

Chapter 3

Affected Environment/ Environmental Consequences

This document is a combined IS and EA that has been prepared to comply with both CEQA and NEPA. This chapter describes the affected environment for each of the resources evaluated and the potential impacts of implementing the proposed action and the no-action alternative on these resources. The discussion of potential impacts on the environment supports the determination of environmental significance made in the CEQA checklist (chapter 4). This chapter also discusses the affected environment and consequences from a NEPA perspective. Adverse effects discussed include both short-term (construction-related) and long-term (operation-related) effects. Construction activities are expected to take place in several phases over an extended period of time, which has not yet been determined by the lead agency and project proponent.

Aesthetics

Affected Environment

The San Joaquin River and the Jensen River Ranch project site are an important part of the view shed for roadway travelers and adjacent residents in the vicinity of the project site. The project site is visible from sections of 2 roadways: the Friant Expressway to the east and SR 41 to the west. The San Joaquin River is adjacent to the northern side of the project site, and the Woodward Park area is adjacent to the southern side. To the west, the project site is also visible to the residents of the Woodward Bluffs Mobile Home Estates. Roadway travelers on SR 41 have fleeting views of the San Joaquin River, Woodward Bluffs Mobile Home Estates, and the project site. Roadway travelers on the Friant Expressway have fleeting views of the project site, Woodward Park, and a distant view of the San Joaquin River. Residents of the Woodward Bluffs Mobile Home Estates have a direct view of the project site to the east and the San Joaquin River to the north. There are no officially designated scenic vistas or roadways in the vicinity of the proposed action project site. However, nearby Friant Expressway is a designated scenic road. The American Express Overlook and Raptor Point in Woodward Park as well as the Lewis S. Eaton Trail provide scenic vistas for the site.

Environmental Consequences/Impacts

No-Action Alternative

The no-action alternative would maintain the existing land use of irrigated pasture and seasonal grazing. No alteration of existing views would occur under this action. However, vegetation may naturally regenerate along the periphery of existing habitats if grazing is eliminated in these areas. No adverse effects would occur to the aesthetics of the site under this alternative.

CEQA Significance: no impact.

Proposed Action

Key views of the project site include those from the American Express Overlook, Raptor Point, the Lewis S. Eaton Trail, and the Woodward Bluffs Mobile Home Estates residential area. Views of the project site from SR 41 and the Friant Expressway are located at the same elevation as the bluff and are not considered to have extended views of the site.

Though implementation of the project would result in several construction-related effects to these key viewsheds, construction-related effects would be relatively short-term in nature because of the phasing of the restoration plan. Site preparation would include light disking of most proposed planting areas. Earthwork, such as the creation of perennial oxbows and backwater sloughs, would be done with self-loading scrapers and excavators. Excess material generated from the excavation would be used to create a visual buffer berm, a new weir, access ramps, and trails.

Irrigation of the planted areas is anticipated during the first 3–5 years of plant establishment. Irrigation will ensure the healthy establishment of plants and speed the growth of vegetation, thus reducing the time period the ground is left unvegetated. If planting is phased over several years, areas in later phases will be seeded with a native cover crop.

Long-term effects include: the planting of riparian and wetland plant species including cottonwood, oak, willow, and tule; construction of paved and gravel trails; and the creation of visual buffers along the southeast and northern site boundaries. No sources of lighting are proposed. Overall, implementation of the proposed action involves restoring the project site to a more natural vegetated landscape, which improves the existing visual character of the project site.

CEQA Significance: less than significant.

Agriculture

Affected Environment

The Jensen River Ranch is a 167-acre site that is primarily used for open space and irrigated pasture. The California Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) evaluates and categorizes farmland in California based on available soil survey and land use data provided by the Natural Resources Conservation Service. The farmland classification system used by the FMMP places farmland into 5 categories, with Prime Farmland defined as land with the best combination of physical and chemical characteristics for crop production. Prime Farmland is followed in importance by Farmland of Statewide Importance, Unique Farmland, Farmland of Local Importance, and Grazing Land. The first 4 categories are known collectively as Important Farmland. According to the most recent Important Farmland maps, approximately 148 acres (89%) of the Jensen River Ranch is classified as Prime Farmland (California Department of Conservation 1998). The remaining portions of the ranch are mapped as Other Lands, which are not used for agricultural purposes.

Environmental Consequences/Impacts

No-Action Alternative

The no-action alternative would maintain the existing land use of irrigated pasture and seasonal grazing. No change to the status of the property under the Williamson Act would occur. No adverse effects to agricultural resources would occur under this alternative.

CEQA Significance: no impact.

Proposed Action

Implementation of the proposed action would result in the conversion of Prime Farmland to nonagricultural uses and would limit the use of remaining farmland for agricultural purposes. Limited grazing may still occur on the site as a form of grassland management. The effect of this conversion is considered less than significant for the following reasons:

- The site is not adjacent to other agricultural operations but rather is bounded by a regional park, an aggregate mine, a small mobile home park, low-density residential housing, and the San Joaquin River;
- although the site soils are of high quality, the site has been used for irrigated pasture and seasonal grazing since at least 1937 (Krazen & Associates 1996),

not high-value row crops so impacts on agriculture use would be minimized;
and

- limited grazing would still be allowed to occur to manage grasslands and control weed species on the site.

In addition, no alterations or structures are being proposed that would preclude converting the property back to agriculture in the future.

CEQA Significance: less than significant.

Air Quality

Affected Environment

The San Joaquin Valley is characterized by warm, dry summers and cool winters. The average mean temperature is 65°F. Daily high temperatures average 95°F in summer, and daily low temperatures average 45°F in winter. The predominant wind direction is from the north during the summer and from the south during the winter. The San Joaquin Valley is subject to episodes of poor atmospheric mixing caused by inversion layers, where a mass of warm, dry air settles over a mass of cooler air near the ground. Inversion layers limit vertical mixing in the atmosphere, trapping pollutants near the surface.

Both the State of California and the federal government have established ambient air quality standards for various pollutants (table 3-1). The pollutants of greatest concern in the Fresno County area are carbon monoxide (CO), ozone, and inhalable particulate matter less than 10 microns in diameter (PM-10). Motor vehicles are the dominant source of CO emissions in most areas. Ozone is not emitted directly into the air but is formed by a reaction between light and other chemical compounds in the atmosphere. PM10 conditions in the Fresno County area result from a mix of rural and urban sources, including agricultural activities, industrial emissions, dust suspended by vehicle traffic, and secondary aerosols formed by reactions in the atmosphere.

Over the past 3 years, the Fresno County area has exceeded the federal and state 1-hour CO standards once but has not exceeded the 8-hour CO standards. The state ozone standard has been exceeded several times each year, with no obvious trend, either upward or downward. The state 24-hour PM10 standard is exceeded much of the time. The state annual PM10 standard has also been exceeded each year. Air quality is regulated at the local level by the San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) and at the state level by the California Air Resources Board.

In Regulation VIII, the SJVUAPCD has identified best management practices for construction to avoid significant PM10 production. These include

- utilizing appropriate dust control measures such as watering or pre-soaking,

- stabilizing disturbed areas, and
- limiting or removing accumulated mud or dirt on public paved roadways adjacent to the project area.

Sensitive Receptors

Sensitive land uses near the project site include residential (Woodward Bluffs Mobile Home Estates) and recreation (Woodward Park) areas. Residents of the nearby homes and people recreating in the adjacent park and trails are considered sensitive receptors.

