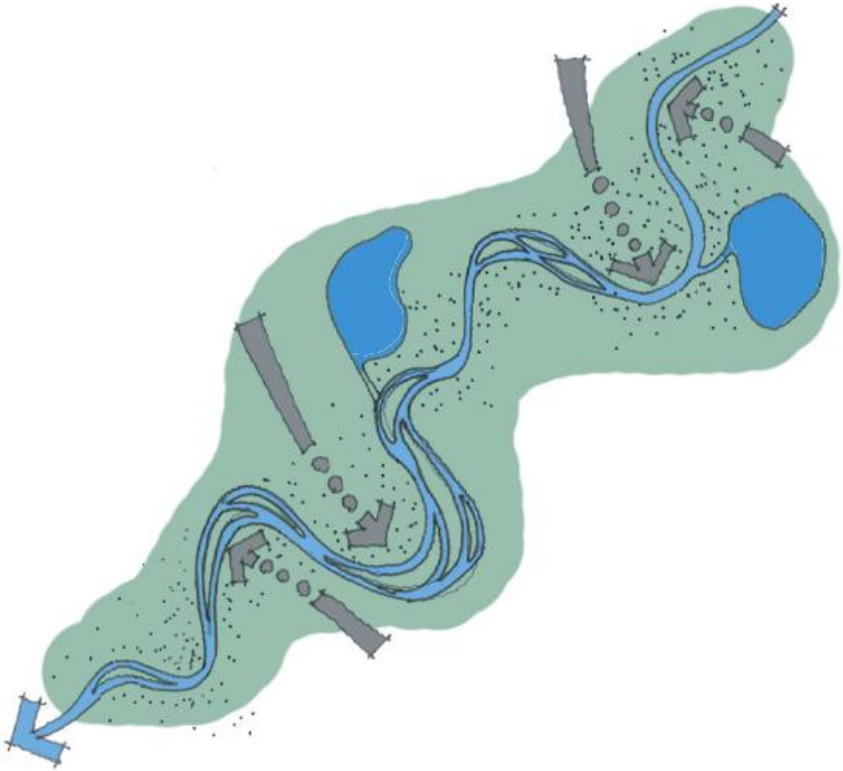
- **It should be free of obstacles and flowing to the Pacific Ocean.**
- **It should be meandering, braided and free of ponds.**
- **It should be bordered with native riparian vegetation that provides habitat for wildlife and the potential for filtration of urban runoff.**
- **It should be free of litter and solid waste should be properly managed.**



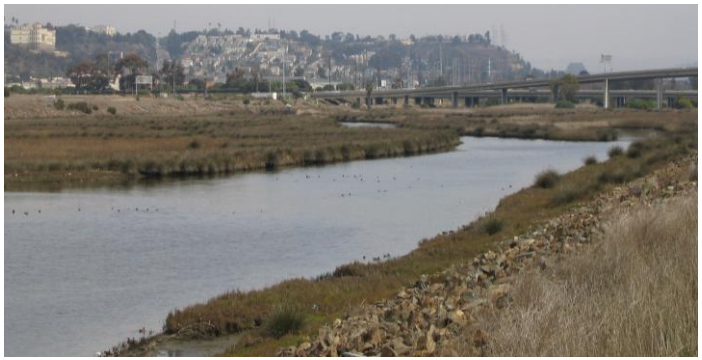
Today the river is channelized and impeded by ponds



Urban run-off flows directly into the river



Re-contour the channel to increase the river's length and meander, expand the groundwater recharge area, separate ponds from the River, and filter urban run-off before it reaches the river.



Free flowing

Meandering

Bordered by vegetation

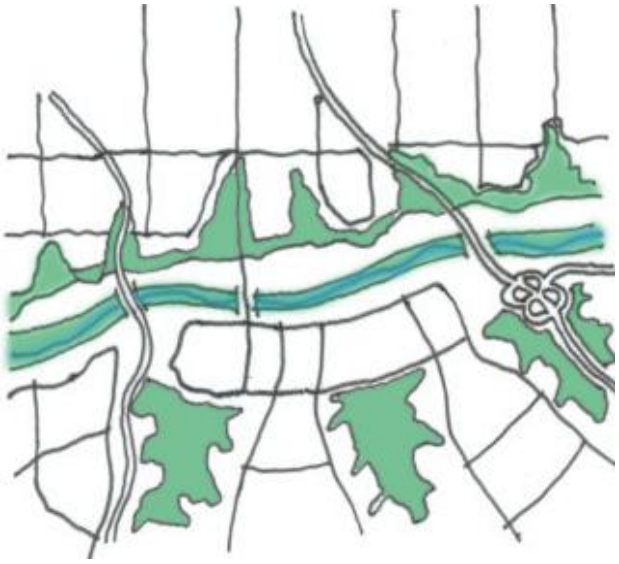
2.3 PRINCIPLE TWO:

UNIFY FRAGMENTED LANDS AND HABITATS

The San Diego River Park Master Plan seeks to create a unified native riparian corridor along the river, a continuum of native plant communities from riparian to upland in the canyons, and to accomplish connectivity on three primary levels: 1) Linear connectivity along the river allows animals, energy and nutrients to move more freely and extensively throughout the landscape system; 2) Lateral connectivity between the river and adjacent upland habitat areas reducing habitat fragmentation allows a natural progression of habitat types; 3) and Tributary connectivity between the river and its tributaries is vital to the health of the river, measured in water quality, and the health of the surrounding habitat.

Healthy and continuous native plant communities are essential to encouraging the movement and inhabitation of wildlife. Today, the canyons, undeveloped steep slopes and upland spaces provide significant refuge for wildlife. Connecting these lands with the river valley creates the potential for wildlife movement between uplands and the river. Therefore, the extent to which these uplands remain undeveloped is of benefit to the river park. These corridors should be of sufficient width to encourage the presence of a variety of bird and animal species, and contribute to reducing the existing condition that isolates most canyons from the river.

An important step to enhance connectivity is to integrate both “infrastructure” and “ecostructure” of natural habitat. Infrastructure encompasses such services as transportation, utilities, and storm water, while the term ecostructure encompasses rivers, vegetation, wildlife corridors and habitat.



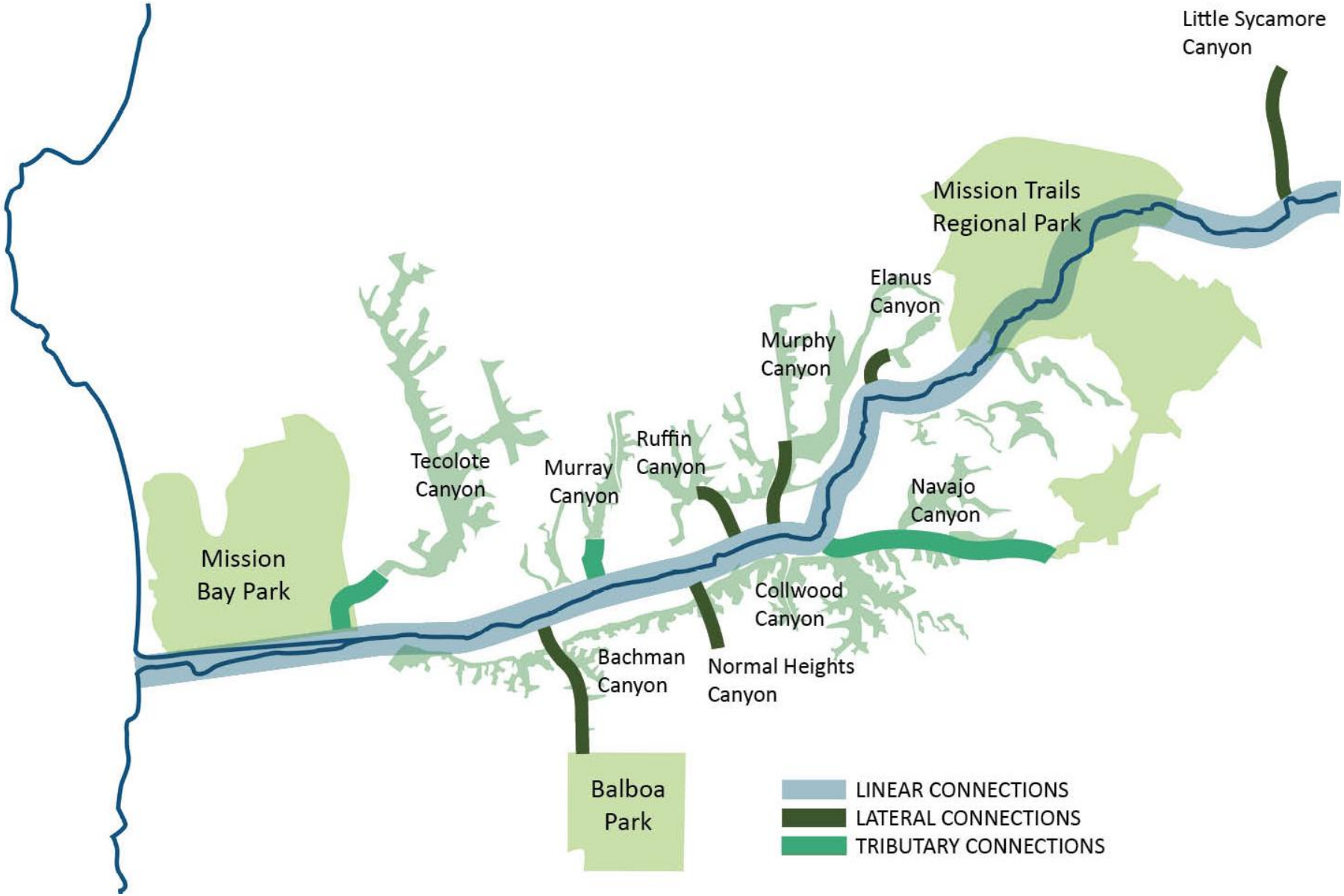
Existing open spaces are fragmented

Link parks, open spaces and trails along the river and canyons with the river valley

To be included in this ecostructure designation, lands must meet two or more of the following conditions: 1) be located within the San Diego River watershed; 2) be part of the river corridor/floodway (as identified in the reach sections of this document); and/or 3) be a functioning natural habitat, designated park, open space or be protected by an easement. Generally, areas that meet more than one of these conditions are undevelopable because they flood regularly, present steep side slopes and canyons, or are areas designated for recreation or conservation. These areas have been identified as biologically significant and incorporated into the San Diego's Multiple Species Conservation Program (MSCP) Subarea Plan.

Like most canyons, Ruffin Canyon no longer reaches the river valley

Native vegetation surrounding urban infrastructure softens and integrates structures with the natural landscape and provides connective habitat


Little Sycamore Canyon
Mission Trails Regional Park
Elanus Canyon
Murphy Canyon
Ruffin Canyon
Tecolote Canyon
Murray Canyon
Navajo Canyon
Mission Bay Park
Collwood Canyon
Bachman Canyon
Normal Heights Canyon
Balboa Park
LINEAR CONNECTIONS
LATERAL CONNECTIONS
TRIBUTARY CONNECTIONS

2.4 PRINCIPLE THREE:

CREATE A CONNECTED CONTINUUM, WITH A SEQUENCE OF UNIQUE PLACES AND EXPERIENCES

The experience of the landscape is diverse, and changes throughout the river valley. A visitor senses the expanse at the estuary and coastline, the rampart of the coastal terrace experienced as one overlooks Mission Valley from the Presidio, the broad river valley stretch through the Navajo community, the constriction of the soaring walls in the gorge and the open vistas of the plateau above Mission Trails Regional Park.

Continuity is essential to engaging users with this kaleidoscope of experience, and it is equally important to express the unique physical and cultural qualities of each reach along the river. A common river pathway system connecting the unique habitats of the river as well as linking to existing and future parks/open space will create a synergy of water, wildlife and people. From the river pathway there should be pathways and trails that link the river park to adjacent neighborhoods and open space areas. These secondary pathways and trails should be visual and physical green connections that connect more people to the ecology, culture and history of the river. As indicated in the preceding principle, undeveloped land within the valley is limited. Land acquisition and open space easements are two ways to rejoin the valley and allow unbroken passage along the river's length.

Citywide connections will link neighborhoods with the river

The river pathway will link upland and riparian experiences

Emphasize a Continuum of Experience

Ocean Beach Park

Mission Bay Park

Mission Trails Regional Park

2.5 PRINCIPLE FOUR:

REVEAL THE RIVER VALLEY HISTORY

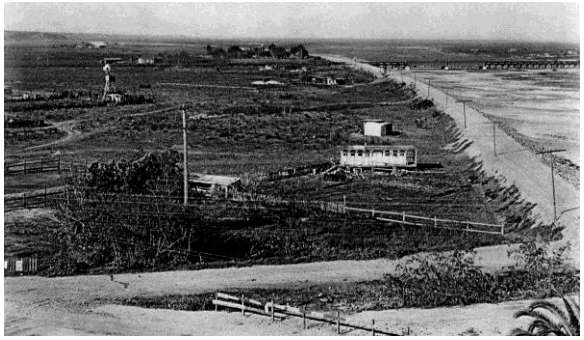
The river valley has long been central to the settlement of the San Diego Region. The presence of water was the impetus for the earliest native people to move into the area. Although much of the evidence of this history has been lost, a number of artifacts and sites remain, and major sites can be found in Mission Trails Regional Park, Presidio Park, Old Town San Diego State Historic Park and Mission San Diego de Alcalá. Some sites have particularly rich and visible histories that can be further interpreted.

The San Diego River Park is an opportunity to link these locations, stimulate public interest in the river valley's history, and expand the public's knowledge about the prehistoric and historic people and land uses within the valley. Increased public interest and knowledge benefits these sites by instilling a sense of responsibility for their preservation and care. Increased visitor traffic, however, can also have its negative effects and careful evaluation of a site's ability to support visitor traffic is critical prior to opening a site. Some historic sites may be too sensitive to be exposed and should remain closed to the public, but interpretive panels placed along the river pathway should be provided to express the story.

In 1916 agriculture was the primary activity in Mission Valley

Mission San Diego de Alcalá

Reveal the River Valley History



Derby Dike

Mission Dam

Presidio Park

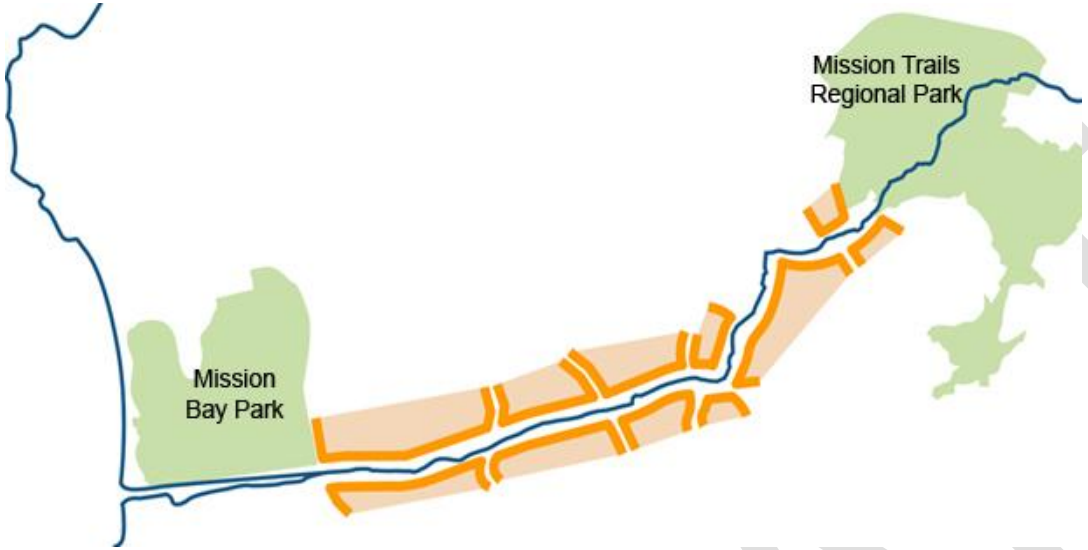
2.6 PRINCIPLE FIVE:

REORIENT DEVELOPMENT TOWARD THE RIVER TO CREATE VALUE AND OPPORTUNITIES FOR PEOPLE TO EMBRACE THE RIVER

Today, nearly all development turns its back to the river. Parking lots, dumpsters, roads, storage yards and mining operations border the river between Riverwalk Golf Course and Mission Trails Regional Park.

The river park should be treated as a 'front door': an amenity to celebrate. Planning efforts should seek ways to draw the river park character into current uses and capitalize on the exceptional natural beauty. New development should face the river, taking design cues from the colors and materials lining the river, scaling and orienting new buildings to complement, not compete with, the river park. The reorientation of development towards the river park, through placement of cafes and plazas that open up to and capitalize on the river, as well as buildings that provide views of the natural river habitat, will inherently enhance property values. In the more urbanized reaches of the river, ensure that development occurs in a manner that co-exists with the river's value as both a natural and an urban resource.

Focusing on the river should not be limited to riverfront development. Development within the river valley should seek opportunities to connect with the river. These links may be achieved through elements such as sight lines, design elements, materials, or even physical connections.



Reorient Development toward the River

Example of a bridge complimenting the river park

Example of orienting development towards a river

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3.0 RECOMMENDATIONS

The five guiding principles described in the preceding section define the vision of the San Diego River Park. The recommendations that follow describe general and specific strategies for achieving the intent of those principles. These recommendations address the health of the river, the river habitat and encouragement of human recreational use while understanding and appreciating the river's history and its environs. The recommendations also address the river as an amenity for economic development and how development should be reoriented to the river as a means of creating value and providing identity for the San Diego River Park.

It is important to note that while each recommendation fits into the vision for the river, no single recommendation is meant to address every location or every situation along the length of the river. The Master Plan encourages pursuing opportunities as they arise with property owners to implement the Master Plan's vision and principles, while the general and specific recommendations focus on the six reaches of the river: Estuary, Lower Valley, Confluence, Upper Valley, Gorge and Plateau.

3.1 GENERAL RECOMMENDATIONS

3.1.1 RESTORE AND MAINTAIN A HEALTHY RIVER SYSTEM

Human activity from mining to flood control for adjacent development has pushed and squeezed the river. This has resulted in constrictions, channelization and ponds. The San Diego River Park should look for opportunities to separate river flow from ponds, remove river constrictions, and broaden the width of the river's meander belt (that portion of the flood plain in which the river alters its course as a result of a major flood event) to allow the necessary width for meandering and braiding. These improvements will result in a longer river, which will, in turn, expand riparian habitat and improve water quality through the increased duration of water contact with soil and vegetation.

RECOMMENDATIONS

A. Augment flows to the river periodically.

B. Remove / circumvent obstacles that impede flow.

C. Remove invasive vegetation species.

D. Encourage the growth of appropriate native riparian and upland vegetation.

E. Rehabilitate the channel to encourage meander and braiding.

F. Expand the river's recharge area.

G. Adopt programs to reduce/remove non-point source loads and including litter and solid waste.

H. Future development projects should incorporate hydrology and water quality considerations in all planning and guidance documents and monitor water quality following implementation of the projects.

Restore the health of the river by improving flow, increasing length and meander

Re-establish transitional riparian edges with native vegetation to filter stormwater runoff and accommodate minor flooding

A. Augment Flows to the River Periodically

Although the pre-disturbed condition of the river was one of ephemeral flows (dry during certain times of the year), the persistent condition is now perennial flows (at least some flow all year long). It is unlikely that flow in the river will be dramatically augmented by natural means. Rather, the extreme demand for a consistent water supply for human use and increasing attention to water efficiency make it more likely that flow in the river will continue to diminish during the dry season. The result of reverting to an ephemeral, or semi-ephemeral system, whether through conservation or conscious design, would be a more barren riparian corridor supporting less biodiversity than present conditions.

The existing perennial flow supports a relatively abundant riparian biological community, and for this reason, the flow should be maintained to some degree. The river's perennial flow is most likely the result of return flow from urban and suburban activities, such as irrigation. The flow is also augmented by some contribution from groundwater sources. The relative contribution from each of these sources is not well understood at this time and will require further investigation. Means to augment the flow should also be investigated. The water should closely mimic existing river conditions in measures such as temperature and salinity, and augmented flow should occur periodically, to mimic historic patterns of flow. These seasonal pulse flows also offer the opportunity for sediment transport and would create disturbance/recovery cycles for ecosystems. The potential to augment flows should be fully explored with the Padre Dam Municipal Water District and Regional Water Quality Control Board.

Climate change impacts have the potential to further influence river flows due to warmer temperatures, drier weather, sea level rise and increasing storm surges. For information on climate change impacts and adaptation strategies, see http://www.sandiego.gov/environmental-services/sustainable/eestf.shtml.

B. Remove/Circumvent Obstacles that Impede Flow

Numerous impediments exist in the river channel and in most of the streams and creeks that are tributary to the channel, which includes ponds, lakes, culverts, roads, and dams. These elements segment habitat species movement and disrupt water flow. Past gravel mining operations have created ponds within the river and the flow of the river is inadequate to sufficiently flush the ponds thereby creating shallow ponds. The shallow ponds and minimal flow lead to an increase in water temperature, promoting algae and macrophyte growth which are both serious issues for riparian systems. The still water created by the ponds also promotes a deposition of sediments resulting in downstream deprivation of sediment load.

Planning efforts that encourage the removal and/or circumvention of impediments to improve flow characteristics and reconnect habitat fragments should be continued. However, the water volume, pond depth and the flow conditions of the river in various reaches will affect the specific conditions of each pond. As the river park and adjacent land is designed and developed, each pond should be studied specifically to create the best and most appropriate hybrid that is most beneficial to improving the water quality of the river, expanding native plant communities and adding value to adjacent development. While the existing ponds have a negative effect on the hydrology of the river, they offer potential passive recreation opportunities for fishing, non-motorized boating, birding and other activities as approved by the Federal and State Resource Agencies. It is beneficial to the river to separate the river from the ponds, but with aeration and other treatments the ponds could remain as assets to the River Park.

Historic gravel mining has resulted in numerous ponds

Overhanging native vegetation shades and cools the river

C. Remove Invasive Vegetation Species

The presence of dense, invasive vegetation results in an impediment to flow. Invasive species also result in dramatically increased evapotranspiration of water that would otherwise remain in the channel or be used by more productive and beneficial species. In an effort to reduce flow impediments and better utilize the limited water quantity in the channel, a strategy/plan for the systematic removal of invasive species from up-stream to down-stream should be prepared in coordination with adjacent jurisdictions.

Arundo donax (Giant Reed) has invaded many sections of the river

D. Encourage the Growth of Appropriate Native Riparian and Upland Vegetation

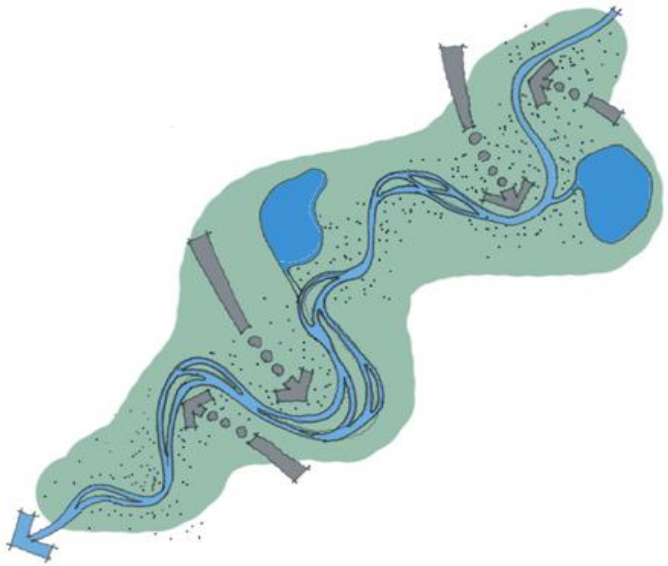
Appropriate and continuous native riparian vegetation has potential direct benefits to hydrology and water quality. Best management practices should be implemented to encourage the propagation of existing native species. Areas where invasive species have been removed should be re-vegetated with appropriate native species.

Less-dense, native vegetation will cause significantly fewer water circulation problems and require less water than invasive species. Additionally, under certain specific conditions a variety of native species can be used to more effectively "cleanse" urban runoff through nutrient uptake. In some locations non-invasive non-natives may be more beneficial in nutrient uptake then natives and the use of non-natives should be determined on a project by project basis. By increasing the riverbed area groundwater infiltration can be increased. When combined with specific additional vegetation, pollutant filtration can be increased. In certain situations, with careful planning, contaminated groundwater can be treated through phyto-remediation, or biological filtration. Such an approach would require careful study and should be integrated into the corridor where possible.

E. Rehabilitate the Channel to Encourage Meander / Braiding

Over the past decades, the river has become increasingly channelized by projects that seek to transport water from higher to lower elevations in a manner that has often resulted in minimizing space for the river to maximize land available for development. The net result of these projects is a relatively straight channel with artificially-raised banks. This condition has removed the river's natural meander and braiding, depriving it of its natural flood cycle. The term "meander" refers to a river's naturally winding path; and "braiding" refers to a river that has carved multiple simultaneous channels, diverging from and rejoining itself. Both of these river patterns contribute to greater riparian habitat, greater groundwater recharge and reduced velocity when contrasted to a straightened, channelized path.

Although it is impractical to consider returning the natural floodplain to the river in any substantial form, it is possible to increase river length and decrease flow velocities. Where possible and practical, the channel should be rehabilitated to remove concrete or artificial structures, shaped to include meanders and designed to provide a wider river channel for braiding.



Re-contour the channel to increase the river's length and meander, expand ground water recharge area, separate ponds from the River, and filter urban run-off before it reaches the river

F. Expand the River's Recharge Area

Past development in the floodplain and projects that have channelized the river have exacerbated flooding problems and increased the potential economic damage during major flood events. Development should look for ways to provide future projects that will not degrade the river's natural carrying capacity, water quality or riparian habitat. Such land use decisions should be made with sensitivity to the river. Expanding wetlands and creating new ones through restoration or construction will contribute to improving water quality by filtering pollutants and will serve as a refuge for native flora and fauna, allowing them to re-establish after flood events.

Hard surfaced channels such as Tecolote Creek increase velocity, prevent groundwater recharge and offer little wildlife habitat

G. Adopt Programs to Reduce/Remove Non-Point Source Loads Including Litter and Solid Waste

Preventing pollution at its source is the best and most cost effective approach to improve the water quality of the San Diego River. During wet weather events, the first flush of contaminants from most urban and suburban surfaces is transported directly into the river via storm drain systems. Ongoing low flow in these systems continues to trickle contaminants into the river. Although the City has a relatively advanced program to identify pollutants and to educate citizens in this area, a significant quantity of pollutants continues to enter the river via storm drains.

Storm water is governed by the National Pollutant Discharge Elimination System (NPDES) Municipal Storm Water Permit (Municipal Permit). The Municipal Permit directs municipalities to implement an urban runoff management program on a jurisdictional and watershed level. The intent is to prohibit pollutant discharges into the storm water conveyance system, implement best management practices, ensure that storm water discharges do not cause water quality objectives to be exceeded, identify and eliminate sources of illicit discharges, and enforce local municipal water quality related ordinances.

The City recognizes the linkages between land use and impacts on the river in urban and suburban areas and has developed a "Storm Water Standards Manual" as a comprehensive program that sets forth a list of permanent best management practices that development must incorporate into their projects. Some examples include requiring compliance with mandatory structural practices (swales, infiltration basins), and mandatory non-structural practices (restricted irrigation, aggressive street cleaning). Localized approaches to non-point source pollutant reduction/elimination are the only alternative to massive, in-channel treatment approaches. Highway and golf course runoff is of particular concern. Responsible

Example of a swale

Example of an infiltration basin

agencies need to treat storm water runoff from highways prior to its reaching the river. Golf courses are traditionally maintained through intensive turf management. Course managers should be encouraged to create water quality buffers adjacent to the river and to implement sustainable management techniques that reduce the use of chemical based pest and weed control and fertilization. Litter and solid waste management programs should target waste reduction. Litter bins should facilitate separation of recycled materials. Solid waste generation within the watershed should be minimized and properly managed.

H. Future Development Projects should Incorporate Hydrology and Water Quality Considerations in all Future Planning and Guidance Documents and Monitor Water Quality following Implementation of the Project

A healthier river leads to cleaner water and groundwater recharge. Like many urban rivers, the San Diego River has been neglected as a resource, and until recent decades, planning and development have largely ignored the river and the impact of development on it as a natural system.

Future planning and design efforts within the San Diego River watershed should address potential impacts on the river and consider means of benefiting the river and its corridor, by treating storm water before it reaches the river and preventing litter. Improvement measures should be monitored to evaluate their effectiveness, to identify lessons that can be applied elsewhere, and to celebrate successful outcomes.

Fragmentation of the river as a result of streets crossing at the First San Diego River Improvement Plan area slows stream flow

Lack of natural buffer on the banks of the river increases the potential for run-off of fertilizers and pesticides into the river

3.1.2 UNIFY FRAGMENTED LANDS AND HABITATS

Reduction or loss of habitat and associated fragmentation, are two of the biggest factors that determine the viability of habitat to continue to support wildlife, particularly in regard to the riparian, coastal sage scrub, and chaparral plant communities that comprise the majority of natural habitat in the study area. In urban areas, the existing habitat is limited to the immediate riparian corridor of the river and the fragmented and isolated upland habitat. Opportunities to increase habitat are limited; so focusing San Diego River Park efforts on creating or improving habitat in places where it also improves connectivity between existing habitat areas is the key to success.

Connectivity between habitat areas increase the viability of wildlife

RECOMMENDATIONS

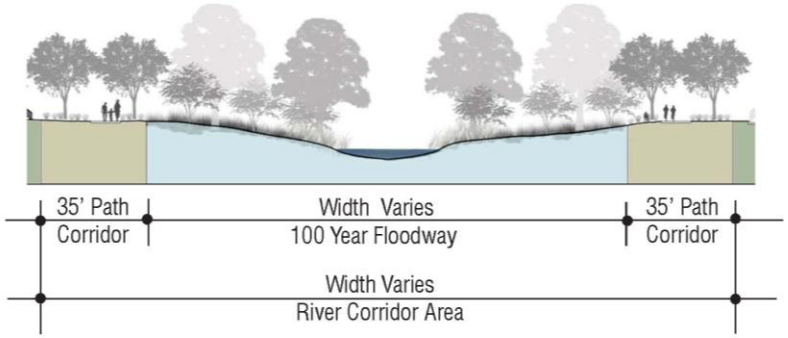
- **A. Establish appropriate corridors for the river, wildlife and people.**
- **B. Acquire open lands and/or pursue conservation easements.**
- **C. Eliminate invasive plant species and reintroduce native species.**
- **D. Naturalize floodway areas.**
- **E. Use biological systems to treat all storm water before it enters the river.**
- **F. Separate pedestrian/wildlife and vehicular river crossings.**
- **G. Create "Green Gateways".**
- **H. Establish habitat corridors as secondary gateways at side canyons and tributaries.**

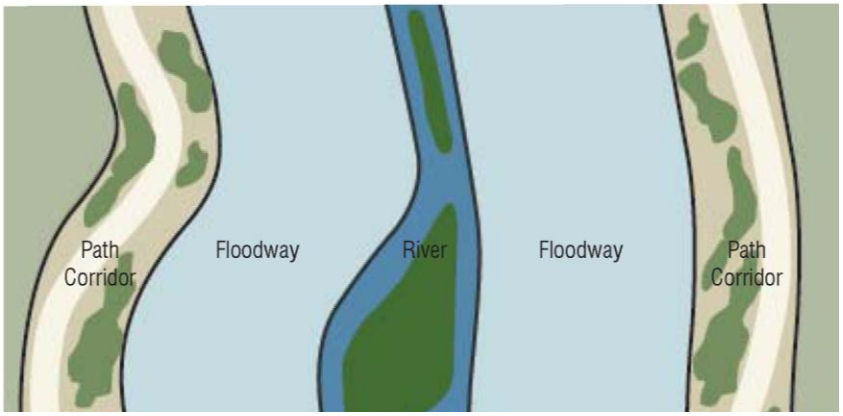
Naturalized floodway areas provide shade and protection for wildlife and cool the river

A. Establish Appropriate Corridors for the River, Wildlife and People

Water bodies, wildlife and people need “breathing room” to maintain health and integrity. Open space corridors for the River Park function as water quality buffers and valuable habitat areas for both wildlife and people. The corridors can be thought of as layers adjacent to the river. These layers may be defined by topography or vegetation and vary in size depending on the river location.

Within the San Diego River Park Master Plan are two specific corridors: the River Corridor Area and the River Influence Area. The River Corridor Area will include the river itself and the land immediately adjacent to it. This corridor will be measured by the 100-year Floodway, as mapped by FEMA, plus 35 feet on either side of the floodway. The 100-year Floodway varies in width depending on the floodway location and provides a continuous corridor that accommodates the flooding hydrology of the river while providing for a diversity of native vegetation for habitat. The 35-foot wide area provides an opportunity for native habitat and a multi-use pathway that will accommodate people. It will be a natural environment providing for the river ecology, enhancement of wildlife habitat and movement, and allowing for passive recreation, such as walking, bicycling, sitting and observation. In some areas of the River Corridor Area, public parks could be located that will contain turf areas. These turf areas will be graded to drain away from the river. The River Influence Area will adjoin the River Corridor Area and extend 200 feet on either side of the River Corridor Area. Within this area, development will occur and should be designed to acknowledge and celebrate the presence of the river and treat it as an amenity. In





Plan and Section of River Corridor Area

addition to the San Diego River Park areas, there are two other areas that provide for the protection, preservation and restoration of the river and wildlife. These two areas are the City's Multi-Habitat Preservation Area (MHPA) and the Wetland Buffer for wetlands. The MHPA has been established and mapped by the City. The Wetland Buffer is not mapped in advance, but is determined at the time of proposed development. These areas: the San Diego River Park River Corridor and River Influence Areas, the MHPA, and the Wetland Buffer, all work together to provide for an appropriate corridor for the river, wildlife and people.

B. Acquire Open Lands and/or Pursue Conservation Easements

To expand, unify, and connect the River Corridor area the City of San Diego, the State River Conservancy, the River Coalition and other organizations should acquire open space parcels and/or obtain easements on private property as opportunities arise.

C. Eliminate Invasive Plant Species and Reintroduce Native Species

Floodways restored with natural vegetation offer great promise in improving ecological function. Invasive, non-native plant species disrupt the balance and function of natural ecosystems, often choking out native species. The City of San Diego should coordinate with other public agencies, community groups and land owners to develop and implement vegetation management programs to remove exotic species and plant native riparian vegetation.

D. Naturalize Floodway Areas

Naturalized floodway areas that are created should restore river channel dynamics to a more natural hydrologic regime and provide continuous transitions of native plant communities between the riparian and upland habitat areas.

E. Use Biological Systems to Treat All Storm Water before it enters the River

Biological treatment systems (constructed wetlands) provide water quality buffering that mimics natural processes while maintaining the character of the river corridor and should be considered if long term financing and maintenance is available (constructed wetlands typically have a ten year life span). These systems provide a vegetative substrate for micro-organisms that break down pollutants. These systems are only effective when planned on a comprehensive scale and provided with regular maintenance. This method of water filtering aligns with the United States Bureau of Reclamation Storm Water Treatment Program goals. The San Diego River Park should also make the location of these Biological Systems visible and provide educational interpretation of these systems for the public.

F. Separate Pedestrian/Wildlife and Vehicular River Crossings

San Diego River Park improvements should retrofit existing river crossings to allow grade-separated crossings for wildlife, San Diego River Park users, and vehicles. These bridges should address crossings at all scales, from trails to roads to highways. Pedestrian safety and continuity of pedestrian movement will be improved by eliminating conflicts and interactions with vehicles. The construction and use of grade-separated pedestrian passages is encouraged, such as the one under Friars Road at Fenton Marketplace. Similar passages should be created to improve pedestrian movement between the river valley and upland neighborhoods and canyons. Where feasible along the river, 'eco-bridges' could be constructed with adequate width and vegetation to encourage wildlife movement. Such eco-bridges diminish the separation caused by roads and other development.

Pedestrian Tunnel under Friars Road provides a link between the river valley and the community to the north and Ruffin Canyon

G. Create 'Green Gateways'

Green Gateways should be located below major highways that cross the river and should consist of large-scale native riparian trees and shrubs to identify the river's location from the highway. Depending upon each highway's elevation in relation to the ground plane of the river valley below, the goal is to convey the sense of going "over" or "through" the riparian canopy of the river corridor. Visually, these gateways will counterbalance the overwhelming presence of the existing highway infrastructure.

The San Diego River Park should implement green gateways at a range of scales, sized to fit the visual and functional needs of the connections being made via the use of native vegetation. Large-scale green gateways are appropriate at locations where highways, such as Interstate 5, State

Highway infrastructure and rights-of-ways should be adapted to support native plants and habitat

Highway 163, Interstate 805 and 15 cross the San Diego River Valley. These plantings should include native trees and understory vegetation selected from the Recommended Plant Species in Appendix A. Fremont Poplar (Populus fremontii) or California Sycamore (Platanus racemosa) are recommended for this application; these species are large, easily-recognizable trees that are signature elements of the region's riparian corridors and manifests seasonal interest. Iconic trees, such as these two, will emphasize the river's location. Open space parcels, whether acquired outright or through public access easements that are contiguous with the green gateways can contribute to and enhance their effect. These open space corridors will extend the native vegetation of the green gateways.

H. Establish Habitat Corridors as Secondary Gateways at Side Canyons and Tributaries

Habitat corridors can serve as smaller gateways into side canyons and tributaries. These gateways could provide trail linkages and habitat connections to less-frequented areas of the San Diego River Park.

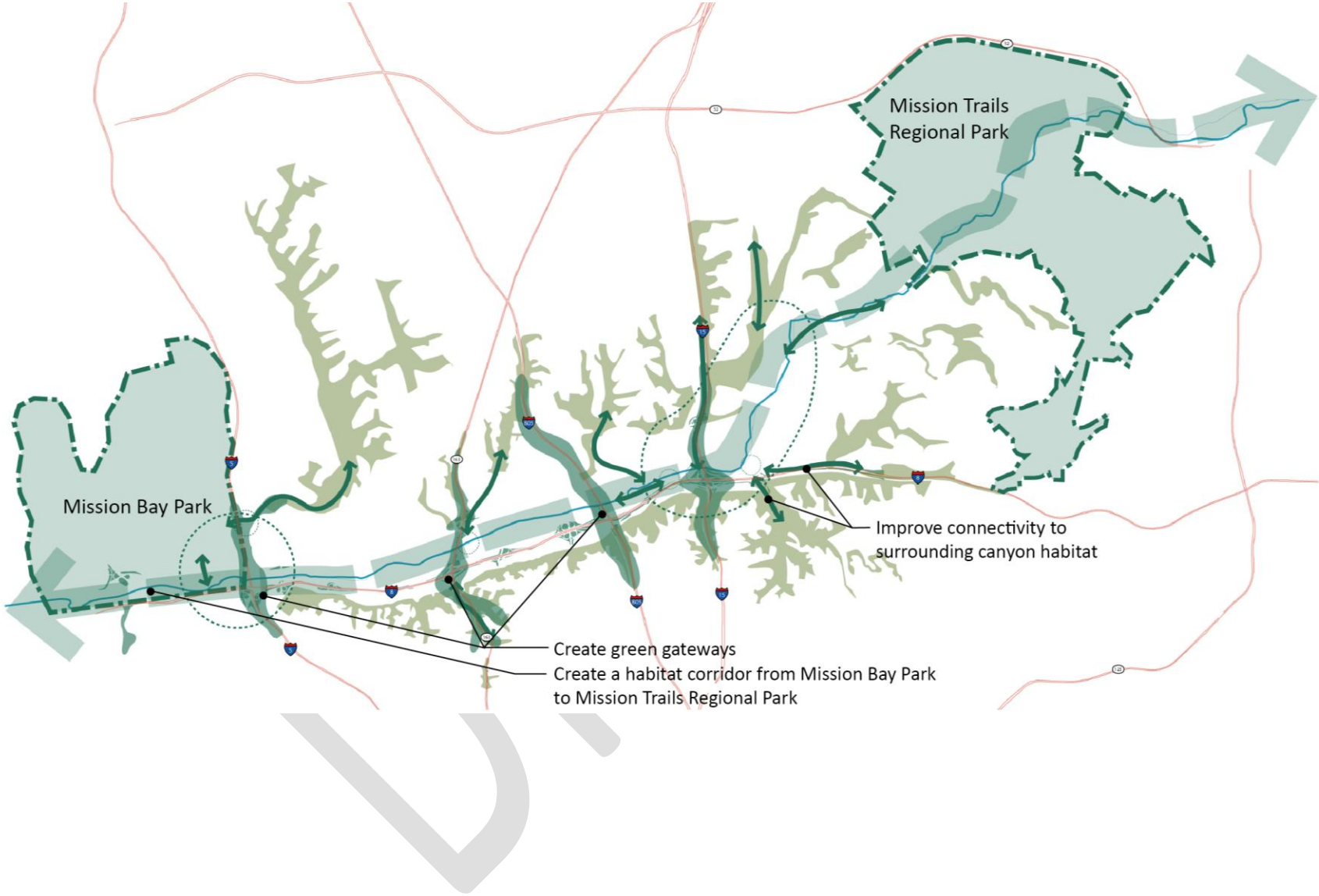
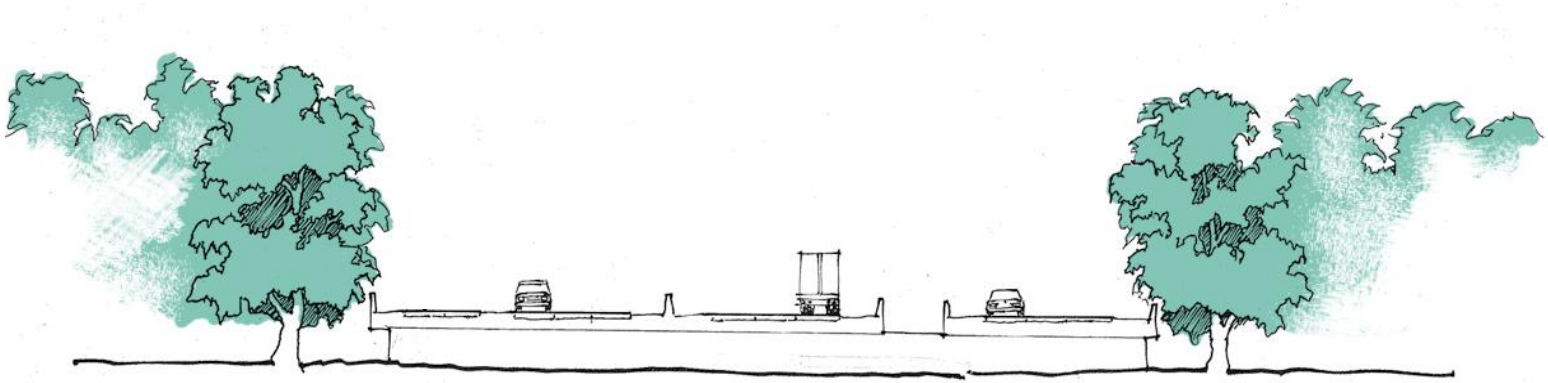
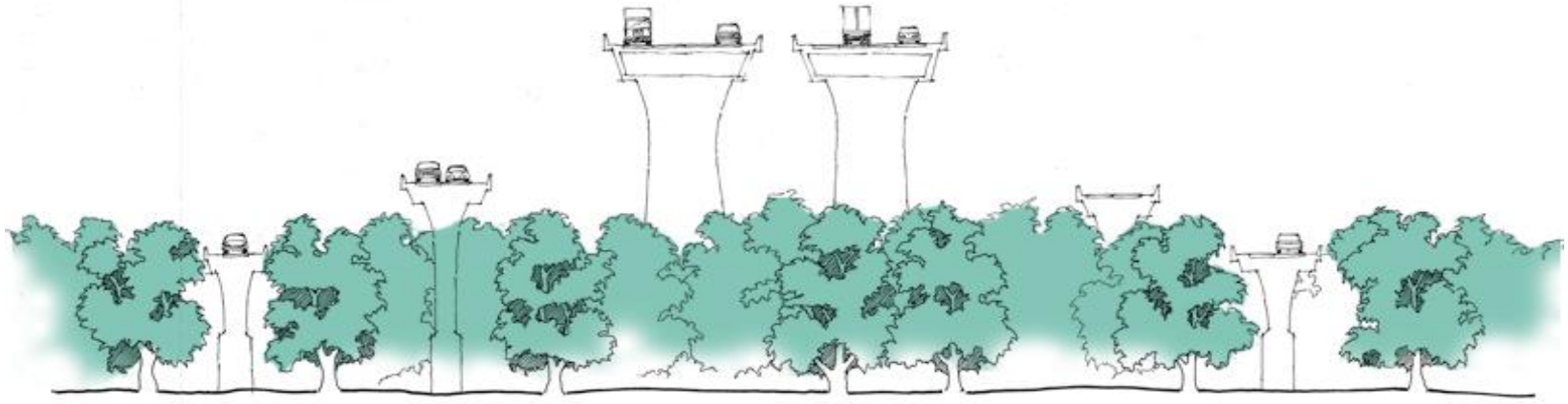


Figure 4. Ecostructure of the San Diego River Park



Cross section of State Route 163 illustrating the going “through” the green gateway experience as State Route 163 crosses above the San Diego River. There is a sense of enclosure and a cooler microclimate on the edges of the highway created by the shading of the riparian tree canopy.



