San Lorenzo Urban River Plan

A Plan for the

San Lorenzo River,

Branciforte Creek and

Jessie Street Marsh

Prepared by:

City of Santa Cruz
San Lorenzo Urban River Plan Task Force

with assistance from

Rivers, Trails and Conservation Assistance Program
of the National Park Service

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Executive Summary

Introduction

In 1999 the Santa Cruz City Council initiated a new phase of planning for the San Lorenzo River, Jessie Street Marsh and Branciforte Creek. The City Council appointed a citizen committee, the San Lorenzo Urban River Plan Task Force (Task Force), to update plans for these waterways and asked the committee to undertake a planning process that would result in recommendations for programs and projects that would enhance the habitat, safety and aesthetics of these waterways within City limits. The City Council's interest in providing updated plans for the River, creek and marsh was instigated by several significant events: the initiation of the U.S. Army Corps of Engineers flood control improvement project beginning in 1999; the listing of the steelhead trout and coho salmon as federally threatened species; and federal designation of the San Lorenzo River as critical habitat for these species. The Task Force initiated a 3-year planning process to accomplish the City Council's directive with the outcome being the San Lorenzo Urban River Plan. The Task Force was assisted in its planning process by the Rivers, Trails and Conservation Assistance Program of the National Park Service.

The San Lorenzo Urban River Plan (Urban River Plan) provides an update to the San Lorenzo River Design Concept Plan (1987) and the San Lorenzo River Enhancement Plan (1989). These earlier plans guided flood control, vegetation restoration, and public access improvements along the San Lorenzo River and Jessie Street Marsh from 1989 through the late 1990s. The Urban River Plan provides a 20-year comprehensive plan for the areas of the San Lorenzo River, Branciforte Creek and Jessie Street Marsh within city limits. The Urban River Plan provides a vision for the San Lorenzo River, Branciforte Creek and Jessie Street Marsh that promotes conservation and enhancement of the river as a wildlife area with complimentary recreation and community uses. Recommendations and guidelines for habitat enhancement, public access, river trail amenities, recreational use, public art, and community programs are addressed in the Urban River Plan. The Urban River Plan includes conceptual plans for areas adjacent to the River. These conceptual plans are provided only to stimulate potential design ideas and are not required for particular properties in development applications. In general, the Urban River Plan advo-

cates river-oriented development to promote the River as an amenity to downtown Santa Cruz.

The Plan is comprised of several components including:

Recommendations for river-wide programs including public access and recreation, management and maintenance, and community outreach and education of the river trail (San Lorenzo Riverway) and associated parkland areas (Chapter 3); Recommendations for specific sites and access points along the River (Chapter 4); Recommendations for Branciforte Creek (Chapter 5); Recommendations for Significant Riverfront Areas that require special attention with regards to development guidelines, public access and aesthetics (Chapter 6); Recommendations for implementation including funding strategies and a timeline for projects and programs (Chapter 7); The Lower San Lorenzo River and Lagoon Management Plan (Appendix A), the updated restoration and management plan for the river; Recommendations from the Jessie Street Marsh Management Plan (Appendix B).

Plan Recommendations:
Restoration of the River is the First Priority

All of the recommendations in the San Lorenzo Urban River Plan were developed through the work of the Task Force and during several public workshops facilitated by the National Park Service. The recommendations recognize that the River is first a habitat area for fish and wildlife and second a passive recreational area for enjoyment by the community. Therefore the plan includes the Lower San Lorenzo River and Lagoon Management Plan as Appendix A. The Lower San Lorenzo River and Lagoon Management Plan provides management and restoration recommendations for improving fish and wildlife habitat along the lower 3 miles of the River. It is the intent of the Task Force that the next 15-20 years of history along the San Lorenzo is a story about restoration and recovery of fish and wildlife. Readers should review the Lower San Lorenzo River and Lagoon Management Plan in Appendix A to acquaint themselves with the goals and recommendations of this plan.

The Urban River Plan focuses on recommendations designed to integrate the San Lorenzo River, Jessie Street Marsh and Branciforte Creek into the surrounding urban fabric of the City of Santa Cruz. Recommendations are focused on system-wide themes such as public access and recreation, operations and maintenance, and community outreach and education. Site-specific recommendations regarding riverfront places that can be created and enhanced over the next 20 years are provided.

A Final Note:
Establish a Permanent River Committee

It is the desire of the San Lorenzo Urban River Plan Task Force to witness the successful implementation of the San Lorenzo Urban River Plan over the next 20 years; bringing to reality the dream of a beautiful, natural river to Santa Cruz. To accomplish this goal, the Task Force has developed a detailed implementation plan that includes a recommendation for the establishment of a permanent River committee by the City of Santa Cruz. This is the first step in ensuring implementation of the San Lorenzo Urban River Plan and its accompanying documents the Lower San Lorenzo River and Lagoon Management Plan and the Jessie Street Marsh Management Plan.

1

Purpose, Context and Goals

"Seeing the photographs of
the San Lorenzo River in the past,
I realize its potential as a natural and
aesthetic focus of our community."

Resident comment
May 5, 2001 Public Workshop

1.1 Purpose of the San Lorenzo Urban River Plan

The San Lorenzo Urban River Plan (Urban River Plan) provides an update to the 1987 San Lorenzo River Design Concept Plan and the 1989 San Lorenzo River Enhancement Plan. These earlier plans guided flood control, vegetation restoration, and public access improvements along the San Lorenzo River (River) and Jessie Street Marsh from 1989 through the late 1990s. In 1999, the Santa Cruz City Council requested that the plans for the San Lorenzo River be updated due to: the initiation of the U.S. Army Corps of Engineers flood control improvement project beginning in 1999; the listing of the steelhead trout and coho salmon as federally threatened species; and federal designation of the San Lorenzo River as critical habitat for these species. The City Council appointed a citizen task force, the San Lorenzo Urban River Plan Task Force, to complete the plan update emphasizing community involvement as the foundation for plan development. The City Council requested that the San Lorenzo Urban River Plan Task Force update restoration and design plans for the River as well as address Branciforte Creek in the planning update process.

This San Lorenzo Urban River Plan articulates a community vision for the corridor encompassing the lower Lorenzo River, Branciforte Creek and Jessie Street Marsh as both a wildlife area, as well as a community recreation and public open space amenity. It contains recommendations for habitat enhancement, public access and trail improvements, public art, and

community programs. It seeks to guide the City of Santa Cruz in reestablishing and improving its management of and relationship to this major, recently expanded landscape feature over the next 20 years.

1.2 Goals and Benefits of the Plan

Acknowledging the validity of previous aspirations and efforts to improve the San Lorenzo River, while recognizing the nature of those efforts as ongoing, the San Lorenzo Urban River Task Force re-adopted the following goals from the 1987 and 1989 plans to guide their work:

- Enhance and restore biotic values of the River, creek and marsh as habitat for fish and wildlife
- Maintain flood control capacity of the San Lorenzo River and Branciforte Creek
- Improve the scenic and recreational value of the Riverfront
- Improve public access and pedestrian/bicycle movement to and along the River
- Improve the urban and neighborhood interface with the San Lorenzo River, Branciforte Creek, and Jessie Street Marsh
- Incorporate the San Lorenzo River, Branciforte Creek, and Jessie Street Marsh into the surrounding urban fabric of downtown and neighborhoods.

First and foremost was the Task Force's interest in restoring the River as a functional riverine ecosystem. The Lower San Lorenzo River and Lagoon Management Plan comprises the biological restoration plan for the River and Lagoon and is included in the Urban River Plan as Appendix A. This restoration plan lays the foundation from which the remaining recommendations for the River were developed.

As the Urban River Plan aims to revitalize the San Lorenzo River and Branciforte Creek as an attractive, safe, convenient and multi-purpose community feature, economic and community health benefits can be expected to accrue from achieving these goals.

Many examples of successful river-oriented downtowns—San Luis Obispo, Sacramento, Santa Rosa, Redding, give testimony to the benefits of using waterways to enhance urban livability and character. River-oriented redevelopment can expand retail and commercial business opportunities. Designed creatively, these areas will become attractions for residents and visitors seeking riverfront dining and shopping experiences. In addition, downtown businesses can increase their revenue by catering to a wildlife-viewing, hiking, kayaking and bicycling clientele.

Connecting downtown to the Beach and Boardwalk, the improved River corridor also provides alternative transportation options for the community, lessening traffic congestion and air pollution. And, the health benefits to the City's residents from having access to a continuous 5-mile recreation corridor adjacent to dense urban neighborhoods should not be overlooked. The National Center for Disease Control is promoting greenways and the opportunities they afford for regular exercise—walking, hiking, biking—as highly important in modern life for controlling obesity and maintaining good health among children and adults alike.

1.3 The Planning Area and River Reach Descriptions

The San Lorenzo Urban River Plan addresses the lower three miles of the San Lorenzo River, from the northern Santa Cruz City limits, to the rivermouth at the Pacific Ocean, as well as Jessie Street Marsh and the lower one mile of Branciforte Creek including its confluence with the San Lorenzo. Figure 1 shows the planning area and associated planning reaches.

The project area encompasses the River channel itself, the levees to the toe of the outside slope, and certain adjacent riverfront areas (see Chapter 6). The Branciforte Creek component includes the flood control channel, along with City-owned easements west and east of the channel within City limits, from the creek's confluence with the San Lorenzo River east to the City limits at Highway 1.

In a change from the earlier River plans, a new approach to addressing the River by reach, in order to more accurately reflect biological and hydrological conditions of the River environment, as well as distinctive adjacent neighborhood and downtown areas, was developed for this plan. A description of the River reaches follows (see Figure 1).

The Estuarine Reach, extending from the rivermouth to the Laurel Street Bridge, was modified by the flood control channel and is devoid of riparian vegetation for most of its length. Due

Figure 1
Plan Area
with River Reach
Designations

to tidal action, however, this reach is transformed into a lagoon when the sandbar at the river mouth closes in the late summer. The Estuarine Reach then becomes a nursery for young steelhead and salmon migrating out to sea from the watershed. Neighborhoods bordering this reach include Beach Flats and Lower Ocean Street. Natural resource enhancements to this reach are contained in the Lower San Lorenzo River and Lagoon Management Plan component of this document.

The Transitional Reach is located between the Laurel Street Bridge and the Water Street Bridge. The designation of this reach reflects its dual nature as a freshwater reach some of the year, and a brackish reach part of the year, depending upon tidal action and the closure of the sandbar at the rivermouth. River Street South, Front Street and San Lorenzo Park border this reach. Branciforte Creek enters near the Soquel Avenue Bridge.

The Riverine Reach, from the Water Street Bridge to upstream of the Highway One Bridge, is not influenced by tidal action, so freshwater predominates. It contains more extensive riparian growth than the lower two reaches. This reach is bordered by the Felker Street and Josephine Street neighborhoods, the El Rio Mobile Home Park, and the Gateway Shopping Center.

1.4 Relationship to Existing City Plans

This San Lorenzo Urban River Plan is the City's guide for restoring, managing, and maintaining natural resources, riverfront development, as well as recreation and public access improvements for the lower San Lorenzo River, Jessie Street Marsh and Branciforte Creek. It contains conceptual ideas, as well as site-specific recommendations, for accomplishing the goals that guided the Plan's development. Conceptual plans are provided to stimulate potential design ideas and are not intended as requirements for development opportunities, but rather to provide ideas that promote river-oriented development. Refinements to the concepts, and specific strategies for implementing the recommendations will need to come from the community, the City Council and staff.

At present, several other adopted plans of the City of Santa Cruz also address the planning area for the San Lorenzo Urban River Plan. Described below, they include the 1991 Downtown Recovery Plan, 1998 Jessie Street Marsh Management Plan, and the City of Santa Cruz General Plan and Local Coastal Plan (1990-2005). The San Lorenzo Urban River Plan reflects the intent of these other plans, and will be incorporated into their updates as appropriate.

The Downtown Recovery Plan is an adopted specific plan providing a framework for public and private actions related to rebuilding the downtown after the 1989 Loma Prieta earthquake. The Plan identifies the River as a major downtown open space, and recognizes its potential "as a naturalistic open space, wildlife habitat, and recreational amenity: a garden promenade that can provide a more contemplative and reflective experience to the hustle and bustle of Pacific Avenue." It recommends riverfront improvement and creation of linkages to downtown as a top priority in rebuilding downtown.

The Jessie Street Marsh Management Plan was adopted in 1998. Its recommendations are incorporated directly into the San Lorenzo Urban River Plan (see Appendix B).

The City of Santa Cruz General Plan and Local Coastal Plan (1990-2005) is a long-range, comprehensive guide for physical development of the City. It contains goals for pursuing environmental, land use, design, housing, circulation, economic, cultural and community facility needs. The Local Coastal Plan, part of the General Plan, comprises a land use plan, implementing ordinances, and maps, applicable to the City's coastal zone areas.

Future updates of the General Plan and Local Coastal Program will incorporate recommendations from the San Lorenzo Urban River Plan for "significant riverfront areas" including Front Street, Salz Tannery, and Beach Flats, as well as bicycle and pedestrian plans, and capital improvement plans for adjacent park and recreation areas. Additionally, the recommendations of the Urban River Plan should be referenced in regional plans referring to the San Lorenzo River and watershed.

1.5 Plan Organization

The San Lorenzo Urban River Plan includes a wide range of guidance and recommendations for enhancement of the natural and urban features of the planning area. For ease of pres use, the plan is organized into seven chapters and two appendices. The appendices comprise other adopted plans incorporated into this plan,

as described below. In addition, a Public Art Master Plan for the River was developed as a companion document to the Urban River Plan.

Chapter 1 - Presents the purpose, goals, and benefits of the Plan; describes the planning area, relationship to existing City plans and organizational structure of the plan.

Chapter 2 - A brief description of the River and its historical setting; describes River planning activities through the present, including the work of the San Lorenzo Urban River Plan Task Force in developing this plan.

Chapter 3 - Presents system-wide recommendations for the River, concentrating on public access, recreation, management and maintenance, and community outreach and education.

Chapter 4 - Provides site-specific recommendations for public areas located along the three reaches of the River described above. These include improvements to existing parks, parking areas, signage and general trail characteristics to provide for a more unified recreation experience for trail users.

Chapter 5 - Addresses Branciforte Creek, providing recommendations regarding flood control and natural resources, beautification and recreational improvements and neighborhood programs.

Chapter 6 - Discusses three “significant riverfront areas” deserving special planning attention to urban development and design, public access, and aesthetics.

Chapter 7 - Addresses implementation of the Urban River Plan; provides recommendations regarding department roles, project phasing, and funding strategies.

Appendix A - Contains the Lower San Lorenzo River and Lagoon Management Plan, which represents the current biological plan for the River. This plan is the underpinning for the Urban River Plan, from which opportunities and constraints for recreation and community uses along the River were identified. Therefore, recommendations in the Urban River Plan are consistent with the goals of the Lower San Lorenzo River and Lagoon Management Plan.

Appendix B - Contains the recommendations of the Jessie Street Marsh Management Plan, which is incorporated by reference into the Urban River Plan.

2

Plan Setting & Background

2.1 Physical Setting

The San Lorenzo River drains a 138-square mile watershed from the steep, forested Santa Cruz mountains to the alluvial floodplain in the City of Santa Cruz (Figure 2). The San Lorenzo River was designated in 1976 as part of the State Protected Waterways Program (a program recognizing outstanding and valuable waterways within California) due to its scenic value and value as a steelhead trout fishery. The San Lorenzo River was at one time the largest steelhead fishery on the Central Coast, south of the Russian River. The San Lorenzo River watershed is also home to California's northernmost stand of Central Coast Cottonwood-Sycamore riparian forest. This unique 10-acre forest occurs in the lower floodplain at Pogonip adjacent to the River at the upstream end of the study area for this plan.