Environmental Consequences/Impacts

No-Action Alternative

The No-Action Alternative would maintain the existing land use. The use of the land for irrigated pasture and seasonal grazing would not cause an adverse change in air quality.

CEQA Significance: No impact.

Proposed Action

The proposed action is expected to create short-term effects on air quality in the form of increased dust, particulate matter, and exhaust odors caused by construction activities. These effects are local in nature and would end with the completion of the project. To minimize dust and particulates, control measures established by the SJVUAPCD will be employed during construction.

Additionally, operation of the proposed action would not cause adverse effects on air quality because most of the users would be on foot or on bicycles or horses. Vehicle traffic may increase in the general area of the restoration site as users travel to and from the site; however, the increase in the number of vehicles in the vicinity is not considered significant. Because of the relatively small increase in vehicle traffic and the short duration and limited creation of dust and particulate matter, the proposed action is considered to have a less-than-significant effect on air quality in the project site. However, methods will be employed to reduce the severity of dust and particulate matter to the lowest possible level by adopting dust control measures during construction activities such as watering, limiting the accumulation of mud and dirt on public paved roadways, and stabilizing all disturbed areas.

CEQA Significance: The effects are considered less than significant with employment of best management practices to minimize dust.

Biological Resources

Vegetation

The project site has been used for grazing since at least 1937. The site at one time may have supported riparian forest, and, with current river hydrology, it could once again support a combination of mixed riparian forest and valley oak/sycamore woodland. Botanical resources of the restoration site were evaluated by reviewing aerial photographs; reviewing existing information resources, including the DFG Natural Diversity Database (NDDDB); and conducting a reconnaissance-level survey of the site. Table 3-2 summarizes the typical characteristics of the project site's lower and upper flood plain areas.

The project site supports 4 broad vegetation types: riparian woodland, irrigated pasture, seasonal wetland, and annual grassland. The riparian woodland contains Fremont cottonwood, Oregon ash, valley oak, elderberry (*Sambucus*), and willow species. The irrigated pasture is dominated by annual and perennial grasses but also contains sedges, smartweed, and stinging nettle. The pasture is currently grazed. A seasonal wetland (nonjurisdictional) has developed within the channel of the FMFCD. The channel area is periodically mowed and contains cattails and sedges. Annual grasses, with a few scattered valley oaks, dominate the annual grassland. The nonnative invasive plants on site include yellow star-thistle (*Centaurea solstitialis*), giant reed (*Arundo donax*), and annual grasses such as rip-gut brome (*Bromus maximus*).

No special-status plant species (i.e., federally listed or state-listed species, candidates for federal listing, or federal species of concern) were observed at the restoration site.

Environmental Consequences/Impacts

No-Action Alternative

The no-action alternative would not have an adverse effect on vegetation resources, but rather it would maintain the existing vegetation types. Regeneration of habitats would not occur unless grazing activities are discontinued.

CEQA Significance: No impact.

Proposed Action

The proposed action would not remove any existing trees or any rare or unique vegetation on the project site. The proposed action plans include the planting and restoration of vegetation native to the area (i.e., grasslands, riparian wetlands, oak/sycamore woodlands, seasonal wetlands, and riparian forest). Nonnative invasive plant species would be removed. All elements of the action would be consistent with the Conceptual Plan and the Parkway Plan. These plans do not conflict with any other local, regional, or state habitat conservation plan or other policy. Habitat restoration could support a greater variety of vegetation types and a greater variety of species; therefore, the effects of the proposed action on vegetation would be beneficial, with no long-term adverse effects. Elderberry shrubs, which may provide habitat to federally listed valley elderberry longhorn beetle (VELB), are present on the project site. Shrubs will be accurately surveyed and mapped during the detailed design phase to ensure that restoration activities, including grading, do not impact the plants. To prevent impacts to habitat for VELB, Mitigation Measure Bio-1 has been added.

Mitigation Measure Bio-1: For elderberry plants located within or immediately adjacent to the project site, a 100-foot buffer shall be established and maintained around elderberry plants containing stems measuring 1.0 inch or greater in diameter at ground level. Firebreaks may not be included in the buffer zone. In buffer areas, construction-related disturbance shall be minimized, and any damaged area shall be promptly restored following construction. The USFWS must be consulted if a disturbance within the buffer area is considered. In addition, USFWS shall be provided with a map identifying the avoidance area and written details describing avoidance measures.

All areas to be avoided during construction activities shall be fenced and flagged. A minimum setback of at least 20 feet from the dripline of each elderberry plant containing stems measuring 1.0 inch or greater in diameter at ground level shall be provided. Signs shall be erected every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment."

CEQA Significance: less than significant, with mitigation.

Wildlife

Wildlife resources were evaluated by reviewing aerial photographs and existing information resources, including the DFG NDDDB, and conducting a reconnaissance-level survey of the site and surrounding area. Appendix A contains a table of special-status wildlife species with potential to occur in the proposed project study area.

The site supports riparian woodland, irrigated pasture, and annual grassland habitats. The riparian woodland is considered high-quality wildlife habitat because it contains mature native trees and shrubs and is adjacent to the San Joaquin River, grassland, and irrigated pasture. Fremont cottonwood and valley oak provide substrates for cavity-nesting birds. Cottonwood, oak, willow, ash, and elderberry also provide foraging habitat for resident birds and mammals and for neotropical migrant birds, including flycatchers, warblers, vireos, and grosbeaks. Wildlife species observed during the field survey include red-tailed hawk, American kestrel, belted kingfisher, Nuttall's woodpecker, downy woodpecker, western scrub jay, and house finch.

The irrigated pasture is considered low-quality breeding habitat for many species of birds and mammals, including red-tailed hawk, American kestrel, finches, mourning dove, European starling, Say's phoebe, western kingbird, coyote (*Canis latrans*), gray fox (*Urocyon cinereoargenteus*), and Botta's pocket gopher (*Thomomys botta*). The annual grassland is considered moderate-quality wildlife habitat. Many of the animals that forage in the irrigated pasture also forage in the grassland. The edge of the bluff provides den and burrow sites for coyote, gray fox, and ground squirrels. The thermals created from the bluffs attract raptors and vultures, which hunt and forage in the irrigated pasture land.

Although suitable habitat (elderberry shrub) was found for the valley elderberry longhorn beetle (VELB), a federally listed threatened species, no VELB exit holes were observed at the project site. Additionally, no other special status-species were observed at the project site during the survey.

Environmental Consequences/Impacts

No-Action Alternative

The no-action alternative would not have an adverse effect on wildlife resources because land uses at the site would maintain the existing wildlife. Regeneration of habitats would not occur unless grazing activities were discontinued.

CEQA Significance: no impact.

Proposed Action

The proposed action would not remove any existing wildlife habitats, any rare or unique wildlife species, or prevent the movement of any migratory or native resident species on the project site. The proposed restoration of native vegetation, expansion of the riparian corridor, and restoration of the irrigated pasture would provide additional nesting and foraging habitat and cover for many species of wildlife. All elements of the action would be consistent with the Conceptual Plan and the Parkway Plan. These plans do not conflict with any other local, regional, or state habitat conservation plan or other policy. In

addition, the proposed action would enhance the area and attract other woodland and riparian wildlife species into the project site; therefore, the effects of the proposed action on wildlife would be beneficial, with no adverse effects.

