Preface

This report presents the regulatory, physical, and financial constraints of the property for extending the Lewis S. Eaton Trail (Eaton Trail) and other amenities on the River West Fresno site. Numerous government agencies have jurisdiction within this area at the local, state, and federal level. Every regulation has specific criteria and process for complying, some more restrictive or less flexible than others, or not allow approval if less impacting alternatives are available.

Project constraints are explained in practical terms, prefaced by a recommendation for compliance or addressing the constraint. Opportunities for achieving project, neighborhood, and community goals are also described where applicable in relation to that constraint.

An Executive Summary is provided in the beginning of the document that provides a straightforward explanation of the issues and recommendation on how to proceed with development of Fresno River West. The Executive Summary can be presented as a stand-alone document.
EXECUTIVE SUMMARY

Project Description

The River West Fresno project covers approximately 400 acres immediately west of Freeway 41 on the south side of the San Joaquin River up to the base of the bluffs within the City of Fresno and the San Joaquin River Parkway (Parkway). The area, commonly known as the Spano property, extends westward to Spano Park located at the end of Nees Avenue at the top of the bluff. Most of the project area is disturbed annual grassland (261 acres) with several large ponds (97 acres) formed from past mining operations, and 25 acres of riparian habitat found around the ponds and banks of the San Joaquin River.

The opportunity to provide City of Fresno residents such direct public access to the San Joaquin River and its riparian habitat is the single most unique asset that sets this property apart from other lands within the San Joaquin River Parkway. This property also provides direct access from Madera County via the Old 41 Bridge and Freeway 41 undercrossing. The undercrossing is the current end point of the Lewis S. Eaton Trail (Eaton Trail) making this trail extension the most logical next project for extending the Eaton Trail.

The Parkway Trust prepared conceptual design plans for extending the Eaton Trail on this site. These were presented to the public in November of 2008. This plan was then revised after taking into consideration comments from all members of the public, the regulatory, physical, and financial constraints of the property, and changes that have occurred since those plans were first developed. This revised design was presented to the public for review and comment in March of 2011.

The Lewis S. Eaton Trail is the most popular recreational element of the Parkway. Extending it west from its current terminus at Freeway 41 with a connection to Spano Park and Northwest Fresno will provide the largest benefit to the most residents of Fresno. It will also provide access to residents from Madera County via the Old 41 Bridge. The public, through their comments, support this trail extension and that it should be built as soon as possible. Adding elements or designs to the Eaton Trail, or location changes that will add difficulty, controversy, time and/or cost to its approval and construction need to be avoided. Infeasible alternatives must be avoided.

A close second is access to the San Joaquin River. Residents want river access for numerous reasons, ranging from hiking/biking/riding (horses), enjoying the river habitat, to boating, fishing, and swimming. There is also concern and regulations over providing too much access, and how much automobile access to provide. Citizens currently are using this section of the river, some more responsibly than others. Opening this area to the public can help control unlawful use.
Constraints and Opportunities Report

The Constraints and Opportunities Report presents the regulatory, physical, and financial constraints of the property for extending the Eaton Trail and other amenities on the River West Fresno site. Numerous government agencies have jurisdiction within this area at the local, state, and federal level. Every regulation has specific criteria and process for complying, some more restrictive or less flexible than others, or not allow approval if less impacting alternatives are available. The following Executive Summary makes recommendations for initial development of River West Fresno Project based on the Constraints and Opportunities Report, professional experience and analysis, and taking into consideration public and all river stakeholder concerns (see Map 5, Sheet 5 of 7; Map 6, Sheet 6 of 7).

Regulatory Restrictions

The river’s shoreline up to the river’s high water line is under the control of the State Lands Commission but is open to the public. State Sovereign Lands are the area between the low water marks on both sides of the river and not under the control or ownership of the Conservancy and therefore outside the property boundaries of River West-Fresno. Land between the low and high water marks are within the Public Trust, still controlled by the State Lands Commission but owned by the upland land owner (See Map 3, Sheet 3 of 7, CSLC high and low water lines). Any improvements within the Sovereign Lands or within the Public Trust would require a lengthy and difficult application process through the State Lands Commission, and is therefore not recommended. There currently exist numerous unimproved trails and dirt roads that provide access to and through the riparian corridor/Sovereign Lands accessible from the proposed Eaton Trail alignment and other existing unimproved trails/roads within River West Fresno. These will satisfy the public need for river access without additional cost, time, or frustration in achieving permit approval or denial.

In order to obtain a permit or lease from the State Lands Commission, a 404 Permit from the U. S. Army Corps of Engineers (ACOE) and 401 Permit from the Regional Water Quality Control Board Certification would be required. A 404 permit is needed for any project potentially impacting navigable waters, known as Waters of the U.S., which includes wetlands and riparian areas. The 401 Permit is required in order to obtain a 404 Permit and is to ensure the proposed project will not pollute any navigable waters. In order to obtain a 404 permit, an applicant must prove there are no other project alternatives that meet most of the project requirements and will avoid waters of the U.S. The proposed Eaton Trail alignment meets those requirements, therefore making it very unlikely ACOE would issue a permit for an alignment with impacts.

The additional critical restriction within River West Fresno is the Federal Emergency Management Agency (FEMA) 100-year floodplain and floodway zone designation (see Map 3, Sheet 3 of 7, Map 6, Sheet 6 of 7). Any proposed improvements within a designated floodway must not restrict any flood flow or become an obstruction. In addition, any needed fill dirt for the project must come from within the same floodway or 100-year flood zone so as to not increase the area of flooding. This can increase construction costs or limit construction options, especially if proper fill dirt is not available on site. The designated FEMA floodways are not completely consistent with the
CLSC High Water Lines (see Map 3, Sheet 3 of 7) and are controlled by different regulators, so would require additional permitting and review. Construction of the Eaton Trail within just a 100-year flood zone (outside the floodway) is feasible, although any structures must be elevated above the flood zone. All bathrooms are proposed outside both zones to avoid this additional cost and added approval requirement. The Parkway Master Plan also contains policies supporting the river’s beneficial use as a conveyor of flood waters. These are described in greater detail in the document.

The San Joaquin River Restoration Program (SJRRP) is an ongoing federal project to restore salmon to the San Joaquin River. This project is within the area proposed for salmon spawning. The Stipulation Settlement has set the maximum river flows at 4000 CFS for approximately two weeks in wet and normal years, estimated to occur 50 percent of the time (See Map ##). The proposed Eaton Trail design avoids areas that would be inundated by these flows to avoid having to close the trail during these expected flows and to avoid the anticipated higher maintenance that would occur from inundation, from mud covering the trail to soil erosion (scour) requiring trail repair or reconstruction.

The City of Fresno passed the San Joaquin River & Bluff Protection Initiative in April of 2010. This initiative added additional requirements to prevent unauthorized motorized vehicle use and fires on the river bottom, and reduce the spread and impact of a fire occurring within the river bluff area. This project is in conformance with these new municipal code regulations. The Eaton Trail, along with its associated landscaping, has the potential to act as a fire break, assisting with the goal of reducing fire risks on the river bottom and bluffs.