Major modifications have occurred to the San Lorenzo River over the last 50 years leading to overall decline in the health of the River. The upper River was impacted by massive timber harvesting activities in the early 1900s, the construction of Loch Lomond reservoir in 1960 and the increasing development of the San Lorenzo Valley during the 1970s through the 1990s. The most notable modification was the channelization of the lower three miles of the River into a levee flood control structure by the U.S. Army Corps of Engineers in 1957-59. Jessie Street Marsh and Branciforte Creek were also impacted by the levee project as these two waterways were modified by that project. Jessie Street Marsh was filled during the construction of the levee project and Branciforte Creek was channelized in a cement culvert in 1959.

The San Lorenzo River is currently in a state of decline as a viable river ecosystem and populations of steelhead trout and coho salmon have dwindled over the last 20 years. The River suffers from poor water quality, excessive sedimentation, loss of connectivity with its historic flood plain, loss of native riparian habitat, and reduced stream flows due to water extraction for increased urban uses. The coho salmon and steelhead trout were listed as threatened species under the federal Endangered Species Act in 1996 and 1997 respectively. Several main tributaries of the River, including Branciforte, Carbonera, Zayante and Bean Creeks, are listed as impaired waterbodies by the State Water Resources Control Board for contaminants including sediment, nutrients, and pathogens.

Figure 2
San Lorenzo River
Watershed

Because of these impairments and designations, the River is receiving increased attention by state and local governments with a goal of restoring the river for fish and wildlife. Local governments and water purveyors are also strategizing on ways to accommodate the conflicting needs of urban water use with wildlife protection. Despite its relative decline, the San Lorenzo River still supports unique resources which can be enjoyed by the Santa Cruz community and larger regional populace. The River provides habitat to over 100 species of birds, including nine species of special concern recognized by the State of California. Branciforte Creek and Jessie Street marsh are important tributaries to the San Lorenzo River. These waterways are valued as prominent features of the lower river, important to its functionality as a natural system, and a recreational feature of downtown Santa Cruz.

Branciforte Creek

Branciforte Creek drains approximately 17 square miles in the eastern portion of the San Lorenzo River watershed and empties into the San Lorenzo River just north of Soquel Avenue in the City of Santa Cruz. The lower mile of Branciforte Creek was channelized in 1957-1959 as part of the U.S. Army Corps of Engineers San Lorenzo River Flood Control Project (Figure 3).

Branciforte Creek supports a run of native steelhead trout and several important bird species. Although coho salmon have not spawned in Branciforte in recent years, the California Department of Fish and Game has indicated that Branciforte Creek has the potential to support coho salmon with appropriate habitat restoration in parts of the watershed (Gilchrist, 1999). The Santa Cruz Bird Club has recognized the confluence area of Branciforte Creek and Carbonera Creek as a birding "hot spot" and several rare or unusual bird species have been reported in the area over the years by the Bird Club.

Figure 3
Branciforte Creek Flood Control Channel

Jessie Street Marsh

Jessie Street Marsh lies on the eastern bend of the San Lorenzo River mouth as it empties into Monterey Bay. Historically, the marsh was part of a large tidal estuary connected to the San Lorenzo River and encompassing much of what is now lower Ocean Street and downtown Santa Cruz (RRM Design Group, 1998). Jessie Street Marsh was originally a brackish saltwater marsh. It received seasonal freshwater inflows from rainfall and perennial spring flow in the Branciforte Bluff area and it was regularly inundated with saltwater when sandbars formed a lagoon at the mouth of the San Lorenzo River. Jessie Street Marsh was hydrologically cut off from the San Lorenzo River by construction of a levee during the 1957-1959 flood control project on the San Lorenzo River. The levee blocks all river flood flows and most tidal flows from entering the marsh.

Jessie Street Marsh has been the focus of a restoration and management plan completed in 1998. The plan provides recommendations to preserve and enhance the natural resources of the marsh, improve water quality, manage flood waters consistent with the protection of natural resources and provide public access and education in appropriate areas of the marsh (RRM Design Group, 1998). The Jessie Street Marsh Management Plan is incorporated into the Urban River Plan by reference (see Appendix B).

2.2 Social Setting: Development of the City of Santa Cruz

Spanish explorers first encountered the San Lorenzo River in 1769. Prior to this discovery, the native Ohlone Indians used the river as a resource for food gathering and hunting but constructed their reed structures well outside the floodplain of the river. An Ohlone village, "Aulina" or "place of red abalones," was located at the rivermouth near what is today called Beach Flats.

When the Spaniards arrived they began settling in the floodplain and built the Santa Cruz Mission Chapel near the river in 1791. A flood in the winter of 1792 destroyed the chapel, and it was moved to the top of Mission Hill in 1792. The mission era saw the floodplains of the San Lorenzo River used for agriculture—most notably cattle and sheep grazing (3,300 head of cattle and 3,500 sheep once grazed in the floodplain) and crops including wheat, barley, corn, and fruit trees. At the same time, the village of Branciforte was also established on the east side of the San Lorenzo River.

Between 1791 and the 1840s the town of Santa Cruz and the Villa de Branciforte were located outside of the floodplain on the tops of the bluffs to the east and west of the river. As the population of the area grew in the late Mexican and early American periods, houses and commercial buildings began to be built in the space available between the bluffs (McMahon, 1997). In 1846 Beach Flats became know as Schooner Flats and one of California's earliest boat-building yards opened. In 1866 the new county courthouse was built on Cooper Street and the center of town development shifted away from Mission Hill bluff to the floodplain of the river. The City was incorporated by the California Legislature in March 1876 with 6,000 residents.

During the 1890s and early 1900s, Santa Cruz became known as a regional tourist attraction with the San Lorenzo River being a primary focus because of its steelhead fishery. At one point in time, 12 public docks were located along the lower River, and the opening of steelhead season would fill downtown hotels with travelers. Other events in the history of the San Lorenzo included the annual Venetian Water Carnivals that involved decorated boat parades, concerts, balls, a Water Olympics, and fireworks. The carnivals were held during the early 1900s.

The City's largest Chinatown was also located along the river on Front Street from 1870 to 1894 when it was destroyed by fire (Lehman, 2000). Chinatown activities included market gardens grown in the San Lorenzo River bottom behind Front Street. After a fire in 1894, a second Chinatown was built on Midway Island in the San Lorenzo River (at the site of today's Longs/Zanotto's parking lot). This Chinatown was eventually destroyed by floods in 1905 and 1940.

Present day conditions on the River are less than favorable with social and criminal problems being prevalent along the entire three-mile levee section. Drug dealing, prostitution, and drug use are common along the River especially during summer and fall when low water levels allow for large illegal camps to be established in the river bottom. These camps result in large amounts of trash and human waste entering the River during the summer season and with the first winter rains. Increasingly these problems have come to the attention of the community and new efforts at cleaning up the River have been initiated by the community and the City. These efforts need continued support to be successful.

2.3 The History of Flooding in Santa Cruz

As development encroached upon the floodplain of the San Lorenzo River, floods began to take their toll upon the community. Eighteen flood events occurred from 1862-1958. Some of these floods were minor events but others were quite severe and caused extensive damage. The first serious flood to hit the growing town was in the winter of 1862. This flood caused extensive damage and eroded the base of Mission Hill 30 feet. The response to this flood by the townspeople was the earliest form of flood control: they built a bulkhead to stabilize the riverbank near the base of Mission Hill and they began to change the river channel so that it would run past Mission Hill instead of straight at it (McMahon, 1997). At the same time the bulkhead was built, property owners along the western edge of the river began to fill their lots to raise the grade by as much as four feet to prevent the river from flooding their properties. The City of Santa Cruz established its first San Lorenzo River Commission in the late 1870s to address the flooding impacts of the river.

Flooding continued with events recorded in 1878, 1881, 1890, 1895, 1907, 1911, 1940, and 1941. The costliest, deadliest and most well-known flood in the history of Santa Cruz was on December 22, 1955. The river flowed down Pacific Avenue at a depth of three to four feet and caused multi-millions of dollars in damage and eight deaths. Following the 1955 flood, the lower 2.5 miles of the San Lorenzo River was channelized into a flood control structure in 1957-59 in a cooperative project of the City of Santa Cruz and the U.S. Army Corps of Engineers (Corps).

The $2.2 million flood control project constructed riprap levee banks, removed all vegetation from the river's banks and dredged the bottom of the river channel approximately 5-8 feet. When the project was competed in 1959, the City retained maintenance responsibilities for the flood control channel. These maintenance responsibilities included annually dredging the channel bottom 5-8 feet below sea level and continued eradication of any vegetation growing on the river's banks.

1987 and 1989 San Lorenzo River Plans

Two river planning efforts for the San Lorenzo River were undertaken during the 1980s in response to several issues requiring immediate attention - the most important being the documented reduction of flood protection for downtown Santa Cruz due to natural filling of the flood control channel with sediment. By the late 1970s, the Corps estimated sediment in the channel had reduced the flood control project's capacity from 100-year flood protection to less than 30-year flood protection (City of Santa Cruz, 1989). Riverine habitat for native anadramous fish (salmon and steelhead) was in decline and the sterile River had become an eyesore with its denuded banks and dredged streambed.

A major flood in January 1982 provided new evidence of the River's ability to scour the streambed during large flood events and demonstrated a larger flood capacity than previously assumed. The Corps reinitiated studies on the River following this event, concluding that replacing flow-constricting bridges at Water Street and Riverside Avenue while constructing a 3-foot high floodwall atop the levee banks would provide the necessary infrastructure for protection against a 100-year flood. The Corps also maintained that the City should continue dredging the flood control channel of approximately 1,200 cubic yards of sediment per year.

These new findings and recommendations prompted the Santa Cruz City Council to initiate planning efforts on the San Lorenzo River. The first effort - the San Lorenzo River Design Concept Plan adopted in 1987 - described a multi-objective design for the flood control improvement project and for enhancing the river as an urban open space. A key recommendation of this plan was to develop a biological enhancement plan to maximize biological resources within the constraints of the Corp's flood control requirements.

Consequently, the City initiated the biological planning process in 1988 with a team of consultants under the direction of a Council-appointed San Lorenzo River Restoration Committee. The 1989 San Lorenzo River Enhancement Plan provided details, specifications and techniques for:

- Planting native riparian vegetation to establish and maintain a continuous corridor of riparian habitat;
- Managing the lagoon at the river mouth;
- Implementing sediment and drainage maintenance practices that are sensitive to biological resources;
- Establishing a monitoring program to collect new data to increase knowledge of the river system and refine management plans;
- Adapting and coordinating the flood control design planning process with the Army Corps of Engineers and the City's restoration plan.

The City approved the San Lorenzo River Design Concept Plan and the San Lorenzo River Enhancement Plan in 1988 and 1989 and both plans were incorporated into the General Plan and Local Coastal Plan. The 1989 Loma Prieta earthquake discontinued the City's focus on the River for a time, as the City began to rebuild the downtown and repair critical public infrastructure including portions of the levee damaged in the earthquake. Reconstruction of the Riverside Avenue Bridge, Soquel Avenue Bridge, and Water Street Bridge was accomplished between 1991 and 1996.

Concurrently, the Corps began to design the flood control improvement project, proceeding with a plan to raise and rebuild the levees by 2-4 feet rather than construct a continuous floodwall. The Corps design incorporated native vegetation components recommended in the City's 1989 San Lorenzo River Enhancement Plan and the construction of a continuous bicycle and pedestrian path the length of the levees. The Corps plan was completed in 1996 and Congress authorized funding the same year. In its authorization, Congress ordered the Corps to combine the flood protection project and vegetation improvements into one project. The San Lorenzo River Flood Control and Environmental Restoration Project commenced construction in 1999 with completion estimated by 2003.

2.4 Current Planning and the San Lorenzo Urban River Plan Task Force

In 1999 the Santa Cruz City Council appointed the San Lorenzo Urban River Plan Task Force (Task Force) to update the San Lorenzo River Design Concept Plan and the San Lorenzo River Enhancement Plan. These plans needed updating due to the federal listing of the steelhead trout and coho salmon as threatened species, the designation of the San Lorenzo River as critical habitat for coho and steelhead, and because the Corps flood control improvement project had begun construction. The 22-member citizen Task Force was charged to undertake a planning process to develop programs and projects that would further enhance the habitat, safety and aesthetics of the San Lorenzo River within City limits. The City Council gave the Task Force the following five tasks:

1. Update the River Enhancement and Design Concept Plans utilizing scientific and technical recommendations and public participation and recommend specific actions for implementation and financing of the updated Urban River Plan;
2. Coordinate and participate in activities of the County of Santa Cruz and other state and federal agencies on the improvement of the San Lorenzo River watershed and the Branciforte Creek watershed;
3. Develop a management plan including defining habitat baseline data and a monitoring program;
4. Study and analyze flood issues and the potential for habitat restoration in the Branciforte Creek watershed;
5. Work with the U.S. Army Corps of Engineers and all relevant federal, state and local agencies to ensure that the work to be conducted by the Corps is carried out in a manner consistent with habitat restoration, enhancement of water quality, improvement of aesthetics values, and all applicable federal, state, and local environmental regulations.

From 1999 to 2002 the Task Force reviewed the existing river plans, conducted public workshops and compiled public comments into recommendations for the San Lorenzo Urban River Plan. Working with a consultant team of biologists and hydrologists the Task Force completed the update to the San Lorenzo Enhancement Plan, producing the Lower San Lorenzo River and Lagoon Management Plan in January 2002. The management plan is incorporated into the Urban River Plan (see Appendix A) and provides the foundation for appropriate recreational uses and features along the River that are non-impacting to fisheries and wildlife resources.

For development of the Urban River Plan, the Rivers, Trails and Conservation Assistance Program of the National Park Service assisted in planning and implementing public workshops to gather information and input from the community. The National Park Service helped to produce useful products such as newsletters and plan drafts for review by the Task Force. In addition to the major tasks described above, the Task Force (with assistance from the National Park Service), completed several other activities during the planning process including the following:

- Initiated the planning process with public

3

Riverwide Concepts and Programs

Beyond the value of commerce rivers bring to cities is the value of the ambience, of amenity, of aesthetic presence they provide. Rivers offer fluid, free-flowing counterpoint to the rigid structures and predictable order of cities. They introduce a corridor of nature between corridors of asphalt and they remind city dwellers of the natural world beyond the urban boundary.

Dave Bolling, author
How to Save a River

Introduction

Integrating the San Lorenzo River, Jessie Street Marsh and Branciforte Creek into the surrounding urban fabric of the City of Santa Cruz presented the Task Force with one of the greatest challenges during the three-year planning process that culminated with this Urban River Plan. For over five decades the San Lorenzo River has been relegated to a back alley of downtown. The height and scale of the levees provides a visual and physical barrier for accessing the river. From street level, the River cannot be seen from downtown and adjacent neighborhoods thus resulting in a lack of involvement by the community. In a sense, the river is not part of the landscape of Santa Cruz, it is hidden behind the massive earthen levees. This sense of abandonment has opened doors for undesireable activities to predominate along the River. Illegal camps and activities such as drugs and prostitution make the area inviting to some, threatening to most. Conservation and stewardship efforts are extremely challenged in this environment often resulting in complete inaction towards these complicated problems.

3.1 The San Lorenzo Riverway

The Task Force recognized that fostering a new way of thinking about the River required community involvement. The Task Force initiated a series of public workshops to gather comments about the River from the community. Each workshop focused on presenting background information on the history and planning process of the Urban River Plan and encouraged community members to express their ideas, concerns, issues and opportunities for the River. Information from these workshops helped the Task Force discern user needs and desires for the River corridor, identify problem areas, and locate important pedestrian connections. The next step was to host a design charrette in partnership with the National Park Service and American Society of Landscape Architects to generate solutions to these specific challenges and illustrate the resulting design concepts.