Since public use and access is a significant component of the proposed action, an increase in use of the site by the public within restored and existing habitat would occur. Recreation elements (trails and other public use areas) have been designed to be compatible with a viable, significant restoration of the property. The per acre habitat quality index and habitat suitability index value (from habitat evaluation procedure models), multiplied by the number of acres of habitat, produces an overall quality rating expressed in habitat units (HUs). These units were averaged between the year before restoration begins and year 50. Changes in the average HU for each habitat provided in the proposed action are listed below.

Habitat	Existing Conditions	Change from Existing Conditions
Mixed riparian woodland	0.00	+4.52
Seasonal wetland	2.01	+2.83
Permanent wetland	0.00	+2.12
Valley oak/sycamore woodland	0.00	+17.02
Valley oak/sycamore savannah	0.00	+13.04
Herbaceous upland	68.82	-59.66

Elderberry shrubs, which may provide habitat for federally listed valley elderberry longhorn beetle (VELB), are present on the project site. To prevent impacts to habitat for VELB, Mitigation Measure Bio-1, described above, has been added.

CEQA Significance: less than significant, with mitigation.

Cultural Resources

Existing texts about the prehistoric, ethnographic, and historical context of the area were reviewed to analyze the potential for cultural resources within the project site. A record search was conducted at the Southern San Joaquin Valley

Information Center at California State University, Bakersfield. Records consulted included previously conducted cultural resource studies and previously recorded cultural resources within the restoration site. The results of the record search indicate that 2 surveys for cultural resources have been conducted at the restoration site (Peak 1975; Uli 1987). These surveys covered approximately 40 acres of the restoration site and identified 1 cultural resource site, CA-Fre-2123H, there. This site is identified as a historic refuse area.

Additional information was requested from the Native American Heritage Commission about traditional cultural properties. In addition, Jones & Stokes cultural resource staff requested that the Native American Heritage Commission refer the staff to interested individuals who had knowledge of resources at the restoration site that might be of concern to Native Americans. The Native American Heritage Commission provided Jones & Stokes with a list of contacts, and consultation was initiated on September 22, 1999. No further cultural resource information resulted from this consultation.

An intensive field survey of the project site was conducted by 2 Jones & Stokes archaeologists on November 8, 1999. It was deemed prudent to survey the entire project site, including those areas surveyed by Uli in 1987. Survey conditions and ground visibility in the project area were fair. Access to some portions of the project site was impeded by livestock. Because of the dense grasses covering the majority of the project site and the likelihood of substantial disturbance of potential surface finds by cattle grazing, the narrowest distance between transects was 20 meters. Approximately 60% of the project site was surveyed using transects spaced 20 meters apart, and areas with restricted access were surveyed using transects spaced 30–50 meters apart.

Site CA-Fre-2123H, which was recorded in 1987, was relocated and its site record updated to reflect its current condition. The site conditions were found to be substantially different from those noted in the 1987 site record. Ground-disturbing activities subsequent to the site's original recording, which appear to have involved the movement of dirt onto the site, obscured the temporally diagnostic ceramic fragments indicated by the 1987 site record. Previously recorded artifacts that were absent at the time of the current survey may also have been removed from the site; a bicycle trail above the site to the east affords easy access to CA-Fre-2123H. Because of ground-disturbing activities at the site and possible vandalism, the site boundaries as recorded in 1987 are smaller.

Three previously unidentified cultural resources were located as a result of the current survey. Two resources are historic structures: a hay barn (JSA-1) and a shed (JSA-2). The third resource is a historic refuse scatter along the toe of the southern bluff (JSA-3).

To comply with both CEQA and Section 106 of the National Historic Preservation Act, evaluations of the resources within the project site that could potentially be affected must be conducted to determine the resources' significance. CA-Fre-2123H was evaluated in 1987 (Uli 1987) and found ineligible for listing in the National Register of Historic Places. The 3 previously

unrecorded resources (JSA-1, -2, and -3) were evaluated in February of 2000 (Jones & Stokes 2000) and are recommended as ineligible for listing in the National Register of Historic Places and the California Register of Historical Places. SHPO concurred with the findings of the resource evaluation, which determined that the proposed project would have no effect on historic properties (letter from Dr. Knox Mellon to Laura Allen Jan 19, 2001)

Environmental Consequences/Impacts

No-Action Alternative

No earthwork would be associated with the no-action alternative. Existing cultural resources would not be adversely affected by this alternative. It is assumed that existing structures would be maintained in their current condition.

CEQA Significance: no impact.

Proposed Action

The cultural resource survey resulted in the relocation of a previously recorded site, CA-Fre-2123-H, and the identification of 3 previously unidentified resources (JSA-1, -2, and -3). Because the resources are recommended as ineligible for listing in the National Register of Historic Places and the California Register of Historical Places, the proposed action is not considered to have an adverse effect on cultural resources.

To protect any previously unidentified cultural resources that may be uncovered on the project site as a result of construction-related activities, Mitigation Measure Cultural-1 would be followed.

Mitigation Measure Cultural-1: If any building materials, archaeological artifacts, nonnative rock, or unusual amounts of shell or bone are uncovered during project activities, all work in the area shall stop immediately and a qualified archaeologist shall be retained to evaluate the find. If the discovery consists of human remains, the Fresno County coroner shall be contacted. The coroner is responsible for contacting the Native American Heritage Commission if the remains appear to be those of a Native American.

CEQA Significance: less than significant, with mitigation.

Geology, Seismicity, and Soils

Affected Environment

The California Division of Mines and Geology has mapped the surficial geologic deposits on the gently sloping portion of the project site as Holocene stream channel deposits. The steeply sloping terrace escarpment that is located at the eastern edge of the project site is composed of the slightly older deposits of the Riverbank Formation. The Riverbank Formation is of Pleistocene age and consists of nonmarine sands, silts, and clays. (Matthews and Burnett 1965).

The closest fault to the project site is the Clovis fault, a pre-Quaternary fault located approximately 20 miles east of the project site. The Clovis fault is concealed by younger sediment (i.e., is imprecisely located) and shows no evidence of displacement during the last 1.6 million years. The closest active and potentially active faults are located more than 50 miles from the project site in the Owens Valley to the east and in the Coast Ranges to the west.

In 1996, the California Division of Mines and Geology released a probabilistic seismic hazard assessment for the State of California to aid in the assessment of seismic ground-shaking hazards in California (Peterson et al. 1996). The report contains a probabilistic seismic hazard map that depicts the peak horizontal ground acceleration values exceeded in a given region of California at a 10% probability in 50 years (i.e., a 0.2% probability in 1 year). The peak horizontal ground acceleration values depicted on the map represent probabilistic estimates of the ground-shaking intensity likely to occur in a given area as a result of characteristic earthquake events on nearby faults and can be used to assess the relative seismic ground-shaking hazard for a given region. Based on this map, the probabilistic peak horizontal ground acceleration value, and thus the seismic ground-shaking hazard, in the vicinity of the project site ranking among the lowest in the state.

Soils

Soils on the project site and surrounding area were mapped by the U.S. Department of Agriculture's Soil Conservation Service (Huntington 1971). According to the survey, soils of the Grangeville series occupy the level to nearly level terrace surfaces that comprise most of the project site. Soils of the Grangeville series formed from granitic alluvium and typically consist of stratified and unstratified sandy loams to depths of more than 5 feet. Under natural conditions, Grangeville soils have moderately rapid permeability and are somewhat poorly drained, but the soil survey indicates that lowering of the local water table by groundwater pumping has improved the drainage of these soils in some locations. Jones & Stokes estimates that the Grangeville soils located within the project site are currently well drained. Runoff is slow, and the hazard of erosion is none to slight.