Cross section of Interstate 805 illustrating the going “over” the green gateway experience as Interstate 805 crosses above the San Diego River. From above, the green gateway outlines the location of the river for the motorist.

Figure 5. Green Gateways

3.1.3 CREATE A CONNECTED CONTINUUM, WITH A SEQUENCE OF UNIQUE PLACES AND EXPERIENCES

Establish a continuous river pathway system from the Pacific Ocean to the City of Santee and from canyon to canyon that provides for frequent access to transit and neighborhoods. Coordinate with community plans, the San Diego Bicycle Master Plan and Pedestrian Master Plan, adjacent jurisdictions and other current planning efforts to develop specific locations for neighborhood connections and route alignments.

Establish a linked string of parks and open spaces through land acquisition and public access easements through partnerships with land owners in key locations. These parks and open spaces will serve a variety of needs providing valuable protected habitat in some places and access to the river and connection to adjacent development in others. Collaborate with and support community planning efforts to identify areas for redevelopment and new development to have a river focus and to identify potential land to acquire for parks and open space. As redevelopment occurs, engage land owners and developers in the San Diego River Park master planning process to support the creation of places that are mutually beneficial.

RECOMMENDATIONS

A. Create a continuous multi-use San Diego River pathway from the Pacific Ocean to the City of Santee.

B. Link the river pathway to adjacent canyons and neighborhoods.

C. Acquire open space lands to expand connectivity.

D. Create overlooks at unique places.

E. Upgrade and link existing parks into San Diego River Park system.

F. Explore opportunities for additional community or neighborhood-scale parks.

G. Integrate art into the identity and experience of the San Diego River Park.

H. Provide San Diego River Park way-finding signs.

I. Explore opportunities for water recreation.

A. Create a continuous multi-use San Diego River Park pathway from the Pacific Ocean to the City of Santee

Organize an east-west multi-use river pathway from the Pacific Ocean to the City of Santee. This pathway is referred to in this document as the river pathway and serves as a recreational opportunity and in some areas can serve as a non-motorized transportation route. The river pathway should be continuous, open to pedestrians and bicycle users, and uninterrupted by conflicts with vehicles, wherever possible, through grade separations. The river pathway should be designed per the design guidelines of the Master Plan, Section 4.0.

The river pathway should be located on both sides of the river where appropriate. In some locations the river pathway will only be on one side of the river due to the topography, MHPA boundaries or required wetland buffers. In these cases, smaller pedestrian-only trails may be provided on the opposite side of the river from where the river pathway occurs. In addition to the river pathway, there should be north-south multi-use path connections to neighboring communities, businesses, shopping centers and regional parks such as Balboa Park, Presidio Park, Mission Bay Park and Mission Trails Regional Park. Smaller, unpaved trails can lead off of the river pathway to interpretive overlooks to give access to special views of the river.

The multi-use river pathway provides the opportunity to exercise, socialize, and connect communities

Overlook at Mission Trails Regional Park of the historic Mission Dam

B. Link the River Pathway to Adjacent Canyons and Neighborhoods

The river pathway is a benefit to the entire City of San Diego. Connections to neighborhoods bordering the river corridor should be established off-street where possible and on-street where necessary. Specific connecting links to existing bicycle and pedestrian trails in Tecolote Canyon Natural Park/Open Space, Navajo Canyon Park/Open Space and Rancho Mission Canyon Park/Open Space should be developed as the river pathway is established.

C. Acquire Open Space Lands to Expand Connectivity

Land beyond the river corridor itself can be important to the overall connectivity of the open space system. As opportunities to acquire such land arise, acquisition should be pursued where they support the Master Plan principles for expansion of the open space network.

D. Create Overlooks at Unique Places

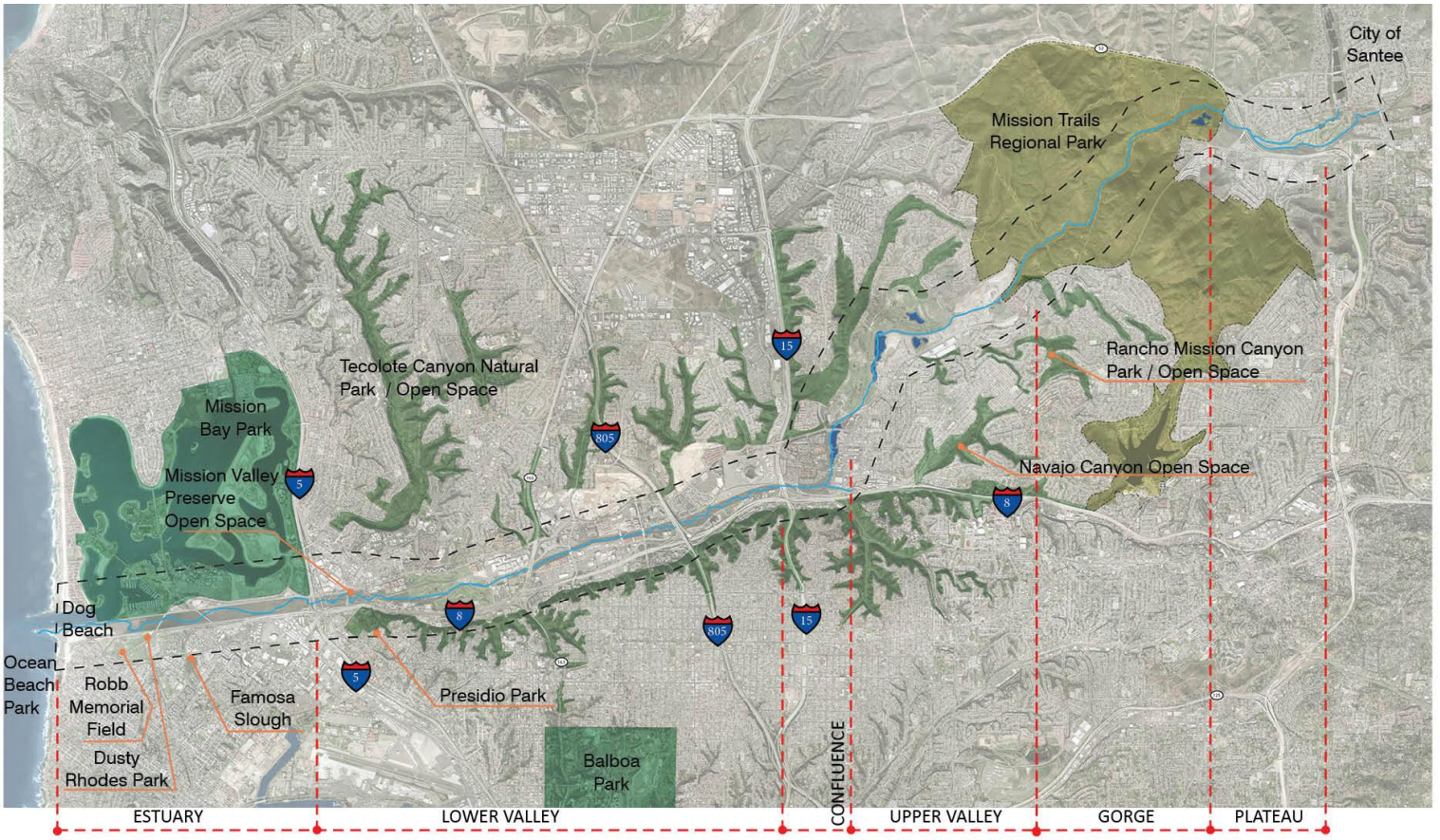
Overlooks will offer viewpoints along the river's length or at nodes where a north-south connection to a community meets the San Diego River Park. Generally, overlooks will be along the river pathway, and will include picnic tables, interpretive signs and/or seating according to the size of the space. Refer to the design guidelines of the Master Plan, section 4.0, for recommended materials.

E. Upgrade and Link Existing Parks into the San Diego River Park System

The San Diego River Park is ultimately a linked series of parks and open space. Awareness of the river and the river park should begin in existing parks that can be linked to the river park. Physical and conceptual elements of the San Diego River Park should be used in upgrades and renovations of existing parks. Establishing a set of materials that are evocative of and sensitive to the San Diego River will knit the system

At the western edge of the River Park, Dog Beach is a unique place that is much loved by the local community

Adjacent to the river is Mast Park in the City of Santee



- Ocean Beach Park
- Mission Bay Park
- Dog Beach (part of Mission Bay Park)
- Dusty Rhodes Park (part of Mission Bay Park)
- Famosa Slough Open Space
- Robb Field (part of Mission Bay Park)
- Mission Valley Preserve Open Space
- Presidio Park
- Tecolote Canyon Natural Park/Open Space
- Navajo Canyon Park/Open Space
- Rancho Mission Canyon Park/Open Space
- Mission Trails Regional Park

Figure 6. Existing Regional Parks and Open Space Areas

together, and is an overall goal of the San Diego River Park Master Plan. As parks are redeveloped, sensitivity to the river should guide design and material selection. Native planting areas should be expanded and impervious surface areas reduced.

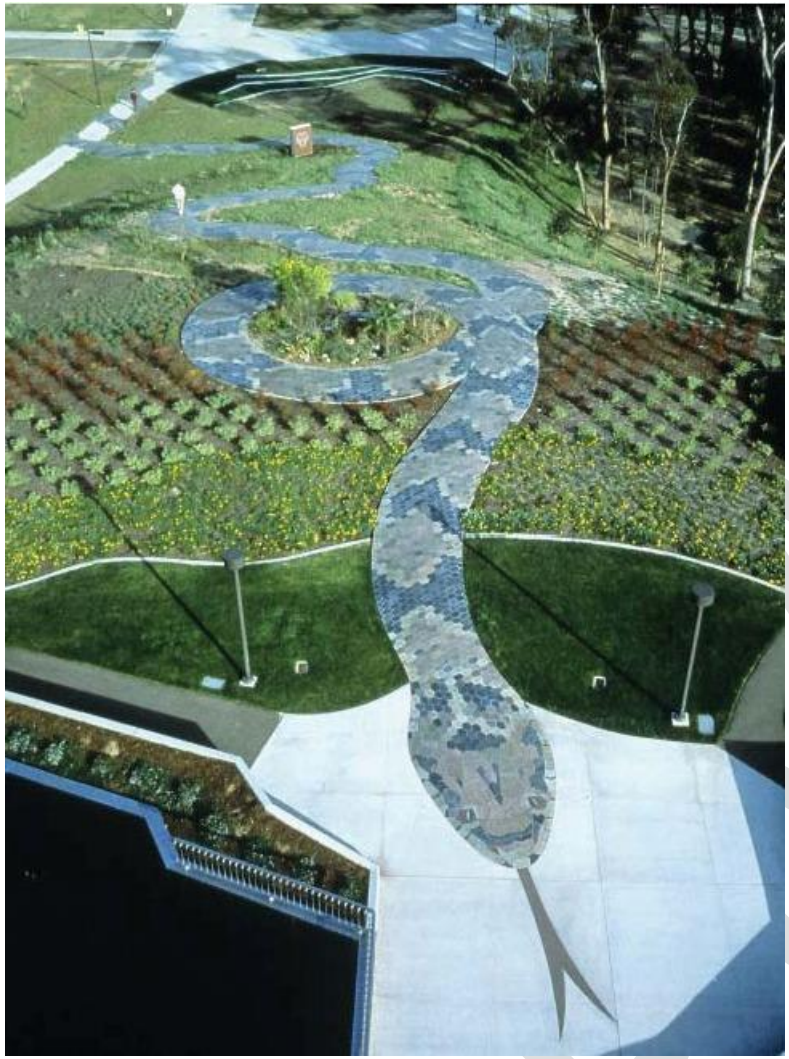
F. Explore Opportunities for Additional Community or Neighborhood-Scale Parks

The Mission Valley, Tierrasanta, Navajo Community Plan Areas will have population-based park deficits in the year 2030 per the City's General Plan Standards. Long-range planning for these communities and the San Diego River Park should look for locations along the river, such as at the Qualcomm Stadium site and the Grantville Redevelopment Subarea, to reduce the park deficits. New park sites along the river should provide connections to the San Diego River Park and the river pathway.

G. Integrate Art into the Identity and Experience of the San Diego River Park

To enhance the identity and experience of the San Diego River Park art elements should be a component of river pathway access points, interpretive areas and signage, fountains where appropriate, fencing, site furnishings and in the paving texture and color. Art should be located in areas of high visibility such as intersections, street crossings and entrances/gateways. In addition art should be incorporated into the San Diego River Park at unique places or significant historical or cultural importance.

Incorporation of publicly accessible art on public and private projects should be supported and encouraged. An artist in residence program could create the opportunity for an individual artist to focus on the river for an extended period of time, creating art that interprets the river and offering the opportunity to teach, interact with schools, and to actively engage people with art and the river. The City of San Diego Commission for Arts and Culture may serve as a source of information for means and methods of incorporating art into specific projects and for the selection of specific artists.



"Snake Path", Artist: Alexis Smith

"Urban Trees" Photo Courtesy Dale Frost, Port of San Diego

H. Install San Diego River Park Way-Finding Signs

In many locations the invisibility of the river is striking. The installation of San Diego River identification signs at road crossings has increased awareness of the river in the community. Other opportunities exist to expand awareness of the river and the San Diego River Park. At a minimum, the river should be identified at every vehicular and pedestrian crossing on both edges. The signs should highlight the presence of the river and include the San Diego River Park logo. The signage system should also identify canyons and tributary creeks where they intersect and where they flow into the San Diego River. In addition, signs in the canyons and nearby open spaces that are connected with the river corridor should indicate the direction of the river.

San Diego River sign

I. Explore Opportunities for Water Recreation

Water recreation in the river should be studied as infill development and redevelopment occurs along the river: swimming, wading or bathing in the San Diego River is prohibited per Municipal Code Section 43.0104. All proposed water recreation, including but not limited to non-motorized boats and fishing, will require review and approval by the federal, state and local resource agencies during discretionary review of a project proposal. The entire river is mapped within the MHPA boundaries and, therefore, all activities are subject to Section 1.4, the Land Use Considerations, of the MSCP Subarea Plan.

The following areas along the river have water restrictions in place; they include the Southern Wildlife Preserve, the Mission Valley Preserve and the First San Diego River Improvement Project (FSDRIP). The Southern Wildlife Preserve, located at the western end of the river, only allows non-motorized boats in the river west of West Mission Bay Drive Bridge from April through September and permits are required to use the area. The Mission Valley Preserve, just east of the Southern Wildlife Preserve, is also a preserve for wildlife and water recreation is restricted. Within the FSDRIP area, water recreation is defined in the FSDRIP Natural Resource Management Plan (NRMP). This NRMP states that the water and buffer areas are a wildlife habitat and that no swimming and boating is allowed. Passive recreation, such as bicycling, picnicking, fishing and wildlife observation is allowed. Fishing is an allowable use in the riprap areas and from bridge crossings.

3.1.4 REVEAL THE RIVER VALLEY HISTORY

The San Diego River Park should function as an open-air living museum to tell the history of settlement, and ecology of the San Diego River Region. The stories of Native Americans communities, the Mission and early California settlement and the modern agricultural periods should be told through maps, art and signage at appropriate locations throughout the San Diego River Park. The historic condition of the river ecology and native wildlife habitat, its current condition and the rehabilitation of the area can reveal the story of the past and future river corridor.


Example of interpretive garden, by artist Robert Miller

RECOMMENDATIONS

A. Develop an interpretive program based on the historical, biological and cultural resources of the river.

B. Create a San Diego River Park Interpretive Center.

C. Use maps, art and signage to integrate the history of the river valley in appropriate locations.

A. Develop an Interpretive Program Based on the Historical, Biological and Cultural Resources of the River

As the San Diego River Park Master Plan is implemented, an interpretive program should be created which tells the story of the evolution of the San Diego River including the history of the river's hydrology, the wildlife habitat and the human settlement of the San Diego River region. The interpretive program should identify a location for a San Diego River Park Interpretive Center and key locations for overlooks that provide information on significant historic sites. In addition, the interpretive program should identify other locations along the river that will interpret the natural ecology and hydrology of the river, its history and how it has changed over time. Describing the process and purpose of the physical improvements to the river channel and recharge area and recording the evolution of these changes over time will tell the story of the rehabilitation of the San Diego River.

Significant Historic Sites

- Midway Pacific area – the Derby Dike.
- Old Town area – Kumeyaay cultural resources, the San Diego Presidio and the original San Diego de Alcala Mission site.
- Mission Valley area – Prehistoric Kosa'aay (Cosoy) Village site, the 1881 California Southern railroad, the Mission San Diego de Alcala, and the Nipaquay Village site.
- Navajo and Tierrasanta areas – Kumeyaay cultural resources and Old Mission Dam and Flume.

B. Create a San Diego River Park Interpretive Center

Due to the significance of the river's history in the San Diego region an Interpretive Center should be provided along the river in a central location. The center could be a public or private facility and designed for residents and visitors. Within the center there could be literature, videos, lecture rooms and a museum to showcase the river's history. Printed historic brochures and walking tours should be provided. Where possible use "green" construction materials, such as those with post-consumer recycled content. Materials with high greenhouse gas impacts should be avoided.

C. Use Art, Maps and Signage to Integrate the History of the River Valley in Appropriate Locations

Art, maps and interpretive signs should be located at sites that will describe the cultural and historical story of the river. Where land is available, an overlook should be located to feature several interpretive signs that could provide more detail about the significance of the area. Materials selected for the maps and signs should meet the design guidelines of Section 4.0 of the Master Plan.

Example of an interpretive sign
Kumeyaay Lake, Mission Trails Regional Park

3.1.5 REORIENT DEVELOPMENT TOWARD THE RIVER TO CREATE VALUE AND OPPORTUNITIES FOR PEOPLE TO EMBRACE THE RIVER

Rivers can provide significant value and advantages for urban environments. They connect communities to each other, provide recreation and open space, offer views in a crowded environment, provide habitat for valued species and provide dramatic settings for urban places. Along the San Diego River, opportunities for people to embrace the river has been neglected by placing the back side of buildings toward the river, locating delivery ramps adjacent to the river and, in some cases, locating parking lots that drain to the river. As a result, the river is polluted, filled in by invasive species and is perceived to be an unsafe area. Opportunities to change this can be provided through implementing the following recommendations during the redevelopment along the river.

RECOMMENDATIONS

A. Treat the river as an amenity.

B. Encourage development to provide active uses fronting the River.

C. Encourage development to face the river.

D. Include access to the river through new development.

E. Integrate pedestrian and bicycle paths along frontage roads.

F. Uncover the river's tributaries.

G. Create "green streets".

H. Enhance the development edge facing the river with active uses.

Riverfront redevelopment Malden River, Medford, MA

Recreation center adjacent to the San Diego River in Mission Valley

A. Treat the River as an Amenity

Development adjacent to the river should be designed to treat the river as a desirable feature by taking advantage of the open space it creates, connecting to the river pathway system for an alternative means of transportation, and capturing the dramatic views of the water environments.

B. Encourage Development to Provide Active Uses Fronting the River

Development along the river should provide a mix of housing, jobs, shopping, commercial services and public or semi-public open spaces. This type of development promotes higher residential densities that are within close proximity to public transportation, provides dwellings to accommodate students, workforce and senior housing, and provide outdoor gathering spaces that create a village atmosphere. Future projects adjacent to the river should look for opportunities to provide active uses that are oriented towards the river. Commercial services, cafes and other active uses could be located on the ground floor to take advantage of the connection to the river pathway and connections to the existing trolley transportation system. Residential uses could be found in the upper floors of buildings to provide privacy and views to the river.

C. Encourage Development to Face the River

Buildings and outdoor areas should face the river through the placement of windows and doors, gateways, active uses, pathway connections and passive seating areas. If development is designed with a front entry or main activity use to the street, then an entrance or activity of equal quality should be located facing the river.

D. Include Access to the River through New Development

A majority of the river frontage is not adjacent to a public street and, therefore, is not accessible. Through in-fill development and redevelopment of a site, access to the river should be provided by a pedestrian path from the nearest public street through the site to the river. These paths should have public access easements and signs located along the public streets to mark the public path entrance.

E. Integrate Pedestrian and Bicycle Paths along Frontage Roads

As frontage roads are improved, assure that there is adequate right of way for safe pedestrian and bicycle movement. Landscape areas should be provided to buffer pathways from adjacent roads and to provide access to the river pathway where appropriate.

F. Uncover the River's Tributaries

The San Diego River and its tributaries are contained in culverts at many of the road crossings all along the river area. Removing pipes, culverts and covered channels to expose the river to daylight combined with widening the channel and gently sloping banks will reveal the natural structure and pattern of the river, and support the naturalization of the floodplain and river corridor. Where possible, culverts should be replaced with bridges to reduce flow constraints, expand riparian habitat and encourage wildlife movement.

G. Create "Green Streets"

Green streets transform impervious street surfaces into landscaped green spaces that capture stormwater runoff and let water soak into the ground as plants and soil filter pollutants. Green streets convert stormwater from a waste directed into a pipe, to a resource that replenishes groundwater supplies. They also have the potential to create attractive streetscapes and urban green spaces and help connect neighborhoods, schools, parks and business districts. Green streets should be used throughout the river area to provide connectivity to adjacent communities.

H. Enhance Development Edges Facing the River with Active Uses

When possible all new project proposals should enhance the development edge of the San Diego River Park with plazas, cafes, commercial shops, parks, restaurants, recreation centers, outdoor balconies, amphitheaters and/or civic meeting rooms. These spaces can be public or private, but will be more successful if open to the public to use and accessible from the river pathway. If these active areas are private then they should be somewhat visible from the river pathway and have views of the river. Materials for these spaces should be of the same high quality of the main structures and should reflect the natural colors and textures of the river valley.

Example of a native planted green street in San Francisco

Example of outdoor patios and balconies adjacent to the River Corridor

3.2 SPECIFIC REACH RECOMMENDATIONS

The San Diego River can be understood as a linked series of reaches. The unique characteristics and opportunities of each reach suggest an approach that reveals their best qualities and showcases the changing visual and physical experience as one moves through the river valley.

Within the City of San Diego, the Master Plan identifies six reaches. Traditionally distinguished by hydrologic characteristics, these reaches are based upon distinct topographic conditions, spatial experience and/or land use. Following the flow of water from the ocean to the City of Santee, the reaches are the Estuary, the Lower Valley, the Confluence, the Upper Valley, the Gorge and the Plateau. Specific recommendations needed to create the river park are identified in each reach.

Specific reach recommendations are described in the following categories: existing conditions and recommendations. The existing conditions category provides a brief description of the area and the current conditions of the river hydrology and habitat. The recommendations category outlines how to achieve the Master Plan principles and general recommendations. Where appropriate, key sites are identified where special opportunities exist or where conditions and location define the site as a critical component of the river park.

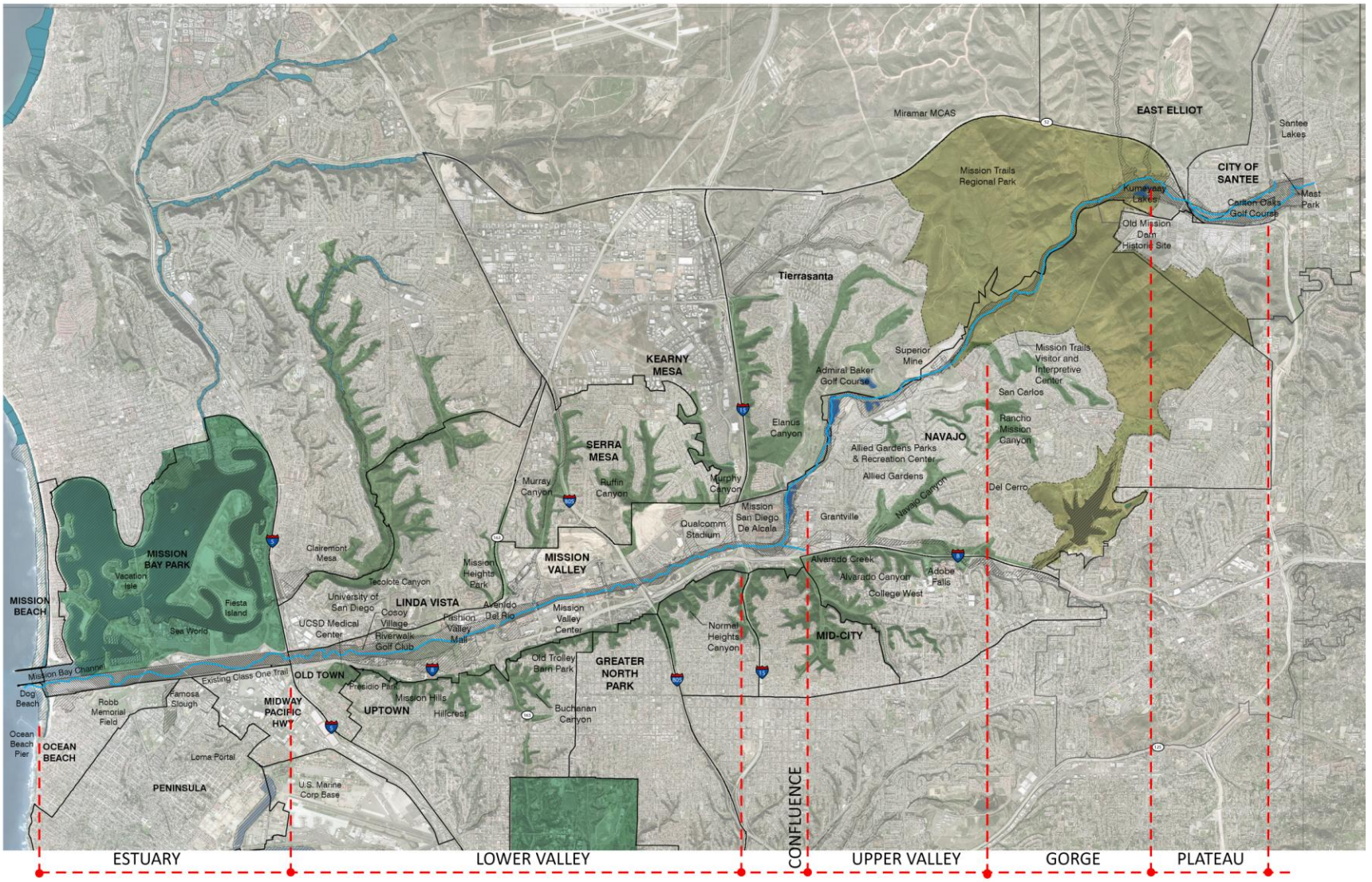


Figure 7. San Diego River Reaches

3.2.1 ESTUARY REACH

Overview

Extending from the Pacific Ocean to the western boundary of Mission Valley Preserve, the Estuary Reach is a unique habitat where the ocean waters converge with the fresh waters from upstream. The estuarine ecosystem at the mouth of the San Diego River is remarkably healthy, but significantly smaller than its original extent. The Derby Dike, built on the river's southern edge in 1852 by the United States Army to eliminate flooding into downtown, and the construction of the floodway channel berm on the north side of the river is responsible for this reduction in scale, separating the river from its delta that historically (and alternately) included both Mission Bay and San Diego Bay. This constructed river channel has also restricted and concentrated pedestrian and vehicle circulation, resulting in heavy containment of boundaries to the river channel.

Diverse estuarine vegetation

The multiple crossings of Interstate 5, Mission Bay Drive and the railroad have had additional impacts on the estuary, creating an abrupt terminus to the Estuary and disrupting the gentle transition from estuarine to riparian habitat. The tremendous experience of viewing the entire estuary and shoreline as one entity is now limited by views of development, the dikes, and by highways containing the river. Despite these alterations, the estuary remains an expansive environment defined by horizontality.

The estuary supports rich avian and aquatic species

The estuary includes, or is adjacent to several significant existing parks and open spaces, including Ocean Beach Park, Famosa Slough Open Space and Mission Bay Park, (which includes Ocean Beach Dog Beach, Robb Field, Dusty Rhodes and the Southern Wildlife Preserve Open Space). The existing San Diego River pathway is on the south side of the river on top of the man-made river channel (the Derby Dike) and connects Ocean Beach Park to the Mission Valley Preserve. In addition, there is a multi-use path on the north side of the river that follows the river to Friars Road

and at this point the path is located on the public street. Dog Beach is located at the mouth of the river and is used regionally by many dog owners. East of Dog Beach is the Southern Wildlife Preserve, a unique habitat for waterfowl and shore birds, in addition to least terns. To minimize disturbance to the habitat, especially wintering waterfowl, only non-motorized boats are allowed to use the river channel west of the West Mission Bay Drive Bridge from April through September. Obtaining a park use permit from the Park and Recreation Department is required prior to use of the river channel. The Park and Recreation Department instructs permit applicants on use restrictions and limits permits to ten for any given day. Fishing is allowed in the river channel west of Sunset Cliffs Boulevard. Wading in the river channel to fish is permissible at Dog Beach. Interpretive signs about the Estuary Reach and its relationship to the river are needed.

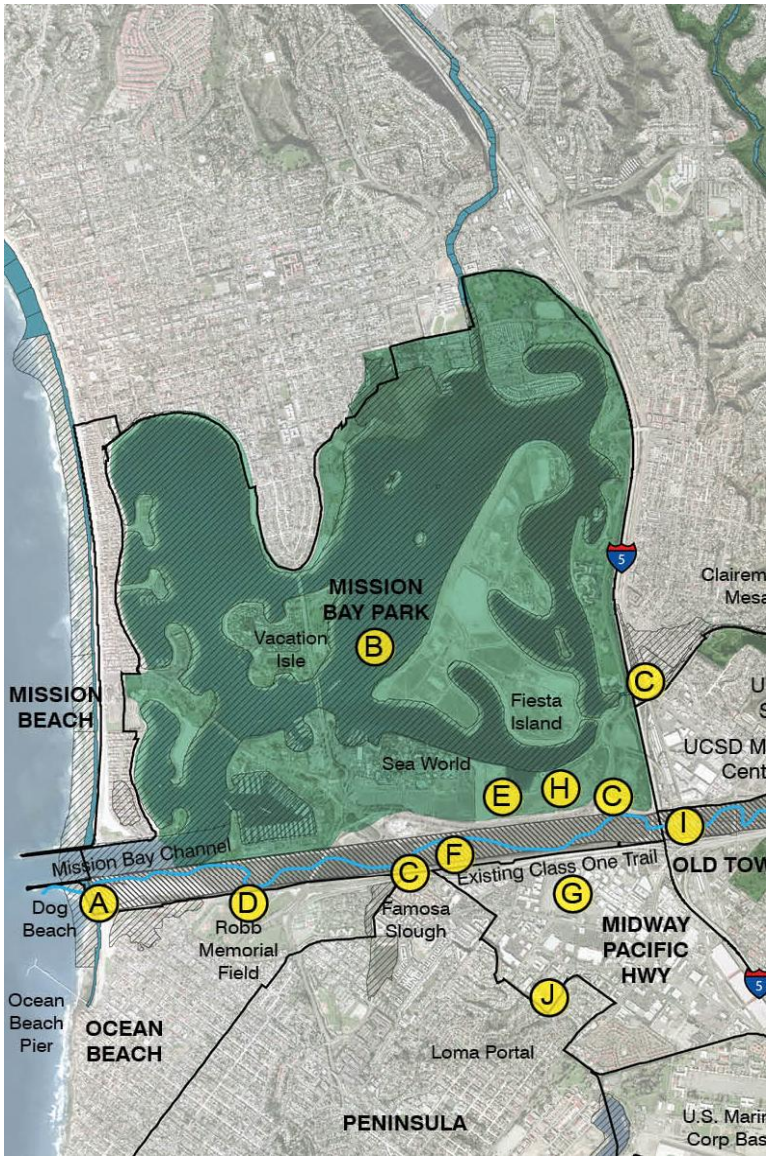
RECOMMENDATIONS

A. Create a San Diego River Park pathway kiosk at Dog Beach identifying the western entrance of the river pathway.

B. Support the goals of Mission Bay Park Master Plan (including Dog Beach, Robb Field, and Southern Wildlife Preserve), the Famosa Slough Enhancement Plan, and the Mission Valley Preserve. Support the replacement and construction of the West Mission Bay Bridge that will contain class I bike lanes on both sides.

C. Improve pathway and trail connections to Mission Bay Park, Famosa Slough, Tecolote Canyon, Southern Wildlife Preserve and other open spaces from the San Diego River pathway.

D. Create a kiosk at Robb Field identifying the entrance to the San Diego River pathway and re-landscape the area adjacent to the river with natives that relate to the estuary and river edge.



Estuary Reach

E. Investigate options through a feasibility study to provide a river and estuary outdoor interpretive center along the north side of the river.

F. Create estuary overlook platforms along the San Diego River Park pathway that could include interpretive signs on the hydrology and habitat of the Southern Wildlife Preserve.

G. Study the potential to create a park with a recreational connection to the river and neighborhood when the Valley View Casino (formerly know at the San Diego Sports Arena) redevelops.

H. Provide interpretive signage along the river pathway about the rich history of the estuary including the development of Old Town, the construction of Derby Dike and the creation of Mission Bay Park.

I. Coordinate with Caltrans to establish a 'Green Gateway' at the intersection of Interstate 5 and the river valley by revegetating the interstate rights-of-way with native vegetation.

J. Create a pedestrian/bicycle connection between the San Diego River Park and San Diego Bay.

The Estuary Reach of the San Diego River Park must balance two primary needs: human interaction at an educational and experiential level, and the protection and maintenance of sensitive habitat. Careful design can accommodate both elements in a manner that benefits the system as a whole. Greater understanding of the ecosystem through interpretation will instill a sense of ownership and stewardship for this delicate part of the river valley. Overlooks should be provided along the river pathway to interpret the Southern Wildlife Preserve.

Opportunities to explore the expansion of the estuary should be sought, where possible, to further diversify the wildlife habitat. The potential to do so may exist at Famosa Slough and at Mission Bay Park. Planning efforts should also acknowledge that the entire corridor within the Estuary Reach, as proposed for the San Diego River Park, is within the boundaries of Mission Bay Park. Planning must integrate with and support the Mission Bay Park Master Plan.

The river park must support planning efforts in Mission Bay Park to provide a river and estuary interpretive center, which could include educational opportunities, public art, and scenic overlooks. The facility should be oriented toward the river, and buffer the river edge with native vegetation.

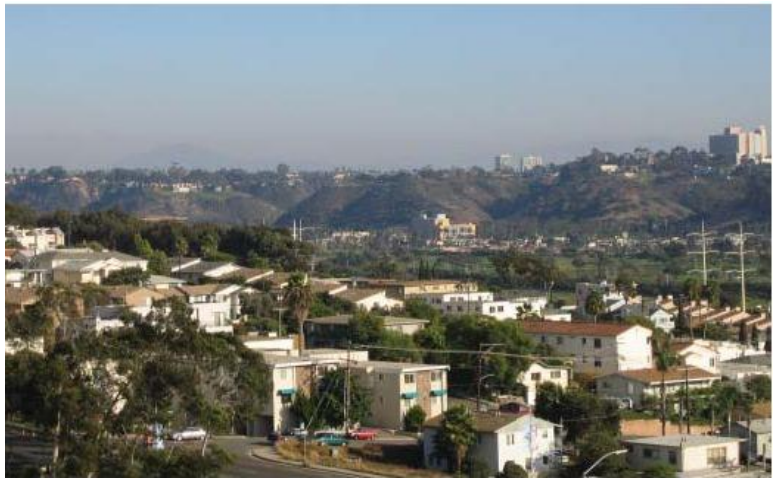
3.2.2 LOWER VALLEY REACH

Overview

The Lower Valley includes the Mission Valley Preserve east to Interstate 15. The Lower Valley Reach is heavily urbanized; extensive paving in the form of parking lots and roadways, massive infrastructure projects and relatively high density development are within this reach. The river's presence is further marginalized by channelization and old mining ponds. Simple lack of space presents a severe hydrological constraint throughout the Lower Valley Reach, and exotic vegetation negatively impacts the reach's native ecosystems.

Lower Valley looking northwest

At the very west end of the Lower Valley is the Mission Valley Preserve, which extends from the Interstate 5 to Sefton Field and the YMCA. The preserve is entirely within the floodplain of the San Diego River. Most of it is riparian in nature, including black willows, cottonwoods, and sycamores. The western edge is estuarine, due to the constant fluctuation of the ocean, with salt grass, pickleweed, and spiny rush. This preserve is home to many wetland species and home to the endangered Least Bell's Vireo, a tiny songbird that nests in the area after wintering in Baja California. The birds usually arrive in the spring, as early as mid-March, and stay until as late as September. The City of San Diego owns and maintains the preserve.



Lower Valley from University of San Diego looking southeast

The surrounding communities within the Lower Valley Reach are particularly deficient in community and neighborhood parks and the San Diego River Park should play a role in addressing this need. In 2009, Sefton Field was dedicated to the City as a 19-acre population-based park, of which 7.37 acres are usable for ball fields and children's play area and the remaining acreage is a mitigation site for the construction of the

Metropolitan Transit System (MTS) trolley. On the north side of the river, across from Sefton Field is the Mission Valley YMCA. This site, 8.3 acres, is owned by the City with a lease to the YMCA for recreation facilities including a recreation building, outdoor multi-use fields and a 50-meter pool. The San Diego River pathway is located on the south side of the river from the Mission Valley Preserve to Sefton Field. East of Sefton Field, the river pathway does not exist along the river. At Fashion Valley Road, the river pathway begins again on the north side of the river only and continues under State Highway 163 to the First San Diego River Improvement Project (FSDRIP) at Hazard Center Drive. From Hazard Center Drive, the western boundary of FSDRIP, the river pathway is on the north and south side of the river to the end of FSDRIP at Qualcomm Way. The river pathway stops at all existing public street intersections within FSDRIP, creating several gaps in the pathway. The City has completed a feasibility study on above-grade connections for the river pathway that would close all the gaps within FSDRIP. The next river pathway gap occurs under Interstate I-805 due to a large drainage structure. From Interstate 805 to the east, the river pathway does not exist as a formal paved path. If additional development occurs west of Fenton Parkway, the river pathway will be continued to the Upper Valley Reach. Undeveloped space or public land exists within the lower valley reach, offering opportunities for the river to meander, for wildlife habitat to expand, and for the creation of the river pathway and parks.

RECOMMENDATIONS

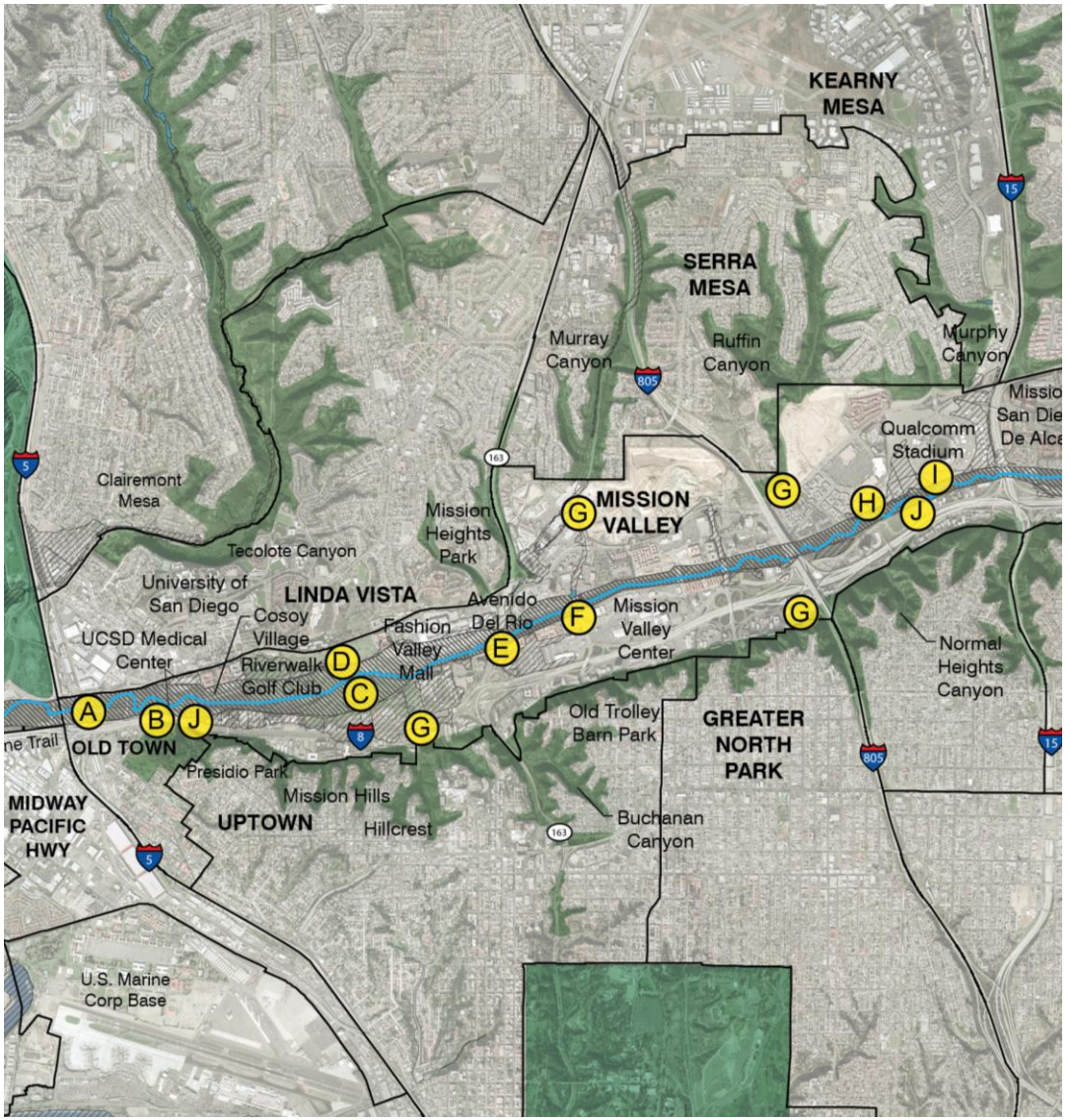
A. **Support the goals of the Mission Valley Preserve and provide additional interpretive signs on the role of the San Diego River in the Preserve.**

B. **Provide a connection between the San Diego River pathway and Presidio Park and a kiosk at Presidio Park to identify the river pathway. Provide a connection between Sefton Field to the south of the river and the YMCA to the north.**

C. **Explore options at the Riverwalk Golf Course to extend the river pathway along the trolley corridor as a short term measure until the Riverwalk Golf Course is redeveloped into a multi-use development. When the redevelopment occurs, extend the river pathway along the River Corridor.**

D. **Pursue opportunities to address the hydrology of the river, to provide public parks and to orientate the new development toward the river in Specific Plan areas, if amended.**

E. **Coordinate with Caltrans to establish "green gateways" at the intersection of State Highway 163 and Interstate 805 and the river valley by revegetating the freeway rights-of-ways with native vegetation.**



Lower Valley Reach

F. Construct bike and pedestrian crossings for the existing river pathway at FSDRIP at public street intersections, including Mission Center Road, Camino del Este and Qualcomm Way.