This three-day workshop was held in January of 2002 and brought together artists, landscape designers, planners, citizens, and policy makers to identify a new focus for the River. The outcomes from the workshop reiterated what the Task Force had already

acknowledged—that the San Lorenzo River is an important open space area in the City and that the community has many opportunities to create a new, positive relationship with the River for the future.

In January 2002, in a symbolic first step to recognize and embrace the River as part of the urban life of Santa Cruz, the Task Force renamed the levee trail system and its related facilities and amenities (currently commonly referred to as "the levee") as the "San Lorenzo Riverway." In doing so, the Task Force hoped to create not only a new linear city park but a new nomenclature for referring to the River—one that recognizes its value as a recreation feature, an alternative transportation corridor, and a significant fish and wildlife habitat and an amenity worthy of community support and involvement. "San Lorenzo Riverway" captures these goals in a recognizable place name for the newly completed flood control project and trail system.

3.2 Defining the Riverway: System-wide Recommendations

The Urban River Plan recognizes the San Lorenzo Riverway as an exciting network of places to be discovered during one's journey along the River. It can indeed become the signature of the City over the next 20 years. The Riverway includes riverfront places, river views, and river-related activities that will be developed or enhanced to integrate the River into the downtown fabric. This section of the plan provides recommendations for ongoing and future treatment of the San Lorenzo Riverway to enhance its function as an open space area, transportation corridor, a recreation feature, and an environ for community activities. These recommendations focus on system-wide themes that are not reach specific and are both physical and programmatic in nature.

The River as an Alternative Transportation Corridor

The Corps flood control improvement project has provided substantial improvements to the trail system along the levee crest, however additional improvements such as completing bicycle and pedestrian bridges, improved access at existing ramps, and directional signage are still needed. The river pathway system provides the best opportunity to maintain an alternative transportation route accommodating pedestrians, bicycles, and wheelchairs from the beach to the River Street/Highway 1 area. This loop trail system, with its many east-west lateral access points to adjacent neighborhoods, offers alternative transportation options for residents and visitors. Increased use of the River trail system will help alleviate existing illegal activities along the Riverway.

The following system-wide recommendations meet the goals of improving public access and pedestrian/bicycle movement to and along the River, as well as improving the urban and neighborhood interface with the San Lorenzo River, Branciforte Creek and Jessie Street Marsh.

Recommendations

- Complete pedestrian/bicycle bridges at Highway One/Felker Street and the confluence of Branciforte Creek and the San Lorenzo River. Secure funding for design and construction of these projects.
- Complete the upgrade and widening of the Union Pacific Railroad Trestle at the rivermouth to provide safer pedestrian and bicycle use along this route.
- Improve pedestrian/bicycle access between the Riverway and Jessie Street Marsh and Oceanview Park.
- Identify and program parking areas for trail system users into current and future transportation planning efforts. Provide signage and facilities such as stairs and ramps leading up to the trail in order to dissuade "shortcuts" through landscaping.
- Access and pathways in the Front Street corridor should be designed to draw people out of the downtown to the River.
- Access and pathways from the neighborhoods at Ocean Street and Barson Street should be designed to facilitate pedestrian and bicycle use.
- Continue to provide disabled access to areas and facilities of the river.

The River as a Recreation Feature

For all its current and potential contributions to the quality of life in Santa Cruz, the San Lorenzo Riverway offers perhaps the greatest opportunity for enhancing recreational use of the River. Recreational access along the River provides opportunities for public interaction with the River corridor for enjoyment, education and

continued stewardship. A multitude of recreational opportunities exist along the Riverway: hiking, picnicing, bicycling, jogging, skating, birdwatching, etc. Water-based activities such as kayaking and canoeing are increasingly popular sports. Participants in public workshops organized to solicit input for this Urban River Plan advocated to allow kayaks and other small boats access to the River for at least seasonal use. While existing City policy (Santa Cruz City Municipal Code Section 9.66.090 and Section 9.66.030) prohibits the use of water sports equipment and boats in the San Lorenzo River, this plan recommends consideration of future possibilities for providing water-based recreational opportunities on a limited basis.

The following system-wide recommendations meet the plan goal of improving the scenic and recreational value of the River.

Recommendations

- Develop a San Lorenzo Riverway trail improvement program that addresses infrastructure improvements (lighting, safety, call boxes), signage, wayfinding, interpretation and trail linkages. Trail lighting should be designed to be non-intrusive to fish and wildlife and energy efficient.
- Develop a system of unpaved nature paths on the levee slopes near riparian areas to enhance wildlife viewing activities. Design bird-viewing platforms and observation decks so as not to disturb wildlife. Platforms and observation decks should be constructed so as to avoid conflicts with flood capacity.
- Develop a map of the San Lorenzo Riverway including regional trail links (Sanctuary Scenic Trail and California Coastal Trail) and key lateral access areas. Place the map at directional locations along the Riverway.
- Develop recreational guides for the river and associated activities. Investigate potential for creation of par course along the Riverway.
- Review existing City ordinances prohibiting use of the river for kayaking and canoeing; explore opportunities for establishing a seasonal boating program with appropriate launching facilities and public safety measures. The boating program should be designed so as to avoid conflicts with fish and wildlife and public safety.

System-wide Operations and Maintenance

The San Lorenzo Riverway represents one of the most significant investments of public funds over the last ten years. The Riverway includes over 3,000 native plants and 2.5 linear miles of parkland that now need to be maintained. Although past expenditures on the river have largely been directed toward flood control maintenance and operations, the Riverway is a substantial new public park and open space in the City and will require increased expenditures for staffing, operations, and capital improvements. Increased expenditures can also be expected in other departments such as police, fire, and public works (transportation) as the community makes more and more use of the Riverway.

The following system-wide recommendations meet the Urban River Plan goal maintaining the flood capacity of the River and Branciforte Creek and enhancing the biological values of the River for fish and wildlife.

Recommendations

- Establish a “River Coordinator” position to facilitate coordination of maintenance, management, restoration, and monitoring projects for the river. The River Coordinator would seek and procure project grants, coordinate with City staff and community groups, and be the lead staff for plan implementation.
- Provide adequate operations and maintenance staffing levels in the Parks and Recreation and Public Works departments to maintain existing Riverway facilities and recommended improvements of the Urban River Plan.
- Establish a staff-level “River Management and Maintenance Coordinating Group” comprised of staff from Parks and Recreation, Public Works, Water, Planning, Police, Fire, and Redevelopment to coordinate ongoing management and maintenance projects on the levee and in the river.
- The City should devote consistent attention to issues of public safety, maintenance, and enforcement of ordinances to reduce harmful effects of human activity (e.g. camping, illegal activities) that degrades environmental or recreational qualities.
- Develop and implement a litter control program on the San Lorenzo Riverway including monthly large-scale cleanups of areas that

present public health hazards.

- Work with code enforcement to continue abatement of illegal dumping along the San Lorenzo Riverway.
- Evaluate conditions of landscaped areas and conditions of native vegetation installed as part of the flood control improvement project. Work with a qualified botanist to develop a replacement plant list should mortality occur in landscape areas and ensure implementation of remediation plans.
- Develop a river management and stewardship training program for City of Santa Cruz staff to inform staff of the river's sensitive resources and unique management requirements.
- Investigate options for volunteer programs and community service programs to assist with maintenance and management responsibilities.
- Conduct annual vegetation and sediment management program for flood control maintenance.

Community Outreach and Education

Public outreach and education are a critical component of the San Lorenzo Urban River Plan. These programs will expand the community's awareness of the San Lorenzo River, Jessie Street Marsh, and Branciforte Creek increasing community involvement and conservation of these waterways. Increased public involvement in the River will help the City meet its management responsibilities for the River. Public interest in and use of the Riverway will focus more "eyes" on the River and its amenities, raise contributions of volunteer hours and services, and educate a new generation about the River, its natural and cultural history, and develop a sense of pride and ownership.

The following recommendations will help to achieve the plan goal of incorporating the River, marsh, and creek into downtown and neighborhood activities.

Recommendations

- Provide regular updates about the River and creek to the community via the newspaper and media (ie., Community Television, local radio station, or City-based website).
- Develop an "Adopt- A-Riverbank" program for participation by local businesses, schools, community and neighborhood groups. Activities could include litter control, planting, and ecological monitoring.
- Conduct annual River tours and priority planning sessions for the City Council.
- Develop multi-lingual materials and educational products about the River.
- Participate in National River Cleanup Week annually during the second week of May as an awareness raising celebration.
- Work with local schools and outdoor education programs to utilize the River as an outdoor classroom.
- Develop and implement a docent program for natural history tours in cooperation with the Museum of Natural History or Parks Department Ranger Programs.
- Establish a "Friends of the San Lorenzo River" non-governmental organization to partner with the City of Santa Cruz and other agencies and organizations on public outreach programs and Riverway projects.

4

Reach Specific Recommendations

Introduction

This chapter provides reach specific recommendations for sites along the San Lorenzo Riverway. As described in Chapter 1, for planning purposes, the Riverway has been divided into three distinct reaches: the Estuarine Reach (rivermouth to Laurel Street); Transitional Reach (Laurel Street to Water Street); and the Riverine Reach (Water Street to Highway 1). This system of division reflects the biologic and hydrologic conditions of the River environment as well as the distinct neighborhood and urban areas adjacent to the River.

By dividing the River into distinct reaches, projects can be clearly defined and priorities set on improvements to the Riverway over the 20-year plan period. One of the most important components of the plan is that it be comprised of realistic projects that can be accomplished within a defined time period. It is the intent of the Task Force that the plan include aesthetic as well as functional improvements for the Riverway—that the Riverway gain a sense of unification as projects are completed in specific reaches and sites. The Riverway will then become an important recreational and transportation corridor for residents and visitors. As previously mentioned, conceptual plans are provided to stimulate potential design ideas and to encourage appropriate uses, scale and orientation in adjacent areas along the River. Conceptual plans included in this chapter are for example purposes only.

Figure 4
Focus sites are existing sites that can be made into river-oriented public spaces

4.1 Design Improvements

The San Lorenzo Riverway consists of several existing public sites and accessways. During the development of the Urban River Plan, the Task Force collected public comment about opportunities for existing areas and sites along the Riverway. This information was compiled and presented to Task Force members, artists, landscape designers, and planners as part of the design workshop held in January 2002. The goal of the design workshop was to provide ideas for “fine tuning” the existing sites and accessways along the Riverway to provide a more unified recreation area for the community. Participants in the design workshop visited and reviewed the existing parks adjacent to the Riverway as well as parking areas (formal and informal), street connections, signage and general trail characteristics and use patterns. Tak-

ing this information, the participants developed three different types of improvements that could be done along the Riverway to provide a more unified recreation experience.

The three types of design improvements that could be implemented at existing sites along the Riverway include focus sites, access nodes, and urban interface connections.

Focus sites are public spaces within or adjacent to the Riverway corridor that create a destination or unique Riverway experience for the Riverway user (Figure 4). Most focus sites will be located on existing Riverway land, but in some cases focus sites may involve land acquisition or easements. Focus sites are intended to increase Riverway use, increase awareness and appreciation for the Riverway, create consistency in pathway treatments and amenities and add visual focal points. Improvements to focus sites will include the following:

- Plazas and public spaces
- Entry features
- Interpretative features
- Public art Seating
- Education facilities
- Defining trail access parking areas through striping and entry markers

Access nodes are sites where existing streets, bridges, and/or stairways converge with the Riverway trail and provide opportunities for seating, public art, and signage (Figure 5). Access nodes are important features along the Riverway because they provide the user with a sense that they are traveling along a network of interconnected places with common landscape features such as design elements (ie., pavement treatments, walls or vertical markers), and wayfinding elements.

Access nodes should indicate to the Riverway user that they have arrived on the Riverway and the Riverway is there to discover and explore. Access nodes will include the following elements:

- Pavement treatments (to differentiate from

Figure 5
Access nodes are located where ramps and the Riverway trail converge

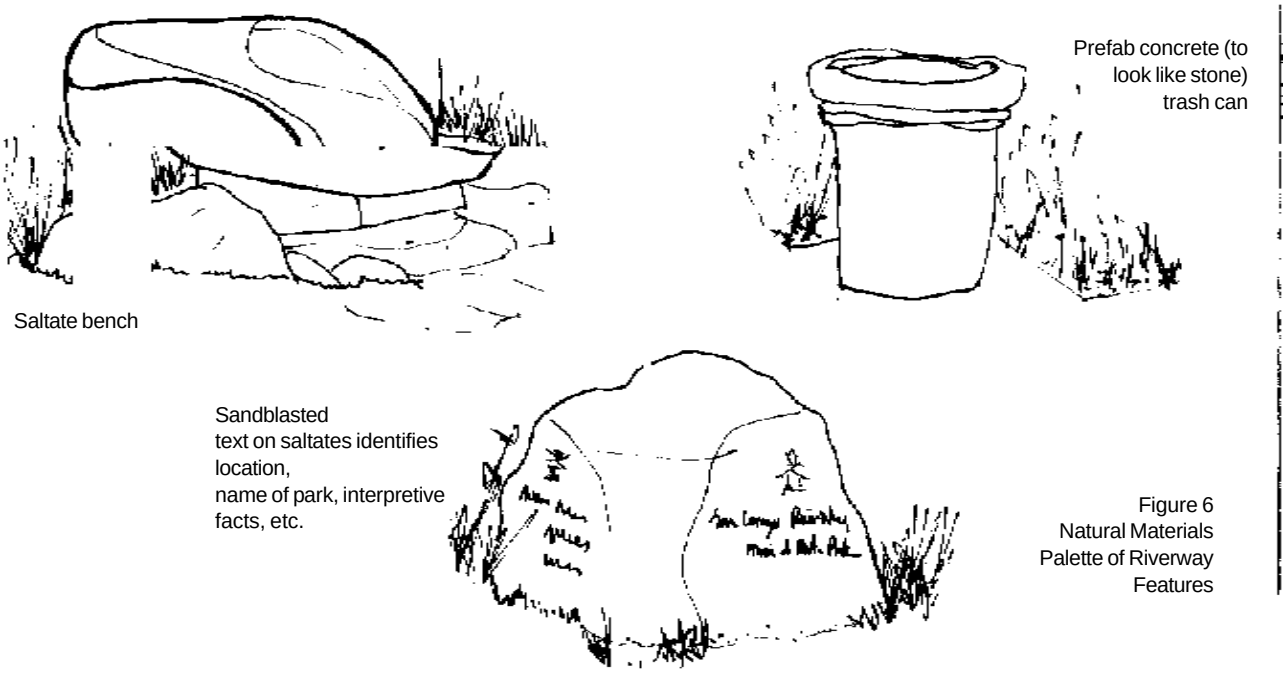
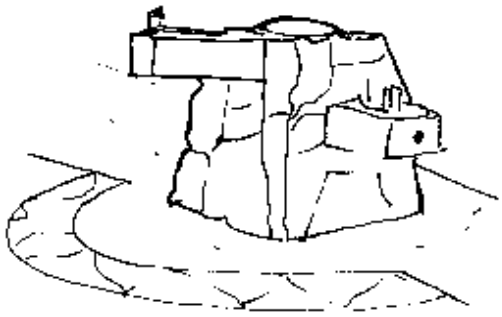
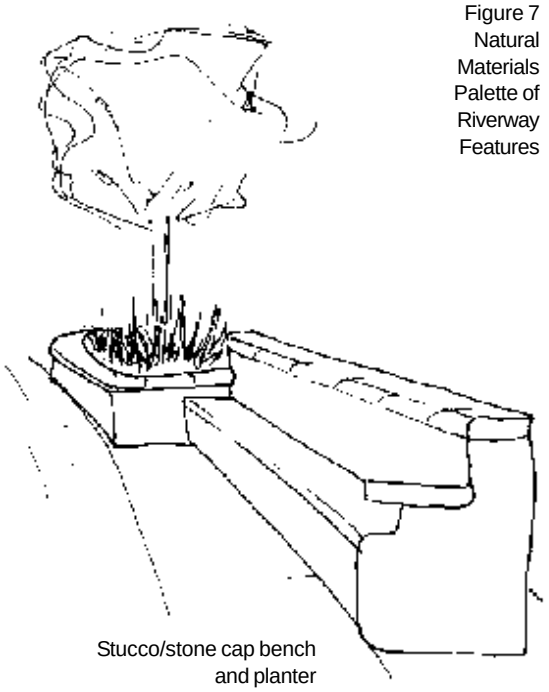


