SAN JOAQUIN CORRIDOR PROGRAMMATIC ENVIRONMENTAL IMPACT REPORT 2035 VISION

Oakland and Sacramento to Bakersfield and then Los Angeles Union Station

INITIAL STUDY

California Department of Transportation

November 2012

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Section 1 Project Information

INTRODUCTION

1. Project Title: San Joaquin Corridor Programmatic Environmental Impact Report 2035 Vision

2. Lead Agency Name: California Department of Transportation
   Address: Caltrans District 7

3. Contact Person: Dawn Kukla
   Phone Number: 213-897-3643
   E-mail: dawn.kukla@dot.ca.gov

4. Project Location: San Joaquin Rail Corridor – Oakland and Sacramento to Bakersfield and then Los Angeles Union Station

5. Project Sponsor's Name and Address: Caltrans District 7, Division of Environmental Planning, MS 16-A
   100 South Main Street, Suite 100
   Los Angeles, CA 90012

6. General Plan Designation: various

7. Zoning: various

8. Project Description: The Detailed Project Description is provided as Attachment 1.

9. Surrounding land uses and setting: (Briefly describe the project's surroundings)

The proposed San Joaquin Rail Corridor (Corridor) Project infrastructure upgrades would generally be installed within the existing track rights-of-way, with limited rights-of-way acquisition if any, and would not change the existing land use of the rail corridor or the surrounding parcels. The land use setting for the project area includes a variety of rural and urban uses and the existing BNSF Railway Company (BNSF), Union Pacific Railroad (UPRR), and under certain circumstances, Metrolink rail transportation corridors.

The proposed **Sacramento Maintenance Facility** would be located between the American River Parkway corridor to the north and the existing UPRR to the south. Land to the east and west is either vacant or contains industrial development. The proposed site is currently occupied by disturbed fields, a parking lot and retention basin. Existing residential development south of the UPRR tracks would continue to have access to the American River Parkway at an existing point of entry west of the proposed facility.

At both locations under consideration for the new **Stockton Amtrak Station**, the sites are designated "industrial" in the Stockton General Plan as is land along both sides of the rail corridor in both locations. There is land designated commercial, residential and a park in the near vicinity of both locations.

The **Fresno Layover Facility** Alternative would include the development of a layover facility located in the City of Fresno that would extend along existing train tracks northeast of State

Route (SR) 41 to Tulare Street in the north, adjacent to the existing Fresno Amtrak station, and along abandoned railroad tracks south of SR 41 to Walker Avenue in the south. Implementation of a facility at this site might require acquisition of property. Existing land use for much of the area including and adjacent to the expansion area southeast of SR 41 is described as heavy industrial; however, site review found that a homeless encampment of perhaps up to 100 individuals is located along the abandoned tracks within the proposed layover facility site. The existing adjacent land use on both sides of the tracks northwest of SR 41 is parking lots.

The **Merced Layover Facility** Alternative would include the development of a layover facility located in the City of Merced that would extend along the existing train tracks from K Street in the north to 6th Avenue in the south. Land uses surrounding the proposed Merced Layover Facility are almost exclusively residential with a small area of general commercial and neighborhood commercial designated land located at G Street. Other nearby land uses include several schools, including John Muir Elementary School and Preschool, that are located about 250 feet north of the existing rail yard. Hoover Middle School is located north of and across E Santa Fe Avenue from the existing rail road tracks. The proposed expansion would locate the westernmost portion of the facility south of the rail and one block west of the middle school. The expanded facilities on the north side of the tracks would be located about 1,100 feet west of the middle school. Most of the proposed layover facility would be within an existing rail yard to the north of the tracks that is separated from existing low density residential development by a surface street or would be located within the existing Amtrak Station. The proposed layover facility may be located along the southern edge of the tracks immediately east of the Amtrak station and west of G Street where a storage rental facility is currently located. If the layover facility were to occupy this area, it would require property acquisition. The proposed layover facility is zoned High Density Residential, High Medium Density Residential, Low Density Residential and General Commercial.

10. Other agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

Although local communities do not have jurisdiction or direct approval over the implementation of the proposed project, certain components of the project may be subject to review and approval by other agencies. This includes encroachment permits from local jurisdictions where construction activities may occur outside of the BNSF, UPRR, and under certain conditions Metrolink rights-of-way; filing of a Notice of Intent with the State for a Construction Activity General Permit; and regulatory permits from the U.S. Army Corps of Engineers (Corps), California Regional Water Board and the California Department of Fish and Game. These permits are discussed in their pertinent Subchapters, including Water Resources and Biological Resources. For example, where drainage channels must be modified, the permits must be obtained from the referenced regulatory agencies before construction activities can proceed in such areas.

Section 2 Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

❑ Aesthetics	❑ Agriculture and Forestry Resources	✔ Air Quality
✔ Biological Resources	✔ Cultural Resources	❑ Geology / Soils
✔ Greenhouse Gas Emissions	❑ Hazards & Hazardous Materials	✔ Hydrology & Water Quality
✔ Land Use / Planning	❑ Mineral Resources	✔ Noise
❑ Population / Housing	❑ Public Services	❑ Recreation
✔ Transportation / Traffic	✔ Utilities / Service Systems	❑ Mandatory Findings of Significance

Section 3 Determination

On the basis of this initial evaluation, the following finding is made:

	The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
	Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
■	The proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Ron Kosinski

Ron Kosinski
Deputy District Director
Division of Environmental Planning
California Department of Transportation
District 7

Nov. 9, 2012
Date

Section 4 Impact Checklist

The impacts checklist in this section identifies physical, biological, social, and economic factors that might be affected by the proposed project. Direct and indirect impacts are addressed in checklist items I through XVII. Mandatory Findings of Significance are discussed in item XVIII. The California Environmental Quality Act (CEQA) impact levels include "potentially significant impact," "less than significant with mitigation incorporated," "less than significant impact," and "no impact."

A brief explanation of each CEQA checklist determination follows each checklist item.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista?	❑	✔	❑	❑
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	❑	✔	❑	❑
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	❑	✔	❑	❑
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	❑	✔	❑	❑

SUBSTANTIATION:

a. *Less Than Significant With Mitigation Incorporated* – Aesthetics issues are typically addressed in local (city or county) planning documents. These documents identify particular locations that are sensitive to physical changes in visual setting, or locations where the desire is to upgrade from the existing visual setting/conditions. Policies are specified in general plans, as well as in ordinances to be found in development codes or zoning ordinances. Thus, in order to determine adverse effects under this issue, the local characteristics must be examined in relation to the proposed project to see if a project site or project alignment is within an aesthetically sensitive location. Also, the project''s consistency with policies or ordinances must be demonstrated, otherwise an inconsistency may be considered an adverse impact.

   Conceptually, it is easiest to discuss the San Joaquin Rail Corridor Project in terms of improvements to the existing track system that are expected to occur within the existing rail rights-of-way (installation of double or triple track, sidings, modification of drainage facilities, etc.), improvements associated with the ancillary facilities that would install and operate rail infrastructure support facilities at a new location; or improvements that would expand facilities and convert land use to support rail infrastructure (e.g., Sacramento Maintenance Facility, Stockton Station, Fresno Layover Facility and Merced Layover Facility.) General construction impacts for all project components are addressed first in the discussion. Potential impacts associated with the proposed Sacramento Maintenance facility, Stockton Station alternatives and layover facilities are addressed separately after the discussion of the track improvements throughout the San Joaquin Corridor outlined in Figures 1-3a through 1-3h.

Construction Impacts

All of the project components have some potential to conflict with local agency design guidelines through construction disturbance of the landscape. Such disturbance can be reduced to an acceptable level by landscaping or revegetating disturbed areas or returning hardscapes (paved roadways, parking areas, etc.) to their prior condition after disturbance. Restoration of disturbed areas requires vegetating either with landscaping that is consistent with local design guidelines or with native vegetation that is consistent with that which occurs naturally in the area.

With implementation of mitigation outlined below, development under the San Joaquin Rail Corridor Project will be consistent with current general plan requirements for protecting scenic vistas.

I-1 All surface areas disturbed by the San Joaquin Rail Corridor Project construction activities, except those areas occupied by structures, hardscapes, or rail maintained areas, shall be revegetated, either with native vegetation in natural landscapes or in accordance with a landscape plan in man-made landscape areas. In non-native landscape areas, landscaping shall prioritize the use of native species or drought tolerant non-invasive species. Once construction is completed, site revegetation or restoration shall begin immediately. Where a formal landscape plan is to be implemented, it shall be coordinated with the local agency and the local design guidelines for consistency. Where a native landscape is to be restored, it shall be implemented in cooperation with regulatory agencies with oversight from a qualified biologist.

The construction activities associated with implementation of the proposed project would be temporary and localized. Construction-related aesthetic impacts associated with the San Joaquin Rail Corridor Project are not forecast to be substantially degraded by any of the proposed facilities in conjunction with implementation of the above mitigation.

Track Improvements throughout the San Joaquin Corridor

The visual setting for the project area includes a variety of rural and urban uses and the existing BNSF and UPRR rail transportation corridors. The track and siding upgrades outlined in Figures 1-3a through 1-3h would generally occur within the rail corridor rights-of-way, with limited rights-of-way acquisition, if any, and would not change the existing land use, nor substantially affect the existing scenic vistas or visual aspects of the project area. Designs for the new track segments would follow standard BNSF and UPRR track design requirements, and the visual setting after project completion would be comparable to the visual setting of the existing track. The long-term visual changes associated with the project would be the addition of new track at some locations, which would generally be at the same elevation as the existing surrounding track (Figures 1-1 and 1-2). There is potential for subsequent traffic/transportation analysis of individual segments of the project to conclude that grade separation of railroad and local streets is necessary at some locations. For views across the tracks (perpendicular to the track), the existing visual settings/vistas are forecast to remain the same as they are now, i.e., no change in the existing visual setting except in the event that grade separation is necessary to reduce traffic/transportation impacts. In general, the only long-term change in view where track would be added at the same grade as current track would be a wider area of tracks with a visual setting comparable to that under existing conditions.

The Traffic/Transportation analysis in Section XVI Of this document identifies locations where track improvement may have the potential to reduce the level of service on impacted roadways. Subsequent site specific analysis conducted as part of future environmental documents at the identified locations may determine that grade separation is necessary at some sites. The following mitigation will be required to minimize potential aesthetic impacts associated with any grade separations.

I-2 At any location where grade separation is recommended by the traffic/transportation or subsequent analysis, the follow on CEQA document will evaluate the

potential aesthetic impacts of the proposed grade separation and make a determination regarding the significance of the aesthetic impacts.

As specific facilities are proposed in the future, the associated environmental impacts will be evaluated in a subsequent project-specific CEQA evaluation to allow a final determination on future project's specific aesthetic impacts. Such review is appropriate and consistent with utilization of a program environmental document in accordance with Sections 15162 and 15168 of the State CEQA Guidelines.

Proposed Sacramento Maintenance Facility

The proposed installation of a rail operations and maintenance facility in the City of Sacramento would include a maintenance yard and shop designed to handle routine and periodic inspections and repairs (fueling, sanding, inspections and light repairs), as well as heavy maintenance for both coach cars and locomotives. In addition to tracks and repair bays, the maintenance facility would contain mechanic support areas; an operations control center; transportation support areas for train engineers (day room, lockers, train control and dispatch, etc.); materials handling areas; administrative offices; and possibly other supporting services such as training and security. The maintenance facility is currently proposed to be located generally between 20th Street and 28th Street, adjacent to the UPRR track. The proposed site would have to be acquired for the project to proceed at this location. Figure 1-11 shows the proposed location of the maintenance facility and Figure 1-12 is an aerial photo of the proposed maintenance facility site. Current uses include disturbed fields, a parking lot, and retention basin.

The proposed Sacramento Maintenance Facility site is adjacent to the American River on the south side of the river within the area designated as both a State and National Wild and Scenic River, classified as a "Recreation" river. Most of the American River Parkway amenities in the vicinity of the proposed project site (trails, restrooms, picnic areas, etc) are located on the north side of the river; however, there is a bicycle trail located just west of the proposed site boundary and the proposed Two Rivers Bicycle/Pedestrian Trail along the south side of the river within the Parkway boundary, which extends to include a small portion of the south side of the riverbank. According to the 2008 American River Parkway Plan Wood Lake Area Plan Map depicting the project area, pedestrian and bicycled access to the proposed Two Rivers Bicycle Trail is proposed both within the proposed Maintenance Facility site and along the eastern edge of the site.

Detailed Maintenance Facility site development plans are not available for review at this time. However, Figure 1-12 shows that the boundary of the proposed facility is located very close to the River, and there is the potential both for the proposed facility to be visible from the River corridor/Parkway and for trees along the River to be adversely impacted by facility development, depending upon the development plans.

The 2008 American River Parkway Plan developed by the County of Sacramento includes Goals and Policies applicable to the proposed maintenance facility, particularly the following items under *Visual Impacts from Uses and Facilities Adjacent to the Parkway.*

7.23 Levees, landscaping, or other man-made or natural buffers should be used to separate, buffer or screen the Parkway visually from adjoining land uses, unless the adjacent land uses are indistinguishable from the Parkway.

7.24 In order to minimize adverse visual impacts on the aesthetic resources of the Parkway, local jurisdictions shall regulate adjacent development visible from the Parkway. These local regulations shall take into account the extent to which the development is visible from the Parkway. Regulations may include tools to address design, color, texture and scale, such as:

- *Setbacks or buffers between the Parkway and the development.*
- *Structures to be stepped away from the Parkway or limits on building scale.*

- *Screening of structures visible from the Parkway with landscaping, preferably native vegetation or other naturally occurring features.*
- *Use of colors and materials including non-reflective surfaces, amount of glass, and requiring medium to dark earth tone colors that blend with the colors of surrounding vegetation, particularly in sensitive bluff or river's edge locations.*
- *Guidelines to discourage intrusive lighting and commercial advertising.*

7.25 Between the confluence of the Sacramento and American rivers and the Capital City Freeway (Business-80) the Parkway context is the Sacramento downtown urban core for the Sacramento metropolitan region. ***(Note: the proposed Maintenance Facility would be located within this area.)*** *Protection of the Parkway's aesthetic values in this reach should be accomplished within the context of creating a vital urban area. Development immediately adjacent to the Parkway shall respect the intent of the Parkway goals by reducing visual impacts through context sensitive site planning and building design.*

7.26 Development of the bluffs within and adjacent to the Parkway shall be designed so as not to degrade the stability of the bluffs, while minimizing the visual impacts into the Parkway.

Mitigation is incorporated to minimize adverse impacts to the visual setting of the river from implementation of the proposed Maintenance Facility.

I-3 The site development plan for the proposed Sacramento Maintenance Facility shall be required to show consistency with goals 7-23 through 7-26 from the 2008 American River Parkway Plan. Additionally, the proposed facility development plan must demonstrate that the facility would not prevent the development of the proposed extension of the Two Rivers Bicycle/Pedestrian Trail along the south bank of the River within the Parkway Boundary or create hazards for the proposed pedestrian/bicycle access along 28th Street or the existing pedestrian/bicycle access immediately west of the site.

<u>Stockton Amtrak Station Alternatives</u>
The proposed Stockton Amtrak Station would include standard rail station design features, such as platforms that extend the full length of the passenger boarding area to permit boarding to all accessible train cars. It would be equipped with shelter, lighting, signage, schedules, leaning bars, information kiosks, ticket vending machines, as well as have adequate space for dedicated bus passenger circulation, loading or unloading bays and shelters, van, shuttle, taxicab, and passenger vehicle drop-off. Once a station site is selected and funds become available, the project will follow a general construction scenario.

Plans for the new station include a police-staffed, state-of-the-art, Emergency Operations Center (EOC), in which all stations, staffed and unstaffed, would be monitored. The EOC would incorporate a security management system that consists of video surveillance, access control, motion detection, intercoms and emergency mass notifications to ensure maximum safety for all passengers within Amtrak facilities.

- Stockton Amtrak Station Alternative 4 (See Figure 1-17): Alternative 4 would include the development of a new Amtrak station located at the corner of East Scotts Avenue and Pilgrim Street in the City of Stockton on the BNSF rights-of-way. Currently, the site is developed with a manufacturing plant. The proposed site would have to be acquired for the project to proceed at this location. The site also contains a rail interlock connecting the UPRR and BNSF railroads. Implementation of Alternative 4 would include the demolition of the manufacturing plant. Existing tracks are located west and south of this site. Standard rail station design features would be implemented. This alternative location would serve passengers on both the Oakland to Bakersfield and Sacramento to Bakersfield routes. Alternative 4 is the preferred location for a new passenger rail station, because it could easily serve both the Oakland and Sacramento trains that use the San Joaquin Corridor.

- Stockton Amtrak Station Alternative 5 (See Figure 1-18): Alternative 5 would rehabilitate the existing Amtrak station located on the BNSF rights-of-way at 735 South San Joaquin Street in the City of Stockton. Existing train tracks are located directly south of this site. Rehabilitation of this station would include an expansion of existing facilities to accommodate additional passengers. Standard rail station design features would be implemented. Alternative 5 is considered a viable, but not the preferred, alternative.

Construction and operation of the new Stockton Station at either location will require compliance with local agency design guidelines in order to ensure that new facilities do not cause significant negative aesthetic effects.

I-4 Fencing, landscaping and/or architectural design will be incorporated in project design to reduce the visual impact of facilities in a manner consistent with the surrounding development and with the local agency design guidelines to the extent that such measures do not conflict with the engineering and budget constraints established for the facility.

Layover facilities

Within the 25-year planning period, Caltrans proposes initiating two train operations from the middle of the San Joaquin Corridor, either from Merced or Fresno. The objective would be to start a train early in the morning that would head north to Sacramento and south to Bakersfield. The train would return to the layover facility at the end of the day. The new layover facility would include a storage yard; running maintenance and repair area; support shops; parts storage; mechanical and electrical rooms; and administrative offices. Descriptions of the potential layover locations are as follows:

- Fresno Layover Facility Alternative (See Figures 1-19 and 1-20): This Alternative would include the development of a layover facility located in the City of Fresno that would extend along the existing train tracks from Tulare Street in the north to Walker Avenue in the south. The layover facility would be located adjacent to the existing Fresno Amtrak station. This site is constrained by its small size and ability to meet the layover objective. Implementation of a facility at this site might require acquisition of property.

- Merced Layover Facility Alternative (See Figures 1-21 and 1-22): This Alternative would include the development of a layover facility located in the City of Merced that would extend along the existing train tracks from K Street in the north to 6th Avenue in the south.

Construction and operation of the layover facility at either location would require compliance with local agency design guidelines in order to ensure that new facilities do not cause significant negative aesthetic effects. Implementation of mitigation measure I-4 is sufficient to reduce potential adverse aesthetic impacts at either site to a less than significant level.

With implementation of the proposed mitigation addressing concerns in specific locations, the proposed project is not projected to have a substantial adverse impact on a scenic vista.

b. *Less Than Significant With Mitigation Incorporation* – A review of the California Scenic Highway Mapping System identified both state and county eligible and designated scenic highways. The only designated State or County scenic highways that occur within the viewshed of the proposed railroad infrastructure are located in Contra Costa County. Details are provided on each County within which project infrastructure improvements are proposed below.

- In Los Angeles County Interstate (I)-110 east of I-5 is designated an Historic Parkway and State Route (SR) 126 south along I-5 and east along I-210 are identified as State Eligible, but have not been designated at this time. The only possible project-related impacts in the area would occur if the alternative to provide passenger rail service from Bakersfield to Los Angeles were selected, as shown on Figure 1-5. The existing rail alignment in the vicinity of I-110 is located west of the I-5/I-110 Interchange. Extensive rail facilities, as they currently exist at this location, are part of the existing and historic viewshed, and include passenger rail (local

commuter rail) under existing conditions. No significant adverse change to the viewshed of a designated Historic Parkway is projected to occur with implementation of the project. The Eligible Highways referenced above similarly have existing rail infrastructure and carry passenger rail under existing conditions. No significant adverse change to the viewshed of an Eligible State Scenic Highway is projected to occur with implementation of the project.

- In Kern County SR 58 east of SR 14, and SR 14 north of SR 58 are both identified as State Eligible, but neither has been designated at this time. The only possible project-related impacts in the area of either highway would occur if the alternative to provide passenger rail service from Bakersfield to Los Angeles were selected, as shown on Figure 1-5. The Eligible Highways referenced above have existing rail infrastructure and carry passenger rail under existing conditions. No significant adverse change to the viewshed of an Eligible State Scenic Highway is projected to occur with implementation of the project.

- In Kings County SR 41 west of SR 33 is identified as State Eligible but has not been designated at this time. No proposed project impacts would occur in the vicinity of this highway segment.

- In Tulare County SR 190 east of SR 65 and SR 198 east of SR 99 are identified as State Eligible but have not been designated at this time. No proposed project impacts would occur in the vicinity of either highway segment.

- In Madera County SR 41 north of SR 49 and SR 49 northwest of SR 41 are identified as State Eligible but have not been designated at this time. No proposed project impacts would occur in the vicinity of either highway segment.

- In Merced County I-5 north of SR 33/SR 152 and SR 152 west of I-5 are designated as State Scenic. No proposed project impacts would occur in the vicinity of either highway segment.

- In Stanislaus County I-5 is designated as State Scenic. No proposed project impacts would occur in the vicinity of this highway segment.

- In San Joaquin County I-580 west of I-5 is designated as State Scenic. No proposed project impacts would occur in the vicinity of this highway segment.

- In Sacramento County SR 160 southwest of I-5 is designated as State Scenic, and a County Road that isn't identified by number located south of SR 160 and west of I-5 is designated as County Scenic. No proposed project impacts would occur in the vicinity of either highway segment.

- In Contra Costa County I-680 southeast of SR 24 and SR 24 west of I-680 are designated State Scenic and SR 4 east of SR 160 and SR 160 north of SR 4 are identified as State Eligible. The proposed UPRR double tracking would occur over a mile west of the identified segment of SR 24 at the closest point, and thus would have no potential to impact views along this route. The identified segment of I-680 is not in the vicinity of any proposed improvements. The identified segments of I-160 and SR 4 are in the vicinity of BNSF in the eastern portion of the City of Antioch in the vicinity of Oakley station. SR 160 crosses over the railroad via an overpass in an industrialized area. The eligible section of SR 4 runs parallel and adjacent to the railroad for about a mile and in vicinity with areas where the railroad is briefly adjacent to SR 4 or within the viewshed for approximately two additional miles. The general area is a mixture of agricultural fields and residential development with increasing industrial activity in the western portion of the SR 4 alignment identified as eligible. As shown in Figures 1-3a through 1-3e, none of the proposed project alternatives would include additional track along the eligible segment of SR 4. Any infrastructure improvements within the identified area would occur within the existing rights-of-way and would not substantially change or alter the existing visual character of an active railway. Based on this information, the proposed project''s potential impact to scenic highway resources in this area is concluded to be a less than significant impact.

Wild and Scenic Rivers

A review of the National Wild and Scenic River System found that the only designated river in the vicinity of any portion of the proposed project is the American River as it flows through the City of Sacramento. A 23-mile segment of the American River is designated a Wild and Scenic River from the Nimbus Dam, just east of Gold River, downstream to the juncture with the Sacramento River, just west of I-5. The proposed Sacramento Maintenance Facility site is adjacent to the American River on the south side of the river within the area designated as Wild and Scenic, as has already been addressed under the Maintenance Facility discussion under item (a) of this Section. Site development plans are not available for review at this time. However, there are trees along the river that have the potential to be adversely impacted by facility development, depending upon the development plans. Mitigation has been incorporated under item (a) of this Section to minimize adverse impacts to the visual setting of the river from implementation of the proposed Maintenance Facility.

Both segments of the UPRR under consideration for track upgrades in the Sacramento Area terminate south of the American River in the near vicinity of the segment designated as a National Wild and Scenic River. However, in both cases the railroad is outside of the viewshed of the river. The Sacramento Subdivision (western alignment alternative) terminates almost half a mile before reaching the river, leaving a substantial margin of industrial development and vacant lands between the alignment and the river. The Fresno Subdivision (eastern alignment alternative) parallels the American River through a designated portion of the river for approximately 4-miles. The Fresno Subdivision runs 800 feet south of the river at the closest point but is separated from the river by residential housing in this area. At other locations the distance between the railroad alignment and the river is greater, and the intervening land uses include I-80, the State University, fields, industrial development, and the proposed Sacramento Maintenance Facility Site.

There are no other designated rivers within the San Joaquin Valley in the vicinity of the proposed rail infrastructure improvements according to the September 2009 National Wild and Scenic Rivers System Map.

Other Scenic Resources

A cultural resources evaluation to be conducted as part of the EIR for this project will evaluate the potential for the project to adversely impact historic buildings. Because the vast majority of the project would occur within existing railway rights-of-way, those improvements have no potential to impact historic buildings. The only proposed improvements that might impact historic buildings would be the Stockton Station Alternate 5, which would require renovation of the existing Station building, or possibly some of the proposed demolitions, such as removal of a manufacturing plant for Stockton Station Alternate 4. The age of the structures to be demolished has not been evaluated at this time, but will be addressed in the cultural resources evaluation included in the EIR.

Because the vast majority of the proposed facilities would be located within the existing rights-of-way of active railways, no adverse impact to scenic resources such as trees would be impacted. Railroad safety regulations require that rights-of-way be maintained free of trees and tree limbs.

Visual inspection of the whole scenic corridor determined that along the vast majority of the alignment no scenic resources such as trees or rock outcroppings occur within the project area of potential effect (APE). Exceptions occur at three locations along the alignment as detailed below.

- Areas of rock outcroppings occur along the proposed passenger rail alignment between Bakersfield and Los Angeles. However, as operation of a small number of passenger trains along this alignment would not require track modification, no adverse impacts to scenic resources along this segment of the alignment would occur.

- Along the UPRR track between Richmond and Martinez there is a segment where the development of the existing double track required cutting into the hillside. While the site does not have a high aesthetic value, it may be further disturbed by installation of a third main track.

The proposed third track at this location could be installed either by cutting into hillside or by filling on bay shore, either of which could have adverse aesthetic impacts.

- The final location with some aesthetic sensitivity is along the alternate BNSF route between Richmond and Port Chicago. The following mitigation shall be implemented prior to commencement of construction activities on either the segment of the UPRR between Richmond and Martinez or the segment of the BNSF between Richmond and Port Chicago.

I-5 Prior to commencement of construction activities on either the segment of the UPRR between Richmond and Martinez or the segment of the BNSF between Richmond and Port Chicago, a visual simulation analysis shall be performed of the facility's impact on the view. If the analysis identifies a significant impact on a scenic vista, the facility shall be relocated or redesigned to reduce the impact to a non-significant level, or a subsequent environmental evaluation shall be prepared.

Because no scenic resources that would be adversely impacted occur along the remaining segments of the proposed project and because the physical changes to the corridor from implementing the proposed project are not forecast to be substantial, the proposed project''s potential impact to scenic resources is concluded to be a less than significant impact.

c. *Less Than Significant With Mitigation Incorporation* – The existing visual setting of the railroad corridor includes tracks, culverts, signals, and other appurtenant railroad support infrastructure. At certain locations along the corridor storage tracks contain stored rail cars; at other locations side tracks extend to industrial customers; and about 50 times per day, trains (freight and passenger) pass through the corridor. The proposed project would cause short-term construction activities within the rail corridor that would result in construction equipment and activities that are necessary to install all of the proposed project components. Within the context of an active rail corridor, short-term construction activity is not forecast to cause substantial degradation to the existing visual qualities. This is because ongoing track maintenance within the corridor results in short-term construction activities that are already part of the corridor visual setting.

The proposed project is designed to meet the expected long-term increase in passenger rail operations. Future commercial demand for rail transport is also expected to increase freight rail operations, and the project design features would provide for more efficient handling of greater rail volume. Increased rail traffic will require increased frequency of rail maintenance activities. An increase in the frequency of train traffic or of rail maintenance activities along the existing rail corridor is not considered an adverse impact on the visual qualities of the corridor. No significant long-term degradation of the rail corridors visual qualities is forecast to occur if the proposed project is implemented.

Improvements associated with the ancillary facilities (Sacramento Maintenance Facility, Stockton Station, Fresno Layover Facility and Merced Layover Facility) would install and operate rail infrastructure support facilities at new locations, or would expand facilities and convert land use to support rail infrastructure. Installation of these facilities has a potential to modify the existing view or visual setting at the specific project sites where they would occur. Mitigation measure I-3 outlined previously in this section can ensure that construction disturbance is mitigated by replacing vegetation and controlling potential negative aesthetic effects due to landscape scarring. Compliance with local agency design guidelines, as identified in mitigation measure I-4, will ensure that new facilities do not cause significant negative aesthetic effects.

Based on the above, it is concluded this project would not have a substantial adverse effect on or substantially degrade the visual character or quality of the project corridor/area. Potential impacts to the visual characteristics of the existing visual setting are considered less than adverse based on the proposed modifications to the existing visual environment described above.

d. *Less Than Significant With Mitigation Incorporation* – The development of most of the proposed San Joaquin Rail Corridor Project facilities would be within the existing rail corridor and would not require the installation of lighting that is substantially different from what is installed under existing conditions. Any new signals adjacent to the new track will not be a source of substantial amounts of new light. Existing rail crossing lighting, such as that associated with crossing stop signs or signals, may be upgraded, but based on the type of light standards used for safety purposes any changes would not alter the existing light environment.

The proposed Sacramento Maintenance Facility, Stockton Station, Fresno Layover Facility and Merced Layover Facility would install and operate rail infrastructure support facilities at new locations, or would expand facilities and convert land use to support rail infrastructure. These proposed facilities would result in new lighting sources. Lighting requirements associated with active railroad facilities must prioritize safety and must comply with standard railroad lighting protocols. Lighting associated with facilities necessary to support rail infrastructure, such as parking lots or station lighting (not related to rail safety) can be designed to minimize conflicts with adjacent uses.

Many of the jurisdictions within which the project would occur have passed ordinances or adopted development codes designed to minimize the impact of light and glare on sensitive uses. The San Joaquin Rail Corridor facilities would conform with the guidelines of each jurisdiction wherever feasible, but at a minimum they shall comply with the following mitigation measure.

I-6 Installation of lighting not associated with rail safety shall be implemented consistent with the following measures.

- ***Use low pressure sodium lights to minimize impacts of glare, where security needs require such lighting***
- ***Install lighting fixtures at the lowest level consistent with the purpose of the lighting to reduce unwanted illumination***
- ***Direct and shield light to minimize off-site illumination***
- ***Prevent light from intruding into sensitive light receptor areas off of a specific project site***

With implementation of the proposed mitigation measures, no significant adverse light or glare effects are forecast to occur from implementing the proposed project.

Conclusion

No unavoidable, adverse aesthetic effects have been identified in association with the implementation of the proposed project. The following issues **will not** require any further analysis in the EIR:

- Affect a scenic highway
- Create light or glare
- Affect a scenic vista
- Have a demonstrable negative aesthetic effect.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
II. AGRICULTURE AND FORESTRY RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	❑	❑	❑	✔
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	❑	❑	❑	✔
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	❑	❑	❑	✔
d) Result in the loss of forest land or conversion of forest land to non-forest use?	❑	❑	❑	✔
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	❑	❑	❑	✔

SUBSTANTIATION:

a-e. *No Impact* – The rail corridors of the San Joaquin Rail Corridor Project are owned and maintained by BNSF and UPRR solely for the support of rail operations. These corridors range between 100 feet and 200 feet in width. Federal rules prevent the introduction of vegetation that could pose a fire or other safety hazard to rail operations within this corridor. Therefore, no agricultural operations or timberlands are permitted within this corridor. No portion of the proposed rail road alignment improvements is located outside of the existing BNSF and UPRR rights-of-way. A separate project within the corridor of the proposed project would relocate approximately 1,000 feet of track within the City of Sacramento in the vicinity of the Old Sacramento Rail Yard. The tracks have already been relocated and passengers are required to walk or be ferried out to the new track alignment to meet trains. Bus operations continue to be operated adjacent to the existing Sacramento Amtrak Station. The proposed rail operations and maintenance facility to be located in the City of Sacramento and a proposed new station in Stockton could both require procurement of property that is not currently within railroad rights-of-way. If the Fresno Alternative is selected for the proposed Layover Facility, property acquisition might be required.

There are four major classifications of farmland adopted by the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS). These classifications are based on the fertility of soils and such factors as water availability. “Prime Farmland” has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops, when managed according to modern farming methods. “Farmland of Statewide Importance” is land other than prime farmland with a good combination of physical and chemical characteristics for producing food, feed, forage, and fiber. “Unique Farmland” is land other than prime farmland and land of statewide importance that has a special combination of soil quality, growing season, and moisture supply needed to produce sustained high yields of a specific crop. “Farmland of Local Importance” is defined as important to the local agricultural economy.

The State is required to prepare current maps of the important farmland in agricultural counties of California and monitor permanent farmland conversion. The California Department of Conservation, Division of Land Resource Protection’s Farmland Mapping and Monitoring Program also uses this system for the classification of farmland. In addition to the farmland classifications above, the California Department of Conservation describes three other categories, as follows: “Grazing Land” is land on which the existing vegetation is suited to the grazing of livestock. “Urban and Built-Up Land” is land that does not fall within an agricultural category and is occupied by structures with a density of at least one structure to one and one-half acres “Other Land” is all other land that does not meet the criteria of any other category.