G. Create trail connections to the southern canyons of the Lower Valley, including Buchanan and Normal Heights Canyon, and to the northern canyons, including Murray, Murphy and Ruffin Canyons.

H. Create the river pathway connection from Fenton Parkway (on the south side of Mission Valley Library) to I-15 and pursue opportunities to provide a pedestrian/bicycle connection, over the river, from Qualcomm Way to Mission City Parkway.

I. Consider public recreation, the San Diego River pathway and a naturalized open space along the river when planning any future use of the City's property at the Qualcomm Stadium site.

J. Provide interpretive signage along the river pathway about the rich history of the Lower Valley including: the prehistoric Village of Kosa'aay (Cosoy) and Nipaguay; the first Spanish Mission in California; and the farming industry of the 1880's; the sand and gravel companies; the construction of the highway system; and the development of Qualcomm Stadium (formerly known as Jack Murphy Stadium).

The heavily suburbanized condition of the lower valley reach is deficient in developed public parks will require innovative park solutions. The San Diego River Park has the potential to combine "natural" programs, such as the healthy hydrology of the river and its ecological habitat, with "urban" programs, such as active and passive recreation and an accessible and urban corridor edge. By locating recreational activities, such as passive picnic areas or overlooks within the River Corridor Area and active recreational uses in the River Influence Area such as field sports or children's play areas, the river becomes a place of varied experiences. An active river scene will reach out to a large number of user groups and introduce the river's historic and modern faces to a broad spectrum of people. The rights-of-way, associated with the river valley's highways, presents key opportunities to establish green gateways into the river area and the surrounding communities, extending the color and texture of native plant communities along the river.

Space for the river must be sought out in the Lower Valley Reach. Open space easements and property acquisition where feasible are necessary for the San Diego River Park to become a success. The future redevelopments of public land or undeveloped land are opportunities for creating parks and open space. Consistent recommendations regarding new development, streets and landscape should be established for the Lower Valley Reach. Establishing setbacks along the river will allow the San Diego River Park to provide for areas for passive uses as well as active uses.

Key Sites of the Lower Valley Reach

A. Riverwalk Golf Course Redevelopment Site

The Levi-Cushman Specific Plan for the Riverwalk Golf Course site was approved in 1987. As approved, the plan would develop roughly 5.2 million square feet of mixed-use development including residential, retail, commercial, office and recreational uses for the approximately 200-acre site. The specific plan aligns with the San Diego River Park Master Plan in focusing development on the river, and this concept should guide any future amendments to the plan. The recommendations and guidelines contained in the San Diego River Park Master Plan, such as considering a more naturalized river pattern and increasing the channel width to allow the river to meander in a more naturally manner, should be considerations of any future amendments to the Levi-Cushman Specific Plan.

Illustrative river pathway concept at Riverwalk site

A future amendment to the approved Levi-Cushman Specific Plan should require implementation of the San Diego River Park Pathway as recommended in this Master Plan. The San Diego River Pathway can serve the site by providing an amenity to people living and working within the proposed development, as well as providing pedestrian and bicycle commuter access to surrounding neighborhoods and the trolley. The trolley right-of-way may offers the opportunity for an interim trail alignment. Because the Riverwalk Golf Course is anticipated to provide new residential development, there is an opportunity to establish public community and/or neighborhood parks. As the site redevelopment plans evolve, space for a public park should be sought adjacent to the river where possible. The nearby YMCA is expected to continue its private, fee-based recreation facility. Sefton Field will provide public recreation including ball fields and children's play areas. Connection to these public and private facilities could be strengthened with connected open space and a trail head near the YMCA.

View of the Riverwalk Golf Course

Key Points for Levi-Cushman Site

- Create and maintain continuity of the river pathway for meeting transportation needs in Mission Valley.
- Seek opportunities to establish a community/neighborhood park to meet community needs.
- If the Levi-Cushman Specific Plan is amended, work with the developer to improve river hydrology, restore habitat, and provide the river pathway.
- In the short term, the river pathway could be developed following the trolley alignment, within the trolley right-of-way. In the long term, the river pathway should be developed within the River Corridor Area.

Potential Park Elements

- Park Recreation may include more active recreation found in a neighborhood park
- Open Space Recreation may include pedestrian and bike paths, benches,
- and passive recreational areas
- Location visually or conceptually connected to the river
- Character reflecting the river's ecology and history

B. Qualcomm Stadium Site

The Mission Valley Community Plan locates a Community Park at the Qualcomm Stadium site. This site is the last remaining City-owned property that is large enough to be in scale with the river valley. Careful consideration should be given to the intrinsic value of this place as a public green space and as an opportunity to create value to help finance redevelopment. A river-oriented community park could provide public recreation facilities adjacent to the naturalized open space San Diego River Park, which would complement Mission Bay Park and Mission Trails Regional Park.

Key Points for Qualcomm Stadium Site

- Critical location for meeting community-based park and recreation needs in Mission Valley, as identified in the Mission Valley Community Plan.
- No acquisition costs required; land is currently owned by City of San Diego.
- Critical location for creating continuity in San Diego River Park and San Diego River Park pathway.
- Create primarily natural open space located between the trolley and the river.
- Extend open space corridor to create new habitat and trail connection to Murphy Canyon.
- Acknowledge environmental constraints with adjacent land uses.

Qualcomm Stadium Site

Potential Community Park Elements for Qualcomm Stadium Site

- Ball fields/soccer fields
- Active sports complex
- Picnic facilities
- Amphitheater
- Children's Play area with "natural" character (wood, boulders, sand)

Potential San Diego River Park Elements for Qualcomm Stadium Site

- San Diego River Pathway
- Natural riparian and upland habitat areas
- Boardwalk/overlooks for viewing and interpretation
- Pedestrian linkage: park to river and Murphy Canyon
- Focus park toward river

3.2.3 CONFLUENCE REACH

Overview

The Confluence Reach is the area between Interstate 15 and Friars Road Bridge. It is where Murphy Canyon, Alvarado Canyon and two minor canyons once joined the San Diego River as it turned west to the Pacific Ocean. This place is not only a confluence of canyons and creeks, but a confluence of people and activity throughout the history of San Diego. This is where the El Camino Real met the east-west transportation route following the San Diego River near the Mission San Diego de Alcalá. This reach also acts as a gateway to multiple destinations, allowing users to access Murphy Canyon, Alvarado Canyon, Collwood Canyon, Navajo Canyon and the Mission San Diego de Alcala.

This reach is partially enclosed by a steep canyon wall on the west side and industrial uses on the east side of the river. Interstate 8 on the south further emphasizes the sense of enclosure. Within this reach, east of Interstate 15 on the south side of the river, is a large undeveloped parcel owned by the California Department of Fish and Wildlife. This parcel was owned by Caltrans, but was deeded over to the California Department of Fish and Wildlife during the expansion of Interstate 805. The site is a State Ecological Reserve and is open for public use during daylight hours for hiking on existing trails and fishing from certain areas.

The river is also constrained by a series of old gravel mining ponds below the Friars Road Bridge; these ponds impede the normal hydrologic activities of the river system. Extensive exotic vegetation infestation is present both in the ponds (Ludwigia) and in the river (Arundo donax). As the river turns west, it is isolated by highway infrastructure, private property, and difficult physical terrain. The dense growth of Arundo further adds to the river's inaccessibility. The only section of the river pathway constructed in this reach is along the east side of the river adjacent

River is choked by invasive vegetation

Redevelopment in Grantville should encourage new development to orient to the river

to some of the existing commercial development. Access to the Mission San Diego de Alcalá from the river is along the public sidewalk along San Diego Mission Road.

The Confluence Reach contains the Grantville Redevelopment Subarea A of the Navajo Community. This area is directly adjacent to the east side of the river and has been zoned and built with industrial uses that have turned their backs on the river and used the area as a storage yard and in some cases a waste storage area. Through redevelopment of Grantville, the area could to be rezoned with active uses that orient to the river and ensure that the river side of the structures includes plazas, public access and architecture that will step back and allow for air and sunlight to be part of the river corridor. Public parks to serve new residential uses along the river should be located adjacent to the river where possible and provide connections to the river pathway.

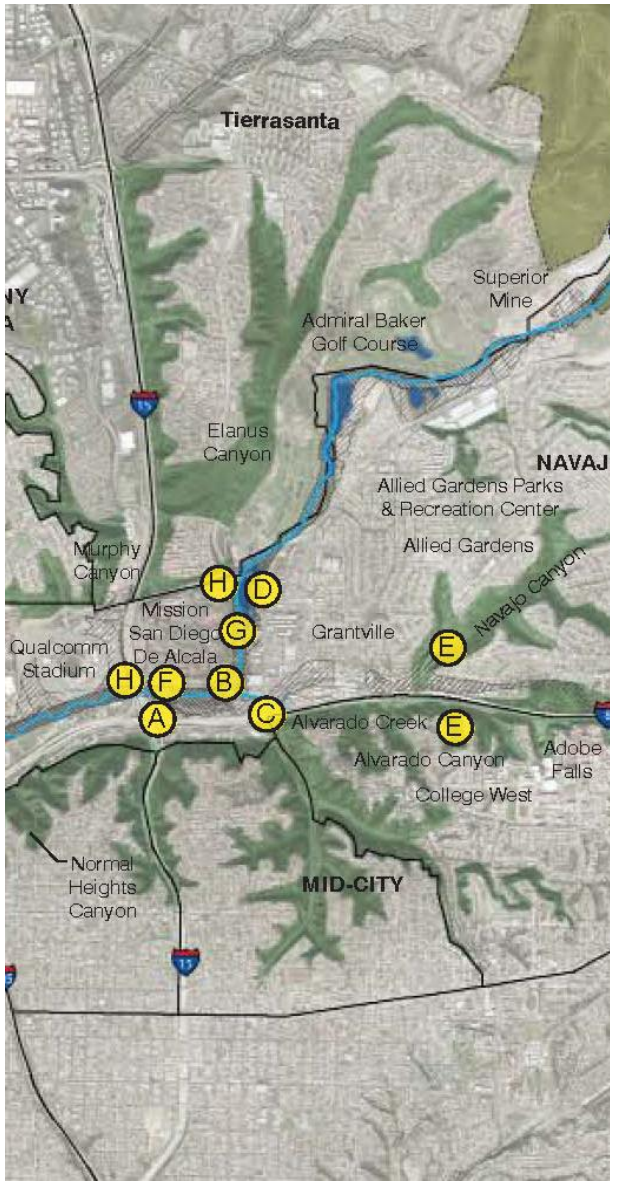
RECOMMENDATIONS

A. Pursue a class I path along Rancho Mission Road and Ward Road and coordinate with the California Department of Fish and Wildlife for a river pathway connection on the south side of the river just east of Interstate 15. If a pathway connection cannot be provided alternative connections will be considered. Ensure that trails are designed with safety in mind, and to encourage stewardship and litter prevention.

B. Provide for a river pathway connection to San Diego Mission Road from the north side of the river at Rancho Mission Road.

C. Improve water flow under the bridge at Mission Gorge/Fairmount Avenue for the Alvarado Creek to connect to the San Diego River. Provide a pedestrian connection under or over the bridge for access to the river pathway from Alvarado Creek.

D. Identify land for public parks and open space through land acquisition or open space easements and identify an alignment for the San Diego River pathway as Grantville redevelops.



Confluence Reach

E. Improve open space and trail connections with Alvarado Canyon and Navajo Canyon.

F. Create a connection between the San Diego River Park pathway and the Mission San Diego de Alcalá.

G. Study alternatives to improve the hydrology of the river where the river corridor is narrow and constrained by deep ponds that were created by past sand and gravel mining operations. Separating the river channel from the ponds is recommended where possible and feasible. In addition, it is recommended to remove barriers between pond sections to create a larger, deeper pond.

H. Provide interpretive signage along the river pathway about the history of the Confluence Reach including; Mission San Diego de Alcalá and its role in building the first water conveyance system (San Diego Mission Flume), the Kumeyaay village of Nipaguay at the historic mission site, the formation of the large Mexican land grants and the history of the sand and gravel mines.

The redevelopment in the Grantville area will provide the tools to change the river landscape in the Confluence Reach. By engaging owners of under-utilized property on the east edge of the river corridor, the redevelopment of Grantville may create opportunities for the acquisition of land or establishing public access easements that could allow for a wider river corridor. The river corridor today is highly constrained, however by separating the existing ponds from the river; it may be feasible to accommodate space for a free flowing river. With the ponds separated from the river a more diverse aquatic habitat could be provided. A complementary action might be improving the ponds for recreation activity, such as fishing or non-motorized boating, with resource agency approval.

The west side of the river is steep and narrow, and does not have possibilities for trail construction; however, cantilevered construction may be considered, but could affect the river and habitat. The San Diego River Park pathway can be best accommodated on the east side of the river. There is significant potential to recreate an important wildlife habitat connection between the river valley, Murphy Canyon and Alvarado Creek. Such connections would represent a meaningful first step toward reestablishing the physiographic origins of the river valley. A trail and habitat/open space connection along Alvarado Canyon Creek would link Navajo Canyon with the river corridor, further unifying the river valley's recreational and interpretive resources.

Key Site of the Confluence Reach

A. Grantville Subarea A and Alvarado Creek Site

Alvarado Canyon combines with Navajo and Collwood Canyons to form the largest tributary canyon system linked to the San Diego River Valley within the City of San Diego. However, currently this connection is nearly invisible because of the scale of highway infrastructure and development that has constrained the canyon throat at the confluence. Replacing culverts with bridges and gaining adequate land to reduce the channelization of Alvarado Creek will re-establish the visual continuity of the canyon system with the river valley.

Key Points for the Grantville Subarea A & Alvarado Creek Site

- Location is critical for reconnecting San Diego River with its most significant tributary canyon, Alvarado Creek, within the City of San Diego.
- "The greening" of Alvarado Creek is an important component of connecting the river valley to the canyon, providing potential space for expanding and connecting habitat and trail to the canyon, San Diego State University and upland neighborhoods.
- Coordinate with private land owners in Grantville to incorporate the river as an amenity for all redevelopment.
- Improve the creek passage under Mission Gorge Road and Fairmount Avenue to allow for improved creek flow, water quality and pedestrian safety in Grantville.
- Coordinate with Caltrans on the potential new interchange design and construction.
- Provide park land along the river as a component of the redevelopment of Grantville.

Vegetation can soften the impact of concrete channels

The channelization of Alvarado Creek above the Grantville Post Office offers little wildlife habitat and allows for no groundwater recharge

Potential Park Elements for Grantville Subarea A and Alvarado Creek Site

- Path connection to the east side of Mission Gorge Road and Fairmount Avenue
- Wildlife habitat restoration
- Interpretation of the Grantville history
- Public parks that feature picnic areas, scenic or interpretive overlooks, fitness stations, seating and educational exhibit areas. In areas that do not contain sensitive habitat additional park amenities could include children's play areas, multi-purpose courts, and multi-purpose lawn areas. Recreation activities within the river, such as non-motorized water craft, could be proposed and will require Resource Agency approval at the time of a project proposal.
- Location visually or conceptually connected to the river
- Character reflects the river's ecology and history
- River function incorporated into design

3.2.4 UPPER VALLEY REACH

Overview

The Upper Valley Reach extends from Friars Road Bridge to the western boundary of Mission Trails Regional Park. It is a reach comprised of a complex natural environment as well as topographic features, with a diversity of experiences from the enclosure of steep valley walls in the east to a broad and open valley near Admiral Baker Golf Course. Heavily impacted by human activity, this reach has dense development on the south side of the river, sand and gravel mining along both sides of the river and a federal golf course on the north side of the river.

The Upper Valley Reach is characterized by three hydrologic conditions that are deleterious to the health of the river system. First, the sand and gravel operations west of Mission Trails Regional Park has channelized the river and disrupted habitat continuity through and across the mine site. The river is similarly channelized further downstream through the federally-owned and maintained Admiral Baker Golf Course. The golf course use poses additional risk of surface runoff-carrying pesticides, fertilizers and other pollutants because of the lack of a buffer between the golf course and the river. Secondly, the river corridor through the mine site is infested with exotic plant species, particularly Giant Reed (Arundo donax). Exotics displace native riparian vegetation, causing the loss of the animal species that would typically inhabit this vegetation. Finally, the river channel is interrupted by a series of ponds that obstruct the natural sediment transport processes of the stream. A problem shared by other ponds in the system, the unnatural stream flow invites further infestation by non-native plant species; in still water conditions, the encroaching species is typically the surface plant Water Primrose (Ludwigia spp.).

Upper Valley looking east over Admiral Baker Golf Course

Superior Mine site

Within the Upper Valley Reach is the Grantville Subarea B of the Grantville Redevelopment Area within the Navajo Community Plan Area. This area is directly adjacent to the east and south side of the river and has been zoned and built with industrial uses. Similar to Grantville Subarea A, this area contains industrial uses which have turned their backs on the river and used the area as a storage yard, and in some cases for waste storage. Grantville Subarea B is proposed to be rezoned to a combination of multi-family residential, commercial and industrial uses that will reorient new development to the river. These new structures would feature mixed uses, plazas, public access and architecture that will step back and allow for air and sunlight to be part of the river corridor. Public parks required of the new residential use will be located adjacent to the river and will provide passive uses and connections to the river pathway.

This reach does not contain any segments of the river pathway in that the land is all privately owned and has not redeveloped in the last several decades. The City has prepared a Class I bike route feasibility study of the river pathway through this reach, but no future funding or action has taken place. The Archstone and Shawnee developments in the western end of the reach will construct the first segments of the river pathway as part of their new residential development.

RECOMMENDATIONS

A. **Coordinate with Navy Planners to explore opportunities to modify the Admiral Baker Golf Course, without impacts to the current recreational elements, to create a space for the San Diego River pathway, and to improve the relationship of the golf course with the river, such as controlling surface runoff from entering the river.**

B. **Improve open space and trail connections to Elanus Canyon north of Admiral Baker Golf Course.**

C. **Create public parks along the river pathway within the Grantville Area and explore opportunities for water recreation.**

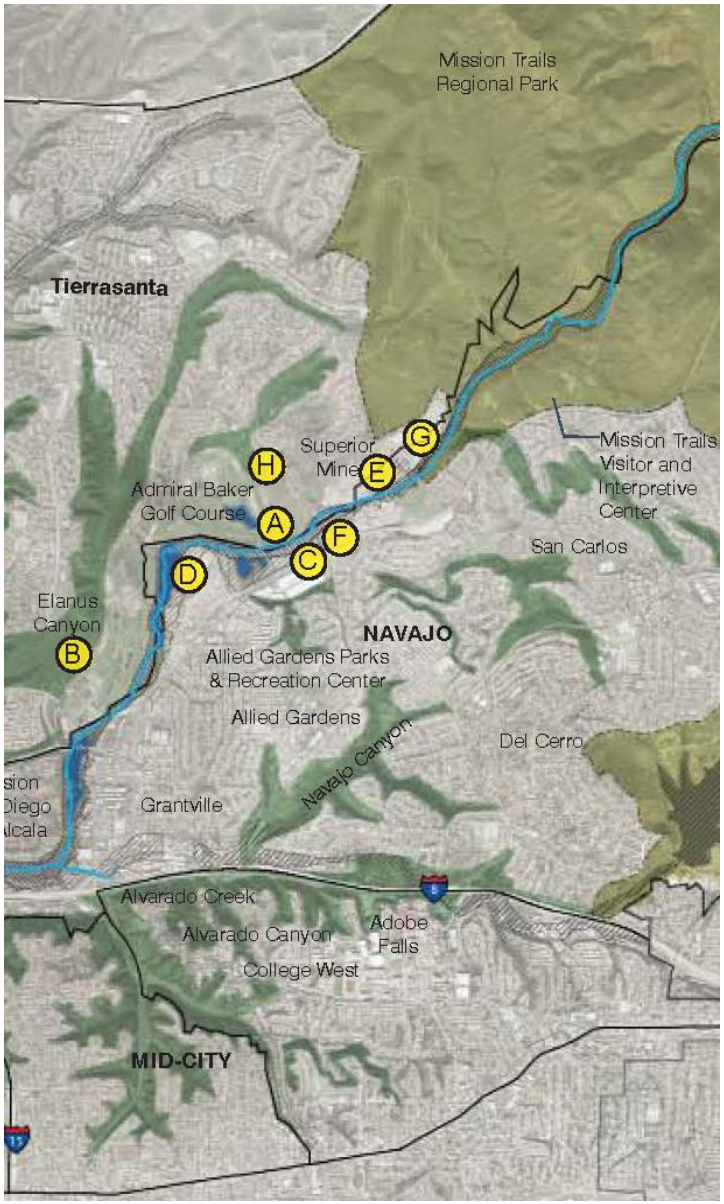
D. **Separate the river channel from the old mining ponds, where possible, as land is redeveloped to improve the hydrology of the river based on specific engineering studies.**

E. **Coordinate with Superior Mine redevelopment project to improve the hydrology of the river, establish a naturalized open space and habitat areas adequate to achieve wildlife habitat objectives and provide for the multi-use river pathway. The redevelopment should also look for areas along the river to interpret the river valley's history, including the mining operations.**

F. **Construct the river pathway to connect to Mission Trails Regional Park when Grantville Subarea B redevelops.**

G. **Provide interpretive signage along the river pathway about the history of the Upper Valley Reach, including the Mission Dam and Flume that brought water to Mission Valley, the historic cattle ranches and the history of the sand and gravel mines.**

H. **Create trail connections to the river pathway from the Tierrasanta community and a connection from Tierrasanta Blvd. to Calle de Vida. Provide a kiosk at each trail head and at least one overlook at the higher elevation to mark the entrance to the San Diego River Park.**



Upper Valley Reach

Within the Upper Valley Reach, future development should look for opportunities to increase the river corridor width. A wider river corridor in the Upper Valley reach would allow the river to be separated from the ponds, and offer space for passive recreation opportunities. Separating the ponds from the river will improve the flow velocities and reestablish some degree of sediment transport. Hydraulic and hydrologic studies should be conducted in conjunction with redevelopment planning to determine the physical and hydrologic characteristics and ecologic condition of each specific pond, and provide recommendations as to the feasibility, ecological value and open space benefit of separating stream flow from the pond in each location.

The San Diego River Park pathway can be best accommodated on the south side of the river connecting to Mission Trails Regional Park. A pathway or smaller trail connection should be provided to the Tierrasanta community, linking this community to the River Park. In addition, interpretive signs should be placed along the pathway to provide an interpretive history of the Upper Valley Reach.

Key Sites of the Upper Valley Reach

A. Admiral Baker Golf Course Site

There are opportunities to integrate the golf course with the river corridor. Methods of meshing the two landscapes might include pedestrian trail connections along the golf course and the redevelopment of the golf course as a "links" or target type course with native landscaping between tees and greens. The incorporation of native plant species, creating a visual link and habitat corridor from the river corridor to Elanus Canyon north of the golf course, would be another strong step toward integrating the river and recreational environments.

Key Points for Admiral Baker Golf Course Site

- Continue on-going discussions with Navy Planners to find an appropriate level and means of integrating the golf course with the San Diego River Park.
- Expand critical habitat area and connections to Elanus Canyon north of the golf course.
- Create trail connections along the golf course.
- Establish habitat along the river for wildlife movement and habitat objectives.
- Create a trail connection from the Tierrasanta Community (adjacent to Tierrasanta Blvd.) to the river pathway with an overlook at the upper elevation.

- If the Admiral Baker Golf Course develops into something other than a golf course, the new development should provide trail connections from the San Diego River Pathway to the Tierrasanta community.

B. Superior Mine Site / Grantville Subarea B

Evolution of the landscape within the Upper Valley Reach hinges upon successfully engaging the land owners, developers and planners of Superior Mine, which is in the Grantville Subarea B and adjacent lands with the river park master planning process. As these lands move toward reclamation and redevelopment, collaboration can bring about benefits to all parties. Creating adequate corridor width for habitat and trail is a minimum requirement. A broad natural river corridor through the mine site could serve as a strong organizing feature of the development. This corridor should include the river pathway, a native riparian habitat, an infiltration zone for ground water recharge, and/or an improved river channel with introduced meanders. The potential to acquire portions of the site to create open space and recreation land should also be explored.

Incorporating elements of the San Diego River Park into the redevelopment of the mine site creates the potential of increasing property values, and as such, is an incentive for cooperative planning. The site's close proximity to Mission Trails Regional Park also creates an excellent opportunity to use the river and its landscape as a unique and identifying character of the site. Cooperative planning and river-sensitive design would benefit end-users by providing a visual and recreational amenity, as well as the river pathway for commuter bicycle connections to adjacent communities and trolley service.

Improvement to Admiral Baker Golf Course can contribute to the health of the river

The reclamation and redevelopment of Superior Mine is a significant opportunity to improve the condition of the River and wildlife habitat

Key Points for the Superior Mine Site/Grantville Subarea B

- Coordinate with Superior Mine land owners and developers to find an appropriate balance between development, park land and open space.
- Ongoing mining operations are scheduled to continue for another 20 years. The potential for increased property values, due to the amenity created by the San Diego River Park, may encourage an earlier end to mining operations.
- Create an open space amenity that is accessible and usable by the public that provides access to the river, as well as added value to the development project. The location, size and use of this amenity will be studied as part of the specific land planning studies for the future development.

Potential Park Elements for Superior Mine Site/Grantville Subarea B

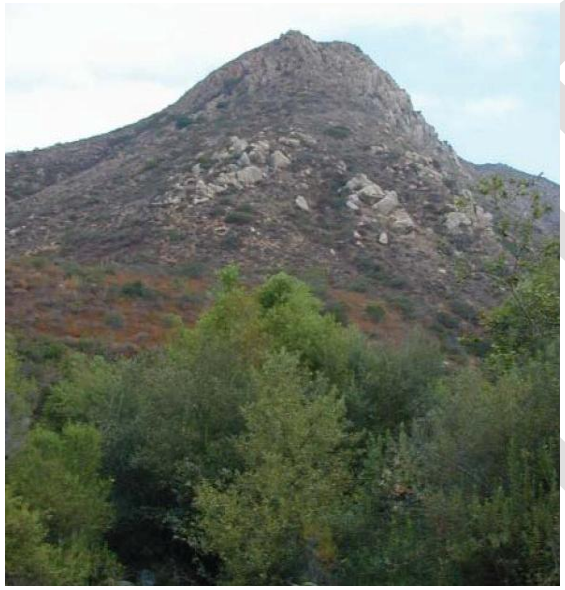
- Public parks with recreational uses, such as picnic areas, children's play areas, multi-purpose fields and courts
- Incorporation of the river pathway as an amenity of the public park
- Wildlife habitat restoration
- Location visually or conceptually connected to the river
- Character reflecting the river's ecology and history
- River function incorporated into design

3.2.5 GORGE REACH

Overview

The Gorge Reach is defined primarily as the Mission Trails Regional Park but also includes privately-owned land between Mission Trails Regional Park and Mast Boulevard. The Gorge Reach offers a strong sense of enclosure reinforced by the rising walls of Fortuna Mountain and Kwaay Paay Mountain. Established in 1974, Mission Trails Regional Park has preserved the river valley's original landscape of sage scrub, chaparral, and oak woodland and riparian habitats in exceptional condition. At approximately 8,000 acres, Mission Trails Regional Park is one of the largest urban parks in the nation, and a regional destination for hiking, biking, and wildlife viewing. The rich historic layers of the San Diego River Valley are revealed in many ways within the park. The Kumeyaay, Spanish missionaries and settlers, and 19th and 20th century ranchers and farmers have all left their mark on the land now within the bounds of Mission Trails Regional Park.

The river pathway has been established from the Mission Trails Regional Park Visitor Center to the Kumeyaay Campground on Father Junipero Serra Trail. Gaps in the river pathway exist from the Superior Mine site to the visitor center and from the Kumeyaay Campground to the Equestrian Staging Area. The existing and any future river pathway within the Mission Trails Regional Park will meet the trail requirements of the Mission Trails Master Plan.



South Fortuna Mountain

Mission Trails Visitor Center Terrace

RECOMMENDATIONS

A. **Support the recommendations of the Mission Trails Regional Park Master Plan. Coordinate with the Mission Trails Regional Park to establish a continuous trail system through the park that would connect the west and east ends of the San Diego River Park pathway. While most trails are not paved in the Mission Trails Regional Park, the trail should provide for pedestrians and bicycle users.**

B. **Provide a kiosk at the west and east entrances to the Mission Trails Regional Park along the San Diego River Park pathway.**

C. **Support existing and proposed interpretation of the river and history of the park at the Mission Trails Visitor Center.**

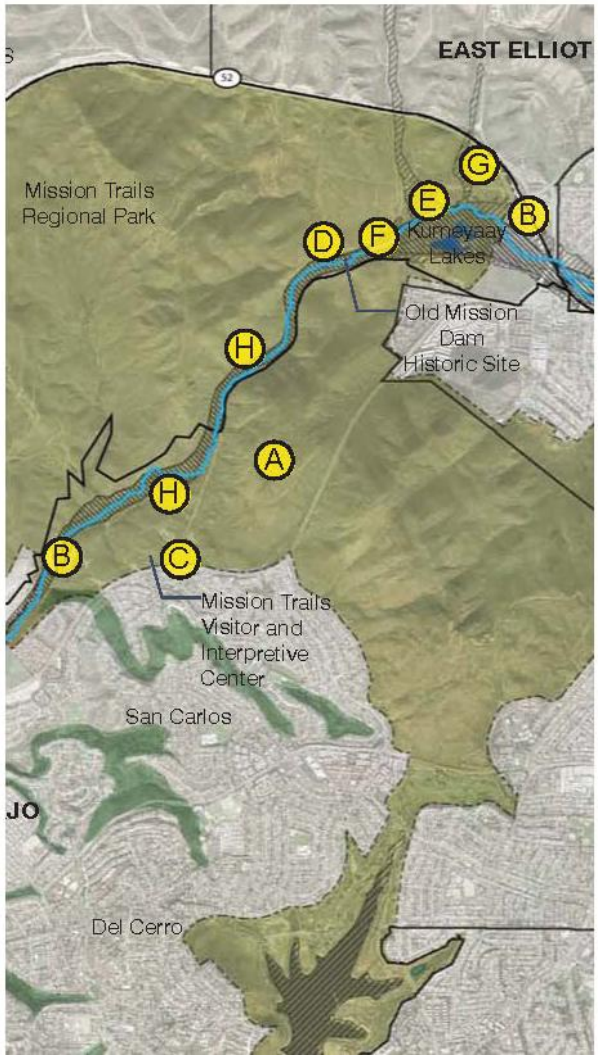
D. **Support the continual maintenance of the Old Mission Dam by dredging, and provide interpretive signage on why and how this type of maintenance is provided, including the development of the first water conveyance system (San Diego Mission Flume).**

E. **Study trail connections from Kumeyaay Lake campground to the future river pathway below State Highway 52.**

F. **Support the implementation of the Kumeyaay Lake Dredging and Berm Restoration to improve the hydrology of the river.**

G. **Study trail connections and alignments from the East Fortuna Staging Area to the future river pathway below State Highway 52.**

H. **Provide interpretive signage along the river pathway about the history of the Gorge Reach including; Mission San Diego de Alcala and its role in building the first water conveyance system (San Diego Mission Flume), the historic cattle ranches and the creation of Mission Trails Regional Park.**



Gorge Reach

The goals of the San Diego River Park Master Plan are in harmony with those of the Mission Trails Regional Park Master Plan and focus on continually improving hydrology and habitat along the length of the river and seek to further enhance and preserve the conditions already present at the park. That effort should explore the possibility of a soft surface trail linking the river corridor west of the park with Father Junipero Serra Trail and the Mission Trails Regional Park Visitor and Interpretive Center. Planning efforts should also consider improving the bike lanes within the Mission Gorge Road right-of-way or creating a trail, if right-of-way improvements are impossible. This trail would provide for connections within the park and with up-stream communities.

3.2.6 PLATEAU REACH

Overview

The Plateau Reach extends east from the privately-owned land adjacent to the Mission Trails Regional Park to the City of Santee. The terrain of the plateau opens up and reveals expansive views to the hills above Santee and to the distant mountains in the Cleveland National Forest. This expanse offers a sense of release from the narrow, enclosed condition of the river in the Gorge Reach. The San Diego River is negatively affected by a variety of physical constraints. North of the river is a man-made berm that separates the river from Carlton Oaks golf course and to the south of the river is State Highway 52. Heavy infestations of Giant Reed, Brazilian Pepper, and Fountain Grass (Pennisetum sp.) and other exotic species degrade water and vegetative quality. Other than golf, recreational resources are minimal, but an informal pedestrian trail exists on the north side of the river on top of the dike that connects the west and east end of the golf course. This existing trail is a potential site for the river pathway that will be the eastern boundary of the San Diego River Park.

RECOMMENDATIONS

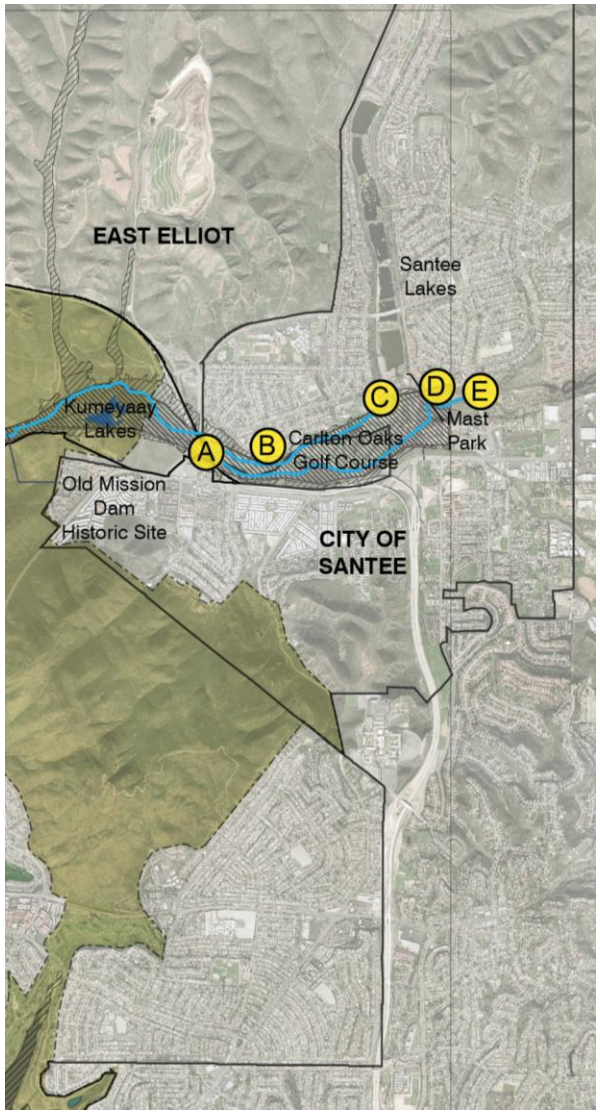
A. **Coordinate with Caltrans to identify potential alignment and methods to create the San Diego River Pathway under State Highway 52 and West Hills Parkway to the Carlton Oaks Golf Course.**

B. **Through a feasibility study and an associated environmental document determine the best location for the San Diego River Park Pathway connecting Mission Trails Regional Park to the City of Santee, along with connections to West Hills Parkway. Include in the study where a soft surface trail could be provided separate from the paved pathway to accommodate a variety of users.**

C. **Initiate a dialogue with Carlton Oaks Golf Course to explore the potential to evolve the golf course edge into a naturalized landscape buffer with native plant species and a vegetation management plan that removes exotic plants. The buffer should be designed to provide habitat, as well as an infiltration device to treat the golf course surface runoff before it goes into the river.**

D. **Look at opportunities to restore the natural open space adjacent to the river if the golf course were to change in the future and the site is redeveloped into a new use.**

E. **Provide a kiosk at the boundary of the City of San Diego and the City of Santee that identifies the eastern end of the San Diego River Park.**



Plateau Reach

Key Site of the Plateau Reach

A. Carlton Oaks Golf Course Site

There is potential for the golf course to accommodate a multi-use river pathway on its southern edge near the river. Land currently not used as golf course should be used for the river pathway and open space. The long term potential for this area to evolve into becoming part of the San Diego River Park should also be considered. Redesigning the golf course to be more sensitive to the hydrology of the river and creating habitat corridors are ways in which the golf course may accommodate multiple user groups.

Key Points for the Carlton Oaks Golf Course Site

- Golf Course site is a critical location for connecting the City of San Diego segment of the San Diego River Park with the City of Santee and upstream segments of the river park.
- The river corridor is channelized, narrow and constrained on the south side of the golf course. An expanded open space corridor would provide adequate width to re-contour the river channel. An improved river channel should allow increased river length and meander, increased riparian habitat, and run-off buffering at the golf course.

Cottonwood Tree Grove and secondary stream channel on Carlton Oaks Golf Course

Invasive species removal project, vegetation management in practice

Illustrative Draft Concept for the San Diego River Park at Carton Oaks Golf Course (Location of River pathway subject to change)

4.0 DESIGN GUIDELINES

4.1 PURPOSE

The purpose of the Master Plan design guidelines is to provide written and graphic information to support the Master Plan vision, principles and recommendations, for development areas within or directly adjacent to the river within the Mission Valley, Navajo, Tierrasanta and East Elliott community plans, and the following development regulations in the City of San Diego Land Development Code:

- Mission Valley Planned District Ordinance (Chapter 15, Article 14, Division 1-4),
- Community Plan Implementation Overlay Zone (Chapter 13, Article 2, Division 14, Navajo)
- Mission Trails Design District (Chapter 13, Article 2, Division 12)

All City of San Diego public projects conducting work in the river area and have an approved discretionary permit issued by the City prior to the adoption of this Master Plan, are exempt from the requirements of the San Diego River Park Master Plan Design Guidelines until such time that the permit is amended or expires. These projects however, are encouraged to comply with the Master Plan Design Guidelines were possible. In addition, all future private and public projects that propose or modify public utilities within the River Corridor or River Influence Areas must meet the requirements of the most current version of the City's Water and Sewer Design Guidelines. In addition, all future private or public projects adjacent to the shared railroad/light rail right-of-way will be planned with the safety of the rail corridor and the most current requirements of the California Public Utilities Commission.

Flexibility in the Design Guidelines and actual site development can be achieved and administered through the Planned Development Permit (PDP) process, Chapter 14, Article 3, Division 4 of the Land Development Code. The intent of the PDP regulations is to accommodate, to the greatest extent possible, an equitable balance of development types, site constraints, development regulations and community and city benefit.

Where development constructs the River Pathway Corridor consistent with Design Guidelines Sections 4.3.2 through 4.3.4 and the Recreation Element of the City's General Plan, population-based park credit may be granted commensurate to the River Pathway Corridor area. Where a development proposal includes the provision of park space to address population-based park requirements outside of the River Pathway Corridor area, population-based credit may be granted if consistent with the Design Guidelines, the Recreation Element of the City's General Plan and upon approval as identified in the City Council Policy – Community Notification and Input for City-Wide Park Development Projects.

4.2 RELATIONSHIP TO MULTIPLE SPECIES CONSERVATION PROGRAM SUBAREA PLAN AND ENVIRONMENTALLY SENSITIVE LANDS REGULATIONS

In addition to supporting the Master Plan's vision, principles, and recommendations, the Master Plan's design guidelines must be consistent with the Multiple Species Conservation Program Subarea Plan (MSCP) and the Environmentally Sensitive Lands (ESL) Regulations (Chapter 14, Article 3, and Division 1).

The MSCP is a comprehensive habitat conservation planning program that addresses multiple species habitat needs and the preservation of native vegetation communities. See Section 6.1.5 for a full description of the MSCP. The San Diego River and a majority of the area adjacent to the river are mapped per the MSCP as Multi-Habitat Planning Area (MHPA) and subject to the MSCP Subarea Plan "Land Use Considerations". These Land Use Considerations are implemented through the ESL regulations and the City's Biology Guidelines during project proposal, review and approval.

The ESL Regulations for Wetland Buffers apply to all land along the river that contains wetlands. These regulations require a wetland buffer to be provided and maintained around all wetlands, as appropriate, to protect the functions and values of the existing wetland area. In the Coastal Overlay Zone, the wetland buffer is a standard 100 feet minimum. Outside the Coastal Overlay Zone, the wetland buffer is determined by the recommendations of the Biology Report. Site specific evaluation of onsite wetland's functions and values, at the time of a project proposal, is recorded in the Biology Report and these conditions form the basis for the wetland buffer width. Proposed wetland buffers may require consultation with the wildlife agencies (U.S. Fish & Wildlife Service and California Department of Fish and Wildlife) before any public hearing for a development proposal. The wetland buffer can be the same footprint as the MHPA, or in some cases, the buffer will be larger than the MHPA boundary due to the functions and values of the existing wetland. Therefore, all development proposals in and adjacent to the San Diego River must map the following three areas:

1. The River Corridor and River Influence Areas of the San Diego River Park Master Plan (this can be determined by applying the Master Plan design guidelines).
2. The MHPA area (this area has been mapped and can be accessed from SANGIS mapping systems).
3. The Wetland Buffer area (this area will be determined based on the biological resource present at the time of project submittal).