Figure 6
Natural Materials Palette of Riverway Features

Identification, interpretation or regulation panel inset into stone



Drinking fountain



Stucco/stone cap bench and planter

Figure 7
Natural Materials Palette of Riverway Features

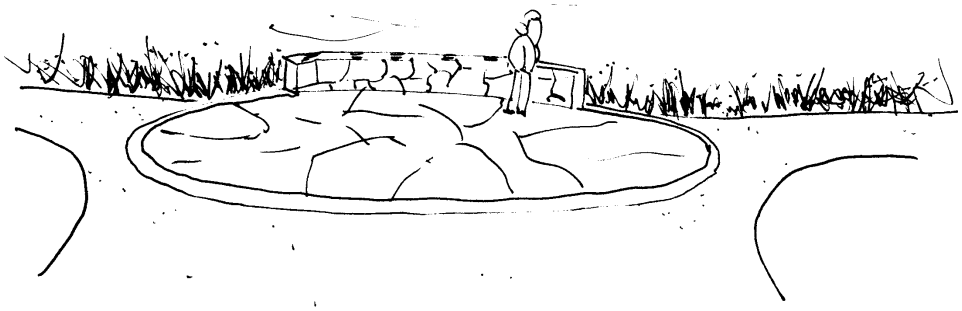


Figure 8
Sample pavement treatment: Trail Crossroads

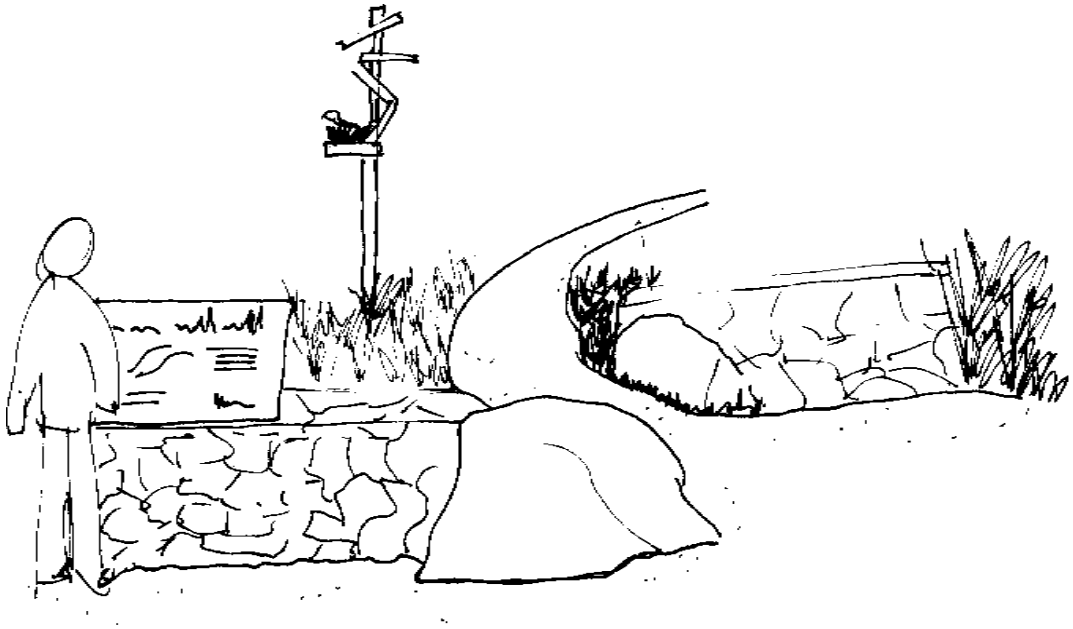


Figure 9
Sample interpretive treatment: River's Perch

Figure 10
Estuarine Reach Map

asphalt path and announce the connection to the Riverway corridor)
- Thematic fencing/walls/arbors
- Seating
- Directional and informational signage
- Public art features
- Riverway markers

Figures 6-9 show sample design standards for access nodes. In general, materials should be natural (ie., stone or stucco) and designed to be vandal-proof and non-intrusive to the undeveloped feel of the Riverway. It is preferred that these features be design build rather than selected from a catalog.

Urban interface connections are envisioned as "fingers of green" that expand and connect the Riverway corridor into the community and neighborhoods through the installation of street trees, pavement treatments, and public art elements along specific streets and corridors. These "fingers of green" provide hints and reminders to visitors and residents that by following the routes they will end up at the River and Riverway trail. Urban interface connections may also include directional signage or orientation symbols from downtown areas and other neighborhood areas such as Beach Flats and lower Ocean Street. Public art is another element that can play on river themes and remind the community that the River is nearby.

4.2 Site Specific Recommendations in River Reaches

The following discussion addresses improvements to each of the three planning reaches and identifies focus sites, access nodes, and urban interface connections located within each reach.

The San Lorenzo Riverway currently consists of a 12-foot wide asphalt path running the length of the levee on the west and east banks for a total of five linear miles. The Riverway trail includes American Disabilities Act (ADA) accessible ramps at all major bridges. Other amenities such as seating, lighting, signage, public art, and interpretive elements do not currently exist on the Riverway. The Riverway is landscaped on the outer banks with native riparian trees and shrubs. The inner banks are not landscaped but have a mix of native and nonnative plants characteristics of streams on the Central Coast. The three planning reaches and their existing characteristics are described below. Recommendations for focus sites, access nodes, and urban interface connections follow the reach descriptions. Conceptual designs developed in the design charette are included for each site to provide conceptual ideas for existing areas.

Figure 11
Mike Fox Park
Focus Site

Estuarine Reach

The Estuarine Reach is the last segment of the San Lorenzo Riverway and runs from Laurel Street to the rivermouth (Figure 10). The Estuarine Reach refers to the portion of the River where tidal action changes the aquatic environment to a brackish system and influences the types of plants that can grow in the area. The Estuarine reach also becomes a lagoon in the late summer when the sandbar at the rivermouth closes and freshwater inflows cause the estuary to fill and become a lagoon. During the period of sandbar closure the lagoon slowly converts to freshwater. The Estuarine Reach is one of the most complicated areas biologically and hydrologically in the river system.

Neighborhood areas adjacent to the Estuarine Reach include Beach Flats, Seabright and Lower Ocean Street. The neighborhoods in this reach are developed with housing and commercial land uses. The Santa Cruz Beach Boardwalk and its associated facilities including the Third Street parking lot are located in the Estuarine Reach. Jessie Street Marsh is located on the southeast bank of this reach immediately upstream of the rivermouth. Existing parks in this reach include Mike Fox Tennis Park and Jessie Street Marsh Park. In this reach the Riverway can be accessed via ramps at Riverside

Figure 12
Conceptual
Plan for Mike
Fox Tennis
Park

Avenue Bridge, Canfield Avenue, Jessie Street, Third Street, and near the Trestle Bridge at the terminus of the levee. The Southern Pacific Railroad Trestle Bridge located at the terminus of the Riverway provides east-west access over the River from the Seabright area to Beach Flats.

Focus Sites—The Estuarine Reach includes four focus sites: Mike Fox Park, the Riverbend/Laurel Street Extension area, the terminus of the Riverway trail on the east bank at Jessie Street Marsh, and the Trestle Bridge area. Improvements at these focus sites include defining trail access parking with marked spaces and entry sites, creating additional river view areas through construction of small thematic plazas and informal nature trails, and enhancing recreational use.

Mike Fox Park is a large regional park located on the east side of the River on San Lorenzo Boulevard. Except for four public tennis courts and several picnic tables, much of the park is unimproved. There is no designated parking area and access to the Riverway trail is from the northern and southern ends of the park via pedestrian and maintenance vehicle access ramps (Figure 11).

Streambanks are flatter in this area and a small seasonal beach is formed along the riverbank from the Riverside Avenue Bridge upstream. Improvements proposed for Mike Fox Park include defining parking with marked spaces and entry sites, providing additional picnic areas, and creating a seasonal events plaza at the northern end of the park on an existing turf area. Creation of an informal nature path on the inner levee bank with seasonal overlooks and seating will provide opportunities for wildlife watching and streambank and River monitoring. The park may also serve as a location for a kayak vendor if seasonal boating is ever established for the river. This park would also be appropriate for a public restroom. See Figure 12 for additional concepts that may be implemented at this focus site.

The Riverbend/Laurel Street Extension area is currently in design and construction planning as a cooperative project with the U.S. Army Corps of Engineers as Phase 3 of the San Lorenzo River Flood Control Improvement and Environmental Restoration Project. Construction is anticipated to occur in 2003/2004. Improvements will include a one-way road from

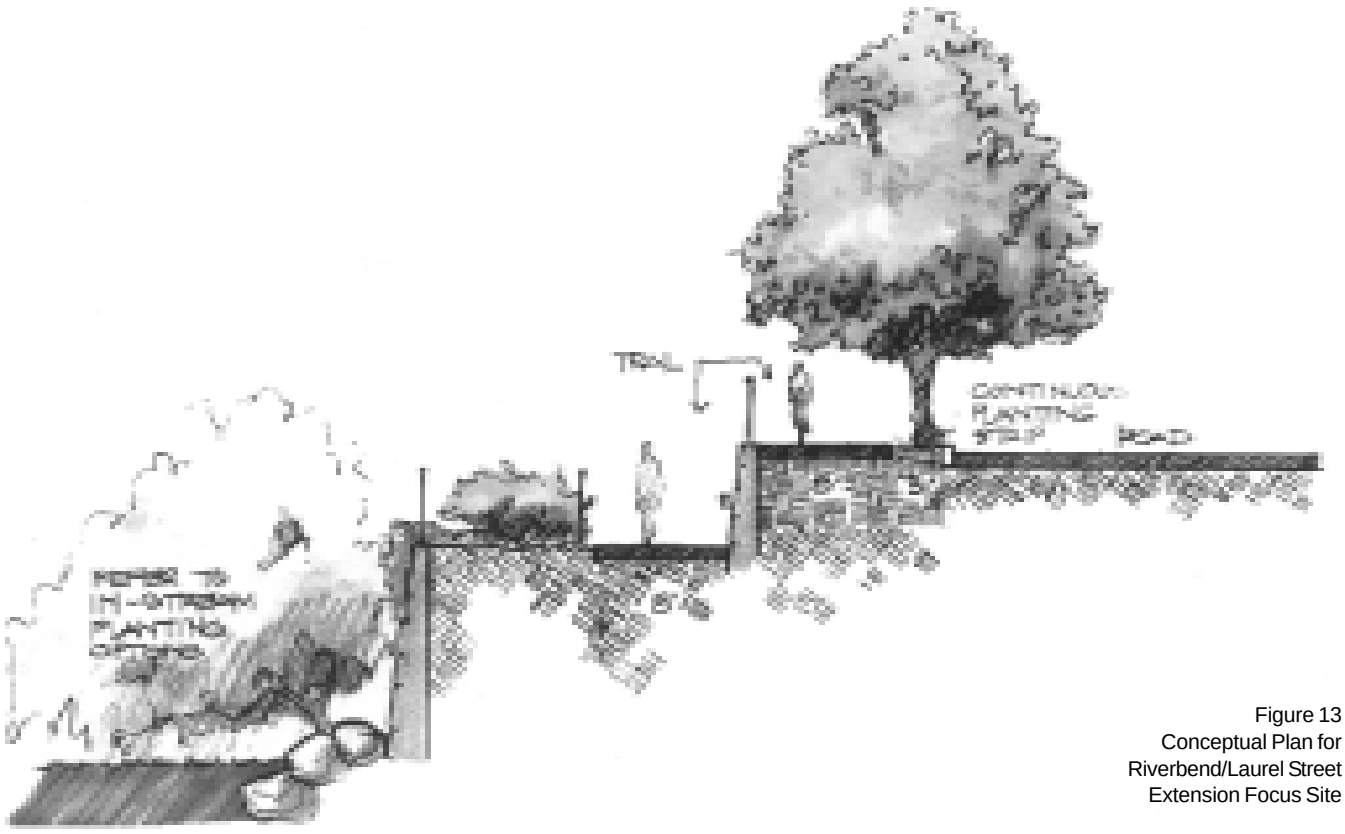


Figure 13
Conceptual Plan for
Riverbend/Laurel Street
Extension Focus Site

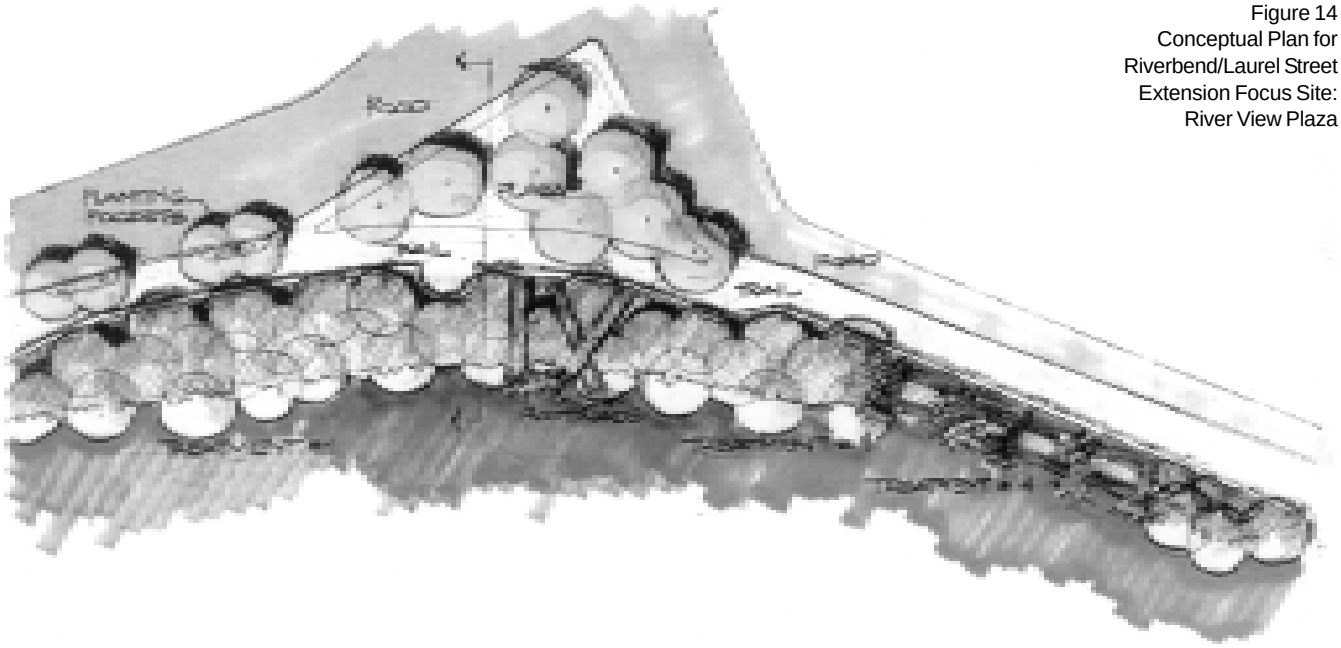


Figure 14
Conceptual Plan for
Riverbend/Laurel Street
Extension Focus Site:
River View Plaza

Figure 15
Jessie Street
Focus Site

Laurel Street Extension to Third Street, a River view plaza off Third Street and a pedestrian/ bike trail that will complete the Riverway trail under the Riverside Bridge. The River view plaza will provide opportunities to interpret the cultural and natural history of the River. See Figures 13 and 14 for conceptual drawings of the improvements at this focus site.