The City of Fresno General Plan, Open Space/Recreation Element, contains objectives and policies pertaining to the San Joaquin River Parkway Plan. These objectives and policies support the development of the Parkway, Eaton Trail, and cooperative planning within the Parkway and consistent with Parkway policies. The proposed design is consistent with the applicable General Plan objectives and policies.

Policy F-8a requires any project adjacent to State Lands to submit plans and receive a letter from the State Lands Commission stating whether the project encroaches on State Sovereign Land and if a public trust easement is needed. If a public trust easement is needed, that must be included with any application to the city, public or private. This applies to this project. The project is recommended to stay outside State Sovereign Land, but will need verification from the State Lands Commission.

**Physical Constraints**

There were many public suggestions on where to locate the Eaton Trail, many wanting the trail location as close to the river as possible. This included placing the Eaton Trail on several of the existing berms attempting to separate the ponds from the San Joaquin River channel. These berms are generally about 20 feet wide on top, many with large breaches (breaks) and heavily grown over. These breaches would have to be repaired or bridges constructed for the trail to be located on them. Either of those repairs would require a 404/401 permit, as described previously, and also require a Streambed Alteration Agreement from the California Department.
of Fish and Game. The SJRRP will need to repair these berms, or other alterations to the river channel and ponds through this stretch to create suitable salmon spawning habitat. It is simply not financially prudent to spend limited resources to construct the Eaton Trail on berms and other locations that will be affected by the SJRRP. At the time those are being planned, it will be prudent to discuss extending a trail or relocating the Eaton Trail onto reconstructed berms or nearer river banks and incorporating those trail improvements into the restoration plans.

**Design & Parkway Policy Considerations**

The Parkway Master Plan calls for the Eaton Trail to be designed within a 100-foot wide corridor where feasible and to maintain a 150-foot buffer from wildlife habitats. The existing berms do not allow for conformance with either of these policies, and likely do not provide adequate width for the standard Eaton Trail design that includes parallel trails totaling 20 feet in width. All berms, by their very nature, are adjacent to wildlife (riparian) habitat areas.

The proposed Eaton Trail alignment (see Map 5, Sheet 5 of 7; Map 6, Sheet 6 of 7) has been designed as close to the San Joaquin River as possible while staying outside the jurisdictionally controlled areas previously described. Additional Parkway policies were also taken into consideration such as the riparian habitat and residential buffer zones. The private property within the project site, that includes a home, is too close to the river to allow construction of the Eaton Trail on the river side, therefore curves around the south side of the private property. A landscape buffer will be incorporated into the trail design to reduce impacts where residential buffer distances cannot be fully maintained. This applies to bluff residences and the on-site private residence. In the future, if the on-site private property becomes part of the Parkway, realignment of the Eaton Trail closer to the river can be proposed.

**Public Access**

Use of the Parkway by Fresno and area residents not living within walking or biking distance will require automobile access and parking. This also applies to boaters wanting to launch canoes, kayaks, or other non-motorized boats inside a manageable portaging distance. The Eaton Trail is to be an Americans with Disabilities Act (ADA) accessible trail, and due to the mostly level grade on the River West Fresno property, makes it an ideal location for meeting those requirements. The steep slope along the River Bluff does not allow for feasible ADA access from the bluff top and access at the Freeway 41 undercrossing is too great a distance from any existing public transit or parking to be considered ADA compliant without on-site parking. Providing parking within River West at the north end of Freeway 41 right-of-way will provide ADA access to the Eaton Trail and suitable portage distance for boaters. This location is outside the 100-year floodplain so is a good location for restroom facilities and equestrian staging as well.

Pedestrian access and portaging of bikes and boats for the very strong will be provided via stairs from either end of the existing bluff trail, and Spano Park where 16 parking stalls are striped at the Nees Avenue cul-de-sac (see Map 5, Sheet 5 of 7; Map 6, Sheet 6 of 7). This is also the closest location for access using public transit. On-street parking is available on Bluff Drive and Del Mar Avenue for those accessing the park from either end of the Bluff trail. Overnight parking is
prohibited on those streets. Additional restroom facilities (vault toilets) are proposed along the Eaton Trail east of the access point to Spano Park, outside the 100-year flood zone.

Conclusion

There are many constraints, both physical and regulatory, within the River West-Fresno project site, but there are also many opportunities to provide needed recreational facilities and river access to the residents of Fresno. Map 4 and Map 6 identifies the recommended areas not to build within based on the analysis of all constraints. The proposed design works within those constraints to provide a project that extends the Eaton Trail, provides river access, meets ADA requirements, protects private property, and is consistent with Parkway and government regulations and with straight-forward construction (See Map 5, Sheet 5 of 7; Map 6, Sheet 6 of 7).
CONSTRAINTS and OPPORTUNITIES ANALYSIS

Flooding, Floodways, & 100-year Flood Zones

Recommendation

Minimize the amount of trail construction within the 100-year floodplain and avoid floodways and areas estimated to be inundated every other year. Locate all restroom facilities outside both zones to simplify permitting and reduce maintenance costs and potential discharge of wastes into the San Joaquin River.

Constraint Analysis

Floodways are a critical restriction within River West Fresno, regulated by the Federal Emergency Management Agency (FEMA). Less restrictive are areas within the 100-year flood zone (see Map 3, Sheet 3 of 7; Map 4, Sheet 4 of 7).

The 100 year flood zone is regulated by the Federal Emergency Management Agency (FEMA) and defined by FEMA Flood Insurance Rate Maps. The 100-year flood zones have a base flood elevation set for an event with a one (1) percent probability of occurring in any year. Any habitable structures within 100-year flood zones must be flood-proofed and elevated above the 100-year base flood elevation and designed and constructed so that they cannot be substantially damaged by flooding. Fill (additional dirt) to elevate structures or facilities must be from within that flood zone so that there is no net displacement of flows or capacity (increase or change the boundary of the flood zone).

The 100-year floodway is regulated by FEMA and the Central Valley Flood Protection Board. During a 100-year flood, the floodway is the area that will convey flows in strong currents, not just standing inundation as in a flood zone. No obstructions to flows or improvements that may come loose and become obstructions may be placed within the floodway and new trees must not be planted in a manner that will significantly affect flood flows.

Floodways within the project site are also within the 100-year floodplain. Any proposed improvements within a designated floodway must not restrict any flood flow or become an obstruction (object that restricts the flood flows or comes loose and then gets caught on another object and dam water in any manner). Fill dirt needed for project construction must come from within the same floodway or 100-year flood zone so as to not increase the area of flooding. This can increase construction costs or limit construction options, especially if existing soil on-site is does not have the proper characteristics for use as fill on the project.
The project does not propose habitable structures; however, restrooms for the project must be located outside, or elevated above, the 100-year flood elevation and outside the floodway. If they are located inside the 100-year flood zone, they must be flood-proofed as necessary, and designed to not be damaged by flood flows, as explained above.

