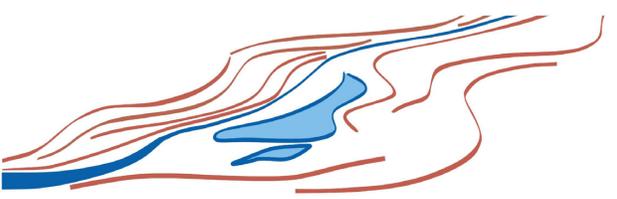




Lost Lake Park Master Plan



along the San Joaquin River Parkway



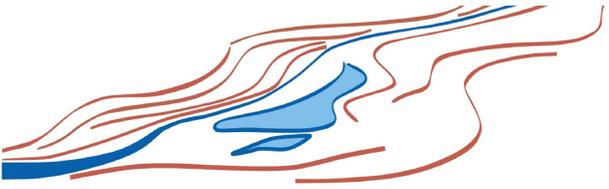
APRIL 18, 2011

Fresno County Parks
Department of Public Works and Planning

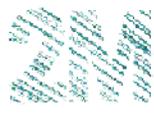
Lost Lake Park Master Plan



along the San Joaquin River Parkway



Prepared by



2M Associates
Landscape Architecture,
Planning, Horticulture



DESIGN, COMMUNITY & ENVIRONMENT

Live Oak Associates
Blair, Church and Flynn
Sierra Valley Cultural Planning

TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	1
CHAPTER 1: INTRODUCTION.....	1
CHAPTER 2: OWNERSHIP AND USE AGREEMENTS	13
CHAPTER 3: THE EXISTING PARK.....	17
CHAPTER 4: VISION, GOALS, AND GUIDELINES	31
CHAPTER 5: MASTER PLAN.....	39
CHAPTER 6: NATURAL RESOURCE MANAGEMENT AND ENHANCEMENT	67
CHAPTER 7: IMPLEMENTATION.....	79
CHAPTER 8: REFERENCES.....	83

APPENDICES

Appendix A	Acknowledgements
Appendix B	Master Plan Meetings, Workshops, and Reviews
Appendix C	Cooperative Lease Agreements
Appendix D	Existing Utilities Map
Appendix E	Biology Constraints and Opportunities Analysis Lost Lake Master Plan Fresno County, California
Appendix F	San Joaquin River Parkway Master Plan Policies
Appendix G	Evaluation Criteria

List of Figures

Figure 1-1	Project Context.....	2
Figure 1-2	Restoration Program Releases.....	8
Figure 2-1	Ownership	15
Figure 3-1	Existing Park Features.....	19
Figure 3-2	Hydrology.....	23
Figure 3-3	Park Habitats.....	25
Figure 3-4	Potential Waters of the United States.....	29
Figure 5-1	General Management Zones.....	41
Figure 5-2	Phasing	43
Figure 5-3	Phase 1 Illustrative Plan	45
Figure 5-4	Phase 2 Illustrative Plan	47
Figure 5-5	Phase 3 Illustrative Plan	49
Figure 5-6	Illustrative Master Plan	51
Figure 5-7	Schematic Diagram Park Utilities.....	53
Figure 6-1	Grading Concept – Floodplain Enhancement.....	69
Figure 6-2	Vegetation Associations	71

List of Tables

Table 5-1	Project Improvements by Phase.....	60
Table 5-2	Existing and Proposed Facilities by Phase (Commutative Totals).....	64
Table 6-1	Approximate Acreages of Proposed Plant Associations	73
Table 6-2	Master Plan Vegetation List.....	74
Table 7-1	Permitting Agencies	82

EXECUTIVE SUMMARY

The Lost Lake Park Master Plan (the Master Plan) is a net benefit project that enhances the Park's natural resources, improves existing recreation facilities, and establishes new facilities and use areas. The Master Plan is a long-term, phased road map for changes that would occur over a 20- to 30-year horizon. Figures 5-2 through 5-6 illustrate changes that could take place under the Master Plan.

The Master Plan covers approximately 374 acres under multiple ownerships. It includes lands owned by the County of Fresno and the State of California. State-owned properties include lands of the California Department of Fish and Game/Wildlife Conservation Board, the San Joaquin River Conservancy, and the California State Lands Commission.

The Master Plan is based on a vision and set of goals that were developed out of a public process with environmental and economic review. The vision is for Lost Lake Park to be the hallmark "park" of the San Joaquin River Parkway where people can:

- ◆ Safely interact with the river's waters and environment;
- ◆ Begin their river experience along the Parkway's trails and the river itself;
- ◆ Learn about the river, its floodplain, its habitats, and its wildlife; and
- ◆ Recreate together in a shaded, green landscape where water is always nearby.

Implementation of the Master Plan will reclaim a more natural river floodplain, expand and enhance riparian, wetland, and upland habitats, and protect sensitive cultural resources. Improved existing recreational and educational facilities and development of additional facilities and use areas will provide significantly more outdoor recreation opportunities for the general public than now exist at the Park.

COMPONENTS OF THE PLAN

Key components of the Master Plan include:

- ◆ Natural resource enhancements involving recontouring steep slopes and overburden stockpiles from abandoned mining areas in order to improve hydrology, habitat and access, and to create more diverse, safe use areas. Recontouring will recreate a more natural 100-year floodplain for the San Joaquin River within the Park. Expanding the floodplain will: relieve flooding conditions; provide an expanded riparian corridor through the Park that would be both a habitat enhancement and an attraction with additional shaded use areas; expand the nature area at the south end of the Park by reclaiming Lost Lake as a benched floodplain area; allow the creation of an extensive nature trail system that is both safe and accessible; and support a new interpretive/cultural center.

- ◆ A major native riparian forest and shade tree planting program of approximately 10,000 trees. This program would include, over time, replacing existing non-native trees (as they die or must be removed for construction or safety purposes) with native species. Additionally, traditional Native American plants will be incorporated into areas of the Park for harvesting by local tribes. Any improvements to the Park would be upon completion of the California Tiger Salamander (CTS) protocol surveys and development of a mitigation program, if appropriate.
- ◆ Upgrades of existing facilities along the San Joaquin River within the central portions of the Park. These facilities will be expanded upstream along the river and enhanced with fish cleaning stations, additional parking, better canoe/kayak access and passage, and additional developed use areas and support facilities.
- ◆ A new camping area adjacent to the existing campground outside of the San Joaquin River 100-year floodplain. Complementary to the campground would be a visitor-serving commercial recreation facility. An expansion area for the campground is identified.
- ◆ Additional new park and interpretive facilities include bicycling and equestrian trails and staging areas connected to a regional multi-use trail system.
- ◆ Interpretive and educational features to provide natural and cultural resource information.
- ◆ New roads and parking for all use areas and access to trails. Ultimately there could be approximately 1,500 parking spaces and 5.1 miles of roads.
- ◆ New use areas outside of the San Joaquin River's 100-year floodplain that would include facilities for both passive and active recreation.
- ◆ A Friant Community Park of 47 acres. This "park within a park" would be easily accessible to the residents of Friant. Community park facilities would include playgrounds, a dog park, and tennis/basketball courts. Approximately 27 acres of multiple-use, open meadow areas could be used for a variety of purposes.
- ◆ An 11.5-mile inter-connected formal trail system. This system includes the Parkway's multi-use trail and connections to the Town of Friant.

CHAPTER 1:

INTRODUCTION

This Master Plan for Lost Lake Park has been prepared by the County of Fresno Public Works and Planning Department in cooperation with the San Joaquin River Conservancy. Lost Lake Park is a County of Fresno park located on the south bank of the San Joaquin River approximately 1.5 miles downstream of Friant Dam, which forms Millerton Lake Reservoir (see Figure 1-1). The 374-acre Master Plan Study Area (Lost Lake Park or the Park) comprises 190 acres of land owned by the County of Fresno (the County), 76 acres leased by the County from the California Department of Fish and Game (CDF&G), and approximately 108 acres that are owned by the San Joaquin River Conservancy (the Conservancy). In addition, the California State Lands Commission retains sovereign ownership over the ordinary low water mark of the San Joaquin River. Chapter 2 overviews this multi-agency ownership pattern in greater detail.

The general goals for the Lost Lake Park Master Plan are to rehabilitate, improve existing recreation areas and facilities to provide greater recreation opportunities for the general public, and enhance wildlife habitat values. These improvements and enhancements are to be consistent with County General Plan policies and the Conservancy's San Joaquin River Parkway Master Plan, thereby creating a net-benefit project.

The Master Plan identifies appropriate long-term uses for the Park. These uses were developed through an extensive coordination program between project partners, consultation with Responsible and Trustee Agencies, and the general public, and is described later in this Chapter. In addition to facility and habitat enhancements within the Park, the Master Plan proposes connectivity to adjacent public lands and planned Parkway and community trails and bikeways, and provides habitat linkages throughout the Park for wildlife movement.

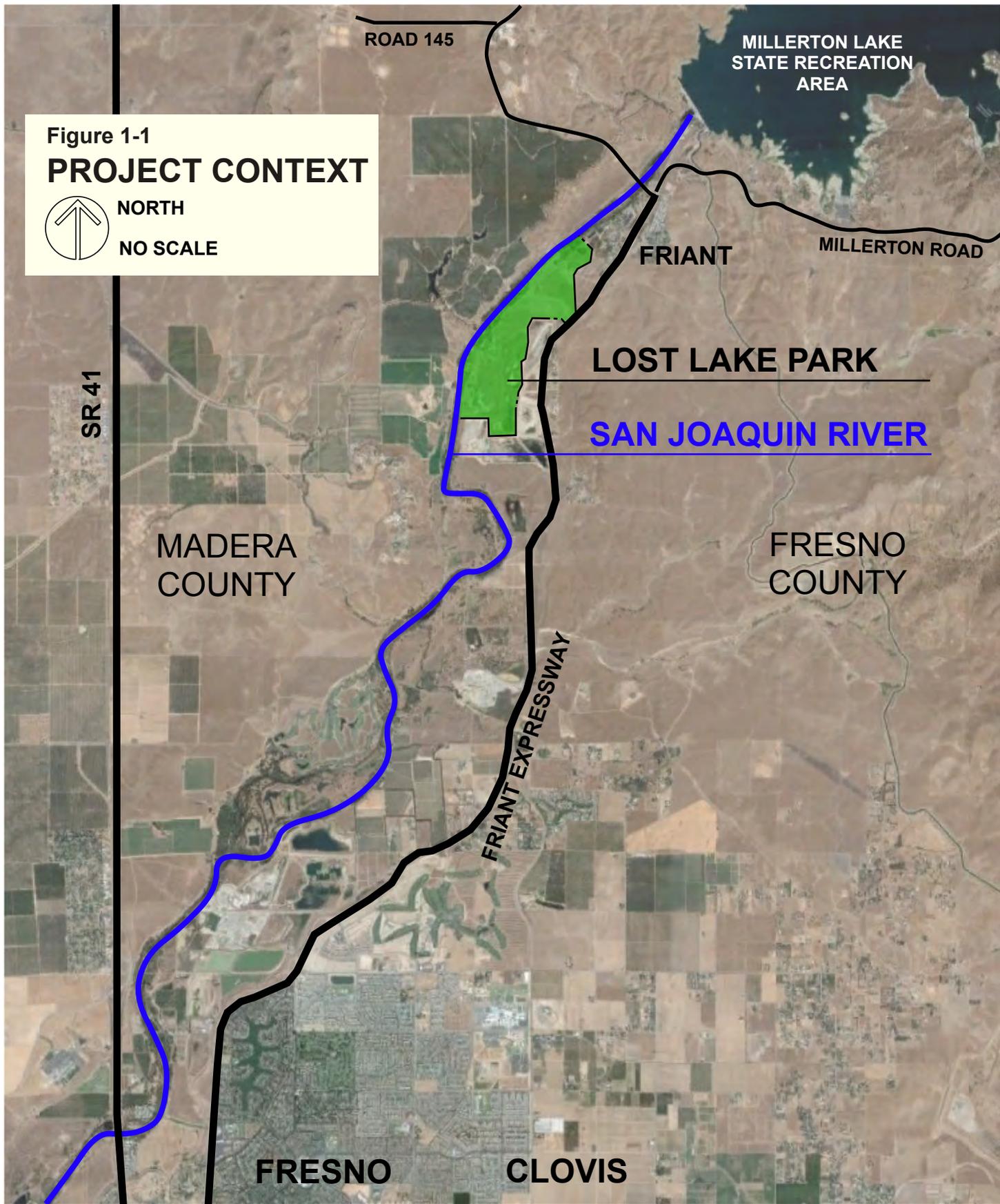
This Master Plan summarizes site conditions, presents a vision, goals, and guidelines that direct the Master Plan, and presents a phased facilities and resource management program for the Park. Recommendations for implementation and management are also provided.

LOCATION

Lost Lake Park is located at the southern edge of the community of Friant in an unincorporated area of Fresno County.

The Park is bounded to the north by the San Joaquin Hatchery and the Town of Friant, to the east by the Friant Expressway and private lands that are generally undeveloped, to the south by CEMEX who is actively extracting gravel from the area, and to the west by the San Joaquin River and Madera County. The San Joaquin River marks the Fresno-Madera County boundary line. The hillside lands that are on the Madera County side of the river, opposite the Park's existing

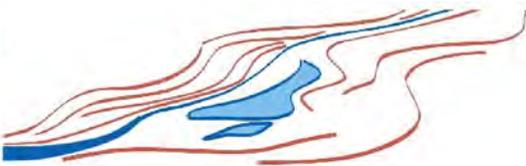
Figure 1-1
PROJECT CONTEXT
NORTH
NO SCALE



Lost Lake Park Master Plan



along the San Joaquin River Parkway



campground, are owned by the Conservancy. The remaining lands in Madera County opposite the Park are in private ownership and are currently managed as agriculture.

PLANNING CONTEXT

The planning for Lost Lake Park is to be consistent with policies of the Fresno County General Plan and the San Joaquin River Parkway Master Plan. Other plans that influence the planning of the Park include the San Joaquin River Restoration Program, the California State Parks Central Valley Vision Plan, and the Friant Area Community Plan.

Fresno County General Plan

The Fresno County General Plan, adopted in October, 2000, includes policies and goals that are particularly relevant to the future of Lost Lake Park. Generally these are to:

- ◆ Protect and enhance the water quality and quantity.
- ◆ Conserve areas that contain significant mineral deposits.
- ◆ Protect, restore, and enhance habitat, wetlands and valuable vegetation.
- ◆ Designate land for and promote recreational facilities.
- ◆ Develop a system of hiking, riding, and bicycling trails and paths.
- ◆ Identify, protect, and enhance important historical, archeological, paleontological, geological, and cultural sites.
- ◆ Conserve, protect, and maintain the scenic quality of Fresno County.

In addition, Friant Road from the City of Fresno to Lost Lake Road is a Fresno County Designated Scenic Highway. Scenic highways are highways that traverse land with unique or outstanding scenic quality or provide access to regionally significant scenic and recreational areas.

Within the General Plan, specific policies about the San Joaquin River Parkway, Lost Lake Park, and areas around Lost Lake Park can be found in both its Open Space and Conservation Element and its Agriculture and Land Use Element. Relevant policies are listed below.

a. Open Space and Conservation Element

- ◆ Policy OS-A.20 and OS-H.11: The County shall support the policies of the San Joaquin River Parkway Master Plan to protect the San Joaquin River as an aquatic habitat, recreational amenity, aesthetic resource, and water source. (See Policy OS-H.12)
- ◆ Policy OS-C.8: The County shall, where feasible along the San Joaquin River, site recreational trails, bikeways, and other recreation areas at least three hundred (300) feet from the edge of active aggregate mining operations and separate them by physical barriers. Recreational trail/bikeway crossings of active haul routes should be avoided whenever possible; if crossings of haul routes are necessary, separate where feasible.
- ◆ Policy OS-E.14: The County shall require a minimum 200-foot-wide wildlife corridor along particular stretches of the San Joaquin River and Kings River, whenever possible. The exact

locations for the corridors should be determined based on the results of biological evaluations of these watercourses. Exceptions may be necessary where the minimum width is infeasible due to topography or other physical constraints. In these instances, an offsetting expansion on the opposite side of the river should be considered.

- ◆ Policy OS-H.12: The County shall in conjunction with the San Joaquin River Conservancy rehabilitate and improve existing recreation areas and facilities along the San Joaquin River at the earliest possible time, particularly Lost Lake and Skaggs Bridge Regional Parks.
- ◆ Policy OS-H.13: The County shall require that structures and amenities associated with the San Joaquin River Parkway be designed and sited to ensure that such features do not obstruct flood flows, do not create a public safety hazard, or result in a substantial increase in off-site water surface elevations, and that they conform to the requirements of other agencies having jurisdiction. For permanent structures, such as bridge overcrossings, the minimum level of flood design protection shall be the greater of the Standard Project Flood (which is roughly equivalent to a 250-year event) or the riverine requirements of other agencies having jurisdiction to ensure flood flows are not dammed and to prevent flooding on surrounding properties.
- ◆ Policy OS-I.6: The County shall coordinate development of its Recreational Trail Master Plan with the San Joaquin River Conservancy concerning the proposed multipurpose trail between Highway 99 and Friant Dam in the San Joaquin River Parkway.

b. Agriculture and Land Use Element

- ◆ Policy LU-C.2: Within the San Joaquin River Corridor Overlay, the County shall accommodate agricultural activities with incidental home sites, recreational uses, sand and gravel extraction, and wildlife habitat and open space areas.
- ◆ Policy LU-C.3: The County may allow by discretionary permit commercial activities needed to serve San Joaquin River Parkway visitors, such as sales of food and beverages, camper's grocery items, books, guides, and educational materials, consistent with the objectives and policies of the San Joaquin Parkway Plan.
- ◆ Policy LU-C.6: The County may allow the extraction of rock, sand, and gravel resources along the San Joaquin River consistent with the Minerals Resources section policies of the Open Space and Conservation Element.
- ◆ Program LU-C.B: The County shall work with the San Joaquin River Parkway and Conservation Trust, San Joaquin River Conservancy, City of Fresno, and other interested agencies and organizations to implement the San Joaquin Parkway Plan.
- ◆ Friant-Millerton Regional Plan - Policy LU-H.8: The County shall prepare a regional plan for the Friant-Millerton area. The preliminary study area boundaries for the new regional plan... are designed to encompass the area's major recreation facilities and open space resources, include the area's existing and potential residential growth areas, but exclude most productive agricultural land. In the near-to-mid-term, planning and development in the area should focus on expanding and enhancing the area's recreational activities and resources. In the long-term [beyond the 2020 time horizon of the General Plan], the area may be suitable for urban

development as the unincorporated county's largest remaining area without productive agricultural soils near the Fresno-Clovis Metropolitan Area and recreational and scenic resources.

The new regional plan shall at a minimum address the following key issues:

- a. Expansion and enhancement of recreation activities and facilities centered on Millerton Lake and the San Joaquin River.
- b. Open space and natural resource protection.
- c. Implementation of appropriate policies of the San Joaquin River Parkway Plan.
- d. Groundwater and surface water availability.
- e. Wastewater disposal limitations and options.
- f. Development of affordable housing, particularly for workers at recreational and related tourist facilities in the area.
- g. Suitability of the area for future long term urbanization and options for how this might occur (e.g., County specific plan, city annexation, or city incorporation).
- h. Provision of an adequate circulation/transportation system, including mass transit.

San Joaquin River Parkway Master Plan

a. Parkway Purpose and Goals

The Conservancy was created through State legislation to provide leadership and acquire, preserve, manage, and promote access to lands within the floodplain on both sides of the San Joaquin River from Friant Dam to Highway 99. The Conservancy completed the *San Joaquin River Parkway Master Plan* (Parkway Master Plan) in 2000, establishing goals, objectives and policies to guide the development of the 22-mile regional green space/parkway and wildlife corridor with an interconnected trail system and recreational and educational features.

Fundamental goals of the Parkway Master Plan include the following:

- ◆ Preserve and restore riparian corridor.
- ◆ Protect wildlife species that depend on or prefer the river environment.
- ◆ Provide for conservation, education, and recreation.
- ◆ Operate and manage lands for public enjoyment consistent with protection of natural resources.
- ◆ Provide a continuous trail in cooperation with affected landowners.
- ◆ Protect irreplaceable natural and cultural resources.
- ◆ Protect existing undeveloped areas of the river bottom.

b. Parkway Recreation Areas

Lost Lake Park is identified in the Parkway Master Plan as a "Recreation Area" where facilities should be rehabilitated and improved on a priority basis (Parkway Policy RP-1). These recreation areas are intended to meet increasing demand for recreation in the Fresno-Madera region while preserving the natural resources of the river. The Parkway Master Plan concentrates proposed recreation facilities near and adjacent to existing facilities such as Lost Lake Park. The Parkway Master Plan recognizes that by improving and expanding existing facilities rather than accommodating them at new locations along the river, overall recreation impacts within the Parkway will be reduced. Appendix F provides a listing of Parkway Master Plan goals and policies related to recreation areas.

c. Recreation Uses and Development

The types of uses to be accommodated at publicly operated recreation areas are to be limited mainly to hiking, jogging, bicycling, swimming, canoeing, picnicking, fishing, golfing, equine riding, nature observation, nature study and educational/interpretive programs, camping (tent, trailer, and RV), and supporting retail. Existing playgrounds and turf areas for informal play could be retained, and expanded if warranted by demand (Policy RP4). As part of the master planning process a golf course suitability analysis was conducted with the determination being made that for economic, policy, and environmental criteria a golf course is not feasible at the Park (2M Associates and Economics Research Associates).

The Parkway Master Plan cites that within the recreation areas, activities are to be located to minimize impacts on the river environment. High-activity-level recreation uses and related facilities will be located as far from the river as possible. In general, only uses that are river-dependent, such as fishing, canoeing, and nature observation will be located on the river. New campgrounds, picnic areas, the multi-use trail, turf areas for informal play, playgrounds and support facilities such as service roads, parking concessions, and restrooms are to be sited away from environmentally sensitive areas.