The terminus of the Riverway trail on the east bank is at East Cliff Drive directly across from Jessie Street Marsh (Figure 15). The terminus is landscaped but has no other improvements. This area could be improved through providing a River view plaza area which would

Figure 17
Trestle Bridge
Focus Site

Figure 18
Trestle Bridge
Focus Site

Figure 16
Conceptual Plan
for Jessie Street
Focus Site

Figure 19
Conceptual Plan for Trestle
Bridge
Focus Site

Figure 20
Beach Hill Stairs Access Node

Figure 21
Canfield Avenue Access Node

take advantage of the views and natural and cultural features of this site. This area should also emphasize a relationship with Jessie Street Marsh through signage, interpretation, and educational planting areas of appropriate flora. Existing site conditions and public safety constraints make it difficult to provide a formal connection to Jessie Street Marsh without major transportation improvements at this site. Conflicts with vehicular traffic going both directions on East Cliff Drive are common in this area due to the lack of a signal light or crosswalk. Original plans for the River developed in 1987 discussed the idea of a cantilevered bicycle trail above the River along East Cliff Drive. This design should be reconsidered in transportation improvement plans for this area to address public access and safety concerns. Additional consideration should be given to creating an underpass to connect the east Riverway trail with the Oceanview Park trail and Jessie Street Marsh. See Figure 16 for conceptual plans for this focus site.

The Trestle Bridge area is a confusing array of public and private property hampered by the presence of the wall along the Santa Cruz Beach Boardwalk's log ride and the private parking area at the terminus of the levee trail. Yet the Trestle Bridge area offers dramatic views of the river and Monterey Bay and the beach (see Figures 17

Figure 22
Third Street Ramp Access Node

Figure 23
Barson Street Access Node

Figure 24
Summary Map of
Improvements in Estuarine
Reach

Specific Location	Improvement Type	Recommended Improvements
Mike Fox Park entry	Focus Area	• Define trail access parking with marked spaces and • Provide additional picnic areas • Create plaza and community gathering circle and program community events and celebrations • Possible future kayak vendor site • Install public restrooms • Add nature trails with seasonal overlooks • Add Riverway markers, directional and interpretive signage, and public art opportunities
Riverbend/ Laurel Street Extension	Focus Area	• Create Riverview plaza • Add interpretive features focusing on the area's history
Trail terminus at East Cliff Drive (Jessie Street Marsh)	Focus Area	• Create Riverview plaza highlighting the cultural and natural history of the River and Bay. • Add Seating • Add Riverway markers, directional and interpretive signage, and public art opportunities
Trestle Bridge area/ Rivermouth kiosk, Boardwalk.	Focus Area	• Make beach access more user friendly • Construct River view plaza • Emphasize gateway to Riverway trail with Riverway markers, directional and interpretive signs, a staffed and other public art opportunites • Connect to the trails over the Trestle Bridge and
redevelopment		• Identify opportunity to acquire parking lot for as a River restoration area.
Third Street	Access Node	• Pavement treatment • Provide orientation symbols • Install public art
Canfield Avenue	Access Node	• Pavement treatment • Provide orientation symbols
Barson	Access Node	• Pavement treatment • Provide orientation symbols • Improvements for bikes and strollers
Beach Hill Stairway	Access Node	• Pavement treatment • Provide orientation symbols • Install public art
Lower Ocean to East Cliff	Urban Interface Connection	• Plant street trees
Barson Street to Riverside	Urban Interface Connection	• Plant street trees
East Cliff to San Lorenzo Point	Urban Interface Connection	• Plant street trees

Table 1
Summary Table of Improvements in Estuarine Reach

Figure 25
Transitional
Reach Map

and 18) and is the gateway to the San Lorenzo Riverway at its southern terminus. Goals for improvements to this focus area include 'cluing' Riverway users that beach access is available and that bicycle and pedestrian access is available over the Trestle to the east side of the River. The trestle bridge could also incorporate public art features. The site would be fitting for a River view plaza that takes advantage of the views to Monterey Bay and should highlight the cultural and natural resources of the area. Another feature of the site is the large parking lot off of Third Street. This parcel should be considered for restoration to wetland habitat to lessen the visual impact of the parking lot adjacent to the River. Chapter 6 addresses this area in more detail. Figure 19 shows conceptual plans for the Trestle Bridge site.

Access Nodes - The Estuarine Reach includes four sites appropriate for access nodes. These sites include (1) the Beach Hill stairway from Cliff Street where it ends at Laurel Street extension, (2) the Riverway trail access ramp at Canfield Avenue, (3) the Riverway trail access ramp at Third Street, and (4) a Riverway trail access ramp at the western end of Barson Street (Figures 20-23). Improvements to these access nodes will include pavement treatments, thematic fencing/walls/arbors, and directional and informational signage. Refer to figures 6-9 previously for sample design treatments for use in these access nodes. Improving these nodes will help to orient users to the Riverway trail.

Urban Interface Connections - Urban interface connections should be provided at three sites in the Estuarine Reach: (1) Lower Ocean Street to East Cliff Drive, (2) Barson Street to Ocean Street, and (3) East Cliff Drive to San Lorenzo Point. Improvements to these streets should include street trees and signage indicating the location of the Riverway. These "fingers of green" will help to define connections to the Riverway from adjacent neighborhoods and arterials.

Figure 24 and Table 1 summarize all of the improvements at sites in the Estuarine Reach.

Transitional Reach

The Transitional Reach includes the area from the Laurel Street Bridge to the Water Street Bridge (Figure 25). This area changes with the closure of the sandbar during the later summer and fall. When the sandbar is closed

Figure 26
Branciforte Creek
Confluence Area - Existing
Conditions

this reach fills with freshwater and provides additional habitat for steelhead. At times of the year when the sandbar is open extreme tides can bring saltwater into this area. During most of the year this reach is freshwater and includes important riparian habitat areas along San Lorenzo Park. Branciforte Creek enters this reach just above Soquel Avenue.

The neighborhood areas adjacent to this reach include Pacific Avenue and downtown, Front Street and San Lorenzo Park. Land uses in this area of the river are largely commercial, retail, office, and recreational. The Transitional Reach includes San Lorenzo Park, a large regional park, and Mimi De Marta park, a small neighborhood park, both on the east side of the river. The Santa Cruz County Government Center is also located on the east bank. Front Street is located on the west bank in this reach. Front

Figure 27
Conceptual
Plan for
Branciforte
Creek
Confluence
Site

Figure 28
Royal Taj/Soquel Avenue
Existing Conditions

Figure 31
Mimi De Marta
Focus Site
Existing Conditions

Street is addressed in more detail in Chapter 6 of this plan. There are many public access points throughout this reach, including ADA ramps at Laurel Street, Soquel Avenue, and Water Street Bridges. Circulation between the west and east banks is facilitated by a pedestrian bridge at San Lorenzo Park.

Focus Sites - The focus sites in the Transitional Reach include the Branciforte Creek/Dakota Avenue area, the Soquel Bridge/Royal Taj area, and Mimi de Marta Park. Improvements for focus sites in this reach emphasize providing increased educational and interpretive elements as well as enhanced recreational and access features. These focus sites are located along the eastern bank and are targeted at neighborhood and regional users of the Riverway.

Existing conditions at the Branciforte Creek/Dakota Avenue area (Figure 26) include dumpster storage, chain link fencing and non-native trees. Access to the river and creek is limited by overgrown vegetation and homeless encampments prevent safe access from San Lorenzo Park and Dakota Street. Connection to San Lorenzo Park, the Riverway trail and Branciforte Creek is undefined. The confluence area of Branciforte Creek and San Lorenzo River does provide dramatic views of the River. These opportunities, as well as defined trail connections, should be capitalized on in this focus site. Proposed improvements include a River view plaza at the north side of Branciforte Creek with a seasonal access to the creek and River via stairs and a temporary creek crossing (Figure 27). Redesign of the existing north wall of the flood control channel should also be considered to lessen the visual bluntness of the wall. A step down design of the wall may be appropriate without compromising the engineered flood control integrity. Reconfiguration of the point of land northeast of the confluence should also be explored. A seasonally opened nature path at the confluence features interpretive information and overlooks. On the south side of Branciforte Creek opportunities exist to redevelop the Dakota Street office complex to be more river oriented and

Figure 29
Conceptual
Plan for Royal
Taj/Soquel
Avenue Focus
Site

Figure 30
Conceptual
Plan for
Royal Taj/
Soquel
Avenue
Focus Site -
Redeveloped

Figure 32
Conceptual Plan for Mimi
De Marta
Focus Site

Figure 33
Pedestrian
Bridge West Bank
Access Node

Figure 34
Pedestrian
Bridge East Bank Access
Node

to possibly accommodate a River Education Center and parking in the future.

Another significant feature that will occur in the Branciforte Creek/Dakota Avenue area is the construction of a pedestrian/bicycle bridge that connects the existing Riverway path under Soquel Bridge and over Branciforte Creek to San Lorenzo Park. While the bridge is not currently designed, it is programmed for construction within the next 10 years. This bridge will greatly enhance the access options on the east bank of the Riverway. It is an opportunity to integrate public art, and will also serve to bring people to the proposed River view plaza at the confluence with Branciforte Creek. A conceptual route for the bridge and trail is shown in Figure 27 in relation to the River view plaza and other improvements proposed for this site.

The Soquel Bridge/Royal Taj area suffers from an incomplete and confusing parking lot and bikeway design that conflict with vehicle and parking uses. The Riverway trail abruptly terminates at the entrance to the restaurant parking lot at Riverside Avenue. The Riverway trail is indicated only by its raised elevation from the parking area in certain areas, but is not

Figure 35
Summary Map of
Improvements in
Transitional Reach

Specific Location	Improvement Type	Recommended Improvements
Branciforte Creek/ Dakota Avenue	Focus Area	• Construct River view plaza • Provide River access through informal trail and overlook features • Add seasonal creek crossing • Incorporate future River Education Center • Construct pedestrian/bicycle bridge over Branciforte Creek • Relocate dumpster and maintenance facilities • Connect to Riverway and Branciforte trails and San Lorenzo Park. • Add Riverway markers, directional and interpretive signage, and public art opportunities.
Soquel Avenue Bridge/ entry	Focus Area	• Define trail access parking with marked spaces and
Royal Taj		• Separate bike path from parking • Prevent illegal parking on bike path • Identify potential site for public restroom • Landscape parking area with trees • Install boulder (saltate) barrier for bike path • Add Riverway markers, directional and interpretive signage, and public art opportunities
Mimi de Marta Park entry	Focus Area	• Define trail access parking with marked spaces and • Add additional recreation elements • Construct River view plaza at levee top • Create informal nature trail • Add Riverway markers, directional and interpretive signage, and public art opportunities
Front Street Plaza @ Cathcart or Maple Lane	Focus Area (see Chapter 6)	• Construct River view plaza • Add Riverway markers, directional and interpretive signage, and public art opportunities
Existing pedestrian bridge		Access Node • Provide orientation signage • Create interpretive features
Cathcart Ramp	Access Node	• Provide orientation signage • Create interpretive features
Maple Lane Ramp	Access Node	• Provide orientation signage • Create interpretive features
Church/Cooper Streets via Galleria	Urban Interface Connection	• Plant street trees • Provide orientation symbols
Pacific Avenue via Cathcart	Urban Interface Connection	• Plant street trees • Provide orientation symbols • Install public art
Pacific Avenue via Maple Lane	Urban Interface Connection	• Plant street trees • Provide orientation symbols • Install public art

Table 2
Summary Table of Improvements in Transitional Reach

Figure 36
Riverine
Reach Map

striped and cars often park on it obstructing trail users (Figure 28). The driveway/trail area is also used by delivery trucks, creating additional confusion in the area. The area is devoid of vegetation and illegal dumping occurs here and under Soquel Bridge.

Proposals for this area include formalizing the parking area for the restaurant as two smaller lots with trees screening the bridge and Soquel Drive (Figure 29) and delineating the Riverway trail with boulders or other rock elements to carry with the theme of the river saltates (see Public Art Master Plan) thus discouraging illegal parking and undefined vehicle use. This area could also be a site for an additional public restroom but would require negotiations with property owners. If redevelopment were to occur on this area, a river oriented commercial use could be created (Figure 30) with parking and trail uses more clearly delineated at the Riverside Drive frontage. Directional and informational signs, Riverway markers, and additional plantings will help define this area.

Mimi de Marta Park is a small neighborhood park with only limited facilities (2 picnic benches). The park is located at the terminus of Broadway Avenue. A cul-de-sac provides informal parking (Figure 31) and a large ramp provides pedestrian and bicycle access to the Riverway trail. Maintenance vehicles also use this ramp. This small park is located in an area that receives significant neighborhood traffic and could be enhanced through defining trail access parking with marked spaces and an entry marker, adding additional recreational elements (ie., sand volleyball or basketball court, picnic areas) and developing a thematic river plaza area and informal nature trail for bird-watching and other wildlife viewing activities (Figure 32).

Access Nodes - Access nodes should be created at both sides of the existing pedestrian bridge near the County Government Center in the Transitional Reach (Figures 33 and 34) and at Cathcart Street and Maple Street off of Front Street. The bridge currently provides the main access for pedestrians and bicyclists crossing the river and is an important route from the County Government Center to downtown and Pacific Avenue. The access nodes should be designed to compliment one another as well as provide directional and interpretive information for trail users. Improvements should include

Figure 37
Felker Street
Focus Site

Figure 38
Gateway Plaza
Focus Site

Figure 39
Pedestrian
Bridge and Trail
Connection
Locations

Steven Grover & Associates

Figure 42
Josephine Street Access Node

Figure 43
West Bank Water Street Bridge Access Node

pavement treatments, directional and informational signage, and Riverway markers.

Urban Interface Connections - The goal of the urban interface connections in the Transitional Reach is to provide features that connect downtown areas with the River via “green corridors” of trees and landscaping. Street trees and signage should be provided from Pacific Avenue via Cathcart Street and Maple Lane to the River. Dakota Street should also be treated as an urban interface connection to draw attention to the Branciforte Creek confluence area.

Figure 35 and Table 2 summarize all of the improvements at sites in the Transitional Reach.

Riverine Reach

The Riverine Reach extends from the Water Street Bridge to Highway One (Figure 36). This reach is entirely freshwater during all times of the year. Extensive stands of riparian vegetation are found in this reach. The nomenclature for the reach reflects its behavior as a freshwater river system with habitat supportive of fish and wildlife. Tidal action does not affect the hydrology in this area of the River.

Neighborhoods and commercial areas adja-

Figure 44
East Bank Water Street Bridge Access Node

cent to this reach include Felker Street, Josephine Street, the El Rio Mobile Home Park, and the Gateway Shopping Center. There are four Riverway trail access points on the east bank at Felker Street, Pryce Street, Kennan Street and Blaine Street. Felker Street is identified as a focus site connecting to the proposed bridge across the River. Three public access points are located on the west bank as well and include the Gateway Plaza commercial area, Josephine Street and El Rio Mobile Home Park. The Gateway Center access is a public plaza connected to the top of the levee.