The San Joaquin River Restoration Program (SJRRP), Stipulation of Settlement, sets forth the agreed upon restoration releases from Friant Dam. The maximum SJRRP flows are 4,000 cubic feet per second (cfs) for approximately two weeks in wet and normal wet years (See Map 4, sheet 4 of 7, for estimated inundation area). This flooding is estimated to occur on average every other year (50 percent probability in any given year). Project Improvements should not be located in areas inundated as frequently as once every 2 years. Fall SJRRP releases are 400-700 cfs for ten days and spring releases are 500-2,000 cfs for 8-16 weeks in all but the driest years and varying by water year. These lower flows are generally within the recognized bed and bank of the river and are not expected to affect the project design.

The San Joaquin River Parkway Master Plan (1997) adopted by the San Joaquin River Conservancy (SJRC) has six specific policies regarding flood management (FP1-FP6). They recognize the river as a floodway and the beneficial use of the river to transport flood waters and the need to protect and preserve this use. Recreation and Flood Management Policies (RFMP1 - RFMP3) are to ensure recreational features are designed to comply with FEMA and Fresno Metropolitan Flood Control District (FMFCD) Riverine Floodplain policies.

State Sovereign Lands

Recommendation

Avoid improvements on State Sovereign Lands to eliminate the need to obtain a General Use permit from the State Lands Commission.

Constraint Analysis

State Sovereign Lands lie between the low water marks on both sides of the San Joaquin River. Sovereign Lands are owned in fee title by the State. Between the high and low water marks lies lands in the public trust (see Map 3, Sheet 3 of 7). These lands are owned by the upland property owner but are under the jurisdiction of the State Lands Commission (SLC) for management in accordance with the Public Trust Doctrine. The Public Trust Doctrine embraces the right of the public to use the navigable waters of the state for fishing, swimming, boating, and general water-related recreational purposes and encompasses preservation of the lands in their natural state for scientific study, as open space, and as wildlife habitat. The upland property owner may not preclude these public uses within the area between the high and low water marks.
Placing the Eaton Trail or other improvements on State Sovereign Land would require a lease and/or permit from the SLC. Applications require paying a fee, preparing a proposal and supporting environmental data that is reviewed by SLC staff. A recommendation is then made to the State Lands Commission for action. The proposed recreational use is expected to be determined to have a statewide public benefit; otherwise a yearly rental fee for the land would be required. General Use Permits have a maximum term of 49 years. Use of unimproved trails on State Sovereign Lands and within Public Trust areas would be allowed by the State Lands Commission within the River West area.

Berm Repair for Placement of Eaton Trail

Recommendation

Avoid placing the Eaton Trail in locations requiring construction of a bridge or repairing berms to avoid the construction cost and permitting needed to construct at those locations. Coordinate with the River Restoration Program to provide opportunity to integrate the Eaton Trail and other Parkway improvements as part of the restoration program.

Constraint Analysis

Currently five breaks exist in several of the berms separating the on site ponds from the San Joaquin River (See Map 7, Sheet 7 of 7). The berms along the river would have to be repaired or bridges constructed in order to locate the Eaton Trail on those berms. This represents a significant cost increase for construction and would require obtaining permits from several agencies in order to allow construction within those jurisdictionally controlled areas (berms adjacent to the river are located within FEMA floodway and 100-year flood zones, state sovereign lands, riparian habitat, and Parkway buffer zones). The width of the berms adjacent to the river channel (20 to 25-foot top) do not accommodate the Parkway Master Plan policy to design the Eaton Trail within a 100-foot wide corridor, nor the 200’ riparian corridor and 100’ buffer between the trail and riparian corridor Master Plan policies (described in more detail under Parkway Policies).

Potential Opportunities

Repair, reconstruction, removal, or alteration of the berms separating the river from the on-site ponds may occur in conjunction with the San Joaquin River Restoration Program. The program’s proposed strategy is to isolate these warm water ponds from the river to restore salmon habitat and areas for spawning within this reach of the river. The final channel and floodplain configuration/restoration for the River West reach is unknown at this time. At the time those are being planned and designed, it will be prudent to discuss the potential to incorporate into the river restoration design, the ability to extend a trail or relocate the Eaton Trail onto the reconstructed berms or near the reconstructed river bank.
Pedestrian, Bicycle and Equestrian Access

Recommendation

Provide pedestrian access to the River West Fresno site and Eaton Trail from Spano Park and the Bluff Trail via stairs down the bluff slope, and under Freeway 41 at the east end of the site to provide ADA access and continuation of the Eaton Trail from its current end at Woodward Park. A wheel channel should be installed adjacent to the staircases to assist bicyclists with walking their bikes along the stairs.

Constraint Analysis

The large project site is relatively constrained with regard to access. There are two public roads leading to the site, two trails adjacent to the site (Eaton Trail to the east and the Bluff Trail to the south), and currently, unauthorized pedestrian access from Spano Park to the south from the top of the bluff. Future access may be possible as the Parkway Master Plan is implemented, via a bridge from the Madera County side of the planned Parkway, and from a public access easement at Palm and Nees Avenues, provided additional land or easements are secured for the Parkway. These two future access possibilities are not part of this project.

Three pedestrian access points are being studied. The first access is the continuation of the Lewis Eaton Trail under Freeway 41 from Woodward Park. This is also being studied for vehicular access and parking to provide the only ADA and equestrian accessibility to River West and the Eaton Trail. Driving to this access point from Fresno requires driving north on Freeway 41 to the Childrens Boulevard exit and then travelling back over the San Joaquin River on the old Highway 41 Bridge to the existing undercrossing of Freeway 41. (10 miles round-trip from the Friant Road Interchange at Freeway 41). The current undercrossing has a 10-foot wide concrete sidewalk on the north side and 10-foot wide native soil path on the south, separated by curb and gutter and a 2-lane paved road. Access to River West from the existing section of the Eaton Trail and Woodward Park is too far a distance from River West and will not meet slope criteria to be considered an ADA access point without the proposed vehicle access and parking in River West.

The second pedestrian access is from the existing Bluff Trail located in the residential subdivision located along the bluff overlooking River West. Currently, unauthorized access to River West is occurring at this trail’s east end at River View Drive and Bluff Avenue (cut fence). The Bluff Trail runs west from this intersection travelling along the face of the bluff for one-third of a mile before it connects back into Bluff Avenue at Churchill Avenue. Parking on the residential streets is the only parking proposed for these access points (Street parking is restricted to daytime use only). No residences face onto Del Mar Ave, the street leading to the River View Drive access point from Audubon Drive. This access is not ADA compliant due to the slope of the Bluff Trail and proposed use of stairs from the Bluff Trail down to River West and the Eaton Trail.

ADA access would only be possible at River View Drive by allowing vehicle access to River West from River View Drive and parking within River West in close proximity to the Eaton Trail. This
would increase traffic through the Bluff neighborhood and introduce motorized vehicles into this portion of River West. The parking and vehicle use below the bluff properties would increase noise and be a visual intrusion for those residents.