Recreation areas are to include the Parkway's continuous multipurpose trail, a system of internal trails with surfaces for pedestrian, equestrian, and wheeled uses, and trails that are connected to bicycle routes in nearby urbanized areas. These trails will range from wide multipurpose trails to narrow footpaths. In addition to the land-based trails, the river itself is to serve as a canoe trail and recreation areas would include put-in and take-out areas, spaced to provide opportunities for non-motorized small boat trips of varying lengths.

d. Wildlife Corridors

The Parkway Master Plan includes accommodating a continuous corridor of wildlife habitat, with buffers, along the length of the Parkway. Typically habitat areas adjoining or within the recreation areas would be clearly demarcated and public use in these areas will be limited to nature observation and other low-impact uses. The primary purpose of these habitat areas is to preserve the continuity of the wildlife corridor where it adjoins a recreation area or to provide a buffer between a recreation area and a natural reserve. However, the Parkway Master Plan also specifically recognizes that significant recreational activity is expected at Lost Lake Park and that riparian vegetation restoration should be carried out along the Madera County side of the riparian corridor between Ledger Island and the North Fork Road (Madera County Road 206) crossing, or steps should be taken to enhance opportunities for the corridor to revegetate on its own.

e. Floodplain Management

Parkway Master Plan policies regarding development within the floodplain require that, where applicable, any development sited in a designated 100-year floodplain comply with regulatory requirements at a minimum and with the Fresno Metropolitan Flood Control District's Riverine Floodplain Policy criteria, and that structures and amenities within the Parkway do not obstruct flood flows, do not create a public safety hazard, and do not result in a substantial increase in off-site water surface elevations.

Friant Redevelopment Plan

The *Friant Redevelopment Plan, 1992* was prepared in compliance with Article 16.5 of the California Community Redevelopment Law with the goals of eliminating blight, expanding and developing the commercial area, and developing very low, low and moderate-income housing. *The Friant Redevelopment Implementation Plan, January 1, 2005 through December 31, 2009*, describes specific anticipated redevelopment programs for the five-year period. These projects include design and construction of a sewage treatment and collection system and the development of affordable housing. Lost Lake Park is not included in the Redevelopment Plan area. This plan can be expected to result in increased population, and therefore greater local demand for parkland.

San Joaquin River Restoration Program

The San Joaquin River Restoration Program (Restoration Program) is a comprehensive long-term effort to restore water flows to the San Joaquin River from Friant Dam to the confluence of the Merced River, providing irrigation water to Friant Water users, and restoring a self-sustaining fishery in the river. It is a multi-agency effort involving the Bureau of Reclamation, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, California Department of Fish and Game, and the California Department of Water Resources. The Restoration Program is a direct result of a settlement reached in September 2006 on an 18-year lawsuit to provide sufficient fish habitat in the San Joaquin River below Friant Dam near Fresno.

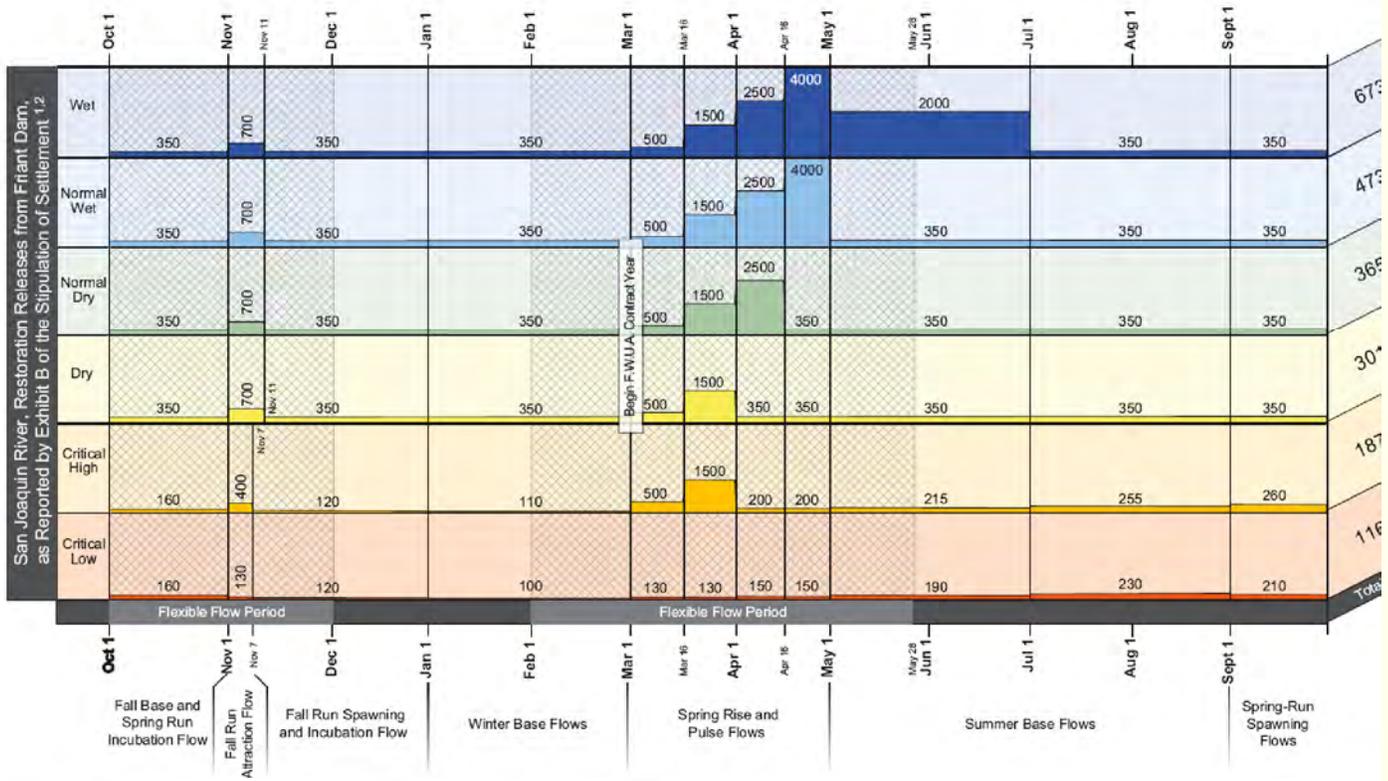
Lost Lake Park is within Reach 1A of the Restoration Project Area that is designated for spawning and rearing habitat for the Chinook salmon. Modifications such as gravel augmentation, pool enhancement, or longitudinal or slope changes may be needed in Reach 1A to support spawning and rearing habitat. Figure 1-2 indicates the Restoration Program releases from Friant Dam as identified in the settlement agreement. These releases do not constrain the U.S. Bureau of Reclamation from higher flow releases if required for operation of the dam.

Regional Growth and Demand

Fresno and Madera Counties have lower population densities and median age than the California average. Both counties have lower income levels, higher poverty levels, and lower education levels than state averages. Population increases in Fresno and Madera Counties are expected to be much higher than the state average over the next 20 years. Both counties are projected to have higher growth rates than the state average, with Madera County predicted to grow at a rate of 72.9 percent between 2000 and 2020. The combined populations of Fresno and Madera are projected to double in the next forty years to approximately 2,342,000 people (California Department of Finance). Existing regional parks, such as Woodward Park in the City of Fresno, are already experiencing days at which they are operating at capacity. The San Joaquin River Parkway is the most readily accessible natural area for resource-based outdoor recreation for a majority of residents within the two counties. The role of the Parkway and Lost Lake Park in accommodating existing and future recreation needs cannot be overstated.

Figure 1-2 RESTORATION PROGRAM RELEASES

San Joaquin River, Restoration Releases from Friant Dam,
as Reported by Exhibit B of the Stipulation of Settlement^{1,2}



1 - NRDC v Rodgers, Stipulation of Settlement, CIV NO. S-88-1658 - LKK/GGH, Exhibit B, September 13, 2006
 2 - Hydrographs reflect assumptions about seepage losses and tributary inflows which are specified in the settlement

Lost Lake Park Master Plan



along the San Joaquin River Parkway



California State Parks Central Valley Vision Plan

The California State Parks Department initiated the Central Valley Vision project in 2003 to address the perceived lack of recreational opportunities in the Sacramento and San Joaquin Valleys. The 2007 Project Summary Report recommended that the State take the following actions:

- ◆ Systematically assess and, if found appropriate, expand and improve park facilities and recreation programs at Central Valley State Park System units to accommodate the varied needs and interests of visitors and an increasingly changing Valley population.
- ◆ Significantly expand recreational and interpretive opportunities, programs, and the preservation of resources, particularly those along river corridors.
- ◆ Continue to provide quality recreation programs and interpretive activities and consider expanding these services depending on staffing availability at Central Valley park units.
- ◆ Strengthen partnerships with non-profits, concession operators, and other public agencies to expand active and passive use, park and recreation facilities, programs and services.

A Draft Implementation Plan for the Central Valley Vision proposes a new State park be created along the San Joaquin River Parkway downstream from Millerton Lake State Recreation Area. Specifically the recommendations include developing a water trail on the San Joaquin River, accepting about 1,250 acres of existing public land as a new park, and developing picnic sites, trails, boating facilities, and interpretive program. Lost Lake Park has the potential to accommodate some of the park needs as expressed the Central Valley Vision Plan.

Other Planning

The County adopted and certified the *Friant Community Plan Update & Friant Ranch Specific Plan Draft Environmental Impact Report* during the final production of this Master Plan. The Friant Community Plan updates the existing Friant Redevelopment Plan, amends it to extend the term an additional 20 years, and eliminates the commercial development standards set forth in the 1992 Friant Redevelopment Plan. While Lost Lake Park is not within the Friant Redevelopment Plan area, the Park, including the Conservancy's property, is included in the proposed Friant Community Plan area programmatically for effluent discharge (personal communication, March 2, 2011, Fresno County). Friant Ranch, a private development, is located immediately east of Friant Expressway from the Park. These plans will need to be reviewed for any program, impacts, or mitigation measures that would affect the Park.

THE MASTER PLANNING PROCESS

The planning process and outreach program of user surveys, public workshops, interagency meetings, County Recreation and Wildlife Commission, and County Board of Supervisors meetings that support this Master Plan were conducted over a four-year period. Appendix A lists those involved in the preparation of the Master Plan.

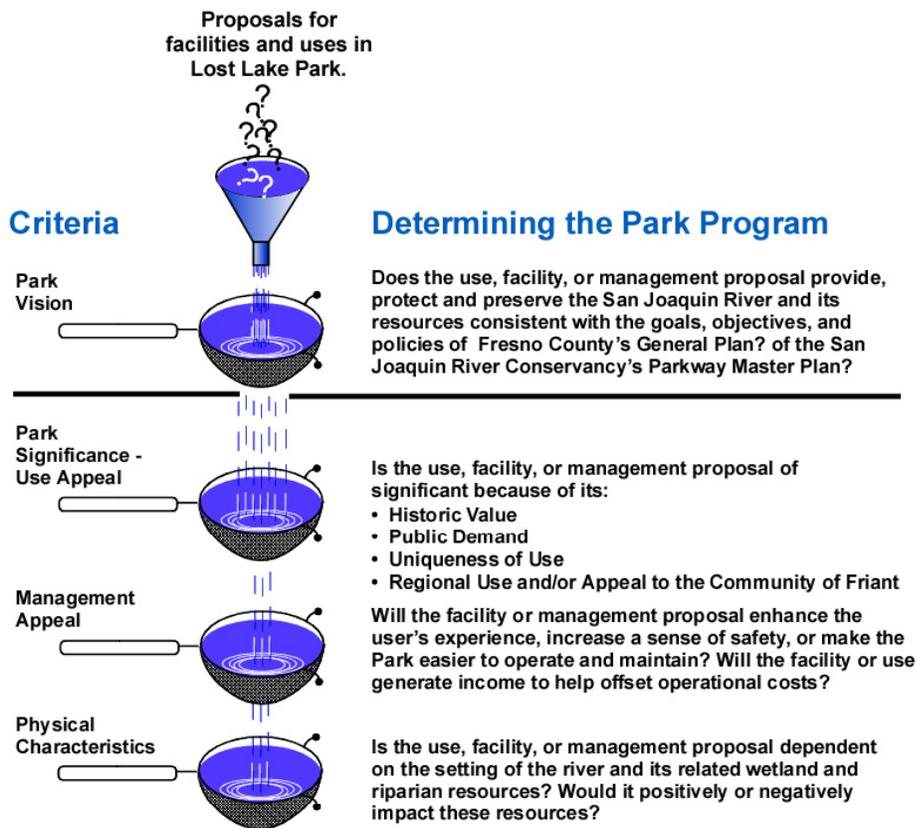
Appendix B provides an annotated listing of the meetings and workshops that were held.

General steps of the planning process included:

- ◆ **Vision and Goals:** Conducting user surveys of park visitors, public workshops and agency meetings to identify a preliminary vision for the Park consistent with the policies of the County General Plan and the Parkway Master Plan. The first community workshop provided an overview of the project and solicited the community's visions, goals, and "big ideas" for the Park. Criteria for evaluating proposed park uses was also presented and discussed. Community Workshop #2 resulted in the identification of specific facilities and uses to be considered for inclusion in the Master Plan.
- ◆ **Resources Inventory and Opportunities and Constraints Analysis:** The culmination of this analysis was the development of an Existing Conditions report summarizing the Park's regulatory settings, existing resources, and related opportunities and constraints. This inventory included an assessment of aggregate resources within the Park and the potential to extract these resources for other public beneficial uses and in the process help fund park development (2M Associates).
- ◆ **Alternative Development:** Four alternatives with different themes for the Park's future conditions were developed. The alternative themes included:
 - Alternative 1: Minor Enhancement
 - Alternative 2: Active Recreation with Soccer as a focal activity
 - Alternative 3: Active Recreation with Golf as a focal activity
 - Alternative 4: Resource Enhancement

The four alternative plans were presented to the public at Community Workshop #3. The discussion revealed an overall preference for not significantly changing the existing park use areas, making it more attractive for cold-water fishing, and stewarding resources. The desirability of having easy access to the river was clearly expressed. It was recognized that the Park needs to serve the Community of Friant as it grows. Resource enhancement was strongly supported.

- ◆ **Evaluation of Proposed Park Uses and Facilities:** Ideas were evaluated for how Lost Lake Park should be used, what facilities should be developed, and how the Park's land and water resources should be managed. The following graphic illustrates the evaluation process and the four major evaluation criteria of park vision, park significance, management appeal, and physical characteristics; see Appendix G. During this phase, three specific evaluations were prepared for a golf course (Lost Lake Partners, LLC) a regional soccer complex, and a white-water park proposed by private entities.



◆ **Preliminary Master Plan:** A singular preferred alternative was developed based on input received during community workshops and from the County and stakeholders. The Preliminary Master Plan combined components from the prior alternatives to best meet project needs and included a strategy of limited mineral extraction associated with enhancing the park landscape. The Preferred Alternative was presented to the Board of Supervisors. Direction from the Board included that, to the extent possible, existing facilities, including the campground, remain, that there should be no mining in the Park, and to reiterate that public access within the Park is important.

In December, 2008 the Board of Supervisors reviewed a proposal from Table Mountain Rancheria to lease and improve Lost Lake Park. County staff was directed to continue with the planning process, provide a tour of the site to Table Mountain Rancheria representatives, have additional meetings to inform the public, and work with Table Mountain Rancheria to develop a plan that addressed the regulatory and environmental constraints.

The project was put on a general hold due to uncertainties with the State budget from December, 2008 to September, 2009. During this time, the County made repeated efforts to engage Table Mountain Rancheria and to follow up on the December, 2008 proposal. Table Mountain Rancheria was unresponsive.

- ◆ **Revised Preliminary Master Plan:** Based on the Board of Supervisors' direction, a revised Preliminary Master Plan was prepared and reviewed in the field with individual Board members that combined components from the prior alternatives to best meet project needs. The revised Preliminary Master Plan was presented for review and comment to the San Joaquin River Conservancy Board of Directors, at two additional public workshops, and to the Board of Supervisors.
- ◆ **Draft Illustrative Plan and Project Description and Review:** Based on the Board of Supervisors' direction, a draft Illustrative Plan and a Project Description were developed to initiate the environmental review process in conformance with the California Environmental Quality Act (CEQA) guidelines. The Board accepted the draft description with minor changes. The Initial Study (IS) for the Master Plan was prepared in accordance with CEQA. The County Development Services Division distributed the Draft Illustrative Plan and Project Description to responsible agencies for review and comment.

CHAPTER 2:

OWNERSHIP AND USE AGREEMENTS

This chapter describes the current ownership of Lost Lake Park as well as existing leases and agreements.

OWNERSHIP

Lost Lake Park (see Figure 2-1, Ownership) consists of approximately 374 acres under multiple ownerships. It includes lands owned by the County of Fresno (the County) and the State of California. State-owned properties include lands of the California Department of Fish and Game/Wildlife Conservation Board, the San Joaquin River Conservancy, and the California State Lands Commission.

State of California - State Lands Commission (CSLC)

The State retains sovereign ownership of all tidelands and submerged lands and beds of navigable waterways, including the San Joaquin River, upon its admission to the United States in 1850. The State holds these lands for the benefit of all the people of the State for statewide Public Trust purposes. The State holds a fee ownership in the beds of the San Joaquin River between the two ordinary low water marks.

The lands along the San Joaquin River between the ordinary high water marks are also subject to a Public Trust Easement whether granted or ungranted. The landward boundaries of the State's sovereign interests are often based upon the ordinary high water marks of these waterways as they existed prior to man-made influences such as channelization, dams, diversions, etc. Thus, such boundaries may not be readily apparent from present day site inspections. The CSLC has jurisdiction and management authority over these lands (Public Resources Code §6301.) A lease from the CSLC is required for any portion of a project extending onto State-owned lands that are under its exclusive jurisdiction. Use of State lands and lands underlying the State's easement are limited to waterborne commerce, navigation, fisheries, open space, recreation, or other recognized Public Trust purposes.

A lease from the Commission is required for any portion of a project extending onto lands which are under its exclusive jurisdiction. At present there is no lease between the County and the CSLC. The precise extent of State lands and the Public Trust Easement has not been legally established.

California Department of Fish and Game / Wildlife Conservation Board

The California Department of Fish and Game (CDF&G) / Wildlife Conservation Board (WCB) owns approximately 76 acres less the property below the ordinary low water mark owned by the CSLC.

San Joaquin River Conservancy

The San Joaquin River Conservancy owns approximately 108 acres of lands that were previously mined and reclaimed to open space.

The mission of the San Joaquin River Conservancy includes purposes of:

- ◆ Implementing the San Joaquin River Parkway Master Plan, a 22-mile-long regional greenway and wildlife corridor along both sides of the river extending from Friant Dam to Highway 99, with an interconnected trail system and recreational and educational features.
- ◆ Operating and managing lands for public enjoyment consistent with protection of natural resources.
- ◆ Protecting, enhancing and restoring riparian and riverine habitat and ecological diversity.

Fresno County

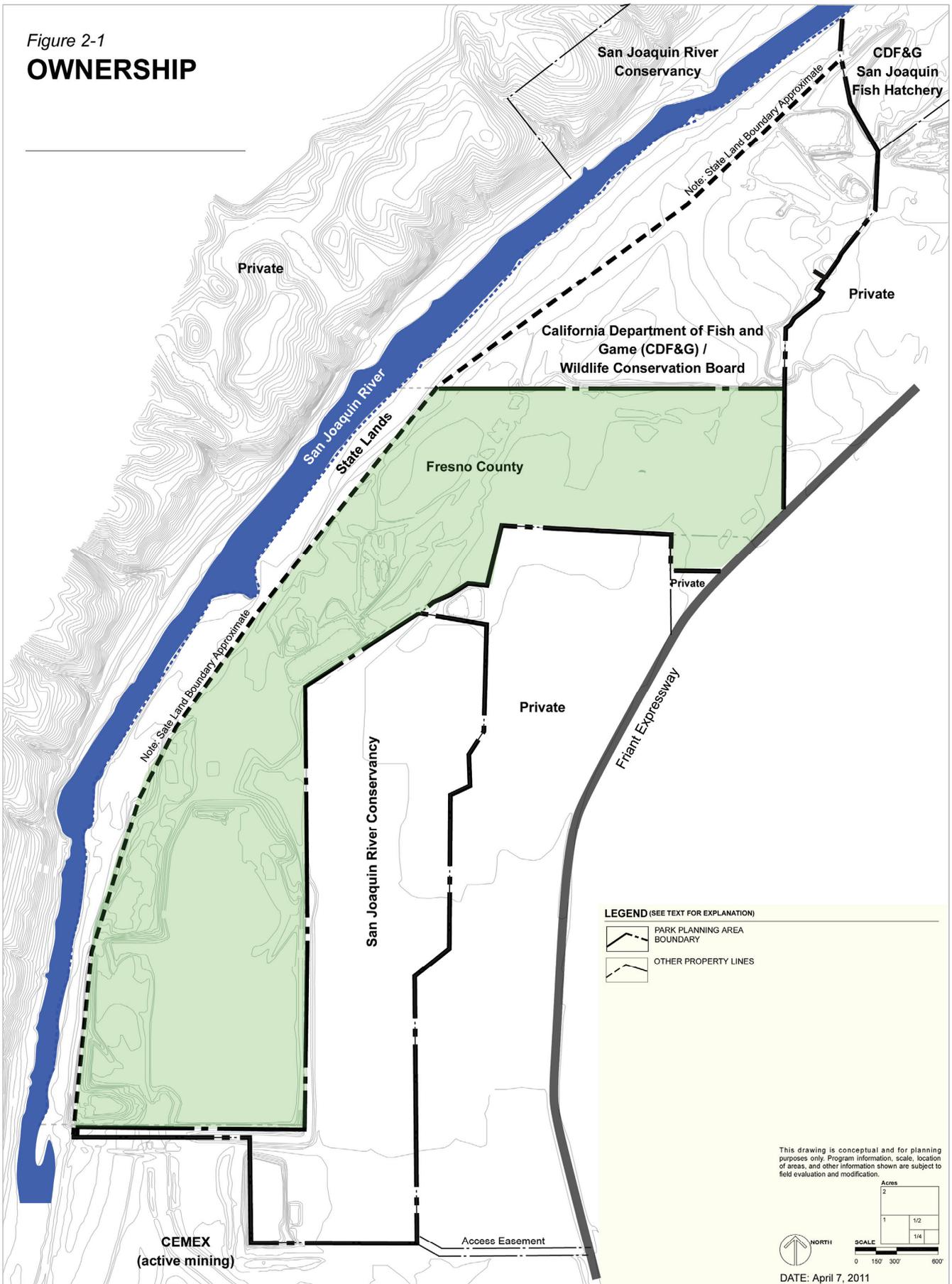
Fresno County owns approximately 190 acres less the property below the ordinary low water mark owned by the CSLC.

LEASES AND AGREEMENTS

Lease and cooperating use agreements exist between the County and the CDF&G/WCB (see Appendix C). These were established in 1959 for the "Lost Lake Public Fishing Area" and were amended in 1977 and 1988 to extend to July 15, 2027. In essence these two agreements develop a partnership between the State and County to fund, develop, and maintain fishing access and other recreation facilities on each others' properties. In the lease agreement, the County leased ownership of its lands to the CDF&G/WCB. Simultaneously a cooperating agreement between the two agencies established purposes for the Park and enabled cooperative funding of improvements. In the cooperating agreement, facilities developed by the State would be maintained by the County.