Focus Sites - The focus sites along the Riverine Reach include the Felker Street cul-de-sac and the levee crest plaza located at Gateway Center (Figures 37 and 38). These two sites will be linked together with the construction of the new pedestrian bridge programmed for construction

Figure 40
Conceptual Plan
for Felker Street Focus Site
& Gateway Plaza

Specific Location	Improvement Type	Recommended Improvements
Felker Street entry	Focus Area	• Define trail access parking with marked spaces and • Create stair access up levee: incorporate art into risers • Provide handicap access side trail • Provide vertical entry feature • Incorporate small thematic plaza as gateway feature • Tie to pedestrian bridge • Revegetate social trails • Plan for future trail connection under Highway 1
vertical		• Create public art area near Highway 1 bridge for announcement pieces
Gateway Center Plaza	Focus Area	• Integrate pathway into existing plaza: add focal feature to plaza • Create lower plaza in shopping center area • Program both public spaces for events • Tie to pedestrian bridge
facilities		• Consider formation of dog area • Partner with Gateway businesses for joint use of
Josephine Street	Access Node	• Incorporate pavement treatment • Construct low boulder wall/saltates • Provide orientation signage
Felker Street	Urban Interface Connection	• Plant street trees • Provide orientation symbols

Table 3
Summary Table of Improvements in Riverine Reach

Figure 45
Summary Map of
Improvements in
Riverine Reach

5 Branciforte Creek

Introduction

Branciforte Creek is an important feature in both the biotic and hydrologic character of the San Lorenzo River and the urban area surrounding the River. Branciforte Creek flows into the San Lorenzo River near Dakota Street and Soquel Avenue. Its natural appearance is masked by the concrete flood control structure that runs the first one-mile of the creek from its confluence with the River. The 1987 San Lorenzo River Design Concept Plan did not provide site-specific recommendations for Branciforte Creek and largely left the creek out of the planning discussion. During plan development by the San Lorenzo Urban River Plan Task Force in 2000, it was agreed that Branciforte Creek was an integral component of the river and should be included in the updated San Lorenzo Urban River Plan.

This chapter provides recommendations for Branciforte Creek and its surrounding neighborhoods. The planning area includes the Branciforte Creek corridor (including the flood control channel along with City-owned easements west and east of the channel) from the creek's confluence east to the City limits north of Highway 1 (Figure 46). Private properties adjacent to the creek are not part of the planning area.

5.1 Area Description and Current Conditions

Branciforte Creek is the largest tributary flowing into the San Lorenzo River in the City of Santa Cruz. Branciforte Creek drains an approximate 17-square mile watershed and includes the drainage area of Carbonera Creek. The lowest one-mile of the creek was converted into a concrete flood control channel during the construction of the San Lorenzo River Flood Control Project from 1957-1959 by the U.S. Army Corps of Engineers (Corps). The flood control channel begins at the confluence with the San Lorenzo River and continues 5,200 feet upstream. The channel is trapezoidal (mostly rectangular) in shape with sidewalls varying from 13 to 22 feet in height and approximately 35 feet wide. A fish passage channel built in the center of the concrete channel is designed to provide passage for steelhead trout during low flow and drought conditions (Figure 47). Carbonera Creek enters Branciforte Creek approximately one-quarter mile upstream from the upper end of the flood control channel. Carbonera Creek drains the areas of

Figure 46
Branciforte Creek
Planning Area Map

Scotts Valley and the western area of the San Lorenzo Valley. The flood control channel is designed to convey the estimated 125-year recurrence interval flood. At the time of planning and construction, the Corps estimated the 125-year flood equal to 8,400 cubic feet per second.

The flood control channel is currently impaired due to accumulation of sediment and vegetation throughout the channel. A flood conveyance assessment conducted in 2001 concluded that the sediment and vegetation is impacting the design flood capacity of the channel by a significant degree (Balance Hydrologics Inc., 2001). The maintenance agreement with the Corps requires the City of Santa Cruz to "prevent any encroachment in the project channel which would interfere with its proper functioning for flood control" including keeping the channel clear of debris, weeds, and wild growth and ensuring the capacity of the channel is not being reduced by the formation of shoals (U.S. Army Corps of Engineers, 1959). In recent decades, the area surrounding Scotts Valley has undergone rapid development, dramatically increasing the impervious surface present along Carbonera Creek. This land use change has modified the timing of when flood crests arrive at the flood control channel of Branciforte Creek. The increased urbanization in the watershed presumably decreases the amount of time between when rains falls to when a flood peak is generated in the creek (Balance Hydrologics Inc., 2001). City officials have estimated that the flood peak arrives approximately one and a half times sooner than when the flood control channel was first constructed in 1959 (1.5 hours versus 3 hours).

Beginning above the flood control channel near Market Street, Branciforte Creek becomes a natural channel with native riparian habitat on both streambanks. Branciforte Creek is known to support steelhead trout (a federally listed threatened species). The California Department of Fish and Game conducted a stream inventory of fishery habitat and species present in 1996. The inventory was largely focused on the natural channel of Branciforte Creek and offered little insight as to habitat conditions in the flood-control channel (Balance Hydrologics Inc., 2001). At the time of the survey steelhead were observed well above the flood control channel (between 3 and 8 miles upstream). Recommendations resulting from the 1996 Department of Fish and Game study included conducting a sediment-source study and developing management strategies based on the recommendations of the sediment source study. The report also recommended increasing woody cover in pools and flatwater habitats and continued study of water temperatures.

Figure 47
Branciforte Creek Channel
with Fish Channel

Additional fisheries study was completed by the Department of Fish and Game in November 2001 in the flood control channel portion of Branciforte Creek. That study concluded that although there was limited steelhead spawning and rearing habitat noted within the concrete channel, the quality of habitat was not optimal (California Department of Fish and Game, unpublished). The study concluded that although the concrete channel is providing little or no habitat for spawning and rearing, it is essential that the channel be maintained for optimal adult and juvenile salmonid passage (California Department of Fish and Game, unpublished). Passage of salmonids is both an issue for downstream migration (occurring in summer and late fall) and for upstream migration (beginning as early as January or February). Downstream migration and passage may be impeded by low flows, high temperatures and lack of escape cover. These conditions may lead to stranding of young fish or predation by birds and other predators if the fish cannot hide in deeper water. Upstream migration is complicated by high stream flows (usually associated with storm flows) and lack of resting areas for fish migrating upstream. Without off stream or instream resting areas (slow water areas, boulders) upmigrating steelhead can fall victim to

exhaustion. Neighbors in the immediate area of the flood control channel have reported seeing upmigrating steelhead in the flood control channel in recent years.

The natural and channelized portions of Branciforte Creek provide habitat for birds, small mammals, and amphibians and reptiles. Bird censuses performed in 1999 on the natural part of the channel (Gilchrist, 1999) identified18 different species, although no special status species were observed during the census. Locally, Branciforte Creek is known as a birding "hot spot" and members of the Santa Cruz Bird Club visit the area frequently.

The neighborhoods immediately adjacent to the channelized creek include Market Street, Reed Way, Berkeley Way, and Dakota and May Avenues. Land use in the immediate neighboring areas is primarily residential with some office uses near Market Street. San Lorenzo Park is located at the confluence of Branciforte Creek and the San Lorenzo River. The creek is accessed by two utility access roads. One begins at May Street and continues north to Water Street along the east bank of the creek and the other access road begins on the west bank at May Avenue and continues to Market and Grant Streets. These roads are owned and maintained by the City of Santa Cruz and provide access for maintenance of the flood control channel by City vehicles as well as emergency access.

Branciforte Creek benefits greatly from the involvement of a local neighborhood group, the Neighbors of Branciforte Watershed. This group has been instrumental in recruiting volunteers to work on creek projects including volunteer water quality monitoring. The Neighbors group has hosted several informational workshops and creek field trips and continues to host projects such as planting days and creek cleanups. Their continued involvement in the creek will be essential to the success of improving the creek as a natural and community resource.

Branciforte Creek faces many challenges in both its biological recovery and in its role as a prominent neighborhood feature. Recovering fish and wildlife species to the Creek is hampered by a lack of current studies and assessments. There is much anecdotal information concerning the Creek and its previous populations of steelhead. Current studies have been spotty and incomplete in most conclusions regarding the effects of the flood control channel on steelhead. Even less information is available regarding bird habitat. A comprehensive assessment of the watershed (biological and hydrological conditions) has not been completed nor has an examination of the physical conditions of the watershed (i.e., sediment sources). These types of studies will need to be completed for an effective watershed-wide recovery effort for Branciforte Creek.

The Creek is a prominent feature in the local neighborhood. Neighbors are especially interested in improving the appearance of the Creek and its access road and fencing. The Creek and access roads are considered an amenity by many neighbors as the route provides a safe and quiet pedestrian and bike route to the downtown. Neighbors have expressed concerns about illegal camping in the Creek and illegal dumping of trash and garbage along the access road and in the Creek. In general, neighbors have expressed an interest in keeping the Creek cleaner and healthier for enjoyment by neighbors and the community.

General Recommendations for Branciforte Creek

- Conduct a watershed-wide, sediment source investigation to develop a sediment-control plan for benefiting aquatic life and reducing sediment delivery to the flood control channel. The sediment-source investigation should focus on Carbonera Creek and mainstem Branciforte Creek.
- Continue investigations into providing enhanced habitat for steelhead trout compatible with flood protection and with added emphasis on areas upstream of the flood control channel but within City ownership (i.e., Delaveaga Park).
- Continue volunteer water quality monitoring program and expand into monitoring stream flow in summer months.
- In cooperation with federal and state agencies pursue long-term solutions for steelhead passage and habitat enhancement in the flood control channel.
- Identify opportunities for land acquisition along the creek corridor for increased flood conveyance and storage.

5.2 Reach Specific Recommendations for Branciforte Creek

For purposes of providing recommendations for the Urban River Plan, Branciforte Creek has been broken into three reaches to reflect common issues and needs in each reach. The reaches include Reach 1 (confluence of San Lorenzo River to the Water Street Bridge); Reach 2 (Water Street Bridge to beginning of the natural channel) and Reach 3 (natural channel to City limits including the confluence of Carbonera Creek and upstream reach within City limits). Recommendations for each reach are provided with regards to flood control and natural resource considerations, beautification and recreational improvements and programs for addressing neighborhood concerns and issues.

Reach 1
(Confluence of San Lorenzo River to the Water Street Bridge)

Reach 1 includes the flood control channel from the confluence with the San Lorenzo River to the Water Street Bridge. This reach includes access roads on both sides of the creek beginning at May Avenue and continuing north to Water Street. The access roads are used regularly by neighbors for walking and bicycling; however, the western access road is more heavily used. Problems with illegal camping and dumping are more common on the eastern access road and neighbors have expressed concerns about these activities in this area. The access roads are for flood control maintenance and emergency access. The roads are not recognized as formal trails by the City of Santa Cruz and so they receive no regular maintenance as would be more typical of a City park or trail area. The access roads are maintained at 12 feet in width and the toe ditches on either side of the maintenance road are cleared of debris and garbage. A 2-acre parcel of vacant land owned by the City is located just south of Water Street on the east bank.

This reach is especially impacted by sediment and vegetation and requires maintenance for ensuring design flood capacity. Several storm drains empty into the flood control channel/creek within this reach. The County of Santa Cruz Environmental Health Department has documented high levels of fecal coliform discharging from the storm drain near Ocean Street (Ricker, 2000). This reach benefits from extensive riparian vegetation from neighboring residences. Several important species are found along this reach including box elder and California buckeye.

Recommendations

- Develop and implement a sediment and vegetation maintenance program within this reach consistent with Corps flood control maintenance requirements. The program should reflect necessary protections for steelhead passage requirements and water quality. Sediment and vegetation maintenance activities should be restricted to occurring only in June 15 through October to avoid impacts to steelhead.
- Conduct sediment removal downstream into the zone of confluence with the San Lorenzo River by excavating 1 to 2 feet of sediment from the bed of the existing channel before the onset of winter rains. The sediment deposited in the channel between the confluence and Ocean Street can remain if the depth does not exceed one foot and reduces to zero at Ocean Street.
- In cases where limited funding is available, maintenance activities can focus on vegetation removal and sediment bars may be left in place. However, periodic removal of sediment will be required to ensure design flood capacity.
- Improve the storm drain at Ocean Street by providing dry-weather diversion to the sewage treatment plant.
- Produce an informational door hanger for residents concerning water quality, illegal dumping, and use of native species in landscaping.
- Investigate the feasibility of constructing a pedestrian bridge linking the east and west access roads south of Water Street.
- Work with the property owners at 550 Water Street to obtain an easement for completing the access road to Water Street on the west side.
- Work with the U.S. Army Corps of Engineers to remove chain link fencing and replace with more aesthetic fencing.
- Investigate installation of wall treatments for exterior walls of the flood control channel.
- Implement native riparian planting along creekside areas in City ownership on the east bank consistent with providing necessary access for emergency and maintenance vehicles.
- Remove non-native trees in areas owned by

the City of Santa Cruz and replace with appropriate native tree species.
- Post signs and enforce City ordinances regarding camping and dumping.
- Provide and maintain dispensers for dog waste disposal.

Reach 2
(Water Street to natural stream channel)

Reach 2 includes the flood control channel from Water Street to the beginning of the natural stream channel. The access road continues in this reach but only on the west bank. and continues to the beginning of the natural channel. A pedestrian bridge crosses the creek at Berkeley Way providing a crossing from the east side of the creek to the west side and Hubbard Street. There are several small areas of vacant city owned property along this reach including at the corner of Water and Market Streets, at the pedestrian bridge, and at the Senior Center. This reach also benefits from mature riparian forest most of its length. These trees are primarily found on private properties adjacent to the flood control channel and include many native riparian species (box elder, alder, buckeye).

This reach is less impacted by sediment and vegetation in the channel except in its most southern reach near Water Street where sediment and vegetation are impairing the channel. Stormdrains also empty into this reach at Water Street and the Senior Center. These drains have not been documented with high levels of fecal coliform, however limited testing has been done on these drain outflows.

Recommendations

- Conduct sediment and vegetation management as necessary in the flood control channel to maintain design flood capacity.
- Conduct water quality investigation of storm drain outflows in this area.
- Improve city-owned areas with native riparian trees and shrubs.
- Provide a “Welcome to Branciforte Creek” sign at Water and Market Street on west access road. Include a watershed-wide map showing the Creek and San Lorenzo River.
- Remove non-native trees in areas owned by the City of Santa Cruz and replace with appropriate native tree species.
- Post signs and enforce city ordinances regarding camping and dumping.
- Continue use of west access road by pedestrians and bicyclists.

6
Significant Riverfront Areas

Introduction

The San Lorenzo River is a defining feature in downtown Santa Cruz. The river corridor, recently named the “San Lorenzo Riverway,” has become the City’s newest park and open space area, providing five linear miles of trails which connect the western and eastern sides of downtown and the beach to Highway One and areas north of the City limits. Previous planning efforts for the San Lorenzo River recognized that certain key downtown areas should be connected to the River. The San Lorenzo River Design Concept Plan (1987) identified Front Street between Water Street and Laurel Street as a prime location for residential and commercial development to be oriented towards the River. The Design Concept Plan also identified opportunities for improving the rivermouth area for public use and recreation.