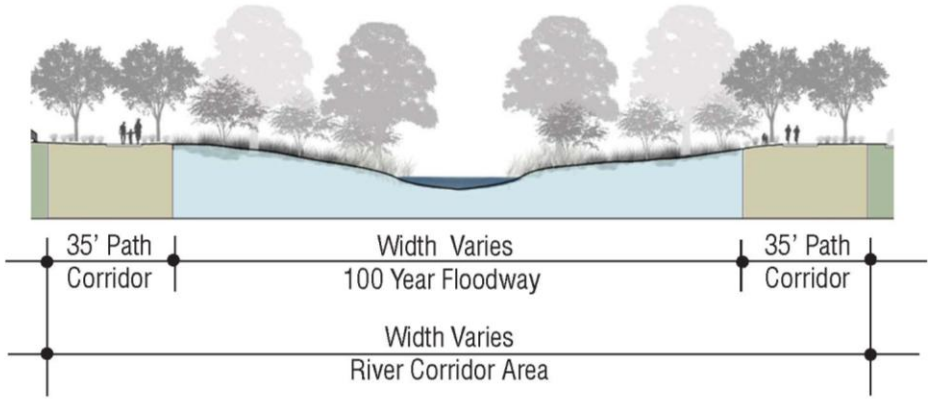
Once the areas are mapped, the largest mapped area will prevail. In some areas where the MHPA and the Wetland Buffer are larger than the San Diego River Corridor Area, then the San Diego River Park pathway (river pathway) will be required to be outside the MHPA and the wetland buffer. In some areas a MHPA boundary adjustment may be requested for the river pathway location.

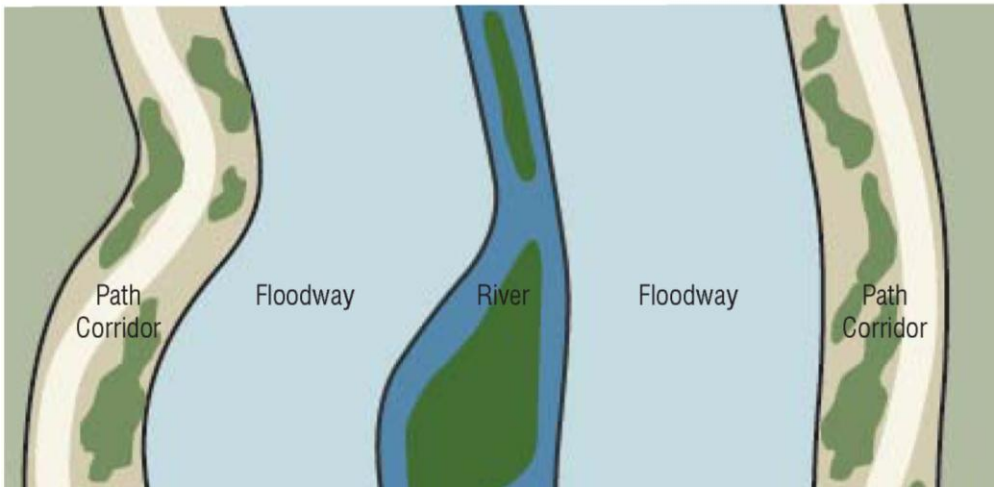
4.3 RIVER CORRIDOR AREA

4.3.1 PURPOSE AND DEFINITIONS

4.3.1.1 Purpose

The purpose of the River Corridor Area is to restore the health of the San Diego River by cleaning the river, improving its hydrologic function, increasing its length and recharge area, separating it from ponds, and creating opportunities for braiding and meandering. It will also enhance wildlife habitat by providing a continuous movement corridor that varies in width and provides diversity of habitat and native vegetation. The river habitat area should be expanded where possible on a project by project basis. The River Corridor Area will also serve as a natural open space and a recreation system for the surrounding communities by providing a river pathway, a trail network and other park amenities. Its purpose is also to establish the valley as a common gathering place for all San Diego citizens, unify fragmented land of the river valley, emphasize a continuum of experience from the ocean to the mountains, and reveal the history of the river valley and its significance to the San Diego Region.





Plan and Section of River Corridor Area

4.3.1.2 Definitions and Boundaries

The River Corridor Area is comprised of the current 100-year floodway (floodway) as mapped by the Federal Emergency Management Agency (FEMA) and the Path Corridor on each side of the floodway.

- 100-year Floodway: The current 100-year floodway will vary in width depending on the location along the river. This area provides for: a filtration zone adjacent to the river; an opportunity for the river to meander; places for wildlife habitat and, where possible, pedestrian trails. Recreation uses within the floodway to comply with the Land Development Code and may require approval from local, state and federal resource agencies.

- Path Corridor: The 35-foot wide area within the River Corridor Area on each side of the floodway. This area provides for a wildlife habitat zone, native vegetation, a multi-use river pathway, picnic areas, scenic/interpretive overlooks, fitness stations, seating and educational exhibit areas. The only type of motorized vehicles would be those used by disabled people per the American Disabilities Act and public safety and maintenance vehicles. In locations that do not contain sensitive habitat additional recreational amenities such as children's play areas, multi-purpose courts or multi-purpose turf areas can be considered. All areas that are mapped MHPA or within a wetland buffer or adjacent to these areas have restricted uses as defined in the MSCP and the ESL regulations.

4.3.2 SITE PLANNING FOR THE RIVER CORRIDOR AREA

4.3.2.1 100-Year Floodway

A. Development in the floodway should be in accordance with Land Development Code Section 143.0145 (Development Regulations for Special Flood Hazard Areas), the Environmentally Sensitive Lands Regulations in Chapter 14, Article 3, Division 1 of the Land Development Code and the Multiple Species Conservation Program (MSCP) Subarea Plan 'Land Use Considerations for Flood Control' where the floodway is mapped MHPA.
B. The river bottom and sides should be natural or designed with natural materials and sized to accommodate a 100-year flood as well as provide for groundwater recharge capability.
C. The use of gabions and native stone on river sides to dissipate flows should include design features to provide for or preserve wildlife habitats and wildlife movement corridors.
D. Where floodway width permits, the bottom of the floodway should be a maximum of 5 percent cross slope to encourage river braiding and meander.

Rehabilitated Platte River in Colorado designed to be natural in appearance by utilizing native materials and gentle slopes

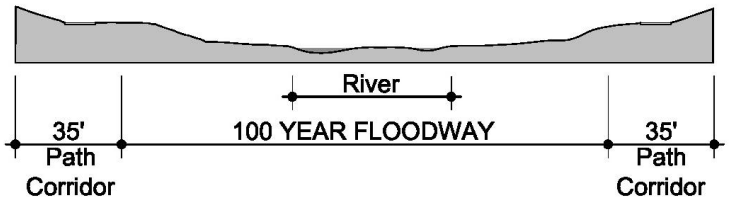
Example of natural stone used to dissipate flows and allow for wildlife movement

Natural river bank in Southern California with gently sloping edges and native plant materials

Concrete or other man made materials should not be used to stabilize channel banks

4.3.2.2 Path Corridor

A. Manufactured slopes within the Path Corridor should preserve the natural character of the floodway; protect the function and values of ground water recharge, the water quality and wildlife movement and habitat. Avoid long, continuous manufactured slopes with hard edges and provide smooth transitions. All slopes to be appropriately stabilized and re-vegetated with native plants.
B. Energy dissipation devices, such as rock rip-rap or gabions, should be native stone or similar to the natural soil color and provide for or preserve wildlife habitats and wildlife movement corridors.
C. All drain pipes in this area should not be visible from the river pathway.
D. Headwalls should be as small as possible and match existing soil color.



Section of River Corridor Area

Example of manufactured slope and native planting between path and river

Example of a smooth transition at top of slope

4.3.2.3 Storm Water Drainage and Water Quality Design

Development within the River Corridor Area should comply with the Land Development Code, Chapter 14, Article 2, Division 2, (Storm Water Runoff and Drainage Regulations) and should implement the requirements of the City's Storm Water Standards Manual and the San Diego River Watershed Management Plan. In addition, all projects should include innovative approaches to storm water drainage and water quality management that incorporates the design principles of sustainable development. These design principles include the following best management practices:

A. "Source control" to reduce the initial contribution of pollutants into a water way, such as implementing educational programs on source control, maintenance practices on source control, and/or integrated pest control management.
B. "Site design" to reduce runoff and pollutants through the use of permeable surfaces, low water use landscaping, and open spaces which facilitate the reduction of runoff, pollutants and litter.
C. "Treatment control" to maximize pollutant removal from runoff flows in creative systems which provide multiple functions, such as incorporating landscaping filters (bioswales and detention basins) to reduce flow velocities, to filtering runoff to control erosive processes.

4.3.2.4 San Diego River Pathway

The San Diego River Pathway, a multi-use pathway for bicycle and pedestrian use, to be located within the 35-foot Path Corridor is considered the primary pathway for the entire 17.5 mile river park from the Pacific Ocean to the City of Santee. Where possible, the river pathway should occur on both sides of the river. In cases where site conditions, or topography, do not allow for the river pathway, a narrower pedestrian trail should be provided. The river pathway to include design treatments of all intersections with pedestrian sidewalks and vehicular travel paths (e.g. bike lanes, bike paths, streets), that appropriately address safety and access of all users, using current City of San Diego and Caltrans standards (i.e. Street Design Manual, Council Policy 200-07 and Caltrans Chapter 1000 Bikeway Planning and Design). If any part of the River Corridor Area is mapped MHPA, or determined to be within a wetland buffer area, the river pathway should be moved just outside of these areas. In these situations, the outer edge of the river pathway will be the new boundary for the River Corridor. The river pathway will connect to the existing Mission Trails Regional Park (MTRP) trail system on the west and east boundaries of the park. At this point the river pathway will collocate on a MTRP trail and be identified through signage. All trails within MTRP will be designed to the MTRP Park Master Plan requirements.

A. The river pathway should be a minimum 14-foot wide and consist of a minimum 10-foot wide concrete surface (porous concrete material preferred where feasible), with a minimum 2- foot wide shoulder area of decomposed granite, Class II recycled base or similar soft material, to be similar in color to the river pathway, along each side of the 10-foot wide river pathway. A 12-foot vertical clearance to be provided over the 14-foot wide river pathway. The river pathway surfaces should have a cross slope no greater than 2 percent.

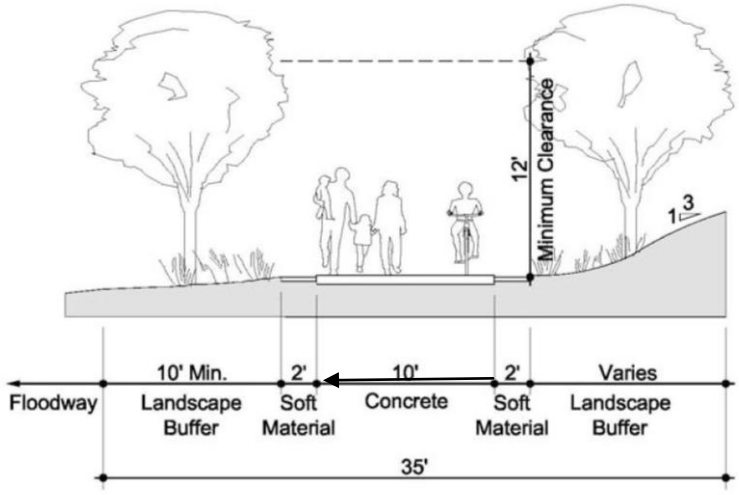
B. The concrete material should be a color that blends with the surrounding native soil with a texture appropriate for bicycle and pedestrian uses.

C. The river pathway should meander, where possible, within the 35-foot Path Corridor. A 10-foot wide minimum landscape area between the edge of the 100-year floodway and the edge of the river pathway should be provided.

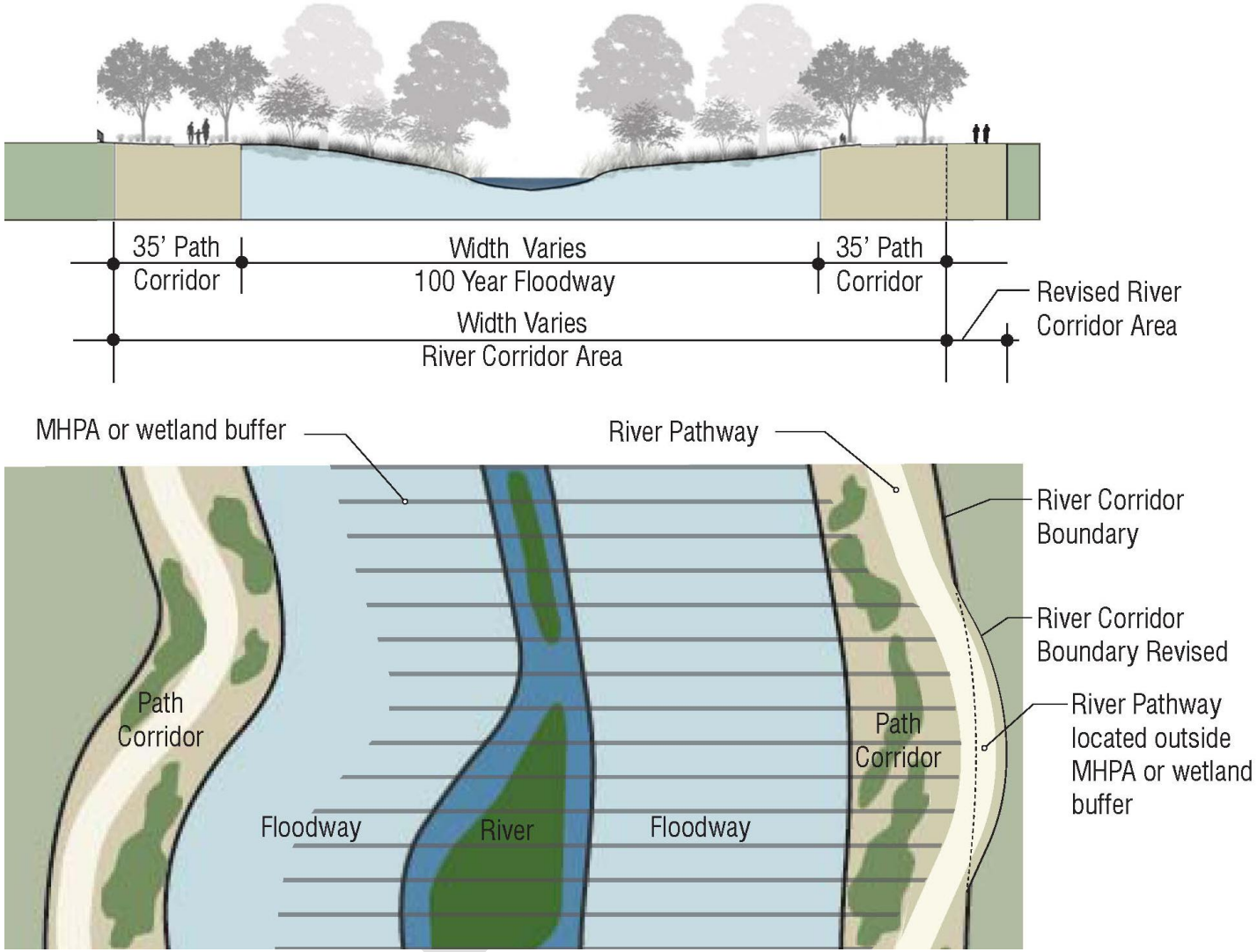
D. Creative elements such as leaf or animal imprints appropriate to each reach may be included in the river pathway paving material.

E. The river pathway will be designed to meet ADA standards and guidelines and California Title 24 regulations for accessibility, which allow for flexibility in how trails are designed and used.

Typical River Pathway with soft surface on both sides



River Pathway Section



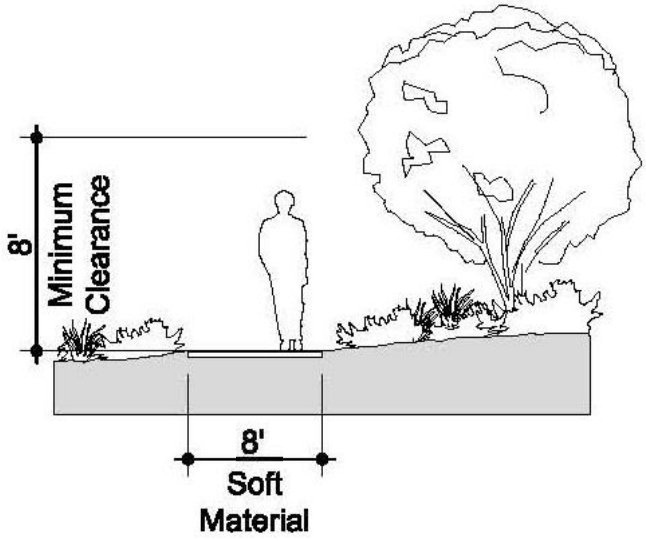
Plan and Section of River Corridor with mapped MHPA and/or Wetland Buffer Area

4.3.2.5 Trails

Trails proposed within the River Corridor Area provide a secondary path system for pedestrians to experience the river valley native landscape and habitat. In some areas, trails will provide a connection where physical constraints do not permit the river pathway to occur. Typically, trails should be confined to existing trail locations to provide the least amount of impact to the wildlife habitat.

A. Trails should be a maximum of 8 feet wide and have a minimum vertical clearance of 8 feet above finish grade of the trail. Trails within the MHPA, or a wetland buffers, should meet the requirements of the MSCP Subarea Plan, 'Land Use Considerations'.
B. Trails should be a continuous loop, connecting to the river pathway. Dead-end trails should be avoided where possible for safety reasons.
C. Trails should be soft-surface materials, such as decomposed granite (color to blend with the surrounding native soil) or suitable native soil with a maximum cross slope of 2 percent with appropriate sediment and erosion control devices.
D. Trails should have an alignment that responds to natural conditions with minimal grading and disturbance to existing vegetation.
E. Trails should meander, where possible.

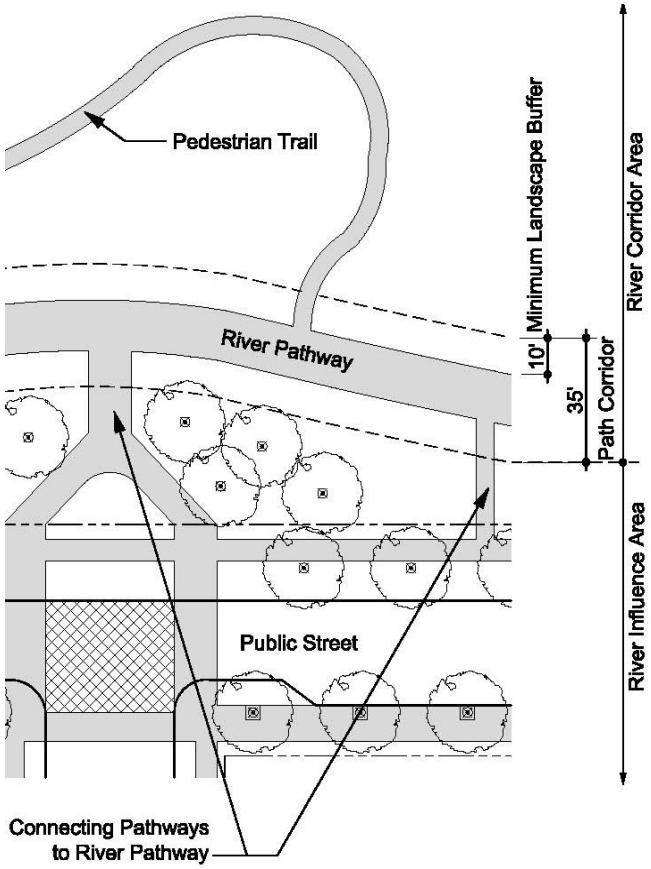
Example of a natural Trail



Pedestrian Trail Section

4.3.2.6 Connecting Pathways

The river pathway and trail system should connect to existing regional trails and public sidewalks on adjacent properties and/or parks. Connecting pathways and trails to the river pathway should meet the design guidelines noted in section 4.3.2.4, 4.3.2.5 and 4.4.2.8 through 4.4.2.11.



Connecting Pathways Diagram

Example of Connecting Pathway

4.3.2.7 Bridges

All new or redeveloped bridges should be specially designed to acknowledge and announce the crossing of the San Diego River. Signs should be included to highlight the pedestrian crossings, as well as the San Diego River Park.

A. Pedestrian/bicycle-only bridges should be at locations of steep grade crossings, streambeds and in other areas where protection of the water quality and wildlife habitat is needed. The width of bridges should be determined by anticipated use, but should provide a minimum of 10-foot wide area for pedestrians and bicyclists.
B. Pedestrian/bicycle-only bridges should be designed to blend into the natural landscape character of the River Corridor Area through the use of natural materials or material that reflects the natural colors of the river valley. Bridges that cross significant habitat, or historic view sheds, should include a platform to allow for pedestrian viewing without obstructing mobility.
C. Vehicular/pedestrian/bicyclist bridges should include a sidewalk for pedestrians and where possible a Class 1 bike route in each direction or, at a minimum, on one side of the bridge.
D. Bridges crossing the River Corridor Area should be designed, where possible, to accommodate the river pathway passing beneath the bridge during typically low water conditions (minimum of 12 feet vertical clearance) with a ramping connection to at-grade crossings to accommodate high water conditions.
E. Bridge spans should provide adequate space for both the river and dry land area to accommodate wildlife movement, where possible.

Example of a Pedestrian / Bicycle Bridge

Example of a grade separated high and low water level street crossing

4.3.2.8 Boardwalks

Boardwalks provide a stable and creative approach to accessing river shorelines and wetland features for park users of all abilities. Boardwalks can be constructed in several different ways depending upon the site conditions. The boardwalk structure is typically supported on piers which can be used in wet conditions, or even submerged areas. Boardwalks could be installed in lieu of surface paths within sensitive habitat areas; however, no boardwalk elements may be installed in areas which would impede or obstruct the 100-year floodway.

Example of pedestrian boardwalk within a sensitive habitat

4.3.2.9 Picnic Areas and Overlooks

Picnic areas and overlooks should be provided along the river pathway, within the 35-foot Path Corridor, at locations where habitat or historic views are available, where connections to adjacent communities are accessible, and at a minimum provided at intervals of one-half mile. These places will function as destinations, rest areas, and places of education and orientation. Interpretive information should be integrated into overlooks and picnic areas.

Picnic areas and overlooks could include a combination of the following:

- Picnic tables on concrete material
- Trash and recycling receptacles
- Bicycle racks
- Shade structure and/or shade trees
- Benches and/or seat walls
- Interpretive signs
- Drinking fountains
- Elevated Decks

Example of a bench and a picnic table at elevated overlook

4.3.3 ARCHITECTURE FOR THE RIVER CORRIDOR AREA

Permanent structures are not allowed in the 100-year Floodway in accordance with the Land Development Code Section 143.0145 (Development Regulations for Special Flood Hazard Areas). Within the 35-foot Path Corridor the following permanent structures could be located to provide the following and should be designed to provide safety through visual access to the spaces and reduce vandalism and graffiti:

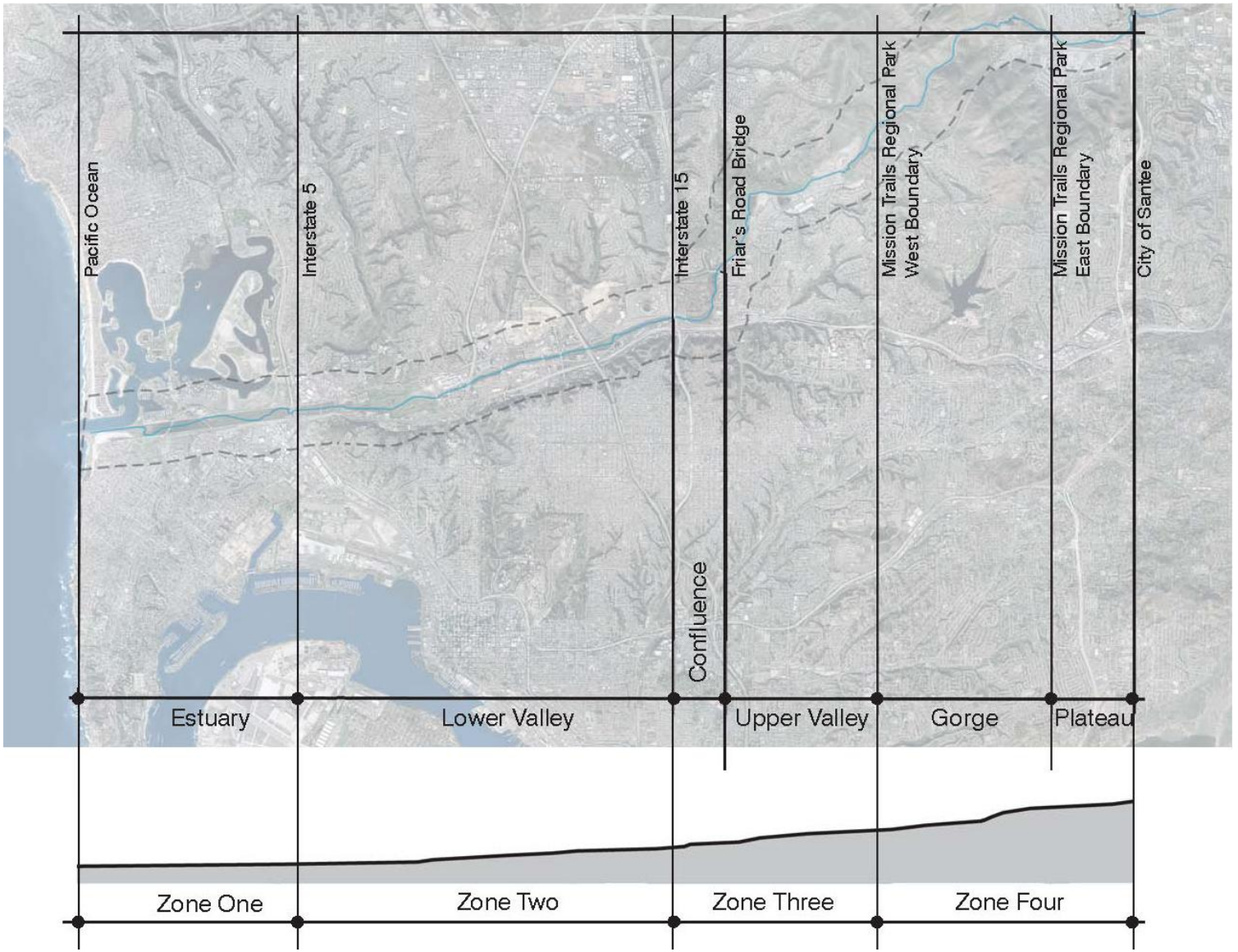
A. Shade structures
B. Picnic shelters
C. Interpretive and/or scenic overlooks

4.3.3.1 General Architecture Material for Structures

The San Diego River Park Master Plan identifies six reaches within the river valley based on topographic characteristics and river condition. The six reaches comprise four distinct architectural zones, as follows:

Architectural Zone 1: Estuary
Architectural Zone 2: Lower Valley
Architectural Zone 3: Confluence and Upper Valley
Architectural Zone 4: Gorge and Plateau

General architectural material for structures should reflect the local context and be consistent within each reach. Low maintenance, recyclability, hazardous materials content, and carbon footprints should be considered in material choices. The following descriptions establish the basic approach for each architectural zone. All architecture within Mission Bay Park or Mission Trails Regional Park to meet the design standards contained in the Park Master Plans for each parks respectively.



Architectural Zones for the River Corridor Area

Architectural Zone 1:

Estuary (Pacific Ocean to Interstate 5)

Influenced by the sea and ocean, shade structures, picnic and overlook shelters should be composed of:

- Columns - Metal tensile technology (preferably stainless steel)
- Shade Structures or Roofs - Fabric panels stretched for shade canopies and roofing

Other materials such as glass, sand, shells and native grasses should be integrated as complementary materials. Walls that are part of shade structures, picnic and overlook shelters should be constructed from precast concrete, or cast-in-place concrete walls with integral color that reflects the sand found in the estuary.

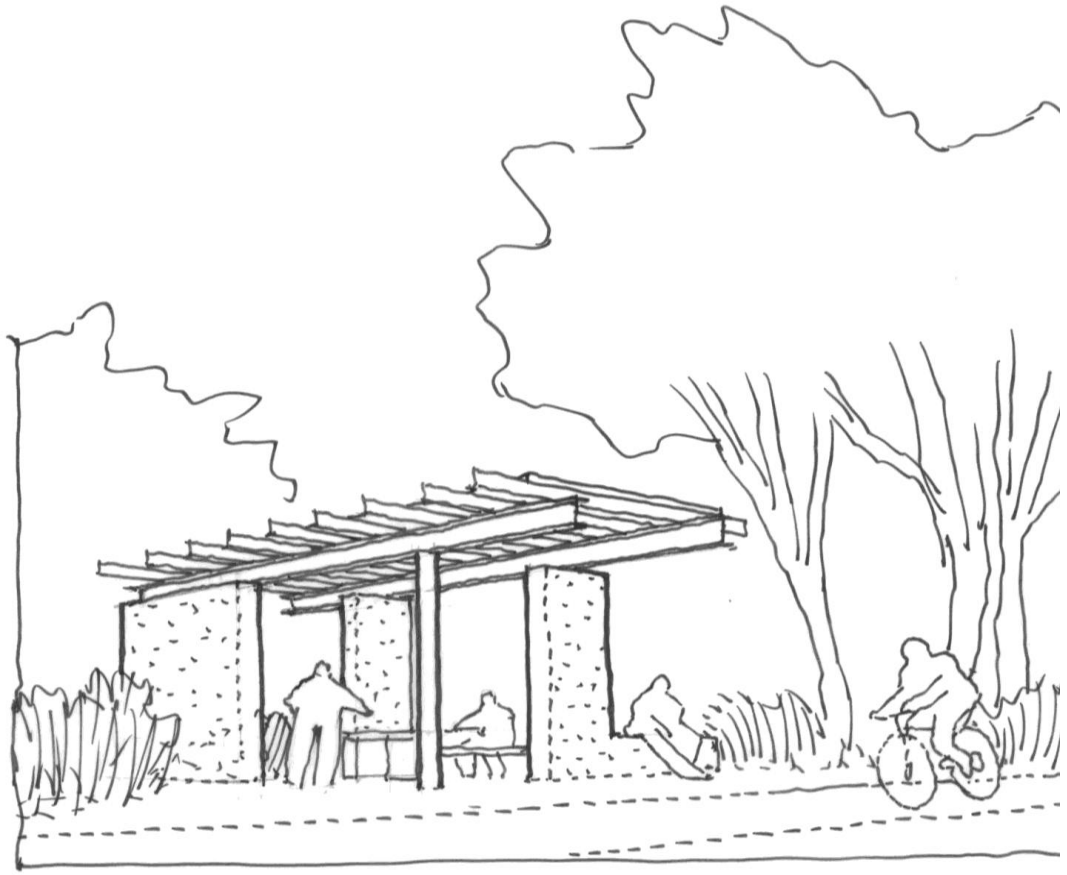
Example of tensile fabric shade structure for Estuary Reach

Architectural Zone 2:
Lower Valley (Interstate 5 through Mission Valley to Interstate 15)

Influenced by the adobe walls and post and beam structure and expressive of traditional regional architecture, shade structures, shelters and pergolas for picnic areas, and interpretive and scenic overlooks should be composed of:

- Columns – Wood, steel, concrete and/or adobe
- Shade Structures or Pergolas - Metal and/or wood lattice
- Walls – Cast in place concrete, cement stucco finish over concrete masonry units.
- Roofs - Metal or terra cotta tile on flat or sloped roofs

Other materials, such as terra cotta tile and cobblestones should be integrated as complementary materials. Walls that are part of shade structures, picnic and overlook shelters should be clad in hard coat cement stucco over precast concrete, cast-in-place concrete or concrete block. The stucco should be colored in warm 'whites' or adobe colors that are similar to the regional architecture.



Example of Lower Valley shade structure composed of metal lattice over concrete supports

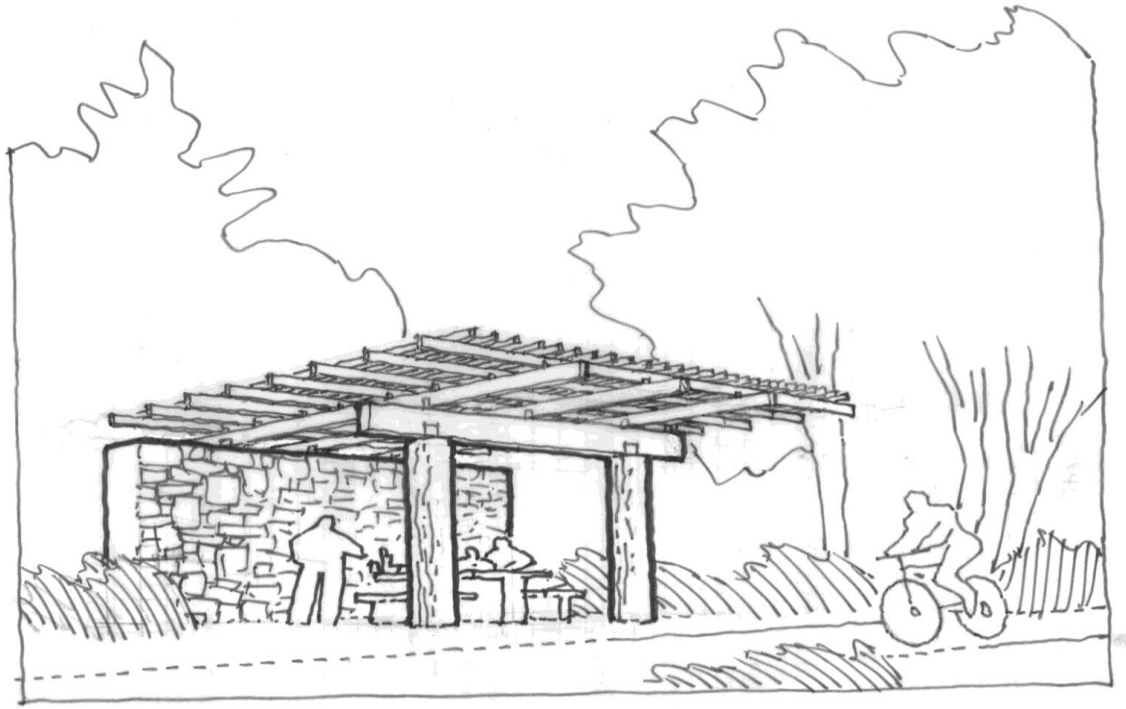
Architectural Zone 3:

Confluence and Upper Valley (Interstate 15 to Mission Trails Regional Park)

Influenced by the cobblestone walls and dam found in the Mission Trails Regional Park, shade structures, shelters and pergolas for picnic areas, and interpretive and scenic overlooks should be composed of: :

- Columns - Native stone and/or wood.
- Shade Structures or Pergolas – Metal or wood lattice
- Walls - Native stone or stone veneer (over precast concrete, cast-in-place concrete, or concrete block colored to match natural colors of the river environment)

Other materials, such as metal and concrete imprinted with upland plants and animals should be integrated as complementary materials.



Example of Confluence/Upper Valley shade structure featuring wood lattice supported by a stone wall and wood columns

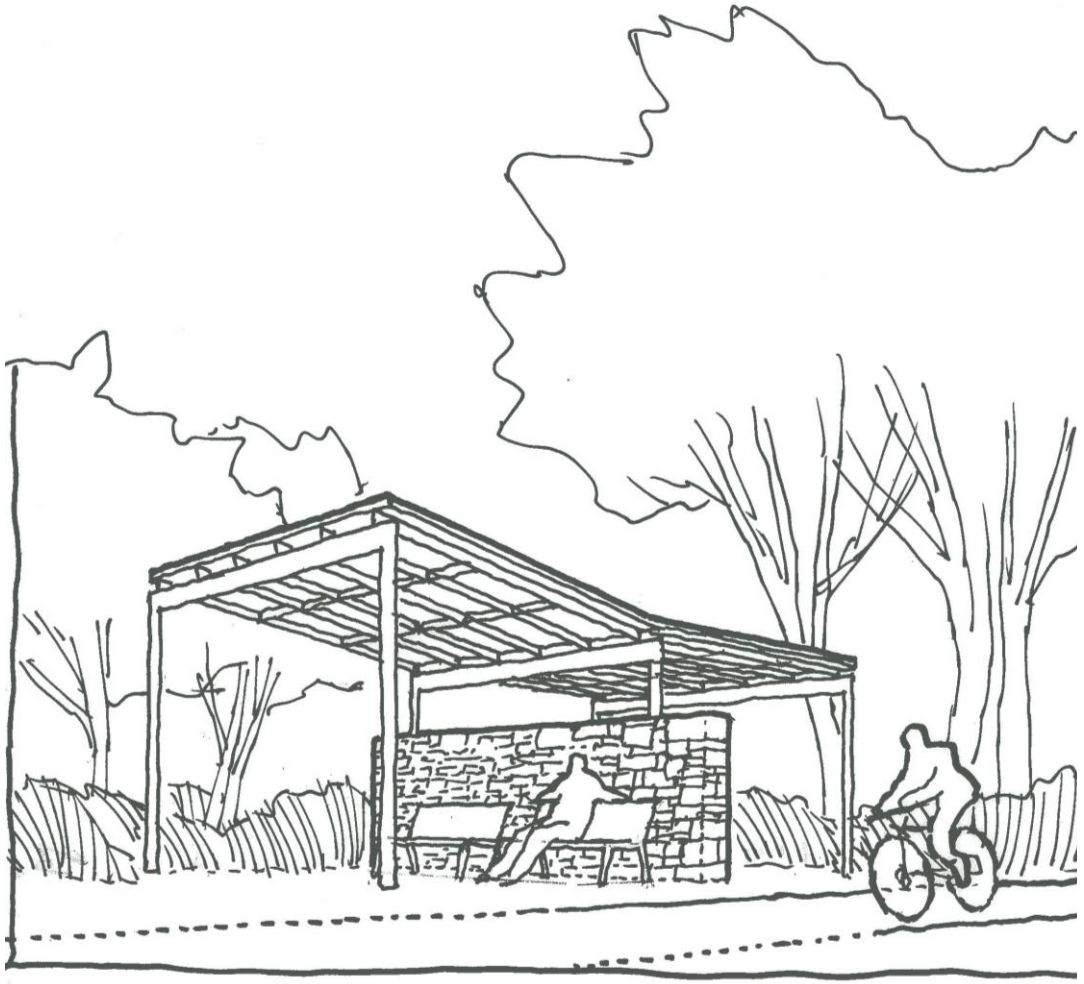
Architectural Zone 4:

Gorge and Plateau (East of Mission Trails Regional Park to City of Santee)

Influenced by the expansive views, rolling hills and grasslands of Mission Trails Regional Park, structures should be generally low and horizontal, reflecting the character of ranch architecture. Shade structures, shelters and pergolas for picnic areas, and interpretive and scenic overlooks should be composed of:

- Columns - Naturally finished metal and/or wood
- Shade Structures or Pergolas - Galvanized and/or corrugated metal on wood beams and/or wood lattice
- Roofs - Metal or wood flat roofs over wood structure
- Walls - Adobe, stone or concrete block for walls (concrete block walls should have the color and texture of adobe or faced with stone)

Other materials such as cobblestones and concrete imprinted with native grasses should be integrated as complementary materials. Note: All structures in Mission Trails Regional Park to meet Mission Trails Regional Park Master Plan design guidelines.



Example of Gorge/Plateau shade structure featuring low, horizontal wood roof with metal columns

4.3.3.2 Placement of Structures

Site structures should be placed at intervals throughout the River Corridor Area and at locations that offer views, shade or historic interpretation. Locate structures to avoid over-use and crowding in constrained or densely-populated areas. Structures should also be placed near points of access to the San Diego River, such as connections to off-site paths, public sidewalks, and parking areas, in order to more easily serve larger groups of people, as well as people with disabilities.

A. Place structures so as not to interrupt the flow of users of the river pathway.
B. Locate structures at views of the river and valley walls, and take advantage of interesting topographic, historic or scenic conditions.
C. Some structures should be located near public access points, paths and parking areas.
D. Locate structures for visibility from public streets or the river pathway.
E. Structures to be accessible to persons with disabilities in accordance with Americans with Disabilities Act (ADA) Guidelines and California Title 24 regulations.

Example of structure appropriate for Estuary or Lower Valley

Example of a structure at Mission Trails Regional Park

4.3.3.3 Lighting of Structures

Design lights into the architecture of the structure and discourage use of decorative lights. A balance must be achieved between lighting to provide security and the absence of lighting necessary for a functional wildlife habitat. In general, structures should be evenly under-lit rather than over-lit.

A. Utilize shielded lights.
B. Solar powered lighting should be used as a sustainable alternative.
C. Lighting should be vandal-proof and easy to maintain.
D. Lights on structures that are located adjacent or in the MHPA to meet the requirements of the MSCP Land Use Adjacency Guidelines.
E. Lighting should provide true color rendering and be energy efficient.

4.3.4 LANDSCAPE ARCHITECTURE FOR THE RIVER CORRIDOR AREA

4.3.4.1 River Pathway Lighting

Lighting of the river pathway may be necessary in some areas for safety and security. Any lighting located within the River Corridor Area should meet or exceed the City of San Diego Park and Recreation Consultant's Guide to Park Design and be shielded and directed away from sensitive areas to ensure compliance with the MSCP Subarea Plan, 'Land Use Adjacency Guidelines' and to be in accordance with Land Development Code Section 142.0740, (Outdoor Lighting Regulations).

The overall conceptual approach to illuminating the River Corridor Area should be to balance safety and security with nighttime visibility and function through light color selection and reduction of glare. The approach should minimize light pollution ("sky-glow") and light trespass ("spillage"), particularly into adjacent habitat and residential areas. Where lighting is appropriate, it should be treated consistently throughout the River Corridor Area, in terms of light source, fixture type, and fixture finish and color.

Examples of angular, cut-off down-cast lighting

Examples of solar powered lighting

Color of the Light Source

Light color should provide true color rendering and be energy efficient.

Standards and Fixtures

A fixture palette that allows lighting to respond to adjacent conditions (urban and naturalized) should be selected for each application. Fixtures should create an unobtrusive appearance that allows the focus to remain on the river, rather than the fixture. Fixtures may be placed on standards designed for each architectural zone, but should coordinate with each other.

Lighting elements should be:

A. Metal or concrete round poles of natural sand or warm grey/brown color
B. Triangular style fixtures of natural sand or warm grey/brown color
C. Light poles to not exceed 12 feet in height.
D. Lights to be directional and have shields to avoid spilling into the native habitat
E. Solar powered lighting should be used as a sustainable alternative

Bollard-type light fixtures can present significant problems of glare, lack of cut-off ability, are more susceptible to vandalism, and are strongly discouraged.