The basic purpose of the Park, as stated in the lease and cooperating agreement, is to create access for public fishing and to protect significant wildlife habitat.

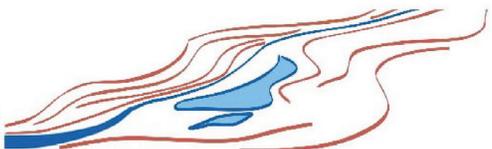
Figure 2-1
OWNERSHIP



Lost Lake Park Master Plan



along the San Joaquin River Parkway



Other articles of the lease and cooperating agreement that affect the long-range planning of Lost Lake Park include, but are not limited to:

- ◆ The County may construct and maintain other improvements for project purposes and/or general recreation as may be appropriate, provided that such improvements and/or structures do not interfere with the major purposes of creating access to public fishing and protecting significant wildlife habitat.
- ◆ The County may operate, or permit others to operate, concessions, special services, or accommodations that would enhance and benefit public fishing to the end that greater use and enjoyment of the area for such purpose may be provided. Rules and regulations related to these actions shall be administered in accordance with the standards set by the State laws applicable to public fishing areas. The development, maintenance, and operation by the County of such concessions, special services, or accommodations shall be subject to such supervision and direction by the State as may be required by law.
- ◆ Subject to the written approval of the State, the County may restrict public access to certain hours, days and/or seasons, as necessary for continued operation and maintenance of the premises in good condition. During hours of operation, the Park shall be open to all members of the public who comply with park rules and regulations, including payment of the established charges or fees, if any.

The County may make reasonable charges, fees or collections for park entrance, use, concessions, and special services or accommodations provided for the public as the County deems appropriate, subject to the written approval of the State. All charges, fees, collections and profits derived by the County shall be used only to operate and maintain Lost Lake Park or selected other cooperative public access projects between the two agencies within the County.

CHAPTER 3:

THE EXISTING PARK

The developed physical and natural characteristics of Lost Lake Park are summarized in this chapter.

RECREATION AND PUBLIC ACCESS RESOURCES

Recreation Facilities and Use Areas

Figure 3-1 identifies the location of park facilities and use areas. Virtually all the use at Lost Lake Park takes place within about 15 percent of the total park acreage that fronts the San Joaquin River. The park experience generally ignores the upland entry area and areas of former aggregate extraction. Existing formal and informal river access support a variety of recreational activities focused along the river including educational field trips and nature observation, fishing, swimming and wading, hiking, camping, and picnicking. Activities that occur in the upland area include dog training, model airplane flying, and limited use of softball and volleyball facilities.

Most of the Park's facilities and infrastructure were developed in the period between 1950 and 1980, with the exception of the volleyball area which was constructed in the early 1990s. The area south of the existing park entrance road is a bladed field currently used for flying model airplanes which was built as an expanded parking area for the professional and regional volleyball tournaments that took place in the Park for a brief period.

Structures on-site include temporary construction offices located by the entry gate closest to Friant Expressway, two entry gate stations located at the internal entry point and at the camping area, various group picnic shelters, restrooms, two play structures, a corporation yard with several buildings located between Lost Lake and the Audubon Trail, and two small abandoned stone buildings along the river assumed to be associated with previous cable or utility crossings. In addition, remnants of a cable car crossing for the San Joaquin River are located near the northern perimeter of the Park.

The following list provides a brief summary inventory of all park facilities, including those which are currently in disrepair and/or underutilized.

- ◆ Restrooms– 7 (6 working)
- ◆ Camping sites– 40
- ◆ Campground with hook-ups– 7 informal sites, possibly unused
- ◆ Composite playground structures– 2
- ◆ Uncovered group picnic area with large BBQ– 1
- ◆ Parking spots– ~ 150 formal, significant additional capacity for informal

- ◆ Picnic tables– ~89
- ◆ Covered group gathering areas– ~4 of varying size
- ◆ Sand volleyball courts– ~7
- ◆ Softball field– 1
- ◆ ADA accessible parking space with river access– ~1
- ◆ Accessible river access– multiple access points
- ◆ Swimming, wading and fishing areas– multiple access points
- ◆ Walking/hiking trails– multiple access points

Floods in 1997 significantly damaged many of the Park's facilities near the river. These were replaced in approximately 2001. Many of the Park's facilities are located within the river's 100-year floodplain, including camping areas, restrooms and sections of the main access road (see also Traffic and Circulation below). This is inconsistent with the Parkway policies and overall stewardship of water quality within the river.

Utilities

Utilities were mapped in 1997 and are presented in Appendix D. Approximate sizes and locations of existing utilities are based on estimates given by Fresno County park officials, the farm manager for the adjacent private property (part of which is now the Conservancy land included in this project) and the utility plans for the area.

Within the Park, utilities are generally underground. Telephone and electrical service come from Friant Expressway near the park entrance. A series of irrigation pumps, deep wells, and pressure tanks are located throughout the Park and are typically screened with vegetation. Wastewater from restrooms is accommodated either by septic vaults without water or by septic and leach fields. Most restrooms are located within the 100-year floodplain of the San Joaquin River. A U.S. Geological Survey stream gauge is located at the far upstream end of the Park. There are some structures along the river near the campground that have utility connections but it is unclear if they are still actively working.

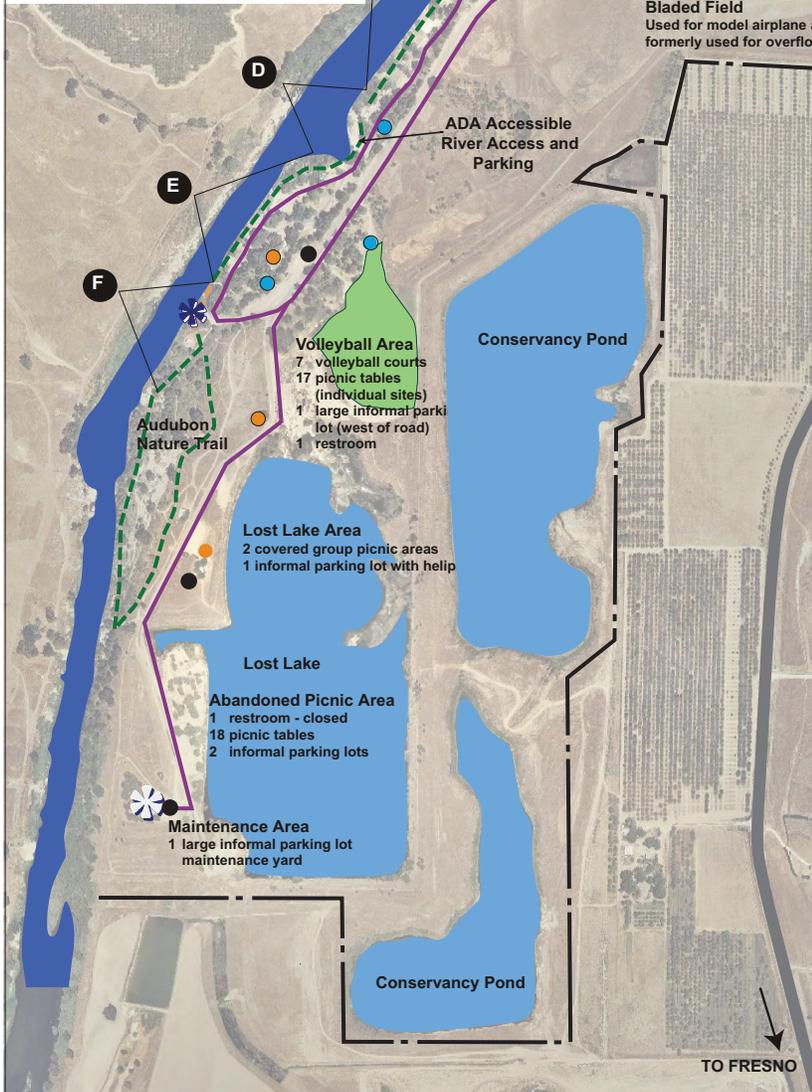
Traffic and Circulation

a. Vehicular

Formal vehicular circulation in Lost Lake Park includes the entry from Friant Expressway and paved access roads. The access roads include the entrance which runs east to west connecting Friant Expressway to the west side of the park, two roads that parallel the river and a spur road that provides access to the maintenance yard and Lost Lake picnic areas. The roads that parallel the river form an elongated loop road that connects from the campgrounds in the north to the group picnic grounds and trailhead for the interpretive trail in the south. Formal parking is provided by striped parking lots throughout the Park as well as road-side parallel parking. The lower loop road and its associated parking are approximately 150 feet from the river. The combined length of the maintained road is approximately 3.3 miles. Paved roads within the camping area are in poor condition due to severe tree root upheaval. Sections of the paved road that connect to the maintenance yard are heavily cracked with vegetation.

EXISTING FACILITIES ALONG THE RIVER CORRIDOR

- A** 1 fee booth with 10 parking spaces
3 restroom buildings
1 group picnic site with brick barbecue
20 camping spaces with bench, trash receptacle, and pull-in (no hook-ups)
20 informal camping spaces on river side
7 informal campsites with spigots (not used)
2 playground structures in median
- B** 1 covered group picnic site
9 picnic tables (individual sites)
5 formal parking spaces
1 restroom building
- C** 50 picnic tables (individual sites)
26 formal parking spaces
1 restroom building
- D** ADA Accessible River Access
11 formal parking spaces
1 restroom building
Informal swimming area
- E** 11 picnic tables (individual sites)
20 formal parking spaces
1 large group picnic area with 2 covered structures
1 restroom building
1 informal parking lot
- F** Canoe/kayak access
Nature Trail staging
10 formal parking spaces
1 informal parking lot
1 small picnic shelter

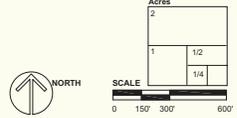


**Figure 3-1
EXISTING PARK FEATURES**

LEGEND (SEE TEXT FOR EXPLANATION)

PARK PLANNING AREA BOUNDARY	PLAYGROUND STRUCTURE
PONDS	GROUP PICNIC AREA
MAINTAINED FIELD	RESTROOM
CAMPING AREA	PUMP OR WELL (see Attachment D)
VEHICULAR ROAD	FACILITY (as labeled)
HIKING TRAIL / FISHING ACCESS	CANOE/KAYAK ACCESS

This drawing is conceptual and for planning purposes only. Program information, scale, location of areas, and other information shown are subject to field evaluation and modification.



DATE: April 7, 2011

Lost Lake Park Master Plan



along the San Joaquin River Parkway



Informal vehicular activities, including off-road driving and parking, are evident throughout the Park. These activities appear to be concentrated along the river corridor where cars are frequently parked, and in the flat upland areas where there is little to obstruct vehicular access.

Friant Expressway was widened to four lanes between 2008 and 2010. This two- to four-lane roadway configuration change was done to improve capacity and level of service, reduce future maintenance costs, and address motorist safety. The existing roadway was resurfaced and left turn/deceleration lanes were added at major access points, including at the entrance to Lost Lake Park.

b. Non-Vehicular

Formal non-vehicular access within Lost Lake Park is currently limited to the pedestrian trail that parallels the river, the Audubon Nature Trail, ADA accessible concrete path to the river's edge, and the canoe/kayak put-in located directly west of the volleyball courts. Although the trailhead for the Audubon Nature Trail is well marked, much of the route lacks definition due to the impacts of flooding and off-trail pedestrian activities.

The Park does not currently provide formal bicycle or equestrian access.

CULTURAL RESOURCES

The numerous bedrock mortars and cupule features found along the San Joaquin River throughout the Park are clear evidence that the Park was inhabited by the Yokut Indians prior to European settlement in the region. Local Native Americans continue to use areas of the Park for harvesting grasses, sedges, and other plants for use in basket making.

A total of two prehistoric, one historic period, and one new historic period trash scatter are documented within the Park. No cultural artifactual remains or other features were identified within Lost Lake Park. Any cultural material previously deposited at these sites would most likely have been washed away by annual flooding of the San Joaquin River prior to the construction of Friant Dam. It is highly unlikely that subsurface cultural components exist in the Park. Prehistoric and historic-period cultural resources are described below.

- ◆ CA-FRE-856 is described as a food processing area with more than 275 bedrock mortar holes in five major granite outcrop areas. Cupules are located at two bedrock milling features. Cupules, commonly referred to as rock art, are small, bowl-shaped indentations located on the vertical sides and edges of the rock that are common throughout many parts of California. No other features or artifacts have been noted at this site.
- ◆ CA-FRE-867 is described as a prehistoric food processing area with six major areas of granite bedrock outcrops containing mortar holes. No midden or surface artifacts have been noted at this site.
- ◆ CA-FRE-3109H is recorded as a railroad grade with associated features at the eastern boundary of the Park adjacent to Friant Expressway on its eastern slope. The site does not extend into the Park.

- ◆ (Temporary LL-1) was recorded as a historic trash scatter with two loci of debris located where Lost Lake Road dead-ends at the southernmost portion of Lost Lake Park. This site consists of a historic trash scatter that is probably associated with past agricultural activities in the area and most likely dates to the 1940s based on material types present. The trash scatter in Locus 1 contains several glass shards in a variety of colors (e.g., clear, amber, green, blue), porcelain fragments from a toilet, china fragments, metal fragments, wire cable, barbed wire bundles, at least two large sanitary food cans, clear plastic fragments, at least three broken bricks, and a bundle of wire fencing. Locus 2 contains a metal spiral tiller, a wooden post, and at least two pipes. The trash scatter has been disturbed by road construction and erosion.

NATURAL RESOURCES

Climate

Lost Lake Park experiences a Mediterranean climate with hot, dry summers and cool, moist winters. On average, the region receives 14 inches of precipitation per year, most of which falls between October and March. During summer months, the average high temperatures are above 90 degrees Fahrenheit and low temperatures range between 60 and 65 degrees Fahrenheit. During winter months, average high temperatures range between 50 and 60 degrees Fahrenheit and low temperatures average around 40 degrees Fahrenheit.

Climate is one of the reasons for the popularity of the existing park use areas. The waters of the San Joaquin River and the shaded zone adjacent to the river provide a relatively cool microclimate during the hot summer months. The lack of shade elsewhere in the Park discourages use.

Soils

Soils in the Park consist of alluvium derived primarily from the Sierra Nevada, and thus reflect soils found throughout the San Joaquin Valley. A hardpan layer has developed two to six feet below the surface in some areas which can lead to ponding and the formation of vernal pools. Although vernal pools would normally be expected to occur in the Park, no ponding is evident in areas within the Park containing the characteristic soil (Merced Clay Moderately Saline). No vernal pools now exist in the Park, likely due to heavy on-site disturbance including sand and gravel extraction. Ponding was evident at the time of study in depressions within pits, but this ponding is most likely the result of the fluctuating water table.

Geology

Mining for sand and gravel has played a significant role in shaping Lost Lake Park over the last seventy years. Lost Lake itself was created by extracting sand and gravel for the construction of Friant Dam in the 1940s. Additional ponded pits have been created in the Park as well as on the Conservancy property because of aggregate extraction. The steep slopes and large pits that exist in

the Park today are a result of these activities. These areas currently support some habitat; however, the steep slopes pose a hazard for park visitors and lessen the habitat diversity that a relaxed slope would provide.

As part of the master planning process an aggregate extraction suitability assessment was prepared (2M Associates). Significant aggregate reserves likely exist within the Park. Portions of Lost Lake Park owned by Fresno County are identified in the County General Plan as a Mineral Resource Zone-2 (MRZ-2). Additionally, the entire Park plus lands leased from the California Department of Fish and Game have been identified by the State as potentially MRZ-2. The MRZ-2 designation relates to areas where adequate information indicates that significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists.

Hydrology

Lost Lake Park has several major hydrologic features, including the San Joaquin River, Lost Lake and other ponded basins.

a. San Joaquin River

The low-water surface elevation of the San Joaquin River is approximately 298 feet at the upstream end of Lost Lake Park and approximately 288 feet at the Park's downstream end. Roughly centered in the Park is a historic rock dam whose original design was intended to supply a canal system. The 1-mile reach from the upstream edge of the Park to the rock dam involves a 4-foot change in gradient and is essentially a flat water pool. Each side of the dam has crumbled, creating a small rapid that drops approximately 2 feet. From there downstream to the southern end of the Park, the gradient drop is approximately another 4 feet with some riffles, but in a reach that is only partially accessible via the existing Audubon Nature Trail.

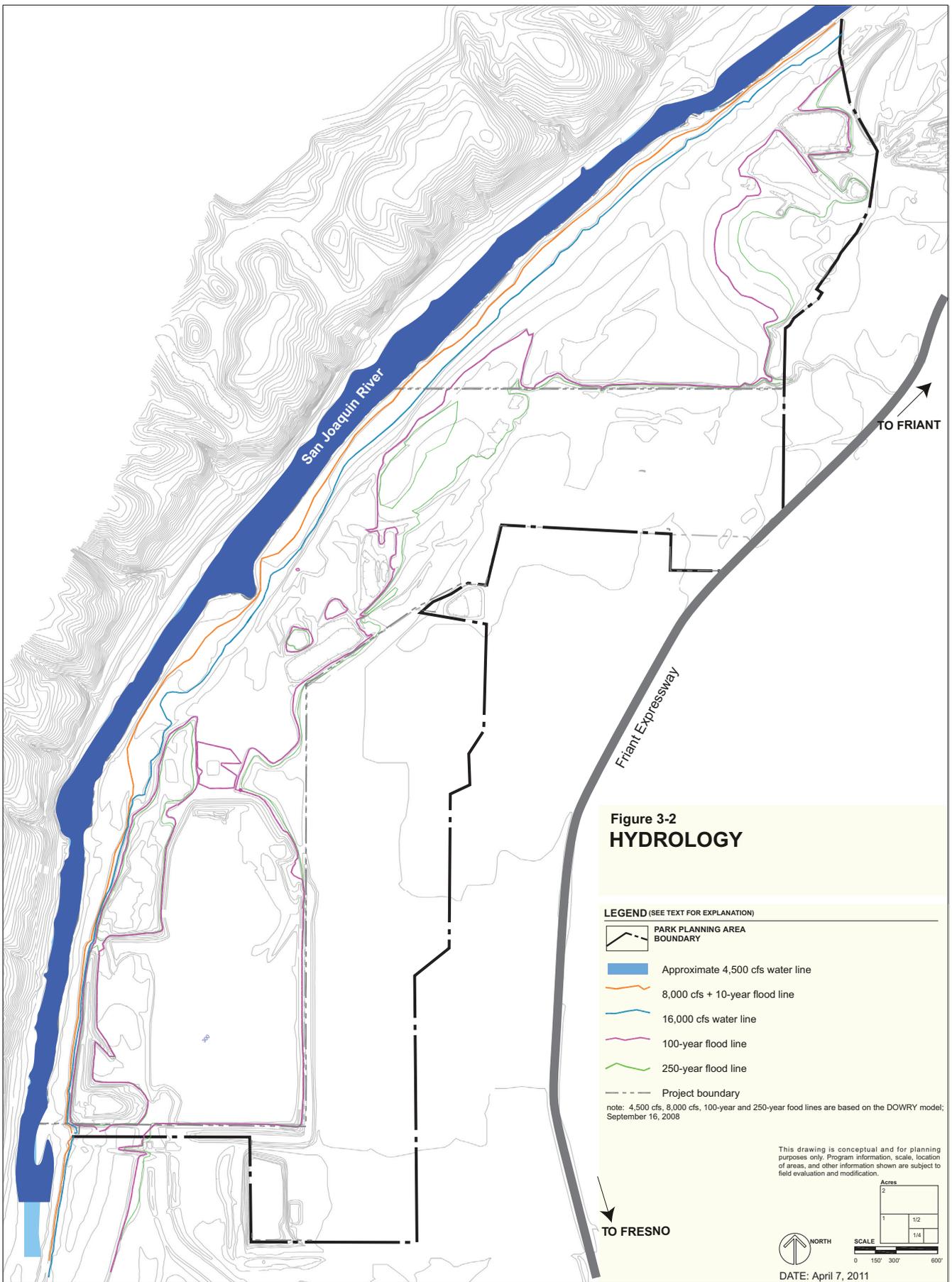
b. Millerton Lake, Friant Dam, and the San Joaquin River Restoration Program

The San Joaquin River's flows are controlled by releases from Friant Dam as operated by the U.S. Bureau of Reclamation. Seasonal fluctuations have significant influence on the Park's lowland area. The operations of the dam and reservoir have reduced the overall floodplain of the river and restricted sediment transport. Lost Lake Park is within Reach 1A of the San Joaquin River Restoration Project, which is designated for spawning and rearing habitat for the Chinook salmon. Figure 1-2 indicates the Restoration Program releases from Friant Dam as identified in the settlement agreement. These releases do not constrain the U.S. Bureau of Reclamation from higher flow releases if required for operating the dam. Figure 3-2 indicates how these releases affect the existing Park.

c. Flooding

The highest recorded discharge in the San Joaquin River was 77,200 cubic feet per second (cfs), which occurred on December 11, 1937. The most recent high flow event was 60,300 cfs, which occurred on January 03, 1997. This latter event significantly damaged the Park's facilities.

During flood conditions, much of the Park's existing infrastructure, facilities and roads can be inundated. Lost Lake and other ponded pits and seasonal wetlands may also be filled during



Lost Lake Park Master Plan



along the San Joaquin River Parkway



flooding, and therefore connected by surface water to the San Joaquin River. This can result in entrapment of native fish in the Park's ponds. Water levels in Lost Lake and the ponds on the adjacent Conservancy property are affected by a fluctuating ground water level.

The State of California Department of Water Resources (DWR) was tasked with developing a hydraulic model for the San Joaquin River from the State Route 99 Bridge to Friant Dam in July, 1999. The purpose of the model was to update the Federal Emergency Management Agency's Flood Insurance Rate Maps for the San Joaquin River as the result of the peak flows caused by the January, 1997 flood event.

Figure 3-2 shows the limits of the water surface profile for the base flood within the Park, which is the 100-year recurrence interval peak flow event as well as at other flow intervals. When river flows approach 8,000 cfs the existing lower park road and riverside use areas are flooded.