Staircase access down the bluff to River West and the Eaton Trail from Spano Park is the third access point being studied. Sixteen parking spaces plus two handicap stalls currently exist in the Palm Avenue cul-de-sac at Spano Park. This access point is not ADA compliant. A channel for walking bikes and boat dollies up/down the stairs is being studied as well. This access would be the closest access point to River West for residents in Northwest Fresno wanting access to the Eaton Trail. Unauthorized access from Spano Park down the bluff slope is currently occurring shown by a dirt path worn into the slope.

**Vehicle Access**

**Recommendation**

Provide vehicle access at the east side of River West using the existing Freeway 41 undercrossing into River West with on-site parking for 60 cars, handicap parking, equestrian staging, restrooms, and ADA accessibility adjacent to Caltrans’ right-of-way (See Map 5, Sheet 5 of 7, Map 6, Sheet 6 of 7).

**Constraint Analysis**

Vehicle access is being proposed under Freeway 41 on the east side of River West. Driving to this access point from Fresno requires driving north on Freeway 41 to Childrens Boulevard and then travelling back over the San Joaquin River on the old Highway 41 bridge. This location provides good access from Madera. Access at this location at River West is through the existing Freeway 41 undercrossing. The undercrossing was designed with a 10-foot concrete sidewalk on the north side and a 10-foot dirt path on the south side with sufficient road width for two lanes of travel and parallel parking under Freeway 41. This could be considered overflow parking or parking for people not wanting to pay the entrance fee, but does not provide sufficient parking for the nearly 400-acre River West site. Providing vehicle access only from the Freeway 41 undercrossing is too great a distance from any existing public transit or parking to be considered ADA compliant for river access without on-site parking. Providing parking within River West at the north end of Freeway 41 right-of-way will provide ADA access to the Eaton Trail and suitable portage distance for boaters. This location is outside the 100-year floodplain so is a good location for restroom facilities and equestrian staging as well.

Parking is being proposed alongside the Freeway 41 fenceline, outside the 100-year floodplain. Parkway Master Plan Policy RPP1 is to develop sufficient on-site parking at each public recreational facility during peak periods. Public restrooms, equestrian staging, limited picnic facilities, and handicap accessibility are proposed in conjunction with the parking.
Vehicle Access is possible from River View Drive. This location is used to provide vehicular access to the private residence located within River West through a dedicated easement. A wide road right-of-way is available at this location. A majority of comments received at the March 2011 Open House requested allowing public vehicular access and parking at River View Drive; however, there is also significant opposition to using this location for vehicular access.

Vehicle Access using the private road proceeding from the intersection of Palm and Nees Avenues to the south may provide future access to the project. Access to River West from this location would require acquiring the land or rights to travel across private property and would lie within the 100-year flood plain. The access easement provided to the City of Fresno for this access point states this is not to be the only vehicle access point in Fresno for River West. This access point is not being considered as part of this project.

Multiple opportunities for management, maintenance, emergency and patrol vehicle access needs to be provided and maintained within River West. Currently three locations exist to provide vehicle access for this purpose; at the Freeway 41 undercrossing, River View Drive/private easement, and from the intersection of Palm and Nees avenues. Due to the 10-mile out-of-direction travel from Fresno, at least one of the other two existing access points other than under Freeway 41 needs to be maintained. To ensure timely access for emergency services, including fire trucks, all three emergency access locations need to be included. Parkway Recreation Area policies state that design of the Eaton Trail is to be wide enough to allow for use by emergency vehicles (RP9).

**Biotic Habitats and Species**

**Recommendation**

Maintain a 100-foot buffer where possible around all elderberry trees and shrubs with one inch diameter stems or larger, but at a minimum of 20 feet from its dripline. Maintain a 100-foot buffer from riparian and wetland habitats where feasible. Eliminate, to the extent possible, project design and features impacting protected habitat or species.

**Constraint Analysis**

Several agencies are involved in the regulation of biotic habitats and species, especially riparian, aquatic, and wetland habitats and habitats of protected species. Those agencies include the Regional Water Quality Control Board (RWQCB), U. S. Army Corps of Engineers (ACOE), California Department of Fish and Game (CAFG), U. S. Fish and Wildlife Service (USFWS), and at times the Environmental Protection Agency (EPA). These resource agencies generally require that projects avoid impacting riparian and wetland habitat and endangered and protected species (both plants
and animals) to the maximum extent practicable, and provide evidence of avoidance and preservation prior to permitting or allowing any impacts to these resources, with requisite mitigation to fully mitigate the impact. Each agency has standard and generally lengthy discretionary processes to follow in order to get approval. The permitting process usually requires detailed field work and consultation with the various agencies in order to get approval and reach agreement on the impacts and mitigation required. Avoiding sensitive habitats and resources greatly ease or eliminate the need for a permit. A description of each agency and their permitting process can be found in Appendix A.

The most sensitive habitat at River West is riparian habitat, including wetlands. They occupy a relatively small portion of the project site (25.1 acres, 6%). Riparian habitat is currently restricted to narrow margins around the quarry pond perimeters and river. The most significant riparian habitat associated with the project site is on State Sovereign Land immediately west of Highway 41 at the river. Riparian habitat is considered a sensitive and impacted habitat needing protection as several endangered or threatened species call it home. Wetland habitats in particular are federally protected.

Other sensitive and protected habitats identified within River West are tall trees used by predatory birds while foraging and elderberry bushes, habitat for the Valley elderberry longhorn beetle (VELB). Generally, elderberry plants containing stems one inch or greater in diameter should be completely avoided by maintaining a 100-foot buffer. Where that cannot be maintained, a 20-foot setback from the plant’s dripline needs to be provided, as well as offsetting mitigation planting. Similar setbacks are often required for construction projects near tall trees used by predators for foraging.

Figure 2 shows the distribution of dominant biotic habitats within the project site (including State Sovereign Lands) based upon a reconnaissance-level survey. Table 1 provides the surface area for each habitat type. A description of each habitat type is found in Appendix B.

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<thead>
<tr>
<th>Biotic Habitat Types</th>
<th>Surface Area (acres)</th>
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<tr>
<td>Disturbed Annual Grassland</td>
<td>261.3</td>
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<tr>
<td>Aquatic</td>
<td>97.3</td>
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<tr>
<td>Riparian (including wetlands)</td>
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<tr>
<td>Developed/Landscaped</td>
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<tr>
<td>Stormwater Detention Basins</td>
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<tr>
<td><strong>Total Surface Area</strong></td>
<td><strong>400.2</strong></td>
</tr>
</tbody>
</table>
Riparian Habitat Constraints

Potential ACOE jurisdictional waters and wetlands are present on the project site within the bed of the San Joaquin River and the associated ponds. Therefore, proposed project improvements that would place fill within the ponds or within the bed of the San Joaquin River would require a Section 404 Permit from the ACOE, and associated 401 Water Quality Certification. If cumulative fill is more than nominal, an individual permit will be required, and full mitigation of impacts to wetlands will be required.