4.3.4.2 Site Furnishings

All site furnishings should meet accessibility guidelines and regulations. Site furniture should be durable, comfortable, and attractive. Securely anchored in place and should have the river park logo placed appropriately on the furnishing. Site furniture should be located along the River Pathway at picnic areas, overlooks and other areas that compliment the use of the River Pathway. Lots that do not have picnic areas or overlooks should provide a minimum of one type of site furniture for every 200 linear feet of the River Pathway. Site furniture selected can be placed individually or in groups to compliment the River Pathway. Maintenance of the site furnishings, including trash and recycling receptacles, will be the responsibility of the property owner or a special assessment district. The following pictures are examples of durable and anti-graffiti furnishings and actual site furnishings will be determined on a project by project basis.

Benches

A. Location: At overlooks, areas of shade, under shade structures, etc.
B. Design: Should be simple in form, but designed to discourage extended periods of use or lodging. Offset benches a minimum of 2 feet from the edge of the river pathway, including its shoulders. The offset area may vary in surface materials, but should coordinate with the materials used around it. Where appropriate, low walls of concrete or stone could be provided at seat height and width in lieu of, or in addition to, benches.

Examples of concrete bench without back

Example of concrete seat walls located adjacent to multi-use path

Example of low stone wall used as seating

Example of bench with back

Picnic Tables

A. Location: Along the river pathway and place perpendicular to the river pathway to reduce vandalism.
B. Design: Offset a minimum of 4 feet from the edge of the river pathway, including its shoulders. The offset area may vary in surface materials, but should coordinate with the materials used around it.

Example of concrete picnic table

Drinking Fountains

A. Location: In close proximity to picnic areas or at an entrance to the river pathway from an adjacent public street.
B. Design: Should be simple in form.

Example of accessible (high/low) concrete drinking fountain

Example of picnic table placed perpendicular to a pathway

Trash and Recycling Receptacles

A. Location: In close proximity to picnic areas, overlooks, seating areas, path intersections and access points to the river and must be accessible to maintenance vehicles.
B. Design: Receptacles should contain hood covers to prevent rummaging by animals. Trash and recycling receptacles should be located side-by-side.

Bicycle Racks

A. Location: In close proximity to picnic areas, shade structures, overlooks and pedestrian intersections.
B. Design: Simple in design.
C. Materials: Galvanized metal.

Example of galvanized bicycle racks

4.3.4.3 Signs

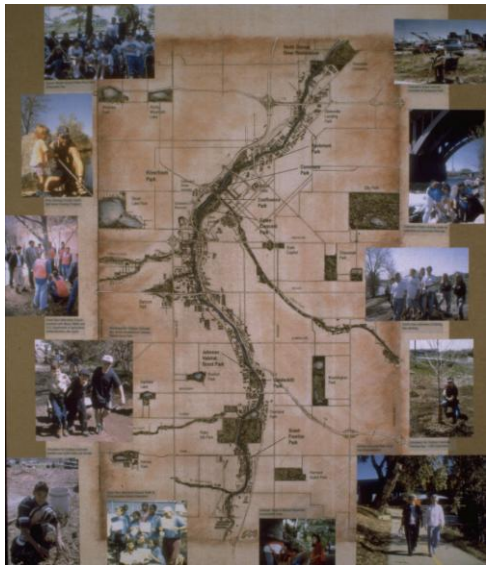
Three categories of signs have been identified for the River Corridor Area: Information kiosks, Interpretive Signs and Identification/Directional Signs. Information kiosks provide location maps and the rules and regulations. Interpretive signs provide educational information about history and the environment. Directional signs provide a location, direction and distances.

All signs should be designed to withstand vandalism and damage from graffiti, knife gouging, scratching and acid etching.

Information Kiosks

A. Location: Should be located at all river pathway entrances from a public street right-of-way.
B. Design: Consistent with City of San Diego standard design as used in regional parks and open space areas (contact the City of San Diego Park and Recreation Department for the current standard detail).
C. Materials: Wood.
D. Information:
    - River park map indicating precise location of kiosk within the park
    - Detailed local area map, depicting precise location of kiosk, location of parking areas, shade shelters, drinking fountains, interpretive and scenic overlook areas, and all other kiosk locations in either direction, with associated distances shown in miles
    - Emergency contact numbers
    - River park logo
    - Any other pertinent information, such as seasonal fire warnings, community events that focus on the river, etc.

Information kiosk


Example of area map

Interpretive Signs

A. Location: Should be located along the river pathway at strategic locations to educate users on significant river park features.
B. Design: Durable and artistically unique to convey the information. Sign frames should be simple in design to not distract from the significant features being interpreted. Include river park logo.
C. Materials: Should include galvanized metal posts with durable panels that will not sun-fade.
D. Information:
    - Geography and Geology
    - Cultural and Historical Resources
    - Ecology
    - Restoration
    - Native Plant and Wildlife
    - Historic Water Resources

Examples of interpretive signs at scenic overlooks

Identification/Directional Signs

A. Location: Should be located at all points of access and decision, including intersections, street crossings, canyon and tributary creeks that intersect the river and open space areas that are connected to the river corridor.
B. Design: Use readable font, graphics, symbols on the sign face. Use consistent mounting height.
C. Materials: Should include galvanized metal posts with durable panels that will not sun-fade.
D. Information:
    - River Park logo
    - Name of canyon or open space

Examples of San Diego River Park bike path directional sign

Example of San Diego River Park identification sign

4.3.4.4 San Diego River Park Logo

The San Diego River Park logo is consistent with the river graphic established by the San Diego River Park Foundation and is to be used with the permission of the San Diego River Park Foundation. It should not be modified in form, but may be modified in material and size. It should not be used for commercial purposes without written permission from the San Diego River Park Foundation. Artwork for the logo can be obtained from the City of San Diego Park and Recreation Department.

All signs in the River Corridor Area should contain the river park logo (refer to image). Large signs, such as information kiosks and interpretive signs should provide the full spelling of "San Diego River Park". Smaller signs, such as directional signs, should use the logo and the abbreviated spelling of the River Park as "SDRP". Within Mission Trails Regional Park, the size and placement of the river park logo on signs to be approved by the Mission Trails Regional Park staff.

All site furniture in the River Corridor Area, except those in Mission Trails Regional Park, should contain the river park logo. The river park logo should be stamped into concrete benches, picnic tables, drinking fountains, and trash and recycling receptacles.

San Diego River Park Logo

4.3.4.5 Vandalism Prevention

All structures, furnishings, signs, lighting, and fencing within the River Corridor Area should be designed or selected to be resistant to vandalism and easy to repair, refinish, or replace if vandalism or malicious mischief occurs. For graffiti, treat all building walls, site walls, concrete site furnishings, and light standards with a 'non-sacrificial' (products that do not wash off when maintained) anti-graffiti material and apply per the manufacturer's specifications.

Various design measures can be employed to discourage vandalism, including the following:

- Roughen pavement surfaces in front of benches, low walls, steps and railings.
- Add vines and shrubs to cover walls and other areas that might be vandalized.
- Use pavement cut-outs instead of low planter walls for trees or provide walls with varying height differentials.
- Provide a rough shape to the edges of bench tops, low walls and planter walls for trees.
- Design benches and seating walls with height differentials, arm rests, or seat dividers on the top surface.
- Install circular picnic tables and curved benches instead of rectangular or straight tables or benches.

4.3.4.6 Fences

Fencing in the River Corridor should only be provided to protect sensitive habitat and historic resources, while allowing for wildlife movement. To provide a consistent park identity and to blend with the natural environment fencing should be consistent with the following:

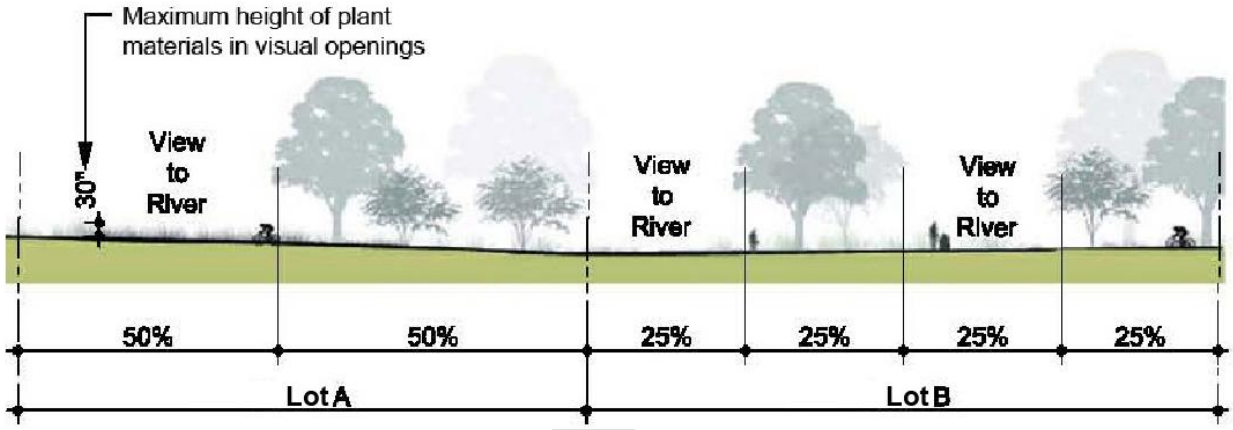
- A minimum of five feet from the River Pathway or trails and follow the natural grade.
- A maximum of 42 inches in height.
- Fence rails to be horizontal.
- Fence to be a minimum of 75 percent open. Chain link fencing does not qualify as 75 percent open fence.
- Materials such as peeler log fencing or steel/steel cables.

4.3.4.7 Plant Material

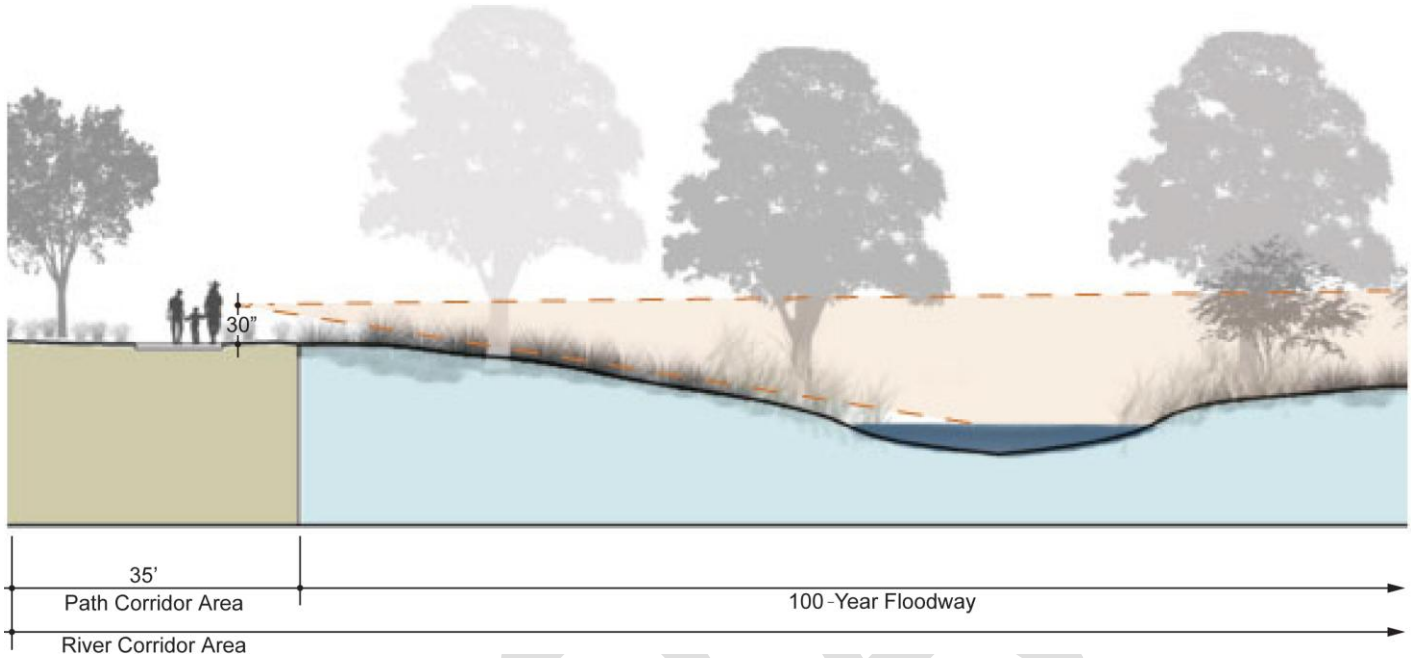
Use native trees, shrubs, grasses and perennial plants appropriate to the specific microclimatic, soil and moisture conditions of each river reach within the River Corridor Area. Group plant species according to plant communities appropriate to the location. Remove all invasive, non-native species and replace with native plant materials. See Appendix "A", Recommended Plant Species, for a list of recommended plant materials for the River Corridor Area. This list is not a mandate and should be used as a guide only.

Plant Placement and Visual Openings to the River

Place plants within the River Corridor Area to preserve and enhance views of the river and the river pathway. In addition, locate plants that preserve and enhance views from public streets or recreation areas. Plant placement should not compromise the safety and security of the river pathway users. To enhance visibility at pedestrian levels along the river pathway, plant materials in the river corridor areas to consist primarily of tall canopy trees and low growing shrubs, with limited use of smaller multi-stem tree species on the non-river side of the pathway. Plant materials selected to be located so that visual openings with views to the river are provided along at least 50 percent of the river frontage on each lot. Trees to have a canopy clearance of 8 feet above finished grade of the river pathway and all other plant material to not exceed a maximum height of 30 inches above the finished grade of the river pathway.



Placement of plant materials to allow views of the river



Section at River Corridor Area depicting views to the river

Plant Material Adjacent to the River Pathway

Plant material located within 10 feet of either side of the river pathway to be consistent with the following: Trees should have a canopy clearance of 8 feet above finished grade of the river pathway; and all other plant materials should not exceed a maximum mature height of 30 inches above finished grade of the river pathway.

Plant Transition and Pattern

Plant species selection, variety and pattern should establish a transition in character from the naturalistic quality of the floodway through the Path Corridor to the adjacent River Influence Area. Within the 100-year Floodway, locate canopy trees to provide some shade to the river. Plant patterns should be naturalistic and informal. Within the 35 foot Path Corridor, plants patterns should support views, uses, provide shade and define spaces. Visibility and safety should also be primary concerns.

Non-native turf grasses should not be used in the River Corridor Area except where community or neighborhood public parks occur. Public parks may use non-native turf areas within the River Corridor as long as these areas are outside the MHPA and the wetland buffer areas.

4.3.4.8 Public Art Opportunities

Public art has a role in bringing life and identity to the River Corridor Area. The diversity of culture, history and biology in the San Diego Region and, specifically along the San Diego River, offers the opportunity to engage the public to celebrate and experience the river through artistic expression.

Integrate public art into the local cultural and natural systems. Public art should interpret the river and its ecosystems along the length of the river. Also integrate public art into functional elements within the River Corridor Area, such as site furnishings, structures and signage, consistent with the criteria in these design guidelines. Design public art to be resistant to vandalism and easy to repair if it is damaged.

Examples of parks extending non-native turf to non-river side of multi-use path
Denver, CO

4.3.4.9 River Pathway and Trail Safety

The river pathway and pedestrian trail development in the River Corridor Area should specifically address issues of safety and crime prevention through the following design considerations:

A. Place removable bollards at strategic access points along the river pathway to prevent vehicular access and yet allow access for emergency and maintenance vehicles.
B. Locate safety call boxes where appropriate and consider the use of solar powered call boxes in strategic locations. The San Diego Police and Fire-Rescue Departments should be consulted on the locations of these boxes.
C. Locate safety sign posts where appropriate. One possibility would involve the following: Install sign posts every fifth (or some other appropriate fraction) of a mile along the pathway giving the distance from its east or west end. Install signs at all path entrances giving people the mile location of the nearest safety call box for use in an emergency, and telling them that if they cannot reach a call box to call 9-1-1 and give the dispatcher the name of the pathway, which would be on the sign, and the mile on the closest signpost. Whatever emergency communications are provided they will need to be implemented with the Public Safety Geofile Coordinator in the San Diego Fire Department's Communication Response Planning Division.
D. Install information kiosks at each entrance or street crossing showing users where they are in the river valley.
E. Directional signs, such as trail markers, should be provided along the river pathway to direct users, especially in areas where following the trail may be difficult.
F. Lighting should be provided at appropriate areas to provide for surveillance of river pathway access points and picnic areas.
G. Other river pathway and trail safety should be considered early in the planning process of any development through consultation with the San Diego Police Department and/or City Park Rangers for the Mission Valley Preserve or Mission Trails Regional Park.

Crime Prevention through Environmental Design

Crime Prevention through Environmental Design (CPTED) is the practice of designing sites, buildings and public spaces with the goal of reducing crime, alleviating the fear of crime and improving quality of life. CPTED is based upon the concept of defensible space, developed by the architect Oscar Newman. According to this concept, all space is defended by the people who use it. If a space is defended by legitimate users, it is protected against crime; if a space is defended by illegitimate users, it cannot be used for its intended purpose. The premise of CPTED is that crime and misbehavior can be controlled by designing a space to encourage legitimate use, and discourage illegitimate use. Today, CPTED principles are employed by planners, designers and law enforcement officers to prevent crime. Designers can consider the following guiding principles to incorporate CPTED into a site design:

A. Natural surveillance - encourages legitimate activity and provides visual access to spaces, in order to increase the number of people using, watching and caring about the place.
B. Territory reinforcement - ensure that the transitions between private and public space are visible, so that people have an appropriate perception of how spaces are meant to be used.
C. Access control - clearly communicate where people are allowed and not allowed to be to prevent illegitimate use of space.
D. Maintenance - ensure that development is designed in a way that reduces maintenance needs after construction. Poorly maintained spaces send a signal that the community is willing to tolerate negative activities in these spaces.
E. Appropriate use - utilize design rails and decorative ledges to discourage skateboard use of seating walls. Avoid blank walls that can provide a blank surface for graffiti.

4.3.4.10 Brush Management

Brush management is required in all base zones on publicly or privately owned premises that are within 100 feet of a structure and contain native or naturalized vegetation and regulated by the Land Development Code (LDC), Section 142.0412, “Brush Management”. Brush management activity is permitted within environmentally sensitive lands (except for wetlands) that are located within 100 feet of an existing structure in accordance with LDC, Section 143.0110(c)(7). Brush management in wetlands may be requested with a development permit in accordance with LDC, Section 143.0110 where the Fire Chief deems brush management necessary in accordance with LDC, Section 142.0412(i). Where brush management in wetlands is deemed necessary by the Fire Chief, that brush management shall not qualify for an exemption under the Environmentally Sensitive Lands Regulations, Section 143.0110(c)(7).

4.4 RIVER INFLUENCE AREA

4.4.1 PURPOSE AND DEFINITIONS

4.4.1.1 Purpose

The purpose of the River Influence Area is to create a quality backdrop to the River Corridor Area through design that treats the river as an amenity; orients development toward the river; encourages active uses adjacent to the River Corridor and public access to the river pathway.

4.4.1.2 Definition and Boundaries

The River Influence Area is defined as the 200 feet wide area extending outward from the River Corridor Area on each side of the river.

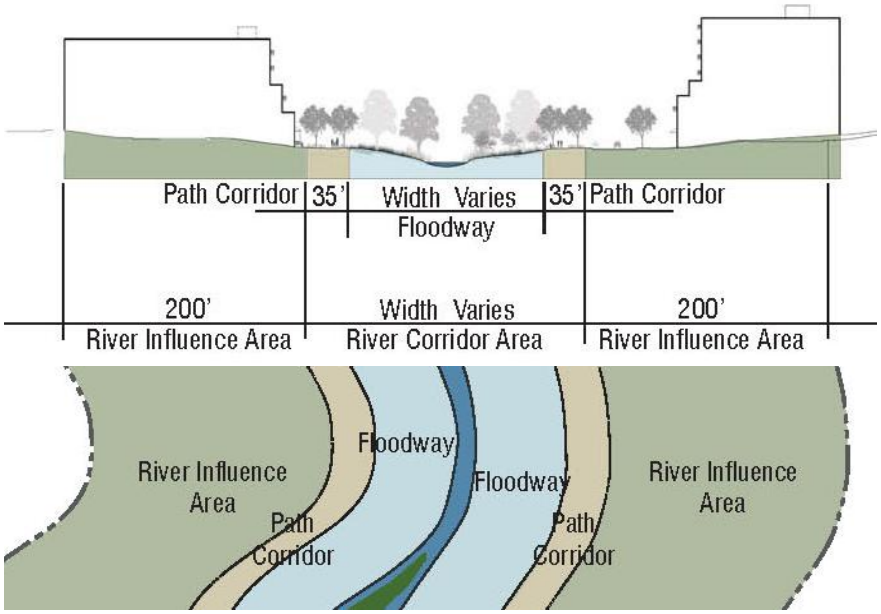


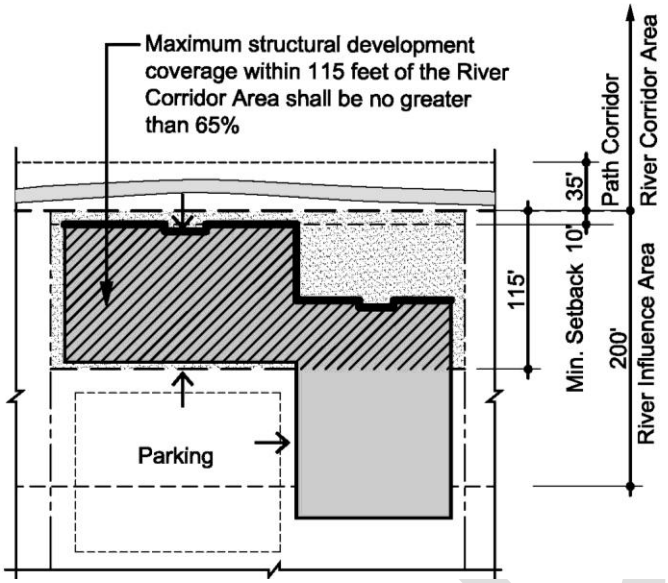
Figure 8. Plan and Section of River Corridor and River Influence Areas

4.4.2 SITE PLANNING FOR THE RIVER INFLUENCE AREA

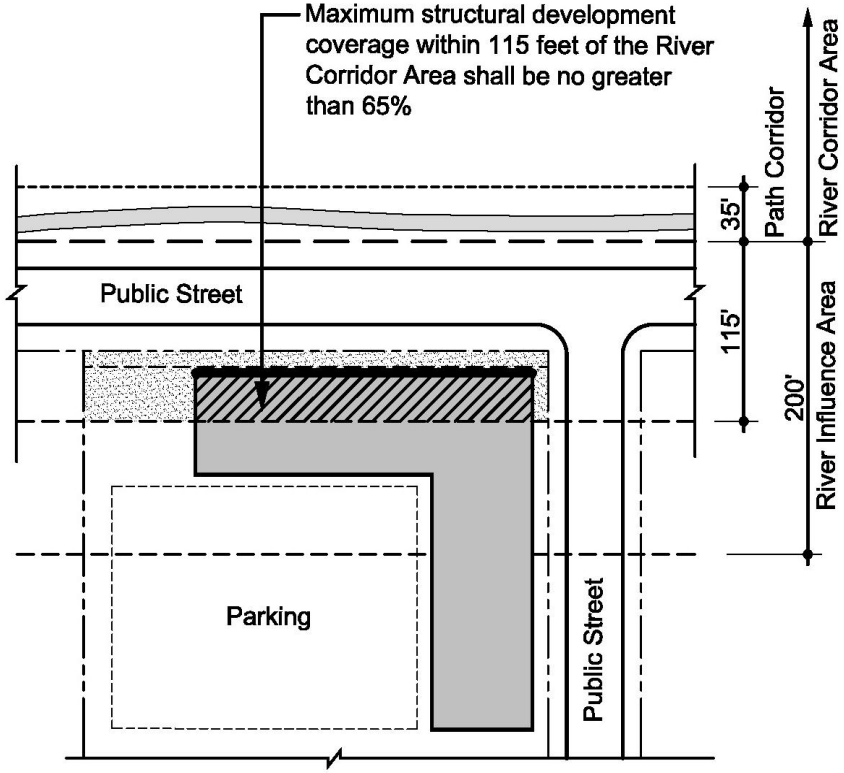
Development within the River Influence Area should be oriented to engage the river, taking advantage of the river environment as a park amenity while simultaneously providing informal oversight of the river park. In addition, development should define the edge and boundary of the River Corridor Area to reinforce and/or establish the corridor identity and image. Structures should be located and shaped in a manner that opens up views to the river from nearby districts, neighborhoods and hillsides and a structure's location and shape on the site should create a spatial transition to the river. The active uses of a structure should be focused toward the river and inactive uses should be directed away from the river.

4.4.2.1 Maximum Structural Development Coverage (For Mission Valley Planned District Ordinance Area only)

The maximum structural development coverage of a parcel within 115 feet of the River Corridor Area in Mission Valley Planned District Ordinance area to be 65 percent, all other areas along the river are per the community plan or the underlying zone.



Maximum structural development coverage depicting property adjacent to the River Corridor with open space/or plaza adjacent to the river pathway within Mission Valley Community Plan area

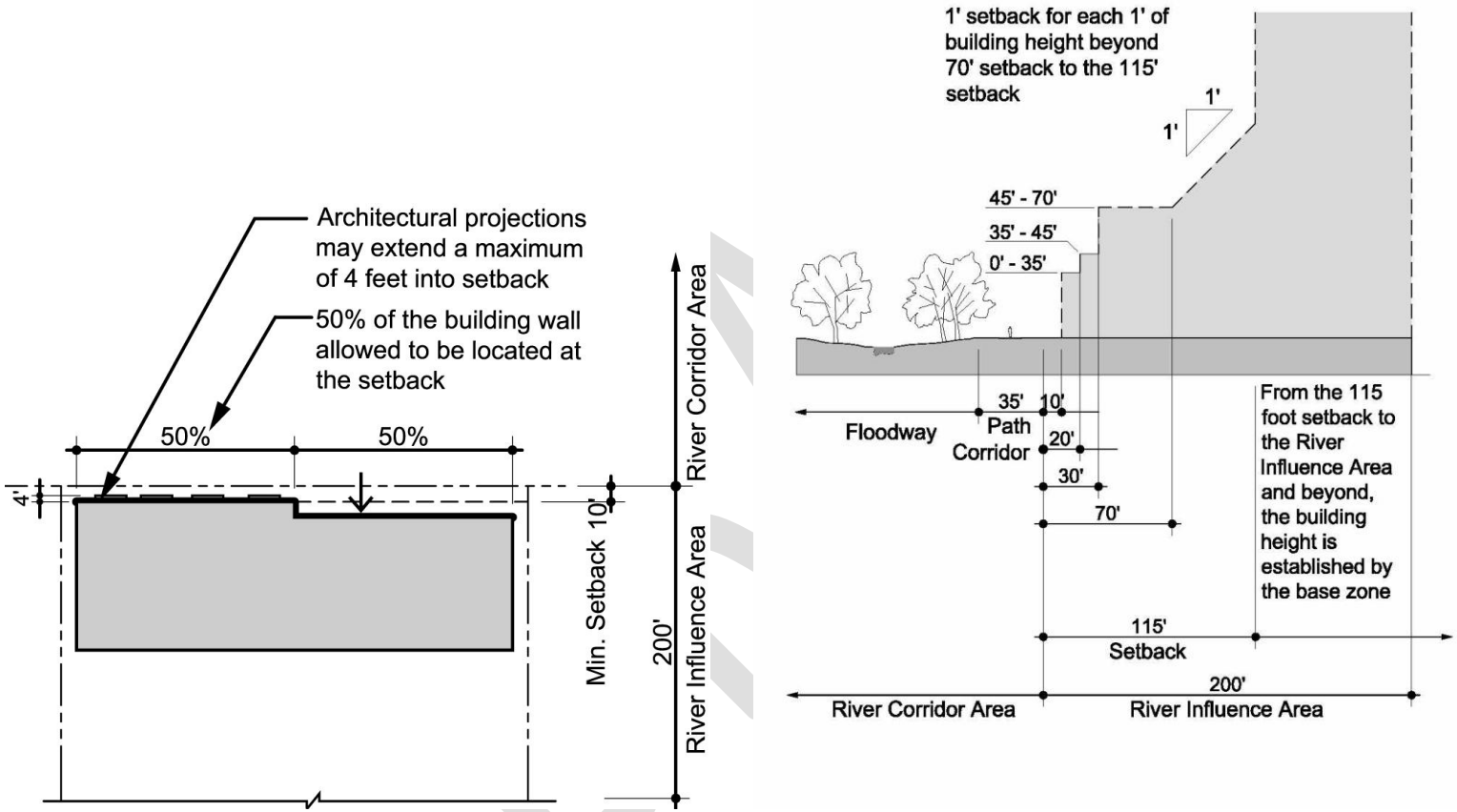


Maximum structural development coverage depicting property located at street adjacent to the River Corridor Area within Mission Valley Community Plan area

4.4.2.2 Building Height and Setback

Building height and setback on lots adjacent to the River Corridor Area should be determined by the distance the building is setback from the River Corridor Area in compliance with the following or the base zone, whichever is more restrictive. Building height should be measured in accordance with the Land Development Code.

A. A minimum 10-foot setback is required for buildings up to 35 feet in height. A maximum of 50 percent of the building wall may be located at the setback. The remaining building wall to be per the existing Offsetting Planes and Façade Variation Requirements of the Land Development Code. Architectural projections such as eaves, cornices, eyebrows, trellises, bay windows, fireplaces, entry roofs, entry arbors, balconies, and bay windows may extend a maximum of 4 feet into the 10-foot setback and should not be closer than 6 feet to the River Corridor Area.
B. A minimum 20-foot setback is required for buildings between 35 feet to 45 feet in height.
C. A minimum 30-foot setback is required for buildings between 45 feet to 70 feet in height. (Note: Buildings within the Mission Trails Design District Regulations, Land Development Code, Chapter 13, Article 2, Division 12, are restricted to a building height of 50 feet)
D. At 70-foot setback, the maximum building height allowed to not exceed 1-foot of setback per each 1-foot of building height (45 degrees).
E. At the 115-foot setback, building height to be determined by the underlying zone.
F. Where the River Influence Area and street setbacks overlap, the setback requirements of the River Influence Area to apply.



River Influence Area Building Height and Setback Diagram

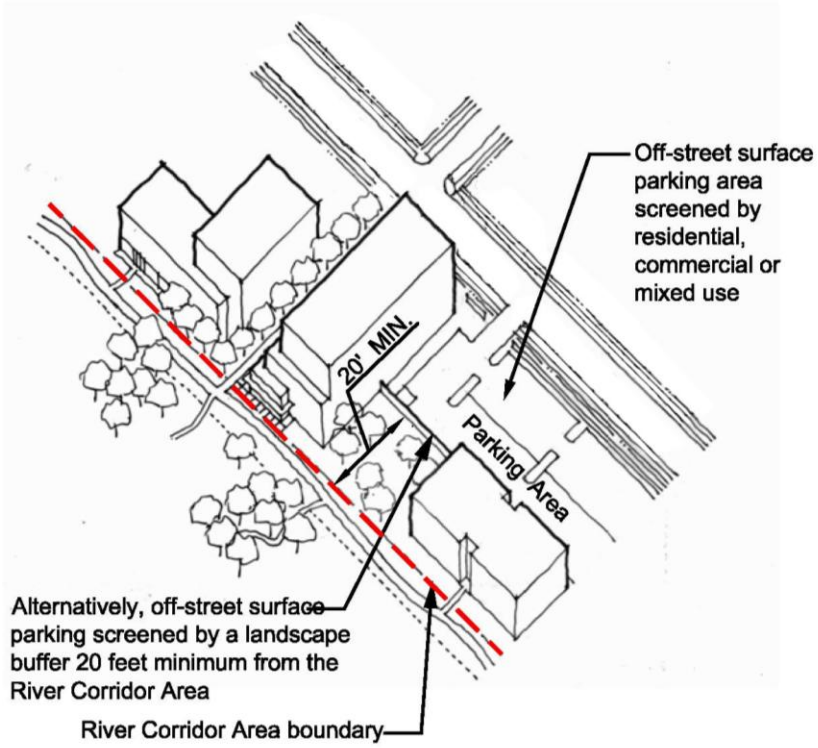
(Note: Buildings within the Mission Trails Design District Regulations, Land Development Code, Chapter 13, Article 2, Division 12, restricted to a building height of 50 feet)

4.4.2.3 Exterior Equipment Enclosures, Outdoor Storage, Loading Areas and Refuse Collection Areas

Such areas and enclosures, including utility and mechanical equipment, to be located a minimum of 100 feet from the River Corridor Area and screened by landscaping and an opaque wall at least 6 feet high, or 1 foot higher than the item to be screened if item exceeds 6 feet in height. Opaque walls should be designed and constructed of the same quality of materials as the primary building façade. Enclosures should be paved and sufficiently impervious to contain leaks and spills, and have a roof or awning to minimize direct precipitation within the secondary containment area.

4.4.2.4 Off-Street Surface Parking

Off-street parking should be sited to consider the sensitive nature of the river corridor but also promote a street scene that is conducive to pedestrians and responsive to principles of urban design. Off-street surface parking should be screened for the full length of the surface parking area with residential, commercial, industrial and/or mixed use development. Alternatively, off-street surface parking can be located a minimum of 20 feet from the River Corridor Area and screened by a landscape buffer. Within the landscape buffer plant material should be provided that achieve a minimum height of 30 inches along 80 percent of the length of the parking area along the River Corridor frontage within a two year period, except that screening is not required at pedestrian access points. Trees should be provided at a rate of one 24 inch box tree for every 30 feet of frontage along the River Corridor. Trees can be spaced apart, or provided in naturalized groupings. Parking areas that are screened by a landscape buffer should not exceed 30 percent of the length of the lot frontage cumulatively along the River Corridor or a maximum of 120 feet of the lot frontage along the River Corridor, whichever is less. Off-street surface parking should be designed to implement the City's Storm Water Standards Manual.



Off-street surface parking screened from River Corridor Area

4.4.2.5 Parking Structures

Facades of parking structures facing the river to be screened from the River Corridor Area by permitted uses or a landscape buffer. Parking structures screened with permitted uses include residential, commercial, industrial and/or mixed use development and to be for the full height and width of the parking structure. Alternatively, parking structures could be located a minimum of 30 feet from the River Corridor Area and screened by a landscape buffer in accordance with the landscape buffer requirements described in Section 4.4.2.4 Off-Street Surface Parking. Parking structures that are screened by a landscape buffer should not exceed 50 percent of the length of the lot frontage cumulatively along the River Corridor.

4.4.2.6 Site and Parking Lot Lighting

Site and parking lot lighting within 100 feet of the River Corridor Area should be designed to incorporate elements to reduce glare such as translucent, obscure or refracting lenses, low wattage light sources or shielding devices. Through the use of lighting design and shielding devices internal to the luminaire, there should be no light spillage into the River Corridor Area and lighting should be directed away from sensitive areas to ensure compliance with the MSCP's Land Use Adjacency Guidelines and to be in accordance with the Land Development Code Section142.0740 (Outdoor Lighting Regulations).

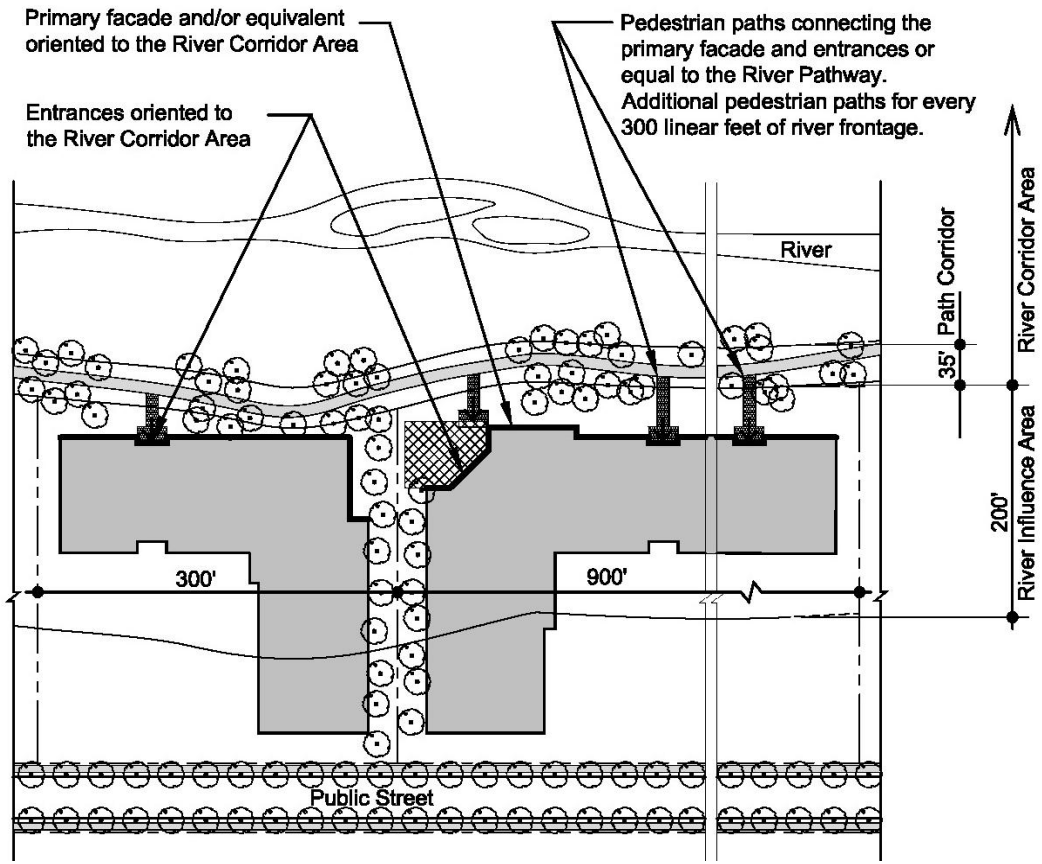
4.4.2.7 Building Access to the River Corridor Area

Development that abuts the River Corridor Area should provide the following:

A. Buildings facades to orient a primary facade and entrance, or its equal in design and materials to the River Corridor Area.

B. A pedestrian path from the river side of the building to the river pathway to be provided. Additional pedestrian paths to be provided for every additional 300 linear feet (minimum) of river frontage measured along the property line.

C. The pedestrian path to be designed utilizing the same materials as the primary entrance.



Building Façades entrances and access adjacent to the River Corridor Area

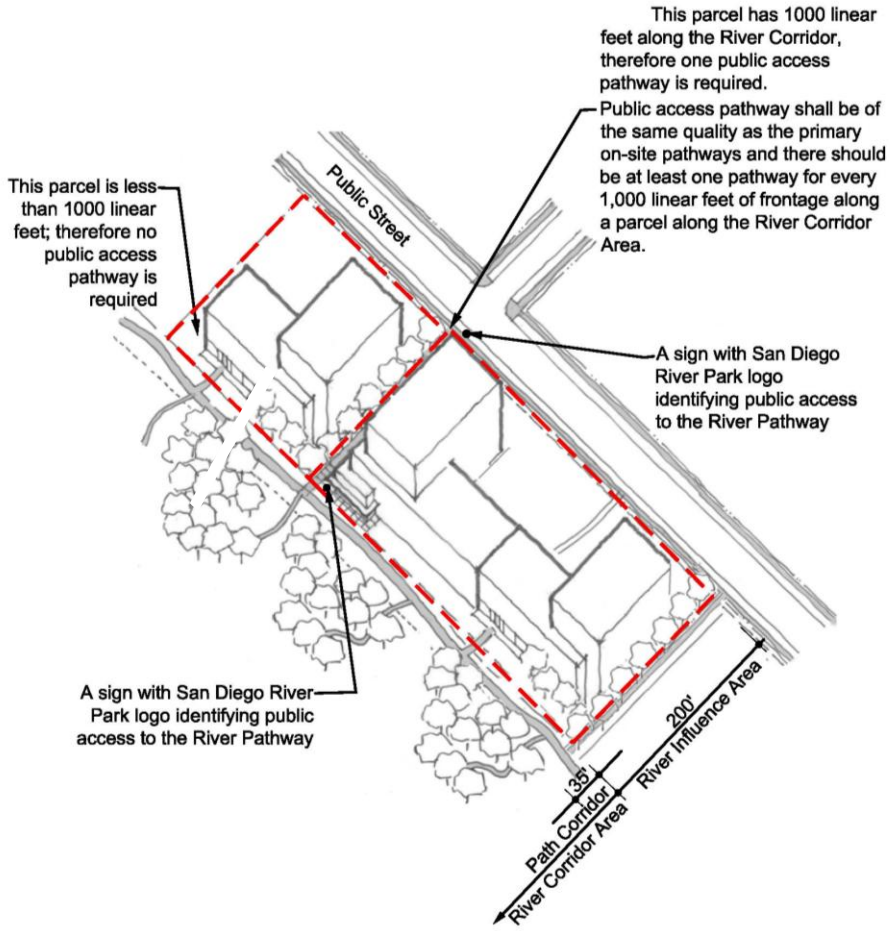
4.4.2.8 Public Access Pathway Across Development

Development that abuts the River Corridor Area to provide public pedestrian access pathways connecting the public street and the river pathway consistent with the following:

A. At least one public pedestrian pathway for every 1,000 linear feet of frontage along the River Corridor Area per lot.

B. The public access pathway should be part of the overall design of the site and a feature within the landscape design. This pathway should be the same design and materials as the primary on-site pathways.

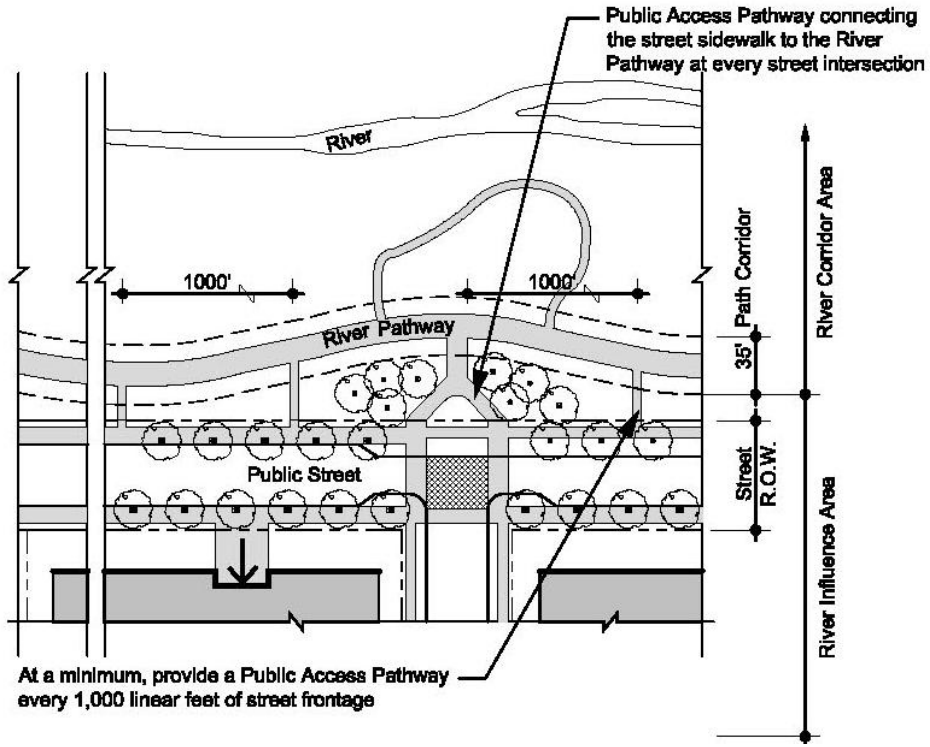
C. Directional signage, identifying public access to the River Pathway to be located at the intersections of the public access pathway and the street, and the public access pathway and the River Pathway. At a minimum the sign post to be on a galvanized mounted break-away post and the bottom of the sign to be 7 feet above finish grade. The sign face to be constructed of a minimum 1/16 inches thick aluminum, sized no smaller than 18 inches wide by 24 inches tall. Sign to include the San Diego River Park logo and these words: “Public Access Pathway to the San Diego River”. Lettering to be a minimum 1 inch wide and 3 inches in height.