The San Lorenzo River is also discussed in the Downtown Recovery Plan (1991). The Downtown Recovery Plan identifies the river as a major downtown open space and recognizes its potential “as a naturalistic open space, wildlife habitat, and recreational amenity: a ‘garden promenade’ that can provide a more contemplative and reflective experience to the hustle and bustle of Pacific Avenue.” The Downtown Recovery Plan is an adopted specific plan of the City that provides a framework for public and private actions related to rebuilding the downtown after the 1989 Loma Prieta earthquake. The Downtown Recovery Plan recommends that the improvement of the riverfront and the creation of linkages to the downtown should be a top priority in the rebuilding of the downtown. To date this has not been completed due to the timeline of rebuilding the levees for 100-year flood protection.

In the planning process for the San Lorenzo Urban River Plan, the river corridor north of Highway 1 also emerged as a significant opportunity to integrate the river with surrounding neighborhoods and the larger San Lorenzo River watershed. The San Lorenzo Urban River Plan therefore designates three “Significant Riverfront Areas” described below and provides recommendations for design guidelines and improvements for riverfront development, access, and aesthetics.

6.1 Front Street Riverfront Area

For the purposes of this plan, the Front

Figure 48
Front Street Riverfront Area

Street Riverfront Area extends between the west bank of the San Lorenzo River up to and including Front Street from Laurel Street north to South River Street (Figure 48). The Front Street Riverfront Area is the prime opportunity site to engage the community with the San Lorenzo River. Improved public access is a primary goal of the San Lorenzo Urban River Plan.

As mentioned above, the 1991 Downtown Recovery Plan includes design guidelines and recommendations for this area. While commercial development and municipal parking lots are the current major land use, redevelopment is expected to occur here over the next 5-10 years providing an opportunity for encouraging development that acknowledges and interacts with the river. Two factors play a significant role in the potential for redevelopment along the Front Street area: the pressing need for housing in Santa Cruz and the pending removal of the existing floodplain designation in the Front Street area.

Prompted by high housing costs and transportation issues, in September 2000 the City Council requested an analysis of ways to facilitate the construction of new housing in the Front Street area. The City's Planning Department conducted an opportunities and constraints analysis and quantified 449 potential housing units which may be located in the Front Street Riverfront Area. Studies to date have indicated that a parcel consolidation strategy might allow for the most efficient development of the area between Soquel and Laurel Streets. A parcel consolidation strategy looks at ways to combine properties and ownership patterns to provide contiguous development options and patterns. The City is continuing to study the Front Street corridor to determine housing development options and viability. In any case, the Front Street Riverfront Area will develop with a more dense housing and commercial development pattern in the future. Recommendations in the Urban River Plan aim to encourage new and redeveloped housing and commercial buildings to take advantage of their riverfront location.

The Front Street area is currently designated as an A-11 Federal Emergency Management Agency (FEMA) flood plain. New construction in areas with this designation must meet FEMA flood elevation and flood proofing requirements. Additionally, any new property purchases, refinances, and construction projects, which require a loan from a federally insured financial institution must purchase flood insurance. Residents and businesses in the Front Street flood plain area pay approximately $1 million in flood insurance premiums per year. A major goal of the San Lorenzo River Flood Control and Environmental Restoration Project was to improve the flood protection offered by the existing river levees so that the system would provide 100-year FEMA flood protection and eliminate the need for mandatory flood insurance on development in flood plain areas. The economic benefits resulting from removal of the flood plain designation (and the consequent elimination of flood insurance payments) for the Front Street area could translate into less expensive development requirements for construction and more flexibility for combining commercial and residential uses.

The San Lorenzo Urban River Plan acknowledges the importance of the Front Street Riverfront Area as appropriate for mixed-use, riverfront development that may include housing, commercial, retail and office uses. However, the Urban River Plan also stresses that these uses should not conflict with the recreational and wildlife values of the River. The following recommendations detail specific design guidelines for the Front Street Riverfront Area.

Recommendations

- Maintain existing development standards in the Downtown Recovery Plan (DRP) for the Front Street Riverfront Area including principal permitted uses for ground-level and upper-floors, conditional uses, and height and step back requirements. Maintain maximum height restriction to 50 feet with development above 35 feet in height stepping back at least 10 feet at an angle not to exceed 42 degrees. (DRP, p. 47-50)
- Maintain the ten-foot setback area between residential and commercial uses adjacent to the levee trail from the western edge of the trail. The setback area should be filled to raise the adjacent ground-level use to the same elevation as the levee trail. This area should also incorporate outdoor public seating or visually accessible garden space for residential development. Trees planted as part of the San Lorenzo Flood Control Improvement Project should be maintained and incorporated into new development. (DRP, p.

51)

- Maintain design guidelines for residential and commercial development with the exception of limiting building materials to more natural wood, brick and stone; avoid overuse of concrete and stucco. (DRP, p. 51)
- The river promenade proposed in the original San Lorenzo Design Concept Plan between Soquel Drive and Laurel Street should be reconceptualized as a more natural, less formal looking "trail" with adjacent garden space and native trees to be accommodated in the ten-foot setback area.
- Establish a river plaza or park within the Front Street Riverfront Area between Soquel Drive and Laurel Street on the west bank (upstream orientation). Redevelopment of the Metro Station affords an opportunity for connecting a plaza or park with a public area on the east side of Front Street. Other favorable sites are the terminus with Cathcart Street and the terminus with Maple Street (Figures 49 & 50).
- Maintain the wooden roof-truss buildings along Front Street as architectural artifacts to demonstrate the "working waterfront" character of the area.
- Ensure that any parcel consolidation strategy provides for public access from the Front Street sidewalk to the levee. Maintain the ten-foot step back requirement between buildings included in the Downtown Recovery Plan for any development. Encourage pedestrian traffic through creative inviting design and incorporate water features, gardens, paving, and stairways up the levee as design features.
- Redevelop the Long's-Zanotto's site to create a true connection to the River from the downtown area. Preserve views to the River from buildings along the west side of Front Street. Concentrate development on the north and south portions of the site to allow for a transition from the public space at Front and Cooper Streets (the Octagon Museum and plaza) and the Museum of Art and History to a River promenade and the pedestrian bridge to San Lorenzo Park. Avoid large expanses of parking in project design, attempt to "green" parking areas by using trees common to the River for a more natural visual impact.
- Consider abandonment of River Street South for use as a riverfront promenade and public space for festivals and other outdoor activities once a comprehensive development plan is promoted for the Long's-Zanotto's area.
- Maintain views from both taller downtown buildings to the River and from the River trail to distant mountains and ridges, avoiding creation of a development "wall" between the downtown and the River.
- Preserve views along the Front Street area to and from Beach Hill, a significant historic feature in this area.
- Encourage local business opportunities along Front Street and avoid "box" stores in this area.

6.2 Salz Tannery to Sycamore Grove Riverfront Area

The west bank of the San Lorenzo River north of Highway One offers immense opportunities to expand the San Lorenzo Riverway trail to the natural area of the upper River, Sycamore Grove, and Pogonip. Existing City properties at Sycamore Grove and Pogonip offer an opportunity for hikers to travel from the rivermouth north to Pogonip and Henry Cowell State Parks in Felton. Redevelopment of the Salz Tannery site will be an important component to providing these trail connections.

The Salz Tannery to Sycamore Grove Riverfront Area extends north of Highway One on the west bank of the River upstream to Sycamore Grove, a natural area along the River. The Sycamore Grove natural area is owned and maintained by the City of Santa Cruz Parks and Recreation Department. Figure 51 shows the project area.

Salz Tannery is a historic site on the City's historic register. The tannery operation was closed in late 2001 and the site and accompanying buildings are currently for sale. The City's Redevelopment Agency is assisting the property owner

Figure 49
Conceptual Plan for Front
Street Plazas

Figure 50
Conceptual Plan for Front Street Plaza at Cathcart Street

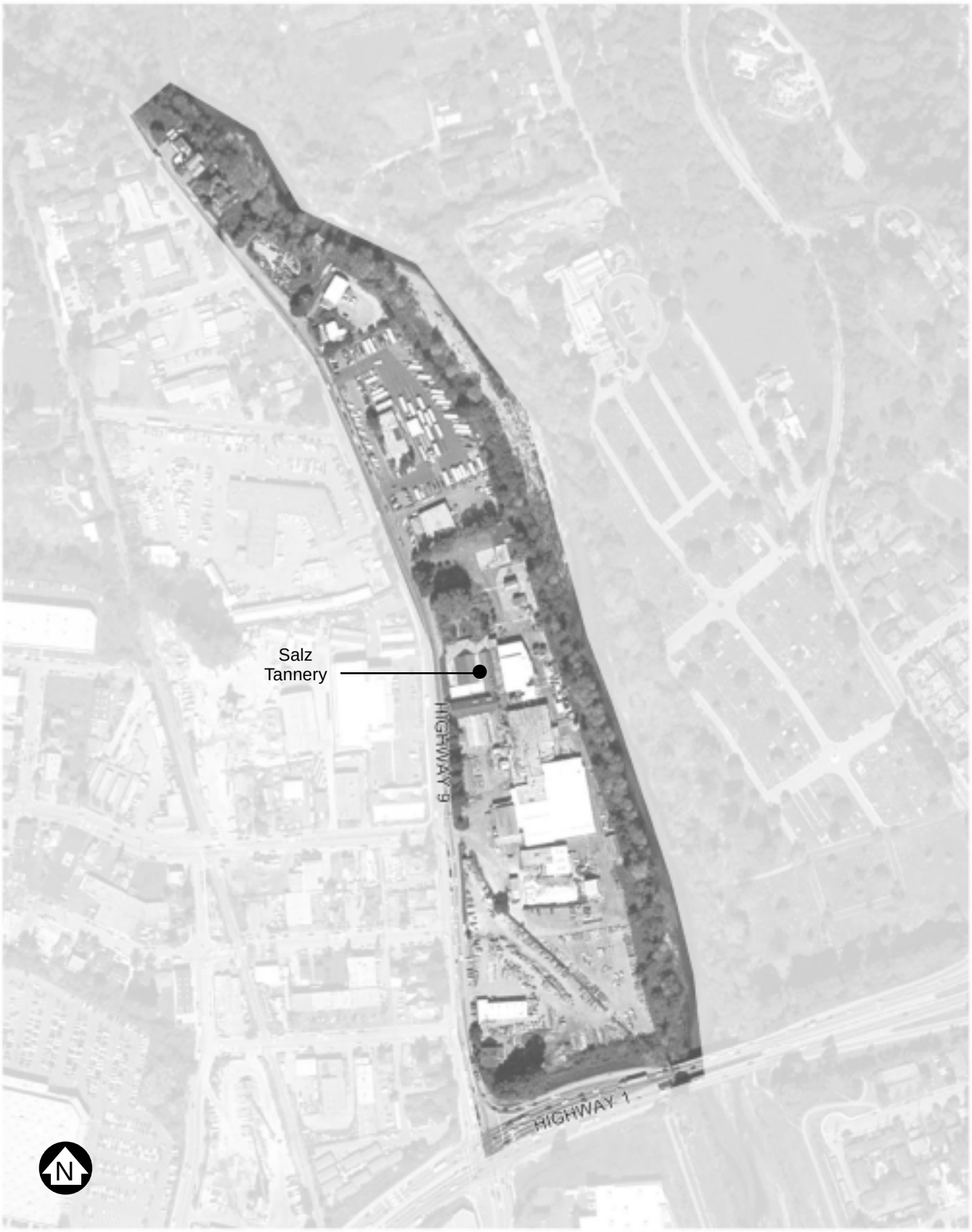


Figure 51
Salz Tannery/Sycamore
Grove Riverfront Area

Figure 52
Beach Flats
Riverfront Area

in investigating possible reuses for the property. The current state of the property transfer and potential reuse is unknown.

The 10-acre Sycamore Grove is included in the Pogonip Master Plan (1998) which establishes management actions in Pogonip and Sycamore Grove including removal of non-native species and revegetation. The plan also calls for passive recreation and educational uses including a nature trail, interpretive displays, and picnic tables for field trips and passive recreation. Although the Pogonip Master Plan does not call for a connector trail route south to the lower river and San Lorenzo Riverway trail, this is a logical connection and is recommended here.

Recommendations

- Negotiate a public easement along the west bank of the San Lorenzo River north of Highway One to Sycamore Grove to provide for eventual trail connection from the San Lorenzo Riverway trail to Sycamore Grove.
- Maintain the native riparian forest north of Highway One.
- Protect views of the River from Highway One bridge.
- Develop an 8-10' wide trail north of Highway One along the top and edge of the River bank in a meandering pattern with a natural material (e.g. decomposed granite) surface.
- Provide connections from a possible park and ride lot (at Highway One and River Street) to the Riverway; provide signs and maps to north and south connecting trails.
- Encourage redevelopment of a portion of the Salz Tannery site as a river orientation center; investigate potential partnerships with California State Parks and the State Coastal Conservancy for this use.

6.3 Beach Flats Riverfront Area

The Beach Flats Riverfront Area is the terminus for the San Lorenzo Riverway and provides the connection between the beach area and the River. The Beach Flats neighborhood has a long history of interaction with the River and its environs. This area is located along the west bank from the Riverside Avenue Bridge south to the rivermouth. Figure 52 shows the boundaries of this area. Currently this neighborhood is separated from the River by Third Street and the expansive 8-acre Boardwalk parking lot extending from Uhden Street to Beach Street. The parking lot and Third Street create a physical and psychological barrier that inhibits residents from interacting with the river.

The area is densely developed with residential and commercial uses and includes the Santa Cruz Beach Boardwalk, a regional tourist attraction. Many of the homes in the area are historic buildings and longtime residents of the neighborhood recall the River prior to channelization by the U.S. Army Corps of Engineers. Stories of boating on the River, surviving floods and fishing off backyard docks capture the sense of relationship with the River that this small neighborhood had in the past. Issues with increasing crime in the area as well as traffic on Third Street, currently dissuade neighbors from utilizing the River for recreation.

The Beach Flats neighborhood is planned for regional visitor commercial uses and high density residential. Redevelopment in Beach Flats over the next 20 years should seek to reintegrate the neighborhood with the River through pedestrian linkages, park furniture and lighting, and improved access to the beach and rivermouth. Spectacular views and connections to regional trail systems such as the California Coastal Trail and Monterey Bay Sanctuary Scenic Trail makes the Beach Flats Riverfront Area a potential magnet for residents and visitors.

Recommendations

The following recommendations address the Beach Flats Riverfront Area.

7
Plan Implementation

We don't want this plan to sit on the shelf. We want this vision to become a reality for the City of Santa Cruz.

—Member
San Lorenzo Urban River Plan Task Force

Introduction

Implementation of the San Lorenzo Urban River Plan will require focused attention from the City and the community into the future, as well as dedicated financing for both maintenance/operations and capital projects. The Urban River Plan provides policies, programs and projects for the San Lorenzo River, Branciforte Creek, and Jessie Street Marsh. These policies, programs and projects include improvements for public access, riverfront amenities, and community involvement. The plan is designed for implementation over 20 years. An incremental approach to implementation is most appropriate with a concentration on identifying a sustainable financing structure as one of the most important early steps.

The San Lorenzo Urban River Plan sets a vision for the San Lorenzo River, Branciforte Creek and Jessie Street Marsh as a network of natural areas to be discovered during one's journey along the river. It is desired that the San Lorenzo River and Riverway become a healthy and vibrant habitat for fish and wildlife and a clean, safe and enjoyable place for recreation by residents and visitors. Goals of integrating the River with adjacent neighborhoods and the downtown can be realized through a well-organized implementation plan. This implementation chapter presents a series of recommendations regarding establishment of a permanent River advisory body, establishment of a staff level coordinating group, operations and maintenance needs, project phasing and costs, and funding opportunities.