Biologic Resources

With the exception of the existing nature area that contains the Audubon Nature Trail and the relatively small strip of riparian forest along the San Joaquin River downstream from the nature area, virtually all of the Park is a disturbed landscape. Modifications to the natural landscape have been predominantly through past sand and gravel mining operations or park development.

a. Habitats

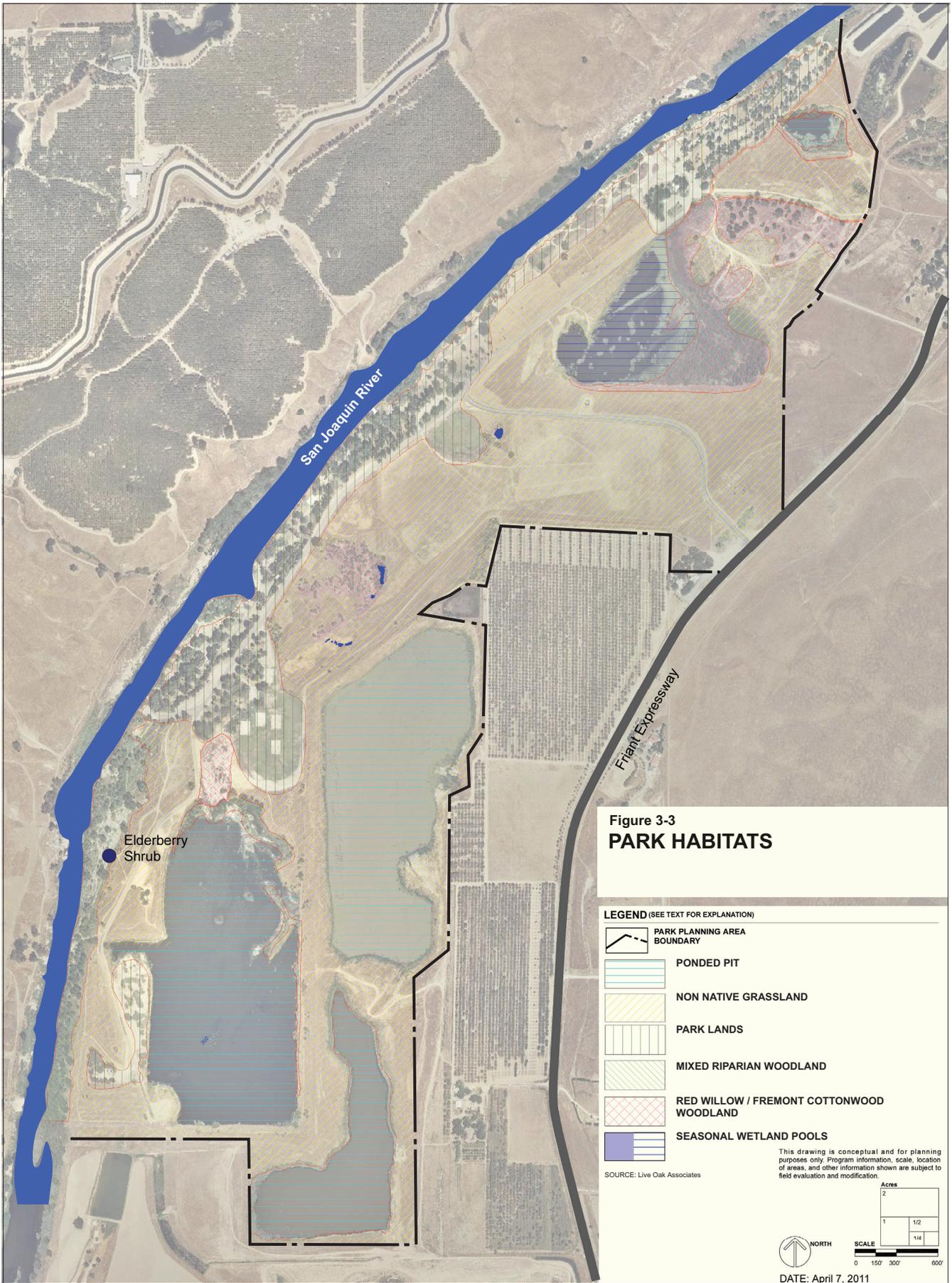
Six major habitat types found with the Park are described below and shown in Figure 3-3.

Non-Native Grasslands

The study area contains large areas of heavily disturbed non-native grassland. Past disturbances include grading and excavating. This grassland is used as an open space area for park recreation and includes a large, bladed field at the entry that served as an overflow parking area in the past. Grasses and forbs of European origin dominate this habitat. Grasslands also have the potential to support a large variety of native spring-flowering annuals and perennials. Annual grasslands of the Park, like grasslands throughout the region, are productive biotic habitats supporting a large diversity of native terrestrial vertebrates. Grasslands of the region provide significant foraging habitat for a variety of resident and wintering raptors, as well as large numbers of other birds. Furthermore, the dense growth of native and non-native grasses and forbs provide cover for large populations of small mammals that in turn attract a diversity of predatory species.

Ponds

There are approximately 108 acres of ponded areas within the Park. Lost Lake, a low area just north of the entrance road and a small pond at the north end of the Park adjacent to the campground are mined lands that were never reclaimed. In many cases excessively steep slopes remain. These areas have experienced heavy human disturbance. Since these excavated pits were abandoned, natural habitats have established in these areas. Two ponds east of Lost Lake on Conservancy property were reclaimed with pond slopes averaging between 2:1 and 3:1 (horizontal:vertical). Depending on the time of year, the amount of winter rainfall, and groundwater levels, these ponded areas may support aquatic, wetland, riparian, and/or upland habitat.



Lost Lake Park Master Plan



along the San Joaquin River Parkway



Parkland

The Park consists of a highly manicured day-use lawn area with an overstory of planted native and non-native tree species, a 40-site campground at the north end of the site that consists of paved and compacted dirt surfaces, as well as grassy areas, with an overstory of planted native and non-native tree species. Associated infrastructure for the Park consists of roads, maintenance yards, restroom facilities, picnic tables and parking stalls. Vegetation occurring within the Park consists primarily of species planted and maintained by park personnel. Many exotic and native tree species exist in this habitat. Several different ornamental shrubs and flowering plants are scattered throughout the Park. Maintained lawn covers large portions of ground. Because of the close proximity of the San Joaquin River and riparian vegetation along the river's edge, this habitat is expected to be used by a number of amphibians, reptiles, birds, and mammals.

Mixed Riparian Woodland

Mixed riparian woodland occurs in and immediately adjacent to the Park along its western boundary fronting the San Joaquin River. Within the Park, this woodland consists of a non-continuous stand of riparian trees interspersed among native and non-native shrubs along the east bank of the San Joaquin River and around the perimeter of ordinary high water of the ponded pits. The diversity of terrestrial vertebrates using the mixed riparian woodland is expected to be considerable. The structural diversity of this habitat (i.e., the many canopy layers), the presence of open water, and the large populations of invertebrates found in aquatic habitat ensure that cover and food are available.

Red Willow/Fremont Cottonwood Woodland

This area consists of an open canopy of red willow (*Salix laevigata*) and Fremont cottonwood (*Populus fremontii*) trees, a scattered shrub layer consisting of mule fat (*Baccharis salicifolia*) and tree tobacco (*Nicotiana glauca*), and an herbaceous understory consisting of upland vegetation in some areas and wetland vegetation in other areas. This habitat occurred in low gradient areas of the Park created by past excavation activity. These low-lying areas provide shrub and tree roots easier access to an already low water table as well as concentrating surface water in these low areas. As a result some areas within the red willow/Fremont cottonwood contained wetlands while other areas in this habitat exhibited upland characteristics. Wildlife found in this area would likely be much the same as those species found in other habitats of the Park.

Seasonal Wetland Pools

Approximately 12 acres of seasonal wetland pools are found within the Park. For the purposes of this Master Plan, "wetlands" are those areas meeting the wetland definition in the 1987 Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987). According to this definition, wetlands are, "Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions." Seasonal wetland pools in the Park are formed in depressions that accumulate a sufficient amount of water to meet the conditions stated above. Most of these depressions appear to have been artificially created through past sand and gravel mining operations or park development. Seasonal wetland pools in the Park likely support a number of aquatic and terrestrial animal species.

b. Wildlife Movement Corridors

Wildlife movement corridors are areas where regional wildlife populations regularly and predictably move during dispersal or migration. Such geographic and topographic features are present in the Park in the form of the San Joaquin River corridor. A number of wildlife species are expected to make use of this corridor for regular and seasonal movements. For example mule deer are known to make use of the cover and forage offered by the river corridor in order to facilitate movement deeper into the Central Valley San Joaquin River corridor. Also, a number of migratory birds move along the San Joaquin River corridor, where they find cover and food during their migratory journey. Other migratory birds may use the river corridor as a resting and/or feeding point during north-south migration. Consequently, the river corridor is considered a significant wildlife movement corridor

c. Sensitive Resources

Natural Communities of Special Concern

The Park supports areas of mixed riparian woodland. Although this habitat type does not meet the California Department of Fish and Game's requirements of a "natural community of special concern", all riparian areas are considered an important resource for regional wildlife populations. As such, mitigations for impacts to riparian areas will be required. The Park's most abundant habitat, non-native grassland, is regionally abundant and is not considered a natural community of special concern.

d. Sensitive Species

Vernal Pool Fairy Shrimp (Branchinecta lynchi)

The Vernal Pool Fairy Shrimp is an invertebrate species occurring in vernal pools and other seasonal aquatic habitat throughout California's Central Valley, and is listed as a Federally Threatened species. Although this species has not been documented in the Park, it has been documented on adjacent land. Several of the seasonal pools that occur in the Park provide possible habitat for this species.

Valley Elderberry Longhorn Beetle (Desmocerus californicus dimorphus)

Listed as Federally Threatened, the Valley Elderberry Longhorn Beetle (VELB) occurs at scattered locations throughout much of California's Central Valley, as well as the Sierra foothills below 3,000 feet. The obligate host plant of the VELB is the elderberry (*Sambucus mexicana*). One elderberry shrub was identified in the Park during the 2007 protocol level survey. The USFWS considers all elderberry shrubs within the VELB's range to be occupied by the VELB, even when exit holes are absent from mature stems, as is the case for Lost Lake Park's elderberry.

California Tiger Salamander (Ambystoma californiense)

The California Tiger Salamander (CTS) is listed as a Federally Threatened species that occurs in Madera and Fresno Counties where vernal pool complexes are located within extensive grassland habitats. The CTS is also designated as threatened under the California Endangered Species Act. The Park contains several seasonal pools that could provide breeding habitat for the CTS including the large seasonal pool north of Lost Lake Road and a smaller seasonal pool south of Lost Lake Road. Rodent burrows in grasslands in the Park could provide aestivation habitat for this species. The CTS has been documented in vernal pools directly east of the study area. Because potential CTS breeding pools are located near the center of the Park and the U.S. Fish and Wildlife Service

considers most upland areas within a 1.24 mile radius around breeding pools to be possible aestivation habitat, all upland areas of the Park containing rodent burrows are considered potential CTS aestivation habitat. This amounts to nearly all upland habitat in the Park.

*San Joaquin Kit Fox (*Vulpes macrotis mutica*)*

The Federally Endangered and California threatened San Joaquin kit fox once occurred throughout much of the San Joaquin Valley, but this species favored areas of alkali sink scrub and alkali grassland in the trough of the San Joaquin Valley and Tulare Basin, as well as areas further west. The nearest confirmed record of a kit fox population is located in western Madera County approximately 40 miles away. Given the lack of evidence suggesting the presence of any kit fox populations in the vicinity, it is unlikely that kit fox would occur in the Park. However, the U.S. Fish and Wildlife Service maintains that the eastern portions of the San Joaquin Valley in Madera and Fresno Counties constitute San Joaquin kit fox habitat.

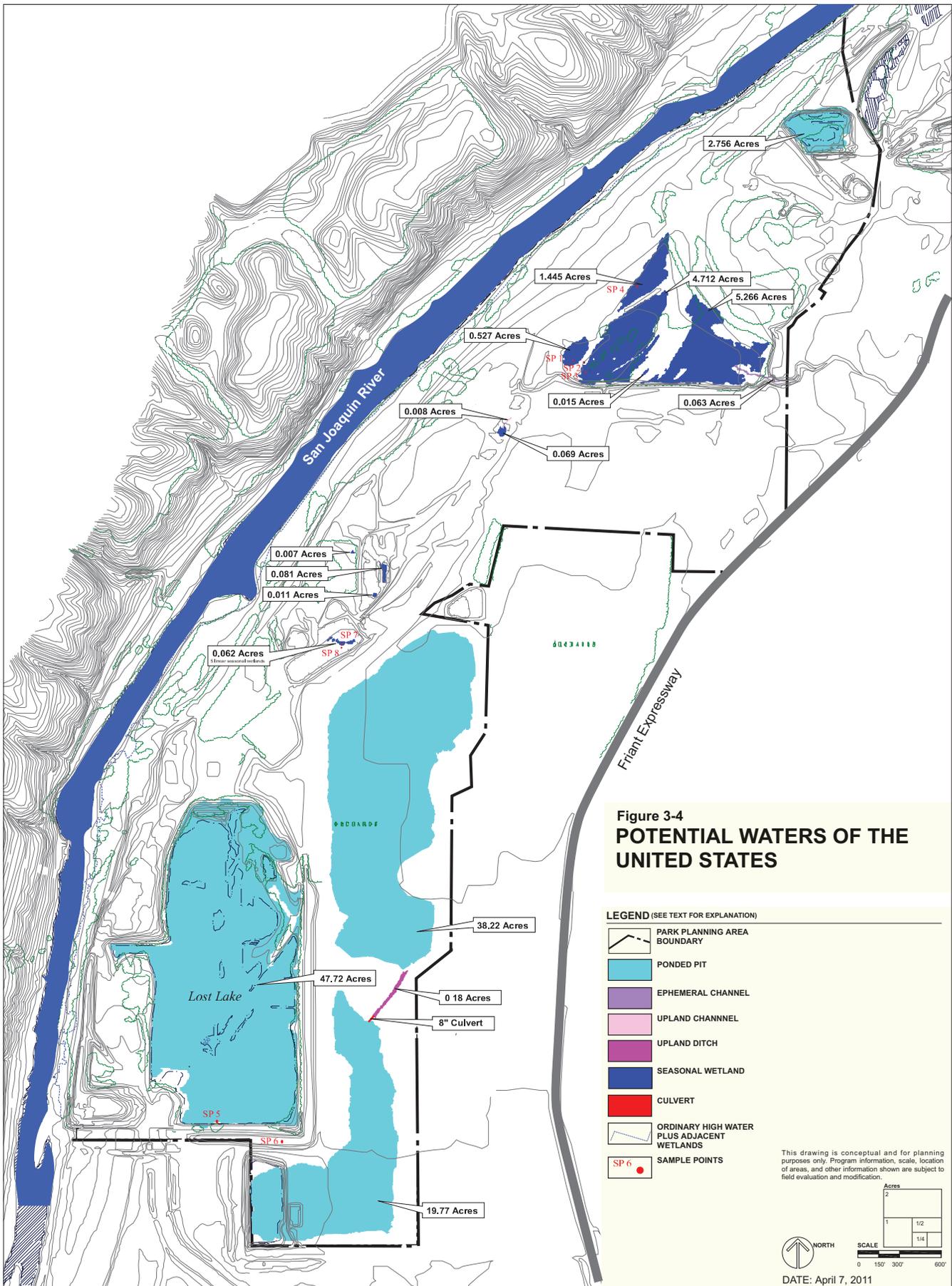
Nesting and Migratory Birds

Special status birds potentially nesting in the Park include a variety of raptor and passerine species that may nest in trees or shrubs, plus ground nesting birds such as the burrowing owl, meadowlark, California horned lark and killdeer which may nest in the grasslands. If active nests are found during park development, suitable avoidance measures should be drafted in consultation with the California Department of Fish and Game to ensure protection of adult and juvenile birds.

e. Jurisdictional Waters

Figure 3-4 illustrates the potential jurisdictional wetland areas of the Park. All seasonal wetlands, seasonal drainages, and ponds in the Park would likely be considered Waters of the United States.

Additionally, all drainage channels of the Park would be within the jurisdiction of the California Department of Fish and Game.



Lost Lake Park Master Plan



along the San Joaquin River Parkway



CHAPTER 4:

VISION, GOALS, AND GUIDELINES

The vision, goals, and guidelines for Lost Lake Park described in this section reflect the adopted policies of Fresno County and the San Joaquin River Conservancy for the San Joaquin River Parkway. The vision, goals, and guidelines were developed and refined through detailed site analyses and an extensive participation program involving County representatives, resource and regulatory agency representatives, and the general public.

GUIDING VISION

Lost Lake Park is the hallmark "park" of the San Joaquin River Parkway. The Park reflects its original purpose as a public fishing area, embraces the resource management principles of the Parkway, and is envisioned to become a place where individuals, families, and groups large and small can:

- ◆ safely interact with the river's waters and environment;
- ◆ begin their river experience along the Parkway's trails and the river itself;
- ◆ learn about the river, its habitats, and its wildlife;
- ◆ have the opportunity to enjoy solitude within a riverine environment; and
- ◆ have the opportunity to recreate together in a shaded, naturalistic landscape.

As a regional recreation area, Lost Lake Park will be known for sustainability and for offering a wide variety of outdoor recreation experiences. As a local asset, Lost Lake Park will be known by its nearby neighbors as Friant's backyard on the river, a gateway for the town, and where the community plays.

GOALS AND GUIDELINES

This section presents goals and guidelines for implementing the Master Plan. While some of the goals and guidelines apply to the entire project, others are specific to discrete planning areas or activities. Goals and guidelines are defined as follows:

- ◆ Goal refers to a general, overall, and ultimate purpose, aim or intent toward which management will direct effort.
- ◆ Guideline refers to a general set of parameters that provide clear direction for accomplishing goals.

Fundamental Park-Wide Goals

- ◆ Ensure consistency with the goals and policies of the San Joaquin River Parkway Master Plan and the County General Plan.
- ◆ Develop the Park as the San Joaquin River Parkway's primary recreation area and gateway to the San Joaquin River.
- ◆ Preserve and enhance the Park's natural and cultural resources for the enjoyment and education of visitors.
- ◆ Develop the Park as an integral public amenity for the Community of Friant.

Natural Resource Management

a. Hydrology

Goal

- ◆ To reflect the river's dynamic hydrology in reclaiming the Park's disturbed lands and in providing new facilities and use areas.

Guidelines

- ◆ **Hydrology 1:** Restore the San Joaquin River natural floodplain to the greatest extent practical and allow for stable hydro-geomorphic processes beneficial to the preservation of a sustainable riparian habitat corridor.
- ◆ **Hydrology 2:** Site new structures within the Park and the Parkway Multi-use trail above the 100-year floodplain.

b. Vegetation

Goals

- ◆ To establish a diverse vegetation mosaic of native plant associations.
- ◆ To enhance a continuous riparian corridor along the San Joaquin River.
- ◆ To enhance the Park's entrance experience and the overall park image as a riverside setting.
- ◆ To provide shade for active and passive recreation use areas, the river, and the Park's wetland areas.
- ◆ To screen views between selected use areas and surrounding land uses.

Guidelines

- ◆ **Vegetation 1:** Preserve existing elderberry shrubs (*Sambucus mexicana*) by establishing buffer zones around each to prevent soil compaction and potential damage from recreation facility development and use.

- ◆ **Vegetation 2:** Develop park features with minimal disturbance to existing riparian vegetation immediately adjacent to the San Joaquin River and riparian and wetland vegetation within reclaimed lands owned by the Conservancy.
- ◆ **Vegetation 3:** For any new tree and shrub plantings, use species that are native to the region and complement the Park's diverse habitats. Select species from the Master Plant List for Lost Lake Park.
- ◆ **Vegetation 4:** Incorporate climate-appropriate and water-efficient species to reduce the amount of water used for irrigation.
- ◆ **Vegetation 5:** Provide monitoring and maintenance to ensure the long-term health and survival of native plant associations.
- ◆ **Vegetation 6:** Over time, remove non-native trees and shrubs and replace with native species
- ◆ **Vegetation 7:** Manage invasive plant species through mechanical means.

c. Wildlife

Goal

- ◆ To manage and enhance the Park's biological resources to encourage native bio-diversity, preserve resources, and protect habitats in cooperation with a variety of partner agencies and interest groups.

Guidelines

- ◆ **Wildlife 1:** Identify, establish, and maintain functioning habitat corridors that extend for the length of the Park.
- ◆ **Wildlife 2:** Enhance natural resources through active stewardship programs and adaptive management strategies based upon the most current and reliable scientific information.
- ◆ **Wildlife 3.** Site, design and construct Park features to avoid existing populations of special-status, and State or federally threatened or endangered plants and animals where possible. When special-status species cannot be avoided, implement appropriate mitigation measures.
- ◆ **Wildlife 4.** Protect nesting birds and their nests through pre-construction surveys and avoidance.
- ◆ **Wildlife 5.** Implement the project so as not to interfere substantially with the movement of any native resident or migratory fish or wildlife species. Design the reclaimed floodplain to prevent formation of fish entrapment areas.
- ◆ **Wildlife 6.** In order to determine the presence of CTS in the Park, protocol level surveys will be conducted.

d. Cultural Resource Management

Goal

- ◆ To preserve and enhance the Park's cultural resources for the enjoyment and education of visitors.

Guidelines

- ◆ **Cultural 1.** Avoid disturbance of all bedrock milling sites and other known cultural resources within the Park.
- ◆ **Cultural 2.** Precede actions requiring extensive ground disturbance within or adjacent to the bedrock milling sites with additional archaeological review and monitoring as appropriate.
- ◆ **Cultural 3.** Interpret significant archaeological, paleontological, historical, and cultural resources.
- ◆ **Cultural 4.** Permit sustainable harvesting of plants by Native Americans for cultural uses and activities.

Recreation

Goal

- ◆ To provide access to the San Joaquin River.
- ◆ To disperse visitor use throughout the Park.
- ◆ To ensure that Park visitors enjoy a wide variety of safe outdoor recreation and educational experiences that can be associated with the San Joaquin River Parkway.

Guidelines

- ◆ **Recreation 1:** Retain existing recreation uses.
- ◆ **Recreation 2:** Provide an interconnected system of trails, use areas, and facilities that are directly related to or benefit from the natural, cultural, or historic resources of the San Joaquin River and the overall San Joaquin River Parkway.
- ◆ **Recreation 3:** Provide expanded day use areas and related support facilities for family, group, and occasional event uses.
- ◆ **Recreation 4:** Expand existing overnight camping facilities.
- ◆ **Recreation 5:** Develop trails, use areas, and facilities in shaded settings that are conducive to all-season use.
- ◆ **Recreation 6:** Develop a segment of the San Joaquin River Parkway's continuous, multi-use trail for the length of the Park.