According to the 2008 California Department of Conservation Important Farmlands Maps for each of the affected counties, extensive areas of land designated as Prime Farmland, Farmland of Statewide Importance and Unique Farmland occur along the railroad alignments in Fresno, Kings, Madera, Merced, Stanislaus and San Joaquin Counties. In Kern County Prime Farmland and Farmland of Statewide Importance is abundant along the railroad alignment, and in Tulare County Farmland of Statewide Importance is abundant along the railroad alignment. No designated farmlands occur in Contra Costa County along the railroad alignments west of the City of Antioch, but to the east all three aforementioned classifications occur. In Sacramento County Farmland of Statewide Importance occurs along both the UPRR Fresno and Sacramento Subdivisions, and Prime Farmlands also occur along the Fresno Subdivision. Along the Bakersfield to Los Angeles rail alignment, areas of land designated as Prime Farmland and Unique Farmland occur east of Bakersfield before the alignment traverses the Tehachapi Pass. In the Tehachapi Mountains, much of the land along the railroad alignment is designated as grazing land. In Los Angeles County, there is a small sliver of Unique Farmland that abuts the rail alignment in Sylmar, but no other land is designated as having agricultural importance. Please refer to Appendix A for a copy of the Important Farmlands maps referenced. Although Prime Farmland, Farmland of Statewide Importance and Unique Farmland occur along many portions of the project alignment, all of the proposed improvements to the rail alignment would be constructed and operated within the existing railway rights-of-way, which has been dedicated to non-agricultural uses for over a century.

The ancillary facilities that may or would require property acquisition, including the proposed rail operations and maintenance facility to be located in the City of Sacramento, the proposed new station in Stockton, and the proposed Fresno Layover Facility are all proposed to be located on land identified as urban and built-up land by the Important Farmlands Maps.

The California Land Conservation Act (Williamson Act) was established in 1965 to protect agricultural lands from conversion to non-agricultural use. Owners of land placed under Williamson Act contract receive lower property tax rates, but must keep the land in agricultural production or related use for the ten-year contracts that are automatically renewed each subsequent year (after the initial ten year period) unless a notice of non-renewal is filed. According to the California Department of Conservation Williamson Act Lands County Maps for the most recent years available, there are extensive areas of land under Williamson Act Contracts along the railroad alignment(s) in Fresno, Kern, Kings, Madera, Merced, San Joaquin, and Stanislaus Counties. In Contra Costa County, there are very limited lands under Williamson Act Contracts along the railroad alignments. In Sacramento County there are no lands under Williamson Act Contracts closer to the developed portions of the City and only limited lands under contract along the UPRR Fresno Subdivision, but there are more extensive areas of lands under contract along the UPRR Sacramento Subdivision alignment. Along the Bakersfield to Los Angeles rail alignment, Williamson Act land along the rail alignment in Kern County are primarily on non-prime agricultural lands, including an area east of Tehachapi identified as in non-renewal. The only map of Williamson Act land available from the Department of Conservation File Transfer Protocol (FTP) website represented Catalina Island, so presumably there are no Williamson Act lands along the alignment in Los Angeles County. The 2008 Statewide Map of Williamson Act Contract Land shows no designated lands in Los Angeles County. Please refer to Appendix A for a copy of the Williamson Act maps referenced.

Although lands under Williamson Act contracts occur along many portions of the project alignment, all components of the proposed rail alignment improvements would be constructed and operated within the existing railway rights-of-way. The ancillary facilities that may or would require property acquisition, including the proposed rail operations and maintenance facility to be located in the City of Sacramento, the proposed new station in Stockton and the proposed Fresno Layover Facility are all proposed to be located on land identified as urban and built-up land by the Williamson Act Maps. Because all components of the proposed rail project would be constructed and operated within the existing railway rights-of-way which are maintained for railroad safety and operations and none of which is under Williamson Act contracts, or on land identified as urban/built-up, no Williamson Act contract lands are present within the project area of impact.

The proposed project would accommodate increased train traffic along the existing rail alignment, which has the potential to increase delays for vehicles, including farm equipment or other agriculture-related vehicles, waiting at railroad crossings. The project would not remove any existing crossings, and all grade-separated crossings (crossings where trains are separated from non-train traffic by a bridge or underpass) would continue to be grade-separated during construction and after completion of the project. This issue is addressed in greater detail under Section XVI Traffic/Transportation. The proposed project is not expected to result in substantial increased delays for agricultural vehicles that would result in significant adverse impacts to agricultural lands.

No significant adverse impact to any prime or unique farmlands, farmlands of statewide importance, or farmland under Williamson Act contracts would occur as a result of implementing the proposed project.

The proposed project would not traverse any areas or forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production, except for within the Tehachapi Pass area of the proposed Los Angeles to Bakersfield alignment. It is expected that initiating passenger rail along this alignment could be implemented within the existing rights-of-way or with minimal expansion.

No portion of the project has the potential to cause the rezoning of any land zoned for forest or timber uses.

Conclusion

Based on the analysis above, the proposed project would have no significant impact on forest lands, timberland, prime or unique farmlands, farmlands of statewide importance or farmland under Williamson Act contracts. No mitigation is required to minimize project impacts on these resources. The issues of agricultural, timberland and forest resources **will not** be carried forward to the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	✔	❑	❑	❑
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	✔	❑	❑	❑
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	✔	❑	❑	❑
d) Expose sensitive receptors to substantial pollutant concentrations?	✔	❑	❑	❑
e) Create objectionable odors affecting a substantial number of people?	✔	❑	❑	❑

SUBSTANTIATION:

The proposed project has the potential to result in significant impacts with respect to this issue; therefore, this issue **will be** included in the EIR to be prepared for the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IV. BIOLOGICAL RESOURCES: Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	✔	❑	❑	❑
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	✔	❑	❑	❑
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	✔	❑	❑	❑
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	✔	❑	❑	❑
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	✔	❑	❑	❑
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	✔	❑	❑	❑

SUBSTANTIATION:

The proposed project has the potential to result in significant impacts with respect to this issue; therefore, this issue **will be** included in the EIR to be prepared for the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?	✔	❑	❑	❑
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?	✔	❑	❑	❑
c) Directly or indirectly destroy a unique paleon-tological resource or site or unique geologic feature?	✔	❑	❑	❑
d) Disturb any human remains, including those interred outside of formal cemeteries?	✔	❑	❑	❑

SUBSTANTIATION:

The proposed project has the potential to result in significant impacts with respect to this issue; therefore, this issue **will be** included in the EIR to be prepared for the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
• Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	❑	✔	❑	❑
• Strong seismic ground shaking?	❑	✔	❑	❑
• Seismic-related ground failure, including liquefaction?	❑	✔	❑	❑
• Landslides?	❑	✔	❑	❑
b) Result in substantial soil erosion or the loss of topsoil?	❑	✔	❑	❑
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse?	❑	✔	❑	❑
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	❑	✔	❑	❑
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	❑	❑	❑	✔

SUBSTANTIATION:

a. *Less Than Significant With Mitigation Incorporation* – Conceptually, it is easiest to discuss the San Joaquin Rail Corridor Project in terms of improvements to the existing track system that are expected to occur within the existing rail rights-of-way (installation of double or triple track, sidings, drainage facilities, etc.) and improvements associated with the ancillary facilities that would install and operate rail infrastructure support facilities at a new location, or would expand facilities and convert land use to support rail infrastructure (e.g., Sacramento Maintenance Facility, Stockton Station, Fresno Layover Facility, and Merced Layover Facility.)

A review of *Official Maps of Earthquake Fault Zones* delineated by the California Geological Survey through December 2010 under the Alquist-Priolo Earthquake Fault Zoning Act found that none of the proposed ancillary facilities would be located within or in the vicinity of Alquist-Priolo Special Studies Zone Boundaries. However, segments of the proposed rail alignment improvements would be located within Alquist-Priolo Special Studies Zone Boundaries, as are detailed below.

Bakersfield to Sacramento alignment as shown on Figures 1-2a, 1-2b and 1-2d: There are Alquist-Priolo Special Studies Zones in the Bakersfield region, extending north approximately to the community of Delano. There are no Alquist-Priolo Special Studies Zones north of Delano along the alignment north through Fresno, Merced, Stockton, and Sacramento counties. The **Pond Quadrangle** in Kern County shows the northernmost Alquist-Priolo Special Studies Zones in the rail vicinity along this route as located between one and one and a half miles east of the alignment, running roughly parallel to the railroad. The **Oildale Quadrangle** in Kern County shows Alquist-Priolo Special Studies Zones located in the mountainous terrain in the northwest section of the quadrangle, while the rail alignment is located in the far southeast of the quadrangle more than four miles from the Zones. Similarly, the **Oil Center Quadrangle** in Kern County shows Alquist-Priolo Special Studies Zones located in the western section of the quadrangle, while the rail alignment is located in the far southeast of the quadrangle more than 2.5 miles from the Zones.

Stockton to Oakland alignment as shown on Figure 1-2c: There are no Alquist-Priolo Special Studies Zones along this portion of the route east of Contra Costa County. The **Vine Hill Quadrangle** in the vicinity of Port Chicago shows that an Alquist-Priolo Special Studies Zone crosses perpendicular to the rail alignment along Pacheco Creek east of I-680. Continuing westward, the Mare Island Quadrangle in the vicinity of Pinole shows an Alquist-Priolo Special Studies Zone crosses the rail alignment in Richmond. The Richmond Quadrangle shows that an Alquist-Priolo Special Studies Zone crosses diagonal to the rail alignment in the San Pablo area continues to run roughly parallel to the railroad approximately two miles to the east as far south as Oakland.

BNSF Port Chicago to Richmond alignment as shown on Figure 1-6: The **Vine Hill Quadrangle** in the vicinity of Port Chicago shows that an Alquist-Priolo Special Studies Zone crosses perpendicular to the BNSF rail alignment along Pacheco Creek east of I-680. BNSF crosses the same Alquist-Priolo Special Studies Zone that the UPRR crosses; the UPRR crosses the zone north of the BNSF crossing.

Visalia to Hanford Route alignment as shown on Figure 1-4: There are no Alquist-Priolo Special Studies Zones along this portion of the alignment.

Los Angeles to Bakersfield Route as shown on Figure 1-5: The **Edison Quadrangle** east of Bakersfield shows that an Alquist-Priolo Special Studies Zone is located just north of the rail way in the community of Edison. Additional Alquist-Priolo Special Studies Zones are located one-half mile or farther to the north as the rail continues to the east. The **SW ¼ Breckenridge Mountain Quadrangle** shows that the rail way crosses an Alquist-Priolo Special Studies Zone as the track winds through the Tehachapi Pass near Bealville. The **SE ¼ Breckenridge Mountain Quadrangle** shows that the rail way crosses through an approximately mile-wide Alquist-Priolo Special Studies Zone as the track winds through the Tehachapi Pass south of Caliente Creek. The **Tehachapi South Quadrangle** shows that the rail way runs in the extreme northeast of the quadrangle while an Alquist-Priolo Special Studies Zone is located more than five miles to the south. The **Monolith Quadrangle** shows that the rail way runs within an Alquist-Priolo Special Studies Zone for approximately two miles in the vicinity of Cameron. The **Mojave Quadrangle** shows that the rail way runs parallel about half of a mile south of an Alquist-Priolo Special Studies Zone for approximately two miles in the northwest corner of the quadrangle. The **Palmdale Quadrangle** shows that the rail way crosses perpendicular to the San Andreas Fault and associated Alquist-Priolo Special Studies Zone just south of Palmdale. The **Newhall Quadrangle** shows that the rail way crosses an Alquist-Priolo Special Studies Zone just before the rail way turns south to Santa Clarita. The **Oat Mountain Quadrangle** shows that the rail way crosses several Alquist-Priolo Special Studies Zones north of the San Fernando Valley. The **San Fernando Quadrangle** shows that the rail way crosses several Alquist-Priolo Special Studies Zones in San Fernando. The Alquist-Priolo Special Studies Zones in the **Burbank Quadrangle** are in the far northeast of the quadrangle whereas the rail way is several miles to the west in the central portion of the quadrangle. The Alquist-Priolo Special Studies Zones in the **Hollywood Quadrangle** are in the far southwest of the quadrangle whereas the rail way is in the far northeast of the quadrangle.

The **Los Angeles Quadrangle** shows that the rail way runs more than two miles west of an Alquist-Priolo Special Studies Zones in the Pasadena area.

All components of the proposed rail alignment improvements would be constructed and operated within the existing railway rights-of-way; therefore, the rail system currently operates with the above referenced proximity to Alquist-Priolo Special Studies Zones. The proposed project would construct all infrastructure in accordance with the established standards of each railroad, including design standards that account for seismic activity and its effect on rail corridor design and operation. BNSF and UPRR maintain crews that monitor and repair any damage from natural hazards that may affect their main line tracks. The potential for fault rupture along the proposed alignment is highest within the Alquist-Priolo Special Studies Zones. Potential impacts can be mitigated to reduce impacts by implementing the following mitigation measures.

Under existing avoidance and minimization measures, in the event of significant seismic activity the track owners stop all trains in areas of concern and send out crews to ride the rail in search of any issues. In the event that issues are found with the rail, structural engineers evaluate issues and determine remediation measures, if required. This standard operating procedure would occur on any new segment of track constructed as part of the project, particularly at locations where surface rupture is most likely to occur, such as where tracks cross Alquist-Priolo Special Studies Zones. No mitigation is required because the existing standard operating procedure would avoid and minimize any adverse impacts associated with seismic activity.

Ground-shaking can cause damage by itself or through potential secondary effects such as fire and dam failure. Ground settlement may also occur in unconsolidated sediments saturated with water, which occur along portions of the alignment. These sediments represent the poorest kind of soil condition for resisting seismic shock waves. The changes that occur, such as liquefaction and loss of strength in fine-grained materials, can result in ground cracking, unequal settlement, subsidence, and other surface changes.

A great deal of soil compaction and settlement can also result from seismic ground shaking. If the sediments which compact during an earthquake are saturated with water, soil can liquefy and lose its capacity to support structures. The extent of damage ranges from minor displacement to total collapse of a structure. Engineering treatment of either the ground or structures, or both, can sometimes stabilize hazards, such as liquefaction. According to the General Plans for the cities and counties within which the proposed project improvements would occur, portions of the alignment are located within areas of liquefaction and subsidence hazard potential. Potential impacts can be mitigated to reduce impacts by implementing the following mitigation measures.

VI-1 ***The structural design and construction of new structures will, at a minimum, be in accordance with the requirements of the most recent Uniform Building Code (UBC) and California Building Code (CBC) including the latest supplements for the Groundshaking Zone within which they will occur, as described in the latest California Building Code and all other applicable City, County, State, and Federal laws, regulations and guidelines.***

VI-2 ***The proposed project rail infrastructure shall be designed to comply with the performance standard for Risk Class I & II, e.g., public facilities, as identified below:***

Risk Class I & II, Structures Critically Needed after Disaster: Structures which are critically needed after a disaster include important utility centers, fire stations, police stations, emergency communication facilities, hospitals, and critical transportation elements such as bridges and overpasses and smaller dams.

<u>Acceptable Damage</u>: Minor non-structural; facility should remain operational and safe, or be suitable for quick restoration of service.

Ancillary facilities including the Sacramento Maintenance Facility, new/refurbished Stockton Station, Fresno Layover Facility, and Merced Layover Facility shall be designed to comply with the performance standard for Risk Class III, as identified below:

Risk Class III: High occupancy structures; uses are required after disasters, i.e., places of assembly such as schools and churches.

<u>Acceptable Damage</u>: Some impairment of function acceptable; structure needs to remain operational.

The mitigation measures are designed to ensure that the proposed facilities are not subjected to significant risk associated with severe ground shaking, including liquefaction or subsidence, in the event of future seismic activity.

The vast majority of the proposed project area occurs within the generally flat San Joaquin Valley where landslide risk is minimal. The only locations where risk of landslide increases is the Bakersfield to Los Angeles alignment, which crosses over the Tehachapi Mountains, through Soledad Canyon and various locations between Lancaster and the San Fernando Valley; along the UPRR track from Richmond to Martinez; along the alternate BNSF track from Richmond to Port Chicago; and where infrastructure would cross or be located adjacent to streams or rivers. In addition to the many stream crossings along the railroad alignment, the Sacramento Maintenance Facility is located on land adjacent to the American River, where bluffs occur.

Under existing avoidance and minimization measures, in the event of significant rainfall or seismic activity that has the potential to trigger landslides, the track owners stop all trains in areas of concern and send out crews to ride the rail in search of any issues. In the event that issues are found with the rail, structural engineers evaluate issues and determine remediation measures, if required. This standard operating procedure would occur on any new segment of track constructed as part of the project, particularly at locations where landslides are most likely to occur, such as the aforementioned locations. No additional mitigation is required because the existing standard operating procedure in combination with mitigation measures VI-1 and VI-2 are sufficient to minimize the risk of significant adverse impacts of landslides resulting from the implementation of the proposed project.

b. *Less Than Significant With Mitigation Incorporation* – The State Water Resources Control Board (SWRCB) adopted the General Construction Activity Storm Water National Pollution Discharge Elimination System (General Permit) in 1992 thereby regulating construction activity that would result in the disturbance of five (5) acres or more. Water Quality Order 99-08-DWQ lowered threshold of regulated activity to one (1) acre in 2002. The proposed project will impact more than one acre of land; therefore, a Notice of Intent (NOI) with the SWRCB prior to initiation of construction activity must be filed. The General Permit requires that the project developer submit a NOI with SWRCB and authorizes discharge of stormwater associated with construction given implementation of a Storm Water Pollution Prevention Plan (SWPPP) that eliminates or reduces non-stormwater discharges to storm sewer systems and other “Waters” as defined by the Clean Water Act (CWA). The General Permit prohibits the discharge of material other than stormwater and all discharges that contain hazardous substances in excess of reportable quantities established at 40 Code of Federal Regulations 117.3 or CFR 302.4, unless a separate National Pollution Discharge Elimination System (NPDES) permit has been issued to regulate those discharges. Regardless of the need for a construction NPDES permit, the Project must implement Best Management Practices (BMPs) to reduce the potential for soil erosion or pollutants leaving the site and adversely affecting surface water.

New construction must conform to the appropriate Basin Plan water quality standards and applicable Stormwater NPDES Permit, which requires implementation of a Standard Urban Storm Water Mitigation Plan (SUSMP)/ Water Quality Management Plan (WQMP) with numerical design standards for BMPs. The BMPs to infiltrate and/or treat stormwater pollution are required to be incorporated into the design phase of new development and redevelopment in order to minimize the discharge of pollutants of concern. Numerical design standards ensure that stormwater runoff is managed for water quality and quantity concerns. Therefore, the following measure shall be implemented to reduce the effects of potential impacts to water quality from non-point source discharges to a less than significant level.

In the short term, construction activities associated with the San Joaquin Rail Corridor Project have some potential to increase soil erosion.

Mitigation measures are required to minimize erosion problems associated with wind and water, especially during the construction phase when trenches and cut slopes are exposed. During construction, the length of time vegetation and other cover is absent should be minimized. When cut slopes are exposed, the following measures shall be implemented in order to limit potentially significant adverse erosion impacts.

VI-3 ***Add protective covering of mulch, straw or synthetic material (erosion control blankets, tacking will be required). Mulch or straw must be certified to be free of invasive plant seed.***

VI-4 ***Limit the amount of area disturbed and the length of time slopes and barren ground are left exposed. After sub-surface infrastructure installation, soil shall be compacted to an elevation and density similar to pre-construction conditions.***

VI-5 ***Construct diversion dikes and interceptor ditches to divert stormwater away from construction areas.***

VI-6 ***Apply provisions of erosion and sediment control that reduce volume and velocity of flows and content of sediment to levels that do not cause significant rill or gully erosion in susceptible areas. For example, the project may install slope drains (conduits) and/or water-velocity-control devices to reduce concentrated high-velocity streams from developing. In addition, provide for restoration of areas that do become eroded.***

The above measures shall be implemented as part of a SWPPP and WQMP in order to reduce pollutants, such as sediment, from disturbed areas to the maximum extent practicable as defined by the Regional Water Quality Control Board (Regional Board) stormwater runoff adopted NPDES permits. The SWPPP prior to initiating each future second tier project shall be provided to the Regional Board for review and comment prior to construction. The WQMP shall be developed for implementation prior to completion of construction. Measures identified above shall be employed within the proposed project area as necessary.

After construction, soils underlying facilities and pavements will not be subject to erosion. The following mitigation will be required to ensure that exposed soils are not subject to significant erosion after completion of construction.

VI-7 ***After the construction phase, long-term erosion control shall be accomplished by keeping soils under vegetative cover, hardscape (pavement, gravel, or other hard cover) or by planting wind breaks. The type of vegetation used as wind breaks, if installed, shall include natural plants and must comply with the applicable Air quality Management District's standards.***

Implementation of the above measures as well as mitigation measures IX-1 and IX-2 (Hydrology and Water Quality) is considered sufficient to reduce potential impacts to a less than significant level. Please refer to Section IX, Hydrology and Water Quality for a full discussion of the hydrology and water quality issue. By meeting these requirements, potential erosion impacts related to installing the facilities would not cause any significant adverse erosion or sedimentation impacts.

c. *Less Than Significant With Mitigation Incorporation* – According to the General Plans for the cities and counties within which the proposed project improvements would occur, portions of the alignment are located within areas of liquefaction and subsidence hazard potential. The potential for project area soils to become unstable as a result of seismic activity or heavy rain is addressed under item (a) of this section, with mitigation included that, when implemented in conjunction with existing standard operating procedures designed to avoid and minimize hazards, would ensure that no significant adverse impact would occur. Other potential causes/contributors to soil instability include changes in the quantity of water stored underground. The proposed project would have no impacts on water consumption, other than minor amounts of water used to control construction dust or the incremental increase in water required to service increased rail service (domestic water uses at rail facilities and rail maintenance activities), and has no potential to raise or lower groundwater levels that could potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction or collapse. Please refer to Section IX Hydrology and Water Quality for more information regarding storm water management and equalization via culverts.

d. *Less Than Significant with Mitigation Incorporation* – Expansive soils, which are primarily clay soils, occur along the whole track alignment and can occur at the sites of the proposed support facilities. All proposed new tracks will be aligned adjacent to existing tracks. Historically, where tracks were installed in areas with expansive soil or other underlying materials that could not support the track high fill, these materials were overexcavated and replaced with structurally sound fill material, or structural foundations have been installed. Thus, where expansive soil, or other structurally unsound soil occurs along the existing track corridors the railroads have implemented engineering measures to protect the track from failure. The success of these measures is reflected in the long-term operation of the railroad along the San Joaquin Corridor without track failure.

When new tracks are engineered, one of the studies that is conducted includes borings along the alignment to determine whether the underlying soil or sediment is structurally sound, which includes tests for expansive soil. Based on the soil data collected along the proposed track alignment, specific engineering and construction methods are defined to compensate or eliminate any identified soil constraints. Although this type of pre-construction study is routine for all track construction activities, the following mitigation measure ensures that such studies will be completed prior to installing new track or new support facilities.

VI-8 Prior to completing engineering for future track(s) or support facilities, the Division of Rail shall ensure that essential soil and sediment studies have been completed to identify any soil constraints along the track alignment. The information from these studies shall be used to design the track or support facilities with the objective of ensuring adequate foundation support for the specific facility being designed.

With implementation of the above measure the potential for expansive soil or other related soil constraints to adversely impact future rail facilities will be avoided or mitigated to an acceptable level of foundation protection.

e. *No Impact* – The proposed project does not include the use of septic tanks or alternative wastewater disposal systems. Sewers are available for the disposal of wastewater within each of the urban areas where ancillary rail facilities are proposed that would include new or expanded needs for wastewater treatment. The project does not propose the use of septic tanks or alternative wastewater disposal systems where soils area incapable of adequately supporting such systems.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VII. GREENHOUSE GAS EMISSIONS: Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	✔	❑	❑	❑
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	✔	❑	❑	❑

SUBSTANTIATION:

The proposed project has the potential to result in significant impacts with respect to this issue; therefore, this issue **will be** included in the EIR to be prepared for the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	❑	✔	❑	❑
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	❑	❑	✔	❑
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	❑	❑	✔	❑
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	❑	✔	❑	❑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	❑	✔	❑	❑
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	❑	✔	❑	❑
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	❑	❑	✔	❑
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	❑	❑	✔	❑

SUBSTANTIATION:

a. *Less Than Significant With Mitigation Incorporation* – The principal agency for managing contamination from illegal or accidental releases of hazardous materials and wastes in the State of California is the Department of Toxic Substances Control (DTSC). In addition to enforcing state regulations (California Code of Regulations (CCR) Titles 17, 19, and 22), the DTSC was granted authorization from the federal EPA in 1992 to be the agency responsible for regulating the generation, transport, and disposal of hazardous waste under the authority of the Resource Conservation and Recovery Act (RCRA) in California. Other agencies that may periodically coordinate with DTSC or with the enforcement of regulations that address site activities include the California Department of Transportation, California Highway Patrol, State Water Resources Control

Board, Regional Water Quality Control Board (RWQCB) jurisdictions within which the project occurs, Air Quality Management District jurisdictions within which the project occurs, and the city and county fire departments and offices of emergency services jurisdictions in which the project occurs.

In addition to the above regulatory agencies, BNSF and UPRR maintain their own internal teams to manage hazardous materials and wastes and to respond to train accidents that result in the spill of hazardous or toxic materials into the environment along their rail corridors. Management of hazardous and toxic materials being shipped by rail includes maintaining records of such materials being shipped on each train, standard response procedures, and trained personnel to deal with accidental spills when they occur.

Hazardous materials will routinely be utilized during short-term construction activities. Petroleum products, such as diesel fuel, gasoline, lubricants, etc. are required to support construction equipment in the field, and such materials can be accidentally released to the environment. Ongoing rail operations also involve the use and/or transport of hazardous substances. Federal, State and local regulatory agencies oversee hazardous substances handling, transport, and management in accordance with the statutes and regulations that these agencies administer. Railroads are not restricted on transportation routes; rather there are controls on the types of materials that can be transported and on the location of the materials in relation to possible sources of ignition (e.g., the locomotive).

Inherent to the use of hazardous materials is the risk of an accidental release. Because of this risk, Federal, State, and local agencies have established regulations to minimize the likelihood of such occurrences. There are two approaches to managing hazards: (1) minimize the potential release of hazardous or toxic substances into the environment; and (2) if released, have the resources and techniques on hand to respond to an accidental release, including controlling a release; managing any adverse exposure from a release; cleaning up (remediating) a release; and properly disposing of the material contaminated by the release.

Mitigation measures designed to reduce, control, or remediate potential accidental releases must be implemented to prevent the creation of new contaminated areas that may require remediation in the future and to minimize exposure of humans to public health risks from accidental releases. These measures are provided to reduce the potential for such accidents to occur (use of spill prevention countermeasure practices to minimize potential for accidental releases as part of construction activities); to immediately collect and store or remove the primary source of contamination, including soils; and to remediate any residual contamination to levels that do not exceed regulatory thresholds for allowable use in the future. By implementing these measures, potentially substantial adverse environmental impacts from accidental releases associated with construction of the proposed project can be reduced to a less than significant level.

VIII-1 All contaminated material removed from the project area of impact, as a result of an accidental release or otherwise, shall be delivered to a licensed treatment, disposal or recycling facility that has the appropriate systems to manage the contaminated material without significant impact on the environment.

VIII-2 Before determining that an area contaminated as a result of an accidental release is fully remediated, specific thresholds of acceptable clean-up shall be established (in reference to the appropriate regulatory statue) and sufficient samples shall be taken within the contaminated area to verify that these clean-up thresholds have been met.

With implementation of these measures the known contamination along the alignment can be properly managed to prevent any substantial adverse impacts to humans or the environment.

b. *Less Than Significant With Mitigation Incorporation* – As discussed under item (a) above, there is a potential for accidental release of hazardous materials both during construction and operation.

Accidental releases of hazardous materials during construction or operations are readily controlled to a less than significant level of hazard through control or remediation of the material accidentally released. Implementation of mitigation measures VII-1 and VII-2 can prevent any significant exposures to hazardous or toxic materials by the public or employees at the location of an accidental spill. These measures are sufficient to control or limit the adverse impact of accidental releases to a less than significant impact level.

c. *Less Than Significant Impact* – Conceptually, it is easiest to discuss the San Joaquin Rail Corridor Project in terms of improvements to the existing track system that are expected to occur within the existing rail rights-of-way (installation of double or triple track, sidings, drainage facilities, etc.) and improvements associated with the ancillary facilities that would install and operate rail infrastructure support facilities at a new location, or would expand facilities and convert land use to support rail infrastructure (Sacramento Maintenance Facility, Stockton Station, Fresno Layover Facility and Merced Layover Facility.) Potential impacts associated with the proposed Sacramento Maintenance facility, Stockton Station alternatives, and layover facilities are addressed separately after the discussion of the track improvements throughout the San Joaquin Corridor outlined in Figures 1-3a through 1-3h.

Hazardous materials would routinely be utilized during short-term construction activities. Petroleum products, such as diesel fuel, gasoline, lubricants, etc. are required to support construction equipment in the field, and such materials can be accidentally released to the environment. Ongoing rail operations also involve the use and transport of hazardous substances. Federal, State, and local regulatory agencies oversee hazardous substances handling, transport, and management, as well as the statutes and regulations that these agencies administer. Railroads are not restricted on transportation routes; rather there are controls on the types of materials that can be transported and on the location of the materials in relation to possible sources of ignition (e.g., the locomotive).

The proposed project would not convey trains along any alignment or to any destination where they do not already travel. The proposed facilities that would convert land use to rail uses, as detailed above, are all in locations where existing rail operations are adjacent to the proposed land conversion. While there would be an increased presence and increased types of operations at these sites, they do not represent an introduction of rail activities to a location where previously there were none in the vicinity. The proposed project would provide for more efficient flow of rail traffic, thereby reducing the potential for rail accidents, including those that might result in the release of hazardous materials in the vicinity of an existing or proposed school.

There are numerous schools along rail alignment, but only those located within a ¼ mile of a proposed rail expansion site are detailed below, because along the rest of the alignment the proposed project would not result in increased proximity to rail operations and it would not adversely impact the risk/hazard associated with rail operations.

<u>Sacramento Maintenance Facility</u>
Courtyard Private School is located across the existing railroad tracks to the south of the proposed Sacramento Maintenance Facility. No other known existing or proposed schools are located within one-quarter mile of the site. The proposed Sacramento Maintenance Facility would not increase the volume of passenger train traffic to the location, nor would it change the types of freight materials conveyed along rail from the existing conditions, but it would introduce rail maintenance activities to the area. The proposed rail maintenance activities are not projected to create a significant hazard to nearby uses or the general public.

<u>Stockton Amtrak Station</u>
Spanos Elementary School and Lafayette School are both located one-quarter mile northeast of the existing Stockton Amtrak Station, which is Alternative 5 for the proposed Stockton Station. Luther Burbank School is located one-quarter mile south of Alternative 4, the preferred alternative for the Stockton Amtrak Station relocation. Relocating or expanding the station would not change the

existing location of rail in the vicinity of either site, nor would expansion or operation of a passenger station introduce hazardous materials to either site.

Fresno Layover Facility Site

Saint Johns School is located about 600 feet northeast of the northern extent of the proposed Fresno Layover Facility Site. Jefferson Elementary, Sunshine School, UCSF Fresno Center for Medical Education and Research and Childtime are all located between 2,000 and 2,500 feet north of the of the northern extent of the proposed Fresno Layover Facility Site. The selection of the Fresno site for the layover facility would not change the existing proximity of rail to these school sites because the proposed facility would expand rail operations to the west and south.

Emerson School is located about 1,300 feet west of the southern extent of the proposed Fresno Layover Facility Site. The proposed Fresno Layover Facility would locate rail operations about 500 feet closer to Emerson School than under existing conditions.

Fresno Adult School is located about 2,000 feet north of the northwestern extent of the proposed Fresno Layover Facility. Fresno Special Education is located about 2,000 feet northwest of the northwestern extent of the proposed Fresno Layover Facility. The proposed expansion would locate rail activities about 170 feet closer to both schools than under existing conditions. The proposed layover facilities are not projected to create a significant hazard to nearby uses or the general public, and expanding the rail facilities such that they would be located closer to existing schools is not projected to cause a significant adverse impact.

Merced Layover Facility Site

John Muir Elementary School and Preschool are located about 250 feet north of existing rail yard that would be part of the expansion. Le Conte Kindergarten is located about 450 feet west of the western extent of the proposed Merced Layover Facility Site. Friends International Christian University is located about 2,000 feet west of the western extent of the proposed Merced Layover Facility Site. Merced Montessori School is located about 1,100 feet southwest of the western extent of the proposed Merced Layover Facility Site. Yosemite High School, Merced Adult School, and East Campus Educational Center Independence High School are all located about 1,400 feet south of the western extent of the proposed Merced Layover Facility Site. The expansion would locate rail activities about 100 feet closer to the schools than under existing conditions.