The bed and banks of the San Joaquin River, ponds, and associated riparian habitat on the project site are also within the jurisdiction of the CDFG. The project will likely require a Streambed Alteration Agreement from the CDFG under section 1602 of the California Fish and Game Code, for any proposed improvements that would impact CDFG jurisdictional areas. Mitigation to offset impacts, such as planting new replacement vegetation, will be required.

The beds of the San Joaquin River, the upslope extent of wetland vegetation, and on site floodplain ponds are all likely within RWQCB jurisdiction. Therefore, a Section 401 Water Quality Certification will be required if a Section 404 ACOE permit must be secured.

Special-Status Plant and Animal Species Constraints

The following plants and animals may be found within River West, based on the habitats found on site, their condition, and project location, in addition to other factors. The assessment and identification of impacts to these species cannot be provided until a defined project is developed and surveyed for potential impacts to these species. Specific avoidance and/or mitigation measures will be developed during the CEQA review process, although recommended is adherence to the standard VELB mitigation as the location of its host plant, the elderberry tree/shrub has been surveyed and identified (see Map 2, Sheet 2 of 7)). Detailed information on these plants and animals can be found in Appendix C.

Plants

1. California satintail (*Imperata brevifolia*). Federal Listing Status: None; State Listing Status: None; CNPS List 2.1.
2. Sanford’s arrowhead (*Sagittaria sanfordii*). Federal Listing Status: None; State Listing Status: None; CNPS List 1B.2.

Animals

2. Western Pond Turtle (*Actinemys marmorata*). Federal Listing Status: None; State Listing Status: Species of Special Concern.
3. **Burrowing Owl (Athene cunicularia).** Federal Listing Status: None; State Listing Status: Species of Special Concern.
4. **White-tailed Kite (Elanus leucurus).** Federal Status: None; State Status: Fully Protected.
5. **Swainson’s Hawk (Buteo swainsoni).** Federal Listing Status: None; State Listing Status: Threatened.

**San Joaquin River Parkway & City General Plan Policies**

*Recommendation*

Develop River West and the Eaton Trail consistent with Parkway and City General Plan policies, including buffers and setbacks for the protection of wildlife corridors and sensitive habitat.

*Constraint Analysis*

The San Joaquin River Parkway Master Plan, Recompiled (7/20/2000), lists the Parkway’s policies to guide development and implementation of the Parkway. The City of Fresno has adopted General Plan policies in the *Open Space/Recreation Element* that are consistent with and promote the policies in the Parkway Master Plan.

Parkway Master Plan policies state that, wherever possible, trail alignments should avoid steep grades, environmentally sensitive areas, erodible soils, existing residences, and hazards. Separate surfaces for pedestrians, wheeled vehicles, and equestrians are to be provided where feasible and existing trails and unimproved roads should also be utilized where appropriate. The multipurpose trail should be designed to allow the passage of patrol, rescue, and maintenance vehicles; and the multipurpose trail corridor should include native plant landscaping to create buffers and screening when near residences or sensitive habitat. Other policies protect wildlife habitat and residential property through the use of buffers.

There are many existing gravel and farm haul roads, including trails for accessing the river on the project site that could serve as unimproved trail alignments to minimize the impact of trail development.

The City of Fresno passed the San Joaquin River & Bluff Protection Initiative in April of 2010. This initiative added additional requirements to prevent unauthorized motorized vehicle use and fires on the river bottom, and reduce the spread and impact of a fire occurring within the river bluff area. This project is in conformance with these new municipal code regulations. The Eaton Trail, along with its associated landscaping, has the potential to act as a fire break, assisting with the goal of reducing fire risks on the river bottom and bluffs.

The City of Fresno General Plan, *Open Space/Recreation Element*, contains objectives and policies pertaining to the San Joaquin River Parkway Plan. These objectives and policies support the
development of the Parkway, Eaton Trail, and cooperative planning within the Parkway and consistent with Parkway policies. The proposed design is consistent with the applicable General Plan objectives and policies.

Policy F-8a requires any project adjacent to State Lands to submit plans and receive a letter from the State Lands Commission stating whether the project encroaches on State Sovereign Land and if a public trust easement is needed. If a public trust easement is needed, that must be included with any application to the city, public or private. This applies to this project. The project is recommended to stay outside State Sovereign Land, but will need verification from the State Lands Commission.

Operation and Maintenance

Recommendation

Do not authorize construction of the project until and unless adequate long-term operations, maintenance, and management resources, public or private, are secured.

Constraint Analysis

The comprehensive site plan and project description will include fencing, landscaping, public safety, fire prevention measures, an operational plan, and other project details. A long-term plan for funding and conducting daily operation, maintenance, and security within River West is needed to control illegal activity and access within River West and ensure that recreational improvements are properly maintained in a safe, useable condition. This is also important to maintain habitat and residential buffers and landscaping, along with proper fire breaks and fire protection features. Funding for maintenance and security through the City of Fresno General Fund is currently not available. Long-term reliable public and/or private funding sources for operations, maintenance, and management need to be found.
U. S. Army Corps of Engineers Jurisdictional Habitats. Areas meeting the regulatory definition of “Waters of the U.S.” (jurisdictional waters) are subject to the jurisdiction of the USACE under provisions of Section 404 of the Clean Water Act (CWA, 1972) and Section 10 of the Rivers and Harbors Act (RHA, 1899). Generally these are areas of the river to the ordinary high water mark, the upslope extent of wetland vegetation, and on site floodplain ponds.

Discharges of fill to waters of the U.S., including wetlands, resulting from construction and other activities are regulated by the USACE. Nationwide General permits can be secured for very minimal fill projects; however, most projects now require expensive and time consuming individual permits and compensatory mitigation. Projects involving fill to waters of the U.S. must comply with permit requirements of the USACE. No net loss of wetlands is required by federal regulations. State water quality certification pursuant to Section 401 of the Clean Water Act is also required. The State Water Resources Control Board is the state agency (together with the Regional Water Quality Control Boards) charged with implementing water quality certification in California.

Potential USACE jurisdictional waters and wetlands are present on the project site within the bed of the San Joaquin River and the associated ponds. Therefore, proposed project improvements that would place fill within the ponds or within the bed of the San Joaquin River would require a Section 404 Permit from the USACE, and associated 401 Water Quality Certification. If cumulative fill is more than nominal, an individual permit will be required, and full mitigation of impacts to wetlands will be required.

California Department of Fish and Game Jurisdiction. A Streambed Alteration Agreement with the CDFG under section 1602 of the California Fish and Game Code is typically required for project activities that result in the diversion or obstruction of the natural flow of a stream; substantially change its bed, channel or bank; or utilize any materials (including vegetation) from the streambed. Appendix A provides a more detailed regulatory overview for CDFG jurisdiction.

The bed and banks of the San Joaquin River, ponds, and associated riparian habitat on the project site are within the jurisdiction of the CDFG. The project will likely require a Streambed Alteration Agreement from the CDFG under section 1602 of the California Fish and Game Code, for any proposed improvements that would impact CDFG jurisdictional areas. Mitigation to offset impacts, such as planting new replacement vegetation, will be required.