The eastern boundary of the project site consists largely of a steep terrace escarpment that borders the San Joaquin River. The soil survey indicates that the properties of the soil materials that comprise the upper portion of the escarpments are variable but typically consist of somewhat excessively drained sandy loams and loams. Based on Jones & Stokes field observations, soil materials on the escarpments at the project site consist of loose to moderately consolidated loams and fine sandy loams with slopes that range from vertical to roughly 50%. (Huntington 1971).

Based on Jones & Stokes' field observations of the nature of the terrace escarpment soil materials and sediments, the hazard of mass movement (i.e., landslides) occurring on the escarpment face in its existing condition is presently low. Rather, the escarpment materials are of a type that is more prone to sheet and gully erosion (i.e., water erosion) than to mass failures.

Runoff from the escarpments is rapid and the hazard of erosion is high (Huntington 1971). Parts of the escarpment have experienced significant gully and sheet erosion, possibly as a result of current livestock grazing on the project site. Some areas of the bluff have conspicuous grazing-induced "terraces." Areas in which grazing is presently excluded are generally better vegetated and do not display the terraces.

Environmental Consequences/Impacts

No-Action Alternative

The no-action alternative would allow grazing to continue on the property. Soil and vegetation disturbance caused by continued grazing would likely increase sheet and gully erosion rates on the property to some degree. However, further increases in erosion rates under the no-action alternative would be minimal in comparison to existing rates. Therefore, the no-action alternative would have a less-than-significant effect on soil erosion and sedimentation rates.

CEQA Significance: less than significant.

Proposed Action

The earthwork that would be conducted to implement the proposed action would disturb a significant proportion of the project site, exposing bare, unvegetated soil to erosion by wind and water during and shortly after project construction. Grading would not, however, disturb the existing bluff. Erosion and sedimentation rates at the project site could increase as a result of the earthwork. Pursuant to the NPDES, the project applicant shall prepare and implement a storm water pollution prevention plan (SWPPP) in accordance with the requirements of the NPDES General Construction Activity Storm Water Permit issued and administered by the State Water Quality Control Board.

After the proposed earthwork and plantings are complete, erosion hazards would be further reduced by the stabilization provided by the plants and the limited grazing. Implementation of erosion and sediment control measures in the SWPPP would continue, as needed.

The current erosion damage is related to cattle grazing along the bluff. If grazing continues as a form of vegetation management, animals would be confined to the lower terrace and restricted from the bluff escarpment. No appreciable change in the hazard of mass movement on the bluff escarpment is anticipated as a result of project construction or operation.

No septic tanks or other waste water disposal systems are proposed though the soils present on site are suitable for supporting these systems.

The seismic ground-shaking hazard in the vicinity of the project site ranks among the lowest in the state.

CEQA Significance: less than significant, based on compliance with NPDES permit requirements.

Hazards and Hazardous Materials

Affected Environment

The land use at the project site has historically been irrigated pasture and grazing. It is not known if environmentally persistent pesticides have been applied to the site in the past. However, surface soil sampling and analysis from properties with similar agricultural histories has typically yielded nondetectable results.

A Phase 1 environmental site assessment was performed by Krazen & Associates in 1996. The site reconnaissance conducted to complete the assessment revealed that two water wells, an unlined flood control channel, 2 outbuildings, a wooden fence corral used for cattle, and 5 pole-mounted transformers are located on the site. Several vertical concrete pipes present at various locations on the site, including within the storm water drainage channel, indicated that buried irrigation lines are present. The outbuildings were used to store alfalfa and bee hives. No obvious evidence of underground fuel storage tanks were observed; however, an aboveground metal diesel storage tank is located near the smaller outbuilding. No discoloration or staining of soils adjacent to or beneath the storage tank was noted during the site reconnaissance; however, a slight diesel odor was detected from the tank.

A review of topographic and hydrologic data determined that groundwater in the proposed project vicinity would be approximately 35 feet below existing grade. California Department of Water Resources map "Lines of Equal Elevation of Water in Wells, San Joaquin Valley, Spring 1995, Unconfined Aquifer" indicates that lateral groundwater flow is generally in a westerly direction. Review of the

contaminated well list indicated that no listed polluted wells are located on or within a ½-mile radius of the project site. In addition, the site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.

No City of Fresno records of historical hazardous/flammable permits, historical hazardous materials handling, hazardous/flammable incidents, or permits for items such as underground structures, septic, building, demolition, or previous structures were on file for the project site. During the assessment interview with the son of the previous property owner, it was reported that a septic tank may have been associated with the former residence that burned down in the 1980s.

Two water wells – one domestic and one irrigation – exist on the site. One or both of these wells may be used as part of the proposed action. If the wells are not used they will be properly removed from service in accordance with local and state Department of Water Resources regulations.

The site is located more than a ¼ mile from the nearest school. It is not known at this time whether a school is proposed to be built close to the project site. The site is outside an airport land use plan area and is more than 2 miles from an airport or airstrip.

Environmental Consequences/Impacts

No-Action Alternative

Implementation of the no-action alternative would not change the established land uses, structures, or level of hazards on the site, nor would it create a new significant hazard to the public or the environment. No adverse effects caused by hazardous materials would occur.

CEQA Significance: no impact.

Proposed Alternative

The proposed action would involve the use and handling of small quantities of hazardous materials, such as gasoline, during implementation of the project. These materials would be used in a manner consistent with proper construction activities and, in the event of a spill of such materials, appropriate cleanup would occur. In addition, the SWPPP, discussed in “Geology, Seismicity, and Soils,” would reduce this effect to a less-than-significant level.

The proposed action would not involve the routine transport, use, or disposal of hazardous materials, nor would it interfere with an adopted emergency response or evacuation plan. The risk of wildland fire would not dramatically increase with the enhancement of habitat and public access at the site. Public access features would perhaps allow better emergency access than the present conditions

on the property allow. As recommended by the Phase I environmental site assessment, the septic tank, possibly located near the former residence foundation, would be located and properly abandoned. Therefore, the proposed action would not have a significant adverse effect on the environment caused by hazards or hazardous materials.

CEQA Significance: less than significant.

Hydrology and Water Quality

Affected Environment

Hydrology

The project site is located adjacent to the San Joaquin River channel in the upper San Joaquin River watershed. Precipitation is the main source of nonirrigation water on the site. The average rainfall is 11.03 inches per year, with a record maximum of 21.61 inches and a minimum of 6.07 inches (Western Regional Climate Center 1999). Most of the rain falls in the late fall to early spring, and the records show that it is possible that less than 0.1 inch will fall in any month of the year. Runoff enters the site from Woodward Park and the DK drainage area channel; however, the exact amount of runoff is not known. The project site drains to the west and southwest. The DK drainage area channel, an existing vegetated swale in the vicinity of the proposed oxbows, conveys urban stormwater runoff to the San Joaquin River.

Average annual streamflow along the San Joaquin River in the vicinity of the project site ranges from 66 to 4328 cubic feet per second (cfs) (U.S. Geological Survey 2001). The most current Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps indicate that the project site is located outside of the 100-year floodplain (ESRI 2001).

Groundwater elevations at the project site have ranged from 30 to 40 feet below the ground surface in the last 10 years (California Department of Water Resources 2001). The Twining Laboratories (1989) found groundwater within 17–20 feet of the ground surface. Shallower, perched groundwater may exist closer to the surface.