Hoover Middle School is located north of and across E. Santa Fe Avenue from the existing rail road tracks. The proposed expansion would locate the westernmost portion of the facility south of the rail and one block west of the middle school. The expanded facilities on the north side of the tracks would be located about 1,100 feet west of the middle school.

While at some of the specific sites listed above the proposed project would result in increased proximity to rail operations, the project would not adversely impact the risk/hazard associated with rail operations. No mitigation is required.

d. *Less Than Significant With Mitigation Incorporation* – Portions of the alignment would be located in the near vicinity of areas with known historic hazardous contamination, a list of which is provided in Appendix B. The list is derived from DTSC's EnviroStor Database, which includes Federal Superfund Sites (NPL), State Response Sites, Voluntary Cleanup Sites, Hazardous Waste Permit Sites, Geotracker Leaking Underground Fuel Tank (LUFT) and Spills, Leaks, Investigation, and Cleanups (SLIC) sites. In summary, there are numerous hazardous cleanup sites, including superfund sites, along the project alignment. The list provided in Appendix B includes the site location, type of hazardous site, and information regarding regulatory oversight. Some sites have been certified while others are under continuing review. Sites on the LUFT and SLIC are included if the cases are open and adjacent to the project alignment, if they are on property currently or historically owned by the railroads, or the case is on or adjacent to a site identified in the project description for proposed project facilities. For those locations where known hazardous contamination occurs within the railroad property or in another location deemed most likely to be encountered by the proposed project, the information is included below. LUST or SLIC sites that

have been closed, even if on railroad property, are included in the appendix but not in the short list brought forward below.

UPRR from Sacramento to Stockton - western alignment
Union Pacific Railroad, Curtis Park (34400003)
3675 Western Pacific Avenue
Sacramento, CA 95818
Sacramento County
Site Type: State Response or NPL
Status: Active

Groundwater (other than drinking water) and soil have been impacted by historic railroad car maintenance activities. The Site is divided into active (24 acres) and inactive (about 70 acres) portions of the Rail Yard. The active portion is currently operating as a switching yard by UPRR. Land use restrictions apply. DTSC - Site Cleanup Program - Lead

Bakersfield to Oakland alignment
Santa Fe Railway Property - Wasco
7th and H Streets
Wasco, CA 93280
State Response Site - Land Use Restrictions
Certified / Operation & Maintenance as of 6/30/1997

DTSC issued a certification on June 30, 1997 of completion of removal actions in accordance to the approved Removal Action Workplan.

Former Burlington Northern Santa Fe Ice House
3090 E Church Ave
Fresno, CA 93721
State Response Site
Active
DTSC - Site Cleanup Program - Lead

Burlington Northern Santa Fe Railway Company
Adjoining USS Posco Steel Facility
Pittsburg, CA 94565
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead

The Site is currently owned and operated as a railroad right-of-way by BNSF. The Site consists of only a portion of the BNSF rights-of-way in Pittsburg, California. The Site encompasses a rectangular area of approximately 150-feet by 550-feet and contains 11 rail lines trending in an east-west direction. The rail lines are currently used to stage rail cars that are awaiting classification and transport. No prior ownership information was available; however, the Site has reportedly been used as a rail car staging area since at least the early 1940's. The Site is paralleled to the north by a UPRR right-of-way. Immediately north of the BNSF and UPRR rights-of-way is the USS-POSCO Industries (UPI) facility. The Site is bordered to the south by a residential development and to the east and west by adjacent portions of the BNSF rights-of-way.

Liquid Gold Oil Corp
Hoffman Blvd and S 47th St
Richmond, CA 94804
Federal Superfund Site
Land Use Restrictions
DTSC - Site Cleanup Program - Lead
US EPA

The site was owned by the Southern Pacific Transportation Company and is now owned by UPRR. From 1974 to 1982, the site was leased by Liquid Gold Oil Corporation to store, re-refine, and recycle oil and other substances. The hazardous substances stored in over 20 storage tanks and drums included waste motor oil, organic solvents, bunker oil, diesel fuel, oil-water emulsions and mixtures, and tank bottom waste. As a result of site operations, hazardous substances leaked or spilled onto the ground and were discharged into ponds, sumps, and ditches and drained into wetland areas. Subsequently, site remedial investigations were performed, remedial actions completed, and the site was de-listed by the U.S. Environmental Protection Agency from the National Priorities List in 1995.

Southern Pacific Right-of-Way Emeryville
West of 4525 Hollis Street
Emeryville, CA 94608
State Response Site
DTSC - Site Cleanup Program - Lead

The Site is located immediately adjacent to Pacific Gas and Electric Company's (PG&E) Materials Distribution Center. The Materials Distribution Center has served as a warehouse, repair shop, and storage yard since the early 1920's for equipment used by PG&E's substations and electrical distribution network. In the past, fluids in transformers and capacitors contained polychlorinated biphenyls (PCBs). The Site is currently owned by Chiron Corporation and Wareham Development. Chiron operates a research and development facility and the area where residual PCB-contaminated soil may be present is paved. Wareham Development has a parking lot on its property that it leases to Chiron. DTSC is currently evaluating whether land use restrictions on the area where residual contamination may be present are required.

UPRR Parcel D
North of Sherwin Avenue and Halleck Street
Emeryville, CA 94608
Voluntary Cleanup Site
DTSC - Site Cleanup Program

Site is a vacant parcel located to the north of the intersection of Sherwin Avenue and Halleck Street in Emeryville, California. The Site is bounded by the Sherwin-Williams Site on the east and north, UPRR tracks on the west, and the southern edge of Sherwin Avenue on the South. It incorporates the Technichem facility's Solid Waste Management Unit #6 on the southwest corner of the Site adjacent to the building that formerly housed Technichem. The City of Emeryville is preparing the Site for redevelopment. Under the MOA between the City of Emeryville, DTSC, and the Water Board, the City provided oversight for the Redevelopment Agency's site characterization activities and development of a Final Cleanup Plan for the Site.

AT and SF Railroad Property
Along Wood and 32nd Street
Oakland, CA 94607
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead

This property is part of Cypress Reconstruction Project in Oakland. The property is located west of Wood Street between 26th and 34th streets. The property was owned and operated by AT&SF Railroad since the late 1800's. The land use has been a railroad yard used to store rail cars in route to or returning from the Port of Oakland from the AT&SF Richmond rail yard. The property may have been contaminated from spills and leaks from railcars and general maintenance activities.

BNSF Wood Street Yard
Wood Street and West Grand Avenue
Oakland, CA 94607
State Response Site

Land Use Restrictions
Certified / Operation & Maintenance as of 6/28/2006
DTSC - Site Cleanup Program - Lead

Southern Pacific Oakland
1707 Wood Street
Oakland, CA 94607
State Response Site
RWQCB 2 - San Francisco Bay - Lead

Historical land uses have included a foundry, vehicle repair activities, rail terminal, door manufacturing operation, and training maintenance area. Known or suspected contaminates include: lead, petroleum hydrocarbons, PAH's, and volatile organic hydrocarbons.

Visalia to Hanford Route
UPRR - Goshen Junction
Effie
Goshen, CA 93227
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Port Chicago to Richmond on BNSF
Former BNSF Property, Rumrill Blvd. (70000080)
Rumrill Blvd at Chelsey Avenue
San Pablo, CA 94806
Site Type: Voluntary Cleanup

Potential Contaminants of Concern include Chromium VI and Halogenated Organic Compounds and Trichloroethylene (TCE). In 2002 DTSC issued an Imminent and Substantial Endangerment and Remedial Action Order to the Burlington Northern and Santa Fe Railroad Company.

Bakersfield to Los Angeles
Whittaker Bermite/Rail Station - Site A (19281203)
22116 West Soledad Canyon Road
Santa Clarita, CA 91350
Site Type: State Response
Status: Active

This site is identified as a 1/3 acre Santa Clarita Commuter Rail Station Site. It is comprised of a very small portion of the Whittaker Bermite RCRA facility. The PEA was conducted to facilitate the construction of the Metrolink Station. Additional investigation and cleanup is required for impacted soil and groundwater. The cleanup will be part of the former Whittaker-Bermite site wide remedial plans.

Southern Pacific - Taylor Yard/active (19470006)
2800 Kerr Street
Los Angeles, CA 90039
Site Type: State Response
Status: Active

This site is the active or operational portion of a 243-acre rail yard. Routine maintenance and major diesel locomotive service and repair have been conducted at this site for nearly 100 years. Areas of concern include large holding ponds, several former aboveground and underground tank locations, and a rubbish pile.

Taylor Yard - Parcel C (60001553)
Northwest of Granada St and San Fernando Road

Los Angeles, CA 90039
Site Type: Voluntary Cleanup
Status: Active

The Taylor Yard Parcel C had previously undergone excavation and in-situ remediation in the 1990s as part of the larger Taylor Yard Sale Parcel.

Union Pacific Railroad - Cornfield Yard
1245 North Spring St
Los Angeles, CA 90012
Cleanup Program Site
Cleanup Status: Open - Verification Monitoring

The site is a former Union Pacific Railroad facility that has been converted to use for the Metro Rail Gold Line and as a park. Groundwater is impacted primarily by benzene.

Union Pacific/Railroad Company
1322 Broadway N
Los Angeles, CA 90012
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

LA to Pasadena Metro Blue Line Construction Author
Los Angeles, CA
Cleanup Program Site
Cleanup Status: Open - Site Assessment as of 1/5/2001 – no further information provided

Metro Rail
Union Station
Los Angeles, CA 90023
Cleanup Program Site
Cleanup Status: Open as of 1/1/1965 – no further information provided

As detailed above and in Appendix B, there are multiple sites along the project of impact where there is a potential for the proposed project construction activities to encounter known or unknown contamination. If contamination is encountered in the course of project implementation, mitigation measures are incorporated to remediate or avoid any contamination to prevent any significant adverse effects due to hazardous materials. The accidental discovery of contamination would be reported to the appropriate regulatory agencies and any remediation actions would be coordinated with these agencies.

VIII-3 The construction contractor shall halt activities in the vicinity if the site appearance (discolored soil, etc) suggests that contamination has occurred on the site until findings can be reviewed by a qualified industrial hygienist.

VIII-4 In the event that contamination within the area of impact is discovered after construction is initiated, the project proponent shall retain a qualified industrial hygienist to characterize the type and extent of the contamination, contain the contamination and oversee the proper removal and disposal of contamination in accordance with an approved work plan, and all applicable laws, regulations and standards.

Implementation of these measures can ensure that the proposed San Joaquin Rail Corridor Project improvements would not be developed in a manner that could cause significant hazards to the public or environment from historic or existing contamination.

e&f. *Less Than Significant with Implementation of Mitigation* – The Airport Land Use Commissions of the counties within which the proposed project would be located have either adopted comprehensive airport land use plans that cover multiple public use airports within their jurisdiction, or they have adopted individual airport land use plans for public use airports within their jurisdiction. The documents vary in the level of detail provided, but all include basic maps showing the extent of noise contours that exceed certain thresholds (typically 65 db CNEL) and all show safety zones surrounding the airport. Some also provide maps depicting transitional or conical "imaginary surfaces" where, for example, height restrictions may apply to very tall structures.

The **Los Angeles County** Airport Land Use Plan adopted December 19, 1991 and revised December 1, 2004 includes public use airports of Los Angeles County with the exception of Fox Airfield, which is covered in the General William J. Fox Airfield Land Use Compatibility Plan adopted December 1, 2004. According to the Plan, the following portions of the proposed project are located within restricted areas of the following Los Angeles County airports.

- A portion of the Bakersfield to Los Angeles rail alignment is within airport influence area, the Runway Protection Zone and the 65 CNEL contour of the Burbank/Glendale /Pasadena Airport.

- A portion of the Bakersfield to Los Angeles rail alignment is within airport influence area and the 65 CNEL contour of the Palmdale Airport/USAF Plant 42.

- A portion of the Bakersfield to Los Angeles rail alignment is within the airport influence area, the Runway Protection Zone and the 65 CNEL contour of the Whiteman Airport.

- A portion of the Bakersfield to Los Angeles rail alignment is within airport influence area and Zone D of the General William J. Fox Airfield. The Plan states that there is no concern with regard to any object up to 100 feet tall unless it is located on high ground within *Compatibility Zone D*. Objects taller than 100 feet require Federal Aviation Regulations (FAR) Part 77 review.

The **Kern County** Airport Land Use Compatibility Plan dated March 29, 2011 includes public, private (public use), and military airports. According to the Plan, the following portions of the proposed project are located within restricted areas of the following Kern County airports.

- A portion of the Bakersfield to Los Angeles alignment is within airport influence area, the 65 dBA CNEL contour and the single event 90 dB CNEL (as of 2001) for Mojave Airport.

- A portion of the Bakersfield to Los Angeles alignment is within airport influence area and the terrain penetration area for the Tehachapi Municipal Airport.

- A portion of the Bakersfield to Fresno alignment is within the Airspace Plan for the Wasco-Kern County Airport in the portion marked as conical surface 20:1. The rail alignment is not located within any of the other influence areas of this airport.

The **Kings County** Airport Land Use Compatibility Plan dated July 1994 includes public and private (public use) airports. According to the Plan, the following portions of the proposed project are located within restricted areas of the following Kings County airports.

- A portion of the Bakersfield to Fresno alignment is within the Airspace Plan for the Corcoran Airport in the portion marked as conical surface 20:1. The rail alignment is not located within any of the other influence areas.

- A portion of the Bakersfield to Fresno alignment is within the Airspace Plan for the Hanford Airport in the portion marked as horizontal surface. The rail alignment is not located within any of the other influence areas.

The Tulare County Comprehensive Airport Land Use Plan adopted June 24, 1992 and amended November 30, 1995 includes public and private (public use) airports.

- A portion of the proposed Visalia to Hanford Route railroad alignment runs approximately 7,500 feet to the north of the Visalia Municipal Airport property boundary located at 9501 Airport Drive in Visalia, CA. No portions of the rail alignment are located within the 60 dB contour as depicted in the document. The copy of the Plan provided by Tulare County did not include a map depicting FAR Part 77 Surfaces. Proximity of the airport to the rail alignment and the orientation of the runway suggest that there is potential for the alignment to fall within 20:1 Conical Surface height restriction areas.

No other Tulare County airport documented in the Plan is located within the vicinity of proposed San Joaquin Rail Corridor improvements.

Airport Land Use Commission of **Fresno County** website provides links to the most recently adopted Airports Land Use Plans and Maps within the County. Review of the Coalinga Airport Land Use Plan, Fresno Yosemite International Airport Land Use Plan, Fresno-Chandler Downtown Airport Land Use Policy Plan, Harris Ranch Land Use Plan, Reedley Airport Land Use Plan, and Selma-Reedley-Firebaugh-Mendota Airports Land Use Plans indicates that the proposed project rail alignment improvements, including the Fresno Layover Facility, are not within influence area of any of the above referenced airports.

- A portion of the Fresno to Stockton alignment is within the Primary Review Area boundary and within the Horizontal Surface boundary for the Sierra Sky Park as identified in the Sierra Sky Park Land Use Policy Plan adopted August 1985 as amended September 16, 1998. The rail alignment is not located within the 60 CNEL noise boundary.

Madera County Airport Land Use Compatibility Plan adopted December 16, 1993 covers two municipal airports within the County: Chowchilla Municipal Airport and Madera Municipal Airport. The Airspace Plan for both airports is only partially included in the document available from the website, but it is clear in the document that no part of the alignment is located within noise contours or safety zones of either airport. The project is not located in the vicinity of Chowchilla Municipal Airport. The County did not respond to a request for the Madera Municipal Airspace Plan that would indicate if the proposed project traverses imaginary surfaces, such as the transitional zones.

The September 2011 Draft - **Merced County** Airport Land Use Compatibility Plan includes each of the five public use airports within the County. While the ALUC has not been adopted at the time of this writing, it provides information regarding the proximity and airport zones with respect to the proposed project improvements. According to the Plan, the following portions of the proposed project are located within restricted areas of the following Merced County airports.

- A portion of the Fresno to Stockton rail alignment is located within the airport influence area in zones B2, C, and D of the Castle Airport. In zones B2 and C object height is generally not restricted to less than 100 feet except lateral to the runway. In B2 noise impact may exceed CNEL 55 dB, in C and D noise impact is typically less than CNEL 55 dB with frequent noise intrusion. In Zone D the object height concern is with respect to single objects, such as antennas, that exceed 150 feet in height.

- A portion of the Fresno to Stockton rail alignment is located within the airport influence area in Zone D of the Merced Regional Airport. The potential Merced Layover Facility site is located within the conical surface slope.

- A portion of the Fresno to Stockton rail alignment is located within the airport influence area in Zone D of the Turlock Municipal Airport. The rail alignment is also located within the conical surface slope of a proposed runway at this airport.

The **Stanislaus County** Airport Land Use Compatibility Plan adopted August 3, 1978 as amended May 20, 2004 includes public use airports within the County. According to the Plan, the following portions of the proposed project are located within restricted areas of the following Stanislaus County airports.

- A portion of the Fresno to Stockton rail alignment is located within the airport influence Modesto City-County Airport.

The 2009 Final **San Joaquin County** Airport Land Use Compatibility Plan includes public use airports within the County. According to the Plan, the following portions of the proposed project are located within restricted areas of the following San Joaquin County airports.

- Portions of the western alignment of the UPRR Stockton to Sacramento alignment are within the Part 77 Horizontal Surface of Kingdon Airpark.

- Portions of the eastern alignment of the UPRR Stockton to Sacramento alignment are within the Part 77 Horizontal Surface area, the 95 dB Single Event Contour and the 2008 and 2028 marginal effect noise exposure contour of Lodi Airport.

- Portions of the western alignment of the UPRR Stockton to Sacramento alignment are within the Part 77 Horizontal Surface area of Lodi Airpark.

Individual Comprehensive Land Use Plans (CLUPs) have been adopted for airports in **Sacramento County.** Review of each CLUP as linked from the Sacramento Council of Governments website http://www.sacog.org/airport/clups.cfm accessed March 13, 2012 found that the following portions of the proposed project are located within restricted areas of the following Sacramento County airports.

- Portions of the western alignment of the UPRR Stockton to Sacramento alignment are within the airport influence area, the 65 CNEL noise contour, the Safety Zone 2 (approach and departure zone) and the Overflight Zone of Franklin Field.

- Portions of the western alignment of the UPRR Stockton to Sacramento alignment are within the Approach and Departure Zone 2 and the Overflight Zone of Sacramento Executive Airport.

Review of the **Contra Costa County** Airport Land Use Compatibility Plan adopted December 13, 2000 found that the following portions of the proposed project are located within restricted areas of the following Contra Costa County airport.

- Portions of the UPRR alignment from Antioch to Oakland are within the airport influence area, approach surface, transitional surface, and critical TERPS airspace of the Buchanan Field Executive Airport.

- Portions of the BNSF alignment from Port Chicago to Richmond are within the airport influence area, the 55-60db CNEL contour, approach surface, horizontal surface, transitional surface, and critical TERPS airspace of the Buchanan Field Executive Airport.

As indicated by the information provided above, the proposed San Joaquin Rail Corridor Project would include improvements located within the vicinity, and within specific safety zones, of numerous public-use airports. No known private airstrips are located along the corridor. The project has the potential to result in a safety hazard if improvements are not coordinated in accordance with FAA safety regulations. The following mitigation measure is required.

VIII-5 At locations where proposed improvements would be located within airport safety zones that restrict the height of structures, all improvements will be demonstrated to be below the restricted height or measures will be taken to minimize adverse impacts. For example, where a new track will be installed

within a height restriction zone that the train engine on the railbed could violate, the new track would be installed on the far side of the existing track further away from the runway so as to minimize intrusion into the airspace.

g. *Less Than Significant Impact* – Since the proposed project provides for more efficient flow of rail traffic, the potential for rail operations to interfere with an adopted emergency response plan or emergency evacuation plan over the long-term would be reduced. BNSF and UPRR emergency response capabilities will remain the same and the ability to respond to accidents will remain the same after completion of the project as before. The incremental increase in rail traffic along the alignments has the potential to increase delay times at at-grade cross streets, but this increase in delay would occur with or without the project as rail traffic increases. The proposed project itself would accommodate the increased rail traffic in a manner that reduces train delays; and, therefore delays at cross streets, by providing the infrastructure to allow trains to pass each other with fewer stoppages and less slowing than would otherwise occur. The net effect of the proposed project is to provide a comparable or improved level of response capability in the event of an emergency response or evacuation after project completion during future operations relative to the existing conditions.

The construction activities associated with implementation of the proposed project would be temporary and localized. Short-term access disruptions would occur when the proposed infrastructure is installed. It typically requires about a year to install two miles of new track from initial grading to final inspection, with some variation in construction time depending upon whether there are at-grade crossings and/or bridges included in the segment. Impacts to at-grade cross streets would be managed to minimize the amount of time that cross traffic would be impacted, but short term impacts would occur. Please refer to Section XVI Traffic/Transportation item (e) and Section XIV Public Services for a full discussion of emergency access issues. No mitigation is required under this item.

h. *Less Than Significant Impact* – The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP) Draft Fire Hazard Safety Zones in Local Responsibility Area Map dated September 17, 2007 and the FRAP Fire Hazard Severity Zone in State Responsibility Areas adopted on November 7, 2007 shows that most of the project alignment is located within unzoned areas of fire hazard. The FRAP draft County maps indicate that the areas shown as unzoned in the statewide map consist of non-wildland fuels (rock, agriculture and water), and thus the unzoned areas are considered areas of low wildland fire risk in this analysis. Most of the proposed project occurs within Local Responsibility Areas. There are scattered areas of moderate fire hazard both in the Local Responsibility Areas and in State Responsibility Areas. The State Responsibility Areas are generally located in Contra Costa County, where the alignment crosses through areas of high fire hazard, as well as along the Bakersfield to Los Angeles alignment in Kern and Los Angeles County, where the alignment also crosses areas of high and very high fire hazard. Local Responsibility Areas along the Bakersfield to Los Angeles alignment also include areas of high and very high fire hazard. The FRAP Draft Fire Hazard Severity Zoning Map for Sacramento County shows that the Sacramento Maintenance Facility is located in an area along the American River identified as a moderate fire hazard. All of the other ancillary facilities (Stockton Station, Fresno Layover Facility, and Merced Layover Facility) are identified in the FRAP draft county maps for each location as being located in urbanized areas that are not in a fire hazard area.

The rail corridors of the San Joaquin Rail Corridor Project are owned and maintained by BNSF and UPRR solely for the support of rail operations. These corridors range between 100 feet and 200 feet in width. Federal rules prevent the introduction of vegetation that could pose a fire or other safety hazard to rail operations within these corridors. Existing maintenance operations along the corridors minimize fire hazard. Over the long-term, the installation and operation of the proposed rail improvements would facilitate more efficient movement of trains along the corridors, which would reduce the amount of time that a train spends at any one point, such as at an existing road that crosses the tracks at grade. Thus, the long-term impact of the proposed project would result in

better emergency response capabilities, including better wildland fire response capacities for vehicles traveling by land.

Based on the analysis above, the proposed project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

Conclusion

Based on the analysis presented above, hazards and hazardous material issues are not forecast to experience significant adverse impacts from project implementation as long as the identified mitigation measures are implemented during the project development. No further analysis of hazards and hazardous material issues is required. The issues of hazards and hazardous materials **will not** be carried forward to the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
IX. HYDROLOGY AND WATER QUALITY: Would the project:				
a) Violate any water quality standards or waste discharge requirements?	❑	✔	❑	❑
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	❑	❑	❑	✔
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation onsite or offsite?	✔	❑	❑	❑
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding onsite or offsite?	✔	❑	❑	❑
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	❑	✔	❑	❑
f) Otherwise substantially degrade water quality?	❑	✔	❑	❑
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	❑	❑	❑	✔
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	✔	❑	❑	❑
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	❑	❑	✔	❑
j) Inundation by seiche, tsunami, or mudflow?	❑	❑	✔	❑

SUBSTANTIATION:

a. *Less Than Significant With Mitigation Incorporation* – The proposed project would result in increases in stormwater volumes both along the Corridor alignment and at individual site developments due to the increase in impervious areas after project implementation. Site improvements associated with the San Joaquin Rail Corridor Project would include storm water drainage modifications and additions. The post-construction storm drainage system would be sized to accommodate a 100-year storm event. Small amounts of urban pollutants, including petroleum products (motor oil, antifreeze, etc.) associated with rail facility operations and maintenance, could be introduced to stormwater

The State Water Resources Control Board (SWRCB) adopted the General Construction Activity Storm Water National Pollution Discharge Elimination System (General Permit) in 1992 thereby regulating construction activity that would result in the disturbance of five (5) acres or more. Water Quality Order 99-08-DWQ lowered threshold of regulated activity to one (1) acre in 2002. The proposed project will impact more than one acre of land; therefore, a Notice of Intent (NOI) with the SWRCB prior to initiation of construction activity must be filed. The General Permit requires that the project developer submit a NOI with SWRCB and authorizes discharge of stormwater associated with construction given implementation of a Storm Water Pollution Prevention Plan (SWPPP) that eliminates or reduces non-stormwater discharges to storm sewer systems and other "Waters" as defined by the Clean Water Act (CWA). The General Permit prohibits the discharge of material other than stormwater and all discharges that contain hazardous substances in excess of reportable quantities established at 40 Code of Federal Regulations 117.3 or CFR 302.4, unless a separate National Pollution Discharge Elimination System (NPDES) permit has been issued to regulate those discharges. Regardless of the need for a construction NPDES permit, the Project must implement Best Management Practices (BMPs) to reduce the potential for soil erosion or pollutants leaving the site and adversely affecting surface water.

New construction must conform to the appropriate Basin Plan water quality standards and applicable Stormwater NPDES Permit, which requires implementation of a Standard Urban Storm Water Mitigation Plan (SUSMP)/ Water Quality Management Plan (WQMP) with numerical design standards for BMPs. The BMPs to infiltrate and/or treat stormwater pollution are required to be incorporated into the design phase of new development and redevelopment in order to minimize the discharge of pollutants of concern. Numerical design standards ensure that stormwater runoff is managed for water quality and quantity concerns. Therefore, the following measure shall be implemented to reduce the effects of potential impacts to water quality from non-point source discharges to a less than significant level.

IX-1 ***The construction contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that specifies Best Management Practices that will be implemented to prevent construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving offsite. The SWPPP shall be developed with the goal of achieving a reduction in pollutants both during and following construction to control urban runoff to the maximum extent practicable based on available, feasible best management practices. The SWPPP and the monitoring program for the construction projects shall be consistent with the requirements of the latest version of the State's General Construction Activity Storm Water Permit (General Permit) and the applicable NPDES Permit, which will depend upon the county within which construction is occurring.***

The following items should be included in the SWPPP:

- ***The length of trenches that can be left open at any given time should be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.***

- ***Backfill material should not be stored in areas which are subject to the erosive flows of water.***

- ***Measures such as the use of straw bales, sandbags, silt fencing, or detention basins shall be used to capture and hold eroded material for future cleanup.***

- ***Rainfall will be prevented from entering material and waste storage areas and pollution-laden surfaces.***

- ***Construction-related contaminants will be prevented from leaving the site and polluting waterways.***

- ***Replanting and hydroseeding of native vegetation will be implemented to reduce slope erosion and filter runoff.***

- ***A spill prevention control and remediation plan to control release of hazardous substances shall be included.***

IX-2 The Project Proponent shall prepare and implement a Water Quality Management Plan (WQMP) that specifies Best Management Practices that will be implemented to prevent long-term surface runoff from discharge of pollutants from sites on which construction has been completed. The WQMP shall be developed with the goal of achieving a reduction in pollutants following construction in order to control urban runoff pollution to the maximum extent practicable based on available, feasible best management practices.

In addition, Section VI Geology and Soils mitigation measures VI-3 through VI-6 are required to minimize erosion problems associated with wind and water, especially during the construction phase when trenches and cut slopes are exposed. These measures require the minimization of exposed soils, the use of mulch or other material to reduce erosion and construction of diversion dikes, slope drains or similar methods to reduce erosive flows and limit potentially significant adverse erosion impacts during construction. After construction, soils underlying facilities and pavements will not be subject to erosion. Mitigation measure VI-7 requires that exposed soils are not subject to significant erosion after completion of construction. Due to the proposed landscaped or hard-surfaced nature of the majority of the San Joaquin Rail Corridor Project areas of impact after construction, the potential for substantial long-term soil erosion to occur is considered less than significant with implementation of Mitigation Measures VI-3 through VI-7 and IX-1 and IX-2. In combination with implementation of BNSF and UPRR, adopted BMPs designed to control discharges of pollution that could cause a significant adverse impact to surface water quality to the maximum extent practicable as defined by the appropriate Regional Water Quality Control Board (Regional Board), potential impacts are reduced to a less than significant level.

b. *Less Than Significant Impact* – The proposed project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level. The project does not propose any groundwater extraction or major new demands on the water supply. In the short-term, the project construction would require water to minimize dust. The water required for construction activities (dust control, etc.) is forecast to be about 30,000 gallons per day of construction for the track and associated activities. This volume of water will place a short-term demand on local water supplies, which are considered adequate to meet this construction water demand. Water used in construction activities is often from non-potable sources. The short-term demand by the proposed project is not forecast to cause significant water supply impacts.

The project would require an incremental increase in water over the long-term to service an increased number of passenger trains, both for potable and sanitary needs on trains and at

stations. Each Amtrak passenger train carries about 1,000 gallons of fresh water. The tanks are filled in either Oakland at the north end of the passenger train system or in Bakersfield at the south end of the system. As the trains are serviced the water tanks are "topped off" for the next day's runs. Approximately 250 gallons of fresh water is used per train trip. With train operations increasing from 12 trains per day to 22 trains per day, this represents an increase in potable water consumption of approximately 2,500 gallons per day. This equates to approximately 912,500 gallons per year, or about 2.8 acre-feet per year. However the increased water demand is expected to be negligible in terms of the overall use of water by agriculture and urban areas in the San Joaquin Rail Corridor, which use several million acre feet per year.

The project would not interfere substantially with groundwater recharge. The proposed project would have no impact on existing recharge basins or spreading grounds. Along the existing tracks at most locations, storm water runoff from the partially previous track high fill drains to a swale adjacent to the high fill but within the rail rights-of-way. From here the runoff either percolates into the ground or flows to an existing man-made or natural drainage system. This drainage system will be maintained along the future tracks and flows will not be substantially increased as a result of adding another track as summarized in the project description. The net result is that the installation of additional track along much of the Corridor alignment will not substantially reduce groundwater percolation when compared to the existing condition along the tracks. Improvements associated with the ancillary facilities that would install and operate rail infrastructure support facilities at a new location, or would expand facilities and convert land use to support rail infrastructure (Sacramento Maintenance Facility, Stockton Station, Fresno Layover Facility and Merced Layover Facility) require short-term retention of incremental surface runoff on the sites of these facilities.

Based on the above analysis, adverse impact to groundwater resources would not result from implementing the proposed project, and no mitigation is required.

c. *Potentially Significant Impact* – This issue will be evaluated in the EIR.

d. *Potentially Significant Impact* – This issue will be evaluated in the EIR.

e. *Less Than Significant With Mitigation Incorporation* – Please refer to the discussion under item (a) of this Section. No additional mitigation is required under this item.

f. *Less Than Significant With Mitigation Incorporation* – Please refer to the discussion under item (a) of this Section. No additional mitigation is required under this item.

g. *No Impact* – The proposed project does not directly or indirectly involve housing or housing resources. Therefore, it has no potential to expose housing to 100-flood hazards.

h. *Potentially Significant Impact* – This issue will be evaluated in the EIR.

i. *Less Than Significant Impact* – There are numerous dams and levees protecting land that includes the rail alignment throughout the San Joaquin Rail Corridor. Dam safety is regulated by the State Department of Water Resources, Division of Safety of Dams. Government Code Section 8589.5 requires dam owners to submit copies of inundation maps to the Governor's Office of Emergency Services. As discussed under item (h) of this Section, rail infrastructure is placed on highfill that at times is the only land in the vicinity not included within the FEMA 100-year floodplain. The design standards of BNSF and UPRR add an additional level of protection from flood hazards along the alignment beyond the protection provided by dams and levees. However, even given the extra level of protection from flood hazards afforded by standard design practices, there is a potential for dam or levee failure to result in damage to rail facilities. The proposed project would not install rail infrastructure in locations where it does not already occur in the immediate vicinity, so potential adverse impacts to rail infrastructure from levee or dam failure already occurs in locations where the San Joaquin Rail Corridor Project would be exposed to such impacts.