- ◆ **Recreation 7:** Balance recreational opportunities in the Park with resource conservation efforts. Develop adequate parking and recreation facilities in conjunction with each use area and its intended purpose.
- ◆ **Recreation 8:** Provide a variety of recreational trails in the Park that offer opportunities for recreation, river access, education, and wildlife observation.
- ◆ **Recreation 9:** Design multi-use trails to be accessible to a variety of users, including pedestrians, bicyclists, wheelchair users, and equestrians, consistent with the San Joaquin River Parkway Master Plan.
- ◆ **Recreation 10:** Design roads, parking areas, and trails to avoid native trees where possible, limit erosion and protect water quality.
- ◆ **Recreation 11:** Allow dogs in the Park, subject to the following:
 - Leashes will be required on all dogs, with the exception of dogs in any off-leash dog area.
 - Dogs will be prohibited on trails passing through sensitive areas. Specific trails on which dogs will be prohibited will be signed accordingly.
- **Recreation 12:** Prohibit all hunting and/or use of firearms within the Park consistent with County regulations.
- **Recreation 13:** Develop a gating system to allow closure of portions of the Park as warranted during seasonal flooding.

Access

Goals

- ◆ To continue providing convenient access to the river and each recreation use area.
- ◆ To expand circulation systems to accommodate new uses.
- ◆ To provide for efficient park management and emergency access.

Guidelines

- ◆ **Access 1:** Design all roads and trails to minimize disturbance of the Park's natural and cultural resources.
- ◆ **Access 2:** Utilize existing road alignments wherever it is possible to do so without compromising the greater intent of the Park Master Plan.
- ◆ **Access 3:** Retain the existing vehicular entrance to the Park from Friant Expressway as the singular park entrance, with a 30-foot by 30-foot minimum clear area at the entry for visibility.
- ◆ **Access 4:** Develop a secondary emergency access and maintenance route to meet Fresno County standards.

- ◆ **Access 5:** Provide formal parking areas in association with each use area, and overflow parking for special events. Provide accessible parking spaces as required by law and in proximity to the river and the fish hatchery trail.
- ◆ **Access 6:** Provide non-vehicular access to all park facilities and use areas.
- ◆ **Access 7:** Provide safe and convenient bicycle parking in association with all use areas.
- ◆ **Access 8:** Design and develop all structures, trails, and use facilities to meet accessibility guidelines as outlined in the latest edition of the California State Parks *Accessibility Guidelines*.

Utilities

Goals

- ◆ To locate restrooms above the 100-year floodplain.
- ◆ To provide water, wastewater and electrical service to park use areas that meet current standards and use sustainable design principles.

Guidelines

- ◆ **Utilities 1:** Provide domestic water via on-site wells.
- ◆ **Utilities 2:** Require water storage to be in accordance with State and local regulations and evaluate based on the number of proposed service connections, the number of users expected to be served, and the production capacities of the wells.
- ◆ **Utilities 3:** Observe County of Fresno separation requirements in the construction of the potable water and wastewater disposal systems.
- ◆ **Utilities 4:** Construct restrooms to be above the 100-year floodplain and service by a septic tank and leach field system. Construct leach fields outside of the 100-year floodplain. Size and construct all septic systems per County standards.
- ◆ **Utilities 5:** During large events, use on-site portable toilets to accommodate the increased number of visitors.
- ◆ **Utilities 6:** Obtain water for irrigation and fire fighting purpose from the San Joaquin River.
- ◆ **Utilities 7:** Install fire hydrants on site per Fire Department standards. Equip facilities required for fire fighting purposes with a backup generator.
- ◆ **Utilities 8:** Provide exterior security lighting only at the park entrance and the park entrance station. No other exterior lighting will be permitted in the Park.
- ◆ **Utilities 9:** Design electrical facilities to maximize sustainability and equip with high efficiency LED lamps to reduce energy consumption. Restroom and other building interior lighting will be powered by solar panels attached to the roofs of the buildings to the extent possible.

Land Use Compatibility

Goal

- ◆ To respect privacy and security of adjacent properties.

Guidelines

- ◆ **Land Use 1:** Provide a buffer with vegetative screening along common property lines.
- ◆ **Land Use 2:** Provide security fencing as necessary along common property lines.
- ◆ **Land Use 3:** Sign all park boundaries.

Community Amenity

Goal

- ◆ To recognize the importance of the Park as a community amenity for the Town of Friant and assure that community access is provided.

Guidelines

- ◆ **Community 1:** Provide bicycle and pedestrian access to the Park from the Town of Friant.
- ◆ **Community 2:** Develop an area of the Park that will serve both regional and local outdoor recreation needs.

Education

Goal

- ◆ To provide an interconnected system of features that will foster education and research about the ecology of the San Joaquin River and its riparian corridor, the overall Park, and the need to steward these resources.

Guidelines

- ◆ **Education 1:** Provide informational signs to orient visitors and identify park rules at the park entrance, staging areas, trail intersections, and river access points for non-motorized boating.
- ◆ **Education 2:** Develop a park and interpretive nature center themed on the Park's resources in the context of the San Joaquin River Parkway, Native American habitation of the Park's river setting, and the San Joaquin River Restoration Program. The center would include classroom facilities and/or multi-use space to accommodate educational programs.
- ◆ **Education 3:** Expand and enhance the existing Audubon Nature Trail with additional loop trail opportunities and themes for varying educational levels.
- ◆ **Education 4:** Prepare an Interpretation Master Plan to develop and guide interpretive and educational services in the Park.

Operations, Management, Funding, and Implementation

Goal

- ◆ To assure adequate funding of capital improvements, operations, and maintenance.

Guidelines

- ◆ **Operations 1:** Provide opportunities for partnership programs with the private sector through concession or lease agreements.
- ◆ **Operations 2:** Undertake collaboration efforts to obtain adequate protection and funding for the initiation and long-term administration of natural resource management programs in the Park.
- ◆ **Operations 3:** Encourage cooperation with partner agencies, non-profit organizations, and recreation interest groups to provide outdoor recreation, education and interpretation uses and facilities to meet the goals of the Park and, where possible, the mutual goals of these agencies and organizations.
- ◆ **Operations 4:** Establish park use fees commensurate with similar facilities in the region.

CHAPTER 5:

MASTER PLAN

This Master Plan is a long-term road map for changes that could occur in Lost Lake Park over a 20- to 30-year horizon. It is a phased master plan that is organized into four steps of improvements to both facilities and resource enhancements.

USE AND MANAGEMENT ZONES

Figure 5-6, Illustrative Master Plan illustrates improvements that would be made after all phases of the Master Plan are complete. As shown in Figure 5-1, the Master Plan is organized into six management zones to facilitate park development and operations. Key features of these areas and their general planned purposes are described below:

- ◆ **San Joaquin River Recreation Area:** This zone parallels the river and includes the existing developed day-use area and the undeveloped area immediately upstream. Minor upgrade modifications are envisioned for the existing day-use facilities. Features will be expanded and enhanced to emphasize family and group day-use and will include additional parking, better access and passage for non-motorized boats, and additional developed use areas and support facilities.
- ◆ **Lost Lake Campground:** This zone encompasses the northern portion of the Park and includes the existing campground area and an expanded use area to the east. The existing campground will be retained and upgraded. The existing degraded area to the east will be reclaimed to include new camping sites with full utility hook-ups that would be constructed outside of the San Joaquin River 100-year floodplain. A commercial multi-use facility for large group events would be developed overlooking a restored seasonal wetland area. The facility would include a 5,000- to 7,000-square-foot indoor pavilion with commercial catering kitchen and related outdoor use area.
- ◆ **Lost Lake Natural Reserve Area:** This zone encompasses the southern portion of the Park and the area that now includes Lost Lake. The existing Audubon Nature Trail and riparian area adjacent to the San Joaquin River will be preserved. The river floodplain will be restored and planted with riparian vegetation. Facilities in this area will be limited to foot trails, including an expanded nature trail system.
- ◆ **Uplands Recreation Area:** Located in the southeast portion of the Park this zone includes lands owned by the San Joaquin River Conservancy, two previously mined basins, and surrounding lands. The area will generally be developed as an expanded upland recreation area with a variety of day-use features and a nature center. Improvements in this area will include an equestrian staging area, a relocated model airplane flying area, and picnic areas. In addition, a 3,000- to 10,000-square-foot Interpretive/Culture Center would be established in this area adjacent to the Lost Lake Natural Reserve.

- ◆ **Friant Community Park:** An area on the eastern side of the Park immediately adjacent to Friant Road will be easily accessible to the residents of Friant by foot or bicycle. Ultimately the area could be developed as a "park within a park" providing facilities for both passive and active recreation. In addition to being easily accessible to the residents of Friant, this approximately 47-acre "park within a park" will offer opportunities to stage regional events associated with the overall San Joaquin River Parkway.
- ◆ **Parkway Multi-Use Trail:** Providing non-vehicular access to all use and management zones will be an approximately 2-mile section of the San Joaquin River Parkway multi-use trail. The trail will be located adjacent to and above the 100-year floodplain of the San Joaquin River, generally separating it from the upland areas of the Park.

With the exception of the Lost Lake Campground, all management zones will be for day use only. The entire Park would be open for public access throughout the year, unless closed for safety purposes due to flood threats.

PARK-WIDE IMPROVEMENTS

Improvements and programs identified by the Master Plan are described below.

Access

All roads and trails will be designed to minimize disturbance of the Park's natural and cultural resources, and the existing road alignment is utilized wherever it is possible to do so without compromising the greater intent of the Master Plan. Vehicular access will be limited to formal roads and parking areas, with designated areas for roadside parallel parking. At buildout of the Master Plan, there will be approximately 1,500 parking spaces and 5.1 miles of road.

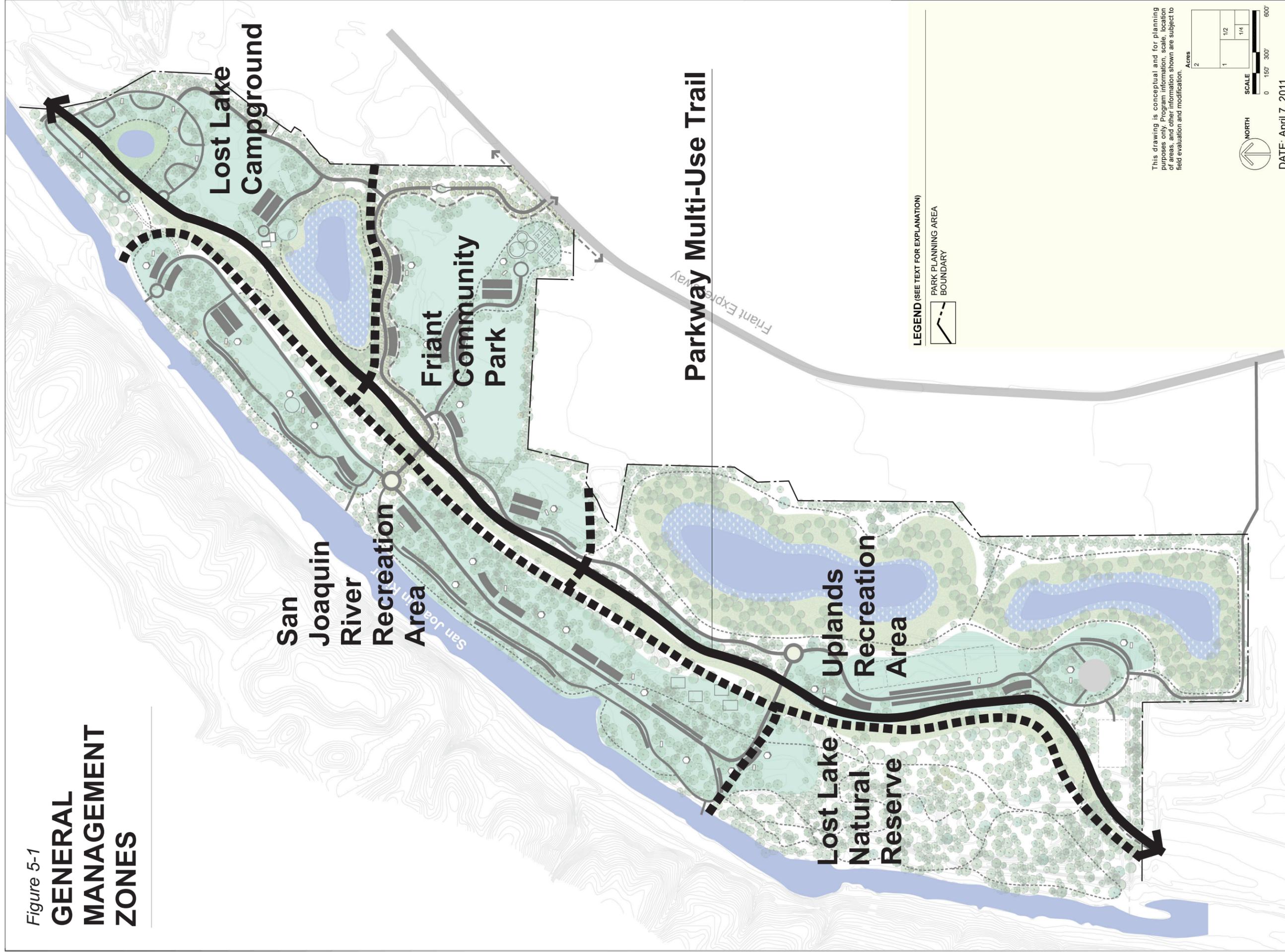
a. Vehicular

The existing vehicular entrance to the Park from Friant Road will be retained as the main park entrance. A secondary emergency access route will be developed from Friant Expressway along the southern boundary of the Park in an easement leading owned by Conservancy.

The entry road for the Park is defined as the segment of road that leads from Friant Road to the western roundabout in the San Joaquin River Recreation Area of the Park, and will be lined with native trees. A spur road off the entry road gives access to the Lost Lake Campground. The western roundabout provides access to Friant Community Park and the Uplands Recreation Area. In addition, the western roundabout at the terminus of the entry road connects with the loop road that provides river access within the San Joaquin River Recreation Area. A second roundabout, located near the Interpretive/Cultural Center, will provide an additional connection between the San Joaquin River Recreation Area and the Uplands Recreation Area.

Figure 5-1

GENERAL MANAGEMENT ZONES



Lost Lake Park Master Plan



along the San Joaquin River Parkway

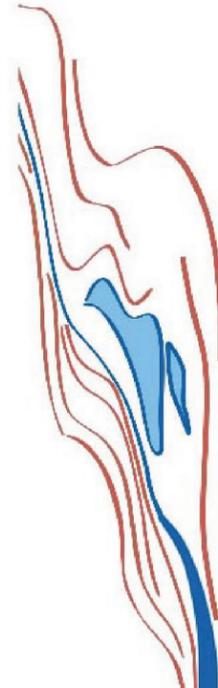
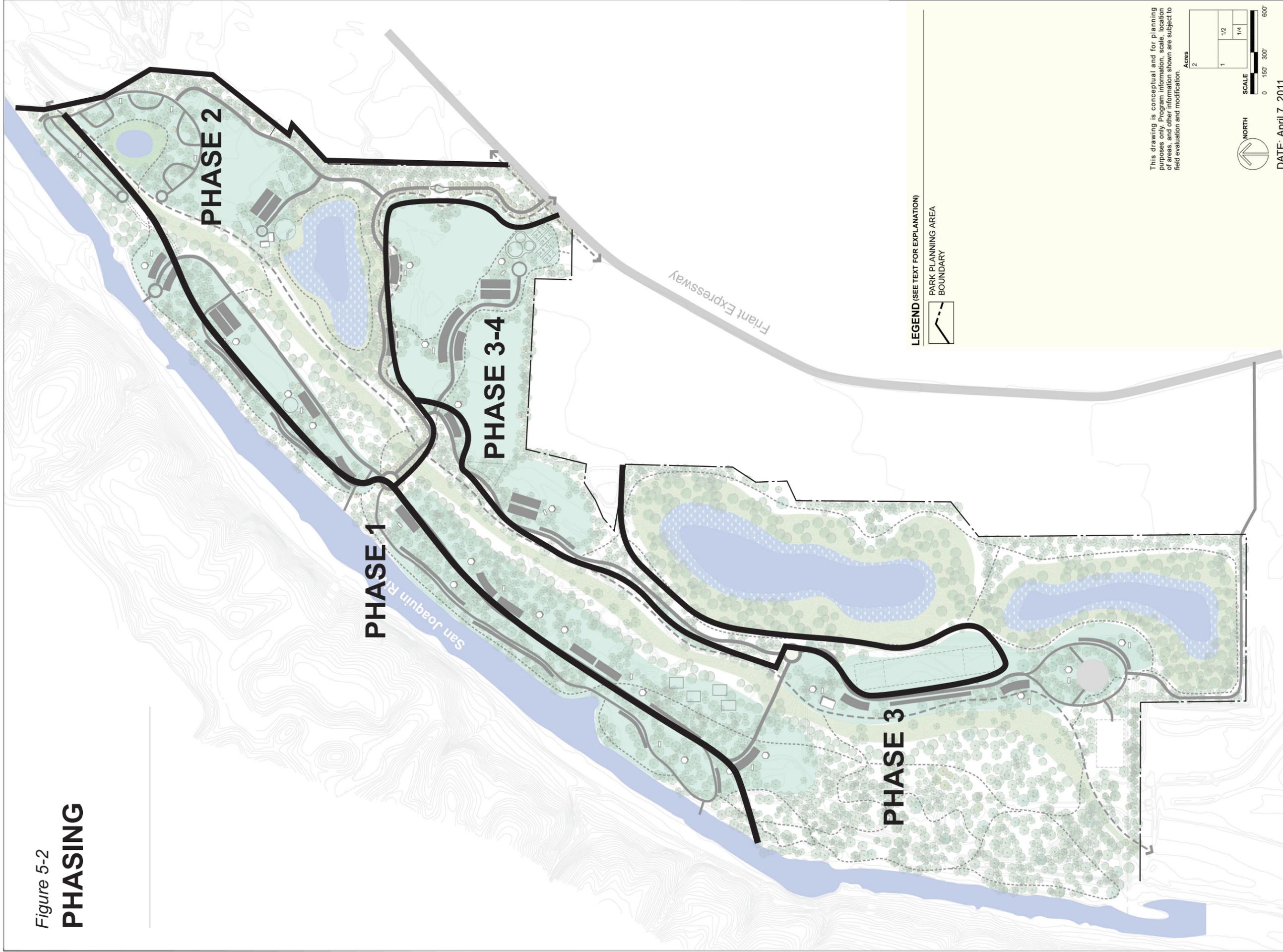


Figure 5-2

PHASING



Lost Lake Park Master Plan



along the San Joaquin River Parkway

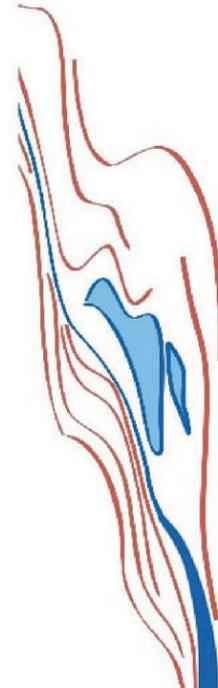
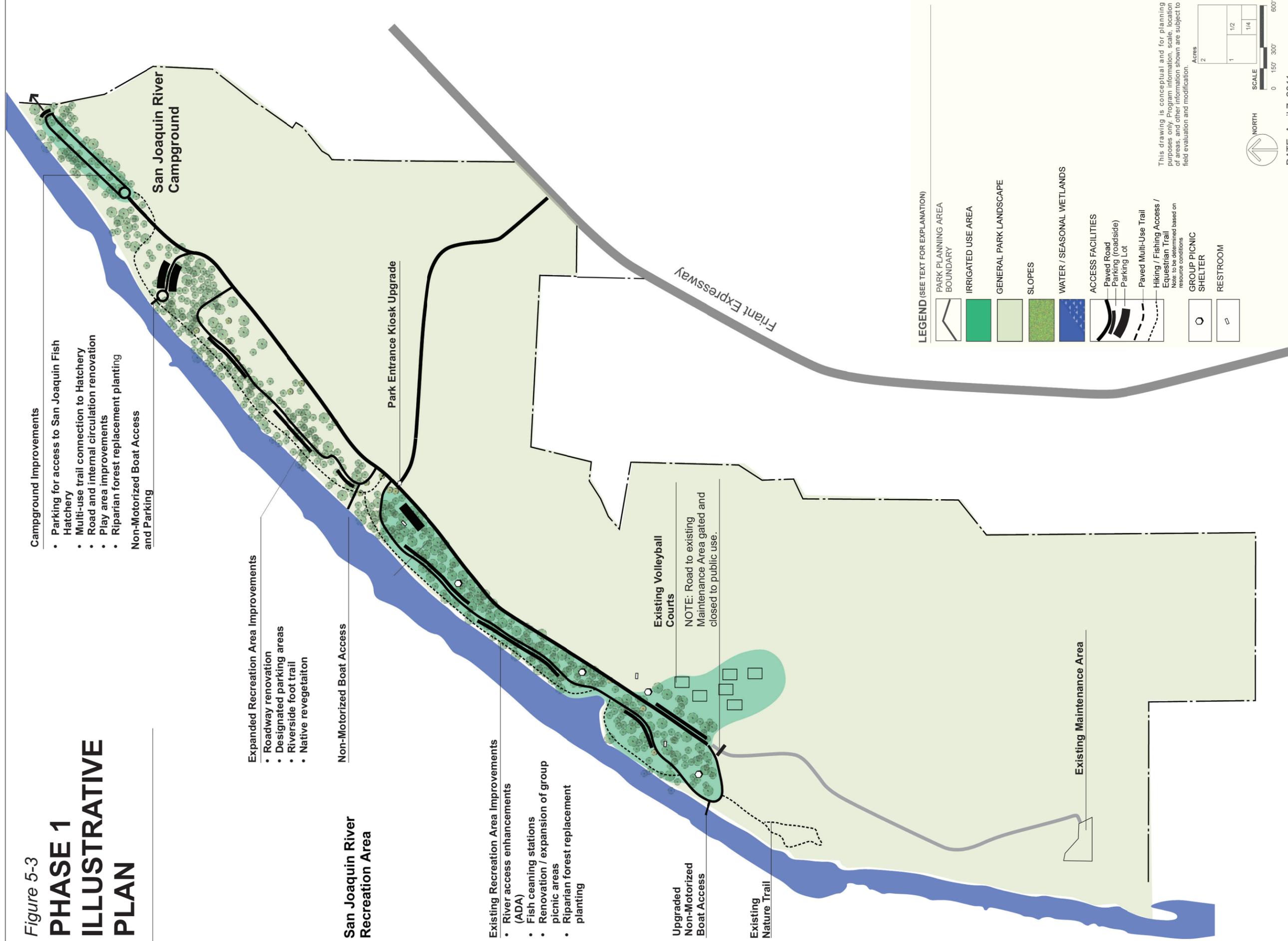