Public access pathway across development

4.4.2.9 Public Access Pathway from Streets that Abut and Parallel the River Corridor Area

Public access pathways to connect the street right-of-way to the river pathway at every street intersection and, at a minimum, provide a connection for every 1,000 linear feet of frontage along the River Corridor Area.



Public access pathway to the river from streets that abut and/or parallel the River Corridor Area

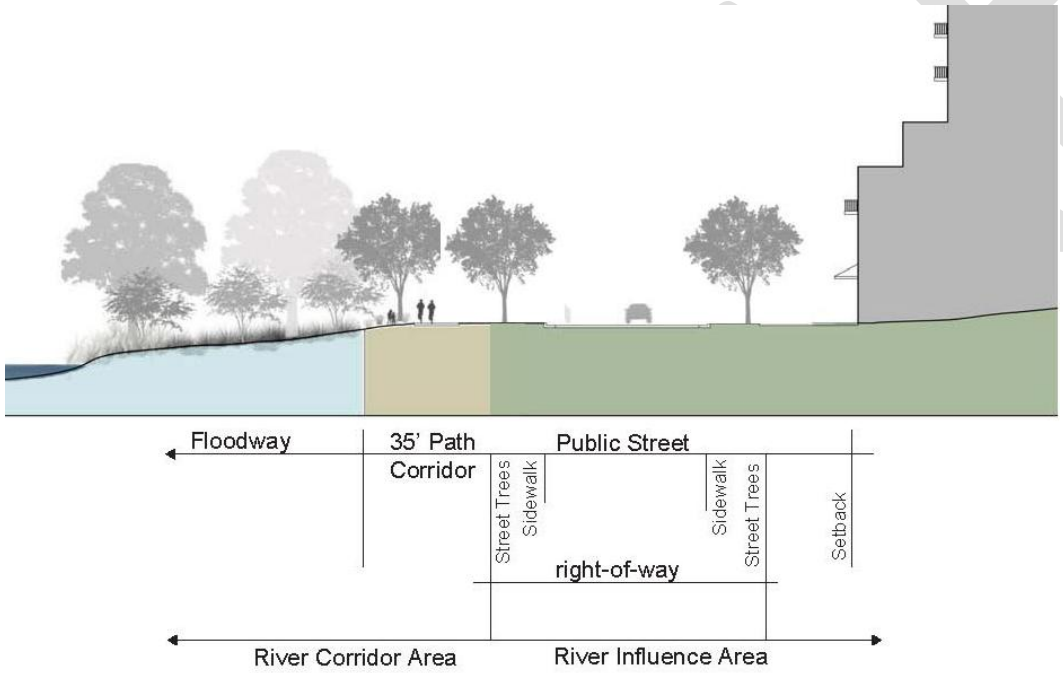
Public access pathway across development

Public access pathway across development designed with elements to encourage pedestrian use and discourage unauthorized vehicles

4.4.2.10 Streets that Abut and Parallel the River Corridor Area

Where appropriate along the river, public streets should be located adjacent to the river corridor area. This allows building activities and main entrances to naturally orient themselves towards the river. The street creates ample public access points and views to the River Corridor Area and eliminates the necessity for long lengths of fencing along private property.

A. Streets should be no wider than necessary to provide for auto, fire and police vehicle access to the River Corridor Area and adjacent development per the Land Development Code "Street Design Manual".
B. The number of curb cuts and driveways should be minimized.
C. The use of common and joint use driveways should be considered, where possible.
D. Where on-street parking is allowed along the river side of the street, parking to be provided in parking bays or clusters to allow for views of the river.

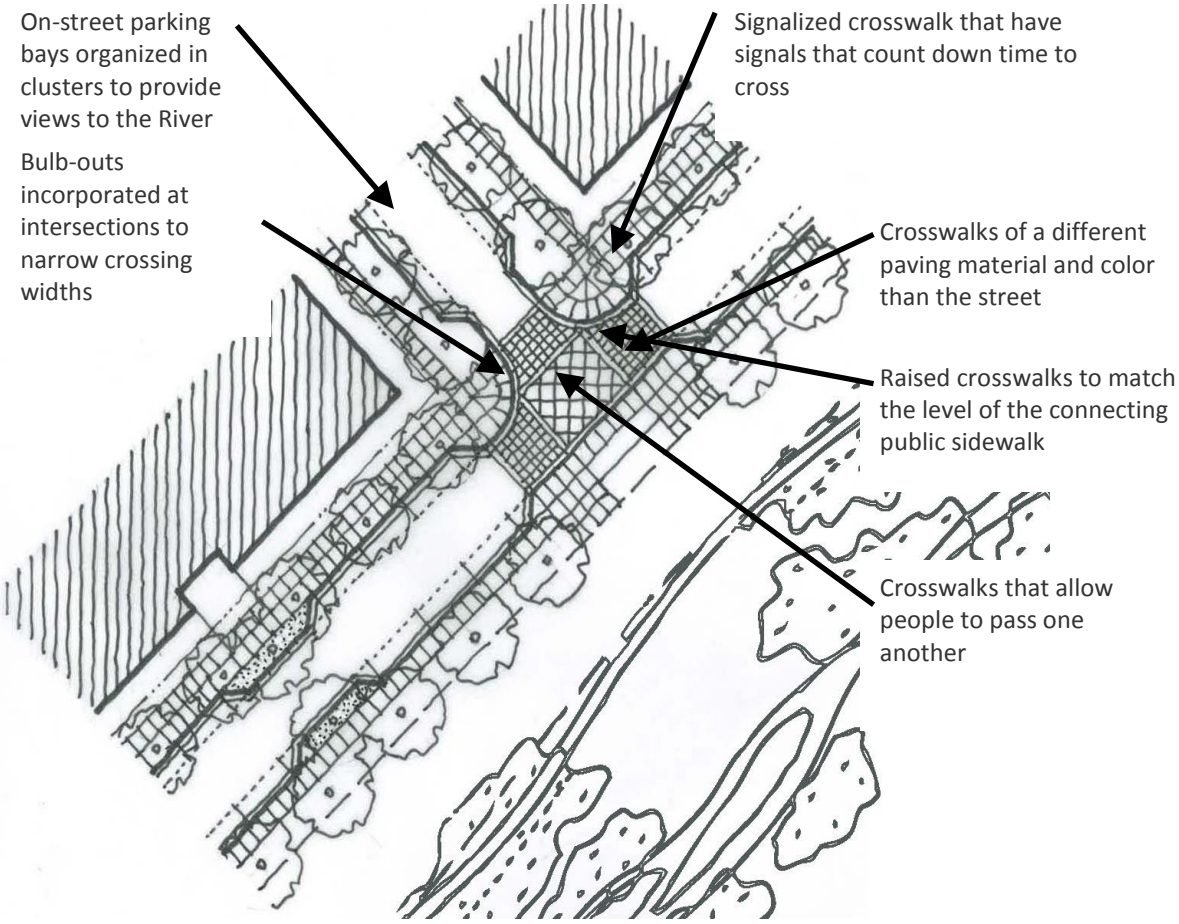


Street section parallel to the River Corridor Area

4.4.2.11 Street Intersections Adjacent to the River Corridor Area

Street intersections adjacent to the River Corridor Area should be designed in a pedestrian friendly manner. The following could be considered:

A. Crosswalks of a different paving material and color than the street.
B. Bulb-outs incorporated at intersections to narrow crossing width and to provide traffic calming.
C. Crosswalks that have signals that count down time to cross.
D. Raised crosswalks to match the level of the connecting public sidewalk and to provide traffic calming.

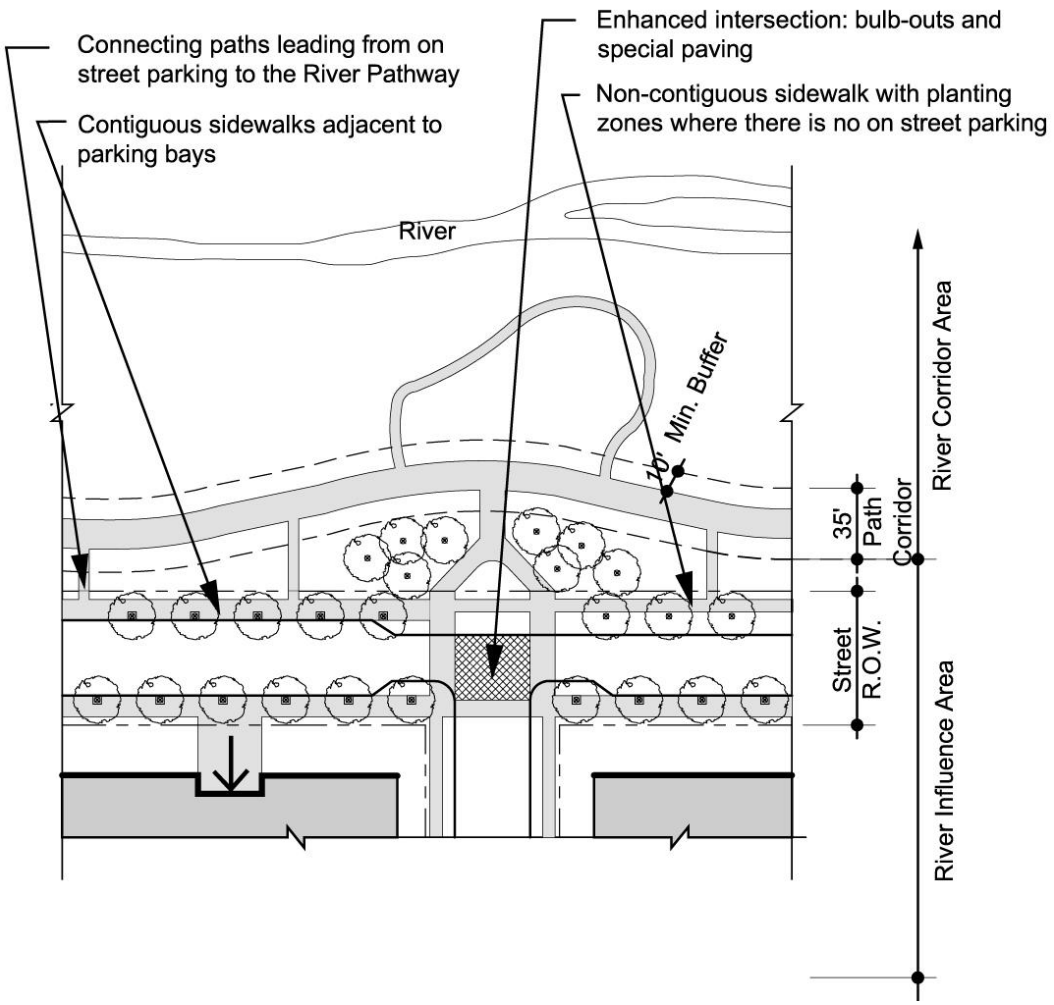


Intersections Adjacent to the River Corridor Area

4.4.2.12 Location of Public Sidewalks Parallel to River Corridor Area

A. Streets with on-street parking or parking bays should have non-contiguous public sidewalks with some public sidewalk areas that connect to the street parking to function as an access point to the river pathway.

B. Streets without on-street parking should have non-contiguous sidewalks in the parkway.



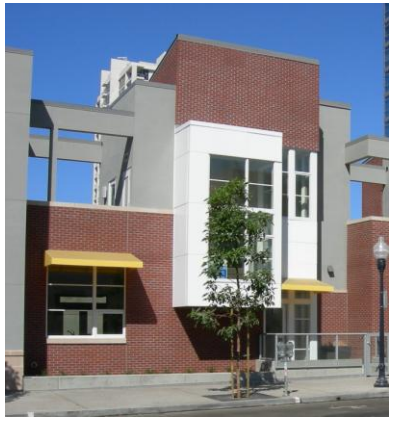
Location of public sidewalks parallel to the River Corridor Area

4.4.3 ARCHITECTURE FOR THE RIVER INFLUENCE AREA

The purpose of the architectural guidelines is to reinforce the vision of the river park as a community amenity by promoting quality architectural design, detailing and building materials within the River Influence Area.

4.4.3.1 Building Massing

To create visual interest, the building massing should vary in form and façade and avoiding repetition and monotonous walls. Building levels and planes should vary to create visual interest and to help define view corridors. To maximize view corridors to the river, the upper levels of the structure to diminish in size to create a slimmer silhouette than the lower levels of the structure. The building width facing the river at and above 70 feet in height above finish grade should be reduced by a minimum of 30 percent of the width of the building at the ground floor fronting the river.



Examples of variety and human scales

Example of varying building form, massing and façade treatment

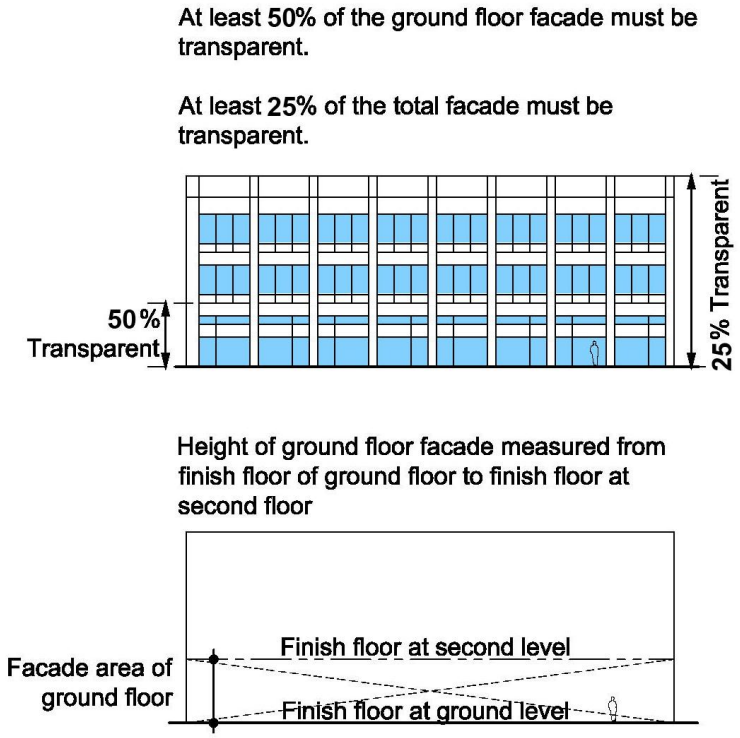
4.4.3.2 Variety and Human Scale

Interest, variety and human scale should be exhibited on building façades that face the River Corridor Area. Such variety is achieved by changes in building or roof form, recesses or extensions of the façade form, window and curtain wall patterns, shading devices, balconies, material changes, color variation, and surface pattern and texture changes.

4.4.3.3 Building Transparency

Building transparency applies to all commercial, mixed use or industrial building façades that front the River Corridor Area or building facades that font a street that abuts and runs parallel to the River Corridor Area, as follows:

A. Commercial and Mixed Use Zones: At least 50 percent of the ground floor building façade (between finish grade and the full height of the first floor) should be transparent. A minimum of 25 percent of each floor above the ground floor should be transparent. Transparency such as: glass windows, or windows affording views into retail, customer services, office, gallery, cafes, lobby space or pedestrian entrances.
B. Industrial Zones: At least 15 percent of the total façade should be transparent, such as: glass windows, display windows, or windows affording views into customer services, office, gallery, cafes, lobby space or pedestrian entrances.



Transparency diagrams for commercial and mixed use zones

4.4.3.4 Building Reflectivity

All building façades that front the River Corridor Area, or building facades that front a street that abuts and runs parallel to the River Corridor Area, should incorporate non-reflective glazing types of materials to reduce the visible light reflectivity.

4.4.3.5 Building Lighting

All lighting within 100 feet of the River Corridor Area should be shielded and directed away from the River Corridor Area and to be in accordance with Land Development Code Section 142.0740, (Outdoor Lighting Regulations).

4.4.3.6 Building Signs

A. Signs to be accordance with Land Development Code, Chapter 12, Article 9, Division 8 (Sign Permit Procedures) and Chapter 14, Article 2, Division 12 (Sign Regulations).
B. Within 100 feet of the River Corridor Area, signs on building facades fronting the River Corridor Area should not exceed a height of 15 feet above finish grade and are to be face lighted or internally lighted.
C. Ground signs between the building and the River Corridor Area should be monument signs not to exceed 5 feet in height and located within a landscaped area at least equivalent to the square feet of the sign face.

Examples of monument signs not exceeding 5 feet in height

4.4.4 LANDSCAPE ARCHITECTURE FOR THE RIVER INFLUENCE AREA

The purpose of landscape architecture guidelines is to integrate the landscape of the River Influence Area with the landscape character and materials of the River Corridor Area. All landscape areas within the River Influence Area to be in conformance with Land Development Code, Chapter 14, Article 2, Division 4 (Landscape Regulations). Landscape materials including but not limited to fencing, trellises, hardscape should include sustainably grown wood products and 'green' materials with post-consumer recycled content.

4.4.4.1 Public Art for Private Development

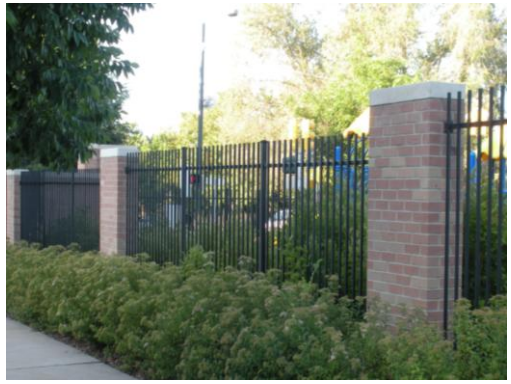
Art within the River Influence Area should be designed to celebrate and enhance the river experience, as well as to complement the natural colors and textures of the river valley where it is located. The placement of public art is encouraged to be viewed not only from the River Influence Area, but also from the river pathway in the River Corridor Area. Art opportunities proposed for private property are encouraged, but will remain at the discretion of the private property owner. The City of San Diego Arts Commission can provide assistance for the selection process of artists on projects. Public art should be integrated into functional elements, such as site furnishings and signage, to engage and educate the public about the river park and its environs.

4.4.4.2 Fences and Walls

Fences and walls should provide screening without visually walling-off the River Corridor Area. Within the 10-foot building setback from the River Corridor Area, the following fences and walls should be consistent with the following:

A. Solid fences or walls not exceeding 3 feet in height.
B. Fences or walls of 6 feet in height that are 75 percent open/transparent.
C. A combination of a 3 feet solid fence or wall topped with a 3 foot fence or wall that is 75 percent open/transparent.
D. For purposed of this section chain link fencing does not qualify as a 75 percent open fence.

Chain link fencing should not be used in the 10-foot building setback and used only within landscape areas where plant material can screen the chain link and the chain link fence should have a green or black vinyl covering.



6-foot fence with 75 percent open/transparent

3-foot wall, with 3-foot high, 75 percent open/transparent fence attached

4.4.4.3 Plant Material

Plant materials within 15 feet of the River Corridor Area plant to be non-invasive low water use species and selected to complement the native plants in the River Corridor through color, texture and forms. Plant materials within the River Influence Area should frame and enhance views of the River Corridor Area. See Appendix "A" Recommended Plant Species, for a list of recommended plant materials for the River Influence Area. This list is not a mandate and should be used as a guide only.

5.0 IMPLEMENTATION

To implement the San Diego River Park Master Plan, both private and public landowners will need to partner and invest in the river valley. This partnership between private and public entities must remain solid and active to ensure the success and vitality of the San Diego River Park. The five principles of the Master Plan (Restoring and maintaining a healthy river; Unifying a healthy habitat; Create a connected continuum along the River Pathway; Interpreting the river valley history; and Reorienting development toward the river to create value and opportunities for people to embrace the river) should serve as the guide for implementation decisions.

As stated in the Introduction Section of the Master Plan, one of the great challenges of implementing the San Diego River Park lies in the fact that much of the land along the river is in private, state, or federal ownership. It is anticipated that the River Pathway will be built through development of these private and state/federal lands and that there will be gaps in the pathway system as the River Park develops over the course of time. Where there are gaps in the pathway, it can be routed to a public sidewalk until it can be constructed along the river. In some locations the pathway gaps could be designed and built by the City working in partnership with the land owner and non-profit organizations by obtaining grant funding or other means. It is critical that efforts are made to work with the owners of these properties and the community to provide access along the river.

Within the following implementation section, these principles are translated into: an implementing framework; implementation strategies; maintenance, management and security; and public outreach and education. The implementing framework gives a summary of the river reaches, how closely they meet the Master Plan principles and what still needs to be accomplished. The implementation strategies section identifies potential funding sources on federal, state, and local levels, development tools, and required government approvals. Of equal importance are maintenance, management, and security for the River Park. Within this section are tools and programs for both private and public lands to ensure a pleasant, desirable, and safe experience for the users of the San Diego River Park. Looking to the future, this Master Plan must also consider public outreach and education as a long term approach to sustain commitment to the River Park.

5.1 Implementing Framework

The following Implementing Framework table briefly describes, in the year 2012, how the five principles have been implemented in the six reaches of the river, and shows where future improvements are needed from private and public landowners.

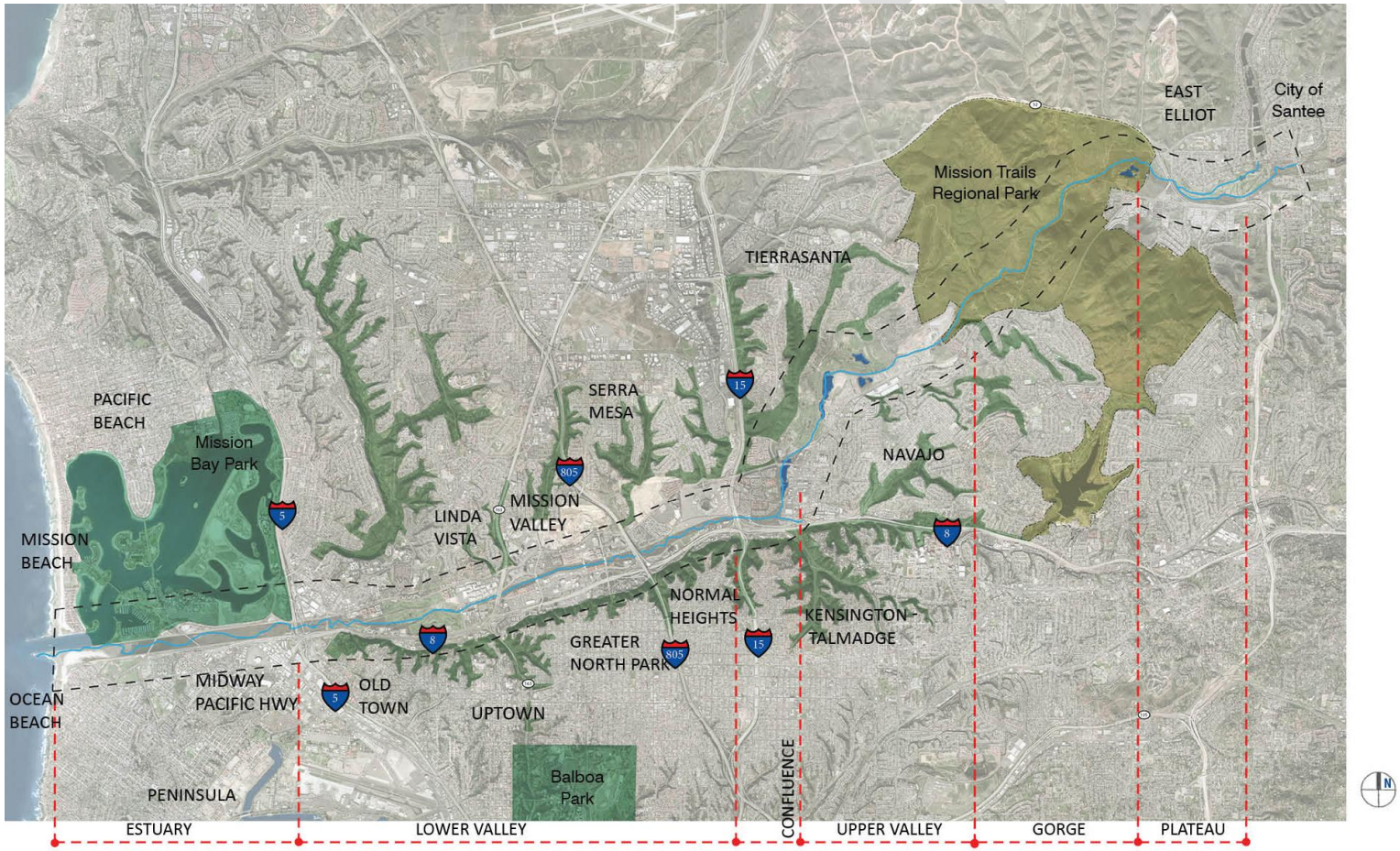


Figure 9. San Diego River Reach Implementing Framework

PRINCIPLE/ RIVER REACH	RIVER HYDROLOGY	RIVER HABITAT	RIVER PATHWAY	INTERPRETIVE PROGRAM	ORIENTATION TO THE RIVER
ESTUARY (Public Ownership)	Existing man-made channel to remain	On-going maintenance and litter reduction is needed	Pathway is primarily complete	Enhance with additional signs on the river's history	No new development anticipated
LOWER VALLEY (Public and Private Ownership)	River channel improvements anticipated through redevelopment	Exotic and Non-native plant removal and restoration of native habitat and litter reduction is needed	Pathway is incomplete and approximately 2.5 to 3.5 miles are needed through public and private land. Potential easements may be needed on private land	Provide signs on the river's history along the River Pathway, outlooks and key historic areas	Infill Development and redevelopment to provide new orientation to the river
CONFLUENCE (Public and Private Ownership)	River channel contains old mining ponds; improvements anticipated through redevelopment	Exotic and Non-native plant removal and restoration of native habitat needed	Pathway is incomplete and approximately 1.5 to 2.5 miles are needed through public and private land. Potential easements may be needed on private land	Provide signs on the river's history along the River Pathway, outlooks and key historic areas	Infill Development and redevelopment to provide new orientation to the river
UPPER VALLEY (Public and Private Ownership)	River channel is constrained; improvements anticipated through redevelopment	Exotic and Non-native plant removal and restoration of native habitat needed	Pathway does not exist, approximately 2.6 to 3.6 miles needed through potential easements on private land	Provide signs on the river's history along the River Pathway, outlooks and key historic areas	Infill Development and redevelopment to provide new orientation to the river
GORGE (Public Ownership)	Existing natural channel to remain	On-going maintenance needed	Pathway is not complete on the west and east end, approximately 1 -1.5 miles are needed on public land	Enhance with additional interpretive signs on the river's hydrology, habitat and history	No new development anticipated
PLATEAU (Public and Private Ownership)	River channel is constrained by Highway 52 and existing Golf Course; If Golf Course redevelops the channel could be improved	Exotic and Non-native plant removal and restoration of native habitat needed	Pathway does not exist, approximately 1.4 to 2 miles needed through public and private land. Potential easements may be needed on private land	Provide signs on the river's history along the River Pathway, outlooks and key historic areas	Infill Development and redevelopment to provide new orientation to the river

Implementing Framework Table

5.2 Implementation Strategies

The implementation strategies listed below are different means of achieving the Master Plan vision and five principles. Private or public projects will require the use of several strategies working together depending on the type of development that is pursued and the area's context. Although comprehensive, the following list of strategies is not complete, and over the next 20 years the implementation strategies could change and projects will need to respond to new funding sources, development tools and government approvals.

5.2.1 FUNDING SOURCES

Funding to implement the Master Plan will come through public and private sources as development and redevelopment occurs. Numerous grants are available from federal, state, local and private entities to provide assistance with the implementation of the Master Plan. Listed below are federal and state grant opportunities, as available in the year 2010, with a brief description of what type of projects they would fund. These are all subject to change over the life of the Master Plan, and landowners should contact the agencies for current information.

5.2.1.1 Federal Funding Agencies:

A clearinghouse for federal government grants is available at www.grants.gov:

National Park Service

There are 25 National Park Service federal grants, government grants and loans. Of these, the River Park: River, Trails and Conservation Assistance (15.921) would assist in the implementation of the River Park. This grant provides for projects that implement the natural resource conservation and outdoor recreation mission of the National Park Service. Eligible Applicants: Public Agencies and Non-profit organizations.

US Fish & Wildlife Service

Provides grants for projects that: 1) promote conservation of wetlands and associated habitats for migratory birds and other wildlife, 2) restore natural resources and establish or expand wildlife habitat and, 3) help conserve birds. Eligible Applicants: Public Agencies and Non-profit organizations.

National Endowment for the Arts

The National Endowment for the Arts (NEA) is dedicated to supporting excellence in the arts, both new and established; bringing the arts to all Americans; and providing leadership in arts education. In 2010, the NEA put forth nine grant categories. These grants provide for broad topics

such as: Access to Artistic Excellence, Literature Fellowships, Arts on Radio, Learning in Arts for Children and Art Partnerships. Several of these grants could provide funds for an art interpretive signage program or public art within the river valley. Eligible Applicants: Public Agencies and Non-profit organizations.

5.2.1.2 State Funding Agencies:

A clearinghouse for state government grants is available at www.getgrants.ca.gov:

State Coastal Conservancy

Provides grants for projects that provide public access to coastal areas, protect and enhance coastal resources and agricultural lands, restore urban waterfronts, and acquire land to protect coastal watersheds and other natural resources. Eligible Applicants: Public Agencies and Non-profit organizations.

State Water Resources Control Board

Provides grants for projects that prevent or reduce storm water contamination of rivers, lakes and streams. Preference is given to projects that: 1) support sustained long-term water quality improvement or 2) are consistent with an applicable Integrated Regional Water Management Plan. Eligible Applicants: Public Agencies.

State Department of Water Resources

Provides grants for projects that help meet the State's water needs, including water supply projects, water quality projects, groundwater projects, removal of invasive non-native species, trash and debris clearing accompanied with re-vegetation, removal of culverts to stabilize river channels, management of storm water runoff to reduce flood damage, and habitat projects that are beneficial to the State's long term water needs. Eligible Applicants: Local Public Agencies and other organizations included in an Integrated Regional Water Management Plan.

State Department of Parks and Recreation

Provides grants to protect fish, wildlife, and native plant resources, to acquire or develop wildlife corridors and trails, and to provide for natural interpretation programs and other programs which bring urban residents into park and wildlife areas. Grants are also available for the acquisition and development of new parks that rehabilitation or expansion of overused parks and to provide new recreational opportunities to low income communities. The Recreational Trails Program Grant may be used for maintenance and restoration of existing trails, purchase and lease of trail construction and maintenance equipment, construction of new trails and acquisition of easements or property for trails. The Land

and Water Conservation Fund allocate money to acquire new land for recreational purposes, including bike paths and support facilities such as bike racks. Eligible Applicants: Public Agencies.

State Natural Resources Agency

Provides grants for multi-objective River Park projects such as providing compatible recreational opportunities, protecting, improving or restoring river habitats, providing open space for flood management, converting existing developed riverfront land into a River Park or providing interpretive enhancement and conservation activities. Eligible Applicants: Public Agencies, State Agencies, and Non-profit organizations.

State Conservancy for the San Diego River

Provides funding for the planning and construction of pathways and trails, removal of exotic species and habitat re-vegetation, improvement of water quality, acquisition of land for new parks or open space and interpretation programs. Eligible Applicants: Public Agencies and Non-profit organizations.

State Wildlife Conservation Board

Provides grants for the restoration and protection of wildlife areas, projects that provide public access to facilities for wildlife viewing and other wildlife oriented purposes, and protection of habitat through conservation easements or acquisition. Eligible Applicants: Public Agencies and Non-profit organizations.

CAL FIRE

Provides grants for urban forestry, tree planting projects, and up to two years of initial maintenance. Preference will be given to projects that provide the greatest air quality benefits and/or energy conservation benefits. Funding is also available for innovative projects that improve the environment in urban areas through establishment and management of urban vegetation. Eligible Applicants: Public Agencies and Non-profit organizations.

Caltrans

Provides grants for projects that mitigate the risks and damages to the environment associated with the construction of new, or modification of existing transportation facilities. Projects that improve air quality through urban forestry and projects that protect enhance or restore watersheds, wetlands, or wildlife areas. Eligible Applicants: Public Agencies, State Agencies, Federal Agencies and Non-profit organizations.

5.2.1.3 Local Funding Agencies

San Diego Association of Governments (SANDAG)

SANDAG is made up of 18 cities and county governments and serves as the forum for regional decision-making. SANDAG builds consensus, develops strategic plans, obtains and allocates resources, plans, engineers, and builds transportation projects, and provides information on a broad range of topics pertinent to the region's quality of life. SANDAG administers *TransNet* funding for planning and construction of transportation projects. Two percent is set aside for bicycle transportation projects and an additional six percent is set aside for habitat-related environmental mitigation activities required to implement projects identified in the Regional Transportation Plan (RTP). Within the RTP, SANDAG estimates that approximately, $457 million maybe available for bicycle/pedestrian improvements from 2010 to 2020 and $2.6 billion from 2010 to 2050 (dollar amount based on 2012 data). In addition, SANDAG has created an Integrated Regional Infrastructure Strategy (IRIS) that identifies four regional infrastructure areas that are significantly underfunded and lack dedicated funding streams: habitat conservation, shoreline preservation, water quality enhancement and public transit operations and maintenance. SANDAG has embarked on a regional dialogue to examine quality of life funding priorities and potential funding mechanisms through the SANDAG Quality of Life Ad Hoc Steering Committee for these four regional infrastructure areas. Projects along the river that focus on habitat conservation, water quality enhancement or public transit could all apply for these quality of life funds.

City of San Diego Development Impact Fees

Development Impact Fees (DIF) provides funding for public facilities. These fees are collected at the time of building permit issuance for private development to fund public infrastructure such as transportation, parks, libraries and fire stations. DIF could be used to implement some of the San Diego River Park facilities that are identified in the appropriate community plan and associated public facilities financing plan to satisfy population-based park and transportation requirements.

Development Costs as of 2010

Multi-Use Paths and Trails

Based on similar developments, a Multi-Use/Class I Bike Path (10' wide) may cost approximately $4.75 to $8.00 per square foot or $250,800 to $422,400 per mile to construct (in 2010 dollars), resulting in total costs of $3.2 to $5.5 million for the approximately 13.1 miles of river pathway to be built.

Decomposed granite (D.G.) pedestrian trails (5' wide) may cost $1.75 to $3.00 per square foot or $46,200 to $79,200 per mile to construct (in 2010 dollars), or $693,000 to $1.9 million for an anticipated 15 miles of trails to be added to the river park area.

NOTE: These pathway and trail construction costs do not include design, permits, mitigation, or land costs.

Restoration

Based on similar developments, the overall restoration costs may range from $60,000 to $120,000 per acre in 2010 dollars, plus additional funds for security, if necessary.

Land

Based on 2009 limited land sales data of developable properties, properties adjacent to the river park area sold for approximately $2.2 to $3.3 million dollars an acre. These numbers are to be used as a preliminary guide for planning proposes and actual values for individual properties would be accessed at time of sale.

City of San Diego Commission for Arts and Culture

The Commission for Arts and Culture serves in an advisory capacity to the City Council on promoting, encouraging and increasing support for the region's artistic and cultural assets, integrating arts and culture into community life and showcasing San Diego as an international tourist destination. The Commission advises on the policies and processes whereby artworks are included in Capital Improvements Program projects and ensures that artists are involved as early as possible in the pre-design and or design phase. For public projects, Council Policy 900-11 outlines a process for including public art in selected Capital Improvement Program (CIP) projects. The Public Art Program is to be funded by two percent of the budget for all eligible CIP projects over $250,000. Artists are to be involved in the early stages of the project design so that they may become an integral part of the design process. For private projects, the City Council has amended the Municipal Code (Chapter 2, Article 6, and Division 7) to require certain private developers to set aside one percent of their project budgets for art and cultural enhancement. The ordinance applies to eligible private commercial and industrial developments with a total building permit valuation equal to or in excess of $5 million dollars. This requirement may be satisfied by the financing of cultural and artistic facilities and/or on-site art work. Private developers also have the option to pay a one half percent in-lieu fee. In-lieu fees are used for artistic enrichment of the City's public spaces. Through these public and private projects the opportunity for public art can be provided along the river.

Special Districts

Utilizing public financing mechanisms, private development may fund land and easement acquisition and improvements through Community Facility Districts (CFDs), Benefit Assessment Districts, and Property-based Business Improvement Districts. CFDs are districts with special taxes secured by property that can be used for capital improvements and maintenance, as adopted by property owners within the district. Benefit Assessment Districts can also be formed by property owners for improvements and maintenance, but are based on more strictly determined benefit nexus formulas than CFDs. Property-based Improvement Districts are similar to Benefit Assessment Districts, but are governed by a private non-profit corporation made up of a majority of the property/business owners.

Development Agreements

Private development can also fund land acquisition and improvements through Development Agreements. This type of agreement becomes a contract between the City and a developer or property owner that ensures development rights in accordance with specified and predictable regulations in exchange for extraordinary public benefits.

5.2.1.4 Private Funding (Private Foundations, Philanthropic Organizations and Individuals)

A number of private foundations, philanthropic organizations and individuals have made contributions to fund improvements or maintain a special area of the river by donating funds to a private or public entity. The San Diego River Foundation, a 501(c)(3) public benefit nonprofit organization, is a community-based organization dedicated to engaging people in caring for the San Diego River and celebrating the creation of the River Park with community places, trails, open spaces and other public areas. Private funding can go directly to the San Diego River Foundation to assist in its volunteer projects, land acquisitions and maintenance programs. Private funding could also be provided to the City of San Diego in a special fund for the San Diego River that would offset maintenance costs or support a Ranger Program.

5.2.1.5 The Nature Conservancy

The Nature Conservancy is a leading conservation organization working around the world to protect ecologically important lands and waters for nature and people. The Nature Conservancy's focus in San Diego County extends from the coastal sage uplands to the coniferous forests to the desert in the far eastern county. The Nature Conservancy is acquiring key properties in San Diego County to add to an emerging countywide system of interconnected nature preserves. This multi-jurisdictional effort is driven by a coalition of private conservation organizations, local landowners, members of the public, and government agencies. The Conservancy alone has saved over 15,000 acres in San Diego County since 1985 and assisted other organizations to protect thousands of additional acres. Recently, the Conservancy joined the San Dieguito River Park Joint Powers Authority and the City of Escondido in a successful collaboration to secure the acquisition of the 232 acres of the Bernardo Mountain property. In the future, the Conservancy could partner with the City of San Diego and the River Coalition to acquire land, assist in biological inventories of the river valley or hold workshops on wetland conservation efforts.

5.2.1.6 Trust for Public Land

The Trust for Public Land (TPL) helps communities take action on parks and land conservation by providing objective advice based on extensive experience, the latest technology and analytical frameworks, and a proven approach to realizing parks and conservation goals. TPL's primary services are: Conservation Vision, Funding, Research and Education, Transactions, Park Design and Development and the Conservation Campaign. Since 1984, TPL has been working in San Diego County protecting more than 31,000 acres. TPL's goal for San Diego is to preserve distinctive landscapes that define San Diego's history, culture, and economy to ensure that it remains a place people want to live, work and play. As of 2010, TPL is working in three distinct areas of San Diego: North County Buena Vista Creek, East County Rutherford Ranch and Volcan Mountain, and South County Otay Mountain and the San Diego National Wildlife Refuge. In addition, TPL has partnered with the San Diego River State Conservancy to acquire land in the eastern San Diego river area within the County of San Diego's jurisdiction.

5.2.2 DEVELOPMENT TOOLS

Through public and private development, the Master Plan's five principles will be implemented through different development tools, including but not limited to: capital improvement programs, discretionary development permits, land acquisitions, project mitigation requirements, and transfer of development rights.

5.2.2.1 Capital Improvement Program

A Capital Improvement Program (CIP) is a plan that identifies projects, schedules and funding options for public landowners. CIP funds are used exclusively for the acquisition, design and construction of permanent improvements which can be capitalized after completion. Typically, repair or maintenance expenditures cannot be made from CIP fund sources. Typical projects include construction of streets/bridges over the river, sewer and water infrastructure, storm water devices, public park amenities and habitat creation. CIP project programming scoping should incorporate the principles and recommendations of the Master Plan, the applicable community plan and the General Plan. This can occur through the public agency making a decision to include this in the CIP or it can be added to the project as a permit condition.

5.2.2.2 Discretionary Development Permits

Discretionary development permits require environmental review for potential impacts, a public hearing (exceptions are Process 2 permits) and approval from a decision making authority. Within the river valley, most land development will include some type of discretionary permit due to environmentally sensitive lands, planned district ordinances, community plan implementation overlay zones and the coastal overlay zone. In some cases, the discretionary permit will be a Planned Development Permit (PDP) to allow for specialized zoning and design guidelines for larger land developments. A PDP may also require the applicant to group a particular development's residential or multi-use structures on a portion of the subject property, reserving some of the site as protected open space or park land and transferring densities internally within the site. Through this process, the development may be approved with a permit that requires open space or population-based parks and transportation amenities (such as bike routes), with possible density incentives. During the review and processing of these discretionary permits, public and private development could incorporate the principles of the Master Plan into the overall design and permit conditions. In addition, any state or federal resource agency permits required for project approval will be determined at this time and the permit conditions will be developed with the appropriate agency.

5.2.2.3 Project Mitigation Requirements

Project mitigation requirements are another vehicle to implement the Master Plan during the discretionary development permit process. All discretionary development projects are subject to California Environmental Quality Act (CEQA). For those projects that require an initial study, project impacts will be determined and project specific environmental mitigation measures will be identified. Environmental mitigation measures could include: 1) water quality best management practices for construction and for post construction, 2) wetland restoration, enhancement, and, in some cases, creation and, 3) noise attenuation. In addition, the Mitigation, Monitoring, Reporting Program (MMRP), prepared as part of the program Environmental Impact Report and incorporated by reference in the San Diego River Park Master Plan, will be required to be incorporated into future project mitigation requirements.