Under existing avoidance and minimization measures, in the event of significant seismic activity or rainfall that could result in dam or levee failure, the track owners stop all trains in areas of concern and send out crews to ride the rail in search of any issues. In the event that issues are found with the rail, structural engineers evaluate issues and determine remediation measures, if required. This standard operating procedure would occur on any new segment of track constructed as part of the project, particularly at locations where flooding is most likely to occur, such as where tracks cross rivers or streams or areas protected by levees. No mitigation is required because the existing standard operating procedure would avoid and minimize any adverse impacts associated with dam or levee failure.

j. *Less Than Significant Impact* – The only portion of the proposed project within sufficient proximity to the ocean to be potentially susceptible to tsunami risks would occur in Contra Costa County. According to the Contra Costa County General Plan, the maximum wave height recorded at the Golden Gate Tide Gage between 1868 and 1968 was 7.4 feet. Wave height diminishes by about half by the time waves reach Richmond from the Golden Gate and dissipate completely before reaching Carquinez Strait where the City of Martinez is located. The General Plan assumes that future tsunami generated waves would be of similar maximum height. If the maximum tsunami generated wave height in the Richmond area would be less than 4-feet in height, and the typical height of highfill on which rail is installed is 5 feet above surrounding surfaces, tsunami waves are not of concern for the proposed alignment infrastructure in Richmond. The only portion of the alignment infrastructure close enough to the coast that tsunami waves might be of concern would be around the point towards Martinez on UPRR track. Under existing avoidance and minimization measures, in the event of a tsunami in the vicinity of this rail alignment, the track owners stop all trains in areas of concern and send out crews to ride the rail in search of any issues. In the event that issues are found with the rail, structural engineers evaluate issues and determine remediation measures, if required. This standard operating procedure would occur on any new segment of track constructed as part of the project, particularly at locations where tsunami waves would be most likely to occur. No mitigation is required because the existing standard operating procedure would avoid and minimize any adverse impacts associated with a tsunami.

Seiche can occur on closed bodies of water after an earthquake. There are no recorded occurrences of seiche in the Bay Area according to the Contra Costa County General Plan, which is where the largest bodies of water along the project area of impact occur. Potential for adverse impacts to the proposed project from seiche is considered less than significant, because the impacts are generally less substantial than from tsunami, which the above analysis has already determined to be less than significant, and because along most of the alignment there are no large bodies of water capable of causing substantial flooding impacts. Further, as noted previously, existing avoidance and minimization measures in place by the track owners include stopping trains in areas of concern and sending out crews to ride the rail in search of any issues in the event of significant seismic activity, such as would be capable of generating dangerous seiche activity. In the event that issues are found with the rail, structural engineers evaluate issues and determine remediation measures, if required. This standard operating procedure would occur on any new segment of track constructed as part of the project, particularly at locations where seiche is most likely to occur, such as where tracks cross or are located in the vicinity of large bodies of water. No mitigation is required because the existing standard operating procedure would avoid and minimize any adverse impacts associated with seiche.

Finally, the potential for mudflow to impact rail infrastructure occurs along portions of the alignment, particularly where infrastructure is located in hilly terrain or near the base of diverse topography. The same avoidance and minimization measures noted above for seiche apply during and immediately after periods of substantial rainfall when mudflow is likely to occur. Again, no mitigation is required because the existing standard operating procedure would avoid and minimize any adverse impacts associated with mudflow.

<u>Conclusion</u>

Based on the analysis presented above, most hydrology and water quality issues are not forecast to experience significant adverse impacts from project implementation as long as the identified mitigation measures are implemented during the project development. The proposed project has the potential to result in significant impacts with respect to drainage impacts and placing structures within a 100-year floodplain; therefore, these issues **will be** included in the EIR to be prepared for the proposed project. The issues of water quality, ground water impacts, impacts from dam or levee failure, seiche, tsunami or mudflow and placing housing within a 100-year floodplain **will not** be carried forward to the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
X. LAND USE AND PLANNING: Would the project:				
a) Physically divide an established community?	❑	❑	✔	❑
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	❑	❑	✔	❑
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	✔	❑	❑	❑

SUBSTANTIATION:

a&b. *Less Than Significant Impact* – As discussed previously, it is easiest to review the San Joaquin Rail Corridor Project in terms of improvements to the existing track system that are expected to occur within the existing rail rights-of-way (installation of double or triple track, sidings, drainage facilities, etc.) and improvements associated with the ancillary facilities that would install and operate rail infrastructure support facilities at a new location, or would expand facilities and convert land use to support rail infrastructure (e.g., Sacramento Maintenance Facility, Stockton Station, Fresno Layover Facility, and Merced Layover Facility.) Potential impacts associated with the proposed Sacramento Maintenance facility, Stockton Station alternatives, and layover facilities are addressed separately after the discussion of the track improvements throughout the San Joaquin Corridor outlined in Figures 1-3a through 1-3h.

The proposed San Joaquin Rail Corridor Project infrastructure would generally be installed within the existing track rights-of-way. The land use setting for the project area includes a variety of rural and urban uses and the existing BNSF and UPRR rail transportation corridors. The track and siding upgrades outlined in Figures 1-3a through 1-3h would generally occur within the rail corridor rights-of-way, with limited rights-of-way acquisition if any, and would not change the existing land use of the rail corridor or the surrounding parcels.

The proposed project is designed to meet the expected long-term increase in passenger rail operations. In addition, future commercial demand for rail transport is expected to increase freight rail operations, and the project design features would provide for more efficient handling of greater rail volume, both passenger and freight. Increased rail traffic will require increased frequency of rail maintenance activities. An increase in the frequency of train traffic or of rail maintenance activities along the existing rail corridor has the potential to increase wait times of cross traffic at locations where rail and cross traffic are at the same elevation (locations without over or underpasses or “at-grade”), which could contribute to increased disruption of communities separated by the existing rail corridor. However, the proposed project would add additional track/sidings precisely with the

intention of decreasing the amount of time that passenger trains are stopped on rails while allowing other trains to pass. The incremental increase in rail traffic along the alignments has the potential to increase delay times at at-grade cross streets, but this increase in delay would occur with or without the project as rail traffic increases. The proposed project itself would accommodate the increased rail traffic in a manner that reduces train delays, and therefore delays at cross streets, by providing the infrastructure to allow trains to pass each other with fewer stoppages and less delay than would otherwise occur.

Designs for the new track segments would follow standard BNSF and UPRR track design requirements and would be comparable to the existing track. The additional track and/or new or extended sidings associated with the project would generally be at the same elevation as the existing surrounding track. There is potential for subsequent traffic/transportation analysis to conclude that grade separation of railroad and local streets is necessary at some locations. In the event that the project warrants a grade separation to enhance traffic flow, any physical separation of an existing community that currently occurs due to train traffic would be decreased by the project.

In general, the only long-term change along the existing track corridor would be a wider set area of tracks along the existing corridor and increased train frequency. At this time it appears that the additional tracks can be added within the existing railroad rights-of-way. If property must be acquired in the future, a subsequent environmental evaluation will be performed. The increase in train operations will cause greater noise and vibration impacts on sensitive uses located adjacent to the track rights-of-way. A detailed assessment of noise impacts associated with the proposed project will be conducted as part of the EIR. The construction activities associated with implementation of the proposed project would be temporary and localized. Short-term disruptions would occur within communities when the proposed infrastructure is installed. It typically requires about a year to install two miles of new track from initial grading to final inspection, with some variation in construction time depending upon whether there are at-grade crossings and/or bridges included in the segment. Impacts to at-grade cross streets would be managed to minimize the amount of time that cross traffic would be impacted, but short-term impacts, on the order of days, would occur. Please refer to Section XVI Traffic/Transportation item (e) and Section XIV Public Services for a full discussion of emergency access issues. No permanent community disruption would result from implementing this project. Sidings and/or additional track is expected to be accommodated within the existing railroad rights-of-way, and thus would not require land acquisition or changes to land use designation or zoning.

The project alignments between Los Angeles and Bakersfield, Bakersfield and Port Chicago, and Stockton and Sacramento are not located within a designated coastal zone. The portion of the UPRR project alignment between western Martinez and Hercules Point is located along the shoreline and any impacts outside of the existing rail bed is expected to require regulatory coordination with and permits from the San Francisco Bay Conservation and Development Commission. The project will secure permits from the San Francisco Bay Conservation and Development Commission (or other appropriate coastal regulatory entity) as applicable specific projects are brought forth. No significant conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect is expected to occur as a result of implementing the new track/sidings proposed by the project.

The proposed ancillary facilities that would install and operate rail infrastructure support facilities at a new location or would expand facilities and convert land use to support rail infrastructure are addressed individually with respect to their potential to divide an established community. All of the proposed ancillary facilities would be located in urbanized areas.

<u>Sacramento Maintenance Facility</u>
The proposed installation of a rail operations and maintenance facility in the City of Sacramento would include a maintenance yard and shop designed to handle routine and periodic inspections and repairs (fueling, sanding, inspections, and light repairs), as well as heavy maintenance for both

coach cars and locomotives. In addition to tracks and repair bays, the maintenance facility would contain mechanic support areas; an operations control center; transportation support areas for train engineers (day room, lockers, train control and dispatch, etc.); materials handling areas; administrative offices; and possibly other supporting services such as training and security. The proposed Sacramento Maintenance Facility would be located between the American River Parkway corridor to the north and the existing UPRR tracks to the south. Land to the east and west is either vacant or contains industrial development. The proposed site is currently occupied by disturbed fields, a parking lot, and retention basin. Existing residential development south of the UPRR tracks would continue to have access to the American River Parkway at an existing point of entry west of the proposed facility. Figure 1-11 shows the proposed location of the maintenance facility and Figure 1-12 is an aerial photo of the proposed maintenance facility site.

Section LU-1 of the City of Sacramento 2030 General Plan identifies the proposed site as an area *"expected to develop for commercial and employment uses (without housing) and/or mixed-use projects that integrate housing with retail, office, community facilities and other uses."* Figure LU-1, Land Use and Urban Form Diagram, shows the site as low rise employment center. Allowed uses include *"Industrial or manufacturing that occurs entirely within an enclosed building or an enclosed outdoor area with appropriately landscaped setbacks"* and *"Compatible public, quasi-public, and special uses."* The proposed facility can be designed to be in compliance with the designated land use. The preliminary project description for the facility states that transit access, bicycle, and employee parking would be incorporated into the design and that the preliminary design would achieve LEED (Leadership in Energy and Environmental Design) Gold standard.

The proposed Sacramento Maintenance Facility would not increase the volume of passenger train traffic to the location, nor would it change the types of freight materials conveyed along rail from the existing conditions. The maintenance facility would divert individual trains into the facility for routine rail maintenance activities, introducing a new rail use to the proposed site. Potential areas of conflict between the proposed facility and adjacent uses include noise, light, and aesthetic impacts. Aesthetic impacts, including lighting conflicts, are addressed in Section I Aesthetics of this document and were found to be less than significant with implementation of mitigation measures. A detailed assessment of noise impacts associated with the proposed project will be conducted as part of the EIR. The proposed Sacramento Maintenance Facility has no potential to divide an established community given that existing UPRR railroad track and the American River already separate the community south of the property from properties farther north, and that adjacent development to the east and west is industrial in nature. Specific information regarding proposed landscaped setbacks of the facility, height of structures, and density of site development are not available at this time, but it is expected that the facility can be designed to be consistent with the specifications for the City's designated land use for the site, low rise employment center.

<u>Stockton Amtrak Station</u>

At both locations under consideration for the new Stockton Amtrak Station, the sites are designated "industrial" in the Stockton General Plan, as is land along both sides of the rail corridor in both locations. There is land designated commercial, residential, and a park in the near vicinity of both locations. Relocating or expanding the station would not change the existing location of track in the vicinity of either site. The preferred alternative, Stockton Amtrak Station Alternative 4 (See Figure 1-17) is located just to the east of the crossroads of the north-south running UPRR tracks with the east-west running BNSF tracks, whereas the existing station under consideration for expansion is located just west of this crossroads. In both locations, the crossroads of existing rail forms some level of physical barrier in the community when trains are passing through intersections, but this condition would not change with either site selection for the new station.

The preferred alternative (Alternative 4) would include the development of a new Amtrak station located at the corner of East Scotts Avenue and Pilgrim Street in the City of Stockton on the BNSF rights-of-way. Currently, the site is developed with a manufacturing plant that is proposed to be acquired and demolished as part of implementation of Alternative 4. The site contains a rail interlock connecting the UPRR and BNSF railroads. Alternative 4 is the preferred location for a

new passenger rail station, because it could easily serve both the Oakland and Sacramento trains that use the San Joaquin Corridor.

Stockton Amtrak Station Alternative 5 (See Figure 1-18) would rehabilitate the existing Amtrak station located on the BNSF rights-of-way at 735 South San Joaquin Street in the City of Stockton. Rehabilitation of this station would include an expansion of existing facilities to accommodate additional passengers.

An expansion of the existing Stockton Station would probably not increase noise impacts in the vicinity of the existing station, but the relocation probably would increase noise impacts in the vicinity of the proposed station. Relocation of the Amtrak station would also have the potential for traffic impacts related to the arrival and departure of passenger vehicles and buses from the relocated station. Noise impacts associated with each site will be addressed in the EIR. A traffic impacts analysis will be conducted as part of a follow on environmental review when the Stockton Station plans are brought forward for implementation. It is expected that the Stockton Amtrak Station can be designed to be consistent with the specifications for the City's "industrial" designation for either site.

Fresno Layover Facility Site

The Fresno Layover Facility Alternative (See Figures 1-19 and 1-20) would include the development of a layover facility located in the City of Fresno that would extend along existing train tracks northeast of SR 41 to Tulare Street in the north and along abandoned railroad tracks south of SR 41 to Walker Avenue in the south. The new layover facility would include a storage yard; running maintenance and repair area; support shops; parts storage; mechanical and electrical rooms; and administrative offices. The layover facility would be located adjacent to the existing Fresno Amtrak station. This site is constrained by its small size and ability to meet the layover objective. Implementation of a facility at this site might require acquisition of property. According to the City of Fresno Interactive Mapping website http://gis4u.fresno.gov/viewer/ accessed March 19, 2012, the planned land use for the proposed expansion area and adjacent areas southeast of SR 41 are heavy and light industrial and are zoned general industrial, and the planned land uses for the proposed expansion area and adjacent areas northwest of SR 41 are commercial/mixed use level 2 (Central Area) and are zoned commercial and light manufacturing. Existing land use for much of the area including land adjacent to the expansion area southeast of SR 41 is described as heavy industrial. However, site review found that a homeless encampment of perhaps up to 100 individuals is located along the abandoned tracks within the proposed layover facility site. Existing land use for much of the area including land adjacent to the expansion area northwest of SR 41 is described as light industrial with most of the parcels immediately adjacent to the railroad described as "parking." Review of Google earth images for the parcels adjacent to the railroad northwest of SR 41 confirms that the existing adjacent land use on both sides of the tracks is parking lots.

The City of Fresno General Plan is supportive of expansion of Amtrak service to the Fresno area, but it is not supportive of BNSF mainline operations expansion or continued use of the BNSF mainline tracks that traverse the center city, as is detailed below in the Objective and Policies extracted from the General Plan.

> *City of Fresno General Plan Objective E-5: Promote continued growth of rail passenger and freight travel through a safe, efficient, and convenient rail system that is integrated with, rather than in conflict with, other modes of travel.*
>
> *E-5-a. Policy: Support and advocate the relocation of the Burlington Northern/Santa Fe Railroad mainline operations over to the Union Pacific railroad tracks or other rail corridor that relocates rail operations from the center sector of the city.*
>
> *E-5-b. Policy: Support development of a method of funding the consolidation of the Burlington Northern/Santa Fe Railroad mainline tracks over to the Union Pacific railroad tracks or other rail corridor that relocates rail operations from the center sector of the city.*

E-5-f. Policy: Support the following improvements of the AMTRAK rail service to the Fresno Metropolitan Area and San Joaquin Region:

- *Provision of the maximum level of train service economically feasible for the San Joaquin route.*
- *Improvement of the AMTRAK station facilities.*
- *Provision of direct train service to the San Francisco/Oakland Bay Area, Sacramento and the Los Angeles area.*

To the extent that the proposed layover facility would serve Amtrak, it appears that the proposal would be consistent with the policies outlined in the General Plan. If the layover facility would also serve BNSF "mainline operations," consistency with General Plan policies is doubtful. However, the policies advocated in the General Plan cannot be realistically implemented at this time because of the extent of existing operations. There is no way that UPRR tracks could accommodate all mainline BNSF and Amtrak traffic without causing significant slow-downs and stoppages due to inadequate capacity. Relocation of the BNSF mainline, on which the passenger rail is currently carried, would require significant land acquisition and would cause significant adverse environmental impacts that are not under consideration as part of the proposed project. The proposed project cannot fulfill the policy objectives outlined in General Plan Policies E-5-a and E-5-b. The proposed project is consistent with the policy objectives outlined in General Plan Policy E-5-f.

If the layover facility resulted in the reduction of parking lots that currently occupy the area, this may be consistent with General Plan Policy E-9-x which advocates reducing the required number of parking spaces in areas, like the City Center, where local public transit is available.

Expanding the Amtrak facilities to include a layover facility at the proposed Fresno location would not be expected to result in land use conflicts (noise, lighting, etc) in the heavy industrial area southeast of SR 41. In the area northwest of SR 41 where adjacent land uses are predominantly parking lots, commercial, and light manufacturing, the layover facility would not locate rail closer to residential development to the east. Regardless, noise impacts associated with the proposed layover facility would be evaluated as part of the EIR prepared for the project. Consistency with the General Plan and impacts to adjacent uses would likely depend upon the ultimate configuration of the layover facility. If administrative offices were located in the area north of SR 41, which is designated for commercial and mixed use and the maintenance and repair activities were located in the area south of SR 41, which is designated heavy industrial, it appears the proposed facility would be consistent with the General Plan and zoning designations.

The proposed layover facility would not create a new division of an established community given that existing railroad tracks and operations already exist at the proposed location. Increased train frequency could contribute to community division, if it already exists, by increasing the amount of time that trains are occupying the rails. No community division is expected to occur to legal conforming uses in the heavy industrial area south of SR 41, but it may already occur to some degree between the commercial district of the City Center and the residential development to the east. The proposed project would facilitate more efficient train movement that would reduce the period of time that trains block at-grade intersections; it would therefore be beneficial in reducing any community division that may currently occur intermittently due to trains blocking crossing streets.

The homeless encampment located along the abandoned rail line proposed as part of the layover facility is a trespass use that would be eliminated if this alternative is selected. Community division of the homeless encampment would occur, as it is unlikely that the inhabitants would be resettled en masse. The City and County of Fresno adopted a 10 Year Plan to End Chronic Homelessness in 2008. The report indicates that the Plan emphasizes the chronically homeless because of the heavy demand they tend to place on social and emergency services and the cost effectiveness of programs designed to prevent ongoing homelessness versus the expense of the same population on emergency services. The Fresno First Steps Home website cites a recent study that housing a

chronically homeless person saves the community of Fresno $11,872 in public funds each year. Cost savings are attributed to a reduction in incarceration, hospitalization, court costs, emergency response calls, and emergency shelter. The 2009 Year One Report on the progress of the 10 Year Report indicates progress with respect to re-housing local homeless, such as establishing 103 people in 72 scattered market rate apartment sites from a local encampment. Housing the homeless in units scattered throughout the community rather than en masse has better outcomes for reintegrating individuals into society. Based upon the existing Plan to address homelessness and information presented above regarding effective re-housing strategies, community division of the homeless encampment is not considered a significant or adverse impact of the proposed project.

Merced Layover Facility Site

The Merced Layover Facility Alternative (See Figures 1-21 and 1-22) would include the development of a layover facility located in the City of Merced that would extend along the existing train tracks from K Street in the north to 6th Avenue in the south. The new layover facility would include a storage yard; running maintenance and repair area; support shops; parts storage; mechanical and electrical rooms; and administrative offices. Land uses surrounding the proposed Merced Layover Facility are almost exclusively residential with a small area of general commercial and neighborhood commercial designated land located at G Street. Other nearby land uses include several schools, including John Muir Elementary School and Preschool, that are located about 250 feet north of the existing rail yard. Hoover Middle School is located north of and across E. Santa Fe Avenue from the existing rail road tracks. The proposed expansion would locate the westernmost portion of the facility south of the rail and one block west of the middle school. The expanded facilities on the north side of the tracks would be located about 1,100 feet west of the middle school. Most of the proposed layover facility would be within an existing rail yard to the north of the tracks that is separated from existing low density residential development by a surface street or would be located within the existing Amtrak Station area that is separated from low to medium density residential development by W. 24th Street. The proposed layover facility is zoned High Density Residential, High Medium Density Residential, Low Density Residential, and General Commercial. While the development of a layover facility at this location that is currently in use as a rail yard, Amtrak station, and tracks would not achieve consistency with the zoning for the site, it would maintain the land use as rail. Therefore the existing circumstances would not change. Because there is no change in the underlying land use at this location, the proposed project is not forecast to result in significant land use impacts.

Potential areas of conflict between the proposed Merced Layover Facility and adjacent uses, particularly adjacent sensitive uses, include noise, light, and aesthetic impacts. Aesthetic impacts, including lighting conflicts, are addressed in Section I Aesthetics of this document and were found to be less than significant with implementation of mitigation measures. A detailed assessment of noise impacts associated with the proposed project will be conducted as part of the EIR. The proposed Merced Layover Facility would not create a new division of an established community given that existing railroad tracks and Amtrak station operations already exist at the proposed location. Increased train frequency could contribute to community division by increasing the amount of time that trains are occupying the rails. According to the City of Merced Vision 2030 General Plan adopted in January 2012, construction of a G Street undercrossing of the BNSF tracks is expected to be completed in 2012. G Street is the primary street crossing through the proposed layover facility. The completion of the surface street undercrossing would therefore reduce adverse impacts of layover facility on circulation, including community division.

c. *Potentially Significant Impact* – The potential for the proposed project to conflict with any applicable habitat conservation plan or natural community conservation plan will be evaluated in association with the Biological Resources analysis, which **will be** addressed in the EIR.

Conclusion

Based on the analysis above, the proposed project would have no significant adverse impact on land use or planning issues, with the exception of a potential to conflict with a habitat conservation plan or natural

community conservation plan, which have not been evaluated at this time. The issue of consistency with habitat conservation plans or natural community conservation plans will be addressed in conjunction with the Biological Resources analysis as part of the EIR. No land use mitigation is required to minimize project impacts on the remaining issues of land use and planning. The issues of land use and planning **will not** be carried forward to the EIR, with the exception of the potential to conflict with a habitat conservation plan or natural community conservation plan.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XI. MINERAL RESOURCES: Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	❑	❑	✔	❑
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	❑	❑	✔	❑

SUBSTANTIATION:

a&b. *Less Than Significant Impact* – Conceptually, it is easiest to discuss the San Joaquin Rail Corridor Project in terms of improvements to the existing track system that are expected to occur within the existing rail rights-of-way (installation of double or triple track, sidings, drainage facilities, etc.), improvements associated with the ancillary facilities that would install and operate rail infrastructure support facilities at a new location, or would expand facilities and convert land use to support rail infrastructure (Sacramento Maintenance Facility, Stockton Station, Fresno Layover Facility, and Merced Layover Facility.) Potential impacts associated with the proposed Sacramento Maintenance facility, Stockton Station alternatives, and layover facilities are addressed separately after the discussion of the track improvements throughout the San Joaquin Corridor outlined in Figures 1-3a through 1-3h. Proposed alternative passenger rail alignments outlined in Figure 1-4, 1-5 and 1-6 are also considered.

The rail corridor improvements are expected to be implemented with minimal, if any, expansion of right-or-way. As such, in any location along the alignment where mineral resources occur within the rights-of-way, existing rail development already precludes the likely recovery of these minerals. However, if the rail is adjacent to mineral resources or to active mineral recovery operations, the proposed project would not create a new constraint on those resources or operations. The ancillary facilities are all located within urbanized areas on sites that are vacant or developed for industrial or commercial uses. None of these proposed facilities (Sacramento Maintenance Facility, Stockton Station, Fresno Layover Facility, and Merced Layover Facility) are located where it would be consistent with adjacent uses to site new mineral recovery activities.

According to the City of Sacramento General Plan 2030 Master EIR, there are no active, permitted mining operations within the City. There has been a construction sand mining operation along the American River within the City limits operating without a State permit that the City and State have sought to stop. Figure 6.5-3 Mineral Resource Zones of the Master EIR shows that the proposed Sacramento Maintenance Facility is located in an area designated MRZ-3: *Areas containing mineral deposits, the significance of which cannot be evaluated from available data*. The Master EIR indicates that the City does not consider this area to contain significant mineral resources.

The City of Stockton *Final Background Report for the 2035 General Plan* indicates that most of the City's Study Area is designated as MRZ-1*: Areas where adequate information indicates that no significant mineral deposits are present or where it is judged that little likelihood exists for their*

presence. The Report indicates that the exception to this designation is not in the vicinity of either proposed Stockton Station location.

The Final Program EIR for the City of Merced *Merced Vision 2030 General Plan* dated July 2011 states that no Mineral Resource Zones or mineral resource recovery sites exist within the City of Merced. Therefore, there are no mineral resource recovery zones or sites that would be impacted by the Merced Layover Facility Site.

The City of Fresno *2025 Fresno General Plan* indicates that there are two regions of significant mineral resources in the general vicinity of the City: along the upper Kings River and along the San Joaquin River. Exhibits 10 and 11 in the General Plan show that neither area of mineral resources includes the proposed Fresno Layover Facility Site. The rail alignment crosses an area of regionally significant resources along the San Joaquin River, but as discussed previously, any additional siding or track is expected to be located within the existing rail rights-of-way, which is already inaccessible for mineral recovery.

Given that most of the proposed project improvements would occur within the existing rights-of-way, and those that would not occur in locations without mineral resources, the proposed project would not result in the loss of a known mineral resource of significance. No impact is expected, and no mitigation is required.

Conclusion

Based on the analysis above, the proposed project would have no significant impact on mineral resources. No mitigation is required to minimize project impacts on these resources. The issues of mineral resources **will not** be carried forward to the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XII. NOISE: Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	✔	❑	❑	❑
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	✔	❑	❑	❑
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	✔	❑	❑	❑
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	✔	❑	❑	❑
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	✔	❑	❑	❑
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	✔	❑	❑	❑

SUBSTANTIATION:

The proposed project has the potential to result in significant impacts with respect to this issue; therefore, this issue **will be** included in the EIR to be prepared for the proposed project.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIII. POPULATION AND HOUSING: Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	❑	❑	✔	❑
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	❑	❑	✔	❑
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	❑	❑	✔	❑

SUBSTANTIATION:

The proposed project depends upon a Caltrans study that anticipates population growth over the next 20-year period as well as growth in demand for alternative modes of transportation. The modeling conducted by AECOM under the direction of Caltrans generated the San Joaquin Corridor passenger rail demand forecast provided in Table 1-1 of the Project Description. Based on the modeling, Caltrans identifies a demand for 8 passenger trains per day (total 16 trains) on the BNSF tracks between Merced and Bakersfield in 2020. This represents an increase in 2 round-trip trains, for a total of 16 trains using this segment compared to the current total of 12 Amtrak passenger trains. By 2035 the modeling indicates a need for 11 round trip passenger trains per day (total of 22 trains) from Bakersfield to Stockton on the BNSF tracks compared to the current total of 12 Amtrak passenger trains. The passenger trains would be expected to operate with 4 or more passenger cars to meet demand. The modeling effort is used for planning purposes over the 25-year planning period, but the actual future schedules would be developed in response to customer demand.

a. *Less Than Significant Impact* – The proposed project would not extend railroad or other infrastructure where it does not currently exist, but would rather provide additional track, sidings, layover maintenance facilities, and an improved station along the designated route that would enable passenger rail to flow more efficiently. The improved rail facilities would be designed to accommodate growth, but would not attract substantial population to the area either by offering expanded passenger rail service or by a substantial increase in rail-related employment. A small increase in rail-related employment would occur primarily at the locations of the maintenance facility and the layover facility, and potentially at other locations where increased service would begin or end, but any increase (approx. 50 new employees) would be negligible when compared with employment growth expected over the next 25 years in the region. The additional passenger rail service would be implemented as customer demand necessitates, and the additional service would not provide rail access where it is not already available. As such, it is not anticipated to induce substantial numbers of people to relocate, for example, by providing passenger rail access to a new location that would allow people to live farther from existing employment centers that they would then commute to by rail. If the Hanford to Visalia or the Bakersfield to Los Angeles passenger rail route is implemented, it would increase the availability of passenger rail to new communities, but in both cases efficient Amtrak bus to rail service is already available. The project would not directly or indirectly induce substantial population growth. No mitigation is required.

b.&c. *Less Than Significant Impact* – As discussed previously, the vast majority of proposed improvements would be located within the existing rail rights-of-way. The facilities that would require land acquisition or expansion of rail facilities onto land not currently dedicated to rail

(Sacramento Maintenance Facility, Stockton Station, Fresno Layover Facility, and Merced Layover Facility) are all located within urbanized areas on sites that are vacant or developed for industrial or commercial uses. None of these proposed facilities are located where formal housing currently exists.

However, the portion of the proposed Fresno Layover Facility Alternative (See Figures 1-19 and 1-20) located along abandoned railroad tracks from SR 41 south to Walker Avenue is occupied by a homeless encampment of perhaps up to 100 individuals. Existing land use for much of this portion of the proposed Layover Facility is described as heavy industrial. According to the City of Fresno Interactive Mapping website http://gis4u.fresno.gov/viewer/ accessed March 19, 2012, the planned land use for the proposed expansion area and adjacent areas southeast of SR 41 are heavy and light industrial and are zoned general industrial. The homeless encampment on the Fresno Layover Facility site is not a legal use of the property, nor is it consistent with the General Plan designation for the site. The Uniform Relocation Assistance and Real Property Acquisition Policies for Federal and Federally Assisted Programs (42 USC Chapter 61) states clearly in Section (B)(i) that “the term "displaced person" does not include a person who has been determined, according to criteria established by the head of the lead agency, to be in unlawful occupancy of the displacement dwelling…” and as such the provisions of the Program would not apply to the occupants of the homeless encampment.

Selection of the Fresno site for the layover facility would require at a minimum the possible eviction of the individuals occupying the homeless encampment and possibly their relocation to alternate locations or facilities. Given that the encampment is not a legal, conforming use of the site, the project would not be responsible for relocation of the inhabitants, but local social services and law enforcement resources would be required to evict and relocate the inhabitants. The City and County of Fresno adopted a 10 Year Plan to End Chronic Homelessness in 2008. The report indicates that the Plan emphasizes the chronically homeless because of the heavy demand they tend to place on social and emergency services and the cost effectiveness of programs designed to prevent ongoing homelessness versus the expense of the same population on emergency services. The Fresno First Steps Home website cites a recent study that housing a chronically homeless person saves the community of Fresno $11,872 in public funds each year. Cost savings are attributed to a reduction in incarceration, hospitalization, court costs, emergency response calls and emergency shelter. The 2009 Year One Report on the progress of the 10 Year Report indicates progress with respect to re-housing local homeless, such as establishing 103 people in 72 scattered, market-rate apartments from a local encampment. The selection of the Fresno site for the Layover Facility would have a significant impact on this homeless population and on the social services needed to serve this population; however, whether the impact is adverse or beneficial would depend upon the outcome of the relocation/re-housing effort.

Housing the homeless in units scattered throughout the community rather than en masse has better outcomes for reintegrating individuals into society. Therefore, in general, replacement housing would be best procured through the consortium of non-profit and governmental organizations (Fresno First Steps Home) working to address the complex issues causing homelessness rather than by creating a new homeless community. Fresno First Steps Home is limited by the availability of funding. Based upon the existing Plan to address homelessness and information presented above regarding effective re-housing strategies, elimination of the homeless encampment would not require construction of replacement housing, because it would be more effective to re-house the homeless in scattered, existing housing if funding is available.

With the exception of the trespass homeless encampment located on a portion of the Fresno Layover Facility site, no existing housing would be directly displaced by the proposed project. The project would accommodate an increase in rail traffic that could have significant adverse impacts on adjacent sensitive uses, particularly due to increase noise levels from additional train traffic. Also, the proposed ancillary facilities could locate some rail related activities closer to sensitive receptors, particularly residential development, than it is under current conditions.

Potential areas of conflict between the proposed facilities and adjacent sensitive uses include noise, light, and aesthetic impacts. Aesthetic impacts, including lighting conflicts, are addressed in Section I Aesthetics of this document and were found to be less than significant with implementation of mitigation measures. A detailed assessment of noise impacts associated with the proposed project will be conducted as part of the EIR. If the noise analysis determines that existing housing would be significantly adversely impacted by the proposed project, mitigation is available to reduce noise levels at adjacent sensitive receptors such that noise levels should not result in displacement of housing.

Conclusion

Based on the analysis above, the proposed project would have no significant impact on population and housing issues. No mitigation is required to minimize project impacts on these issues. The issues of population and housing **will not** be carried forward to the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XIV. PUBLIC SERVICES: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
a) Fire protection?	❑	✔	❑	❑
b) Police protection?	❑	✔	❑	❑
c) Schools?	❑	❑	✔	❑
d) Recreation/Parks?	❑	❑	✔	❑
e) Other public facilities?	❑	❑	❑	✔

SUBSTANTIATION:

a&b. *Less Than Significant Impact With Mitigation Incorporated* – The existing rail operations place a minimal demand on fire and police protection. The proposed project may cause short-term adverse impacts on emergency services provided by fire, ambulance, and law enforcement services along the rail corridor. Closure of existing road crossings would require development of alternative emergency response routes as outlined in Section XVI, Traffic and Transportation. Similarly, construction staging areas may experience an increase in trespass and theft activities over the short-term, which can place additional demand on local law enforcement services.