Water Quality

The Central Valley Regional Water Quality Control Board's 1998 303 (d) lists indicates that the beneficial uses of the lower 130 miles of the San Joaquin River are impaired by pollutants that are characteristic of many agricultural watersheds in the Central Valley. However, adjacent to the project site the beneficial uses of

the San Joaquin River are not impaired. In fact, according to water quality data collected by the FMFCD, the river is of very high quality.

Environmental Consequences/Impacts

No-Action Alternative

Implementation of the no-action alternative would not alter surface drainage patterns, groundwater elevations, groundwater recharge, or flood hazards in the project site, nor would it result in the discharge of sediment or other pollutants into the San Joaquin River. Therefore, implementation of the no-action alternative would have no effect on hydrology and water quality in the project site or the San Joaquin River.

CEQA Significance: no impact.

Proposed Action

The earthwork that would be conducted to construct the various components of the proposed action would result in substantial soil and vegetation disturbance. These disturbances would increase the hazard of erosion and could thereby increase erosion and sedimentation rates during and shortly after construction. Additionally, the use and maintenance of motorized construction equipment on the project site could result in the indirect discharge of hazardous fuels and lubricants into the San Joaquin River. This effect is considered to be less than significant with the commitment to SWPPP requirements. The proposed action would create floodplain habitat. Groundwater recharge would not be affected because the proposed action would not result in an increase in impervious surface or an increase in compacted soil. As part of the project design, oxbow sloughs would be excavated, causing a slightly longer flow path from the drainage area to the existing outfall structure at the San Joaquin River. This modification of the outfall would promote settling of the medium- and coarse-grained soils found on the project site. Water velocities would also decrease as a result of the project. Therefore, the modification of the outfall is not expected to result in increased erosion or sedimentation.

The proposed action would not result in a significant increase in impervious or slowly permeable surface area. The Tom MacMichael Sr. loop trail will be paved and runoff will be captured on site. The site will be recontoured to establish target plant communities, expanding the current drainage area of the DK drainage area channel. The entire site will not be recontoured to drain into the DK drainage area channel. Areas along the river will continue to drain directly into the river, as they do now. Existing drainage swales along the toe of the bluff will remain, with some enhancement to improve habitat and reduce mosquito issues, on the western half of the site. Because the site will remain a natural pervious surface and disturbed areas would be vegetated, an increase in

runoff volume and peak flow is not anticipated. Therefore, a stormwater management system for the project site is not proposed.

Pollution prevention measures will be incorporated into the project design in accordance with the SWPPP. Therefore, no water quality degradation is expected.

The proposed action does not call for the construction of housing within the 100-year floodplain, nor would it involve the placement of permanent structures within the 100-year floodplain. The project would not expose additional people to risk from dam or levee failure. The project is located far enough away from any large waterbodies that potentially significant effects from a seiche and/or tsunami are highly unlikely. The relatively flat topography makes effects from mudflows highly unlikely. Therefore, there no effect is anticipated.

The urban storm water treatment capabilities of the DK drainage area channel will be maintained. Pollutants captured within the urban storm water detention basin (settling basin at the base of the outfall) will be periodically removed by the FMFCD. It is not anticipated that the oxbows will require dredging to remove sediment of pollutants; however, herbaceous vegetation and cattails may require periodic removal.

CEQA Significance: less than significant with incorporation of SWPPP requirements.

Land Use

Affected Environment

Regional and Local Setting

The project site is located approximately 8 miles north of downtown Fresno. According to historical aerial photographs, the site has been in agricultural production since the 1930s. The 167-acre site is bordered to the west by the San Joaquin River, SR 41, and Woodward Bluffs Mobile Home Estates; to the south by Woodward Regional Park (approximately 300 acres); and to the east by the Friant Expressway and several vacant Fresno County properties.

Existing on-site uses are chiefly agricultural (e.g., irrigated pasture). Suburban development associated with the growth of the Fresno metropolitan area is characteristic of land near the southern and southeastern boundaries of the site. Across the Friant Expressway, land uses include several bicycle and equestrian trails associated with the Lewis S. Eaton Trail (part of the San Joaquin River Parkway) and residential and commercial development. Land uses to the north include a small parcel retained by the Jensen family, which will most likely remain in agricultural use.

Beyond the project site to the north are uses that include an open-pit aggregate mine, low-density development, and agriculture. Other areas preserved for wildlife habitat enhancement include Rank Island, located 2 ½ miles up the San Joaquin River, and the Wildwood Property, located directly across the San Joaquin River to the west. Both areas consist of public lands managed by the DFG and the Wildlife Conservation Board.

The Parkway Plan was prepared for long-range planning of the San Joaquin River Parkway and contains possible land uses proposed for the Parkway, including suggested ways to implement these proposed uses. The plan uses the following generalized land use designations to describe the possible land uses within its scope: natural reserve, wildlife corridor, recreation area, agriculture, commercial facilities, and public service facilities. The Parkway Plan was developed with the goal of directing natural resource preservation, public access, and recreation along the river.

General Plan and Zoning Designations

The project site is located within an unincorporated area of Fresno County and falls within the jurisdiction of both the City of Fresno and Fresno County. Both the city and county have a joint tax sharing agreement that includes provisions for management of the San Joaquin River bottom area. In addition, the agreement defines the city's and county's respective roles in the regulation of land uses in areas adjoining the city. The city is considered the lead government agency in matters related to the Jensen River Ranch property. The city designates the Jensen River Ranch site land use as river bottom/multiuse open space zoned AE-5 UGM. The city's allowable uses include agriculture, open space, and mineral resources (Yovino pers. comm.).

Environmental Consequences/Impacts

No-Action Alternative

No modification to existing land uses would be required under the no-action alternative. No adverse effects to land uses would occur

CEQA Significance: No impact.

Proposed Action

Because the proposed action's objectives are to promote the riparian restoration or habitat enhancement of the existing Jensen River Ranch site, it would protect and enhance existing land uses and be compatible with the land use requirements, as established by the City and County of Fresno. The proposed action is expected to

have a beneficial effect on the implementation of land use plans for the area, is compatible with adjacent land uses, and would not divide an established community.

All elements of the action would be consistent with the Conceptual Plan and the Parkway Plan. These plans do not conflict with any other local, regional, or state habitat conservation plan or other policy. The action would maintain open space in conformance with the city general plan and current zoning.

CEQA Significance: no impact.

Mineral Resources

Affected Environment

Geotechnical investigations conducted in the late 1980s revealed that the proposed project site contains subsurface deposits of sand and gravel. The investigations concluded that these deposits are suitable for development as a sand and gravel source for local cement manufacturing facilities (The Twining Laboratories 1989). The Parkway Plan contains goals to ensure that Parkway facilities, including the proposed Jensen River Ranch project, are designed, constructed, and operated in such a way that existing sand and gravel mining operations are not adversely affected and that they will not preclude future extraction of sand and gravel resources. Although the project will not physically preclude sand and gravel extraction, such activities are not within the project objectives and the site will not be put to that use in the future.

Environmental Consequences/Impacts

No-Action Alternative

Implementation of the no-action alternative would not affect the future recovery of mineral resources (i.e., sand and gravel) from the project site.

CEQA Significance: no impact.

Proposed Action

The proposed action has been designed to be consistent with the mineral resource goals of the Parkway Master Plan. Therefore, although no resource recovery is contemplated, the proposed action would not physically preclude the future recovery of mineral resources (i.e., sand and gravel) from the project site.