State Water Quality Control Board Jurisdiction. The RWQCB is responsible for protecting surface, ground, and coastal waters within its boundaries, pursuant to the Clean Water Act, and Porter-Cologne Water Quality Control Act of the California Water Code. The RWQCB, thus, has both federal and state jurisdiction. Federal authority is exercised whenever a proposed project requires a Section 404 permit from the USACE, in this instance the RWQCB would issue a Section 401 Water Quality Certification. State Authority is exercised when a proposed project is not subject to a Section 404 permit, in this instance a Waste Discharge Requirement may be issued for activities that may impact waters of the State.
The bed of the San Joaquin River, up to approximately the ordinary high water mark, upslope extent of wetland vegetation, and on site floodplain ponds, are likely within RWQCB jurisdiction. Therefore, a Section 401 Water Quality Certification may be required if a Section 404 USACE permit must be secured.

APPENDIX B: DESCRIPTION OF BIOTIC HABITATS

DISTURBED ANNUAL GRASSLAND

Vegetation

Disturbed annual grassland habitat comprises the majority of the project site. Approximately 261.3 acres (~65%) of the site consists of disturbed annual grassland habitat. Most of this habitat has been disturbed by previous sand/gravel mining activities, past grazing and agriculture, and human presence. The disturbed annual grassland is dominated by non-native, upland grass species such as ripgut brome (Bromus diandrus), wild oat (Avena fatua), soft brome (Bromus hordeaceus), black mustard (Brassica nigra), and filaree (Erodium cicutarium).

Wildlife

Desert cottontail (Sylvilagus audubonii) sign (pellet droppings and resting forms) was observed throughout the disturbed foothill grassland, and many California ground squirrel (Otospermophilus beecheyi) burrows were noted. None of the ground squirrel burrows showed sign of use or occupancy by burrowing owl (Athene cunicularia). Red-tailed hawks (Buteo jamaicensis), American kestrel (Falco sparverius), and common raven (Corvus corax) were observed soaring over grasslands. Reptiles including side-blotched lizard (Uta stansburiana) and western fence lizard (Sceloporus occidentalis) were observed. The disturbed grassland associated with the proposed project site contains a seed base for foraging small mammals. Many small mammal burrows occur on the site, and are likely occupied by deer mice (Peromyscus maniculatus) and western harvest mice (Reithrodontomys megalotis). California horned larks (Eremophila alpestris actia) and burrowing owls may use disturbed grassland habitat for foraging and nesting in addition to gopher snake (Pituophis catenifer) and southern pacific rattlesnake (Crotalis oreganus helleri).

AQUATIC

Vegetation

Aquatic habitat is the second most abundant habitat at the site (97.3 acres) comprising approximately 24% of the project site. The majority of the aquatic habitat on the site occurs within previously mined areas which are now ponds. Mosquito fern (Azolla sp.) is common in slow flowing areas such as the ponds and protected pools. In the past year, the San Joaquin River has altered its course through the northern portion of the survey area near Freeway 41, shifting the southern bank southward. This is reflected on the habitat map (See Map 2, Sheet 2 of 7), but not on the underlying aerial photo.
Wildlife

A number of wildlife species will utilize the aquatic habitat on site including bullfrog (*Lithobates catesbeiana*), various shorebirds, killdeer (*Charadrius vociferus*), mosquito fish (*Gambusia affinis*), garter snakes (*Thamnophis spp.*), and bass (*Micropterus spp.*). Additionally, bats (*Pipistrellus hesperus, Myotis sp.*) and swallows (*Quiscalus mexicanus*) forage over the open water.

RIPARIAN

Vegetation

Riparian habitat occupies a relatively small portion of the project site (25.1 acres, 6%). Historically, the project site likely consisted of riparian vegetation. However, disturbances including alteration of the hydrologic regime and mining have altered the landscape and reduced the extent of riparian vegetation. Riparian habitat is currently restricted to narrow margins around the quarry pond perimeters and river (See Map 2, Sheet 2 of 7). Riparian habitat on the site, particularly around the ponds, includes permanent wetlands. The riparian vegetation consists of intergradations of the following three plant associations: willow riparian, exotic rattlebox (*Sesbania punicea*) dominated habitat, and mixed riparian. The willow riparian association contains a mix of Gooding’s willow (*Salix gooddingii*), red willow (*S. laevigata*), arroyo willow (*S. lasiolepis*), and narrowleaf willow (*S. exigua*). A common riparian plant association is dominated by the exotic rattlebox which is rated as highly invasive by the California Invasive Plant Council. The mixed riparian plant association contains species such as the above mentioned willows and rattlebox, as well as primarily California native riparian species including valley oak (*Quercus lobata*), mugwort (*Artemisia douglasiana*), and common buttonbush (*Cephalanthus occidentalis*). Black walnut (*Juglans nigra*) is also present in this plant association. The black walnut trees do not represent native stands of this species since these trees have become established within this reach of the river after cessation of mining activities.

Wildlife

Within the riparian area, exit holes from valley elderberry longhorn beetle (VELB) (*Desmocerus californicus dimorphus*) were observed in two stems of a blue elderberry shrub located near the river in the western portion of the survey area. Numerous blue elderberry shrubs providing suitable habitat for the VELB occur within the survey area (See Map 2, Sheet 2 of 7). Desert cottontail sign and individuals were observed in addition to barn swallows (*Hirundo rustica*), mourning dove (*Zenaida macroura*), great blue heron (*Ardea herodius*), and turkey vulture (*Cathartes aura*). This habitat also provides nesting opportunities for riparian-associated bird species including bald eagle (*Haliaeetus leucocephalus*), California yellow warbler (*Dendroica petechia brewsteri*), yellow-breasted chat (*Icteria virens*), and tricolored blackbird (*Agelaius tricolor*). In the sandy areas with leaf litter, silvery legless lizard (*Anniella pulchra*) and shrews
(Sorex spp.) may occur, and in moist areas with decaying vegetation and logs, the California slender salamander (Batrachoseps attenuatus) may be found.

DEVELOPED/LANDSCAPED

Vegetation

Approximately 7.1 acres of the project site is developed consisting of dirt roads and trails (the private property within the project site is not part of the project and not included in this analysis). The dirt roads and trails are sparsely vegetated with scattered ruderal species such as ripgut brome and filaree.

Wildlife

Developed areas have limited resources for wildlife species, although several common species may use these areas for foraging. California ground squirrels and their burrows were observed on the site. Desert cottontail sign (pellet droppings) was also observed. Several avian species including rock dove (Columba livia), common raven, and mourning dove were observed in the trees near the home, and over and within developed areas. Along the road, scats of domestic dogs (Canis familiaris) and coyote (C. latrans) were observed.