Along the whole construction route, a potential exists to adversely impact emergency response as individual second tier projects are implemented in the future. To address this potential impact, the following mitigation measure is identified for implementation.

XIV-1 Prior to initiating construction of the proposed project, the project proponent shall submit and have approved a fire or medical emergency response access plan that meets each affected jurisdiction's response time frame. Success for

this measure will be determined by the local fire agency approving and verifying that the specific access response plan and measures will allow them to continue meeting their emergency response time frame objectives.

Implementation of the measure will ensure that potential adverse impacts to emergency fire response capability are mitigated to a level such that the current level of service (as of the start of construction) is maintained.

Police emergency responses will experience the same short-term impacts during construction of future facilities as fire emergency response. Similar mitigation shall be implemented to ensure that police response times are maintained within each jurisdiction's response time guidelines. Implementation of the following mitigation measure will ensure that potential significant adverse impacts to emergency police response capability are mitigated to a level such that the current level of service (as of the start of construction) is maintained.

XIV-2 Prior to initiating construction of the proposed project, the project proponent or contractor shall submit and have approved a police emergency response access plan that meets each affected jurisdiction's response time frame. Success for this measure will be determined by the local law enforcement agency approving and verifying that the specific access response plan and measures will allow them to continue meeting their emergency response time frame objectives.

Staging and equipment storage areas shall be provided with adequate protection to minimize potential for trespass and theft. The following mitigation shall be implemented during construction to minimize demand for law enforcement response during construction.

XIV-3 Prior to initiating construction of the proposed project, the project proponent shall submit and have approved an access control plan to its staging and equipment storage areas that meets each affected jurisdiction's crime minimization standards. Success for this measure will be determined by the local law enforcement agency approving and verifying that the access control plan and measures will minimize trespass and theft activities in accordance with local requirements.

Implementation of the above measures can ensure that potential significant adverse demand impacts for law enforcement resources during construction are mitigated below a level of significance.

After construction, the proposed track facility improvements would accommodate increased passenger rail. The increase in passenger rail traffic could occur without the project, but speed and reliability of the trains would diminish with increased congestion and conflicts with cross-streets would increase as delays lengthened. Over the long-term, the installation of the San Joaquin Rail Corridor Project would facilitate better emergency response capabilities. The proposed additional track and sidings would facilitate better movement of trains along the corridor, thus reducing the amount of time that a train spends at any one point, such as at an existing road that crosses the tracks at grade. No mitigation is required for the long-term emergency access and police and fire protection capability of the affected police, fire, and other emergency departments. Future access will be equal to or better than the existing condition.

<u>Sacramento Maintenance Facility</u>

A Maintenance facility located on predominantly vacant industrial land along an active railroad segment within the urbanized area of the city is not expected to create a significant increase in emergency response, from police, fire, or other emergency services. The increase in legitimate activity (continuous preserve on the property) would be more likely to deter illegal activities at this location rather than to attract them. No significant adverse impacts to police, fire, or other emergency services are expected from implementing the Sacramento Maintenance Facility.

Stockton Station

Plans for the new station include a police-staffed, state-of-the-art, Emergency Operations Center (EOC), in which all stations, staffed and unstaffed, would be monitored. The EOC would incorporate a security management system that consists of video surveillance, access control, motion detection, intercoms, and emergency mass notifications to ensure maximum safety for all passengers within the San Joaquin Passenger Corridor Rail facilities.

When compared with the existing Stockton Station and current police and emergency oversight, the proposed station would provide for improved facilities and systems that facilitate police and emergency service at passenger rail stations throughout the San Joaquin Corridor.

Fresno Layover Facility

The proposed Fresno Layover Facility Alternative would locate the layover facility along existing, but partially abandoned, track co-located with the Fresno Amtrak Station. Layover facilities located along an active railroad segment are not expected to create a significant increase in emergency response, from police, fire, or other emergency services. The increased rail activity would be more likely to deter illegal activities at this location rather than to attract them. The portion of the proposed Fresno Layover Facility Alternative (See Figures 1-19 and 1-20) located along abandoned railroad tracks from SR 41 south to Walker Avenue is occupied by a homeless encampment of perhaps up to 100 individuals. Selection of the Fresno site for the layover facility would require at a minimum the eviction of the individuals occupying the homeless encampment and possibly their relocation to alternate locations or facilities. Given that the encampment is not a legal, conforming use of the site, the project would not be responsible for relocation of the inhabitants, but local social services and law enforcement resources would be required to evict and relocate the inhabitants.

The City and County of Fresno adopted a 10 Year Plan to End Chronic Homelessness in 2008. The report indicates that the Plan emphasizes the chronically homeless because of the heavy demand they tend to place on social and emergency services and the cost effectiveness of programs designed to prevent ongoing homelessness versus the expense of the same population on emergency services. The Fresno First Steps Home website cites a recent study that housing a chronically homeless person saves the community of Fresno $11,872 in public funds each year. Cost savings are attributed to a reduction in incarceration, hospitalization, court costs, emergency response calls, and emergency shelter. In other words, the existing condition of the homeless encampment likely demands considerable resources from local emergency services. While elimination of the homeless encampment at this location would reduce demand on emergency services from this encampment, the overall demand of this population on emergency services would only be reduced if individuals were successfully re-housed and re-integrated into society. As the homeless population exists in the community with or without implementation of the proposed project, the overall effect of eliminating this homeless encampment would be neutral on emergency services. No significant adverse impacts to police, fire, or other emergency services are expected from implementing the Fresno Layover Facility Alternative.

Merced Layover Facility

The Merced Layover Facility Alternative (See Figures 1-21 and 1-22) would include the development of a layover facility located in the City of Merced that would extend along the existing train tracks from K Street in the north to 6th Avenue in the south. Most of the proposed layover facility would be located within an existing rail yard to the north of the tracks or within the existing Amtrak Station area.

Layover facilities located along an active railroad segment co-located with an existing Amtrak Station and rail yard are not expected to create a significant increase in emergency response from police, fire, or other emergency services. The increase in rail activity would be more likely to deter illegal activities at this location rather than to attract them. No significant adverse impacts to police, fire, or other emergency services are expected from implementing the Merced Layover Facility Alternative.

Based on the analysis presented above emergency services will not experience significant adverse impacts with implementation of the recommended mitigation measures.

c. *Less Than Significant Impact* – The proposed project depends upon a Caltrans study that anticipates population growth over the next 20-year period as well as demand for alternative modes of transportation. The proposed project would not extend railroad or other infrastructure where it does not currently exist, but would rather provide additional track, sidings, layover, and maintenance facilities and an improved station along the designated route that would enable passenger rail to flow more efficiently. The improved rail facilities would be designed to accommodate growth, but would not attract substantial population to the area either by offering expanded passenger rail service or by a substantial increase in rail-related employment. A small increase in rail-related employment (estimated to be 50 employees) would occur primarily to operate new trains and at the locations of the maintenance facility and the layover facility, and potentially at other locations where increased service would begin or end, but any increase would be negligible when compared with employment growth expected over the next 25 years in the region. The additional passenger rail service would be implemented as customer demand necessitates, and under the proposed project the additional service would not provide rail access where it is not already available. As such, it is not anticipated to induce substantial numbers of people to relocate, for example, by providing passenger rail access to a new location that would allow people to live farther from existing employment centers that they would then commute to by rail. The project would not directly or indirectly induce substantial population growth. As such, the project would not place demands on the local schools by increasing the student population.

There are a number of school facilities within the near vicinity of the proposed rail improvements. Potential impacts on nearby school facilities are addressed in the appropriate sections of this document (Aesthetics, Air Quality, Hazards, Noise and Traffic/Transportation), if applicable. No mitigation is required under this item.

d. *No Impact* – There are a number of park facilities within the near vicinity of the proposed rail improvements. Potential impacts on nearby park facilities are addressed in the appropriate sections of this document (Aesthetics, Air Quality, Hazards, Noise and Traffic/Transportation) if applicable. No mitigation is required under this item.

e. *No Impact* – No adverse impacts to other public facilities not discussed above are anticipated from implementation of the proposed project. No additional mitigation is required under this item.

Conclusion

Based on the analysis above, the proposed project would have no significant impact on public service issues with implementation of the proposed mitigation measures. The issues of public services **will not** be carried forward to the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	❑	❑	✔	❑
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	❑	✔	❑	❑

SUBSTANTIATION:

a. *Less Than Significant Impact* – The proposed project depends upon a Caltrans study that anticipates population growth over the next 20-year period as well as demand for alternative modes of transportation. The proposed project would not extend railroad or other infrastructure where it does not currently exist, but would rather provide additional track, sidings, layover, and maintenance facilities and an improved station along the designated route that would enable passenger rail to flow more efficiently. The improved rail facilities would be designed to accommodate growth, but would not attract substantial population to the area either by offering expanded passenger rail service or by a substantial increase in rail-related employment. If the Hanford to Visalia or the Bakersfield to Los Angeles passenger rail route is implemented, it would increase the availability of passenger rail, but in both cases efficient bus to rail service is already available. A small increase in rail-related employment would occur primarily at the locations of the maintenance facility and the layover facility, and potentially at other locations where increased service would begin or end, but any increase would be negligible when compared with employment growth expected over the next 25 years in the region.

The additional passenger rail service would be implemented as customer demand necessitates, and the additional service would not provide passenger rail access where it is not already available, although as mentioned above, service to Visalia and Los Angeles is currently available as a hybrid bus-train service. As such, the proposed additional service is not anticipated to induce substantial numbers of people to relocate, for example, by providing passenger rail access to a new location that would allow people to live farther from existing employment centers that they would then commute to by rail. The project would not directly or indirectly induce substantial population growth and would not place demands on the local recreational facilities by inducing population growth.

The project would not contribute to an increase in the population of the area beyond that already allowed or planned for within the project area. Therefore, there would be no increase above current plans for demand for parks and other recreational facilities associated with this project.

b. *Less Than Significant Impact* W*ith Mitigation Incorporated* - No recreation activities are presently allowed or conducted within the existing railroad rights-of-way or lands to be acquired to implement the proposed Sacramento Maintenance Facility, Stockton Station, or Layover Facility Alternatives; therefore, proposed construction or operation activities would not have a direct impact on parks. There are a number of park facilities within the near vicinity of the proposed rail improvements. Potential impacts on nearby park facilities are addressed in the appropriate sections of this document (Aesthetics, Air Quality, Hazards, Noise and Traffic/Transportation), if applicable.

The proposed Sacramento Maintenance Facility site is adjacent to the American River on the south side of the River within the area designated as both a State and National Wild and Scenic River,

classified as a “Recreation” river. Mitigation measure I-3 is sufficient to ensure that no significant adverse impacts on the recreational features of the Parkway occur as a result of implementing and operating the proposed Maintenance Facility. The installation of the proposed improvements would not create any new access limitations to recreation.

The project does not propose any new development or expansion of recreational facilities. No substantial adverse effects to parks and recreation will be caused by implementing the proposed project. The proposed project would not make a cumulatively considerable contribution to parks or recreational resources within or adjacent to the rail corridor. No mitigation is required under this item.

Section 4(f) Issues

The United States Department of Transportation (DOT) Act of 1966 Section 4(f) stipulates that the Federal Highway Administration and other DOT agencies “cannot approve the use of land from publicly owned parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless the following conditions apply:

- There is no feasible and prudent alternative to the use of land.
- The action includes all possible planning to minimize harm to the property resulting from use.” http://environment.fhwa.dot.gov/4f/index.asp

No publicly owned parks or recreational areas are presently allowed or operated within the existing railroad rights-of-way or lands to be acquired to implement the proposed Sacramento Maintenance Facility, Stockton Station, or Layover Facility Alternatives; therefore, proposed construction or operation activities would not have a direct impact on publicly owned parks or recreational areas. The potential for impacts to Wildlife and waterfowl refuges will be addressed in the Biological Resources Section of the EIR, and the potential for impacts to public and private historical sites will be addressed in the Cultural Resources Section of the EIR.

Conclusion

Based on the analysis above, the proposed project would have no significant impact on recreation issues with implementation of the proposed mitigation measures. The issues of recreation **will not** be carried forward to the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVI. TRANSPORTATION / TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	✔	❑	❑	❑
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	✔	❑	❑	❑
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	❑	✔	❑	❑
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	❑	❑	❑	✔
e) Result in inadequate emergency access?	❑	✔	❑	❑
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	❑	❑	✔	❑

SUBSTANTIATION:

a&b. *Potentially Significant Impact* – There are hundreds of active at-grade crossings along the San Joaquin Rail Corridor. County and city planning documents (general plans, general plan EIRs, background technical reports, etc) were reviewed for the counties and cities in which the project is located in order to identify intersections and roadway segments that currently, or are projected to operate at a deficient level of service (LOS). Deficient roadways and intersections will be evaluated for their proximity to the San Joaquin Rail Corridor in general and to at-grade crossings along the Corridor in particular. These two issues, conflicts between operations of the local circulation system and rail operations along the San Joaquin Corridor, **will be** evaluated in the EIR.

c. *Less Than Significant Impact With Mitigation Incorporated* – The proposed San Joaquin Rail Corridor Project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks. More efficient and reliable passenger rail service has the potential to reduce reliance on air travel for short-distance travel. Project improvements that would be located within airport safety zones must comply with

mitigation measure VIII-5 from the Hazards and Hazardous Materials Section of this document. No additional mitigation is required under this item.

d. *No Impact* – The proposed project would not substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). No new at-grade crossings are proposed as part of the project. Any expansion of rail infrastructure would occur within the existing rail rights-of-way or at discrete facilities designed for maintenance activities, layover facilities, or as passenger stations. No mitigation is required.

e. *Less Than Significant Impact With Mitigation Incorporated* – Since the proposed project provides for more efficient flow of rail traffic, the potential for rail operations to interfere with an adopted emergency response plan or emergency evacuation plan over the long-term would be reduced. BNSF and UPRR emergency response capabilities will remain the same, and the ability to respond to accidents will remain the same after completion of the project. The incremental increase in rail traffic along the alignments has the potential to increase delay times at at-grade cross streets, but this increase in delay would occur with or without the project as rail traffic increases. The proposed project itself would accommodate the increased rail traffic in a manner that reduces train delays, and therefore delays at cross streets, by providing the infrastructure to allow trains to pass each other with fewer delays and less slowing than would otherwise occur. Therefore, the net effect of the proposed project is to provide a comparable or improved level of response capability in the event of an emergency response or evacuation after project completion during future operations relative to the existing conditions.

The construction activities associated with implementation of the proposed project would be temporary and localized. Short-term access disruptions would occur when the proposed infrastructure is installed. It typically requires about a year to install two miles of new track from initial grading to final inspection, with some variation in construction time depending upon whether there are at-grade crossings and/or bridges included in the segment. Impacts to at-grade cross streets would be managed to minimize the amount of time that cross traffic would be impacted, but short term impacts would occur. The following mitigation is required.

XVI-1 At all times during construction, the contractor will ensure that emergency fire, police or medical vehicles are able to access all adjacent areas. Additionally, construction equipment or activities must not obstruct or hinder traffic that might be generated during an evacuation.

Implementation of the above mitigation measure, as well as measures XIV-1 and 2 from the Public Services section of this document, are sufficient to reduce potential adverse impacts to a less than significant level.

f. *Less Than Significant Impact* – No new at-grade crossings are proposed as part of the project. Any expansion of rail infrastructure would occur within the existing rail rights-of-way or at discrete facilities designed for maintenance activities, layover facilities, or as passenger stations. As such, conflicts with other forms of transit, bicycle, or pedestrian facilities would not increase as a result of the proposed project.

According to the Kings County General Plan EIR, the County has identified the San Joaquin Valley Railroad rights-of-way as a viable option for pedestrian and bicycle use. The EIR states that the "shared use and development of the Union Pacific railroad, between the Fresno and Tulare County lines, would provide a signed, recreational route that is intended for pedestrians, bicyclists and equestrian uses." Unless the proposed shared-use would occur in addition to preserving the functionality of the railroad, this proposal would apparently convert the UP freight track alignment that is under consideration to provide passenger rail between Fresno-Hanford-Visalia to a trail. The City of Hanford General Plan adopted on June 18, 2002 suggests development of a multi-use trail along the BNSF rail alignment rights-of-way, but doesn't suggest a similar trail along the San Joaquin Valley Railroad rights-of-way. However, the identification of a possible trail route does not constitute an adopted policy, plan or program, and it does not seem that mention of the possibility

of such a trail in the King County General Plan EIR is sufficient to conflict with the proposed passenger rail extension Fresno-Hanford-Visalia alternative. Also, the intention may be to consider development of a trail along the right-of-way as a buffer between rail and adjacent development, as is suggested along the BNSF route in the Hanford General Plan. Many of the jurisdictions through which the project would be located call for the preservation of abandoned railroad rights-of-way from development in order to provide for future transit, trail, or other infrastructure.

There are specific locations in urban areas where lack of grade separation may result in inconvenience to other forms of transit, bicyclists or pedestrians; as previously noted, the Rail Corridor track improvements will allow trains to more easily pass through at grade crossings without delays. This change can also reduce inconvenience for alternative forms of transportation where at-grade crossings occur, and combined with the benefits of improved passenger rail service along the corridor, reduce potential inconvenience to a less than significant impact level.

Conclusion

Based on the analysis above, the proposed project would have no significant adverse impact on alternative forms of transportation, air traffic, or emergency access and would not substantially increase hazards due to a design feature or incompatible uses with implementation of the proposed mitigation measures. These issues **will not** be carried forward to the EIR.

There is the potential for the proposed project to impact roadways and intersections that are currently deficient or are expected to operate at deficient levels in the future. Conflicts between operations of the local circulation system and rail operations along the San Joaquin Corridor **will be** evaluated in the EIR. Roadways and intersections will be evaluated for their proximity to the San Joaquin Rail Corridor in general and to at-grade crossings along the Corridor in particular in the EIR.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	❑	❑	✔	❑
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	❑	❑	❑	✔
c) Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	✔	❑	❑	❑
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	❑	❑	✔	❑
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	❑	❑	✔	❑
f) Be served by a landfill(s) with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	❑	❑	✔	❑
g) Comply with federal, state, and local statutes and regulations related to solid waste?	❑	❑	✔	❑

SUBSTANTIATION:

a. *Less Than Significant Impact* – The proposed project generates a minor amount of wastewater from the toilets on the Amtrak trains and buses. Based on discussions with Amtrak personnel in Oakland, a contract service removes the wastewater from the passenger cars primarily in Oakland when the trains are serviced, but removal can also occur by a contractor in Bakersfield. This wastewater is then delivered to a wastewater treatment plant (WWTP) or water reclamation plant (WRP) licensed to receive septic waste from wastewater holding tanks. When the tanks are pumped from a train with four or five passenger cars, approximately 1,000 gallons of wastewater is collected for delivery to a WWTP or WRP. The trains are serviced as needed and with six trains on the system, this equates to approximately 6,000 gallons being generated every few days. At full implementation of the proposed project assumed to occur in 2035, the volume of wastewater from trains will increase from 6,000 to 11,000 gallons per service of the fleet.

Although the contractor must be licensed to collect the holding tank wastewater, the actual permits from the Regional Water Quality Control Board are assigned to the WWTP/WRF. The authorization to receive and treat holding tank wastewater is given to the WWTP or WRF by the Regional Board, and the contractor that collects wastewater from the Amtrak trains pays a commercial fee to the WWTP/WRF for the capacity utilized at each facility. Based on the process already established for

handling wastewater from passenger trains and the capacity demand at the WWTP/WRF, the continued treatment of wastewater generated from the trains is not forecast to cause any WWTP/WRF to exceed treatment requirements of any Regional Board. No mitigation is required.

The only support rail infrastructure facility that may generate wastewater will be the proposed rail maintenance facility in Sacramento. Aside from municipal wastewater generated at the facility from employees, this facility may generate industrial wastewater. As an industrial facility it will be necessary to obtain pretreatment requirements for the industrial wastewater to ensure that the receiving WWTP/WRF water quality standards are met. This is a routine procedure coordinated directly between the WWTP/WRF agency and the Caltrans Division of Rail. Since these standards are mandatory and must be negotiated prior to generation of industrial wastewater, the potential for adverse impact is less than significant without mitigation.

b. *No Impact* – The increase of approximately 5,000 gallons of water supply and 5,000 gallons of wastewater generated by the additional trains every one or two days is a very small quantity of wastewater that has no potential to require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities. Therefore, no new construction of such facilities will be required that could cause significant environmental effects.

c. *Potentially Significant Impact* – Stormwater drainage issues **will be** evaluated in the EIR in conjunction with the hydrology/flood hazard issues in Section IX of this Initial Study.

d. *Less Than Significant Impact* – When fully implemented, the San Joaquin Corridor Amtrak operations will require approximately 11,000 gallons of potable water every two days. This equates to approximately six acre feet of potable water per year. This is a *de minimis* volume of potable water within the State of California and represents a net increase of approximately 3 acre feet through 2035. This is a less than significant impact on water resources of the State.

e. *Less Than Significant Impact* – Based on the volume of wastewater and the capacity of the wastewater treatment systems in Oakland (East Bay Municipal Utilities District, [EBMUD]) and Bakersfield (City of Bakersfield). EBMUD currently has 168 million gallons of secondary treatment capacity, and the current average annual flow is 75 million gallons per day (mgd). In Bakersfield the City operates two wastewater treatment plants, Plants #2 and #3. The design capacity of Plant #2 is 25 mgd and it currently treats about 13.6 mgd. The design capacity of Plant #3 is 32 mgd and it currently treats about 17.7 mgd. The 5,000 gallon increase in demand over a two day period (2,500 gpd) for wastewater treatment capacity is a *de minimis* demand on these two systems. The forecast future demand for wastewater treatment capacity is a less than significant impact on the wastewater treatment capacity of both the EBMWD and Bakersfield systems.

f&g. *Less Than Significant Impact* – The proposed project would generate solid waste during construction. The soil/sediment excavated will either be utilized within the rights-of-way as fill or it will be made available to local jurisdictions and/or commercial haulers as fill. The asphalt and other waste will be transported and disposed of at appropriate recycling or solid waste landfills. The solid waste disposal of construction debris that will be generated by the proposed project, and disposal of contaminated soil or sediment that may be encountered during construction, would be carried out in full compliance with pertinent statutes and regulations. Impacts in this area would not be substantial.

The proposed project would generate an incremental increase in operational solid waste typically consistent with commercial use from administrative and passenger uses, as well as solid waste associated with train maintenance and repair. Disposal of any hazardous waste generated in the process of train maintenance or other activities would be carried out in full compliance with pertinent statutes and regulations. Impacts in this area would not be substantial.

The California Integrated Waste Management Act of 1989 mandates a 50 percent diversion goal. The Board announced compliance with the goal in 2006 based on averaging statewide diversion rates. The proposed project impacts would occur within Contra Costa, Sacramento, San Joaquin,

Merced, Madera, Tulare, Fresno, Kings, Kern, and Los Angeles Counties. Contra Costa, Sacramento, San Joaquin, Fresno, Kings and Los Angeles County have identified sufficient disposal capacity to meet the short- and long-term needs of County residents in their respective General Plans, Background Reports for General Plans, General Plan EIR, or Countywide Integrated Waste Management Plan. The Kern County General Plan states that the County shall ensure adequate solid waste disposal facilities for residents and industries within the County.

Specific, current disposal capacity was not provided in planning documents available for the Counties of Merced, Tulare, San Joaquin, and Madera; therefore the State of California Solid Waste Information System (SWIS) database was reviewed to document availability of solid waste capacity in each County.

Merced County

According to the SWIS database and Solid Waste Facility Permit, the Merced County SR 59 Disposal Site had remaining capacity of 28,025,334 Cubic Yards as of September 01, 2005 with an estimated closure date of 2030. According to the SWIS database, the Merced County Department of Public Works Billy Wright Disposal Site had remaining capacity of 11,370,000 cubic yards as of September 30, 2010 with an estimated closure date of December 31, 2054.

Madera County

According to the SWIS database and Solid Waste Facility Permit, the Madera Disposal Systems Fairmead Solid Waste Disposal Site had remaining capacity of 5,552,894 cubic yards as of January 01, 2004 with an estimated closure date of 12/31/2028.

Tulare County

According to the SWIS database and Solid Waste Facility Permit, the County of Tulare Resource Management Agency's Teapot Dome Disposal Site has a remaining capacity of 1,142,278 cubic yards as of December 31, 2004 with an estimated closure date of 05/31/2012. According to the SWIS database and Solid Waste Facility Permit, the County of Tulare Resource Management Agency's Woodville Disposal Site had a remaining capacity of 6,970,183 cubic yards as of February 28, 2006 and an estimated closure date of 12/31/2026. According to the SWIS database and Solid Waste Facility Permit, County of Tulare Resource Management Agency's Visalia Disposal Site had a remaining capacity of 16,145,591 cubic yards as of March 31, 2006 with an estimated closure date of 01/01/2024. In addition, there are a number of green waste/composting facilities in the County.

San Joaquin County

According to the SWIS database and Solid Waste Facility Permit, the San Joaquin County Public Works Department Foothill Sanitary Landfill had a remaining capacity of 125,000,000 cubic yards as of Jun 10, 2010 and an estimated closure date of 2055. Forward Landfill, Inc. had a remaining capacity of 23,700,000 cubic yards as of May 19, 2008 and an estimated closure date of 2021. The County of San Joaquin Public Works Department's North County Landfill had a remaining capacity of 35,400,000 cubic yards as of December 31, 2009 and an estimated closure date of 2048. In addition, there are a number of green waste/composting facilities in the County.

Based on the availability of adequate disposal and recycling capacity, disposal of solid waste generated in association with implementing the proposed project is not forecast to result in significant impacts to the environment. The California Integrated Waste Management Act of 1989 (AB 939**)** mandated diversion of 50% of waste by 2000 in order to address increasing solid waste disposal and decreasing landfill capacity. Because the existing regulatory system mandates that local jurisdictions meet this established threshold, no mitigation is required to comply with solid waste regulations.

The proposed track facility improvements may require relocation or avoidance of existing utilities where utilities cross and may conflict with installation and operations of the new sections of track. Avoidance may be necessary where a flood control channel crosses the alignment, and can be achieved by widening of a bridge or extension of a culvert, depending upon individual

circumstances and how existing rail has been accommodated at the location. Utility relocation or avoidance is a routine component of rail construction activities.

The following mitigation measure will be implemented to ensure that all utility lines within the project alignment that must be relocated will be relocated in a manner consistent with maintaining the continued operation of the utility with a minimum of disruption and that ensures the utility capacity and service is not diminished or significantly affected by the relocation.

XVII-1 ***Prior to initiating relocation of any utility system located within the railroad rights-of-way, the project proponent will notify the pertinent utility of the rail construction plan. The project proponent will work with the utility under the terms of the utilities agreement to occupy the BNSF or UPRR rights-of-way to limit short-term system relocation effects and minimize outages to the degree feasible. The project proponent shall submit sufficient engineering data to verify that remaining utility systems will function as effectively after relocation as it does before relocation.***

Implementation of this measure will ensure that potential substantial adverse effects associated with utility system relocation are fully mitigated to a non-substantial level during both the short and long-term.

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact or Does Not Apply
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE:				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	✔	❑	❑	❑
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	✔	❑	❑	❑
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	✔	❑	❑	❑

SUBSTANTIATION:

a. *Potentially Significant Impact* – The proposed project has the potential to have substantial impacts on biological and cultural resources. The biological and cultural resources impacts have the potential to contribute to cumulative adverse effects. Both of these resource issues will be evaluated in the EIR.

b. *Potentially Significant Impact* – The project will construct rail facilities to meet passenger rail demand in the San Joaquin Corridor. The proposed facilities are consistent with the General Plans of the cities and counties within which they would occur, and projects that are consistent with current land use planning documents are not considered to have the potential to have impacts that are individually limited but are cumulatively considerable. This project does not rely on other development. No other rail improvements are associated with or reliant upon this project.

The issues of Agriculture, Mineral Resources, and Population and Housing were found to have no significant impacts without implementation of mitigation. No further analysis of these issues was required, and these issues **will not be** addressed in the EIR.

All resource issues under Air Quality, Biological Resources, Cultural Resources, Noise, and Greenhouse Gases were found to be potentially significant. These issues **will be** addressed in the EIR.

The issues of Public Services were found to have no significant impacts without implementation of mitigation except for the issues of impacts on police and fire services, which were found to be less than significant with the implementation of mitigation measures. The issue of Recreation was found to have no significant impacts without implementation of mitigation except for in association with the proposed Sacramento Maintenance Facility, which was found to be less than significant with the implementation of mitigation to address potential impacts to the American River Parkway Plan

located adjacent to the proposed facility. All of the Aesthetics issues were found to be less than significant with implementation of mitigation measures. All of the Geology and Soils issues were found to be less than significant with implementation of mitigation measures, except for the issue regarding the capability of soils to support septic tanks or alternative wastewater treatment, which was found to be less than significant without mitigation because all wastewater treatment will occur through existing wastewater treatment or reclamation facilities. All of the Hazards and Hazardous Materials issues were found to be less than significant without the implementation of mitigation except for issues regarding impacts in the vicinity of private and public airports with the potential to result in a safety hazards, the potential for the project to be located on sites with current or historic hazardous material contamination and the potential for hazards created by the routine transport, use or disposal of hazardous materials, all of which required mitigation to reduce potential impacts to below a level of significance. These issues **will not be** addressed in the EIR.

The issues of Utilities and Service Systems were found to have no significant impacts without implementation of mitigation except for the potential for the project to require construction of new or expand existing storm water drainage facilities, which **will be** addressed in conjunction with the Hydrology and Water Quality Issues in the EIR. The issues of Land Use and Planning were found to have no significant impacts without implementation of mitigation except for the issue of habitat conservation plans and natural community conservation plan, which **will be** evaluated in conjunction with the Biological Resources impacts in the EIR.

The Hydrology and Water Quality issue of the placement of housing within a 100-year flood hazard area requires no mitigation to address, because the project would not result in the construction of any housing. Similarly, the issue of groundwater depletion requires no mitigation because the project would not directly extract groundwater nor would it interfere substantially with groundwater recharge. For the Hydrology and Water Quality issues of exposing people or structures to significant risk of inundation as a result of dam or levee failure, seiche, tsunami or mudflow, standard operating procedures of the railroads were found to be sufficient to minimize the risks to below a level of significance. Mitigation is provided to ensure that no violation of water quality standards or waste discharge requirements occur with implementation of the project, as well as to ensure that the project would not create or contribute runoff water that would exceed the capacity of storm water drainage systems. These Hydrology and Water Quality **will not be** addressed in the EIR.

The proposed project has the potential to substantially alter the existing drainage pattern of the site or area in a manner which could result in substantial erosion, siltation or flooding onsite or offsite. It also has the potential to place structures that might impede or redirect flood flows within a 100-year flood hazard. These Hydrology and Water Quality issues **will be** addressed in the EIR.

The Transportation and Traffic issues of hazards attributed to design features or incompatible uses and conflicts with adopted public transit, bicycle or pedestrian facilities or plans were found to be less than significant without mitigation. The Transportation and Traffic issues of impacts to air traffic patterns and inadequate emergency access required mitigation to reduce potential impacts to below a level of significance. These Transportation and Traffic issues **will not be** addressed in the EIR.

The Transportation and Traffic issues regarding the potential for the proposed project to significantly adversely impact the performance of the circulation system or conflict with an applicable congestion management program were found to be potentially significant. These Transportation and Traffic issues **will be** addressed in the EIR.

Based on the analysis in this Initial Study, the installation of and operation of the proposed new facilities would not cause impacts that are individually or cumulatively considerable for those issues that will not be addressed in the EIR. For those issues that will be addressed in the EIR, cumulative impacts will be further evaluated as part of the EIR.

c. *Less than Significant* With Mitigation Incorporated – The provision of an adequate passenger rail system is considered a benefit to public health and safety and has no potential to cause substantial adverse effects on human beings. However, potential impacts to Air Quality, Biological Resources, Cultural Resources, Greenhouse Gases, Hydrology and Water Quality, Land Use and Planning, Noise, Transportation and Traffic, and Utilities and Service Systems have been determined as potentially significant impacts and the specific issues identified under item (b) above will be evaluated in the EIR to be prepared for this project.

The potential for the project to adversely impact human beings exists for the issues of Aesthetics, Geology and Soils, Hazards and Hazardous Materials, Public Services, and Recreation, but mitigation is incorporated to ensure that the effects of proposed project are controlled to a less than significant impact level based on mitigation implementation. Traffic and Transportation issues have the potential to adversely impact human beings, but for specific issues identified under item (b) above mitigation was available to reduce the potential impacts to a less than significant level.

The analysis determined that for the issues of Agriculture, Mineral Resources, and Population and Housing the potential to cause substantial adverse effects on human beings was less than significant.

Conclusion

This document evaluated all CEQA issues contained in the latest Initial Study Checklist form. The evaluation determined that either no impact or less than significant impacts would be associated with the issues of Agriculture, Mineral Resources, and Population and Housing. Some or all of the issues of Aesthetics, Geology and Soils, Hazards and Hazardous Materials, Hydrology and Water Quality, Public Services, Recreation, and Transportation and Traffic required mitigation to reduce the potential for impacts to a less than significant level.