7.1 San Lorenzo River Committee

The San Lorenzo Urban River Plan would benefit from having a Council-appointed permanent San Lorenzo River Committee assigned to assure the implementation of the plan and its associated recommendations. In reviewing current management strategies for implementation of projects and maintenance along the River it is apparent that a permanent River advisory body is desirable to address the multi-departmental, multi-agency nature of managing and maintaining the River into the future. At present, San Lorenzo River management issues are split between the City's Public Works, Parks and Recreation, Planning and Police departments and Redevelopment Agency. While all of these departments will have continuing in-

terests and issues in management of the River and/or adjacent development areas, continuing this confusing and overlapping relationship into the future is not desirable.

A permanent advisory group that focuses on the River and takes into account the sometimes conflicting interests of Parks, Public Works, Water, Planning, Police, the U.S. Army Corps of Engineers and the public is vital. Several other cities have followed a similar process following completion of plans for rivers and creeks including the City of Santa Rosa, the City of Napa, and Portland, Oregon. The following discussion addresses some of the primary issues that a permanent river advisory body would be helpful in addressing.

Funding - The establishment of a permanent River advisory group demonstrates a commitment by the City to long-term programmatic improvements on the River. This is a signal to potential funding agencies such as the State Coastal Conservancy, California Department of Fish and Game, and California State Parks that the City is committed to providing resource protection and improvements along the River. These agencies are poised to distribute over $575 million in funds for river enhancement activities over the next 5-8 years as a result of Propositions 12 & 40. Unless the City is organized to effectively pursue a share of these grant funds, the ability to capitalize on their availability to accomplish many of the proposed river improvement projects will be severely diminished. The alternatives will then be that the Council will be unable to implement these projects or will need to dedicate City funds for these improvements.

Urban River Plan Implementation - Along with outlining restoration priorities for the River, the San Lorenzo Urban River Plan recommends several enhancements and improvements to the existing river levee trail system and acknowledges future projects will continue to occur near and on the River levee, including the two pedestrian bridges (Highway One and Branciforte Creek), redevelopment along the Front Street corridor, redevelopment of the Salz Tannery site and general improvements for pedestrian and bicycle access and trail connections to other areas along the River corridor. The Plan also details ways in which the City could offset some maintenance costs on the River with implementation of community programs such as Adopt-A-Riverbank, volunteer trash cleanup programs and other volunteer activities such as docent programs. All of these projects and programs will benefit from consistent direction from an advisory group focused on the River.

Adaptive Management and Habitat Monitoring - The Lower San Lorenzo River and Lagoon Management Plan calls for “adaptive management” of the river channel to ensure success in habitat recovery and maintenance of flood capacity. Adaptive management is a set of practices in which habitat enhancements are monitored scientifically, and modified or removed if their biological or hydrological impacts diverge from the Plan’s goals. A permanent advisory body could conduct regular reviews of the monitoring reports and recommend adjustment of restoration and management procedures as appropriate.

Watershed Focus - The existing San Lorenzo Urban River Plan Task Force has been instrumental in developing a watershed perspective with regards to the management of the lower River and lagoon, Branciforte Creek and Jessie Street Marsh. A permanent River Committee would further provide a mechanism for the City to communicate to other watershed stakeholders on concurrent goals regarding river restoration and flood protection. This will be especially important with regards to Endangered Species Act requirements for the steelhead trout and coho salmon and will also help in offsetting potential costs regarding endangered species management.

Clarifying River Functions Among Departments - Past focus on the River has been the implementation of the flood control improvement project and associated levee improvements and landscaping. Currently several departments have responsibilities on the River with differing focuses and priorities (see Table 4). A River Committee could play an important role in responding to issues from staff, departments and Council regarding the River.

Recommendations

- Create a San Lorenzo River Committee charged with providing oversight for implementation of the San Lorenzo Urban River Plan (including Branciforte Creek and Jessie Street Marsh). This group will be advisory to the City Council and other policy-making

commissions. Potential duties may include:

Act in an advisory capacity to the City Council in environmental matters pertaining to the San Lorenzo River within the City limits (including Branciforte Creek and Jessie Street Marsh), and the enhancement, maintenance and management thereof;

Draft and recommend measures to implement the policies and programs of the San Lorenzo Urban River Plan and the Lower San Lorenzo River and Lagoon Management Plan;

Convene a Technical Advisory Committee as necessary to serve in a scientific advisory role for adaptive management and monitoring along the San Lorenzo River, Branciforte Creek, and Jessie Street Marsh;

- Establish a River Coordinator position to coordinate implementation of projects and programs in the Urban River Plan and staff the San Lorenzo River Committee.

- Continue the staff level River Management Coordinating Group currently in operation and consisting of staff from the Public Works, Parks and Recreation, Planning, and Redevelopment departments to coordinate and implement projects and programs on the San Lorenzo River, Branciforte Creek and Jessie Street Marsh. The River Coordinator can assist in staffing this group

Table 4
Department Roles

City Department	Activity
Public Works	• Channel Maintenance • Permitting In-channel Vegetation Management • Levee Maintenance • Storm Drain Maintenance • Bicycle and Pedestrian Improvements
Parks and Recreation	• Outer Levee Slope Maintenance • Pathway Maintenance • Trash Removal/ Large Scale Cleanups • Irrigation Maintenance
City Manager	• Project Management • Future Studies • Monitoring • Permitting • Staff to River Commission • Obtaining Funding • Community Outreach
Redevelopment Agency	• Flood Insurance/Certification • Redevelopment Planning • Property Acquisition & Negotiations
Planning Department	• General Plan and Local Coastal Plan policy • Specific Plans
Fire and Police	• Public Safety • Vandalism

7.2 Project Phasing and Projected Costs

The San Lorenzo Urban River Plan includes both policy and project recommendations for the San Lorenzo River and Riverway. Policy level recommendations will need to be adopted into appropriate planning and policy documents. Projects and programs will need to be implemented according to available funding and priorities as defined by the Plan and community input. Table 5 provides a list of projects according to a timeline defined by the Task Force and with a priority assigned.

7.3 Funding Opportunities

Implementation of the Urban River Plan will be dependent on the availability of funds to accomplish the various projects and programs. Funding sources are available from both local sources and from state and federal funding programs. The funding strategy for implementation should focus on grouping common projects and programs comprehensively to be more competitive for grant funding. Identifying local funds that could be used for “match” funds will assist in making grant applications more competitive with the idea of leveraging local dollars for additional funds.

The Urban River Plan benefits from being a multi-focused plan and so therefore projects can be proposed to a variety of funding sources including river parkway and greenway programs, environmental education programs, native plant programs, water quality and watershed programs, restoration programs, and community stewardship programs. Partnerships

with local agencies such as Santa Cruz County, the Santa Cruz County Resource Conservation District, Monterey Bay National Marine Sanctuary, California Coastal Commission, Coastal Conservancy, and local nonprofits will also make grant applications more competitive.

Grant Sources

Several federal, state and private grant funding sources are available for implementing projects and programs of the San Lorenzo Urban River Plan. A brief summary of these grant sources is discussed below.

Federal Grants

National Oceanic and Atmospheric Administration NOAA Community Based Restoration Program - Various small grant programs focused on restoration of riparian, riverine and anadramous fisheries

National Park Service
Land and Water Conservation Fund - For development of outdoor recreation facilities and acquisitions of wetlands

Environmental Protection Agency & River Network
Watershed Assistance Grants - For general operating support and projects

Environmental Protection Agency
Wetlands Program Grants - Wetland protection efforts including monitoring, mitigation tracking and
acquisitions.

U.S. Fish and Wildlife Service
Wetland Protection Program Development Grant - For restoration and acquisition of wetlands valuable to fish and wildlife

U.S. Fish and Wildlife Service
Partners for Fish and Wildlife - For on-the-ground efforts to restore or enhance native plant and animal communities

State Grants

California Department of Fish and Game
Wildlife Conservation Board - Acquisition and protection of fish and wildlife habitat

Coastal Conservancy
Coastal Access and Watershed Management Grants - Projects supporting public access, riparian restoration, watershed planning and restoration

State Water Resources Control Board
Nonpoint Source Pollution Grant Program - Projects improving water quality, watershed planning and implementation, coastal water quality

California Department of Fish and Game
Fisheries Restoration Grants Program - Restoration, planning, monitoring of native anadramous fisheries

California Transportation Commission -
State and federal transportation programs for bicycle and pedestrian access

California State Parks
Habitat Conservation Fund Program - Anadramous fish habitat, wetlands habitat, riparian habitat, and trails programs

California State Parks
Recreational Trails Program - Non-motorized trails programs

California Resources Agency
Coastal Resources Grant Program - Coastal habitat protection, public access and recreation, coastal facilities, coastal management

Private Grants

National Fish and Wildlife Foundation -
Provides funding through a variety of programs for fish and wildlife restoration

Santa Cruz County Fish and Game Commission
-
Local commission that distributes fine monies collected from local Fish and Game violations

Other Financing Strategies

Capital Improvement Program

Capital improvement projects outlined in the plan can be incorporated into the annually-updated Capital Improvement Program of the City. Projects will need to assigned and initiated by a specific department for inclusion into the program.

Local Bond Initiatives

A local ballot measure could be drafted to identify programs and projects to be financed through the measure. The City of Santa Barbara recently passed such a measure, Measure B, which provides approximately $2 million annually for creeks restoration and water quality programs.

Recommendation Type	Description	Estimated Cost	Implementation Priority
Capital Projects			
Pedestrian/Bike Bridge & trail connections @ Highway One		Major transportation improvement	
$2.5 million	1st Priority		
Pedestrian/Bike Bridge @ Branciforte Creek	Major transportation improvement	$2 million	1st Priority
Pedestrian/Bike Improvements to Railroad Bridge	Major transportation improvement	$1 million	1st Priority
Focus Site - Branciforte Creek Confluence Area	Public plaza/orientiation/education	$150,000	1st Priority
Focus Site - Jessie Street Marsh Interface Area	Public plaza/interpretation	$50,000	1st Priority
Focus Site - Trestle Bridge Area	Public plaza/trail access/orientation	$100,000	1st Priority
Focus Site - Laurel Street Extension	Public plaza/interpretation	$40,000	1st Priority
Urban Interface Connections	Orientation	$60,000	1st Priority
Pedestrian/Bike Improvement to East Cliff Drive Bluff	Major transportation improvement	$5 million	2nd Priority
Focus Site - Felker Street	Public plaza/orientation/interpretation	$75,000	2nd Priority
Focus Site - Gateway Center Plaza	Public plaza for festivals	$50,000	2nd Priority
Focus Site - Royal Taj/Soquel Avenue	Public plaza/public restroom/parking	$200,000	2nd Priority
Focus Site - Mimi De Marta Park	Public plaza/orientation/interpretation	$75,000	2nd Priority
Focus Site - Mike Fox Park	Trail access/kayak launch	$75,000	2nd Priority
Access Node - Beach Hill Stairway	Orientation	$25,000	2nd Priority
Access Node - Third Street Ramp - East Bank	Orientation	$10,000	2nd Priority
Access Node - Barson Street	Orientation	$15,000	2nd Priority
Access Node - Josephine Street	Orientiation	$10,000	3rd Priority
Access Node - Existing Pedestrian Bridge	Orientation	$10,000	3rd Priority
Access Node - Canfield Avenue Ramp	Orientation	$10,000	3rd Priority
Planning & Programming			
Complete San Lorenzo RiverwayTrail Improvement Plan	Planning	$30,000	1st Priority
Establish a nongovernmental support group	Programming	NA	1st Priority
Branciforte Creek Sediment Study	Planning	$75,000	1st Priority
Branciforte Creek - Long Term Fish Passage Study	Planning	$50,000	1st Priority
Front Street Redevelopment Planning Studies	Planning	$50,000	1st Priority
Salz Tannery Planning Studies	Planning	$50,000	2nd Priority
Beach Flats Planning Studies	Planning	$50,000	2nd Priority

Table 5
Project Phasing, Costs and Priorities

Recommendation	Description	Estimated Cost	Implementation Priority
Branciforte Creek - Restoration Plan for Delaveaga Park	Programming	$75,000	3rd Priority
Staffing, Operations and Maintenance			
Establish a River Coordinator position	Staffing	$90,000	1st Priority
Provide 3.0 FTE for Riverway maintenance and ops.	Staffing	$175,000	1st Priority
Provide for monthly litter abatement program in summer	Operations/maintenance	$50,000	1st Priority
Investigate volunteer services available	Operations/maintenance	$0	1st Priority
Develop replacement plant recommendations for landscaping	Operations/maintenance	$5,000	1st Priority
Policy			
Designate a permanent San Lorenzo River Commission	Policy	NA	1st Priority
Review City Code Section 9.66.090 and 9.66.030 for kayaking	Policy	NA	1st Priority
Maintain existing Front Street development & setback standards	Policy	NA	1st Priority
Revise Front Street design guidelines for building materials	Policy	NA	1st Priority
Designate a public trail adjacent to Salz Tannery	Policy	NA	2nd Priority

Table 5 (contd.)
Project Phasing, Costs and Priorities

8 References

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Steven Grover & Associates, Pre-Design report San Lorenzo River Bicycle and Pedestrian Bridge, December 2001.

Steven Grover & Associates, Schematic Design Report San Lorenzo River Bicycle and Pedestrian Bridge, March 2002.

Appendix A

Lower San Lorenzo River and Lagoon Enhancement Plan

Appendix B

Jessie Street Marsh Management Plan, 1998

Summary of Management Plan Actions Incorporated by reference

Hydrology Actions

- Action H-1: Modify Operation of Existing Slide Gate at East Cliff Drive and San Lorenzo River
- Action H-2: Create Tidal Channel between East Cliff Drive and Lemos Avenue
- Action H-3: Fill Existing Channel between East Cliff and Lemos Avenue
- Action H-4: Create new Salt/Brackish Marsh plain between East Cliff Drive and Lemos Avenue
- Action H-5: Create New Freshwater Channel between Lemos Avenue and Barson Street
- Action H-6: Create Open Water Areas between Lemos Avenue and Barson Street

Action H-7: Create Sediment Retention Basin near Barson Street

- Action H-8: Partially fill Existing drainage swale between Lemos Avenue and Barson Street

Habitat Restoration and Enhancement Actions

- Action R-1: Create New Salt/Brackish Water Marsh between East Cliff Drive and Lemos Avenue
- Action R-2: Enhance Existing Eucalyptus Grove near East Cliff Drive
- Action R-3: Create New Raised Berm and Vegetative Screening near Residences between East Cliff Drive and Lemos Avenue
- Action R-4: Retain and Enhance Freshwater Marsh Habitat between Lemos Avenue and Barson Street
- Action R-5: Create New Freshwater Marsh Habitat
- Action R-6: Retain and Enhance Existing Riparian Habitat
- Action R-7: Create New Riparian Habitat between Lemos Avenue and Barson Street
- Action R-8: Retain and Enhance Existing Oak Woodland
- Action R-9: Create New Oak Woodland
- Action R-10: Retain and Enhance Existing Saltgrass Grassland
- Action R-11: Remove/Control Invasive, Non-native species

Public Access Actions

- Action P-1: Construct bridge and Boardwalk across Marsh Channel near Lemos Avenue and Jessie Street
- Action P-2: Construct Footpaths within Upper and Lower Marsh Areas
- Action P-3: Construct Gates and Split-Rail Fences and Install Boulders
- Action P-4: Construct Trail and Steps to Oceanview Park
- Action P-5: Install Interpretive and Public Access Sign
- Action P-6: Install benches, Bicycle Racks, and Trash Containers
- Action P-7: Long-Term Site Maintenance
- Action P-8: Improve Existing Trail to Oceanview Park