STORMWATER DETENTION BASINS

Vegetation

Two municipal stormwater detention basins, providing service to the adjacent residential and commercial developments, are adjacent to the project site (See Map 2, Sheet 2 of 7). The stormwater detention basins comprise approximately 5 acres of the project site (~1 %). Should not be considered part of the project site—we don’t control or manage their use, not part of Parkway. These unlined basins are actively maintained and support primarily non-native, seasonal wetland vegetation. The southern basin was inundated and colonized by Bermuda grass (Cynodon dactylon), mosquito fern, and curly dock (Rumex crispus). The northern basin was dry and dominated by Bermuda grass.

Wildlife

The northern basin provides habitat for small mammals including deermice, California voles (Microtus californicus) and desert cottontails. Coyotes, domestic dogs, and domestic cats also likely forage in and around the basin. The southern basin appears to be perennially inundated but also provides limited opportunities for wildlife given that the water that drains into the basin is likely contaminated with petroleum from roadways. Various shorebirds, bullfrogs, and garter snakes may utilize this basin infrequently.
APPENDIX C: SPECIAL-STATUS PLANT AND ANIMAL SPECIES

SPECIAL-STATUS PLANT SPECIES

The following special status plant species are potentially present on the project site.

**CNPS Listed Plant Species**

**California satintail (Imperata brevifolia).** Federal Listing Status: None; State Listing Status: None; **CNPS List 2.1.** California satintail is a rhizomatous herb belonging to the grass family (Poaceae) that blooms from September to May. This plant occurs in coastal scrub, chaparral, riparian scrub, mojavean scrub, and meadows and sinks on mesic, alkaline soils, at elevations between 0 and 1640 ft. This species is found in Butte, Fresno, Imperial, Inyo, Kern, Lake, Los Angeles, Orange, Riverside, San Bernardino, Tehama, Tulare, and Ventura counties, and ranges into Arizona, Baja California, New Mexico (where it is possibly extirpated), Nevada, Texas, and Utah. The Butte, Tehama, and Lake County records may represent escaped ornamentals. This species is threatened by development and agriculture, and was mistakenly classified as a noxious weed in California from 1960 to 2004 (CNPS 2011). A historic CNDDDB record (1893) documents the species in the vicinity of “Fresno”, and suitable habitat occurs on the project site. This species may occur on the project site.

**Sanford’s arrowhead (Sagittaria sanfordii).** Federal Listing Status: None; State Listing Status: None; **CNPS List 1B.2.** Sanford’s arrowhead is an emergent rhizomatous herb belonging to the water plantain family (Alismataceae) that blooms from May to October. This plant occurs in standing or slow-moving freshwater ponds, marshes, and ditches at elevations between 0 and 2133 ft. This species has been reported from Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Orange, Placer, Sacramento, Shasta, San Joaquin, Tehama, and Ventura counties. Sanford’s arrowhead is extirpated from southern California (Orange and Ventura counties) and is mostly extirpated from its historical range in the Central Valley. The species is threatened by grazing, development, recreational activities, non-native plants, road widening, and channel alteration (CNPS 2011). The nearest CNDDDB record (1958) documents the species northwest of Pinedale, less than 1.5 mi south of the project site, and suitable habitat occurs on the project site. This species may occur on the project site.

**SPECIAL-STATUS ANIMAL SPECIES**

The following species listed here are confirmed present, assumed to be present, or potentially present. Other potential special-status wildlife species occurring in Fresno and Madera counties and the project vicinity were judged to be absent from the project site because the site is outside of the known range of the species, no suitable habitat occurs on the project site, and/or recent species occurrence records are lacking in the site vicinity.
Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*). Federal status: Threatened; State status: none. The VELB is an insect endemic to the Central Valley of California that inhabits riparian and associated upland habitats where elderberry, its host plant, grows. Specifically, its range includes the upper Sacramento Valley to the central San Joaquin Valley (USFWS 1991). The beetle’s habitat consists of riparian forests whose dominant plant species include cottonwood, sycamore, valley oak, and willow, with an understory of elderberry shrubs (USFWS 1991). Blue elderberry shrubs in the Central Valley with basal stem diameters larger than 1 inch are considered by the USFWS as potential VELB habitat. The VELB life cycle is intimately connected to its habitat, elderberry shrubs. Following mating, the female lays her eggs in crevices in the elderberry bark. Upon hatching (after about 10 days), the larvae bore into the pith of the shrub and feed inside stems larger than 1 inch in diameter for 1 to 2 years until they mature. They emerge during the spring as adults through exit holes chewed through the bark. The adult beetles feed on the elderberry foliage until they mate, completing the cycle.

Two exit holes were observed in an elderberry bush during surveys of the project site conducted on 18 May 2011 and there are CNDDB records of VELB along Freeway 41 (CNDDB 2011). As discussed above, avoidance and or mitigation is required for impacts to elderberries.

Western Pond Turtle (*Actinemys marmorata*). Federal Listing Status: None; State Listing Status: Species of Special Concern. The western pond turtle occurs in ponds, streams, and other wetland habitats in the Pacific slope drainages of California and northern Baja California, Mexico (Bury and Germano 2008). The central California population was historically present in most drainages on the Pacific slope (Jennings and Hayes 1994), but streambed alterations and other sources of habitat destruction, exacerbated by frequent drought events, have caused substantial population declines throughout most of the species’ range (Stebbins 2003). Ponds or slack-water pools with suitable basking sites (such as logs) are an important habitat component for this species, and western pond turtles do not occur commonly along high-gradient streams. Females lay eggs in upland habitats, in clay or silty soils in unshaded (often south-facing) areas up to 0.25 mi from aquatic habitat (Jennings and Hayes 1994). Juveniles feed and grow in shallow aquatic habitats (often creeks) with emergent vegetation and ample invertebrate prey. Nesting habitat is typically found within 600 ft of aquatic habitat (Jennings and Hayes 1994), but if no suitable nesting habitat can be found close by, adults may travel overland considerable distances to nest. Threats to the western pond turtle include impacts to nesting habitat from agricultural and grazing activities, human development of habitat, and increased predation pressure from native and non-native predators as a result of human-induced landscape changes.

Western pond turtles are common and widespread through the San Joaquin River system and are known to occur in the survey area.

Burrowing Owl (*Athene cunicularia*). Federal Listing Status: None; State Listing Status: Species of Special Concern. The burrowing owl is a small, terrestrial owl of open country. These owls
prefer annual and perennial grasslands, typically with sparse or nonexistent tree or shrub canopies. In California, burrowing owls are found in close association with California ground squirrels; owls use the abandoned burrows of ground squirrels for shelter and nesting. The nesting season as recognized by the CDFG (1995) runs from February 1 through August 31. After nesting is completed, adult owls may remain in their nesting burrows or in nearby burrows, or they may migrate (Gorman et al. 2003); young birds disperse across the landscape from 0.1 mi to 35 mi from their natal burrows (Rosier et al. 2006). Burrowing owl populations have declined substantially in the portions of their range in recent years, with declines estimated at 4-6% annually (DeSante et al. in press, in Rosenberg et al. 2007).