All resource issues under Air Quality, Biological Resources, Cultural Resources, Noise, and Greenhouse Gases were found to be potentially significant. These issues **will be** addressed in the EIR.

The issues of Utilities and Service Systems were found to have no significant impacts without implementation of mitigation except for the potential for the project to require construction of new or expand existing storm water drainage facilities, which **will be** addressed in conjunction with the Hydrology and Water Quality Issues in the EIR. The issues of Land Use and Planning were found to have no significant impacts without implementation of mitigation except for the issue of habitat conservation plans and natural community conservation plan, which **will be** evaluated in conjunction with the Biological Resources impacts in the EIR. The proposed project has the potential to substantially alter the existing drainage pattern of the site or area in a manner which could result in substantial erosion, siltation or flooding onsite or offsite. It also has the potential to place structures that might impede or redirect flood flows within a 100-year flood hazard. These Hydrology and Water Quality issues **will be** addressed in the EIR. The Transportation and Traffic issues regarding the potential for the proposed project to significantly adversely impact the performance of the circulation system or conflict with an applicable congestion management program were found to be potentially significant. These Transportation and Traffic issues **will be** addressed in the EIR.

XIX. SUMMARY OF MITIGATION MEASURES

Aesthetics

I-1 All surface areas disturbed by the San Joaquin Rail Corridor Project construction activities, except those areas occupied by structures, hardscapes, or rail maintained areas, shall be revegetated, either with native vegetation in natural landscapes or in accordance with a landscape plan in man-made landscape areas. In non-native landscape areas, landscaping shall prioritize the use of native species or drought tolerant non-invasive species. Once construction is completed, site revegetation or restoration shall begin immediately. Where a formal landscape plan is to be implemented, it shall be coordinated with the local agency and local design guidelines for consistency. When a native landscape is to be restored, it shall be implemented in cooperation with regulatory agencies with oversight from a qualified biologist.

I-2 At any location where grade separation is recommended by the traffic/transportation or subsequent analysis, the follow on CEQA document will evaluate the potential aesthetic impacts of the proposed grade separation and make a determination regarding the significance of the aesthetic impacts.

I-3 The site development plan for the proposed Sacramento Maintenance Facility shall be required to show consistency with goals 7-23 through 7-26 from the 2008 American River Parkway Plan. Additionally, the proposed facility development plan must demonstrate that the facility would not prevent the development of the proposed extension of the Two Rivers Bicycle/Pedestrian Trail along the south bank of the American River within the Parkway Boundary; nor would it create hazards for the proposed pedestrian/bicycle access along 28th Street or the existing pedestrian/bicycle access immediately west of the site.

I-4 Fencing, landscaping, and architectural design, as applicable, will be incorporated in project design to reduce the visual impact of facilities in a manner consistent with the surrounding development and local agency design guidelines to the extent that such measures do not conflict with the engineering and budget constraints established for the facility.

I-5 Prior to commencement of construction activities on either the segment of the UPRR between Richmond and Martinez or the segment of the BNSF between Richmond and Port Chicago, a visual simulation analysis shall be performed of the facility's impact on the view. If the analysis identifies a significant impact on a scenic vista, the facility shall be relocated or redesigned to reduce the impact to a non-significant level, or a subsequent environmental evaluation shall be prepared.

I-6 Installation of lighting not associated with rail safety shall be implemented consistent with the following measures.

- Use low pressure sodium lights to minimize impacts of glare, where security needs require such lighting.
- Install lighting fixtures at the lowest level consistent with the purpose of the lighting to reduce unwanted illumination.
- Direct and shield light to minimize off-site illumination.
- Prevent light from intruding into sensitive light receptor areas off of a specific project site.

Geology and Soils

VI-1 The structural design and construction of new structures will, at a minimum, be in accordance with the requirements of the most recent Uniform Building Code (UBC) and California Building Code (CBC), including the latest supplements for the Groundshaking Zone within which they will

occur, as described in the latest CBC and all other applicable city, county, State, and Federal laws, regulations, and guidelines.

VI-2 The proposed project rail infrastructure shall be designed to comply with the performance standard for Risk Class I & II; for example, public facilities, as identified below:

Risk Class I & II, Structures Critically Needed after Disaster: Structures that are critically needed after a disaster include important utility centers, fire stations, police stations, emergency communication facilities, hospitals, and critical transportation elements, such as bridges, overpasses, and smaller dams.

Acceptable Damage: Minor non-structural; facility should remain operational and safe or be suitable for quick restoration of service.

Ancillary facilities including the Sacramento Maintenance Facility, new/refurbished Stockton Station, Fresno Layover Facility, and Merced Layover Facility shall be designed to comply with the performance standard for Risk Class III, as identified below:

Risk Class III: High occupancy structures; uses are required after disasters, for example, places of assembly, such as schools and churches.

Acceptable Damage: Some impairment of function acceptable; structure needs to remain operational.

VI-3 Add protective covering of mulch, straw, or synthetic material (erosion control blankets, tacking will be required). Mulch or straw must be certified to be free of invasive plant seed.

VI-4 Limit the amount of area disturbed and the length of time slopes and barren ground are left exposed. After sub-surface infrastructure installation, soil shall be compacted to an elevation and density similar to pre-construction conditions.

VI-5 Construct diversion dikes and interceptor ditches to divert stormwater away from construction areas.

VI-6 Apply provisions of erosion and sediment control that reduce volume and velocity of flows and content of sediment to levels that do not cause significant rill or gully erosion in susceptible areas. For example, the project may install slope drains (conduits) and/or water-velocity-control devices to reduce concentrated high-velocity streams from developing. In addition, provide for restoration of areas that do become eroded.

VI-7 After the construction phase, long-term erosion control shall be accomplished by keeping soils under vegetative cover, hardscape (pavement, gravel, or other hard cover) or by planting wind breaks. The type of vegetation used as wind breaks, if installed, shall include natural plants and must comply with the applicable Air Quality Management District's standards.

VI-8 Prior to completing engineering for future track(s) or support facilities, the Division of Rail shall ensure that essential soil and sediment studies have been completed to identify any soil constraints along the track alignment. The information from these studies shall be used to design the track or support facilities with the objective of ensuring adequate foundation support for the specific facility being designed.

Hazards and Hazardous Materials

VIII-1 All contaminated material removed from the project area of impact, as a result of an accidental release or otherwise, shall be delivered to a licensed treatment, disposal, or recycling facility that has the appropriate systems to manage the contaminated material without significant impact on the environment.

VIII-2 Before determining that an area contaminated as a result of an accidental release is fully remediated, specific thresholds of acceptable clean-up shall be established (in reference to the appropriate regulatory statue) and sufficient samples shall be taken within the contaminated area to verify that these clean-up thresholds have been met.

VIII-3 The construction contractor shall halt activities in the vicinity if the site appearance (discolored soil, etc) suggests that contamination has occurred on the site until findings can be reviewed by a qualified industrial hygienist.

VIII-4 In the event that contamination within the area of impact is discovered after construction is initiated, the project proponent shall retain a qualified industrial hygienist to characterize the type and extent of the contamination, contain the contamination, and oversee the proper removal and disposal of contamination in accordance with an approved work plan and all applicable laws, regulations, and standards.

VIII-5 At locations where proposed improvements would be located within airport safety zones that restrict the height of structures, all improvements will be demonstrated to be below the restricted height or measures will be taken to minimize adverse impacts. For example, where a new track will be installed within a height restriction zone that the train engine on the railbed could violate, the new track would be installed on the far side of the existing track further away from the runway so as to minimize intrusion into the airspace.

Hydrology and Water Quality

IX-1 The construction contractor shall prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) that specifies Best Management Practices to be implemented in order to prevent construction pollutants from contacting stormwater. The SWPPP shall be developed with the goal of achieving a reduction in pollutants both during and following construction in order to control urban runoff to the maximum extent practicable, based upon available and feasible best management practices. The SWPPP and the monitoring program for the construction projects shall be consistent with the requirements of the latest version of the State's General Construction Activity Storm Water Permit and the applicable NPDES Permit, which will depend upon the county within which construction is occurring.

The following items should be included in the SWPPP:

- The length of trenches that can be left open at any given time should be limited to that needed to reasonably perform construction activities. This will serve to reduce the amount of backfill stored onsite at any given time.
- Backfill material should not be stored in areas that are subject to the erosive flows of water.
- Measures such as the use of straw bales, sandbags, silt fencing, or detention basins shall be used to capture and hold eroded material for future cleanup.
- Rainfall will be prevented from entering material and waste storage areas and pollution-laden surfaces.
- Construction-related contaminants will be prevented from leaving the site and polluting waterways.
- Replanting and hydroseeding of native vegetation will be implemented to reduce slope erosion and filter runoff.
- A spill prevention control and remediation plan to control release of hazardous substances shall be developed.

IX-2 The Project Proponent shall prepare and implement a Water Quality Management Plan (WQMP) that specifies Best Management Practices to be implemented in order to prevent long-term surface runoff from discharge of pollutants from sites on which construction has been completed. The WQMP shall be developed with the goal of achieving a reduction in pollutants following construction in order to control urban runoff pollution to the maximum extent practicable, based upon available and feasible best management practices.

Public Services

XIV-1 Prior to initiating construction of the proposed project, the project proponent shall submit and have approved a fire or medical emergency response access plan that meets each affected jurisdiction's response time frame. Success for this measure will be determined by the local fire agency approving and verifying that the specific access response plan and measures will allow the local agency to continue meeting their emergency response time frame objectives.

XIV-2 Prior to initiating construction of the proposed project, the project proponent or contractor shall submit and have approved a police emergency response access plan that meets each affected jurisdiction's response time frame. Success for this measure will be determined by the local law enforcement agency approving and verifying that the specific access response plan and measures will allow the local agency to continue meeting their emergency response time frame objectives.

XIV-3 Prior to initiating construction of the proposed project, the project proponent shall submit and have approved an access control plan to its staging and equipment storage areas that meets each affected jurisdiction's crime minimization standards. Success for this measure will be determined by the local law enforcement agency approving and verifying that the access control plan and measures will minimize trespass and theft activities in accordance with local requirements.

Transportation / Traffic

XVI-1 At all times during construction, the contractor will ensure that emergency fire, police, or medical vehicles are able to access all adjacent areas. Additionally, construction equipment or activities must not obstruct or hinder traffic that might be generated during an evacuation.

Utilities and Service Systems

XVII-1 Prior to initiating relocation of any utility system located within the railroad rights-of-way, the project proponent will notify the pertinent utility of the rail construction plan. The project proponent will work with the utility under the terms of the utilities agreement to occupy the BNSF, or UPRR rights-of-way to limit short-term system relocation effects and minimize outages to the degree feasible. The project proponent shall submit sufficient engineering data to verify that remaining utility systems will function as effectively after relocation as they did before relocation.

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Section 6 Figures / Exhibits

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ATTACHMENT 1

DETAILED PROJECT DESCRIPTION

ATTACHMENT 1

SAN JOAQUIN CORRIDOR PROGRAMMATIC ENVIRONMENTAL IMPACT REPORT 2035 VISION

Oakland and Sacramento to Bakersfield and then Los Angeles Union Station

PROJECT DESCRIPTION

California Department of Transportation

November 2012

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Appendix 2: Passenger Demand Forecast Modeling
Appendix 3: BNSF Report, *San Joaquin Valley Analysis, Summary of RTC Simulations*
Appendix 4: UP Letter, *San Joaquin Service Bakersfield – Oakland*

1.0 INTRODUCTION

The State of California has directly supported intercity passenger rail services since 1976. Functioning through the California Department of Transportation, Division of Rail (Caltrans), the State manages two routes operated by the National Railroad Passenger Corporation (Amtrak)--the Pacific Surfliner Corridor and the San Joaquin Corridor. The State financially supports a third Amtrak intercity passenger rail service, the Capitol Corridor. In addition to providing operating funds to Amtrak, Caltrans funds capital infrastructure improvements and equipment purchases (locomotives and passenger cars).

As State manager of the San Joaquin Corridor, Caltrans initiated the San Joaquin Corridor Program Environmental Impact Report (PEIR) process to comply with the California Environmental Quality Act (CEQA) (Cal. P.R.C. § 21000 et seq.). At this time there is no federal action so compliance with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. § 321 et seq.) is not required. However, to ensure data in this PEIR can be used in conjunction with future federal projects, all technical reports have been prepared to comply with Federal Railroad Administration (FRA) standards. The FRA's "Procedures for Considering Environmental Impacts" contain the procedures relating to environmental assessment and documentation and establish procedures for compliance by the FRA with NEPA, in particular NEPA Section 102 (2)(C) (42 U.S.C. 4332(2)(C)); Section 4(f) of the Department of Transportation Act (49 U.S.C. 303(c)); Section 106 of the National Historic Preservation Act (16 U.S.C. 470(f)); Section 309(a) of the Clean Air Act (42 U.S.C. 7609(a)); Section 307(c)(2) of the Coastal Zone Management Act (16 U.S.C. 1456(c)(2)); Section 2(a) of the Fish and Wildlife Coordination Act (16 U.S.C. 662(a)); Section 7 of the Endangered Species Act (16 U.S.C. 1536); the Noise Control Act of 1972 (42 U.S.C. 4901 et seq.); and certain Executive Orders, regulations, and guidelines. These procedures supplement the Council on Environmental Quality (CEQ) Regulations (40 CFR parts 1500 et seq.) and Department of Transportation (DOT) Order 5610.1C.

Caltrans is the lead State agency, for the environmental review. Caltrans is evaluating the San Joaquin Corridor Project as a "state program" to be implemented over the next 25 years. The objective in preparing the PEIR is to review potential impacts of proposed rail improvement projects to the San Joaquin Intercity Passenger Rail Corridor (San Joaquin Corridor) through 2035.

This PEIR provides a detailed description of the proposed project and alternatives, with a focus on those characteristics and activities that can cause physical changes in the human, physical, and biological environment. A statement of purpose and need for the proposed project is included. A statement of purpose and need for each alternative is also included, as the project encompasses a large area and each alternative would serve a different population. A project's "need" is an identified transportation deficiency or limitation, and it's "purpose" is the set of objectives that will be met by addressing the transportation deficiency. A reasonable solution or range of solutions is developed and evaluated based on the objectives. A project's purpose and need statement is designed to meet the requirements of Federal and State statutes and regulations by providing a basis for the selection of reasonable and practicable alternatives, a comparison of those alternatives, and the selection of a preferred alternative.

The purpose of the proposed rail improvements to the San Joaquin Corridor is to accommodate existing and future California intercity passenger rail demand and projected increases in ridership through 2035. The proposed project would also serve to improve rail safety and operation and provide increased availability of public transportation, which would, in turn, help to reduce emissions from vehicular travel and achieve the goals of State and local plans.

The need for increased rail capacity and the proposed improvements to the San Joaquin Corridor is demonstrated by ridership increases that have resulted in both sold out trains and an increased number of standees on board the corridor trains. Travel demand is projected to grow threefold over the course of this planning period, well exceeding current capacity.

1.1 Project Objective

Caltrans, in cooperation with multiple local agencies located within 11 California counties, propose to fund expansion of the existing rail system within the BNSF Railway Company (BNSF) and Union Pacific Railroad (UP) rights-of-way along three segments of passenger rail corridor in the San Joaquin Valley and portions of the San Francisco Bay area. If federal funding becomes available in the future, a separate document for compliance with the National Environmental Policy Act (NEPA) will be prepared at that time. The map in Figure 1-1 shows Amtrak's existing San Joaquin Corridor intercity rail passenger route. Some of the proposed Project alternatives would utilize rights-of-way along the San Joaquin Valley Railroad (SJVR) and the Southern California Regional Rail Authority (SCRRA), also known as Metrolink. The expansion of this system would serve to accommodate existing and future passenger rail demand and projected increases in ridership through 2035.

1.1.1 Specific Objectives

- Install a second or third main track along:
  - 188.5 miles of the Bakersfield to Port Chicago segment of BNSF track;
  - 22.11 miles of the Port Chicago to Oakland segment of UP track;
  - 40.62 miles of the Stockton to Sacramento segment (Fresno Subdivision) or 35.2 miles (Sacramento Subdivision) of UP track.

  (Figures 1-2a through 1-2d depict where the installation of second or third track is proposed. Figure 1-3a reflects the current BNSF track structure. Figures 1-3b through 1-3h depict the proposed track structure for BNSF and UP in order to improve the efficiency of train movements and ensure that passenger train service can operate on a reliable schedule.)
- Install new sidings, or passing track, in order to facilitate train flow on both tracks.
- Extend or upgrade existing sidings and upgrade track structure and special track work in order to enhance overall safety of railroad operations.
- Replace existing bridges and culverts or install new ones in order to ensure the best performance of drainage structures.
- Improve highway/railroad track intersections in order to enhance safety of railroad operations and to minimize impacts on local circulation systems.
- Install track and/or sidings along secondary rail segments in order to extend passenger rail service into new areas.
- Increase the maximum operating speed of passenger trains in all existing segments of the existing San Joaquin Corridor from 79 miles per hour (mph) to 90 mph.
- Obtain additional operating equipment (rolling stock) to meet the forecasted customer demand for passenger trains.
- Install new passenger train infrastructure, such as additional layover or maintenance facilities, to support expansion of future train operations.

1.2 Project Characteristics

The proposed Project traverses approximately 357 miles of existing track that is located mainly throughout California's Central Valley, reaching into portions of the San Francisco Bay area, and includes three main rail line segments:

- Bakersfield to Port Chicago (BNSF) – Milepost 887.7 to Milepost 1164.0 (276.6 track miles);
- Port Chicago to Oakland (UP) – Milepost 41.3 to Milepost 3.2 (38.1 track miles); and
- Stockton to Sacramento (UP) –Two separate line segment alternatives are proposed that would extend from Stockton to Sacramento. The first proposed alternative (UP's Fresno Subdivision track) for this segment would extend generally to the east of Highway 99 from Stockton to Sacramento from MP 82.96 to MP 39.35 (43.61 miles). The second proposed alternative (UP's Sacramento Subdivision track) would generally extend just east of Interstate 5 from Stockton to Sacramento from MP 95.1 to MP 136.85 (41.75 miles). Only one alternative alignment for this segment would be selected as part of the final preferred Project.

Some of the Project alternatives include secondary passenger train segments that extend beyond the existing areas presently served by the three main San Joaquin Corridor track segments. These secondary passenger train segments include:

- Fresno to Porterville (SJVR)
- Bakersfield to Lancaster (UP tracks) and Lancaster to Los Angeles (SCRRA/Metrolink – Antelope Valley Line)
- Port Chicago to Richmond on the existing BNSF main line

As indicated earlier, Figures 1-2a through 1-2d show the proposed locations of second and third track installation and alignments that encompass the three main San Joaquin Corridor segments (Bakersfield to Stockton, Stockton to Sacramento and Stockton to Oakland). Figures 1-4 through 1-6 show secondary segments, as described in the alternatives section below.

1.2.1 Program / Project Approach

A program-level, first tier, environmental document is considered appropriate for a corridor-wide project as envisioned by Caltrans. This Draft PEIR evaluates the potential environmental impacts of the proposed operational modifications and supporting infrastructure improvements required to support intercity passenger train operations within the San Joaquin Corridor over the 25-year planning period. The program is designed to meet the forecasted increase in intercity passenger demand over the 25-year period, the expanded number of passenger train operations required to meet the demand, and the specific infrastructure improvements required to support future operations. Conceptual and site specific impact evaluations are presented, depending upon projected operations and the rail infrastructure improvements required to support those operations. Under this approach, proposed near-term capital improvements are evaluated with more detailed, site specific information, while long-term capital improvements are evaluated at a programmatic level.

1.2.1.1 Key Program Elements

In order to create a vision for the San Joaquin Corridor at the end of the 25-year planning period, Caltrans focused on the following aspects of the passenger rail system: defined the passenger demand growth over the 25-year planning period; determined how many passenger trains will be required to meet this demand; established an objective of increasing passenger train speeds to 90 miles per hour (mph) where possible; and identified the track and facility infrastructure improvements required to support the proposed future passenger train operations. Caltrans developed the program outlined in the following sections, based on continued growth in intercity rail passenger use of the San Joaquin Corridor. The number of passengers using the San Joaquin Corridor increased about 21.5 percent over the four-year period between 2006 and 2010 (see below). Although the future growth in demand for intercity rail capacity will be affected by a large number of variables, such as future High Speed Rail operations, increased costs for fuel, and availability of future funding to support infrastructure and operations, ridership modeling shows that demand will continue to grow over the 25-year planning period. Based on this assumption, Caltrans has developed a vision of the San Joaquin Corridor operations and infrastructure improvements required to meet the 2035 demand forecast.

1.2.1.2 Existing San Joaquin Corridor Intercity Passenger Train Operations

Current San Joaquin Corridor intercity passenger train operations consist of the following: 6 daily round trip trains on the Bakersfield-Stockton segment (total of 12 trains); 4 daily round trips on the Stockton-Oakland segment (total of 8 trains); and 2 daily round trip trains on the Stockton-Sacramento segment (total of 4 trains). Passenger ridership on the San Joaquin Corridor has increased by about 170,000 riders since 2006, as shown in the following ridership summary:

Year	Number of Passengers
2006-2007	804,785
2007-2008	949,611
2008-2009	929,172
2009-2010	977,835

Based upon the forecasted growth, Caltrans concluded that additional intercity passenger trains will be needed to serve the San Joaquin Corridor. The additional passenger trains forecasted to be needed over the next 25 years, along with the required track system and other infrastructure to support the trains, are the focus of this environmental review.

Another component of current passenger train service along the San Joaquin Corridor is the extensive connecting thruway bus system that supports the train operations. The effectiveness of the San Joaquin Corridor transportation system is partially based on connecting bus routes throughout the Central Valley and into the Los Angeles Basin and beyond. It is through the combined use of Amtrak buses and trains that the San Joaquin Corridor transportation system reaches the majority of Californians and adjacent populations in Nevada. The statewide Amtrak California System Map, included as Figure 1-7, presents the San Joaquin Corridor passenger train route and the connecting bus routes. The bus system extends north to Redding, east to Reno and Las Vegas, Nevada; south to Indio; and all along the California coast from Arcata to San Diego. Throughout the system, interconnections are available between buses and other Amtrak intercity routes (such as the Pacific Surfliner), with Amtrak National Train Routes (such as the Coast Starlight or the Sunset Limited); and with the various commuter rail systems. Bus motor coaches are leased from local companies. All bus motor coaches are required to meet Amtrak motor coach design and safety requirements.

Appendix 1 contains the current San Joaquin Corridor train and bus schedules (May 9, 2011, from *Amtrak California's Operating Timetable No. 43*).

1.2.1.3 Future Intercity Passenger Demand for the San Joaquin Corridor Passenger Trains

In order to forecast demand for passenger train operations in 2035, Caltrans modeling included, among other factors, anticipated population growth over the next 20-year period and demand for alternative modes of transportation as fuel prices increase. The modeling was conducted by AECOM under the direction of Caltrans and generated the following demand forecast for a mid-point (2020) and end date for the planning period (2035).

Table 1-1: Forecast Results for San Joaquin Corridor Service

	Baseline		10-year Plan 79 mph service	10-year Plan 90 mph service	25-year Plan 90 mph service
	2011	2012	2020	2020	2035
Annual Forecasts					
Ridership	1,016,300*	1,069,500**	1,665,600	1,721,200	3,044,500
Ticket Revenue	$31,341,000*	$34,748,000**	$67,896,000	$70,732,000	$144,527,000
Passenger-Miles	139,410,000*	149,140,000**	248,330,000	258,920,000	461,890,000
Service Characteristics					
Train Frequency	Daily	Daily	Daily	Daily	Daily
Oakland-Stockton	4	4	6	6	10
Sacramento-Stockton	2	2	3	3	6
Stockton-Merced	6	6	7	7	10
Merced-Bakersfield	6	6	8	8	11
Average Travel Time (minutes)					
Oakland-Bakersfield	368	368	346 (-6%)	327 (-11%)	324 (-12%)
Sacramento-Stockton	318	318	312 (-2%)	302 (-5%)	300 (-6%)

Notes:

Forecasts are based solely upon information available to AECOM as of 6/21/11.

Forecasts are provided for the sole use of Amtrak and Caltrans.

Forecasts are not intended for disclosure in a financial offering statement.

* FY11 Estimate (prepared May 2011)

** FY 12 Budget (prepared May 2011)

Market Growth

Based on California Department of Finance growth and population projections

Auto Congestion

Auto travel times increase by 2% every five years due to increased congestion

Service Changes

Changes in frequency and travel time as shown above (timetables provided by Caltrans 5/21/11 & 5/31/11)

On Time Performance (OTP) at 90% in all years

Pricing Actions

+2% per year applied to all prices (assume no ridership loss since increase matches inflation rate)

See Appendix 2, *Passenger Demand Forecast Modeling*, for the detailed information in support of Table 1-1. Based upon the modeling, Caltrans identified a demand for 8 passenger trains per day (total 16 trains) on the BNSF tracks between Merced and Bakersfield in 2020. This represents an increase in 2 round trip trains, or a total of 16 trains using this segment compared to the current total of 12 Amtrak passenger trains. The total of 16 trains represents an increase in train operations by about 33 percent in 2020. By 2035 the modeling indicated a need for 11 round trip passenger trains per day (total of 22 trains) from Bakersfield to Stockton on the BNSF tracks. Relative to the current total of 12 Amtrak passenger trains, the 2035 operations represents an increase in operations by 10 trains, or an 83% increase in passenger train operations. These passenger trains would operate with 4 or more passenger cars to meet demand.

The above information is adequate for planning purposes over the 25-year planning period, but actual schedules will be developed in response to customer demand over the planning period. The information provides a baseline from which the program environmental effects can be forecast.

1.2.1.4 Future Line Capacity Demand: BNSF Railway and Union Pacific

Caltrans met with both BNSF and UPRR and requested they model the passenger schedules for the service proposed in this document in order for the railroads to assess the ability of their respective infrastructure and to support the future demand for track capacity, including freight. BNSF used their own RTC (Rail Traffic Controller) model to determine specific projects that would be needed. On the other hand, instead of modeling the proposed service increases, the UPRR requested specific modifications to their railroad infrastructure they claimed would be needed to support the proposed increases in passenger train operations.

1.2.1.4.1 BNSF

Using the passenger demand data, BNSF proceeded with line capacity modeling to identify the track modifications between Port Chicago and Bakersfield that the railroad considered necessary to support the proposed 2020 operating scenario (16 trains) and the 2035 operating scenario (22 trains). Port Chicago is the location (see Figure 1-2c) where intercity passenger trains operating between Oakland and Bakersfield transition between the BNSF and UP tracks.

BNSF evaluated four different schedule proposals, as follows:

- 8 daily round trip trains on the full Bakersfield - Port Chicago segment (total of 16 trains) with the passenger trains operating at a maximum speed of 79 miles per hour (mph). This scenario is termed the 5/10 year 79 mph plan.
- 11 daily round trip trains on the full Bakersfield – Port Chicago segment (total of 22 trains) with the passenger trains operating at a maximum speed of 79 mph. This scenario is termed the 25 year 79 mph plan.
- 8 daily round trip trains on the full Bakersfield – Port Chicago segment (total of 16 trains) with the passenger trains operating at a maximum speed of 90 mph. This scenario is termed the 5/10 year 90 mph plan.
- 11 daily round trip trains on the full Bakersfield – Port Chicago segment (total of 22 trains) with the passenger trains operating at a maximum speed of 90 mph. This scenario is termed the 25 year 90 mph plan.

BNSF also incorporated the following assumptions in its modeling:

- Each of the 5/10 year cases reflects a scenario where one round trip operates as an “express” schedule, with intermediate stops at Stockton, Modesto, Merced, Fresno, and Hanford only on the BNSF. The other 5/10 year cases reflect all trains stopping at all stations.
- In the 5/10 cases the freight counts were increased by 14 trains per week (2 intermodal Z1-7, 10 intermodal Q/S and 2 unit). The freight counts were then kept at those levels for the 25-year cases (in order to identify just the scope of projects needed for the modified passenger services beyond the 5/10 plan). This alternative also includes the express trains.

Based on the above assumptions, BNSF identified the line capacity improvements that would be required to meet the four different schedule proposals. Figure 1-3a shows the existing track structure from Port Chicago to Bakersfield. Only limited double track occurs along this segment, but this configuration supports the current 12 trains per day from Stockton to Bakersfield (8 to/from Oakland and 4 to/from Sacramento). Figure 1-3b shows the track improvements required to support the 5/10-year 79 mph plan. Additional double track is required for 5 new segments, totaling about 31 miles. Figure 1-3c shows the track improvements required to support the 25-year 79 mph plan. Additional double track (relative to the current circumstance) is required for 11 new segments totaling about 75.2 miles. Figure 1-3d shows the track improvements required to support the 5/10-year 90 mph plan. Less additional double track (relative to the current circumstance) is required to support this operational scenario as only 8 new segments totaling about 54 miles is required. Finally, Figure 1-3e shows the track improvements required to support the 25-year 90 mph plan. Additional double track (relative to the current circumstance) is required for 16 new segments totaling about 188.5 miles. With the described improvements to BNSF’s

tracks between Port Chicago and Bakersfield, the modeled future passenger train operational scenarios are feasible.

Appendix 3, *San Joaquin Valley Capacity Analysis, Summary of RTC Simulations*, provides details of the BNSF report.

1.2.1.4.2 Union Pacific

In a letter to Caltrans, UPRR indicated that in order to accommodate any additional intercity passenger trains along its track segments from Oakland to Port Chicago and Stockton to Sacramento, one additional track would be required on each of the specified segments. See Appendix 4, *UP Letter, San Joaquin Service Bakersfield—Oakland*. Thus, a third track would need to be installed from Richmond to Martinez and a second track would need to be installed from Martinez to Port Chicago and from Stockton to Sacramento. This proposal is discussed in more detail below.

In order to evaluate an actual improvement scenario for the UP track segments from Oakland to Port Chicago and Stockton to Sacramento, Caltrans contracted with an engineering firm with expertise in railroad engineering to examine these alignments and identify the scope of improvements that could reasonably be installed within three specific segments of the San Joaquin Corridor. Three corridors were examined, because there are currently two UP track corridors from Stockton to Sacramento, as shown on Figure 1-2d. Ultimately, only one corridor will be selected for improvement, either the Fresno Subdivision on the east or the Sacramento Subdivision on the west. Although UP did not model the route, Caltrans accepts that there is a need for an additional track to be installed on each segment, resulting in three tracks from Oakland to Martinez and two tracks from Martinez to Port Chicago, as well as two tracks on the route selected for the Stockton to Sacramento corridor.

Based upon field surveys and a review of existing track charts, it has been determined that it is possible to add the required track improvements to each of the UP corridors. The UP Niles and Tracy Subdivisions would be improved with a third main track beginning at Shellmound on the west (MP 5.20) and ending at Martinez on the east (MP 32.00). A double track would be added on the Tracy Subdivision from Martinez at MP 36 to Port Chicago at MP 41.3. Figure 1-3f shows the track improvements along these UP Subdivisions. The areas to be improved include segments of existing siding, which would be upgraded to mainline standards, and a new second/third track beginning at MP 6.35. Installation of an additional track was considered infeasible as a result of the engineering review on two segments east of Shellmound, in Richmond and between Crockett and Costa. Of the approximate 38.10 miles of the Tracy Subdivision considered for improvement, approximately 33 miles of second or third track would be installed.

Figures 1-3g and 1-3h show the UPRR's Sacramento Subdivision and Fresno Subdivision tracks, respectively. With the exception of a small segment near Lodi, where it was judged infeasible to construct a second track, the entire Fresno Subdivision would receive a second track, either through upgrade of an existing siding to main status or through installation of a new second track. Approximately 43 miles of new track would be constructed. If the Sacramento Subdivision is selected for improvement, a second track would be installed along the entire alignment, either through upgrading existing sidings or installation of a second track, resulting in approximately 41.75 miles of new track.

1.2.1.4.3 Summary – 25-Year 90 mph

In summary, the following additional track improvements would be required to meet the 25-year 90 mph intercity passenger train operating forecast on the San Joaquin Corridor: This identifies the maximum rail infrastructure improvements proposed by the host railroads.

BNSF from Bakersfield to Port Chicago:	Existing - 276.6 total track miles; 188.5 miles are proposed for new double track (68.1%)
UP from Port Chicago to Oakland:	Existing - 38.10 track miles; 33 proposed new double or triple track miles (86.6% of segment).
UP from Stockton to Sacramento:	
Fresno Subdivision:	Existing - 43.6 track miles; 43 miles estimated new double track (approximately 98.6%)
Sacramento Subdivision:	Existing - 41.75 track miles; the entire alignment is proposed for double track (100%)

An estimated total of 306.25 miles of new track, identified as siding extensions or additional main line, is proposed to meet the 2035 90 mph operational scenario with 22 trains. All new track improvements would include new or revised signal systems, culvert extensions, positive train control systems, and all other infrastructure required to operate the San Joaquin Corridor intercity passenger train system in 2035. These additional infrastructure support facilities are addressed below.