CEQA Significance: no impact.

Noise

Affected Environment

Relevant Guidelines and Regulations

Within the Noise Ordinance of the City of Fresno, ambient noise levels for residential, commercial, and industrial districts are listed (Article 3, Section 8. Orig. Ord. 1076; Rep and Added Ord. 1972). Monitoring procedures to evaluate noise in the community are also detailed. Pursuant to Section 8-309, “construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday” are exceptions to the noise ordinance.

The U.S. Environmental Protection Agency established sound level guidelines for various types of uses (U.S. Environmental Protection Agency 1971). A sound level of 55 decibels day-night average sound level (Ldn) was established as the level that protects the public health and welfare with an adequate margin of safety outdoors in residential areas. The Ldn descriptor is a 24-hour average weighted to penalize noise that occurs during nighttime hours (10 p.m. to 7 a.m.), when people are likely to be most sensitive to noise levels.

Existing Noise Conditions

No known noise monitoring data exist for the project site. Existing noise conditions are typical of conditions in open space areas surrounding the Fresno metropolitan area. Few noise sources exist in the project site. Existing noise sources generated adjacent to or near the site consist primarily of traffic noise from Friant Expressway and SR 41 and from aggregate mining operations north of the site. The existing mobile home park (Woodward Bluffs Mobile Home Park) is between SR 41 and the project site. No significant other noise sources are located near the project site.

Environmental Consequences/Impacts

No-Action Alternative

No change in noise levels would occur under the no-action alternative. No adverse effects caused by noise would occur.

CEQA Significance: No impact.

Proposed Action

The construction of the proposed action would cause temporary increases in existing noise levels, which could affect noise-sensitive land uses in the vicinity of the project site.

Equipment that will be used during construction includes: an excavator, a grader, an earth scraper, and a water truck. It is anticipated that earth moving will take approximately two weeks and operations will take place during regular working hours consistent with the noise ordinance.

Table 3-3 summarizes construction noise levels (in terms of equivalent or energy average sound level) for various types of equipment (Federal Transit Administration 1995). Construction equipment can operate intermittently or fairly continuously, with multiple pieces of equipment operating concurrently. Typically, construction-site noise levels are about 80–90 dBA measured 50 feet from the activity.

Table 3-3 Construction Equipment Noise

Type of Equipment	Energy Average Sound Level, dBA at
	50 feet
Grader	85
Scrapers	89
Heavy Trucks	88
Backhoe	80

Source: Federal Transit Administration 1995.

To assess a typical worst-cased construction noise condition, a scenario which assumes that a heavy truck (88 dBA) and a scraper (89 dBA) are operating concurrently and continuously in the same area has been evaluated. The combined sound level of these two pieces of equipment would be approximately 92 dBA at a distance of 50 feet from the construction site. Noise from this type of equipment will typically attenuate at a rate of about 6 dB per doubling of distance.

The project site is located on an abandoned intermediate floodplain terrace, bordered on the south and east by a natural bluff escarpment. The topography

will naturally shield residential areas across the Friant Expressway from construction noise. However it will not reduce construction noise levels for the residents of the mobile home park located about 100 feet to the west of the site or those recreating on the river north of the site. Residences in the mobile home park or those recreating on the river north of the site could therefore be exposed to temporary construction noise as high as about 86 dBA.

Construction of a privacy berm within the visual buffer is the activity that will occur closest to this residential area (approximately 100 feet from the property boundary) (see figure 2-3). Other construction activities will be greater than 2,250 feet from the mobile home park. The berm will be constructed of excavated material generated from creation of the oxbows, will be approximately 6-8 feet tall and 1,500 feet long. To reduce noise impacts on nearby residents, this berm will be constructed during the early stages of earthwork and will provide additional buffering from later construction activities. The berm would be expected to reduce noise by 5 to 8 dB. Because noise generating activities during construction would be temporary and conducted during daytime hours in accordance with the requirements of the local noise ordinance, the temporary increases in noise from construction are considered to be less than significant.

Typical construction practices include keeping people from approaching too closely to the construction site for safety reasons. Because noise levels decrease with increased distance, this practice prevents people from being exposed to significant levels of construction noise. Most of the site is currently fenced with three-strand barbwire for the grazing operation. Some of this will be removed for construction, in which case the areas that remain accessible to the public will be fenced with temporary chain-link fencing. Temporary trails currently in-use on the site will be closed during construction. The adjacent mobile home park is currently fenced with a 6-foot tall chain link fence.

Noise from on-site activities after implementation of the project are expected to remain unchanged from existing conditions, and operation of the restoration site is not expected to expose people to severe noise levels. Because of the limited duration of noise effects associated with construction and the expected absence of long-term operational effects, the proposed action is not considered to have an adverse effect on noise in the vicinity of the project site.

CEQA Significance: Less than significant with incorporation of local noise ordinance.

Population and Housing

Affected Environment

Suburban development associated with the growth of the Fresno metropolitan area is characteristic of land near the southern and southeastern boundaries of the proposed project site. Residential property bordering and near the site include:

Woodward Bluffs Mobile Home Estates to the west; single family residential housing across Friant Expressway to the east; and low-density residential housing to the north separated from the site by an open-pit aggregate mine and agricultural land. The site itself does not contain residential housing.

Environmental Consequences/Impacts

Neither the No-Action Alternative nor the proposed action involves the construction of new homes, the extension of existing infrastructure, or the displacement of existing housing. The proposed project would not induce substantial population growth in the area.

CEQA Significance: no impact.

Public Services

Affected Environment

Fire and Police

The Fresno Fire Department provides fire protection. The portion of the existing Lewis S. Eaton trail between State Route 41 and the Woodward Park Drainage outfall was designed for use by fire trucks or vehicles of equivalent weight and size. This trail provides fire equipment access from the southern side of Woodward Bluff Mobile Home Estates to Woodward Park and the proposed project site. In addition, an existing 60-foot-wide emergency access easement from Rice Road through Woodward Park exists.

The Fresno Police Department currently assigns 2 police officers for safety patrols of the San Joaquin River Parkway, including the project site. In addition to routine patrol, the officers respond specifically to calls from the river bottom.

Schools and Parks

The proposed project site is outside of the Fresno Unified School District (over .25 miles from the nearest school) and immediately adjacent to Woodward Park. Woodward Park contains established public facilities, routinely maintained by the City of Fresno.

Mosquito Abatement

The Consolidated Mosquito Abatement District (Consolidated MAD) provides mosquito abatement services to the project area. The site consists of habitats

capable of sustaining populations of several mosquito species. Most of the mosquitoes breed in two distinct habitats—the irrigated pasture used for grazing and the grassy swale and maintenance basin (DK drainage area channel) used for trapping sediment and particulate matter from stormwater conveyed from the adjacent bluff area. Each of these habitats supports distinctly different mosquito breeding. Other habitat characteristics that support additional mosquito species include shoreline areas of the San Joaquin River and water-filled treeholes. (Smith, 2001)

Irrigated Pasture

Irrigated pasture is ideal habitat for *Ochlerotatus* (formerly *Aedes*) *nigromaculis*, commonly called the irrigated pasture mosquito, and *Ochlerotatus melanimon*. *Oc. nigromaculis* is a multiple generation floodwater species, which has the ability to produce broods from water that needs to stand for only a few days. Adult mosquitoes emerge in tremendous numbers and immediately seek blood meals from any warm-blooded animal within reach. After water disappears from flooded areas, female mosquitoes lay eggs on the damp soil. When subsequent floodwater inundates the area, a new generation of mosquitoes begins to develop. Although it is usually much less common than *Oc. nigromaculis*, *Oc. melanimon* has occasionally been a serious nuisance in the vicinity of the project site. Both of these species are daytime biters and very active at dawn and dusk.