Transportation and climate change mitigation requirements can be required during the time of project discretionary permits. Transportation mitigation could include enhancements to the pedestrian and bicycle circulation system, such as the River Pathway, to provide alternative modes that may reduce automobile traffic and air quality impacts. The City is preparing a Climate Mitigation and Adaptation Plan that will include an inventory of greenhouse gas emissions (GHG), recommend actions to reduce emissions, and identify strategies to adapt to a changing climate. SANDAG has prepared an update to the Regional Transportation Plan that will include a Sustainable Communities Strategy to reduce GHG emissions resulting from vehicle miles traveled (VMT). As climate change mitigation measures are identified through these and other plans, opportunities may arise for application of these measures in a manner that benefits implementation of the San Diego River Park Master Plan. For example, the planting of native trees and re-establishment of wetlands in the river corridor area may help mitigate climate change impacts through carbon sequestration, and creating key pedestrian and bicycle linkages through the River Pathway may help reduce automobile trips and CO2 emissions.

5.2.2.4 Land Acquisition (Fee Title Purchase, Dedications, Donations or Easements)

Another tool to implement the Master Plan is for the City to acquire land in the river valley through fee title or easement purchases, dedications and donations. Fee title purchase assumes the City would purchase land at fair market value and this would also include real estate transactional costs associated with the acquisition. Fee title purchase is the most expensive land acquisition method, but would be valuable in some locations of the river that are adjacent to existing City-owned land.

Approximately two-thirds of the river and floodway is privately-owned, including the river itself. Typically, this same area is also mapped, per the City's Multiple Species Conservation Program (MSCP), as Multi-Habitat Planning Area (MHPA). As a part of the MSCP management plan, private

landowners can dedicate or donate the land, most of which is not developable, to the City to add to the MHPA acreage. If the land is donated the City would maintain the land as part of the preserved area.

One of the highest priorities for the San Diego River Park Master Plan is to construct the River Pathway from Ocean Beach Park to the City of Santee. The River Pathway would be provided on both public and private land. Most of the City-owned land contains the planned River Pathway from Ocean Beach Park to Sefton Field in the Mission Valley Community, and through Mission Trails Regional Park in the Navajo Community. On private land, the River Pathway will be built as part of new development or redevelopment. A "Recreation Easement" will be required for the River Pathway and will be part of permit conditions. The easement does not transfer ownership of the River Pathway to the City of San Diego and the landowner would be responsible for improvements and maintenance of the easement either individually or, preferably, as a part of a common maintenance structure. The easement area, through the easement language, could also be maintained through a Community Facilities District, Maintenance Assessment District or a Property/Business Improvement District, similar to the Martin Luther King, Jr. Promenade in downtown San Diego.

Reliable land acquisition costs cannot be determined since they rely on specific area circumstances such as property ownership; the development potential, if any, of land or easements acquired; entitlement values; and market values at the time of acquisition. For example, private land that is developable and needed for the River Park will cost more than land that is not developable because of existing local, state and federal regulations. The cost of acquiring easements or fee-interest ownership of land for the River Park that is developable can be reduced if the development rights and associated value are transferrable to other portions of the property, or to other properties, outside the River Park where development is encouraged. Some private land can be acquired through dedication in exchange for development rights.

Permits for Protected Resources

Wetlands
The San Diego River is within a large mapped urban floodplain; as such, any alteration to it is subject to a federal permit under Section 404 of the Federal Clean Water Act. The permit is under US Army Corps of Engineers (ACOE) jurisdiction. This applies to any project which affects floodplains and wetlands or other related habitat.

Cultural Resources
Before a Section 404 permit is issued, the Army Corps of Engineers will consult with the California State Historic Preservation Officer for project conformance with Section 106 of the National Historic Preservation Act, in relation to preservation of cultural resources.

Water Quality
Projects affecting drainage and water quality are also required to obtain a Section 401 Water Quality Certification under the federal Clean Water Act. This permit is obtained through the Regional Water Quality Control Board. This certification also requires a copy of any agreement with the California Department of Fish and Wildlife under Section 1600 Streambed Alteration Agreement of the California Endangered Species Act Consultation (this permit is not only about water quality, but also fish and wildlife protection).

5.2.2.5 Transfer of Development Rights

Transfer of Development Rights (TDR) Programs allows landowners to sell or transfer the building/development rights from a particular piece of property to another property within a community plan area. This typically occurs when a landowner wants to preserve a resource, but still get economic value by selling or transferring entitlements to another property. TDR Programs make such preservation more equitable and politically palatable by compensating landowners who transfer the right to develop their property. Property owners along the San Diego River could use this tool, if a process/program is developed by the City, to sell and transfer development rights to preserve land and resources in addition to what is required by regulations, such as for parks, open space, and historic sites.

5.2.3 GOVERNMENT APPROVALS

5.2.3.1 Federal and State Agency Permits and Agreements

In most cases, all projects within the river valley will require development permits and environmental review by the City of San Diego. The City's review and permit conditions would be based on meeting the vision, principles, recommendations and design guidelines of the Master Plan. The City would be the lead environmental review agency for almost any project proposed within the City's jurisdiction. Federal and state agencies would be notified during the public review process of all proposed projects affecting natural resources and which may require additional federal or state permits. These agencies could include: U. S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (ACOE), Federal Emergency Management Agency (FEMA), Regional Water Quality Control Board (RWQCB), California Coastal Commission (CCC), and California Department of Fish and Wildlife (CDFW). The permits that may be required and what they entail is listed in Section 6.0 Regulatory Framework and summarized in the adjacent text box.

Permits for Protected Resources

Endangered Species
If a federal endangered species is impacted by a project proposal, a biological assessment will be required to determine whether or not the US Fish and Wildlife Service require a formal federal Endangered Species Act, Section 7.

Flood Management
All projects located in the floodplain must comply with the Federal Emergency Management Agency (FEMA) regulations to reduce risk of flooding along the San Diego River. The City is a participant in the National Flood Insurance Program (NFIP) administered by FEMA. The City ensures that projects within the floodplain comply with FEMA regulations and requirements. All projects that propose a change to the existing FEMA mapped floodway or floodplain must meet this requirement by applying through the City and then submitting a Conditional Letter of Map Revision (CLOMR) or a Conditional Letter of Map Revision-Based on Fill (CLOMR-F) to FEMA.

California Coastal Zone
The western end of the San Diego River, from Ocean Beach to the Santa Fe Railroad tracks, is within the California Coastal Zone. Any project within this area must comply with the California Coastal Act. The California Coastal Act includes specific policies related to public access and recreation, low cost visitor-oriented accommodations, and terrestrial and marine habitat protection. Projects within the Coastal Zone are subject to a Coastal Development Permit and must address applicable impacts.

5.2.3.2 City of San Diego Permits

The City is responsible for the implementation of the San Diego River Park Master Plan through permit review. The Park Planning Section within Development Services Department will review all proposed public and private projects to determine if projects are consistent with the San Diego River Park Master Plan, Community Plans, Regulations and Permits pertaining to the San Diego River and the City's General Plan. Permits that may be required and what they entail are listed in Section 6.0 Regulatory Framework.

5.3 Maintenance, Management and Security

In order for the San Diego River Park Master Plan to be successful, the river's long term maintenance, management and security must be a high priority. Maintenance and management activities could include: flood and drainage control, storm water management, invasive species removal, trash pickup and control, landscape and site amenities maintenance and general clean up. The security and safety of the public within the river area and private properties and neighborhoods adjacent to the river area are a real concern. Flooding, crime and other undesirable activities are issues that need to be addressed on public and private land. Security measures should ensure the enjoyment of the River Park, personal safety concerns while enforcing laws and regulations. Illegal uses and camping should be removed from the river area. The challenge to providing maintenance, management and security along the river is the diversity of land ownership and the amount of funding that is committed to these efforts. The following tools and programs begin to address these issues and it is expected that as the River Park is completed efforts will be made to work with the property owners on a comprehensive maintenance, management and security strategy.

Estimated Annual Maintenance Costs at Build-out (2010 dollars)

Water Areas $1,300/acre
Includes removal of litter, some invasive species, associated permits and inspections.

Native Landscape/ Slope Areas $1,800 acre
Includes removal of litter and invasive species, maintenance of native plants, repair irrigation and inspections.

Native Landscape/ Pathway Areas $16,800/acre
Includes removal of litter and invasive species; maintenance of native plants; repair irrigation; maintenance of pathways, benches, picnic areas, kiosk signs, curbs and stairs; and inspections.

Approximate Maintenance Costs for the San Diego River Park

130 acres water at $1,300/ac
= $169,000/year

197 acres of native areas at $1,800/ac
= $354,600/year

125 acres of native area/pathway at $16,800
= $2,100,000/year

Adding 20% for additional costs such as security and specialized security lighting, the annual maintenance costs for the river park could be over $3,148,320 per year at build-out. This acreage does not include the local regional parks, State and Federal land along the river.

5.3.1 MAINTENANCE, MANAGEMENT AND SECURITY

TOOLS

Maintenance, management and security tools for the river area can be based on permit conditions for new development or provided through various funding sources. Funding sources can include revenue generated from City's general and enterprise funds, permit fees, fees from special assessment districts, and corporate or private donor programs. These tools could be used in certain areas of the river based on land ownership or provided in a combination when the River Park is completed.

5.3.1.1 City Funds

The City's general and enterprise funds provide for some of the maintenance and management of land adjacent to the river. City departments, including Park and Recreation, Real Estate Assets, Water, Environmental Services and Street Division, all own properties along the river and are allocated funds to maintain and manage the land through the budget process with approval from City Council. In addition, the Storm Water Division is provided with City funds to maintain and manage public storm drains in the river area to meet Clean Water regulations. The Waste Management Division is funded to implement the City's regulation on weed, rubbish and waste abatement on private and public land. For security issues the City provides funding for the Police Department and a Ranger Program within the Park and Recreation Department.

5.3.1.2 Permit Fees

The City Council has approved the assessment of permit fees for maintenance of habitat and open space areas. Two types of fees may be considered for the river area: a one-time fee option or a one-time fee deposit option. A one-time fee option could be paid at the project approval stage and the fee could be based on a certain time period of maintenance, such as 2-5 years. This fee would be collected by the City and may be used by the City's Park and Recreation Department Open Space Division, a private maintenance company or a non-profit organization that specializes in maintenance to

Steps to Establish Special Assessment Districts

Maintenance Assessment District (MADs)
A developer or interested community representatives/property owners initiate a request to the City to form a district. The City hires an Assessment Engineer to prepare an assessment report and create the assessment methodology. The report proposes formation, describes improvements, specifies boundaries, sets a hearing date to hold a public hearing, and authorizes the City Clerk to mail the ballots. The City mails the hearing notice and a ballot to each assessable property owner, as listed in the most recent certified County Property Tax Roll, a minimum of 45 calendar days prior to the hearing date. The City Clerk's Office receives the ballots and presents district balloting results to the City Council hearing. The City Council receives the ballot results and takes action to either approve the district, Assessment Engineer's Report and the assessment Levy or abandon the district based on the ballot results (simple majority of returned ballots). The earliest a failed ballot can be re-balloted is one year. If approved, City staff prepares the annual enrollment and delivers it to the County Assessor to be included on Property Tax statements to property owners beginning with the December property tax bill after the August 10th enrollment.

provide basic semi-annual trash abatement and weed removal. This option would be appropriate for residential development along the river where maintenance by individual owners would be difficult to assure.

A one-time fee deposit option could be paid at the project approval stage and could be for an amount projected to finance a wider maintenance program along the river, such as an endowment. This fee would be collected by the City, deposited into an interest-bearing account and may be used by the City's Park and Recreation Department Open Space Division, a private maintenance company or a non-profit organization that specializes in maintenance to provide a certain level of maintenance. This option could provide a comprehensive maintenance program for larger areas of the river.

5.3.1.3 Special Assessment Districts

Based on the experience of other River Park corridors and open space greenbelts, implementation of the San Diego River Park Master Plan should create value for adjacent properties. Premiums are attributable to proximity to open space views and access to public pathways/trails. According to the economic analysis conducted for this Master Plan, including a review of case studies around the country, and analysis of local premiums, properties adjacent to the river area are anticipated to sell for a 5 percent to 15 percent premium due to their proximity to the river and anticipated improvements. Some of this enhanced value can be recaptured to help fund Special Assessment Districts such as: 1) Maintenance Assessment Districts, 2) Community Facility Districts and/or 3) Property-based Business Improvement Districts.

By coordinating the funding and maintenance protocols overall, there would be economies-of-scale achieved that should reduce the costs to the property owner, and enable them to maintain their land at a higher standard. Existing MADs or private funding mechanisms can choose to merge into the broader district if it makes economic sense to do so.

Maintenance Assessment Districts (MADs) are established throughout the City as a means of providing property owners with a mechanism to assess themselves to pay for enhanced improvements, maintenance, services, and other activities, known as Special Benefits. MADs are authorized by the State of California in the Landscape and Lighting Act of 1972 and through the California Constitution (Article XIIID) and by the City of San Diego through provisions of the San Diego Maintenance Assessment District Ordinance. Provided that a MAD meets these governing provisions of the State and local law, a MAD may: 1) maintain a variety of improvements within public rights-of-way and other publicly-owned land; 2) provide a variety of enhanced maintenance services; and, 3) be used on a more limited basis to fund acquisition of parkland or open space, for park and recreation improvements and maintenance, and for construction and installation of public improvements. MAD formation is often initiated by a developer during the development of a new community, or by property owners within an already-developed community who desire Special Benefits. The formation process requires close coordination with the Park and Recreation Department, Open Space Division staff for residential or mixed-use MADs, or Economic Development for commercial districts to be managed by a non-profit organization pursuant to San Diego Municipal Code Sections 65.0201 et seq. The formation process requires the initiating party to pay for the preparation of an Assessment Engineer's Report, the cost of balloting, administrative costs, and other incidental expenses. In developing communities, this cost may be funded by a developer or other private contribution. However, because this cost may be prohibitive for property owners in some already-developed areas, the San Diego City Council has created a MAD Formation Fund to assist in financing these start-up costs (see City Council Policy 100-21).

Within the Mission Valley community, a MAD for the First San Diego River improvement project was established in 1987 to provide maintenance for the San Diego River between State Highway 163 and Qualcomm Way. The MAD funds maintenance of the earthen flood control channel, eight river islands inside the channel zone, and an approximately

Steps to Establish Special Assessment Districts

Community Facilities District (CFDs)
A Developer or an established community can initiate the formation of a CFD. For developer initiated districts, an application may be obtained and filed with the City's Department of Finance. The Department of Finance will consider the public benefits offered by the proposed project in context to the CFD policies. If initiated by a community, the CFD must comply with the City's Debt Policy. A comprehensive project review and feasibility analysis of the proposed project, which would ultimately provide for the payment of the special taxes or assessments in connection with bond financing, is performed by an independent financial consultant. If recommended by the Chief Finance Officer, and pursuant to the filing of an appropriate petition and application, the completion of a Feasibility Study that concludes the project is feasible, the City will form the district and, if a financing is contemplated, issue bonds.

20-foot-wide buffer zone running along and adjacent to the channel embankments. MAD activities include revegetation, wildlife monitoring and reporting, native plant and landscape maintenance, restoration of the embankment erosion, and trash removal. This type of MAD could be used as an example for future large subdivisions. The risk of a MAD is that it can be dissolved with a vote of the property owners, which could leave the river without maintenance funds.

Community Facilities Districts (CFDs) are typically formed to provide funding for public infrastructure in connection with new development, but may also be formed to finance improvements pertaining to developed properties. Subject to voter approval within a district, special taxes may be levied upon properties within a district to pay for facilities, and, in certain cases, services. Special taxes may also be levied to repay bonds issued to finance public improvements. The properties within the district can be discontinuous.

CFDs can be initiated by a developer, established community or by the City legislative body. The City expects that private developers should have primary responsibility for providing public infrastructure required in connection with new development. With the City's Debt Policy as a guideline, the City will continue to consider requests for CFDs formation and debt issuance to finance such public infrastructure when the requests address an extraordinary public need or benefit.

CFD financing is guided by the Mello-Roos Community Facilities Act of 1982. This Act was enacted by the State to help growing areas finance certain essential public facilities that typically accompany major development projects. The Act permits a public agency to create a defined area within its jurisdiction and, by a 2/3 majority vote, levy a special tax within the district to pay directly for public improvements or services, or pay debt service on bonds issued to finance the improvements. If there are 12 or more registered voters residing within the district, the vote will be by the registered voters, with each voter having one vote. If there are fewer than 12 registered voters residing within the district, the vote will be by the landowners within the district, with each landowner having one vote for each acre, or portion of an acre, owned within the district. CFDs are not fiscal obligations of the City, and are limited obligations of the CFD, payable solely from special taxes levied upon property within the district. The special taxes are calculated and levied pursuant to a Rate and Method of Apportionment, or tax formula. Under the Mello-Roos Act, the formula must be reasonable. The financed public facilities must ultimately be owned and operated by a public entity, such as the City, and may include, among other things, parks, roadways, water infrastructure improvements that have a useful life of five years or more. In accordance with Section 53313 of the California Government Code, CFDs may also provide funds for certain public services, including police and fire services and recreation program services so long as they are in addition to, and do not supplant, services already provided within the district.

Property/Business Improvement Districts (PBIDs) In California, PBIDs are formed pursuant to the Property and Business Improvement District Law of 1994 (PBID law). A PBID is a financing mechanism for property and/or business owner collaboration used to support various local improvements and services that enhance a targeted area. Before the district is formed, parcel owners paying over 50% of the total assessment must sign a petition in support of the District. Establishment and renewal of a district requires a petition process and Proposition 218 ballot protest process. The PBID Legislation allows for a maximum life of 5 years. Upon renewal, a district may be established for a maximum of 10 years. The district can be formed for any amount of time, not to exceed the maximum term. The law states that the PBID is to be governed by a private nonprofit corporation made up of a majority of the property and/or business owners. The nonprofit PBID management corporation would then enter into a contract with the City that would allow the nonprofit PBID management corporation to manage the district and deliver district services. The City retains a portion for administration of PBID to oversee the nonprofit PBID management corporation delivery of goods and services. By law, (Article XIII (d) of the state constitution), property assessment districts can only fund special, not general benefits. General benefits are those allocated to all parcels in the City and funded out of public or general fund revenues. Cities throughout the state normally adopt "baseline services agreements", that require the City not to withdraw services once the special benefits district has been formed. A Management District Plan spells out, at a minimum, the services to be provided and necessary improvements, establishes the boundaries, the budget, and the term of the district.

Steps to Establish Special Assessment Districts

Property/Business Improvement Districts (PBIDs)
Typically, a PBID is initiated by local property and/or business owners petitioning the City to establish a PBID on their behalf. Once the City Council has approved a resolution of intention, a ballot is sent to all affected property and/or businesses owners. After the City Council conducts two public hearings it may approve the PBID establishment by ordinance, provide written protests are not received from property and/or business owners who will represent 50% or more of the total assessments to be collected.

PBIDs can provide essential services that include but not limited to, the following: (a) parking facilities, (b) benches, booths, kiosks, display cases, pedestrian shelters, and signs, (c) trash receptacles and public restrooms, (d) lighting and heating facilities, (e) decorations, (f) parks, (g) fountains, (h) planting areas, (i) closing, opening, widening, or narrowing of existing streets, (j) facilities or equipment, or both, to enhance security of persons and property within the area, (k) ramps, sidewalks, plazas, and pedestrian malls, and (I) rehabilitation or removal of existing structures in addition to those provided by local government.

In addition, the PBID can fund the following activities: (a) promotion of public events that benefit businesses or real property in the district, (b) furnishing of music in any public place within the district; (c) promotion of tourism within the district, (d) marketing and economic development, including retail retention and recruitment, (e) security, sanitation, graffiti removal, street and sidewalk cleaning, and other municipal services

supplemental to those normally provided by the municipality, and (f) activities that benefit businesses and real property located in the district. The Downtown P/BID, which was formed in 2000 and renewed in 2005, is made up of the majority of the downtown properties in San Diego City. This P/BID district raises funds for the following services: cleaning of sidewalks, graffiti removal, maintenance of landscape areas, public safety programs, enhanced lighting, public information, and program management. The downtown P/BID has been very successful in the downtown area. A P/BID could be formed by commercial property owners including income properties, such as apartments, to provide enhanced security.

5.3.1.4 Corporate and Private Donor Program

Corporations and individuals donors could provide donations to an Endowment Fund for the maintenance, management and security of the river area. This fund could be managed and used by the City, who could then maintain, manage and provide security to the river area through City staffing (ranger program, dedicated police for the river area, waste management and storm water) or the City could retain a private contractor.

5.3.2 MAINTENANCE, MANAGEMENT AND SECURITY PROGRAMS

The following programs could all be funded from the tools listed above and provided all along the river area to ensure consistent maintenance, management and security of the River Park. These programs could be facilitated by the City, Private Land Owners, and the San Diego River Coalition or through other non-profit organizations. Maintenance and management programs could include the City's Ranger Program, Conservation Corps/Neighborhood Youth Corps and an "Adopt the River" program. Security programs could include a Ranger Program working in concert with a dedicated enforcement staff for the river area, a "Neighborhood Watch" program and/or private security companies.

5.3.2.1 Ranger Program

Once the River Pathway is completed, the City could establish a Ranger Program for the San Diego River Park. This program could provide educational programs for schools and other groups, lead hikes through the river valley, oversee maintenance, restoration and preservation programs, enhance security, and provide a point of contact for issues along the river.

5.3.2.2 Conservation Corps or Neighborhood Youth Corps Program

A Conservation Corps or Neighborhood Youth Corps could be established to draw upon the communities' broad range of volunteer talents. The City's Volunteer Service Coordinator could assist schools and youth groups throughout the neighborhoods along the river to work with the City in maintaining and overseeing their community resource. Under this program, youth groups would work under the supervision of the City or school staff to learn about biology, hydrology and urban communities, participating in multiple aspects of river maintenance.

5.3.2.3 Adopt the River Program

A variation of the Youth Corps Program could be an "Adopt the River Program" offered to local schools or to other recognized groups. This type of maintenance program could be facilitated by the City or a non-profit organization to provide training and education on the maintenance of a river habitat. Schools could tie this into a biology curriculum that would allow students to study and undertake laboratory work on different segments of the river. Other recognized groups that want to provide a civic service, much like "Adopt a Highway Program", could provide maintenance under the supervision of the City or a non-profit organization.

5.4 Public Outreach and Education

Another important means of implementing the San Diego River Park Master Plan is through public outreach and education. This involves outreach to the community at large to generate support for the overall efforts related to river improvements and the maintenance, management and security of the river area. In the development of this Master Plan, public participation from adjacent communities has been overwhelming. This amount of outreach and education needs to continue through brochures, newsletters, maps and web sites that focus on river events. Much of this effort has been achieved by the San Diego River Coalition (Coalition). The City will continue to collaborate with the Coalition on public outreach and education, and in efforts to further understanding of the science and implementation of best practices to in the improvement and management of the river area.

5.4.1 OUTREACH BROCHURE

The Coalition could prepare a yearly outreach brochure for community groups, decision makers, businesses, non-profit organizations, government leaders and others on the unique beauty, the habitat/cultural significance, and the recreation possibilities of the river. The brochure should attract support and generate interest in the implementation of the Master Plan. It could also be designed as a graphic art piece to be exhibited as a marketing tool in businesses and offices along the river. Other related outreach could include a newsletter, a San Diego River Pathway Map and/or creation of a webpage that offers upcoming events and recreation activities.

5.4.2 RIVER EVENTS AND SUPPORT FROM THE SAN DIEGO RIVER COALITION

The Coalition is a community-based grassroots non-profit organization, which was founded in 2001, as a 501(c)(3) public benefit organization. The Coalition relies upon donations and support from the community for its general operations and programs. The Coalition's vision for the river is a greenbelt from the mountains to the ocean along the 52-mile long San Diego River and promotes stewardship of the river and education on

the river's natural systems. Through its efforts, the Coalition was created, representing 70 organizations that meet and implement the foundation's vision. To promote the river, the Coalition organizes several annual events such as clean-up days, tree planting on Arbor Day, re-vegetation of natives in the fall and other activities. The Coalition maintains a web site called "Volunteer Events Calendar" that lists current events and dates for activities along the river. It is through these public events that the Coalition offers education on the river's importance to the region and how the river can be restored. In addition, the Coalition provides maintenance of the river through its large volunteer network organization. In 2007, they provided over 10,000 volunteer hours of service. Service included removal of over 1,000,000 pounds of trash and debris from the river and surrounding habitat, creation of the San Diego River Garden in Mission Valley, and creation of the River Watch Program that monitors the health of the river on a monthly basis. In 2010, the Coalition increased their volunteer efforts to 20,000 hours and a large part of this was to promote maintenance and management of the river.

6.0 REGULATORY FRAMEWORK

6.1 APPLICABLE CITYWIDE PLANNING POLICY DOCUMENTS

The San Diego River Park Master Plan is the primary policy document for land use policies along and adjacent to the San Diego River. The Master Plan provides general and reach-specific recommendations for the entire planning area and design guidelines for development within two corridors directly adjacent to the river. In addition to the Master Plan, recommendations and design guidelines are other applicable citywide planning policy documents that also play a role in the use and development of the river. These documents include the City's General Plan, Community Plans, Park Master Plans, the City's Multiple Species Conservation Program Subarea Plan, the San Diego Watershed Urban Runoff Management Plan, the Bicycle Master Plan Update and the San Diego Pedestrian Master Plan. The community planning areas within and adjacent to the river park are shown on Figure 6.

Exploring the San Diego River

With such a complex planning and jurisdictional structure, it is important to understand how these documents work together and support the San Diego River Park Master Plan. This regulatory framework section provides a brief description of each of these policy documents, their implementing ordinances, and their relationship to the Master Plan.

6.1.1 GENERAL PLAN

The City of San Diego's General Plan was updated in 2008. The plan sets out a long-range vision and policy framework for how the City should plan for projected growth and development, provide public services, and maintain the qualities that define San Diego over the next 20 to 30 years. The General Plan calls for new growth to be targeted into mixed use centers, and for important open spaces to be preserved for the environmental, urban form, and recreational benefits they offer. One of the General Plan's guiding principles is to achieve "an open space network formed by parks, canyons, river valleys, habitats, beaches, and ocean." The General Plan specifically addresses river parks with a policy to "encourage the planning and coordination of river parks to provide public recreational opportunities, protect natural resources, and enhance community character (Policy RE-F.6)." The General Plan also calls for "watershed awareness and water quality education programs" (Policy CD-E.1.c), "for City participation in the development and implementation of Watershed Management Plans" (CE.D.3), and to "use open space and landscape to define and link communities" (Policy UD-A.2). The San Diego River Park Master Plan will help implement these and many other General Plan policies.

6.1.2 COMMUNITY PLANS

Community plans represent a vital component of the City's General Plan because they contain more detailed land use designations and site-specific policy recommendations than is practical at the citywide General Plan level. The community-specific detail found in the community plans is also used in the discretionary review process for both public and private development projects. Overall, the General Plan and community plans are intended to be used as a means to maintain or improve quality of life, and to respect the essential character of San Diego's communities. Of the 16 community plans in or adjacent to the river valley, four are directly influenced by the river and the Master Plan:

- Mission Valley
- Navajo
- Tierrasanta
- East Elliott

These community planning areas, through their land use policy documents, can directly influence the relationship between physical development and the river. This relationship determines the character and health of the river. While the San Diego River Park Master Plan does not include specific design guidelines for the unique conditions of each community, it does include design guidelines for the areas directly adjacent to the river.

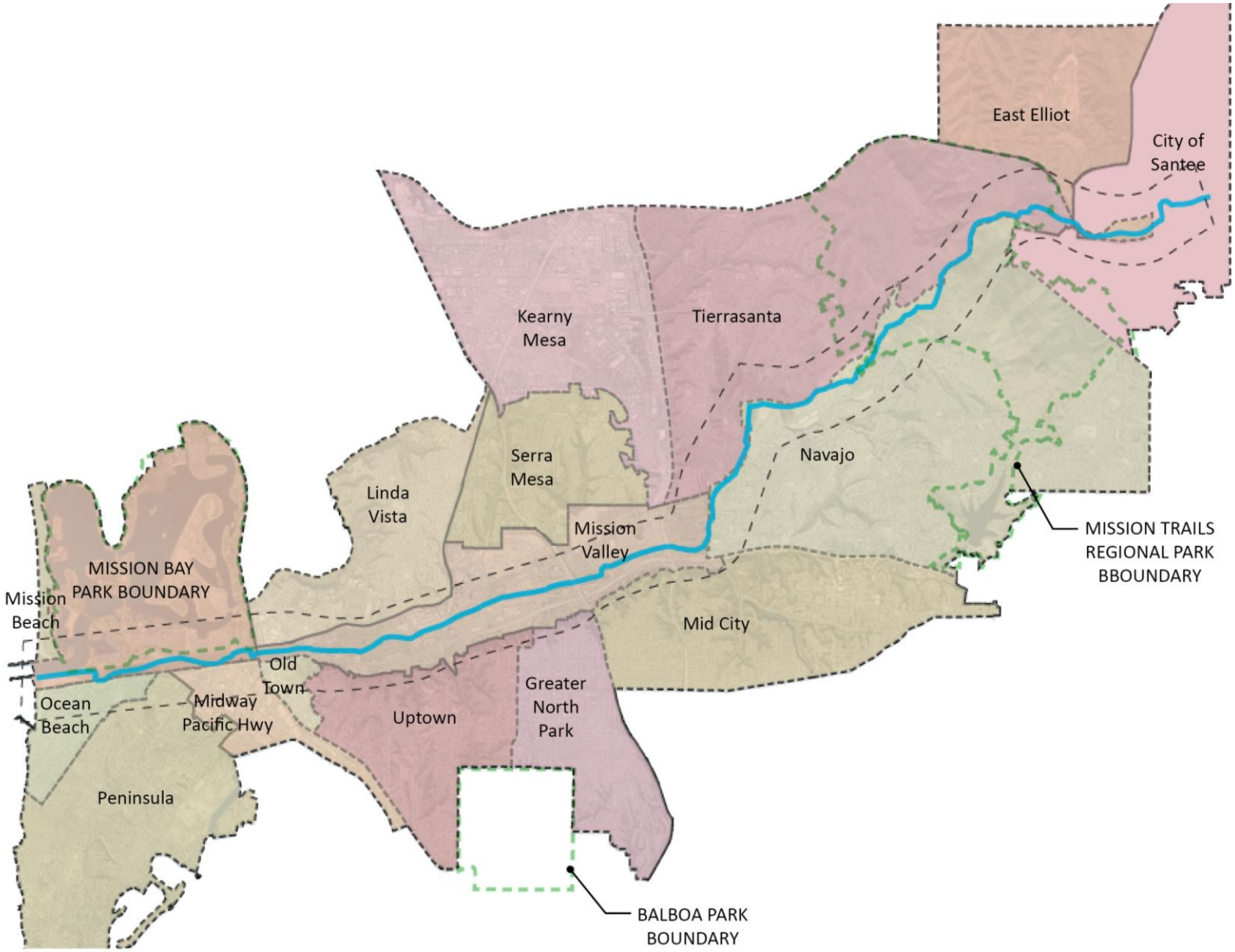


Figure 10. Community Planning Areas

6.1.2.1 Mission Valley Community Plan and Specific Plans

The Mission Valley Community Plan identifies the San Diego River Floodway, as well as the surrounding canyon and hillside landscapes, as major assets in the creation of an open space system available to all San Diegans. The Mission Valley Community Plan seeks to take advantage of the opportunities presented by the unique physical environment of the valley in creating a "quality regional urban center, while recognizing and respecting environmental constraints and traffic needs, and encouraging the valley's development as a community."

While the plan recognizes the potential to establish a unique environment in the City of San Diego, it also notes several conditions which must be considered in future planning efforts. Foremost among these issues is flooding, a significant problem for the surrounding communities. Impacts of development along the river and throughout the watershed must be carefully considered. While the river can provide a significant scenic amenity, development must in turn protect that resource by paying careful attention to the sensitive habitat and species of the river corridor. All development in Mission Valley is regulated by the Mission Valley Planned District Ordinance unless governed by an approved Specific Plan. The Mission Valley Planned District Ordinance regulates development with the intent to "implement the Mission Valley Community Plan through the use of overlay districts regulating development intensity community wide and providing additional development criteria for projects in the San Diego River and Hillside sub-districts…" The San Diego River Subdistrict of the Mission Valley PDO establishes a River Corridor Area and River Influence Area, and identifies development regulations to implement the Master Plan. In most development proposals, public and private projects within the river sub-district are required to undergo a discretionary review process and apply for a Mission Valley Development Permit.

The Mission Valley Community Plan was adopted by City Council in 1985 and amended at various times over subsequent years. A plan update is anticipated to begin as soon as funding can be identified.

Within the Mission Valley Community Planning Area are four approved Specific Plan Areas, from west to east: Levi-Cushman, Atlas, First San Diego River Improvement Project (FSDRIP), and Mission City. The river sub-district regulations would not apply to these approved Specific Plan Areas unless these plans are amended.

More information regarding the Mission Valley Community Plan and the various Specific Plans can be found at:
http://www.sannet.gov/planning/community/profiles/missionvalley/plan.shtml

Levi-Cushman Specific Plan

The Levi-Cushman Specific Plan was adopted in 1987 and proposes mixed-use development on approximately 200 acres of land in the western portion of Mission Valley on a site currently occupied by the Riverwalk Golf Course. Of the total 135 acres of land to be developed, 77 acres lie north of the San Diego River and are planned for mixed uses, such as residential, offices, community uses, retail stores and hotel rooms. Approximately 53 acres planned for development on the south side of the San Diego River will be office and hotel uses. A river buffer and public path are planned for both sides of the river.

Mission Valley is disconnected from side canyons by pavement and development

Atlas Specific Plan

The Atlas Specific Plan was approved in 1988 and is a planning document covering seven sites in western Mission Valley. Three of the seven sites are located adjacent to the San Diego River and the remaining four sites are located south of Interstate 8. The three sites adjacent to the river are known as Hanalei Hotel, Hanalei Tower and Town and Country Hotel/Convention Center. The specific plan includes detailed urban design and river improvement elements that provide for both flood protection and the replacement of wetland habitat.

First San Diego River Improvement Project Specific Plan (FSDRIP)

FSDRIP is a specific plan located in Mission Valley, which encompasses the area between State Highway 163 and Qualcomm Way. It is a mitigation site for a 100-year flood control project that was funded through an agreement with the property owners who benefited from the flood control.

In the 1970's, winter flooding limited the potential for the land owners in the area to develop their properties, prompting the idea to channelize the San Diego River to move flood waters rapidly through the valley. After approval of the project, the property owners entered into an agreement with the City of San Diego that assured them that development of their property could proceed. In exchange, the property owners agreed to fund the necessary flood control improvements and its continued maintenance through a Maintenance Assessment District (MAD).


The San Diego River flows slowly through FSDRIP

Under the Federal Clean Water Act, the U.S. Army Corps of Engineers replanted and preserved 26.8 acres of riparian woodland, 9.7 acres of freshwater marsh, and 8.7 acres of open water within FSDRIP. As a requirement of FSDRIP, a Natural Resources Management Plan (NRMP) was prepared that addresses four areas of use within the FSDRIP boundary: natural habitat, flood control, utility corridor, and public uses. The purpose of the NRMP was to establish 100-year goals and remedial measures to re-vegetate disturbed natural habitats. The plan also delineates acceptable public and recreational uses within the area. The San Diego River Pathway is located on the north and south sides of the river along the FSDRIP area.


Existing pathway through FSDRIP extends from near State Highway 163 to Qualcomm Way

FSDRIP was adopted by the City Council in 1982, amended several times and improvements were completed in 1988. In 1995, the California Department of Fish and Wildlife and the U.S. Army Corps of Engineers agreed that vegetation efforts had progressed well and FSDRIP could be considered successful. The most recent amendment to FSDRIP Design was made in 1999 and is referred to as Rio Vista West Design Guidelines and Development Standards.

Mission City Specific Plan

The Mission City Specific Plan was adopted in 1998 and covers approximately 225 acres located on the north side of the San Diego River, immediately west of Qualcomm Stadium. This Specific Plan amends the Northside Specific Plan approved for the project site in 1984. The plan proposes a mix of land uses including retail commercial, office, and residential and for the most part the plan area has largely been developed. The portion of the San Diego River that abuts Mission City's southern border is not planned for flood control improvements; instead the floodway is designated for conservation due to the quality of existing wetland habitats. A 50' wide channel occurs in this area and carries storm waters from Interstate 15 westward.

6.1.2.2 Navajo Community Plan

The Navajo Community Plan was adopted by City Council in 1982 and amended in 2002. The primary goal of the Navajo Community Plan is to 'retain the residential character of the area' while providing basic services that enhance the day-to-day lives of its residents, such as police and fire protection and open space amenities. The plan recognizes the delicate balance between the community and the San Diego River environment. Much of the community's storm water runoff finds its way to the river, and the occasional flooding of the river impacts future land use planning in the floodplain. Development adjacent to the San Diego River within the Navajo Community is regulated by the Community Plan Implementation Overlay Zone (CPIOZ) for the River Sub-district within the Community Plan. The River Sub-district CPIOZ provides supplemental development regulations that are tailored to be consistent with the San Diego River Park Master Plan Design Guidelines. In most

Navajo Canyon in Navajo Community Area

development proposals, public and private projects within the Navajo River Subdistrict CPIOZ will be required to undergo a discretionary review process and apply for a Site Development Permit.

6.1.2.3 Tierrasanta Community Plan

The Tierrasanta Community Plan was adopted by City Council in 1981 and amended in 1991. The Plan generally describes a low density residential community. Commercial areas are designated only where necessary to support the residential community, and the presence of industrial activity is limited to a small, isolated site. The plan seeks to capitalize on the open spaces of the canyon lands interspersed throughout the community, as well as the expansive open space resource of the nearby Mission Trails Regional Park.

The San Diego River runs along the majority of the Tierrasanta Community Plan's southern planning boundary. Flood control and recreation along the river are discussed in the community plan. The Plan also identifies a need to regulate existing sand and gravel extraction operations in order to avoid any negative impact on the river, its habitat or recreational activities. Development adjacent to the river within the Tierrasanta Community is regulated by the Mission Trails Design District Ordinance and Design Manual. Subarea 3 of the Design Manual contains development regulations that will implement the San Diego River Park Master Plan. In most development proposals, public and private projects within the Mission Trails Design District of the Tierrasanta Community will be required to undergo a discretionary review process and apply for a Site Development Permit.

Elanus Canyon in Tierrasanta

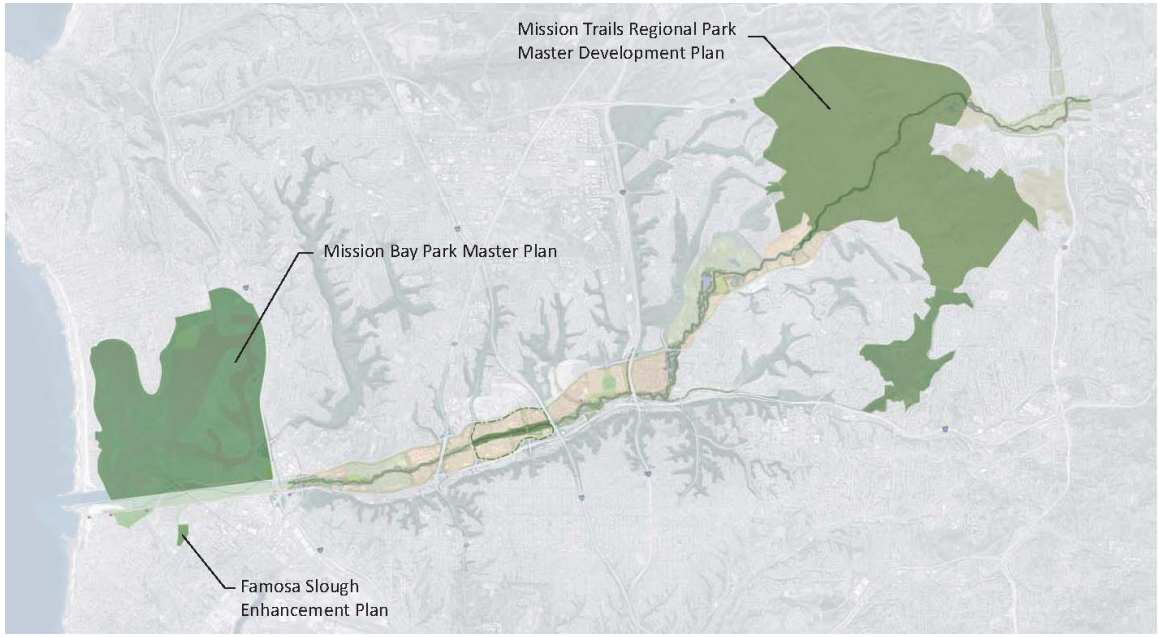
6.1.2.4 East Elliott Community Plan

The East Elliott Community Plan was adopted by City Council in 1971 and amended in 2002. The San Diego River crosses the municipal boundary of the City of San Diego at the southeastern corner of the East Elliott Community Plan. East Elliott is dominated by native vegetation and includes sage scrub, chaparral, native grassland, oak and sycamore woodland and is one of the largest and biologically most important remaining undeveloped areas in San Diego. Due to the natural resources and rugged topography which makes urban development virtually infeasible in this planning area, a majority of East Elliott is designated for long-term open space use. The East Elliott Community is mostly within the boundaries of the MHPA with nearly 80% within the Community Plan Area designated as open space, including areas on both sides of the San Diego River. Development adjacent to the river within the East Elliott Community is regulated by the Mission Trails Design District Ordinance and Design Manual. Subarea 3 of the Design Manual contains development regulations that will implement the San Diego River Park Master Plan. In most development proposals, public and private projects within the Mission Trails Design District of the East Elliott Community will be required to undergo a discretionary review process and apply for a Site Development Permit.

6.1.3 PARK MASTER PLANS

The San Diego River Park planning area intersects two resource-based park planning areas, Mission Bay Park and Mission Trails Regional Park, and abuts the north edge of the Famosa Slough Open Space. Each of these areas has its own policy document:

- Mission Bay Park Master Plan
- Famosa Slough Enhancement Plan
- Mission Trails Regional Park Master Development Plan



6.1.3.1 Mission Bay Park Master Plan

The Mission Bay Master Plan was adopted by City Council in 1994 and amended in 2002. Once part of the estuarine delta of the San Diego River, Mission Bay (historically known as False Bay) was a vast tidal marsh coursed by the braided river until the 1852 construction of the Derby Dike on the south side of the river channel prevented flow into San Diego Bay. In the 1940's, dredging was initiated to turn Mission Bay into an aquatic park and tourist attraction to diversify the City's economy. Today, the San Diego River Estuary lies within the boundary of Mission Bay Park and serves an important role in the provision of wildlife habitat within the park. The fundamental goal of the Mission Bay Master Plan was to identify new demands on the park in response to the regional population growth and evolving recreational activities. The plan acknowledges the many demands and activities within its bounds with a notion of "parks within a park", identifying regional-oriented recreation, commercial-oriented recreation, neighborhood-oriented recreation and habitat-oriented recreation as the key components and purpose of the Park. The plan addresses the river minimally, identifying it as a habitat-oriented recreation area adjacent to a "rustic" perimeter of coastal vegetation as an edge along the river dike. The current plan indicates that the land use between the river and the bay east of SeaWorld is to be developed as regional park land, coastal landscape, and overflow parking.