Figure 5-3

PHASE 1 ILLUSTRATIVE PLAN



- Campground Improvements**
- Parking for access to San Joaquin Fish Hatchery
 - Multi-use trail connection to Hatchery
 - Road and internal circulation renovation
 - Play area improvements
 - Riparian forest replacement planting
- Non-Motorized Boat Access and Parking**

- Expanded Recreation Area Improvements**
- Roadway renovation
 - Designated parking areas
 - Riverside foot trail
 - Native revegetation

Non-Motorized Boat Access

San Joaquin River Recreation Area

- Existing Recreation Area Improvements**
- River access enhancements (ADA)
 - Fish cleaning stations
 - Renovation / expansion of group picnic areas
 - Riparian forest replacement planting

Upgraded Non-Motorized Boat Access

Existing Nature Trail

Lost Lake Park Master Plan



along the San Joaquin River Parkway

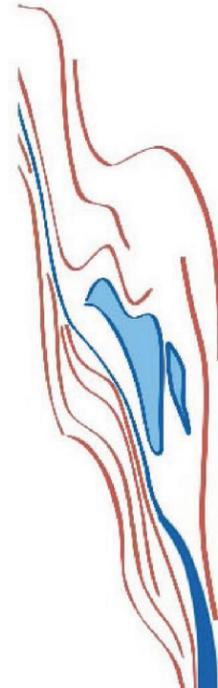
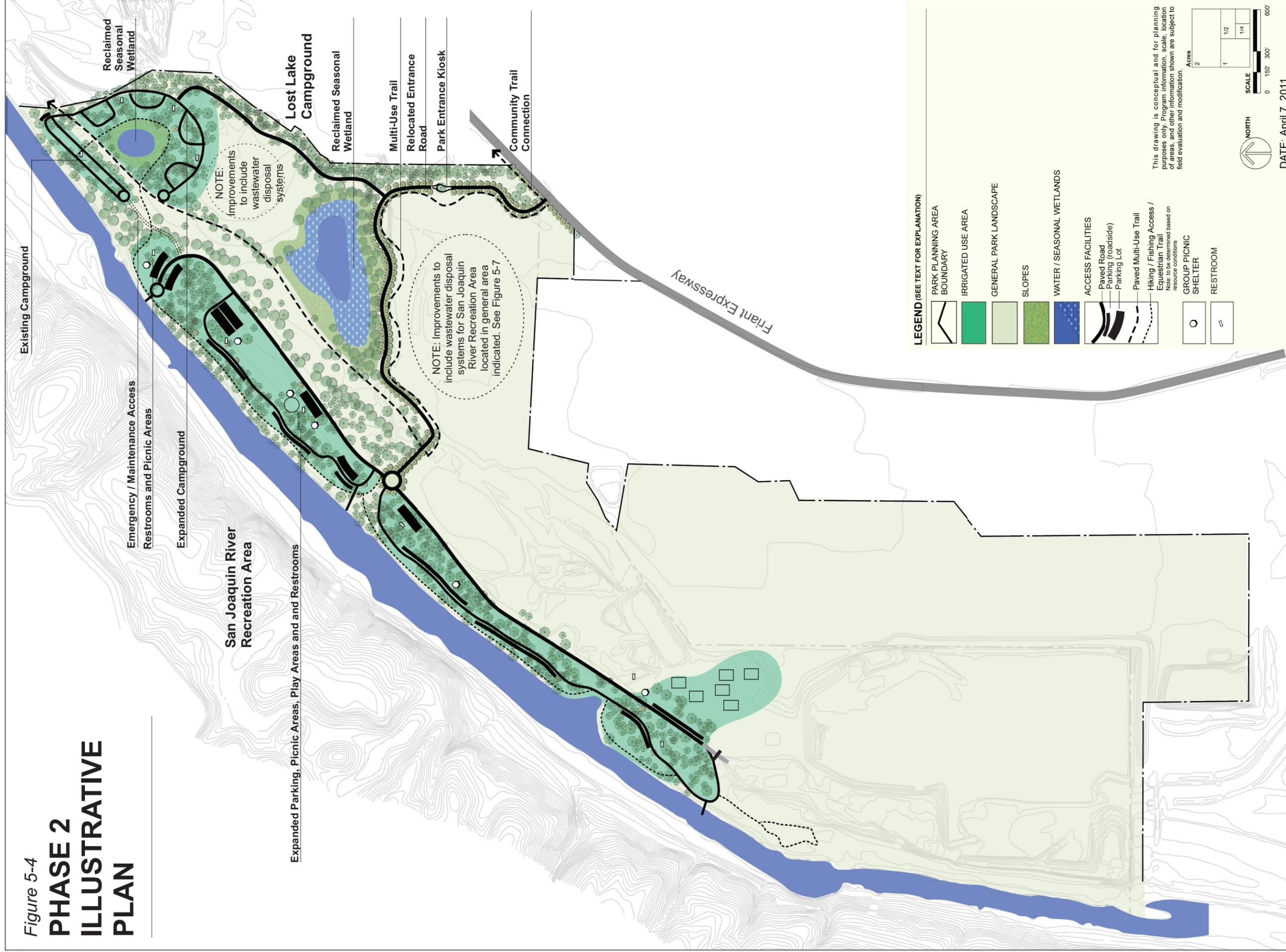


Figure 5-4
**PHASE 2
 ILLUSTRATIVE
 PLAN**



Lost Lake Park Master Plan



along the San Joaquin River Parkway

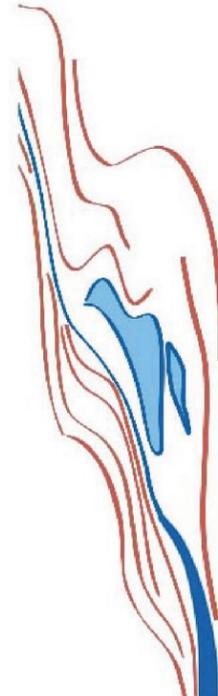
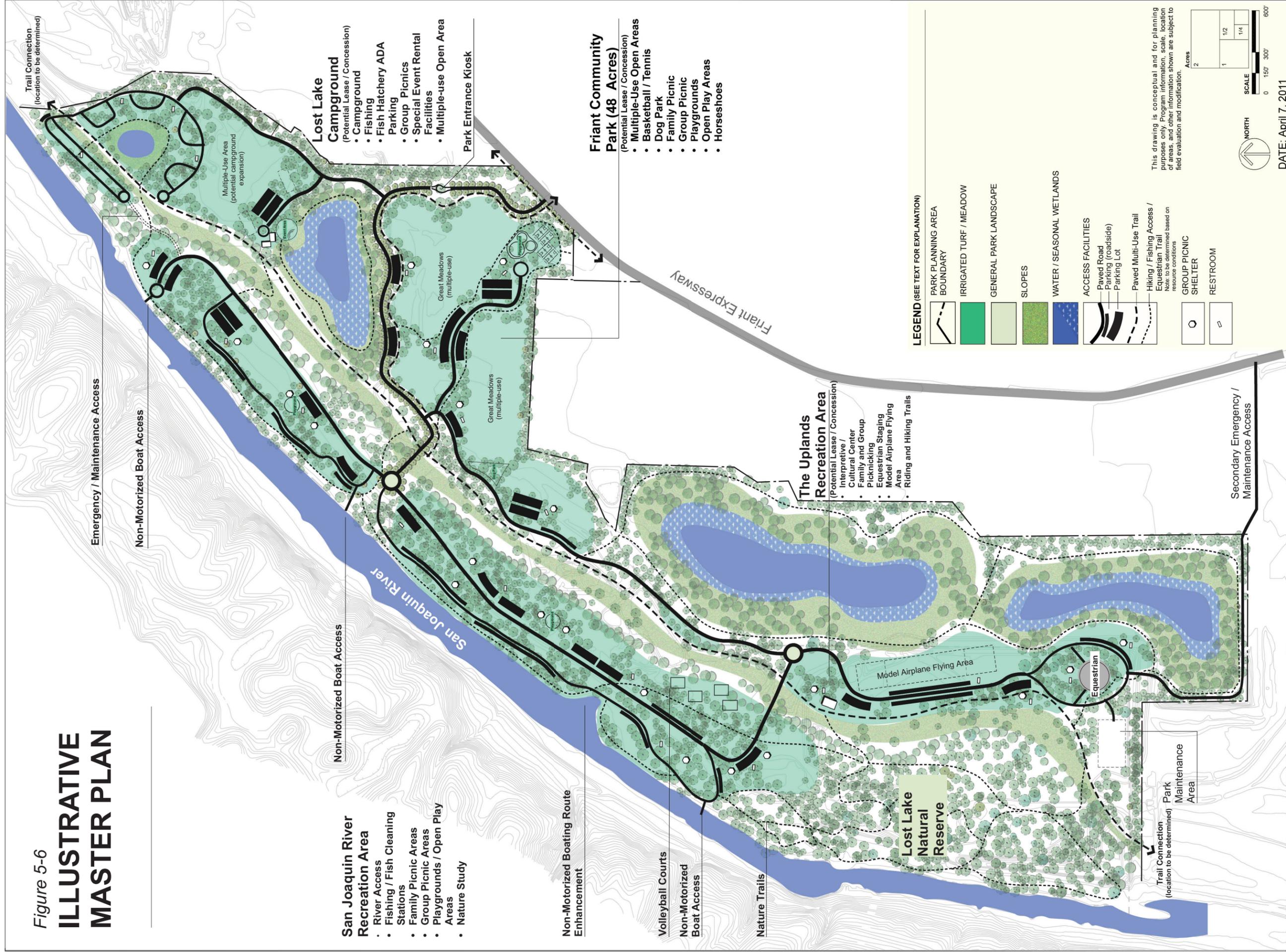


Figure 5-6

ILLUSTRATIVE MASTER PLAN



Lost Lake Park Master Plan



along the San Joaquin River Parkway

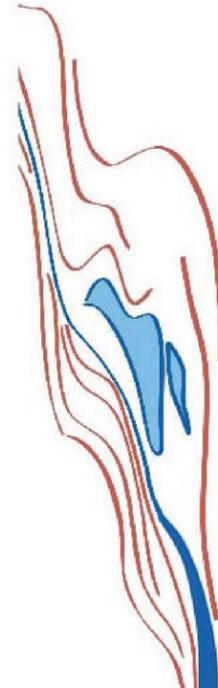
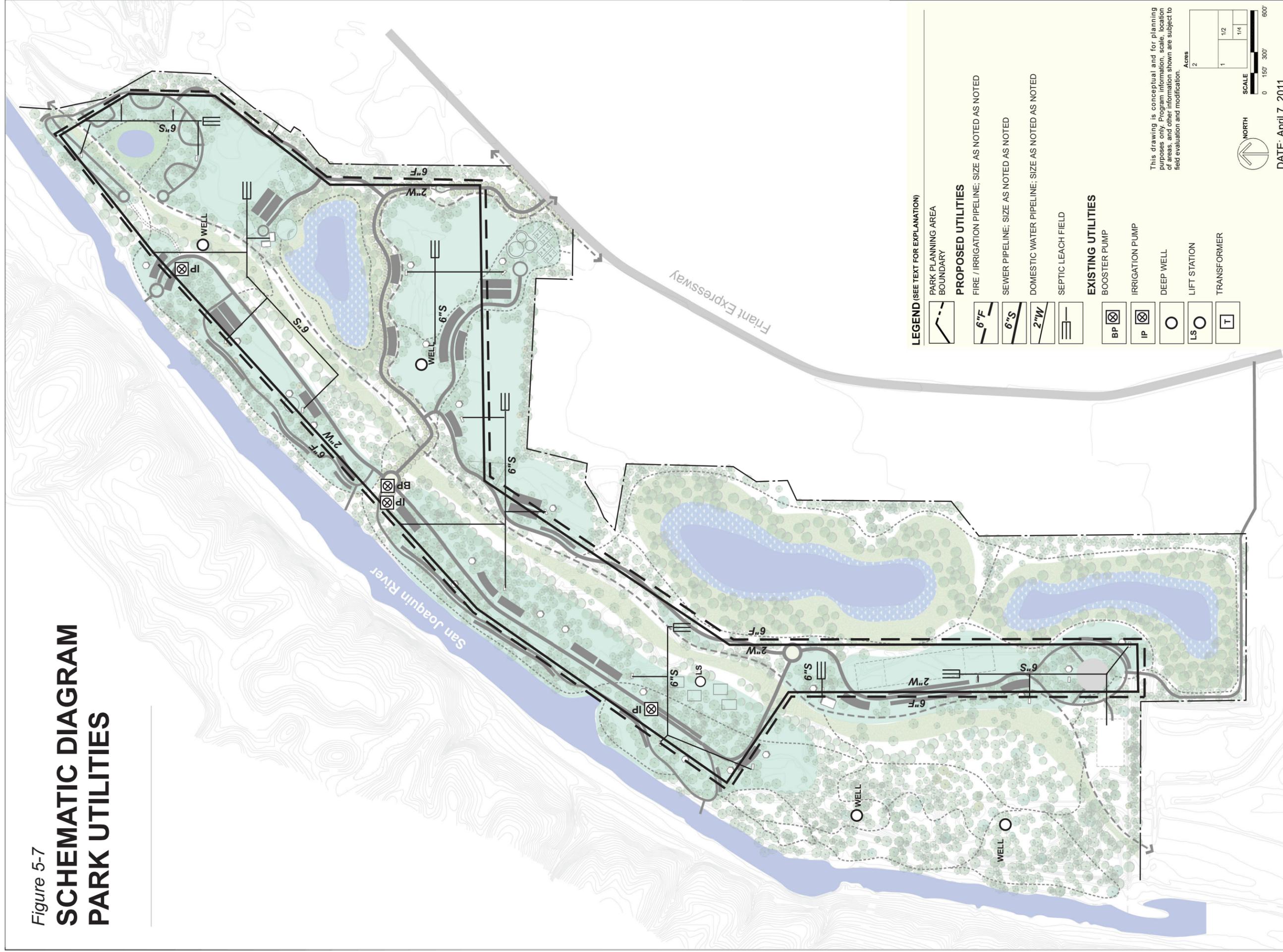


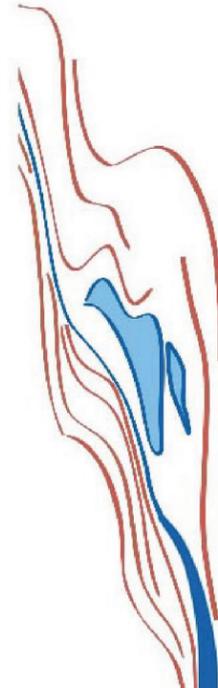
Figure 5-7
**SCHEMATIC DIAGRAM
 PARK UTILITIES**



Lost Lake Park Master Plan



along the San Joaquin River Parkway



This drawing is conceptual and for planning purposes only. Program information, scale, location of areas, and other information shown are subject to field evaluation and modification.

Approximately 1,500 parking spaces and additional designated overflow parking could ultimately be provided at the Park. Formal parking lots will be distributed throughout the Park in association with use areas. Parallel roadside parking will be permitted where appropriate. There will be at least forty accessible parking spaces with river access, and accessible parking spaces will be provided in proximity to the fish hatchery.

b. Non-Vehicular.

An approximately 11.5-mile inter-connected formal trail system will provide access for pedestrians, bicycles and equestrians through and within the Park. This system includes the paved Parkway regional multi-use trail as well as unpaved trails for pedestrians and equestrians, as described below.

Upon completion, the Parkway regional multiple use trail will provide continuous access from Friant Dam to Highway 99 for bicyclists, pedestrians and equestrians. The trail will run the length of the Park and will intersect with staging areas and major use areas and facilities, allowing trail users access to the recreational and educational opportunities provided in the Park. A spur multi-use trail will run parallel to the Park entrance road and connect with Friant Expressway.

An internal trail network will connect park elements, create opportunities for hiking and horse riding, and provide access to fishing spots along the river. Internal trails will include trails that run along the river and the loop through all areas of the Park. An expanded nature trail system will be developed in the Lost Lake Natural Reserve Area.

Bicycles will be permitted on all roadways that, together with the multiple-use trails, will provide river access and multiple loop opportunities.

An equestrian staging area to access the Parkway multi-use trail will be located on the south end of the Park.

Recreation Facilities

Existing use areas and facilities will be enhanced to include expanded camping facilities, river and open space access, fishing facilities along the river, group picnicking areas, multiple-use meadows, walking trails, put-ins for non-motorized boats, and restrooms. New park facilities include fish cleaning stations, bicycling and equestrian trails and staging areas connected to a regional multi-use trail system, and interpretive and educational features to provide natural and cultural resource information. The existing model airplane field will be relocated. Proposed facilities to be located near the Park's entrance that would serve both residents of Friant and the entire park community include playgrounds, a dog park, multiple-use meadows, and tennis/basketball courts.

Structures and Landscape Elements

All new structures within the Park will incorporate sustainable design principles to reduce energy consumption. Structures include but are not limited to the entrance station, restrooms, picnic

shelters, concession buildings, and the interpretive/nature center. Energy saving measures include the following:

- ◆ Consideration of LEED building certification based on the current U.S. Green Building Council certification criteria at the time of design.
- ◆ Compliance with the latest California Energy Commission building standards.
- ◆ Solar orientation, use of solar panels, employment of passive solar designs with a surrounding vegetation design not blocking solar access.
- ◆ Use of Energy Star roofs to exceed Title 24 requirements where possible.
- ◆ For non-roof surfaces, provision of shade and/or use light-colored/high-albedo materials and/or open grid pervious pavement.
- ◆ Use of recycled building and/or facility materials where possible.

Utilities and Infrastructure

Figure 5-7 presents a schematic diagram for utilities within the Park. The utilities and infrastructure necessary to support the Park's operations and recreational uses will be as low impact as possible, allowing for efficient water and energy use and minimizing impacts to natural resources. Utilities and infrastructure will be limited to that which is essential for providing high quality visitor experiences, as described below. Park outdoor lighting will be limited to the park and campground entrances and will be dark sky compliant and may be motion detection activated for security.

a. Stream Monitoring Station

The United States Geological Survey monitoring station will be retained.

b. Domestic Water

The proposed domestic water system will be supplied by existing Well #2 and Well #4. Well #1 and Well #3 will not be brought back into operation for domestic use unless treatment is performed to bring nitrogen concentrations to within the maximum limits established by the State of California. Data indicates that Well #2 is capable of supplying approximately 3 to 5 gallons per minute (gpm) during the summer months while Well #4 is capable of approximately 10 to 15 gpm. Water from both wells meets State of California water quality standards for a public water system.

Water storage requirements will be in accordance with State and local regulations and will be evaluated based on the number of proposed service connections, the number of guests expected to be served and the production capacities of the wells. Preliminarily, it is estimated that the average daily demand for domestic water will be approximately 11,000 gallons per day (gpd).

The combined capacity of the two active domestic wells does not meet the preliminary maximum daily demand requirements, indicating the possible need for one or more additional domestic wells.

Potable water will likely be distributed through a 2-inch diameter pipeline loop constructed near the perimeter of the site. Lateral lines of varying size will branch off of the main loop to supply restrooms, drinking fountains, hose bibs, fish cleaning stations, and other facilities on site that will

require the use of potable water. Possible routing of the proposed domestic water main loop is shown in Figure 5-7.

c. Sewer

The Park will include approximately 19 restrooms, each of which will be approximately 800 square feet in size. The seven existing restrooms are not expected to be utilized as part of the Master Plan design and may be removed as necessary to allow construction of new facilities.

New restroom facilities located within the existing 100-year floodplain will be constructed on raised topography to be above the 100-year flood level. All restrooms will be serviced by a septic tank and leach field system. Wastewater from multiple restrooms will be combined to discharge to a single leach field. In situations where site topography is not conducive to gravity flow, a wastewater lift station may be utilized. If a lift station is used, the restrooms within the 100-year floodplain will be equipped with mechanisms to terminate lift station operation in the event of a flood so as to eliminate storm water intrusion into the septic system.

Leach fields will be constructed outside of the 100-year floodplain and will be located within the proposed playfields and Great Meadows multi-use areas. All septic systems will be constructed and sized per County standards. During large events, portable toilets will be used on-site to accommodate the increased number of visitors.

Water will be supplied to the restrooms by a proposed potable water distribution system that will be constructed concurrently with the sanitary sewer improvements. County of Fresno separation requirements will be observed in the construction of the potable water and wastewater disposal systems.

A schematic routing of the proposed underground disposal system is shown in Figure 5-7.

d. Irrigation Water

Water for irrigation and fire fighting purposes will be obtained from the San Joaquin River by means of at least one irrigation pump station. The three existing pump stations currently being used for irrigation water may be reused if proven to be of sufficient capacity to meet fire and irrigation demands. The option exists of constructing an additional well solely for irrigation and fire fighting purposes. Fire flow requirements will be evaluated based on NFPA standards.

Preliminary analysis of proposed irrigation demands indicates a maximum daily water usage rate of approximately 1,250 gallons per minute. Preliminarily, irrigation demand is estimated at approximately 44.3 acre-feet per month.

Fire Department standards require that water be available at fire hydrants at a flow rate of at least 500 gallons per minute and at a minimum pressure of 20 pounds per square inch (psi). Fire hydrants will be installed on-site per Fire Department standards. Facilities required for fire fighting purposes will be equipped with a backup generator.

Fire and irrigation water will likely be distributed by a single 6-inch diameter pipeline loop running in close proximity to the potable water distribution system. Laterals of varying size will branch off of this main loop to supply irrigation and fire fighting facilities as necessary.

The County separation requirements will be observed in the construction of the potable and non-potable water distribution systems. Possible routing of the proposed fire and irrigation system is shown in Figure 5-7.

e. Electrical and Communication

Electrical and communication services will continue to be supplied from facilities located in North Friant Road. Additional service connections will be constructed if existing services are determined to be insufficient to serve the proposed improvements.

Possible improvements requiring additional electrical services include but will not be limited to restrooms, pay stations, irrigation facilities, sewage pump stations, and security lighting.

Electrical facilities will be designed to maximize sustainability and will be equipped with high efficiency LED lamps to reduce energy consumption. Restroom lighting will likely be powered by solar panels attached to the roofs of the restroom buildings. There is an option of using solar-powered lighting at the entry.