1.2.1.5 General Design Features: Track Improvements throughout the San Joaquin Corridor

The alignments of the proposed additional main line tracks would closely follow the existing track and be designed for the maximum allowable speed, currently 79 mph for passenger trains and 70 mph for freight trains. In locations where operating speed is restricted (track geometry or other constraints), the additional main line tracks would be designed with the same standard as the existing main line track through all segments of the rail corridor.

Connections to sidings and spur tracks from the new track would be made using turnouts that meet host railroad standards, currently No. 11 turnouts. Where existing track would be upgraded to mainline standard, connections to sidings and spur tracks would also use No. 11 turnouts or the current standard. All mainline connections are assumed to be No. 24 turnouts and crossovers. Roadbed sections would be constructed to conform to current railroad construction standards for mainline and major spur tracks. The proposed second mainline track alignments, as well as the upgraded mainline track, would use standard mono-block concrete ties with a resilient fastening system. Running rail would be 136 or 141 continuously welded (CWR) (136/141 lbs per meter of rail) rail on tangents and curves flatter than one degree. Sharper curves would be laid with 141# CWR rail. Cross ties through grade crossings, as well as transition ties, would be 10-foot-long wood ties.

The limits of the area of potential effect (APE) would be fixed at 5 feet from the edge of the new drainage ditch paralleling new mainline track alignments.

1.2.1.6 Track Design

- Structural Bridge Design
  Bridge design would follow common railroad and AREMA standards. The existing timber trestle ballasted deck bridges would be replaced with pre-cast concrete slab or box girder bridges or steel girder ballasted deck bridges as appropriate. All new bridges would use one of the following four designs: (1) pre-cast concrete slab; (2) pre-cast concrete box girder; (3) plate girder; or (4) rolled steel beam. Figure 1-8 provides an example of a typical railroad bridge structure.

  It is estimated that approximately 12 existing bridges along the BNSF right-of-way will be impacted by Project implementation and would need to be widened to accommodate the additional facilities. In addition, approximately 57 new bridges would need to be constructed to accommodate the additional proposed track facilities if the Sacramento Subdivision from Stockton to Sacramento is implemented. If the Fresno Subdivision alternative is implemented, an

estimated 28 bridges would be constructed. Exact bridge locations would be determined during project design.

- Grade Crossing Design
  Grade crossings would follow current railroad standards using pre-cast steel clad, shunt resistant concrete panels on 10-foot-long timber ties spaced on 19.5-inch centers. The timber ties would use tie plates adapted for the same elastic rail clips as the concrete cross ties. End ramps would be provided per railroad standards. Figure 1-9 shows a typical at grade crossing. Generally, new 8-foot concrete crossing panels would be installed for second mainline track alignments. Panels in existing grade crossings would not be upgraded.

  It is estimated that implementation of this Project would require approximately 212 grade crossings to be upgraded if the Sacramento Subdivision from Stockton to Sacramento is implemented and that 218 grade crossings would be impacted if the Fresno Subdivision is implemented. There are currently no grade separations anticipated. Exact grade crossing locations would be determined during the Project development phase.

1.2.1.7 Culverts

It is estimated that the extension of approximately 244 culverts would be required on the Sacramento Subdivision. Approximately 247 culverts would be impacted if the Fresno Subdivision is implemented. Exact culvert locations would be determined during the project development phase. Figure 1-10 contains a photo of a typical culvert.

1.2.1.8 Road Improvements

Several at-grade road crossing improvements may be required as part of the proposed Project. Exact road improvements would be determined during the project development phase.

1.2.1.9 Other Project Aspects

- Land Acquisition
  The width of railroad right-of-way varies throughout the San Joaquin Corridor. Along most of the alignment, the existing right-of-way is sufficient for completion of the proposed track improvements, with a distance of 15 to 20 feet between track centers.

- Utility Crossings
  It is anticipated that there would be utility crossings affected by the Project. These may include natural gas and oil pipelines; water and sewer lines; electric, cable, and telephone lines; storm drains; and industrial product and waste lines (caustic soda, nitrogen, and oxygen gas lines). Construction would avoid the utility crossings, if possible. If not, the lines would be relocated within the railroad right-of-way. A utility line within the railroad right-of-way that is no longer necessary would be removed or closed. Any utility relocations or closures would be implemented only after close coordination with the utility owner(s).

- Staging Areas
  A number of staging areas would be necessary in order to accommodate storage of equipment, materials, and employee parking. The staging areas would be located along the railroad right-of-way at a distance of at least 25 feet from the closest track. Necessary staging areas outside the railroad's right-of-way would be the contractor's responsibility and cannot be identified at this time. If permits (entitlements or regulatory permits) are required for staging areas, they would be obtained by the contractor and any subsequent environmental documentation would be prepared and processed on a case-by-case basis by the contractor.

- Grade Separations
  The proposed 22 train, 90 mph operational scenario in 2035 would not require the construction of any new grade separations.

- Permits
  Various permits would be required for the proposed project. They include, but are not limited to, Section 404 permit from the U.S. Army Corps of Engineers (Corps); California Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification; California Department of Fish and Game (CDFG) Streambed Alteration Agreement (1601 or 1603 Agreement); and construction stormwater discharge permit National Pollution Discharge Elimination System (NPDES) through filing a Notice of Intent and compiling a Storm Water Pollution Prevention Plan (SWPPP) with the RWQCB. It may also be necessary to obtain incidental take permits for listed protected species from the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Game (CDFG). County Drainage Permits would be required from each county that the proposed Project alignment would traverse for activities affecting watercourses and drainage facilities in unincorporated areas. A Flood Control Encroachment Permit may be required for any temporary or permanent encroachment on County Flood Control and Water Conservation District properties or rights-of-way.

1.2.2 Construction Scenario

1.2.2.1 General

The proposed Project track installation would be completed by implementing a series of construction activities. Contracts for construction of new track are typically awarded on an incremental basis. For example, a logical construction segment would be from Merced to LeGrand. It would require an estimated 9 to 12 months to install a 5 to 10-mile segment of new track, excluding the need for grading, permitting, or grade separations. It is estimated that about 31 years of construction activity would be required to install the approximately 312 miles of new track envisioned for this project. Thus, for analysis of potential Project-related construction impacts, it is assumed that two track segments may be under construction at any given time over the 25-year period through 2035.

For a complex project component, such as constructing a new bridge over the San Joaquin River (near Fresno) or the Nichols Curve Bridge near Port Chicago and related track improvements, the track construction period could extend to between 24 to 36 months.

Installation of new second track and support facilities would involve a series of construction activities that would culminate in BNSF or UP track-laying teams installing welded rail on new fill that would be placed along a segment selected for an additional track. The proposed welded rail type (136/141 #CWR) is among the heaviest rail currently being used by BNSF and UP, and provides the best ride and safety for high speed trains, such as the existing passenger trains.

1.2.2.2 Construction Process

The first step in the construction process would be to remove and compact existing soil material within the project alignment and install fill to elevate the new track surface an average of about 5 feet above existing ground level in order to match the existing track elevation. This also maintains a drainage ditch adjacent to the track to manage stormwater runoff. This is accomplished in the following manner:

- A grading contractor would be engaged to first create a compacted base for installation of the sub-ballast. For planning purposes, it is assumed that approximately 50,000 cubic yards (cy) of this material would be excavated within a 10-mile alignment adjacent to existing track(s). About 30,000 cy would be utilized to make the new high fill. The remaining 20,000 cy of material would be exported from the site and made available to contractors as fill material. Assuming 20 cy per truck, a total of 1,000 truck trips would be required to remove the excavated material. It is assumed that the roundtrip distance would be a maximum of 20 miles. The excavation activities

are proposed to occur over an estimated 4 to 6 months, which is equal to about 17 truck trips per day.

- After the sub-ballast fill is placed, the dirt contractor would place 12 inches of sub-ballast on the subgrade. Overall, an estimated 40,000 cy of material would be used for sub-ballast. The sub-ballast material would be purchased from commercial sources in the project area and delivered by truck. Assuming 20 cy per truck delivery, a total of 2,000 truck trips would be required to import sufficient material to create the new fill and sub-ballast. Assuming 60 days of sub-ballast installation, about 34 truck trips per day would occur to deliver the sub-ballast to the entire project alignment.

- An estimated 30 people are forecast to be employed during the grading operations and typical grading equipment (dozers, graders, rollers, etc.) would be used to excavate the existing material and properly compact and install the fill and sub-ballast. Completion of the fill is expected to require approximately 4 to 6 months from the date construction begins. Due to an expected need to dispose of a portion of the excavated material, it is assumed that a maximum of 60 truck trips would occur per day during this phase of construction.

During the same period that the fill is being installed, a separate work crew will be installing bridges, drainage pipes/culverts, and other support facilities for the track. Several small culverts and several road crossings will have to be improved to ensure safety for vehicles using these roads. In addition, pipelines (such as water, natural gas, etc.) located under the railroad right-of-way will have to be protected, either by encasement, relocation or other similar measures. An estimated 50 employees may be utilized on this phase of construction. Most of the material for constructing these support facilities will be delivered by truck and are part of the estimated 60 truck deliveries to the project each day. It is anticipated that these facilities will be completed in six to nine months for each construction contract within a segment of this corridor.

The final phase of construction involves laying the new track and upgrading existing track. Track laying will be carried out by BNSF and UP personnel using a Track Laying Machine (TLM), with the majority of track work materials delivered and installed by rail. Rail, concrete ties, and ballast rock will be installed in sequence as follows:

- Approximately 5 percent of the railroad ballast (1,600 cy or 100 trucks in a 10-day period) will be delivered, laid by bottom dump truck, and leveled by graders to provide an initial working surface.
- The new rail will be delivered by a special train in 1,140-foot segments and laid alongside the existing track.
- The TLM will arrive with all needed ties on flatcars, and position the ties and rail on the newly laid ballast - approximately on alignment, but below final grade.
- Railroad cars with the remainder of the ballast will travel on top of the partially built skeleton track, and unload the ballast on top of the ties and rail.
- Specialized rail-mounted equipment will surface the track structure to final alignment and grade, smoothing the ballast placement and installing safety walkways beside the track as required.
- New signals required for operation and safety will be installed and hooked up to BNSF and UP electrical and communication systems which parallel the existing track. In addition, the access road will be improved for the track corridor to provide for ongoing operations and maintenance.

The final phase of construction would take approximately two months for completion. The new rail will be delivered by a special train in 1,140-foot segments. The new track can be installed at a rate of approximately one mile per day. Track laying requires approximately 50 people to carry out the required tasks. At the same time new signals required for operation and safety will be installed and connected to the railroad electrical and communication systems. When the track and signals have been installed and tested, the new track will be available to support train operations.

Both rail and vehicular traffic will be maintained within the corridor through the period of construction. Disturbance at an individual road crossing occurs only for a few days, except where bridges are being

installed. Where road crossings are improved, vehicular traffic will be detoured for short periods of time. This activity will be coordinated with the appropriate local agency with roadway responsibility. It is anticipated that the majority of the construction activities will take place in the daytime with the exception of major cutovers. This work will need to be coordinated with railroad operations and be scheduled during construction windows in existing track operations.

1.2.3 Expanded Program Elements

A variety of program elements (infrastructure support systems) are presented here for inclusion in all of the alternatives analyzed in this document. These include both fixed stock (rail infra-structure such as tracks, signals, stations, other building, electric wires, etc.) and rolling stock (all the vehicles that move on a railway).

1.2.3.1 Maintenance Facility

The proposed Project includes the installation of a rail operations and maintenance facility to be located in the City of Sacramento for the purpose of servicing rolling stock equipment that will be procured to address a growing demand for intercity passenger rail services. A maintenance yard and shop has been designed to handle routine and periodic inspections and repairs (fueling, sanding, inspections and light repairs), as well as heavy maintenance for both coach cars and locomotives. In addition to tracks and repair bays, the maintenance facility would contain mechanic support areas; an operations control center; transportation support areas for train engineers (day room, lockers, train control and dispatch, etc.); materials handling areas; administrative offices; and possibly other supporting services such as training and security. The maintenance facility is currently proposed to be located generally between 20th Street and 28th Street, adjacent to the UP track. Figure 1-11 shows the proposed location of the maintenance facility and Figure 1-12 is an aerial photo of the proposed maintenance facility site. Current uses include brownfields, disturbed fields, a parking lot, and retention basin.

1.2.3.2 New Stations

A new rail station, or refurbishment of the existing station in Stockton, is proposed as part of the Project. Amtrak currently has one rail station in Stockton, consisting of a building with a waiting room (the San Joaquin Street Station located at 735 South San Joaquin Street), which consists of most transit amenities The station services the 8 Amtrak trains on the Oakland to Bakersfield route. There is also a second Amtrak stop that has one platform with shelter (the ACE Station located at 949 East Channel Street) served by 4 Amtrak trains.

A new station would replace the existing station. It would include standard rail station design features, such as platforms that extend the full length of the passenger boarding area to permit boarding to all accessible train cars. It would be equipped with shelter, lighting, signage, schedules, leaning bars, information kiosks, ticket vending machines, as well as have adequate space for dedicated bus passenger circulation, loading or unloading bays and shelters, van, shuttle, taxicab, and passenger vehicle drop-off. Once a new station site is selected and funds become available, the project will follow a general construction scenario.

Plans for the new station include a police-staffed, state-of-the-art, Emergency Operations Center (EOC), in which all stations, staffed and unstaffed, would be monitored. The EOC will incorporate a security management system that consists of video surveillance, access control, motion detection, intercoms and emergency mass notifications to ensure maximum safety for all passengers within our facilities.

Five alternative locations were considered for the new Stockton station. (See figure 1-13, USGS topographic map.) Descriptions of these locations are as follows:

- Stockton Station Alternative 1 (See Figure 1-14): Alternative 1 would include the development of a new Amtrak station to be located at the corner of East Scotts Avenue and South Wilson Way, compass north of the BNSF mainline in the City of Stockton. The site is currently developed with

industrial and commercial uses. Implementation of this alternative would include the demolition of existing facilities in order to accommodate the new train station. Standard rail station design features, as described above, would be implemented. Caltrans concluded that Alternative 1 should not be given further consideration because a station at this location would require a difficult backup maneuver for trains heading to the San Francisco Bay area (Oakland), which comprises the majority of the train movements through Stockton. It would also cause delays in the schedule. Therefore, Alternative 1 will not be given further consideration in this environmental document.

- Stockton Station Alternative 2 (See Figure 1-15): Alternative 2 would include the development of a new Amtrak station as part of the existing Robert J. Cabral Altamont Commuter Express (ACE) train station located at 949 East Channel Street in the City of Stockton. The site is currently developed with a bus station and parking lots. The existing Union Pacific mainline runs directly east of the site. Several residences along Channel Street would need to be demolished as part of the implementation of Alternative 2. Similarly, the Stockton Civic Center, located on the corner of East Miner Avenue and South Aurora Street, would be demolished as part of implementation of Alternative 2. Standard rail station design features, as described above, would be implemented. Caltrans concluded that Alternative 2 should not be given further consideration because a station at this location would require a difficult backup maneuver for trains heading to the San Francisco Bay area (Oakland), which comprises the majority of the train movements through Stockton. Therefore, Alternative 2 will not be given further consideration in this environmental document.

- Stockton Station Alternative 3 (See Figure 1-16): Alternative 3 would include the development of a new Amtrak station located at the site of the old Western Pacific train depot, on the corner of Weber Avenue and North Union Street in the City of Stockton. Portions of the site are undeveloped, but the old depot remains. Standard rail station design features, as described above, would be implemented. Caltrans concluded that Alternative 3 should not be given further consideration because a station at this location would require a difficult backup maneuver for trains heading to the San Francisco Bay area (Oakland), which comprises the majority of the train movements through Stockton. Therefore, Alternative 3 will not be given further consideration in this environmental document.

- Stockton Station Alternative 4 (See Figure 1-17): Alternative 4 would include the development of a new Amtrak station located at the corner of East Scotts Avenue and Pilgrim Street in the City of Stockton on the BNSF right-of-way. Currently, the site is developed with a manufacturing plant. The site also contains a rail interlock connecting the UP and BNSF railroads. Implementation of Alternative 4 would include the demolition of the manufacturing plant. Existing tracks are located west and south of this site. Standard rail station design features, as described above, would be implemented. This alternative location would serve passengers on both the Oakland to Bakersfield and Sacramento to Bakersfield routes. Alternative 4 is the preferred location for a new passenger rail station, because it could easily serve both the Oakland and Sacramento trains that use the San Joaquin Corridor.

- Stockton Station Alternative 5 (See Figure 1-18): Alternative 5 would rehabilitate the existing Amtrak station located on the BNSF right-of-way at 735 South San Joaquin Street in the City of Stockton. Existing train tracks are located directly south of this site. Rehabilitation of this station would include an expansion of existing facilities to accommodate additional passengers. This Alternative would also include the demolition of commercial uses currently located on the southern portion of the site to accommodate expansion. Standard rail station design features, as described above, would be implemented. Alternative 5 is considered a viable, if not the preferred, alternative.

1.2.3.3 Layover Facilities

Within the 25-year planning period, Caltrans proposes initiating two train operations from the middle of the San Joaquin Corridor, either from Merced or Fresno. The objective would be to start a train early in

the morning that would head north to Sacramento and south to Bakersfield. This would allow mid-route passengers to reach the Bay Area, or Bakersfield, at the start of the work day. The train would return to the layover facility at the end of the day.[1]

The new layover facility would include a storage yard; light running maintenance and repair area; support shops; parts storage; mechanical and electrical rooms; and administrative offices. Such a facility would reduce the need to run "deadhead" trains (i.e., trains without passengers), which will reduce the cost of operation and improve the utilization of train crews. The facility will be designed and built to accommodate planned and future service requirements.

Descriptions of the potential layover locations are as follows:

- Fresno Layover Facility Alternative (See Figures 1-19 and 1-20): This Alternative would include the development of a layover facility located in the City of Fresno that would extend along the existing train tracks from Tulare Street in the north to Walker Avenue in the south. The layover facility would be located adjacent to the existing Fresno Amtrak station. This site is constrained by its small size and ability to meet the layover objective.

- Merced Layover Facility Alternative (See Figures 1-21 and 1-22): This Alternative would include the development of a layover facility located in the City of Merced that would extend along the existing train tracks from K Street in the north to 6th Avenue in the south. The layover facility would be located adjacent to the existing Merced Amtrak station.

1.2.3.4 Track Relocation

A track relocation project underway in the City of Sacramento has realigned the existing UP tracks approximately 1,000 feet to the north, closer to the Sacramento River. The tracks have been relocated to the northeast end of the Old Sacramento Rail Yard, which will affect approximately 0.55 miles of track from the UP bridge over the Sacramento River to north 7th Street. This alignment is shown on Figure 1-23. As presently envisioned, the existing historic downtown Amtrak station will continue to serve arriving and departing passengers, but a 1,080-foot underground tunnel would connect to a platform adjacent to the new track alignment. Realignment will allow access for community development to a larger parcel between the existing station and the new track from 7th Street.

1.2.3.5 Equipment Needs

Over the next 25 years new rolling stock will be required to replace equipment that has reached the end of its useful life and to provide new train sets needed to increase the number of train operations along the San Joaquin Corridor from the current 12 trains to the 22 trains envisioned for future operations in 2035. The anticipated useful life of a locomotive, including various rebuild cycles is 30 years, while the current anticipated life of a passenger car is 40 years. The expansion of rail services on the San Joaquin Corridor will require procurement of additional conventional train equipment, including new passenger rail cars and diesel locomotives. Caltrans developed the following estimates of new rolling stock acquisition over the 25-year period. Table 1-2 summarizes a programmatic equipment acquisition schedule over the planning period.

- The current San Joaquin Corridor service requires seven trainsets daily for operation of six roundtrips – four between Bakersfield and Oakland, and two between Bakersfield and Sacramento. These seven trainsets utilize a total of 42 cars and 9 locomotives, including maintenance spares. The current revenue equipment requirements are detailed under the "current" field in of Table 1-2.

[1] Schedules were modeled for Merced where the crew base is currently located. Early morning Fresno service would still be served both ways if Merced were the selected location. The train from the Bay Area goes through to Bakersfield where it is served by the overnight bus connection to and from Los Angeles. The ridership model showed this option would result in a significant increase in through ridership. The southbound morning train from Merced and northbound evening train would both layover in Merced.

- The revenue equipment requirements for the 2020 operating schedule (for both 79 mph and 90 mph scenarios) requires a total of nine trainsets, which includes an additional 12 cars and 2 locomotives, for a total of 54 cars and 11 locomotives (including maintenance spares). A detailed equipment rotation and consist size summary is located under the "2020 79 mph" and "2020 90 mph" fields in Table 1-2. Additionally, between now and 2020, four Superliner cars will be returned to Amtrak and two "Dash 8" locomotives currently used in San Joaquin service are scheduled to be retired. This increases the total new equipment requirement for the implementation of the 2020 operating scenarios to 16 cars and 4 locomotives.

- Implementation of the 2035 90 mph operating scenario will require a total of 17 trainsets, with a total of 110 cars and 20 locomotives (including maintenance spares). A detailed equipment rotation and consist size summary is located under the "2035 90 mph" field in Table 1-2. This represents an increase of 56 cars and nine locomotives over the 2020 operating scenarios (and is an increase of 68 cars and 11 locomotives over current). Additionally, the 38 California Cars and Surfliners and seven F59PHI used to provide the current services will be at the end of their projected useful life by 2035, and will require replacement. This increases the amount of new rolling stock that will need to be acquired in order to implement the 2035 operating scenario to 94 cars and 16 locomotives (56 new cars and 38 replacement cars, and 9 new and 7 replacement locomotives).

1.2.3.6 Bus System Modifications

Modifications to the existing bus system within the San Joaquin Corridor would be necessary as part of the proposed Project, including possible modifications to existing bus routes and development of additional bus routes. Modifications to the bus system may also occur as part of facilities expansion. Expanding the capacity of the current bus system would increase capacity and thus increase the amount of ridership for the overall Amtrak system. Expanding the capacity of the current bus system does not involve direct acquisition of new buses, because the feeder bus service is contracted; the State does not own or operate the buses. Thus, expansion of the Amtrak bus feeder system simply requires modifications of contracts with the bus service providers in response to future demand throughout the extended San Joaquin Corridor service area.

Potential facility improvements to the bus system within the San Joaquin Corridor may include the following elements:

- Bus drop off/loading areas;
- Bus layover facilities;
- Additional bus transfer centers; and
- Bus pullout areas.

Potential route improvements to the bus system within the San Joaquin Corridor may include the following:

- Minor reroutes of existing lines;
- Additional routes to service increased passengers of proposed secondary (bus feeder) segments;
- Additional bus stops; and
- Decreased connection times.

1.2.4 Facility Construction Activities

The proposed Project would be implemented by initiating construction for the support facilities as funding becomes available over the 25-year period. Contracts for construction of new track are typically awarded on an incremental basis. Such contracts are dependent upon funding available from the State or Federal agencies, which also have competing projects in different areas of the state or nation, respectively. The description of second track or other track construction is provided in the previous text. Construction of most Project components will extend over a period of 24-36 months. Larger and more complex projects

are designed to be built, and funded, in phases, allowing time for funding to become available while projects move ahead incrementally.

The following general construction scenario is evaluated in this document for individual facilities. If a facility (new station, maintenance facility, etc.) will be located on a site with existing structures or development, the existing facilities will be demolished and removed, with as much construction material recycled as is possible; the new facility site will be graded and compacted in a manner consistent with the type of facility (examples are provided below); any structural foundation will be constructed; the utilities will be extended to the site concurrent with foundation installation; the new structure or facility and all supporting facilities will be constructed; and the final step will be equipping the new facility as appropriate.

For example, constructing the new maintenance facility in Sacramento would first require clearing the existing property. The site would then be graded to meet the 40-acre facility footprint, including the lead tracks entering the maintenance facility. Once grading is completed, the foundations for the facility would be constructed, including underground and above ground storage tank components required to fuel and maintain the rolling stock. Utilities would then be extended to the maintenance facility site from the nearest connection point, undergrounded wherever possible. The above ground structures would then be constructed based upon an architectural design. The final step would be to bring in all of the necessary equipment to operate the maintenance facility.

Table 1-2: Future Equipment Forecast

	Cab/ Baggage	Coach	Café-Lounge	Locomotive	Total # of Cars	Total # of Trainsets
Current revenue requirements*	9	24	9	9	42	7
2020 79/90mph total revenue operating requirement*	11	32	11	11	54	9
new revenue equipment required (increase over current)	2	8	2	2	12	2
equipment due for replacement by 2020	0	4	0	2	4	--
total new & replacement equipment for 2020 79/90mph	**2**	**12**	**2**	**4**	**16**	**2**
2035 90mph total revenue operating requirement*	20	70	20	20	110	17
new revenue equipment required (increase over 2020)	9	38	9	9	56	--
new revenue equipment required (increase over current)	*11*	*46*	*11*	*11*	*68*	*10*
equipment due for replacement by 2035	9	20	9	7	38	--
total new revenue & replacement equipment for 2035 90mph	**18**	**58**	**18**	**16**	**94**	**--**
total new revenue equipment (2020 and 2035)	11	46	11	11	68	--
total replacement equipment (2020 and 2035)	9	24	9	9	42	--

* Revenue requirements include maintenance spares.

Assumptions:

a) There are no shared trainsets between the San Joaquin and Capitol Corridor trains. All equipment shown operates exclusively on the San Joaquin corridor.
b) Consist size is calculated to accommodate peak ridership levels, and is based on the maximum peak ridership for all schedules within a given trainset's rotational pattern.
c) No additional layover facilities will be required at Bakersfield, Oakland or Sacramento to accommodate these operating scenarios.
d) Any additional station platform capacity required to implement these scenarios will be addressed elsewhere in the document.
e) The Merced layover facility is addressed elsewhere in the environmental document.
f) All trains will have a cab/baggage and café-lounge car, including both sections of trains that split or combine at Stockton (thus, combined trains operating south of Stockton will have two café-lounge cars, two cab/baggage cars coupled face-to-face, and a locomotive on each end). This is required to meet the requirements of set interchangeability, passenger service and equipment maintenance.
g) All equipment will rotate through a primary maintenance facility (Oakland or Sacramento) for servicing at least once during its rotational cycle.
h) No analysis was performed to validate the operability of the schedules, or to confirm that the equipment will be operationally capable of meeting the schedule times and speeds.

1.3 Alternatives

CEQA and its guidelines require an evaluation of alternatives to the proposed Project. Section 15126 of the CEQA Guidelines indicates that the "discussion of alternatives shall focus on alternatives capable of eliminating any significant adverse environmental effects or reducing them to a level of not significant…" One of the alternatives that must be evaluated is a "no project/no change alternative" regardless of whether it is a feasible alternative to the proposed Project, i.e., would meet the Project objectives or requirements. Under the No Project alternative, the environmental impacts that would occur if the proposed Project is not approved and implemented are identified.

NEPA and its guidelines have similar requirements regarding alternatives analysis. Part 1502 of the Council on Environmental Quality (CEQ) Regulations requires that agencies "rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated" and "devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits" (Sec. 1502.14).

The alternatives described below are designed to satisfy the initial State requirements and in the future the Federal alternatives analysis regulations.

1.3.1 No Project Alternative

The No Project alternative is the baseline for comparison of the alternatives, as described below. Under the No Project alternative, the existing rail system would not be expanded along any of the segments included in the proposed Project.[2] The No Project alternative would not meet the Project purpose and need because it would lack the facilities described as necessary elements of the proposed Project that would accommodate existing and future passenger rail demand and projected increases in ridership through 2035. In addition, the No Project alternative has the potential to cause increased vehicular travel and congestion on roadways due to lack of adequate passenger rail capacity along the San Joaquin Corridor, and would not help achieve the goals of state and local transportation plans.

1.3.1.1 Freight Rail

The purpose of the proposed Project is to serve passenger rail demand over the next 25 years. However, Project implementation would also benefit freight rail operations because the additional infrastructure improvements would increase capacity and reduce congestion along the San Joaquin Corridor for all trains. Thus, the No Project Alternative would not provide additional operational benefits to freight rail operations, which would affect the efficiency of future goods movement. As goods movement is anticipated to increase, either longer or more frequent trains would be required for this purpose. Insufficient capacity to transport goods by rail could also lead to increased goods movement by trucks. Thus, the No Project Alternative would have transportation impacts due to additional truck traffic on the roadways, with resultant negative air quality impacts in the long term.

1.3.1.2 San Joaquin Corridor Strategic Plan

The San Joaquin Corridor Strategic Plan includes details on projects that are programmed or currently underway. The BNSF, UP, and SJVR all currently have projects that are either underway or approved and are waiting for construction, or funding, to begin. Projects are defined as underway if State funds have been allocated by the California Transportation Commission (CTC) or if other funding sources (such as FRA, Amtrak, local, or others) are provided and under contract. Larger projects are often funded and completed in phases. Programmed projects are defined as projects that have been approved, but

[2] Implementation of the No Project alternative would not preclude previously approved projects from being developed. Rail projects within the San Joaquin Corridor that have been approved prior to the certification and approval of the proposed Project could be developed under the No Project alternative.

funding will not be available until sometime in the future. Current programmed projects include track and signal upgrades, route capacity improvements, and a number of station area improvements. Proposed immediate projects are defined as projects that would be developed in one to two years.

1.3.2 Proposed Project

The proposed Project would include three main rail line segments that traverse over 360 miles:

- Bakersfield to Port Chicago (BNSF) – Milepost 887.7 to Milepost 1164.0 (276.6 track miles);
- Port Chicago to Oakland (UP) – Milepost 41.3 to Milepost 3.2 (34.5 track miles); and
- Stockton to Sacramento (UP) – Milepost 1121.4 to Milepost 88.8 (49 track miles). Two separate line segment alternatives are proposed that would extend from Stockton to Sacramento. The first proposed alternative would generally extend just east of Interstate 5 from Stockton to Sacramento. The second proposed alternative for this segment would extend generally to the east of State Route 99 from Stockton to Sacramento. Only one alternative alignment for this segment would be implemented as part of the proposed Project.

These tracks would be installed adjacent to existing BNSF and UP rail lines, as part of a double or, in some cases, a triple track system. The segments would require bridges, culverts, grade crossings, utility crossings, staging areas and road improvements as part of the general design. The proposed Project would also require permit acquisition, and when necessary, land acquisition. In addition to the proposed infrastructure improvements (segments), the proposed Project would include the following elements:

- Additional maintenance facility for trains;
- New or rehabilitated passenger station within Stockton City limits;
- New layover facility (possibly in Merced or Fresno);
- Equipment Needs (including railcars, locomotives, wayside objects, etc.); and
- Bus system modifications.

1.3.2.1 Purpose and Need

The purpose of the proposed rail improvements to the San Joaquin Corridor is to accommodate existing and future passenger rail demand and projected increases in ridership through 2035. The proposed Project would increase the number of daily round trips from 16 to 22 trains operating per day. The proposed Project also includes increasing the maximum passenger train speed to 90 mph along the corridor. Further, the proposed Project would serve to improve rail safety and operation and provide increased availability of public transportation; which would in turn help reduce vehicular emissions and achieve the air quality goals of state and local plans.

The need for the proposed rail improvements to the San Joaquin Corridor is demonstrated by ridership increases and the increased number of standees on board the corridor trains, demonstrating the need to increase the capacity of the current system to meet existing travel demand. The proposed project is also needed to reduce negative impacts to the natural environment and air quality that would result as additional roadways are constructed and vehicular use increases.

1.3.2.2 Travel Demand

The San Joaquin Corridor (Bakersfield to Oakland, Los Angeles and Sacramento) is a major transportation resource between Southern and Northern California. It boasts the fifth highest ridership of any Amtrak service in the country and serves a vital function in providing intercity passenger rail service within and between cities in California's Central Valley.[3] As California's population continues to increase, the travel demand will also increase, with passenger rail ridership growth anticipated to outpace the number of trains available to serve the population.

[3] San Joaquin Corridor Strategic Plan, California Department of Transportation, January 2008. p.1-2.

The California State Rail Plan (2007-08 to 2017-18) (Plan) proposes implementation of 10-year intercity passenger rail service expansion to address projected increases in passenger rail ridership. There are currently 6 train round trips occurring on this route. Caltrans anticipates that within the next 10 years, there will be sufficient demand to support 8 train round trips on the San Joaquin Corridor, with 2 additional round trips operating between Oakland and Stockton.[4] One of the Plan's principal route objectives for the San Joaquin Corridor (defined by the Plan as Bay Area/Sacramento – Fresno – Bakersfield – Los Angeles) includes a 66 percent increase in annual ridership from 853,000 to 1,417,000, with a corresponding 105 percent increase in annual revenues from $27.8 million to $56.9 million.[5]

1.3.2.3 Safety

Passenger rail is known to be one of the safest modes of transportation in the nation, with significantly less accident risk than vehicle travel. The projected increase in passenger rail ridership does, however, bring with it an inherent increase of risk for accidents. In particular, the potential of rail/automobile collisions at grade crossings is elevated with the corresponding increase in the number of vehicles on the road and more frequent, faster trains. The San Joaquin Corridor Strategic Plan notes that the "San Joaquins" have over 400 public and private at-grade crossings throughout the corridor on both the UP and BNSF rail lines. On the BNSF route alone, there are 362 at-grade crossings with 255 public and 107 private crossings. In California, the San Joaquin Corridor has 3 out of the top 10, and 8 out of the top 20 at-grade road crossings with the most accidents between 1995 and 2004.[6] The consideration of safety will weigh heavily upon proposed rail improvement design features for the San Joaquin Corridor.