Due to the large amount of acreage, the lengthy irrigation schedule, and the water management practices currently used on the site, substantial reduction in mosquito breeding through physical means has been unsuccessful. Consolidated MAD controls larvae of *Oc. nigromaculis* by applying insect growth regulator or bacterial agents to the water in a timely fashion. These materials effectively destroy larvae thus breaking the life cycle. If pupae are discovered, they must be killed using a petroleum based insecticide. Adult mosquitoes can be controlled only with the use of aerosol fogging compounds. (Smith 2001)

DK Drainage Area Channel

The DK drainage area channel supports mosquitoes that breed in permanent rather than intermittent water sources. Adult females lay eggs on the surface of the water in calm or stagnant areas. Hydrophytic plants on the surface and along the sides of the maintenance basin provide shelter for mosquito larvae and pupae. The vegetation lining the sides and bottom of the swale also enhance the habitat for mosquito breeding. Species common to this source include *Culex tarsalis*, the encephalitis mosquito, and *Culex quinquefasciatus*, the southern house mosquito. Both of these species are multiple generation and principally night biters.

The maintenance basin of the DK drainage area channel is a permanent water source at the base of the bluff. Within this source, the life cycle of *Culex tarsalis* and *Culex quinquefasciatus* is usually completed in seven to fourteen days

depending on the temperature. Larvae can be controlled using mosquito-eating fish (*Gambusia affinis*) or bacterial agents. Bacterial agents are usually applied by Consolidated MAD within the grassy swale since the water is ephemeral and will not support fish. Pupae and adults of *Culex* species are controlled with the same materials used to control other species.

Environmental Consequences/Impacts

No-Action Alternative

The No-Action Alternative would maintain the existing needs for police and fire protection.

Historically the site has been poorly managed for mosquito control, thus costing the CMAD much time and money to repeatedly treat the site throughout the irrigation season. It is assumed that current practices would remain under the no-project alternative. Continued grazing without substantial changes in water management practices would ensure continued production of pest mosquitoes and rising costs to CMAD for effective control.

CEQA Significance: no impact.

Proposed Action

Fire and Police

The proposed action would create a new public recreational and open space facility that would expand the use area of Woodward Park through adjoining trails. The need for fire protection could increase because of the increase in public access to the site. Fire equipment access would remain unchanged via the existing Lewis S. Eaton trail from State Route 41.

The current level of service provided by the Fresno Police Department to patrol the Parkway is adequate. Additional staff would not be required to patrol the Tom MacMichael Sr. loop trail.

Schools and Parks

The proposed action would not create the need to modify or build school facilities in the project area. Woodward Park would be used for access to the project site but would not require alteration of its existing facilities.

Mosquito Abatement

It is reasonable to assume that any restoration alternatives contemplated for the Ranch will have an impact on the habitat conditions related to mosquito breeding. In order to accomplish successful mosquito abatement, CMAD will need access to the site so that inspection, surveillance, and treatment procedures can be performed. Apart from climatic conditions, the success or failure of mosquito control efforts will depend upon water management strategies, land use decisions, and cooperation between CMAD and the River Parkway Trust as managers of the restoration. CMAD will also be consulted during the detailed design phase of the restoration to ensure design features that would limit mosquito populations are included. Design elements that should be incorporated to reduce mosquito populations include:

- Limit the dense growth of emergent vegetation (i.e. cattails and common tules),
- Allow for wind-wave action in open water areas to reduce shelter for mosquito breeding,
- Eliminate pockets of shallow standing water,
- Ensure permanent ponds are deep enough to support mosquito fish and other mosquito predators, and
- Ensure positive drainage in swales.

The four Habitat Enhancement Elements that may support mosquito populations are evaluated below.

Oxbow Lakes

As described in the Revised Draft Conceptual Plan, the wetland oxbows have the potential to enable significant mosquito breeding. The 6:1 and 4:1 side slopes for oxbows 1 and 2, respectively, will produce a feathered, shallow substrate. This could be an excellent habitat for immature mosquitoes, especially if emergent vegetation provides shelter and if fish are unable to forage. These plants enable mosquitoes to avoid fish and other natural predators and also greatly reduce the efficacy of pesticides. Fluctuating water levels will affect mosquito populations and treatment alternatives.

Riparian Backwater Slough

The backwater slough has the potential to attract mosquitoes in similar fashion to the oxbows. To the extent that the slough is connected to the river and remains free of substantial emergent vegetation, it would create fewer mosquito problems than the oxbows. There is a reasonable likelihood that fish would travel easily through its course.

Seasonal Wetland Depressions

Wetland depressions usually support mosquito breeding, especially if they are ephemeral. Given enough time, natural insect predators will often inhabit such sources and create some balance in the predator-prey population.

Extension of Woodward Park Drainage

Mosquito breeding along an extended drainage watercourse could be negligible or significant depending upon flow, vegetative protection, and natural predators.

CEQA Significance: Less than significant, with incorporation of design measures to allow for adequate treatment of mosquitoes.

Recreation

Affected Environment

The 300-acre Woodward Park currently provides recreational opportunities within the vicinity of the project site. Woodward Park is adjacent to the south side of the project site and consists of equestrian and bicycle trails, large lawn areas, playgrounds, and picnic shelters for recreational use. The Lewis S. Eaton trail is adjacent to the project site, is open to the public and provides a connection from Woodward Park to the river via an existing interim trail on the project site. The river also provides several water-related recreational activities in the vicinity of the project site, such as canoeing. Current river access from the park is provided via an existing interim trail through the project site.

Environmental Consequences/Impacts

No-Action Alternative

The no-action alternative would not create additional recreational opportunities and would not provide additional river access at the project site. The proposed action's habitat restoration, which would increase the recreational value of the project site, would not occur. The current use of the land for irrigated pasture and seasonal grazing would continue. No adverse effect would occur to recreational resources; however, no beneficial effects would occur either.

CEQA Significance: no impact.

Proposed Action

The proposed action is expected to enhance recreational opportunities by restoring habitat (i.e., planting locally native vegetation and creating wildlife viewing opportunities) and by providing trails for bicycling, pedestrian, and equestrian uses. The proposed action's habitat restoration plans would also enhance the aesthetic value of the project site. The proposed action would focus on establishing a habitat that requires relatively low maintenance and provides

increased recreational value to the project site. Therefore, the effects of the proposed action on recreation will be beneficial, with no adverse effects.

The adjacent Woodward Park would join the proposed project via existing trail systems. The Lewis S. Eaton trail would be used for public recreation access at both Woodward Park and the new Jensen River Ranch. Use of this trail would increase with the creation of the Jensen River Ranch; however, use would be dispersed to other Woodward Park trails and the previously analyzed Tom MacMichael Sr. Loop Trail which would provide public trails for the proposed project and would connect to the Lewis S. Eaton trail. No new or expanded recreational facilities would be needed to serve the site.

The public would access the proposed project site via Woodward Park, however, no expansions or modifications to the existing park facilities, access points or public services would be required.

CEQA Significance: no impact.