Interpretation

Interpretive elements will be located throughout the Park to highlight the Park's cultural and natural resources, as well as the natural and human processes that continue to shape it. The Park's interpretive features will include an interpretive/nature center, signage, approximately 2.9 miles of nature trails, and artistic and/or sculptural elements.

Signage

Park rules will be signed at the park entrance. Wayfinding signs to orient visitors along roads and at trail intersections will be provided. Use signs will be located at all trail entrances. Park boundary signs will be located along the north, east, and south property lines.

Natural Resource Management and Enhancement

Natural resource enhancements will include recontouring steep slopes and overburden stockpiles that are the remnants of previous mining activities in order to improve hydrology, habitat, and access, as well as creating more diverse, safe use areas. The Park's existing biotic communities will all be enhanced for seasonal wetlands and ponds, mixed riparian woodland, willow/cottonwood woodland, valley oak forest, and parkland. In addition, the entrance of the Park and perimeter buffer areas will be revegetated. The Master Plan includes a program for planting approximately 10,000 native riparian forest and shade trees throughout the Park. Additionally, traditional Native American plants will be incorporated into areas of the Park for harvesting by local tribes. Chapter 6 provides more information on the resource enhancement of the Park.

PHASING AND SPECIFIC IMPROVEMENTS

Figure 5-2 presents the overall phasing of the Master Plan. Figures 5-3 through 5-6 present the individual, phased steps that would be taken to implement the Master Plan. Changes to the Park would initially involve modest public access and recreation improvements along the river within the San Joaquin River Recreation Area and the Lost Lake Campground. The majority of additional improvements would take place in conjunction with or after the restoration of a more natural, expanded floodplain within the Park (see Chapter 6) as part of the park's overall resource management program. These improvements are not anticipated to occur for many years, with the last facility development likely being Friant Community Park. Implementation phases shown are conceptual and indicate strategic planning based on funding and permitting issues. All phases may be sub-phased and modified based on availability of funding, coordination with partner agencies, and environmental review. Prior to any new areas of disturbance in the Park, protocol surveys would be completed.

Table 5-1 overviews improvements by phase. Water supply for Phases 1 and 2 can be met by the Park's existing wells.

Phase 1: Initial Improvements

Figure 5-3 provides an overview of improvements that could be logically implemented to increase park use consistent with the purposes of the Park as defined in lease and cooperative agreements. Phase 1 would focus on improving existing recreational facilities in the San Joaquin River Recreation Area to enhance the visitor experience in current high-use areas along the river and to modestly expand revenues. As discussed in Chapter 6, any new areas of improvements to the Park would be upon completion of the California tiger salamander protocol surveys and development of a mitigation program if appropriate.

This phase includes:

- ◆ Upgrading the existing entrance station for electronic payment and security, to help the County collect appropriate user fees that would help fund upkeep of the Park.
- ◆ Improving existing roads and parking areas in the San Joaquin River Recreation Area and converting the unpaved informal road that connects the campground with the road to the south into a non-vehicular trail.
- ◆ Designing and installing new facilities including three fish cleaning stations along the river.
- ◆ Improving and expanding river access facilities for non-motorized boating, including the installation of two launch sites, upgrades to an existing launch site, and assuring small boat passage along the river. Currently, the passage is partially blocked by remnants of a rock dam located immediately above the existing launch site.
- ◆ Initiating a signage program that includes directional, use, informational, and interpretive signs.

TABLE 5-1 PROJECT IMPROVEMENTS BY PHASE

Feature	Phase 1	Phase 2	Phase 3	Phase 4
Design	<ul style="list-style-type: none"> Detail design and permitting 	<ul style="list-style-type: none"> Detail design and permitting 	<ul style="list-style-type: none"> Detail design and permitting 	<ul style="list-style-type: none"> Detail design and permitting
Vehicular Access	<ul style="list-style-type: none"> Upgrade road and parking areas (including existing campground access roads) Convert unpaved, informal road to non-vehicular trail. 	<ul style="list-style-type: none"> Re-route park entry road Relocate entrance station and develop access road to campground Convert existing campground access road to emergency access route Develop new parking north of existing day use area 	<ul style="list-style-type: none"> Develop new road into the Uplands Recreation Area 	<ul style="list-style-type: none"> Develop spur road into Friant Community Park Develop new road into the Uplands Recreation Area
Utilities	<ul style="list-style-type: none"> No changes 	<ul style="list-style-type: none"> Expand potable water and irrigation systems Develop leach field areas adjacent to campground 	<ul style="list-style-type: none"> Expand potable water and irrigation systems Develop leach field areas within Uplands Recreation Area and Friant Community Park area 	<ul style="list-style-type: none"> Expand potable water and irrigation systems
Facilities	<ul style="list-style-type: none"> Install fish cleaning stations (3) Install / upgrade canoe/kayak launch sites (3) Enhance canoe/kayak passage along river Upgrade existing entrance station for electronic payment and security Initiate signage program 	<ul style="list-style-type: none"> Develop trails, family and group use picnic facilities, restrooms north of existing day use area Develop ADA parking/hatchery multi-use trail connection Develop a new campground area Relocate entrance station Construct utility mainlines and leach fields/wastewater disposal systems in north end of the Park Connect existing and new restrooms to new utility systems 	<ul style="list-style-type: none"> Develop trails and interpretive signage in the Lost Lake Natural Reserve Area Initiate design and development of the Interpretive/Cultural Center Continue to improve new campground area Relocate and improve maintenance area 	<ul style="list-style-type: none"> Relocate model airplane flying area, equestrian staging area Initiate development of recreational facilities for Friant Community Park, including picnic areas, basketball/tennis courts, horseshoe pits, and play areas
Habitat and Vegetation	<ul style="list-style-type: none"> Initiate native revegetation program in existing use area with irrigation for the plant establishment period 	<ul style="list-style-type: none"> Expand native revegetation with irrigation for the plant establishment period Initiate perimeter screening program 	<ul style="list-style-type: none"> Expand native revegetation with irrigation for the plant establishment period Expand perimeter screening program 	<ul style="list-style-type: none"> Expand native revegetation with irrigation for the plant establishment period.
Floodplain and Grading		<ul style="list-style-type: none"> Regrade areas to be developed/enhanced Reconfigure existing pond areas to create safe slopes 	<ul style="list-style-type: none"> Regrade for expanded floodplain and creation of park use areas 	

- ◆ Constructing a five-car parking area designed for compliance with the Americans with Disabilities Act (ADA) at the north end of the campground and a multi-use trail connection to the fish hatchery and Friant Expressway that would become a part of the Parkway multi-use trail.
- ◆ Initiating a significant revegetation/forestry program to enhance riparian and upland habitats; provide shade for recreation activities; and expand the Native American plant program. Irrigation will be necessary during the plant establishment period.
- ◆ Adding a gate to close the southern portion of the Park to vehicular access.

Phase 2

Figure 5-4 provides an overview of Phase 2 improvements. These would require initiation of significant infrastructure improvements as compared to those called for in Phase 1. This phase would include the following:

- ◆ Developing the new Park entry road.
- ◆ Regrading areas that would be developed or enhanced during this phase, as necessary, and reconfiguring the slopes of the pond in the Lost Lake Campground for safety and habitat purposes.
- ◆ Developing the new campground area, which will include RV hook-ups, and developing new and/or improving existing trails and family and group picnic facilities in the San Joaquin River Recreation Area.
- ◆ Developing a new access road to the existing and new campground areas and converting the existing campground access road into an emergency access route.
- ◆ Relocating the entrance station closer to the park entrance. Components of the existing station may be salvaged where possible. The new station would be a maximum of 500 square feet.
- ◆ Relocating existing restrooms above the floodplain and developing new restrooms approximately 800 square feet in size. Existing and new restrooms will be connected to new utility systems, as well as leach fields or wastewater disposal systems. Utility mainlines would also be installed in the north end of the Park.
- ◆ Developing a multi-use trail connection from Friant Expressway and a portion of the Parkway multi-use trail north of the entrance road.
- ◆ Initiating revegetation activities including buffer plantings with irrigation for the plant establishment period.

Phase 3

The implementation of Phase 3 would be triggered by the activities of the Restoration Program and would not take place until mining activities immediately adjacent to the Park had concluded (County General Plan Policy OS-C.8). Figure 5-5 provides an overview of Phase 3 improvements.

The most notable changes to the Park are tied to the re-sculpting and revegetation of the Park itself to restore the San Joaquin River floodplain, enhance habitat resources, and to create new recreational opportunities in the upland areas of the Park, such as shaded group picnicking and hiking. A broadened floodplain increases the capacity to relieve flood waters and decreases the potential for flood damage within and below the Park. Riparian enhancement along the river provides habitat and low-impact public access nature trails. Floodplain modifications will be designed to ensure the absence of entrapment areas. Steep slopes that have been left from prior aggregate mining would be relaxed to increase slope stability as well as visitor safety.

Phase 3 would focus on the improvements in the Lost Lake Natural Reserve Area and the Uplands Recreation Area with expansion of facilities at the Lost Lake Campground. Additional wells may be required to support the new facilities developed in this phase. In addition to grading, Phase 3 includes the following:

- ◆ Constructing new roads including the road connection into the Uplands Recreation Area.
- ◆ Constructing a new emergency access route within an easement held by the San Joaquin River Conservancy for emergency access and egress in the southern portions of the Park.
- ◆ Developing new family and group picnic facilities, equestrian staging area and an Interpretive/Cultural Center within the Uplands Recreation Area.
- ◆ Initiating design and development of the 5,000- to 7,000-square-foot commercial multi-use facility for large group events within the Lost Lake Campground management zone.
- ◆ Developing additional trails and interpretive signage in the Lost Lake Natural Reserve Area.
- ◆ Initiating the development of the 3,000- to 10,000-square-foot Interpretive/Culture Center, the model airplane flying area and the equestrian staging area in the Uplands Recreation Area.
- ◆ Relocating and improving the maintenance area, including the construction of a new facility with the capacity to store (portable, above-ground) gas and diesel along with minimum amounts of paint, fertilizer, herbicides, and the like. The new building would be heated by propane. The building would be roughly 2,500 square feet, similar to its current size; however, the enclosed adjacent corporation yard would be increased by 50% to 20,000 square feet in order to provide secure storage for all equipment at night.
- ◆ Completing the Parkway multi-use trail through the Park.

Phase 4

Figure 5-6 provides an overview of Phase 4 improvements. These improvements focus on the development of Friant Community Park. Additional wells may be required to support the new facilities. Phase 4 includes the following:

- ◆ Constructing new roads including the spur road into Friant Community Park and the road connection into the Uplands Recreation Area.
- ◆ Initiating the development of picnic areas, basketball/tennis courts, horseshoe pits, multiple-use meadows, and play structures in Friant Community Park.

PARK USE FACILITIES

A comparison between existing park facilities and proposed park facilities by phase is provided in Table 5-2.

TABLE 5-2 EXISTING AND PROPOSED FACILITIES BY PHASE (COMMUTATIVE TOTALS)

Feature	Existing	Phase 1	Phase 2	Phase 3	Proposed at Buildout
					(Phase 4)
Entrance station	Yes	Yes	Yes (relocated)	Yes	Yes (Appx. 500 sf)
Parking spaces (designated; general day use)	Appx. 150				Appx. 1,530 with room for expansion
ADA-compliant parking spaces with river access	2				40 including van parking*
Event overflow parking	Yes	Yes	Yes	Yes	Yes
Fishing access to river w/ multiple access points	Yes	Yes	Yes	Yes	Yes
Swimming, wading and fishing areas w/ multiple access points	Yes	Yes	Yes	Yes	Yes
Fish cleaning stations	No	Yes	Yes	Yes	Yes
Non-motorized boat access points	1	3	3	3	3
Continuous float through park for non-motorized boats	No	Yes	Yes	Yes	Yes
Uncovered group picnic area with large BBQ	1	1	1	2	3
Covered group gathering / picnic areas	4	4	8	15	22
Individual family picnic tables	89	Appx. 89	Appx. 110	Appx. 150	Appx. 200
Playground areas associated with picnic areas and / or campground	2	2	4	4	5
Restrooms	7	7	10	15	23 (Appx. 800 sf/each)
Riverside camping sites	40	40	40	40	40
Campground with hook-ups	7	7			40
Irrigated turf	Appx. 30 acres	Appx. 30 acres	Appx. 74 acres	Appx. 111 acres	Appx. 151 acres
Sand volleyball courts	7	7	7	4	4
Parkway Multi-use trail - with community access	No	No	Appx. 1.4 miles	Appx. 2.7 miles	Appx. 2.7 miles
Neighborhood access points	No	Yes	Yes	Yes	Yes

TABLE 5-2 EXISTING AND PROPOSED FACILITIES BY PHASE (COMMUTATIVE TOTALS) (CONTINUED)

Feature	Existing	Phase 1	Phase 2	Phase 3	Proposed at Buildout (Phase 4)
Interpretive / Nature trail	Appx. 0.3-mile loop	Appx. 0.3-mile loop	Appx. 0.3-mile loop	Appx. 2.9 miles with loop options	Appx. 2.9 miles with loop options
Fishing access / hiking / equestrian trails - with multiple access points	Open access along portion of river	Appx. 1.1 miles	Appx. 3.9 miles	Appx. 5.2 miles	Appx. 5.9 miles
Native American plant gathering areas	Yes	Yes	Yes	Yes	Yes
Equestrian staging area	No	No	No	Yes	Yes
Interpretive / Cultural center	No	No	No	Yes (3,000- 10,000 sf)	Yes
Model Airplane Flying (gliders)	Yes	Yes	Yes	Yes	Yes relocated
Friant Community Park (park within a park including family and group picnic, playgrounds, dog park, and basketball/tennis courts))	No	No	No	No	Yes
Multiple Use Meadows	No	No	No	Yes	Yes
Corporate Picnic Area; Wedding Dell	No	No	No	Yes	Yes
Maintenance Yard	Yes (13,000 sf)	Yes	Yes	Yes relocated (20,000 sf)	Yes

* Exceeds CalIDAG 2009 regulations.

CHAPTER 6:

NATURAL RESOURCE MANAGEMENT AND ENHANCEMENT

INTRODUCTION

Within the context of the 22-mile-long San Joaquin River Parkway, Lost Lake Park is one of the few strategic locations identified for significant regional public access. This is in part because of its existence as a waterfront park for over 50 years and its proximity to transportation routes. Lost Lake Park also provides an opportunity to focus use in such a way that more sensitive downstream riparian habitat resources can be protected, many of which are now part of the San Joaquin River Ecological Preserve within the Parkway.

With the exception of the river riparian zone immediately downstream from the existing day-use area extending to the southern limits of the Park, all of Lost Lake Park is a disturbed landscape that has been modified over the years either by mining or by development as a public recreation area. While project goals include providing additional public access and use features, goals also include enhancing the Park's natural qualities.

Enhancing the natural resources of Lost Lake Park will principally involve:

- ◆ Preserving riparian areas along the river within the San Joaquin River Natural Area including lands around existing elderberry shrubs (*Sambucus mexicanus*) that may host the federally listed Valley Elderberry Longhorn Beetle.
- ◆ Preserving the low-lying riparian areas of the two reclaimed seasonal wetlands within the Uplands Recreation Area.
- ◆ Over time, removing non-native trees and shrubs that extend throughout the San Joaquin River Recreation Area and Lost Lake Campground as they become diseased, a safety hazard, or are impacted by construction, and replanting with native species.
- ◆ Significantly enhancing the resources within the remaining areas of the Park through recontouring and major revegetation programs that will involve a variety of wetland, riparian, and upland habitats.

RESOURCE MANAGEMENT ACTIONS

Floodplain Enhancement and Recontouring

Reflective of the goals and objectives presented in Chapter 4, resource enhancement in the Park will include a signature long-term element of restoring a more natural, expanded San Joaquin River floodplain within southern areas of the Park.

This restoration would involve the relocation of overburden materials placed adjacent to the river over 60 years ago by the sand and gravel mining associated with the construction of Friant Dam that today restrict hydrologic connectivity. This mining also created what is known today as Lost Lake. Currently, Lost Lake does not drain to the south and back to the river except during major flood events. The benefits of this restoration include improved hydrology and enhanced habitat, as well as creating more diverse, and safe use areas.

A conceptual grading plan to enhance the 100-year floodplain of the San Joaquin River within the Park is illustrated in Figure 6-1. The cumulative total of all earth moving activities is projected to be between approximately 1.5 million and 1.9 million cubic yards of material. Existing overburden and other materials generated from lowering selected areas of the Park would be relocated to create the Uplands Recreation Area and to enhance the Friant Community Park and other areas. Recontouring would also support reclamation and revegetation as well as the safety of Lost Lake and other degraded ponds that now exist in the northern areas of the Park. The timing of the floodplain enhancement would be keyed to general river enhancements to be made as part of the San Joaquin River Restoration Program (Restoration Program).

Revegetation and Habitat Enhancement

All new vegetation at Lost Lake Park will consist of plants native within the San Joaquin River region with the exception of the multiple use meadows and individual areas associated with a particular use where additional species may be added to complement.

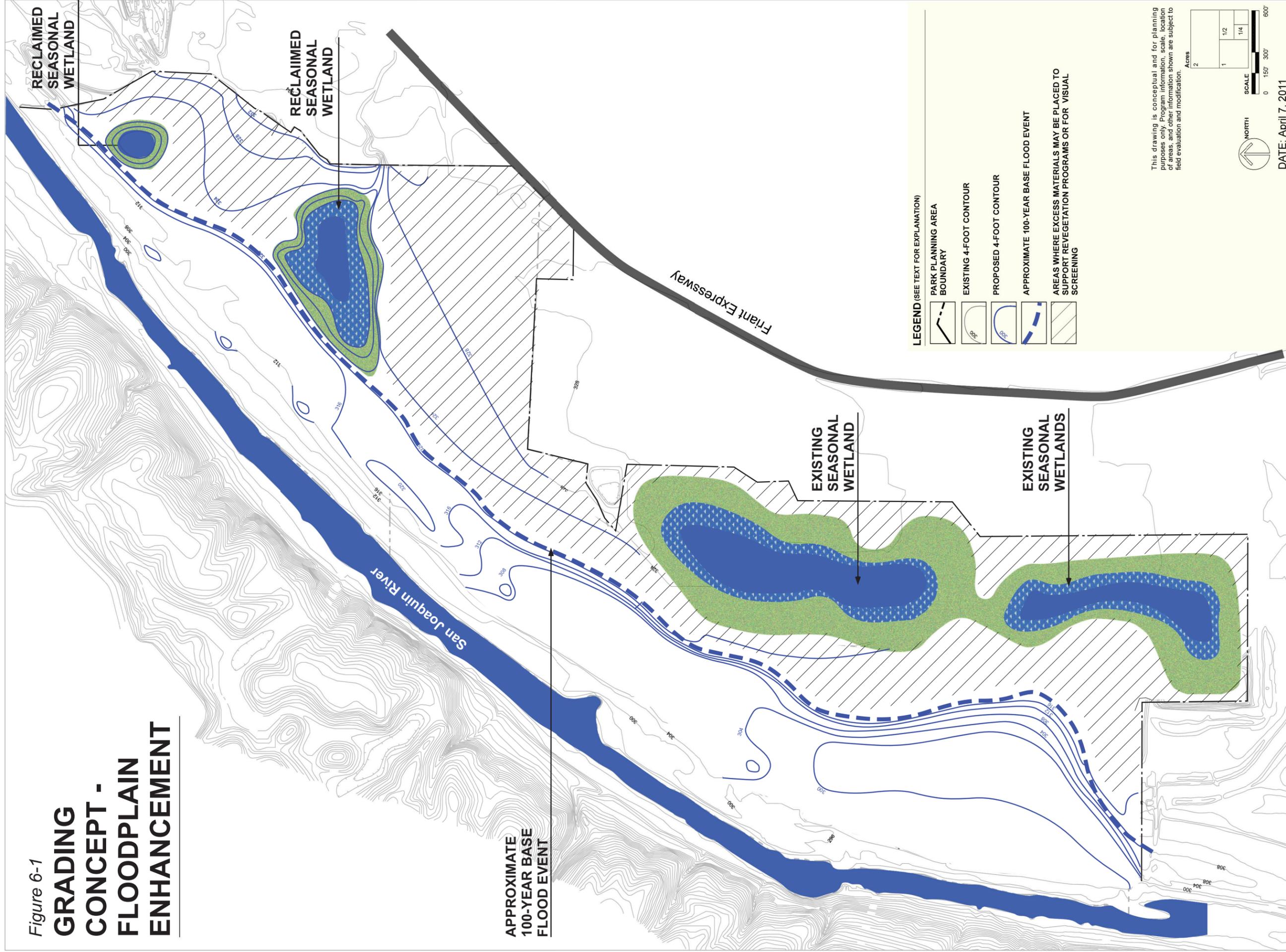
Figure 6-2 shows the mosaic of the proposed plant associations and to be either preserved, enhanced, or created within the Park. Table 6-1 approximates the acreages of each.

The seasonal wetland/ponds that have become established on the Conservancy's mined lands provide abundant habitat for wildlife. Maintaining year-round water in these and in other seasonal wetland areas identified in the Master Plan would enhance both the wildlife habitat and aesthetic value of these areas. Techniques for directing water to these areas that are to be considered include:

- ◆ Draining all park developed areas east of the Parkway multi-use trail into the ponds.
- ◆ Connecting the ponds to the river floodplain or via gated drain pipes french drain system.
- ◆ Diverting water from the outlet of the fish hatchery to the north into these ponds.