Passive Recreation at Mission Bay Park

Mission Bay Park provides a diversity of land and water-based recreational activities

6.1.3.2 Famosa Slough Enhancement Plan

The Famosa Slough Enhancement Plan was adopted by City Council in 1992. Originally part of the San Diego River/False Bay (Mission Bay) estuary, the tidal influence on Famosa Slough has been restricted by flood control structures. Today, Interstate 8 remains a barrier between Famosa Slough and the San Diego River, restricting hydrologic and biologic connections and cutting off a pedestrian connection between the two. The original flood gates have been replaced and remain open most of the time. The Friends of Famosa Slough operate the gates monthly to ensure proper operation and are responsible for closing them in the event of a flood. This change in the waterway's function has resulted in salinity levels and inundation frequencies that have varied over the years. Urban runoff has also impacted the slough, creating several habitats, including some that are non-native and invasive.

The Enhancement Plan recommends a series of actions primarily intended to improve the biology and hydrology of the slough, as well as provide an opportunity for education and limited human access. Implementation of the Enhancement Plan is not complete, but has been successful thus far.

Famosa Slough Open Space

6.1.3.3 Mission Trails Regional Park Master Development Plan

The Master Plan for Lake Murray, Cowles and Fortuna Mountain Regional Park was adopted by San Diego City Council and San Diego County Board Supervisors in 1977. The park was renamed Mission Trails Regional Park in 1979 and a second Master Development Plan was adopted in 1985 by the San Diego City Council and the San Diego County Board of Supervisors. A Master Development Plan update began in 2007, spearheaded by the Mission Trails Regional Park Citizens Advisory Committee. In 2011, the City hired a consultant to begin work on the update, which will include a Resource Management Plan.

The Mission Trails Regional Park Master Development Plan defines five objectives:

- Define the Park's setting in terms of physical environment, aesthetics, public plans and policies, surrounding land use and ownership;
- Identify recreational and open space potentials within the park setting;
- Assess existing and potential relationships especially edges, roads and trail linkages between the Park, its immediate surroundings and the San Diego region as a whole.
- Determine desirable park boundaries based on an evaluation of three alternative concept plans and the relationship between land values and park-use potentials; and
- Prepare a Master Plan Development Plan that is comprehensive in terms of park uses, facility sizes and locations, environmental and architectural design concepts, and EIR mitigation.

Five major geographic areas are identified in the Master Development Plan that are discussed in detail as to the planning of entries, parking, internal circulation, uses, facilities, environmental and architectural design. The San Diego River is located in the Mission Gorge and the East Fortuna Mountain geographic areas of the Master Development Plan. The Mission Gorge area encompasses over two miles of the San Diego River. The existing Father Junipero Serra Trail, a one-way paved road, acts as the San Diego River Pathway connecting the Mission Trails Regional Park Visitor and Interpretive Center to the east entrance of the park. Along this section of the trail are picnic areas, connections to other trails that cross the river, and an amphitheater. The East Fortuna Mountain area is the most diverse area of the Park and contains the historic Old Mission Dam and Flume. The San Diego River Pathway is located on the existing Father Junipero Serra Trail and from this trail access to the north side of the river is found at the Old Mission Dam site. This 7,000 year old site provides interpretation of the Dam and the Flume and picnic areas are located adjacent to the Dam. East of the Dam is the Kumeyaay Lake Campground that is adjacent to the old mining ponds called Kumeyaay Lakes (formerly Hollins Lake) with the San Diego River located on the north side of the Kumeyaay Lakes. The San Diego River and its immediate floodplain are identified as a special corridor to protect with modest interpretive exhibits and restrictions on buildings, intensive recreation and other development.

6.1.4 MULTIPLE SPECIES CONSERVATION PROGRAM SUBAREA PLAN

The Multiple Species Conservation Program (MSCP) Subarea Plan was adopted by City Council in 1997.The MSCP Subarea Plan was prepared pursuant to the general outline developed by the United States Fish and Wildlife Service and the California Department of Fish and Wildlife (herein referred to as the "resource agencies") to meet the requirements of the California Natural Communities Conservation Planning Act of 1992. The MSCP is a comprehensive habitat conservation planning program that addresses multiple species habitat needs and the preservation of native vegetation communities in the San Diego region. This Subarea Plan forms the basis for the Implementing Agreement which is the contract between the City and the resource agencies that ensures implementation of the plan and thereby allows the City to issue Federal Incidental take permits at the local level. The MSCP's core hard-line biological preserve system was developed by the City in cooperation with the resource agencies, property owners, and environmental groups and is referred to as the Multi-Habitat Preserve Area (MHPA). The MHPA delineates core biological resource areas and corridors targeted for conservation. Within the MHPA, limited development may occur and all development must meet the MSCP Land Use Considerations and the Framework Management Plan guidelines. The MSCP is implemented by the City through the Environmentally Sensitive Lands Regulations and the City's Biological Guidelines of the City's Municipal Code and Land Development Code.

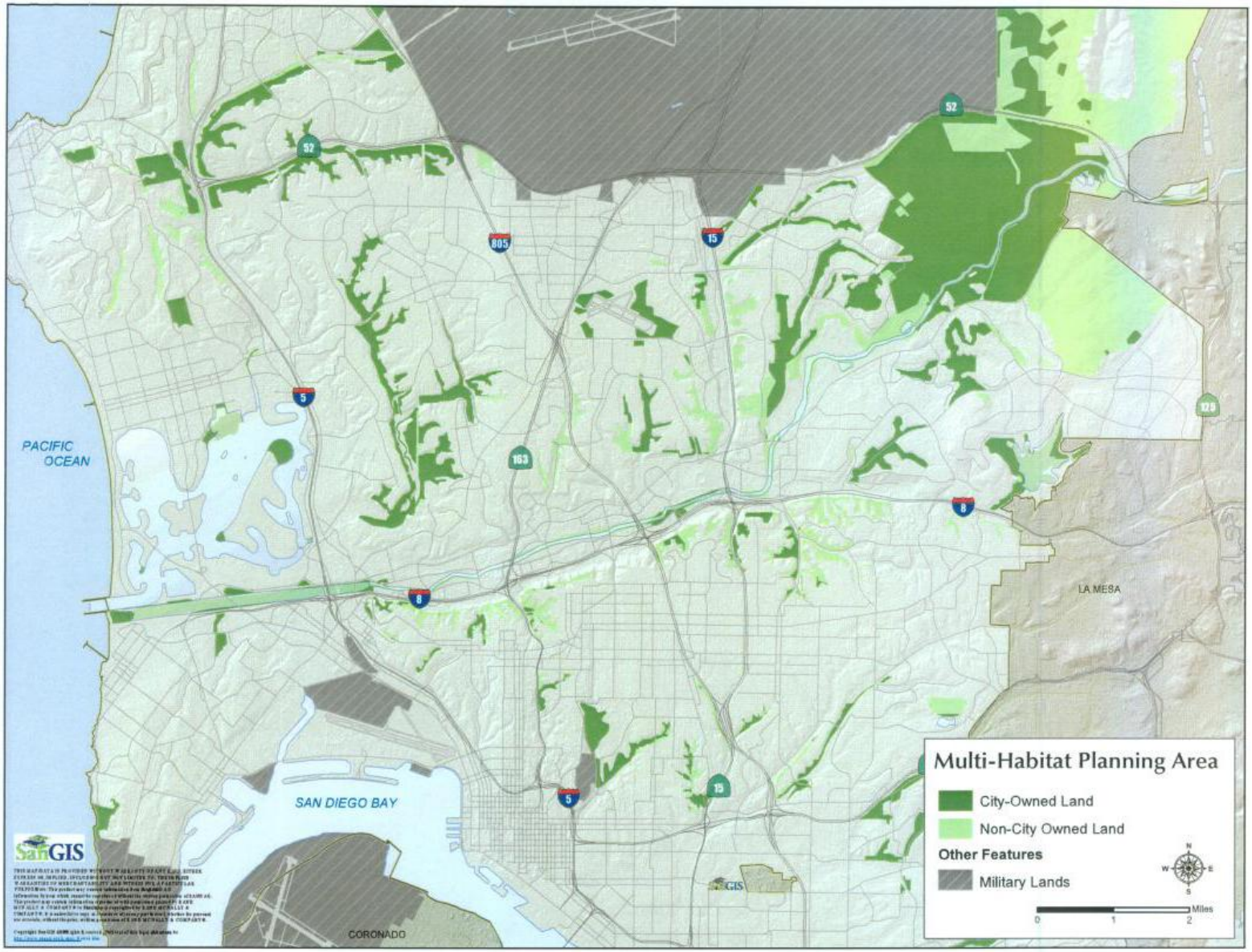


Figure 11. Multiple Species Conservation Program (MSCP) Subarea Plan Map

SAN DIEGO RIVER WATERSHED URBAN RUNOFF MANAGEMENT PLAN

The San Diego River Watershed Urban Runoff Management Plan (WURMP) is required by the San Diego Regional Water Quality Control Board, which issues the National Pollutant Discharge Elimination System (NPDES) Municipal Storm Water Permit (Municipal Permit) to the municipalities in the San Diego Region ("Co-permittees") to control waste discharges in urban runoff from the Municipal Separate Storm Sewer Systems (MS4). The Municipal Permit requires the "Co-permittees" in the San Diego River watershed management area (WMA), consisting of the cities of San Diego, El Cajon, (Lead Watershed Permittee), La Mesa, Santee and the County of San Diego, to work collaboratively at the watershed level to develop and implement the San Diego River WURMP. The Storm Water Department is the lead for the City of San Diego's effort in this program.

The program's goal is to positively affect the San Diego River Watershed water resources while balancing economic, social, and environmental constraints. The following four objectives address the program's goal: 1) develop and expand methods to assess and improve water quality within the watershed; 2) integrate watershed principles into land use planning; 3) enhance public understanding of water pollution sources; and 4) encourage and develop stakeholder participation. The program's collective watershed strategy includes activity planning, monitoring, priority assessment, selection, implementation and assessing effectiveness. The San Diego River WURMP is reviewed annually to identify modifications and improvements.

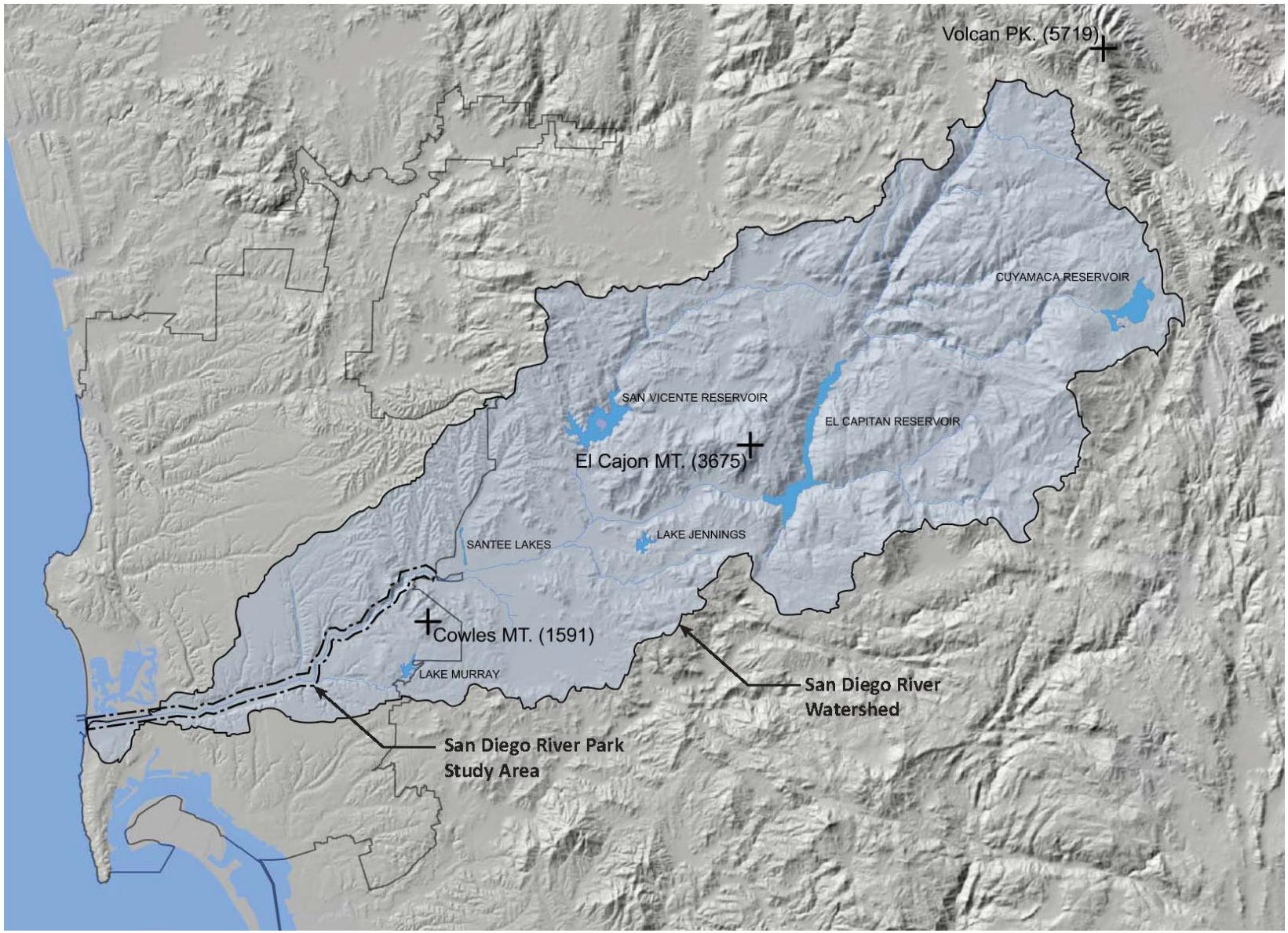


Figure 12. San Diego River Watershed

6.1.7 BICYCLE MASTER PLAN

The first Bicycle Master Plan was adopted by City Council on May 28, 2002. The update to the Bicycle Master Plan (Final Draft April 2012) is in progress and is scheduled to be adopted in 2013. The City of San Diego Bicycle Master Plan was created to promote a more bicycle friendly City, and thereby contribute to an elevated quality of life for all San Diegans and provide additional transportation choices that do not rely on fossil fuel.

The Bicycle Master Plan cites three primary goals:

- A City where bicycling is a viable travel choice, particularly for trips of less than five miles.
- A safe and comprehensive local and regional bikeway network.
- Environmental quality, public health, recreation, and mobility benefits through increased bicycling.

Safety is a primary concern for current and would-be cyclists. Making a safe and easily accessible bicycle infrastructure is a priority for this planning effort. This infrastructure should meet the needs of both the daily commuters and the casual recreational users.

The Bicycle Master Plan incorporates the San Diego River Pathway. It identifies connections between the river corridor's fragmented collection of Class I bikeways and the City's bicycle network. The Bicycle Master Plan also describes peripheral connections perpendicular to the river that link the surrounding communities with the river pathway.

6.1.8 PEDESTRIAN MASTER PLAN

The City of San Diego developed a Pedestrian Master Plan (Final Report December 2006) to guide the way the City plans and implements new or enhanced pedestrian projects. The Pedestrian Master Plan will help the City enhance neighborhood quality and mobility options by facilitating pedestrian improvement projects. The Plan identifies and prioritizes pedestrian projects based on technical analysis and community input, and improves the City's ability to receive grant funding for implementing these projects. The vision statement for the Pedestrian Master Plan is "To create a safe, accessible, connected and walkable pedestrian environment that enhances neighborhood quality and promotes walking as a practical and attractive means of transportation in a cost-effective manner."

The Pedestrian Master Plan cites four primary goals:

- Safety: Create a safe pedestrian network free of barriers and tripping hazards that has sufficient street crossings, buffer pedestrians from vehicles and has facilities wide enough to accommodate peak pedestrian use.
- Accessibility: Make facilities accessible to pedestrians of all abilities and meet all local, state and federal requirements.
- Connectivity: Develop a complete pedestrian network that provides direct and convenient connections for neighborhoods, employment centers, transit stations, public places and community destinations.
- Walkability: Create pedestrian facilities that offer amenities to encourage usage and to enhance the pedestrian experience.

6.2 APPLICABLE AGENCY JURISDICTION AND PERMITS

In addition to the City of San Diego citywide policy documents, there are a number of local, state, and federal agencies that also have direct or indirect involvement with land planning, resource protection and permit approvals for the San Diego River area. Depending on the type of project proposed within and/or along the river area, these agencies will need to be consulted and in some cases permits will be required. This section provides a brief description of each of these agencies and what they govern.

6.2.1 UNITED STATES ARMY CORPS OF ENGINEERS (ACOE)

The ACOE and the United States Environmental Protection Agency (EPA) have established policy and procedures to undertake enforcement of the permit requirements of the Clean Water Act (CWA), Section 404. Under the CWA, it is unlawful to discharge dredge or fill material into waters of the United States without first receiving authorization (usually a permit) from the ACOE, unless the discharge is covered under an exemption. The term “waters of the United States” defines the extent of geographic jurisdiction as waters or rivers, lakes, streams, tidal water, and most wetlands. A discharge of dredged or fill material involves the physical placement of soil, sand, gravel, dredged material or other such materials into the waters of the United States. Some activities resulting from implementation of the Master Plan may require individual or nationwide permits. The ACOE would need to be consulted for a determination on an individual project’s need for a permit at the time of a project proposal.

6.2.2 UNITED STATES FISH AND WILDLIFE SERVICE (USFWS)

The USFWS is the principal Federal agency that provides information to the public on the extent and status of the nation's wetlands. For this reason the USFWS acts in an advisory role with projects requiring an ACOE and/or City of San Diego permit. The USFWS also serves other permitting agencies in an advisory capacity. Of particular importance to the USFWS is the status of plants and animals on the List of Endangered and Threatened Species, which are protected under the federal Endangered Species Act of 1973. The USFWS is also concerned with protecting bird species covered by the Federal Migratory Bird Treaty Act of 1916, as amended in 1994. The USFWS has signed an Implementing Agreement with the City of San Diego for the MSCP Subarea Plan and therefore the USFWS has a participating role in the planning/permit process for the MHPA areas of the Master Plan.

6.2.3 CALIFORNIA COASTAL COMMISSION (CCC)

The CCC was established by voter initiative in 1972 (Proposition 20) and later made permanent by the legislature through adoption of the California Coastal Act of 1976. The CCC, in partnership with coastal cities and counties, plans and regulates the use of land and water in the coastal zone. Development activities, which are broadly defined by the Coastal Act, include (among others) construction of buildings, divisions of land, and activities that change the intensity of use of the land or public access to coastal waters, and generally require a coastal permit from either the Coastal Commission or the local government. Within the Master Plan area, the CCC jurisdiction extends from the Pacific Ocean to the railroad tracks located east of Interstate 5. The CCC has given permit authority to the City of San Diego and all development within the coastal zone of the Master Plan is subject to a City of San Diego Coastal Development Permit.

6.2.4 CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE (CDFW)

The CDFW is a department within the government of California, falling under its parent California Natural Resources Agency. The CDFW manages and protects the state's diverse fish, wildlife, plant resources, and native habitats. To meet this responsibility, the Fish and Wildlife Code (Section 1602) requires an entity to notify CDFW of any proposed activity that may substantially modify a river, stream or lake. Modification could include: substantially diverting or obstructing the natural flow of any river, stream or lake; substantially changing or using any material from the bed, channel, or bank of, any river, stream, or lake; or deposit or disposal of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. If the CDFW determines that the activity may substantially adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be required. The Agreement will include reasonable conditions necessary to protect those resources and must comply with the California Environmental Quality Act. The CDFW has also signed an

Implementing Agreement with the City of San Diego for the MSCP Subarea Plan and therefore the CDFW has a participating role in the planning/permit process for the MHPA areas of the Master Plan.

6.2.5 REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)

The San Diego RWQBC, which is one of the nine RWQCB in the State of California, administers National Pollutant Discharge Elimination System (NEPDES) permits in the San Diego Region. A NPDES permit would be required for any future activity disturbing one or more acres of ground within the Master Plan area. In California, the RWQBC is also responsible for administering Section 401 of the Federal Clean Water Act, which requires that an applicant for a federal license or permit provide a certificate that any discharges from the facility will comply with the Clean Water Act, including water quality standard requirements. Some activities resulting from implementation of the Master Plan may require NEPDES permits and the RWQCB would need to be consulted for a determination on an individual project's need for a permit at the time of a project proposal.

6.2.6 SURFACE MINING AND RECLAMATION ACT OF 1975 (SMARA)

SMARA, which was enacted in 1975 and amended several times, is intended to provide protection and subsequent beneficial use of mined lands. SMARA allows for continued use of surface mining operation and aims to assure that mine lands are reclaimed to a usable condition that is readily adaptable for alternative land uses. Particular emphasis for re-use of mined lands is given to recreation, watershed, wildlife, range and forage, and aesthetic enjoyment. In accordance with SMARA, a report including details of the mining operation and its reclamation plan must be filed with the State Geologist and local lead agency each year. SMARA would apply to areas adjacent to and within the Master Plan area where resource extraction activities are ongoing or planned in the future.

6.2.7 CITY OF SAN DIEGO MUNICIPAL CODE AND LAND DEVELOPMENT CODE

The entire Master Plan area lies within the jurisdiction of the City of San Diego and is subject to the City's Municipal Code. The Municipal Code contains all ordinances for the City of San Diego and includes the Land Development Code (LDC). The LDC contains the City's planning, zoning, subdivision and building regulations which are found in chapters 11-15.

Within the City's Municipal Code, Section 43.0104, Environmental Health Quality Controls 'San Diego River –Bathing Prohibited', it is unlawful for any person, or persons, to swim, wade, or bathe in the waters of the San Diego River within the limits of the City of San Diego.

Within the LDC, the following chapters provide development regulations for the San Diego River Park area:

- Mission Valley Planned District Ordinance (Chapter 15, Article 14, Division 1-4)
- Community Plan Implementation Overlay Zone (Chapter 13, Article 2 Division 14)
- Mission Trails Design District (Chapter 13, Article 2, Division 12)
- Environmentally Sensitive Lands Regulations (Chapter 14, Article 3, Division 1)

The Mission Valley Planned District Ordinance (PDO) regulates development with the intent to, "implement the Mission Valley Community Plan through the use of overlay districts regulating development intensity community wide and providing additional development criteria for projects in the San Diego River and Hillside sub-districts…" The San Diego River sub-district of the Mission Valley PDO establishes a River Corridor Area and River Influence Area, and identifies development regulations to implement the Master Plan. Most development proposals for public and private projects within the Mission Valley PDO San Diego River Sub-district are required to undergo a discretionary review process and apply for a Mission Valley Development Permit.

The purpose of the Community Plan Implementation Overlay Zone is to provide supplemental development regulations that are tailored to specific sites within community plan areas of the City. The intent of these regulations is to ensure that development proposals are reviewed for consistency with the use and development criteria that have been adopted for specific sites as part of the community plan. Within the LDC, Diagram 132-14E (Map No. C-779), several specific sites in Navajo are shown as a CPIOZ area. The actual supplemental development regulations for these CPIOZ areas are found in the Navajo Community Plan. The San Diego River Park Sub-district Element of the community plan contains the supplemental development regulations for the San Diego River park area. Development proposals for public and private projects with the San Diego River Park Sub-district CPIOZ are required to obtain a Site Development Permit.

The purpose of the Mission Trails Design District is to provide supplemental development regulations for property surrounding Mission Trails Regional Park and the San Diego River Park. The intent of these regulations is to ensure that development along the edges of Mission Trails Regional Park and the San Diego River Park enhances the park's natural qualities and promote the aesthetic and functional quality of park/urbanization relationships, while recognizing the right to reasonable development within the Design District. This overlay zone applies to those portions of the Navajo, Tierrasanta and East Elliott communities within the boundaries show on Diagram 132-12A (Map No. C-916) of the LDC. The supplemental development regulations are found in the Mission Trails Design District Design Manual. This Design Manual identifies three sub-areas. The San Diego River Park is found within Subarea 3 – Mission Gorge and San Diego River Areas. The Subarea 3 establishes a River Corridor Area and River Influence Area, and identifies development regulations to implement the Master Plan. Most development proposals for public and private projects within the Mission Trails Design District/ Design Manual - Subarea 3 are required to undergo a discretionary review process and apply for a Site Development Permit.

The purpose of the Environmentally Sensitive Lands Regulations (ESL) is to protect, preserve and, where damaged restore, the environmentally sensitive lands of San Diego and the viability of the species supported by those lands. These regulations are intended to assure that development occurs in a manner that protects the overall quality of the resources and the natural and topographic character of the area, encourages a sensitive form of development, retains biodiversity and interconnected habitats, maximizes physical and visual public access to and along shoreline, and reduces hazards due to flooding in specific areas while minimizing the need for construction of flood control facilities. The ESL regulations implement the MSCP Subarea Plan and provide development regulations for Sensitive Biological Resources, which includes wetlands. Outside and inside the MHPA, impacts to wetlands shall be avoided. A wetland buffer shall be maintained around all wetlands as appropriate to protect the functions and values of the wetland.

The ESL regulations also provide development regulations for Special Flood Hazard Areas. Special Flood Hazard Areas are established in accordance with the Federal Emergency Management Agency's (FEMA) maps and regulations to reduce risk of flooding. The City is a participant in the National Flood Insurance Program (NFIP) administered by FEMA. This program provides subsidized flood insurance for all property owners when their properties are constructed in compliance with the floodplain regulations. The FEMA regulations and the ESL regulations apply to all development proposing to encroach into the Special Flood Hazard Area. In all cases where a watercourse is to be altered (reduce the width or widen the existing floodway width) an applicant must submit a Conditional Letter of Map Revision (CLOMR) to the City Engineer and /or a Conditional Letter of Map Revision-Based on Fill (CLOMR-F) to FEMA. If the proposed change is approved by the City and FEMA, the City will issue a grading permit. After completion of construction, the applicant is required to finalize the map revision process by submitting a Letter of Map Amendment (LOMA) or a Letter of Map Revision-Based on Fill (LOMR-F) to the City and FEMA for final review and approval.

In summary, project applicants should consult with the City for a determination on what types of permits are required and the process for approval for development projects within or adjacent to the river. Project proposals are submitted to the Development Services Department (DSD) of the City for processing and DSD serves as a liaison between City departments, the public, and resource agencies. Projects that propose impacts to wetlands require consultation with the US Army Corps of Engineers, U.S. Fish and Wildlife Service and California Department of Fish and Wildlife prior to a public hearing for a development proposal. The project applicant shall solicit input from the Resource Agencies on impact avoidance, minimization, mitigation, buffer requirements and upland transitional habitat. The applicant shall, to the maximum extent feasible, incorporate the Resource Agencies' recommendations prior to the first public hearing. Grading and construction permits shall not be issued for any project that impacts wetlands or 'Listed' non-covered species habitat until all necessary federal and state permits have been obtained.

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APPENDICES

APPENDIX A - RECOMMENDED PLANT SPECIES
APPENDIX B - GLOSSARY
APPENDIX C - REFERENCES

APPENDIX A - RECOMMENDED PLANT SPECIES

RECOMMENDED PLANT SPECIES FOR THE RIVER CORRIDOR AREA

Note: This list is a recommendation only and not exclusive. Actual native plant species will be based on the area that is being re-vegetated.

Rl and Ru riparian

C/css coastal sage scrub upland and chaparral

Trees

Platanus racemosa	California Sycamore	ru	deciduous tree
Populus fremontii	Fremont Poplar	ru	deciduous tree
Quercus agrifolia	Coast Live Oak	ru,c/css	evergreen tree
Salix gooddingii	Black Willow	rl	deciduous tree
Salix hindsiana	Sandbar Willow	rl	deciduous tree
Salix laevigata	Red Willow	rl	deciduous tree
Salix lasiolepis	Arroyo Willow	rl	deciduous tree
Sambucus mexicana	Mexican Elderberry	ru	deciduous tree

Shrubs / Groundcovers / Grasses / Vines

Artemisia douglasiana	Douglas Wormwood	ru, c/css,	woody perennial
Artemisia palmeri	Palmer's Sagewort	ru, c/css,	woody perennial
Artemisia californica	California Sage/ Coastal Sagebrush	c/css	drought-deciduous
Baccharis pilularis	Coyote Brush	c/css	evergreen shrub
Carex spissa	San Diego Sedge	ru	grass

Dudleya pulverulenta	Chalk Lettuce	c/css	succulent
Encelia californica	California Encelia	c/css	woody perennial
Eriogonum fasciculatum	Flat-top Buckwheat	c/css	shrub/perrenial
Eriophyllum confertiflorum	Golden Yarrow	c/css	perennial
Heteromeles arbutifolia	Toyon	c/css	evergreen shrub
Isocoma menziesii	Goldenbush	c/css	evergreen shrub
Juncus mexicanus	Mexican Rush	rl	evergreen rush
Keckiella cordifolia	Heart-Leaved Penstemon	ru, c/css	perennial
Lonicera subspicata	San Diego Honeysuckle	c/css	evergreen vine
Malosma laurina	Laurel Sumac	c/css	evergreen shrub
Mimulus puniceus	Monkeyflower	c/css	woody perennial
Mirabilis californica	Wishbone Bush	c/css	evergreen shrub
Muhlenbergia rigens	Deer Grass	ru/c/css	grass
Prunus ilicifolia	Holly-Leaf Cherry	c/css	evergreen tree
Rhamnus californica	California Coffeeberry	c/css	evergreen shrub
Rhus integrifolia	Lemonade Berry	c/css	evergreen shrub
Rhus ovata	Sugar Bush	c/css	evergreen shrub
Ribes indecorum	White-Flowered Currant	c/css	deciduous shrub
Rosa californica	California Wild Rose	ru	deciduous shrub
Salvia apicra	White Sage	c/css	drought-deciduous
Salvia mellifera	Black Sage	c/css	drought-deciduous
Sisyrinchium bellum	Blue-Eyed Grass	c/css	perennial

Typha spp.	Cattail	rl	marsh
Viguiera lanata	Woolly-Leaf Sunflower	c/css	drought-deciduous
Vitis girdiana	Wild Grape	ru	deciduous vine
Yucca whipplei	Chaparral Yucca	c/css	succulent

RECOMMENDED PLANT SPECIES FOR THE RIVER INFLUENCE AREA

Note: This list is a recommendation for plant species that could be used in the transition area adjacent to the River Corridor Area and is not an exclusive list. Cultivated hybrids of native plant species are shown with an asterisk (*)

Br riparian

Bu upper riparian and chaparral transition

Trees

Platanus racemosa	California Sycamore	br	deciduous tree
Populus fremontii	Fremont Poplar	br	deciduous tree
Quercus agrifolia	Coast Live Oak	br, bu,	evergreen tree

Shrubs / Groundcovers / Grasses / Vines

Artemisia californica ‘montara ridge’	Dwarf California Sage	bu,	evergreen shrub
Artemisia californica	California Sage/ Coastal Sagebrush	bu	evergreen shrub
Baccharis ‘centennial’*	Centennial Baccharis	bu	evergreen shrub
Baccharis pilularis	Coyote Bush	bu	evergreen shrub
Ceanothus griseus horizontalis *	Carmel Creeper	bu	evergreen shrub
Ceanothus hybrids	Hybrid Ceanothus	bu	evergreen shrub
Dendromecon rigida	Bush Poppy	bu	evergreen shrub

Encelia californica	California Encelia	bu	deciduous shrub
Erigeron glaucus*	Compact Beach Aster	bu	Perennial
Eriogonum fasciculatum	Flat-top Buckwheat	bu	shrub/perennial
Eriogonum fasciculatum ‘dana point’*	Hybrid Dwarf Buckwheat	bu	evergreen shrub
Galvezia speciosa*	Bush Island Snapdragon	bu	evergreen shrub
Heteromeles arbutifolia	Toyon	bu	evergreen shrub
Iris douglasiana*	Pacific Coast Iris	br, bu,	Perennial
Juncus patens	Rush	br	rush
Keckiella cordifolia	Heart-Leaved Penstemon	br, bu,	evergreen shrub
Lonicera subspicata	San Diego Honeysuckle	bu	evergreen vine
Malosma laurina	Laurel Sumac	bu	evergreen shrub
Mimulus puniceus	Monkeyflower	br, bu,	shrub/perennial
Mirabilis californica	Wishbone Bush	bu	evergreen shrub
Muhlenbergia rigens	Deer Grass	bu	grass
Prunus ilicifolia	Holly-Leaf Cherry	bu	evergreen shrub
Prunus lyonii	Catalina Island Cherry	bu	Evergreen/shrub/tree
Rhamnus californica	California Coffeeberry	bu	evergreen shrub
Rhus integrifolia	Lemonade Berry	bu	evergreen shrub
Ribes indecorum	White-Flowered Currant	br, bu,	deciduous shrub
Rosa californica	California Wild Rose	br	deciduous shrub
Salvia clevelandii ‘allen chickering’*	Allen Chickering Sage	bu	evergreen shrub
Salvia greggii ‘salmon’*	Salmon Autumn Sage	bu	evergreen shrub

Salvia greggii ‘white’*	White Autumn Sage	bu	evergreen shrub
Salvia leucophylla ‘pt. Sal spreader’*	Hybrid Purple Sage	bu	evergreen shrub
Salvia mellifera ‘repens’*	Prostrate Black Sage	bu	evergreen shrub
Salvia mellifera ‘tera seca’*	Tera Seca Sage	bu	evergreen shrub
Salvia ‘winifred gilman’*	Winifred Gilman Sage	bu	evergreen shrub
Sisyrinchium bellum	Blue-Eyed Grass	bu	perennial
Viguiera lanata	Woolly-Leaf Sunflower	bu	shrub/perennial
Vitis girdiana	Wild Grape	br, bu,	deciduous vine
Woodwardia fimbriata	Giant Chain Fern	br, bu,	fern

APPENDIX B - GLOSSARY

Active recreation	Programmed activities requiring specific built facilities, such as baseball fields, soccer fields, swimming pools, etc.
Aeration	A process of adding oxygen to water, accomplished by natural means such as streambed turbulence or by artificial means such as fountains
Alluvial	Of or relating to the sediment deposited by flowing water
Alluvium	Sediment deposited by flowing water
Aquifer	An underground layer of porous rock, sand or gravel that bears water
Basin	A region drained by a single river system
Best management practices	Structural, nonstructural or managerial methods that protect surface- and groundwater quality; these practices prevent or reduce the movement of sediment, nutrients, pesticides and other pollutants from the land into bodies of water
Biodiversity	Variability in different species of plants and animals within and between ecosystems
Biomass	Total amount of living matter, both plants and animals, within a given area
Biota	Inclusive term referencing the entire body of plant and animal life of a given region
Braiding	Condition in which a river channel has broken into a network of smaller, interwoven channels; erosion, sediment load, and variable flows can all contribute to braiding
Caltrans	California Department of Transportation
Channelization	Re-design of a river or stream's pathway; channelization will often straighten a waterbody's course to remove meander, and/or armor the banks so that flows can travel downstream faster
Confluence	Area where two or more rivers join and flow into each other
Cut-off fixture	A lighting fixture that reduces or eliminates the light emissions above a 90 degree plane; a full cut-off fixture allows no lights to escape above a horizontal line through the fixture, a semi-cutoff allows a reduced amount of light above this angle
Daylighting	Redirection of a section of a stream or creek that was previously underground into an above-ground channel
Delta	Alluvial deposit at the mouth of a river; area where a river divides before entering a larger body of water

Disturbance/recovery cycle	The length of time necessary for an ecosystem to restore itself following a damaging event; system resilience
Easement	The legal right to use land not owned by the party in question for a particular or limited purpose, such as a highway or utility
Ecostructure	The more constant, stable elements of the biosphere that form the framework of environmental interactions and events
Ecosystem	A self-sustaining system of organisms (plant and animal) and environment that functions as a single ecological unit
Ephemeral (river)	A river that flows sporadically and briefly, usually following storm events or snowmelt; the flow may last hours or days
Evapotranspiration	Loss of water from the soil by evaporation and by transpiration of the plants growing in the soil
Exotic plants	Non-indigenous vegetation; exotic species may be introduced to a region either intentionally or accidentally
Filtration	The process of separating materials, as in pollutants or sediment, from the liquid in which they are suspended
Floodplain	Any normally dry land, usually adjacent to a stream river or lake, that is subject to flooding
Floodway	The channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than one foot.
Flow velocity	The volume of water passing through a specified area in a specified unit of time
FSDRIP	First San Diego River Improvement Project
Glare	Light that is significantly brighter than the level to which the eye is adapted, and which causes annoyance, discomfort or loss of visual performance and visibility
Grade-separated crossing	A highway or road crossing that uses an underpass or overpass to allow different modes of travel to cross without interruption over the highway or road
Groundwater recharge	Process by which external water, usually rain or snowmelt, is added to an aquifer
Headwaters	Source of a river or stream
Hydraulic	Moved, operated or effected by liquid
Hydrologic	Dealing with the properties, distribution and circulation of water on and below the earth's surface and

	in the atmosphere
Hydrologic regime	Sum total of water that falls in or flows through an area on average during a given period
Hydromodification	Process whereby a streambank or riverbank is eroded by flowing water, typically resulting in suspension of sediments in the water
Impervious	Not allowing the passage of water
Impound	To collect and confine water in a reservoir or other structure
Infill	Development of vacant, underutilized or derelict parcels within an already urbanized area
Infiltration basin	A facility constructed within highly permeable soils that provides temporary storage of stormwater runoff, used to remove pollutants and encourage stormwater to seep back into the ground
Infrastructure	The basic services and facilities needed for a community or society to function, such as transportation and utility systems
Interceptor sewer	A sewer designed to convey dry weather flow from the combined sewer system to treatment plant
Interpretive kiosk	A small structure with one or more open sides that is used to display cultural or other educational materials about a nearby feature or area
Invasive plants	Species that disrupt native plant communities; these species compete with and may often displace native vegetation
Kumeyaay	Late prehistoric peoples inhabiting the San Diego River valley, circa 2000 years ago to mid 1700's.
Levee	An embankment to control flooding
Light trespass	Light which shines into neighboring properties or is of an undesirable or obtrusive nature
Links style golf	Golf course characterized by open, rolling terrain, natural vegetation, target landing zone and considerable use of topographic features
Low flow channel	The course or path within a larger channel that typically carries flows during periods of low and/or normal water levels
Macrophyte	Algae visible to the naked eye; a macroscopic, aquatic plant
Maintenance assessment district	A special district that assesses additional property tax within a defined region to fund and maintain unique public amenities that are above City standards, in this case, along the river corridor
Meander	Irregular, turning course of a stream or river
Mitigation site	An area used to compensate for an environmental impact by providing substitute or replacement resources in another location

MTRP	Mission Trails Regional Park
Multi-use trail	Non-vehicular pathway that accommodates a variety of users, which may include pedestrians, bicyclists and, less frequently, equestrians
Native plants	A region's indigenous vegetation; plant species which existed in an area before human intervention
Non-point source load	Pollutants that come from a wide variety of sources, rather than a single, specific point of origin
Open space	Area generally free from development or developed with low intensity uses that respect natural environmental characteristics
Outfall sewer	A sewer that discharges treated sewage effluent to a stream or river
Overstory	Uppermost layer of foliage in the tree canopy
Passive recreation	Hiking trails, cultural interpretation nature study
Path Corridor	The 35-foot wide area within the River Corridor Area
Perennial (river)	A river that flows continuously
Physiographic	Describing the earth's physical geography
Phytoremediation	Use of plants and trees to remove or neutralize contaminants
Pioneer species	The first species or community to colonize a barren or disturbed area
Plant community	The plant populations existing in a shared habitat or environment
Plant palette	The set or selection of plants chosen for a particular purpose
Plume	A subsurface column of one or more pollutants released from a point source
Pocket park	A small park accessible to the public
Pulse flow	High flows occurring during storm events
Quasi-governmental entity	A body or organization that carries out, by contract or assigned power, functions normally executed by a government agency
Reach	Portion of a stream or river with a unified character or landscape
Riffle	Area of shallow, turbulent water passing through or over stone or gravel of a fairly uniform size
Right of way	Strip of land over which public infrastructure--roads, utilities, railways--is built
Rip rap	Large rocks of a fairly uniform size used to prevent erosion
Riparian	Of, on or related to the banks of a natural water body
River Corridor Area	The current 100-year Floodway as defined by FEMA plus a 35 foot Path Corridor on each side of the Floodway

River Influence Area	200 foot wide area abutting the River Corridor Area on each side of the river
River Pathway	The area comprised of the 14-foot wide multi-use pathway.
SANDAG	San Diego Association of Governments
Sediment load	Organic and inorganic matter, both large and small, that is suspended in and/or carried by moving water; includes suspended particulate matter, nutrients dissolved in water as well as gravel or stones that move along the bottom of the streambed
Sediment transport	The movement of materials by gravity, water or wind
Setback	A required distance between property line and edge of building or structures; setbacks may apply from all (front, side, rear) or no property lines of a particular parcel
Sight line	Imaginary line from the eye to a perceived object
Sky glow	A condition where the night sky is illuminated by overly bright electric lights, producing a luminous haze that prevents a clear view of the stars
Spill light	Light which extends outside the intended area or object of illumination
Stakeholder	An individual or group who has a particular interest, monetary or otherwise, in a specific topic or project
Substrate	The base on which an organism lives
Sustainable design	Design that meets the needs of the present without compromising the ability of future generations to meet their own needs; the thoughtful use of resources that reduces the negative impacts
Swale	A shallow topographic depression designed to convey water, usually from storm events
Symbiotic	Describing a cooperative relationship of two dissimilar organisms that is mutually beneficial to each
Synergy	Combined energy of two or more organisms or entities that is advantageous to both or all parties
Tidal marsh	Low, flat marshlands traversed by channels and tidal hollows, subject to tidal inundation
Topography	The surface features, both natural and human-made, of a region
Tributary	A small river or stream that flows into a larger river or stream
Trunk sewer	A sewer that receives wastewater from many areas
Understory	Underlying layer of vegetation, particularly smaller trees and shrubs, in the tree canopy
Urban runoff	Water that collects and quickly runs off of primarily impervious surfaces such as roofs, streets, sidewalks, parking lots; this water, carrying such things as oils, grease, pesticides, soil, pet droppings, is untreated when it enters the storm sewer system and is thus one of the largest sources of non-point waterway pollution

Water quality buffer	A vegetated zone adjacent to a water body that helps prevent pollutants from entering surface waters by trapping sediment and the substances contained therein
Watershed	A region draining into a river, river system or other body of water; may contain several basins
Waystation	A rest or interpretive area occurring between principal destinations along a route such as a bike trail
Xeriscape	The use of drought-resistant and water-conserving plants

APPENDIX C - REFERENCES

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