The project site provides suitable annual grassland habitat for the burrowing owl and California ground squirrels are widespread and common on the project site. No evidence of habitation by burrowing owls was noted during the reconnaissance survey conducted on 18 May 2011. Protocol-level surveys for this species, which would entail a series of site visits in accordance with the CDFG’s protocol to determine presence/absence of this species have not been conducted. Therefore, the burrowing owl could potentially occur on the project site.

**Loggerhead Shrike (Lanius ludovicianus).** Federal Status: None; State Status: Species of Special Concern (Nesting). The loggerhead shrike is distributed throughout much of California, except in higher-elevation and heavily forested areas including the Coast Ranges, the Sierra Nevada, the southern Cascades, the Klamath and Siskiyou ranges, and the highest parts of the Transverse Ranges (Humple 2008). While the species range in California has remained stable over time, populations have declined steadily (Cade and Woods 1997) elsewhere. Loggerhead shrikes establish breeding territories in open habitats with relatively short vegetation that allows for visibility of prey; they can be found in grasslands, scrub habitats, riparian areas, other open woodlands, ruderal habitats, and developed areas including golf courses and agricultural fields (Yosef 1996). They require the presence of structures for impaling their prey; these most often take the form of thorny or sharp-stemmed shrubs, or barbed wire (Humple 2008). Ideal breeding habitat for loggerhead shrikes comprises short grass habitat with many perches, shrubs or trees for nesting, and sharp branches or barbed wire fences for impaling prey. Shrikes nest earlier than most other passerines, especially in the west where populations are sedentary. The breeding season may begin as early as late February, and lasts through July (Yosef 1996). Nests are typically established in shrubs and low trees including sagebrush, willow, and mesquite, though brush piles may also be used when shrubs are not available. Loss and degradation of breeding habitat, as well as possible negative impacts of pesticides, are considered to be the major contributors to the population declines exhibited by this species (Cade and Woods 1997). This species is fairly widespread and common in the area and has been observed on the site.

**White-tailed Kite (Elanus leucurus).** Federal Status: None; State Status: Fully Protected. The white-tailed kite ranges throughout the western states and Florida where suitable habitat occurs. In California, white-tailed kites can be found in the Central Valley and along the coast, in
grasslands, agricultural fields, cismontane woodlands, and other open habitats (Polite et al. 1990, Dunk 1995, Erichsen et al. 1996). Although the species rallied impressively after marked reductions during the early 20th century, populations may be exhibiting new declines as a result of recent increases in habitat loss and disturbance (Dunk 1995, Erichsen et al. 1996). White-tailed kites are year-round residents of the state, establishing breeding territories that encompass open areas with healthy prey populations, and snags, shrubs, trees, or other nesting substrates (Dunk 1995). Nonbreeding birds typically remain in the same area over the winter, although some movements do occur (Polite et al. 1990). The presence of white-tailed kites is closely tied to the presence of prey species, particularly voles, and prey base may be the most important factor in determining habitat quality for white-tailed kites (Dunk and Cooper 1994, Skonieczny and Dunk 1997).

Prey species including California voles are abundant on the project site and the species has been observed foraging throughout the year. It is likely that the white-tailed kite nests onsite.

**Swainson’s Hawk (Buteo swainsoni).** Federal Listing Status: None; State Listing Status: Threatened. Swainson’s hawk was listed as threatened by the State of California in 1983 due to population declines likely precipitated by significant losses of riparian habitat and conversion of open foraging habitats to developed lands (Woodbridge 1998, England et al. 1997). Swainson’s hawks are distributed throughout western North America during the breeding season, but in California they are primarily limited to the Central Valley and the southeastern Great Basin region (Woodbridge 1998). Swainson’s hawks in California are strongly associated with riparian habitats, though they are also found in oak woodlands and other open habitats (Woodbridge 1988, Smallwood 1995, England et al. 1997). Prime breeding habitat for Swainson’s hawk encompasses riparian draws or clumps of trees surrounded by open grassland or oak savannah for foraging (England et al. 1997, Woodbridge 1998). Swainson’s hawks build sturdy stick nests in low willows, box elders, oaks, or other trees, breeding from early March through July (England et al. 1997). Swainson’s hawks are neotropical migratory birds, flying south after the breeding season to spend their winter months on the Pampas of Argentina (England et al. 1997, Canavelli et al. 2003). Stresses on winter populations, including pesticide poisoning, on the winter grounds have contributed to declines in North American breeding populations.

Swainson’s hawks have been observed foraging over the project site and prey species including California voles and pocket gopher are abundant. Although there are no records of nesting by this species in the vicinity, appropriate nesting habitat, including large cottonwood trees, occurs throughout the site and the species may utilize the site for reproduction. No evidence of nesting by Swainson’s hawk was observed during the survey conducted 18 May 2011.
Flooding, Floodways, & 100-year Flood Zones
Flooding, Floodways, & 100-year Flood Zones
Flooding, Floodways, & 100-year Flood Zones
Berm Repair for Placement of Eaton Trail

1  2  3  4  5
Pedestrian, Bicycle and Equestrian Access

1. [Image of pedestrian and bicycle access point]
2. [Image of bicycle and pedestrian area with barriers]
3. [Image of equestrian area with fence and pathway]
4. [Image of natural landscape with seasonal changes]
Vehicle Access

1. [Image of vehicle access point 1]
2. [Image of vehicle access point 2]

Constraints and Opportunities Report River West Fresno
Biotic Habitats and Species
LEGEND:

- PRIVATE PARCELS
- STATE OR CITY OWNED PARCELS (EXCLUDES CA STATE LANDS COMMISSION CONTROLLED LANDS)
- FMFCO OWNED PARCELS
- PROJECT BOUNDARY
- RESTRICTED AREA - NO CONSTRUCTION ZONE
- EXISTING TRAIL
- LEWIS S. EATON TRAIL (IMPROVED MULTIPURPOSE TRAIL)
- NEIGHBORHOOD CONNECTOR (IMPROVED MULTIPURPOSE TRAIL)
- PARK ACCESS (STAIRS UP STEEP SLOPE)
- UNIMPROVED RIVER ACCESS TRAILS
- PAVED ROAD
- RESTROOM
- ENTRANCE BOOTH
- PARKING AREA
- TREE PLANTING, SHADE, LANDSCAPING AND SCREENING

NOTE: THE TRAIL ALIGNMENT IS DIAGRAMMATICAL AND MAY VARY SLIGHTLY BASED ON ENGINEERING, TOPOGRAPHIC FEATURES, GRADES AND CONSTRAINTS.
Figure 2: Habitat Map

LEGEND

Survey Area
Elderberry Locations with > 1 inch Diameter Stems
Private Property (17.9 ac)
Disturbed Annual Grassland/Herbaceous (247.8 ac)
Aquatic (97.3 ac)
Riparian (9.1 ac)
Developed/Landscaped (7.1 ac)
Stormwater Detention Basin (5.0 ac)

Public Property
Not Part of Project

N:
Projects
2952-01
Reports
Biotic Study

Lewis Eaton Trail Biotic Study (2952-01)

600 0 600300 Feet

September 2011