Figure 6-1

GRADING - CONCEPT - FLOODPLAIN ENHANCEMENT



Lost Lake Park Master Plan



along the San Joaquin River Parkway

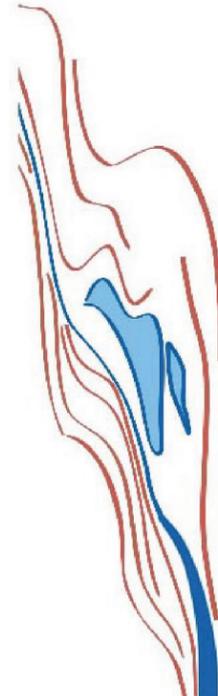
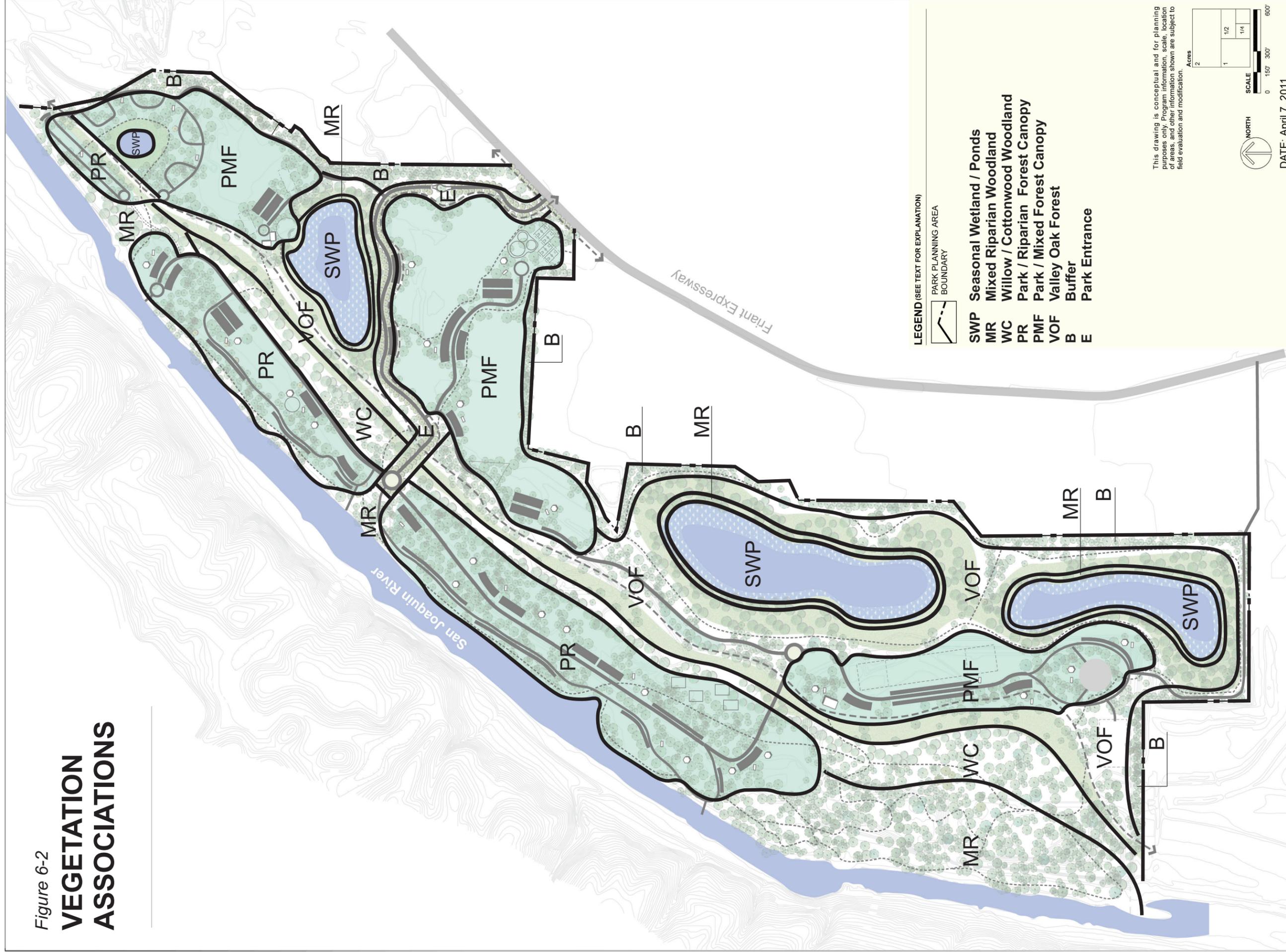


Figure 6-2

VEGETATION ASSOCIATIONS



Lost Lake Park Master Plan



along the San Joaquin River Parkway

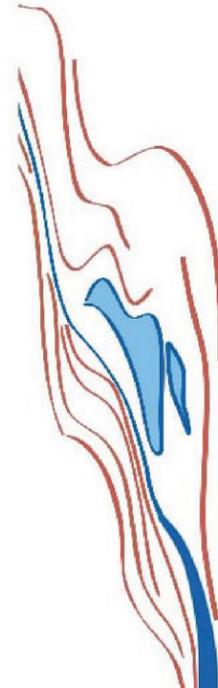


TABLE 6-1 **APPROXIMATE ACREAGES OF PROPOSED PLANT ASSOCIATIONS**

Map Key	Vegetation Association	Approximate Acreage
MR	Mixed Riparian Woodland	54
WC	Willow / Cottonwood Woodland	28
SWP	Seasonal Wetland / Ponds	36
VOF	Valley Oak Forest	71
PR	Park / Riparian Forest Canopy	63
PMF	Park / Mixed Forest Canopy	88
E	Park Entrance Drive	9
B	Upland Buffer Areas	25
Total		374

The revegetation program would involve planting approximately 10,000 native riparian forest and shade trees throughout the Park. This includes planting the perimeter property line with vegetation for the park to be buffered from surrounding land uses. New vegetation shall include the species identified in Table 6-2, Master Plan Vegetation List. Plants are identified for each of eight general vegetation associations within the Park as illustrated on Figure 6-1. Additionally, traditional Native American plants will be incorporated into areas of the Park for harvesting by local tribes. For an individual area and site-specific design associated with a particular use, plants listed may be complemented with additional species as appropriate.

Public Access Management

As the road system in the park is renovated and expanded, vehicle traffic would be limited to the roadway via placement of boulders, bollards, or other traffic control devices. Similar controls will be placed at the intersection of the roadway system with the Parkway multi-use trail and at all entrances places where trails lead into the Lost Lake Natural Reserve Area.

Protected Species

The Park and the Parkway are to demonstrate and educate the public about stewardship principles. These principles include safeguarding the habitat resources of protected species, but also the enhancement of those resources. As described below, clarification as to the priorities between multiple-species goals of regulatory agencies is a Parkway-wide concern that has yet to be resolved.

TABLE 6-2 MASTER PLAN VEGETATION LIST

PLANT		LOCATION IN PARK (see also Figure 6-1)									
Botanic Name	Common Name	Mixed Riparian Woodland (MR)	Willow / Cotton-wood Woodland (WC)	Seasonal Wetland / Ponds (SWP)	Valley Oak Forest (VOF)	Park / Riparian Forest Canopy (PR)	Park / Mixed Forest Canopy (PMF)	Park Entrance Drive (E)	Upland Buffer Areas (B)		
TREES											
<i>Acer negundo californica</i>	boxelder	X									
<i>Aesculus californica</i>	buckeye					X			X		
<i>Alnus thombifolia</i>	white alder	X				X					
<i>Fraxinus latifolia</i>	Oregon ash					X		X	X		
<i>Platanus racemosa</i>	California sycamore	X	X		X	X	X	X	X		
<i>Populus fremontii</i>	Fremont cottonwood	X	X		X			X			
<i>Quercus douglasii</i>	blue oak						X		X		
<i>Quercus kelloggii</i>	California black oak	X							X		
<i>Quercus lobata</i>	valley oak	X			X	X	X		X		
<i>Salix exigua</i>	sandbar willow	X		X							
<i>Salix laevigata</i>	red willow	X		X							
<i>Salix lasiolepis</i>	arroyo willow	X		X							
SHRUBS											
<i>Baccharis pilularis</i>	coyote brush				X				X		
<i>Baccharis viminea</i>	mulefat			X	X				X		
<i>Cercas occidentalis</i>	western redbud	X			X	X	X		X		

TABLE 6-2 MASTER PLAN VEGETATION LIST (CONTINUED)

PLANT		LOCATION IN PARK (see also Figure 6-1)									
Botanic Name	Common Name	Woodland (MR)	Willow / Cotton-wood Woodland (WC)	Seasonal Wetland / Ponds (SWP)	Valley Oak Forest (VOF)	Park / Riparian Forest Canopy (PR)	Park / Mixed Forest Canopy (PMF)	Park Entrance Drive (E)	Upland Buffer Areas (B)		
<i>Heteromeles arbutifolia</i>	toyon					X	X	X	X		
<i>Prunus ilicifolia</i>	holly-leaf cherry					X	X		X		
<i>Rhamnus californica</i>	coffeeberry		X		X	X	X		X		
<i>Ribes speciosum</i>	fuchsia-flowering gooseberry	X				X	X		X		
<i>Rosa californica</i>	California wild rose	X	X		X	X	X		X		
<i>Rosa gymnocarpa</i>	wild rose	X	X			X	X		X		
GROUNDCOVERS / PERENNIALS / VINES											
<i>Arctostaphylos uva-ursi</i>	bearberry							X	X		
<i>Aristolochia californica</i>	Dutchman's pipe	X	X								
<i>Baccharis pilularis</i> Twin Peaks'	prostrate coyote brush				X			X	X		
<i>Clematis lasiantha</i>	chapparal clematis							X	X		
<i>Clematis ligusticifolia</i>	clematis	X									
<i>Cyperus niger capitatus</i>	umbrella sedge			X							
<i>Eriogonum californicum</i>	buckwheat				X				X		
<i>Grindelia camporum</i>	gumplant		X					X			

TABLE 6-2 MASTER PLAN VEGETATION LIST (CONTINUED)

PLANT		LOCATION IN PARK (see also Figure 6-1)									
Botanic Name	Common Name	Woodland (MR)	Willow / Cotton-wood Woodland (WC)	Seasonal Wetland / Ponds (SWP)	Valley Oak Forest (VOF)	Park / Riparian Forest Canopy (PR)	Park / Mixed Forest Canopy (PMF)	Park Entrance Drive (E)	Upland Buffer Areas (B)		
<i>Heleocharis acicularis</i>	spike rush			X							
<i>Juncus spp.</i>	rush			X							
<i>Muhlenbergia rigens</i>	deer grass	X	X	X	X				X		
<i>Rubus lucodermis</i>	wild blackberry										
<i>Rubus ursinus</i>	California blackberry	X	X						X		
<i>Scripus spp.</i>	rule			X							
<i>Typha spp.</i>	cattail			X							
<i>Vitis californica</i>	California grape	X	X								
GRASSES / EROSION CONTROL MIX											
<i>Bromus spp.</i>	brome								All Areas		
<i>Clarkia purpurea</i>	farewell-to-spring								All Areas		
<i>Danthonia californica</i>	California wild oat grass								All Areas		
<i>Elymus glaucus</i>	blue wild rye								All Areas		
<i>Eschscholzia californica</i>	California poppy								All Areas		
<i>Festuca californica</i>	California fescue								All Areas		
<i>Festuca idahoensis</i>	blue bunch grass								All Areas		
<i>Festuca rubra</i>	creeping red fescue								All Areas		

TABLE 6-2 MASTER PLAN VEGETATION LIST (CONTINUED)

PLANT		LOCATION IN PARK (see also Figure 6-1)							
Botanic Name	Common Name	Mixed Riparian Woodland (MR)	Willow / Cotton-wood Woodland (WC)	Seasonal Wetland / Ponds (SWP)	Valley Oak Forest (VOF)	Park / Riparian Forest Canopy (PR)	Park / Mixed Forest Canopy (PMF)	Park Entrance Drive (E)	Upland Buffer Areas (B)
<i>Lasthenia californica</i>	goldfields				All Areas				
<i>Layia platyglossa</i>	tidy tips				All Areas				
<i>Lupinus spp.</i>	lupine				All Areas				
<i>Nassella pulchra</i>	purple needle grass				All Areas				
<i>Poa secunda</i>	bluegrass				All Areas				

The existing large seasonal pool north of Lost Lake Road and a smaller seasonal pool south of Lost Lake Road provide potential breeding habitat for the California tiger salamander (*Ambystoma californiense*). California tiger salamander (CTS) is both a federal and State protected species. Rodent burrows in existing non-native grasslands of the Park provide potential aestivation habitat for this species. The CTS has been documented in vernal pools directly east of the Park on the other side of Friant Expressway. Because potential onsite CTS breeding pools are located near the center of the Park, all upland areas of the Park containing rodent burrows are considered potential CTS aestivation habitat amounting to nearly all upland habitat on the site. To accommodate multiple resource enhancement and public use goals within the Park, a major modification of the Park landscape is proposed.

The Park is located in Reach 1A of the Restoration Program. A primary program goal for the San Joaquin River within the Park is to restore and maintain fish populations in "good condition" and specifically naturally reproducing and self-sustaining populations of Chinook salmon (*Oncorhynchus tshawytscha*), also a federally listed species. Proposed major modifications to the existing floodplain characteristics within the Park, including changes to some of the existing regulated wetlands, will benefit the Restoration Program. These changes could also potentially impact CTS habitat. Given both the goals for the Park and for the Restoration Program, avoidance of potential CTS aestivation habitat is not possible.

In order to determine the presence of CTS in the Park, protocol level surveys will be conducted in coordination with the U.S. Fish and Wildlife Service, and the California Department of Fish and Game. This effort entails two spring aquatic larval surveys with an intervening upland pitfall trap survey. Should CTS be found, on-site and/or off-site mitigation would likely be required. Specific mitigation measures, if necessary, will be coordinated with the appropriate regulatory agencies. Typically, all compensatory habitat, created or preserved, must be protected in perpetuity under a conservation easement. A third party (e.g., a non-profit land trust) generally holds the easement and manages the open space. This arrangement requires that the project proponent establish a non-wasting endowment that can fund management of the conserved lands in perpetuity.

CHAPTER 7:

IMPLEMENTATION

Chapter 5 describes the implementation phases for the Master Plan along with a description of potential funding sources and partnership opportunities with other organizations. This phasing is illustrated on Figures 5-3 through 5-7. Implementation phasing is conceptual and dependent on funding, permits, and coordination with partner and regulatory agencies. All phases may be sub-phased as funding allows.

This chapter presents an implementation strategy for the initial phases of the Master Plan.

PHASING

Improvements will be installed in phases as funding becomes available. Phases 1 and 2 are focused on modest changes and expansion of existing facilities that would enhance access to the San Joaquin River and increase income generated from park use to help support operating expenses. Phases 3 and 4 are more far-reaching and involve a significant restoration of the Park's disturbed landscape that would enhance habitat resources and provide greater recreation opportunities.

Phase 1 includes those components that are most readily implementable once funding and additional environmental review occurs.

The enhancement of the Park to provide new and more amenable visitor experiences consistent with the goals and objectives of the Master Plan is an ambitious undertaking. Phase 1 improvements identified for the Park (see Table 5-1) all occur within existing use areas. They include:

- ◆ Conduct major maintenance on existing facilities.
- ◆ Upgrade road and parking areas (including existing campground access roads).
- ◆ Develop a formal river access trail from the existing day use area to the campground.
- ◆ Install three fish cleaning stations.
- ◆ Create three canoe/kayak launch sites.
- ◆ Enhance canoe/kayak passage along river.
- ◆ Add one group picnic shelter to the existing river use area.
- ◆ Upgrade the existing entrance station for electronic payment and security.
- ◆ Initiate a signage program.

- ◆ Install a security gate and fencing system to close off vehicular access for the general public to the southern portion of the Park and the maintenance area.
- ◆ Initiate a tree replacement and revegetation program using native species.

In addition, conducting CTS protocol surveys, completing a project specific environmental document, securing agreements with State Lands Commission about ownership patterns, and project permitting would take place.

There are currently no County funds available to implement the Master Plan. Through Proposition 84 (approved by voters in 2006), the San Joaquin River Conservancy will receive some funding to provide for habitat enhancement, public access, and recreation. Many of the proposed Phase 1 actions would qualify for this funding. Costs and funding of future phases will need to be developed as funding becomes available, working with partner and regulatory agencies.

OWNERSHIP AGREEMENTS AND PARTNERSHIPS

The majority of Phase I improvements occur on State sovereign lands. A multi-agency agreement about the identification, use, and management of those lands should be developed. The agencies that own lands and/or easements to be included in the agreement are:

- ◆ County of Fresno
- ◆ California State Lands Commission
- ◆ California Department of Fish and Game / California Wildlife Conservation Board

Because the Park is such an important and perhaps unique component of the overall San Joaquin River Parkway and the planning of the Park affects Conservancy lands, coordination of this agreement would best be served by the Conservancy assuming a leadership role.

Fresno County cannot implement Phase 1 improvements without the active involvement of the San Joaquin River Conservancy, the California Department of Fish and Game, and the California State Lands Commission, each of whom own property that comprise the Park. These partnerships will also be vital to completing an environmental review either for the entire Master Plan at the program level, or for Phase 1 and 2 improvements only at the project level. The partnership would also be key in obtaining any regulatory permits for making Phase 1 and 2 improvements.

Implementing Phases 3 and 4 will involve coordination with the Restoration Program. The State has entered into a Memorandum of Understanding with the settling parties that outlines an important, collaborative role for the State in the planning, design, funding, and implementation of the actions called for by the settlement. Relative to the detail design of the floodplain enhancement within the Park, a working relationship should be forged with the Department of Water Resources and the California Department of Fish and Game, the two key agencies responsible for the engineering design of the Restoration Program.

ENVIRONMENTAL REVIEW

As part of the Master Plan, an Initial Study has been prepared in conformance with CEQA guidelines. During the Initial Study, several items were identified that needed further review to determine the significance of the potential impacts. In particular, the potential presence of CTS in the Park is problematic in terms of environmental review and implementation of the Master Plan. Reasons include:

- ◆ The potential presence of CTS warrants additional environmental review and protocol surveys to determine whether a Mitigated Negative Declaration or Program Environmental Impact Report is required. The Master Plan includes broad proposals to reclaim much of the Park for habitat and park use purposes. Implementing these proposals would involve significant ground disturbance that could affect CTS, if present.
- ◆ Conducting protocol surveys to determine presence of CTS and obtaining resource agency agreement with conclusions could take up to 3 years. However, the results of those surveys would be certified by the resource agencies for only 2 years potentially.
- ◆ Protocol surveys are often conducted as part of an environmental review process with the anticipation that there would be development and appropriate mitigation shortly following that environmental review.
- ◆ The approach of taking multiple steps to implement the Master Plan over many years could, based on existing regulations and without the advantage of a Parkway-wide multiple species habitat plan, potentially require multiple verifications of CTS presence or lack thereof. It may not be fiscally prudent to initiate protocol surveys until there is a pending project and funding for it.

Additional environmental review, including protocol surveys, will be necessary before and improvements can be implemented.

This Master Plan is a long-term vision for the Park that, among other proposals, includes a floodplain restoration project as the key component of Phase 3. The resulting landforms and revegetation of the floodplain would be coordinated with the San Joaquin River Restoration Program that is a project planned to enhance habitat for the endangered Chinook salmon. Balancing the habitat enhancement needs of different protected species within one program will require extensive coordination and agreement among all involved.

The agencies and permits that would be required for new improvements or developments within the Park are listed in Table 7-1.

TABLE 7-1 **PERMITTING AGENCIES**

Agency	Permit / Authority
U.S. Army Corps of Engineers	<ul style="list-style-type: none"> ▪ Regulatory authority over all jurisdictional wetlands, navigable waters, and other Waters of the United States under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act.
U.S. Environmental Protection Agency	<ul style="list-style-type: none"> ▪ Dual regulatory authority of Section 404 with the USACE.
U.S. Fish and Wildlife Service	<ul style="list-style-type: none"> ▪ Consultations required as part of the Section 404 permitting process or if any earthwork would affect endangered species habitat.
Regional Water Quality Control Board	<ul style="list-style-type: none"> ▪ Authority to regulate projects that could affect water quality through Section 401(A)(1) of the Clean Water Act.
California State Lands Commission	<ul style="list-style-type: none"> ▪ Review of plans and potential lease agreements for development of facilities and use of sovereign lands of the State of California along the San Joaquin River.
California Department of Water Resources, Reclamation Board	<ul style="list-style-type: none"> ▪ Permit for facilities or land improvements that may impact the conveyance of water within 100-year floodplain.
California Department of Fish and Game	<ul style="list-style-type: none"> ▪ Review and approval of plans and potential lease agreements for use of State-owned lands. Consultations regarding state-listed species as required by the California Endangered Species Act. Issuance of a 1601 Permit if stream alterations are anticipated.
San Joaquin River Conservancy	<ul style="list-style-type: none"> ▪ CEQA review ▪ Agreement/MOU for development, use, and management of Conservancy-owned lands.
Fresno County	<ul style="list-style-type: none"> ▪ CEQA review ▪ Approval for disposal systems ▪ Building permits ▪ Grading permit
Fresno Metropolitan Flood Control District	<ul style="list-style-type: none"> ▪ Review grading plans and other improvements within 100-Year floodplain of the San Joaquin River

CHAPTER 8:

REFERENCES

California Department of Conservation. 1988. *Designation of Regionally Significant Construction Aggregate Resources in the Fresno Production-Consumption Region – Final Environmental Impact Report*. February.

California Department of Finance Demographic Research Unit. 1998. *County Population Projections with Race/Ethnic Detail Estimated July 1, 1990-1996 and Projections for 1997 through 2040*.

California Division of Mines and Geology. 1998. *Mineral Land Classification: Aggregate Minerals in the Fresno Production – Consumption Region, Special Report 158*.

California State Parks. *Accessibility Guidelines 2009 Edition*.

California State Parks. 2008. *Central Valley Vision Draft Implementation Plan*. October 28.

California State Parks. 2007. *Central Valley Vision Summary Report – Findings and Recommendations*. January 1.

California State Parks. 2008. *Revised Draft Planning Handbook*. October.

County of Fresno, Department of Public Works and Planning Development Services Division. 2009 *Friant Community Plan Update & Friant Ranch Specific Plan Draft Environmental Impact Report*. October.

County of Fresno. 2008. *Fresno County General Plan*. October.

County of Fresno. *Fresno County Zoning Ordinance: Section 858 – Regulations for Surface Mining and Reclamation in all Districts*.

Dangermond & Associates. 1992. *Final Draft San Joaquin River Parkway Plan*. March.

Live Oak Associates, Inc. 2008. *Constraints and Opportunities Analysis – Lost Lake Master Plan, Fresno County, California*. April 11.

Lost Lake Partners, LLC. *Parkway Golf Course at Lost Lake Regional Park*.

San Joaquin River Conservancy. 2000. *Recompiled San Joaquin River Parkway Master Plan*.

2M Associates. 2008. *Lost Lake Park Master Plan – Aggregate Extraction Suitability Assessment*. 2008.

2M Associates and Economics Research Associates. 2008. *Lost Lake Park Master Plan – Golf Course Suitability Assessment*. May 27.

United States Department of the Interior, Bureau of Reclamation and California Department of Parks and Recreation. 2010. *Millerton Lake Final Resource Management Plan / General Plan Environmental Impact Statement / Environmental Impact Report*. April.

Web References

Friant Expressway: <http://www.dot.ca.gov/dist6/factsheets/docs/friantroaddwidening.pdf>, accessed June 2008.