Traffic and Transportation

Affected Environment

The Jensen River Ranch lies between SR 41 to the west and the Friant Expressway to the east in unincorporated Fresno County north of City of Fresno limits. Access to the site will be provided through Woodward Park and the Lewis S. Eaton trail via the Perrin alignment that connects from Old Highway 41. The Tom MacMichael Sr. trail will connect with the Lewis S. Eaton trail east of the site via a 60-foot-wide easement from Rice Road currently designated an emergency access easement.

Traffic volumes on SR 41, the Friant Expressway, and surrounding streets operate at acceptable levels of service (Parker pers. comm.).

Parking for the site is available at the north parking lot of Woodward Park. This parking lot has space available for expansion, if needed. Emergency access to the site is available from the Rice Road easement and from the Lewis S. Eaton trail where it meets SR 41.

Environmental Consequences/Impacts

No-Action Alternative

No modification to traffic would occur under the No-Action Alternative. Existing traffic patterns from adjacent roadways would continue. Recreational traffic would continue to flow into Woodward Park. No adverse effects to traffic would occur. Emergency access would remain unchanged under this alternative.

CEQA Significance: No impact.

Proposed Action

During construction of the proposed action, short-term effects on traffic flow are expected to occur. Depending on the work being done on the project site, project-related traffic (e.g., workers coming to and from work, equipment traveling to and from the project site) would enter and exit the access roads (i.e., Perrin Road via SR 41 and surface roads in Woodward Park) at staging areas.

Implementation of the proposed action is expected to increase the number of people on the project site for recreational purposes. However, the number of recreational users at any one time is not expected to exceed 75. The proposed project would not conflict with existing use of or plans for public transportation, including alternative transportation. Once open to the public, access for emergency vehicles would be provided via Woodward Park, the 60 foot emergency access easement from Rice Road and from Old Highway 41 via the Perrin alignment of the Lewis S. Eaton Trail. Both of these access points are designed to accommodate appropriate vehicular loads.

The disruption to traffic flow is mainly a short-term effect and, therefore, is not considered to be adverse. A traffic flow plan with defined staging area locations will be prepared with the construction documents and implemented during construction activities.

Parking for the site would be provided by the existing north parking lot of Woodward Park. It is assumed that the current available parking is adequate; therefore, analysis of parking is not part of this study. (Please see the Jensen River Ranch Public Access Concept summary [2M Associates 2000]). Access to the proposed project site by persons with disabilities would be available via Woodward Park. The previously analyzed Tom MacMichael Sr. trail was designed to accommodate the Americans with Disabilities Act Accessibility Guidelines for Outdoor Developed Areas.

CEQA Significance: no impact.

Utilities and Service Systems

Affected Environment

Existing Irrigation and Potable Water Infrastructure

Most of the project site is flood irrigated from an underground delivery system that pumps water from the San Joaquin River. A 50-foot channel runs from the river into the south bank, which prevents the infrastructure from being placed in

the active river channel. The actual capacity of the pump is currently not known. Only small segments of the system can be opened at one time, irrigating approximately one-seventh of the total irrigation area. Complete irrigation of the pastures requires 2 weeks.

The City of Fresno operates a small drip irrigation system along the far western edge of the property adjacent to Woodward Bluffs Mobile Home Estates, which is used to irrigate 2 rows of trees. In addition, the city also operates a potable water tap near the river access on the western edge of the site. These systems are supplied with water from Woodward Park.

The FMFCD operates an irrigation system within the DK drainage area channel which consists of pop-up overhead sprinklers, controlled by 27 valves, capable of irrigating the entire right-of-way. A 20-horsepower pump near the DK drainage area channel outfall structure supplies water to the irrigation system. Although the system is not currently used, it is reportedly in working order.

Existing Storm Drain Infrastructure

The FMFCD operates a storm drainage channel that runs across the project site. The channel discharges into the San Joaquin River. The DK drainage zone consists of 2,179 acres (east of Blackstone Avenue and north of Audubon Drive) of single-family residential development, which is the primary land use in the drainage zone; however, a parcel immediately across the Friant Expressway from the project site is proposed for commercial development. The storm drain discharge facilities consist of

- a storm drain pipe that crosses Friant Expressway,
- concrete chute baffle blocks to dissipate energy that extend down the bluff face to the project site,
- a maintenance access road from the top to the bottom of the bluff,
- a settling/clean-out basin,
- a 2,000-foot-long grassy swale to the river,
- a concrete weir, and
- an underground bypass pipe.

The storm drain system can accommodate a maximum flow of 350 cfs. During a 2-year-frequency storm, flows are approximately 183 cfs. Flows in the channel are slow, allowing suspended sediment to settle out before reaching the San Joaquin River. Velocities are estimated at slightly less than 1.0 foot per second for flows ranging from 147 to 183 cfs and slightly less than 1.5 feet per second for flows equaling 350 cfs. Captured sediments are periodically removed by FMFCD.

Environmental Consequences/Impacts

No-Action Alternative

No modification to wastewater treatment, stormwater drainage facilities, or water supply systems would be required under the No-Action Alternative. The DK drainage area channel would remain unchanged and would continue to discharge stormwater into the San Joaquin River.

CEQA Significance: no impact.

Proposed Action

Some stormwater from the DK drainage area channel would be diverted to establish the proposed seasonal and perennial wetland oxbows; however, the existing DK drainage area channel infrastructure would be maintained, including the concrete weir, the inlet and outfall structures, and the underground bypass pipe.

Service portable restrooms, not requiring water or waste water systems, would be installed. A drinking water fountain would be connected to the existing city domestic water line on the western edge of the project site. The existing waterlines would be extended, but a new meter connection would not be needed. No new water service, wastewater treatment, or solid waste facilities would be needed to support the project, and no earthwork would affect the existing facilities; therefore, there would be no adverse effects on existing public works, facilities, or utilities.

CEQA Significance: no impact.

Indian Trust Assets

Affected Environment

It is USBR policy to protect Indian Trust Assets from adverse impacts caused by its programs and activities, whenever possible. Types of actions that could affect Indian Trust Assets include an interference with the exercise of a reserved water right, degradation of water quality where there is a water right, impacts on fish and wildlife where there is a hunting or fishing right, and noise near a land asset where it adversely affects uses of the reserved land (U.S. Bureau of Reclamation 1997). No Indian Trust Assets have been identified as part of the environmental setting for either alternative during the Section 106 consultations with local tribe members.

Environmental Consequences/Impacts

Neither alternative would result in any ground-breaking activities that would affect any legal interests held in trust by the United States for the benefit of Indian Tribes or individual Indians.

CEQA Significance: not applicable.

Environmental Justice

Affected Environment

Executive Order 12898 requires each federal agency to achieve environmental justice as part of its mission, by identifying and addressing disproportionately high adverse human health or environmental effects, including social and economic effects, of its programs and activities on minority and low-income populations. The project site is bordered to the east, across Friant Expressway, by several vacant county properties. Single-family residential and commercial developments exist farther east and to the south. To the north, low-density residential developments, agriculture, and aggregate mining exist. To the west are the San Joaquin River, SR 41, and Woodward Bluffs Mobile Home Estates. However, the majority of land surrounding the project site is used for agricultural production. No further analysis is required.

Environmental Consequences/Impacts

Neither alternative would significantly alter employment opportunities, housing availability, or human health or otherwise have disproportionately high adverse human or environmental effects, as defined by environmental justice policies and directives.

CEQA Significance: not applicable.