1.3.2.4 Natural Environment and Air Quality

Caltrans considers the preservation and improvement of the natural environment and air quality one of its key goals in its vision for intercity passenger rail. Both rail passenger and rail freight service contribute to improved air quality by reducing vehicle miles traveled and vehicle emissions. It reduces fuel consumption, thereby helping to limit dependence on scarce petroleum resources. It also helps to reduce the need for highway construction, which can contribute to inefficient land use patterns and their loss of economically, environmentally, and historically valuable land.[7] Expansion of the intercity passenger rail system on the San Joaquin Corridor will provide the opportunity to move more passengers by rail versus automobile.

1.3.3 Proposed Project with a Secondary Segment from Fresno to Visalia (San Joaquin Valley Rail – SJVR)

This alternative includes all facilities and components described above in Section 1.3.2 (proposed Project). In addition, this alternative would include the development of a secondary rail segment that would extend from Fresno to Visalia. One to two additional trains are proposed for the Fresno to Visalia segment. The San Joaquin Corridor Strategic Plan originally envisioned service to Porterville, but no trains are currently being operated to Porterville; nor are the tracks being maintained for service. Therefore, the extension of passenger train service to Porterville is not considered to be a viable alternative, and it will not be given further consideration in this document.

Enhanced track would occur along the existing SJVR alignments, either Fresno to Visalia or Fresno to Hanford to Visalia. The former segment is operated by SJVR, but they are leasing the tracks that are owned by the UP. The latter segment would travel the BNSF tracks from Fresno to Hanford and then the SJVR tracks from Hanford to Visalia. Refer to Figure 1-4 which shows the proposed two alignments for a Fresno to Visalia passenger train service. Two trains per day would operate along this segment, including one train to Fresno and from Fresno. The additional trains proposed for this segment would travel at

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[4] California State Rail Plan (2007-08 to 2017-18), California Department of Transportation, March 2008. p. 114.

[5] Ibid.

[6] San Joaquin Corridor Strategic Plan, California Department of Transportation, January 2008. p. 1-6.

[7] California State Rail Plan (2007-08 to 2017-18), California Department of Transportation, March 2008. p. 10.

speeds between 79 to 90 miles per hour, based on the track geometry and signal system. This segment would require upgraded tracks, signals, bridges, warning devices, and grade crossings.

The SJVR operates over a total of 417 miles of track in the San Joaquin Valley, interchanging with the UP at Fresno, Goshen Junction, and Bakersfield. The SJVR interchanges with BNSF at Fresno and Hanford.

Implementation of a second segment from Fresno to Visalia would enable SJVR to increase its capacity to serve both existing and future demand. Service expansion to Visalia is projected to generate an additional 25,400 passengers per year in the next 10 years and 89,900 passengers per year in the next 25 years over the projected baseline ridership, with an estimated travel time between Fresno and Visalia of 1 hour and 12 minutes.

1.3.3.1 General Design Features

The alignment of the proposed secondary segment would utilize the existing track and would be designed for a maximum allowable speed of 90 miles per hour for intercity passenger trains. All design features would be constructed to conform to current UP construction standards.

1.3.3.2 Structural Bridge Design

All bridge design would follow UP and American Railway Engineering and Maintenance-of-Way Association (AREMA) standards. The existing bridges would be replaced with pre-cast concrete slabs, as appropriate, in order to expand the width of the bridges. All bridges would be constructed by preparing the subgrade, driving piles, then constructing piers, and installing the bridge span.

1.3.3.3 Grade Crossing Design

Grade crossings would follow current UP standards, using pre-cast steel clad, shunt resistant concrete panels on 10-foot long timber ties spaced on 19.5 inch centers. The timber ties would use tie plates. End ramps would be provided per UP standards. Generally, new 8-foot concrete crossing panels would be installed for the secondary track.

1.3.3.4 Culverts

Existing culverts would be extended, and drainage ditches adjacent to the tracks would be reconstructed as required to maintain historic flow paths.

1.3.3.5 Road Improvements

It is anticipated that road improvements would be necessary as part of implementation of the secondary segment. New signals required for operation and safety would be installed and hooked up to SJVR's electrical and communication systems which parallel the existing track.

1.3.3.6 Land Acquisition

Implementation of the secondary segment would generally occur within the existing right-of-way, with the potential for limited right-of-way acquisition, if necessary. A final land acquisition determination would be made during final engineering design.

1.3.3.7 Utility Crossings

It is anticipated that utility lines would be affected by implementation of a secondary segment from Fresno to Visalia. The lines may include natural gas and oil pipelines; water and sewer lines; storm drains; electric, cable, and telephone lines; and industrial products and waste lines. The lines would be left in place and avoided during construction; or, working in conjunction with the owners of the utility lines, the

lines would be relocated within the right-of-way. All utility relocations would only be implemented after close coordination with the owner(s) of the utility line.

1.3.3.8 Staging Areas

It is anticipated that staging areas would be necessary during the construction of the secondary segment from Fresno to Visalia. Exact locations of the staging areas would be determined during construction planning. When permits (entitlements or regulatory permits) are required for staging areas, such permits would be obtained by the contractor. Any subsequent environmental documentation required would be prepared and processed on a case-by-case basis by the contractor.

1.3.3.9 Permits

Implementation of a secondary segment from Fresno to Visalia may require obtaining permits, including, but not limited to a: Section 404 permit from the U.S. Army Corps of Engineers (Corps); California Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification; California Department of Fish and Game (CDFG) Streambed Alteration Agreement (1601 or 1603 Agreement); and a construction stormwater discharge permit–National Pollution Discharge Elimination System (NPDES) through filing a Notice of Intent and compiling a Storm Water Pollution Prevention Plan (SWPPP) with the RWQCB. It may also be necessary to obtain incidental take permits for listed protected species from the USFWS and CDFG. County Drainage Permits may be required from each county through which the proposed secondary segment would traverse for activities affecting watercourses and drainage facilities in unincorporated areas. A Flood Control Encroachment Permit may be required for any temporary or permanent encroachment on County Flood Control and Water Conservation District properties or rights-of-way.

1.3.3.10 Purpose and Need

The purpose and need for this alternative is similar to that of the proposed Project for the portion of rail located in this segment, and would fulfill the same objective. The alignment for this alternative would be shared with the existing SJVR rail line from Fresno to Visalia, and would serve the populations located in the cities along this segment.

1.3.4 Proposed Project with a Secondary Segment from Bakersfield to Los Angeles (UP and SCRRA)

This alternative includes all facilities and components described above in Section 1.3.2 (proposed Project). In addition, this alternative would include the development of a passenger rail segment that would extend from Bakersfield to Los Angeles through Lancaster, a distance of approximately 120 miles. None of the existing rail alignments from the San Joaquin Valley that connect these two locations currently carry passengers. An alignment owned and operated by the UP is currently in operation between Bakersfield and Lancaster. This alignment passes through Tehachapi and Mojave to Lancaster. From Lancaster to Los Angeles, a San Joaquin passenger train would utilize the railroad tracks owned by the Southern California Regional Rail Authority (SCRRA). Refer to Figure 1-5.

The existing UP track segment from Bakersfield to Mojave is dedicated solely to freight service, and is not designed for passenger rail. This is one of the busiest single track freight lines in the western United States. The segment from Mojave to Lancaster is also dedicated solely to freight service. The UP and BNSF share the capacity over this route and do not allow passenger train access over the Tehachapi Pass due to the combination of heavy freight tonnage, the frequency of trains, and track geometry that requires slow operating speeds. Occasionally, the UP will re-route passenger trains over the pass, but this is a rare occurrence and only implemented when maintenance or repairs are required on the normal route. Thus, it is possible for passenger trains to utilize the Bakersfield to Lancaster track segment. Note that under current operating conditions, the San Joaquin Corridor Amtrak operations terminate in Bakersfield and the final segment of travel, Bakersfield to southern California, is provided by Amtrak buses.

Division of Rail (Caltrans) received a request from the San Joaquin Valley Rail Committee to explore the feasibility of operating passenger train service over the Tehachapi Pass. This proposal would allow San Joaquin Corridor trains to be extended via Tehachapi Pass to connect with the Pacific Surfliner Corridor that operates between Los Angeles and San Diego. The evaluation of this proposal identified a number of constraints to the operation of a passenger train through Tehachapi Pass. Because of the high freight density on Tehachapi, the likelihood of interference with BNSF and UP freight trains on this single-track mountain railroad requires any proposed passenger train schedule to plan for delays. To allow passenger service to operate between Bakersfield and Lancaster with minimal impact to freight service and maintain a high level of on-time performance, it was determined that 3 hours of extra time (pad) should be added to the schedule. The provision of a schedule pad allows the use of existing San Joaquin corridor schedules. Additionally, the southbound pad would provide an early morning arrival in Los Angeles for connection with the Pacific Surfliners. It is important that a southbound San Joaquin Amtrak train operate on a regular schedule within Metrolink territory due to the need to interact with Metrolink and Pacific Surfliner trains. This evaluation resulted in the development of a conceptual schedule that holds the southbound San Joaquin train in Palmdale until the train's scheduled morning departure to Los Angeles over Metrolink territory. After departing Palmdale, the train would proceed south to Los Angeles and then continue on to San Diego as a Pacific Surfliner train.

The standout feature of this scenario is that it requires no new equipment with the exception of one sleeping car per train set and one sleeper to serve as a spare. This is because the proposed service operates at night when the equipment sets currently sit overnight in either Los Angeles or Bakersfield. The equipment rotation scenario would be as follows: #718 → #564 → #573 → #580 → #591 → #711. This allows for the train to continue to San Diego as a Pacific Surfliner through train. The #564 → #573 → #580 → #591 rotation will be the actual equipment rotation on the Pacific Surfliner corridor. This rotation would take two equipment sets, with the sets maintained in Oakland every other day between 11:00 a.m. and 5:50 p.m. Three sleepers would be required to operate the service, which will operate as trains #573 → #580. Appendix 5 contains the detailed analysis of this operating scenario.

This alternative proposes to develop the infrastructure necessary to enable the existing UP alignment to carry passenger trains. Infrastructure improvements would be required to satisfy UP rail capacity requirements. The ability to operate over this segment would enable passengers to ride the train continuously from northern California to Los Angeles Union Station, eliminating the need for bus service for this segment of the trip on one train. This alternative would also reduce the total reliance on the extensive bus connections currently operating between Bakersfield and the southern California cities.

1.3.4.1 General Design Features

The alignment of the proposed secondary segment would utilize the existing track and would be designed for a maximum allowable speed of 90 miles per hour for passenger trains, except through Tehachapi Pass. Since the existing alignment is designed for freight rail only, the UP track system would be upgraded as necessary using regulation standards for passenger rail. All design features would be constructed to conform to current UP construction standards. There is currently a separate effort in progress to enhance goods movement through the Tehachapi Pass that would install double track along an additional 8.21 miles of the approximate 25.23 mile route through the Tehachapi Pass from Bena to Marcel. This improvement would provide additional areas through Tehachapi Pass for train meets. The objective of the additional double track is to increase the maximum capacity of this segment from 50 to 65 freight trains, including the ability to add longer trains. Thus, the potential to add one or two passenger trains may be feasible. In order to serve a passenger train in Lancaster, a new connection and platform would need to be constructed between the existing Metrolink station in Lancaster to the UP line. Although the schedule over Tehachapi Pass to Los Angeles Union Station requires about twice the time as the bus trip from Bakersfield to Los Angeles, this alternative will be given consideration as a complete passenger train trip from the Bay Area/Sacramento to Los Angeles.

1.3.4.2 Structural Bridge Design

All bridge design would follow UP and American Railway Engineering and Maintenance-of-Way Association (AREMA) standards. The existing bridges would be replaced with pre-cast concrete slabs as appropriate. All bridges would be constructed by driving piles.

1.3.4.3 Grade Crossing Design

Grade crossings would follow current UP standards, using pre-cast steel clad, shunt resistant concrete panels on 10-foot long timber ties spaced on 19.5 inch centers. The timber ties would use tie plates. End ramps would be provided per UP standards. It is anticipated that road improvements would be necessary as part of implementation of passenger train operations through the Pass.

1.3.4.4 Land Acquisition

Implementation of any track improvements would occur within the existing right-of-way, with the potential for limited right-of-way acquisition, if necessary. A final land acquisition determination would be made during final engineering design.

1.3.4.5 Utility Crossings

It is anticipated that utility lines would be affected by implementation of any track improvements to support passenger train operations from Bakersfield to Lancaster. The lines may include natural gas and oil pipelines; water and sewer lines; storm drains; electric, cable, and telephone lines; and industrial products and waste lines. The lines would be left in place and avoided during construction; or, working in conjunction with the owners of the utility lines, the lines would be relocated within the right-of-way. All utility relocations would only be implemented after close coordination with the owner(s) of the utility line.

1.3.4.6 Staging Areas

It is anticipated that staging areas would be necessary during any construction of track improvements for passenger rail operations from Bakersfield to Lancaster. Exact locations of the staging areas would be determined during construction planning. When permits (entitlements or regulatory permits) are required for staging areas, such permits would be obtained by the contractor. Any subsequent environmental documentation required would be prepared and processed on a case-by-case basis by the contractor.

1.3.4.7 Permits

Implementation of track improvements from Bakersfield to Lancaster may require obtaining permits, including, but not limited to a: Section 404 permit from the U.S. Army Corps of Engineers (Corps); California Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification; California Department of Fish and Game (CDFG) Streambed Alteration Agreement (1601 or 1603 Agreement); and a construction stormwater discharge permit–National Pollution Discharge Elimination System (NPDES) through filing a Notice of Intent and compiling a Storm Water Pollution Prevention Plan (SWPPP) with the RWQCB. It may also be necessary to obtain incidental take permits for listed protected species from the USFWS and CDFG. County Drainage Permits may be required from each county through which the proposed secondary segment would traverse for activities affecting watercourses and drainage facilities in unincorporated areas. A Flood Control Encroachment Permit may be required for any temporary or permanent encroachment on County Flood Control and Water Conservation District properties or rights-of-way.

1.3.4.8 Purpose and Need

The purpose and need for this alternative is similar to that of the proposed Project for the portion of rail located in this segment, and would fulfill the same objectives. The alignment for this alternative would be shared with the existing UP infrastructure from Bakersfield to Lancaster and the existing Metrolink rights-

of-way from Lancaster to Los Angeles Union Station. The new passenger segment would serve the populations located in the cities along its length, as noted in the alternative description above.

1.3.5 Proposed Project BNSF Track Alignment from Port Chicago to Richmond, California

This alternative includes all facilities and components described above in Section 1.3.2 (proposed Project). In addition, this alternative would include the development of a passenger rail segment that would extend along the BNSF tracks between Port Chicago and Richmond. The existing BNSF track between Richmond and Port Chicago is dedicated solely to freight trains and is not designed for passenger rail operations. The current Amtrak passenger trains follow the UP alignment from Port Chicago along the San Francisco Bay from Martinez to Oakland. Under this alternative, the Amtrak passenger trains could also operate on the BNSF owned rights-of-way as an alternative or in an emergency. (See Figure 1-6.)

This alternative proposes to develop infrastructure necessary to enable the existing BNSF alignment to carry passenger trains. Infrastructure improvements would be required to satisfy BNSF rail capacity requirements. This alternative would reduce the total reliance on the UP track for the final segment from Port Chicago into Oakland.

1.3.5.1 General Design Features

The alignment of the proposed secondary segment would utilize the existing track and would be designed for a maximum allowable speed of 90 miles per hour for passenger trains, except through any restricted speed segments. Since the existing alignment is currently designed for freight rail only, the BNSF infrastructure would be upgraded, as necessary, using regulation standards for passenger rail. All design features would be constructed to conform to current BNSF construction standards. A potential to add one or more passenger trains may be feasible, such as a limited passenger train that would stop only at major urban areas along the route, for example, Stockton, Fresno, and Bakersfield.

1.3.5.2 Structural Bridge Design

All bridge design would follow BNSF and American Railway Engineering and Maintenance-of-Way Association (AREMA) standards. The existing bridges would be replaced with pre-cast concrete slabs, as appropriate. All bridges would be constructed by driving piles.

1.3.5.3 Grade Crossing Design

Grade crossings would follow current BNSF standards, using pre-cast steel clad, shunt resistant concrete panels on 10-foot long timber ties spaced on 19.5 inch centers. The timber ties would use tie plates. End ramps would be provided per BNSF standards. It is anticipated that road improvements would be necessary as part of implementation of passenger train operations through this segment of track.

1.3.5.4 Land Acquisition

Implementation of any track improvements would occur within the existing right-of-way, with the potential for limited right-of-way acquisition, if necessary. A final land acquisition determination would be made during final engineering design.

1.3.5.5 Utility Crossings

It is anticipated that utility lines would be affected by implementation of any track improvements to support passenger train operations from Port Chicago to Richmond. The lines may include natural gas and oil pipelines; water and sewer lines; storm drains; electric, cable, and telephone lines; and industrial products and waste lines. The lines would be left in place and avoided during construction; or working in conjunction with the owners of the utility lines, the lines would be relocated within the right-of-way. All utility relocations would only be implemented after close coordination with the owner(s) of the utility line.

1.3.5.6 Staging Areas

It is anticipated that staging areas would be necessary during any construction of track improvements for passenger rail operations from Port Chicago to Richmond. Exact locations of the staging areas would be determined during construction planning. When permits (entitlements or regulatory permits) are required for staging areas, such permits would be obtained by the contractor. Any subsequent environmental documentation required would be prepared and processed on a case-by-case basis by the contractor.

1.3.5.7 Permits

Implementation of track improvements from Port Chicago to Richmond may require obtaining permits, including, but not limited to a: Section 404 permit from the U.S. Army Corps of Engineers (Corps); California Regional Water Quality Control Board (RWQCB) 401 Water Quality Certification; California Department of Fish and Game (CDFG) Streambed Alteration Agreement (1601 or 1603 Agreement); and a construction stormwater discharge permit–National Pollution Discharge Elimination System (NPDES) through filing a Notice of Intent and compiling a Storm Water Pollution Prevention Plan (SWPPP) with the RWQCB. It may also be necessary to obtain incidental take permits for listed protected species from the USFWS and CDFG. County Drainage Permits may be required from each county through which the proposed secondary segment would traverse for activities affecting watercourses and drainage facilities in unincorporated areas. A Flood Control Encroachment Permit may be required for any temporary or permanent encroachment on County Flood Control and Water Conservation District properties or rights-of-way.

1.3.5.8 Purpose and Need

The purpose and need for this alternative alignment is as a backup to the existing UP track alignment for passenger rail operations or for use with a limited type train operation with minimal stops along the route from Oakland to Bakersfield.

1.3.6 Proposed Project Combined with High Speed Rail (HSR)

This alternative analyzes the relationship between the proposed Project in conjunction with the possible future development of high speed rail (HSR) within the San Joaquin Corridor. Amtrak's San Joaquin Corridor is an intercity passenger rail operation that serves as a key alternative transportation mode for the residents of the San Joaquin Valley and throughout the state. Through a combination of train stations in most large communities and an extensive bus feeder system, most of the San Joaquin Valley and Sacramento Valley residents have an alternative mode of transportation to move about the state safely and efficiently, with ultimate connections to both northern and southern California.

A separate high speed rail alignment, originally envisioned to move passengers between San Diego and San Francisco within a few hours, is proposed to be constructed between Bakersfield and either Madera or Merced as a demonstration project. One objective identified under this alternative is to create a "blended" or "integrated" rail system where SJVC trains travel at 90 miles per hour on the existing SJVC tracks to the location of the northern HSR station. Trains at that point would shift to the new HSR track where trains would be allowed to travel at speeds up to 125 mph to an HSR station north of Bakersfield, currently envisioned to be near Jastro, just north and west of downtown Bakersfield. Although this high speed rail system would initially parallel a portion of the San Joaquin Corridor, it would not provide stops throughout the Valley; therefore, it could not serve the entire population of the service area in the same manner as the existing system. A new alignment would be developed as part of this alternative due to a grade separation requirement for any trains traveling speeds in excess of 110 miles per hour. The high speed train is projected to travel at an initial top speed of 125 miles per hour and therefore must consist of a totally separate, isolated track system.

Established in 1996, the California High-Speed Rail Authority (CHSRA) is charged with the planning, design, construction, and operation of a statewide high-speed rail system. The purpose of the CHSRA is to successfully develop approximately 800 miles of a high-speed rail infrastructure that would span from

San Francisco to San Diego, serving up to 24 stations along the route. The need exists for high-speed rail to achieve the goals outlined by the California Legislature. The proposed system would serve some of the same cities currently served by the existing intercity and commuter passenger rail, including Fresno, Merced, Stockton, Bakersfield, San Francisco, and Los Angeles.

Since the CHSRA is responsible for implementing a High Speed Rail system, it is not a traditional alternative to the proposed action. It is being developed as a separate passenger rail system to serve a different clientele and service area. However, Caltrans has concluded that it is essential to define the role that the existing Amtrak passenger system will maintain relative to the proposed High Speed Rail system. Caltrans envisions that the intercity system, including the bus feeder system, will serve as a feeder system to the high-speed rail system, much like the feeder buses serve the intercity rail passenger system. Passengers would take Amtrak intercity passenger rail trains or buses to defined interchange points, which could include joint intercity/high-speed rail stations or a system of bus connections between stations where each system maintains separate stations within the same community. This would allow passengers seeking to use the high speed rail system to continue their journey on high-speed rail trains. At this time an estimated six trains are proposed to operate under the "integrated" system. Additional trains may continue to serve the intercity train demand along the existing BNSF corridor. A specific schedule under this alternative has not been defined, but based on preliminary communications with BNSF, it will require double tracking the whole track alignment between Stockton and Merced (the HSR northern station) to accommodate this alternative. Because the High Speed Rail system has not yet been clearly defined, the exact manner and location of specific connections has not yet been determined, and thus cannot be defined in this document.

1.3.7 Service to Wheeler Ridge

Rail service to Wheeler Ridge (near the Grapevine area along Interstate 5) was analyzed during the earlier phase of Project development based on public comments and stakeholder input, and was presented as an alternative in the San Joaquin Corridor Strategic Plan. Implementation of service would require additional infrastructure in support of an extension of the San Joaquin service south to the Wheeler Ridge/Grapevine area along a new right-of-way.

The acquisition of new right-of-way and construction of new infrastructure for this alternative would result in a high capital cost. In addition, the extent of existing service modification would be high, as coordination with Metrolink along its Antelope Valley line, as well as modifications to the Metrolink or Pacific Surfliner equipment rotations and service timetables would be required. It was determined that these circumstances were prohibitive to implementation of this alternative.[8]

1.4 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for Project construction:

Table 1-3: Permits and Approvals

Agency	Permit/Approval	Status
Corps of Engineers	404 Permit	No Action
Regional Water Board	401	Certification
Department of Fish and Game	Streambed Alteration Agreement	
Department of Fish and Game	CESA Incidental Take Permit	
U.S. Fish and Wildlife Service	FESA Incidental Take Permit	
Local jurisdictions	Encroachment Permits	
Local jurisdictions	Land Use Entitlements	

[8] San Joaquin Corridor Strategic Plan, California Department of Transportation, January 2008. p. 7-6

FIGURES

Figure 1-1: San Joaquin Corridor Intercity Route

Source: J.L. Patterson & Associates, Inc. / Amtrak California

Figure 1-2a: Proposed Track Upgrades – BNSF Bakersfield to Fresno

Source: J.L. Patterson & Associates, Inc.

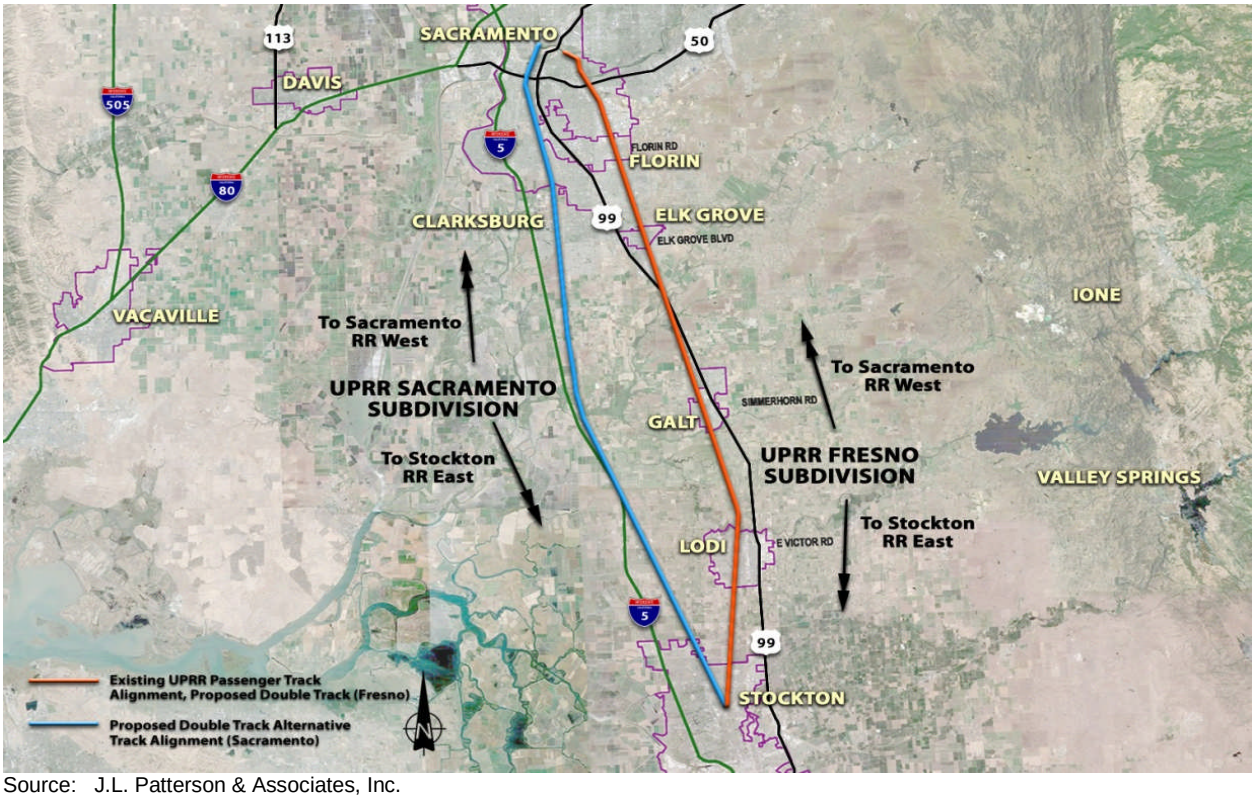
Figure 1-2b: Proposed Track Upgrades – BNSF Fresno to Stockton

Source: J.L. Patterson & Associates, Inc.

Figure 1-2c: Proposed Track Upgrades – UPRR Antioch to Oakland

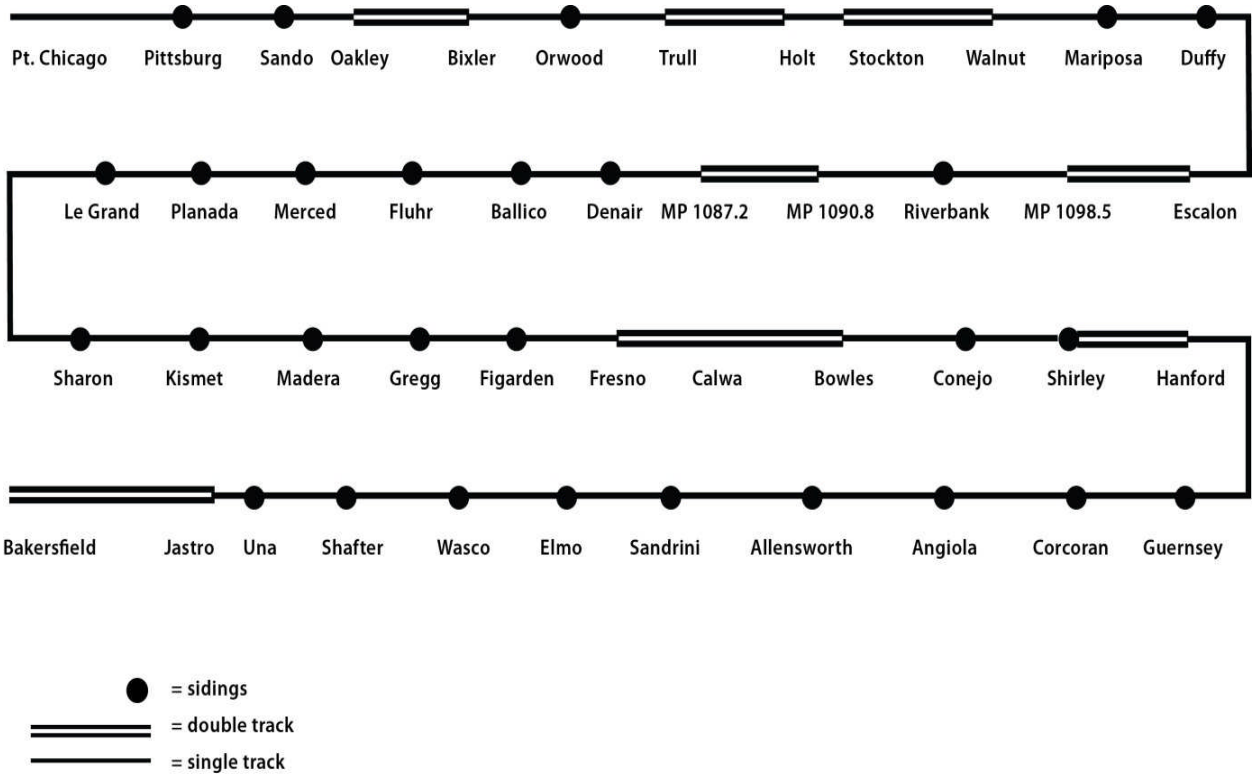
Source: J.L. Patterson & Associates, Inc.

Figure 1-2d: Proposed Track Upgrades – UPRR Stockton to Sacramento



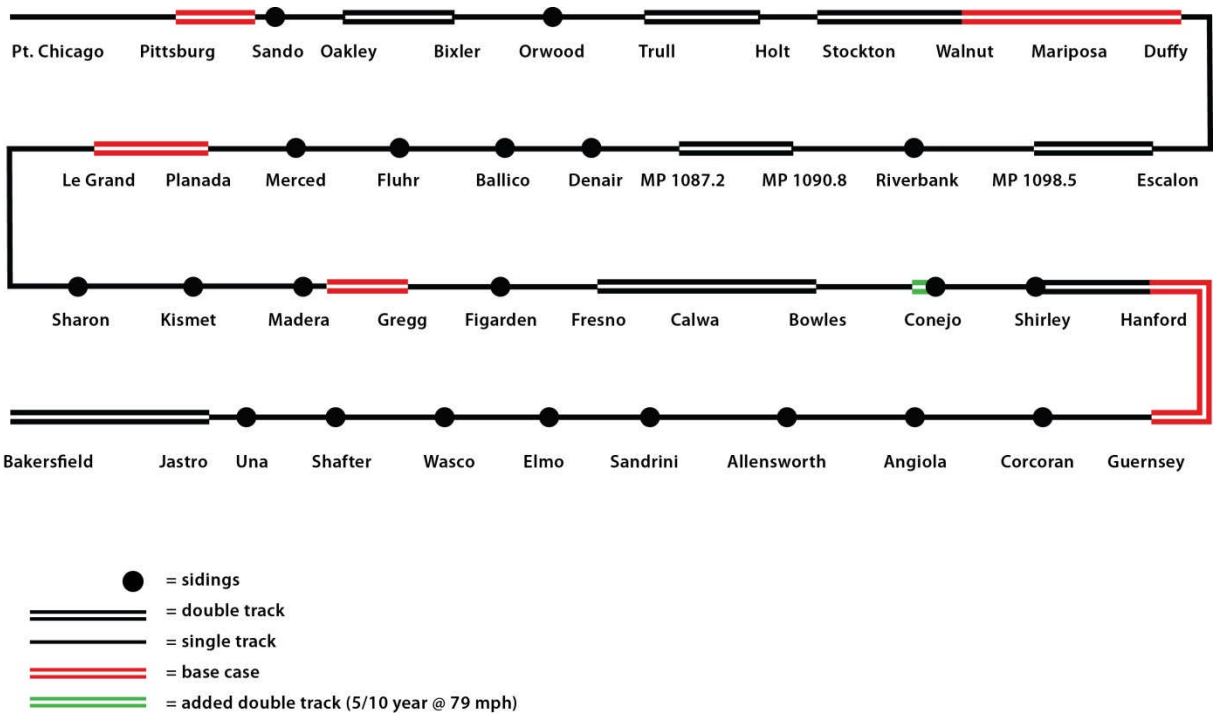
Source: J.L. Patterson & Associates, Inc.

Figure 1-3a: Current BNSF Track Structure



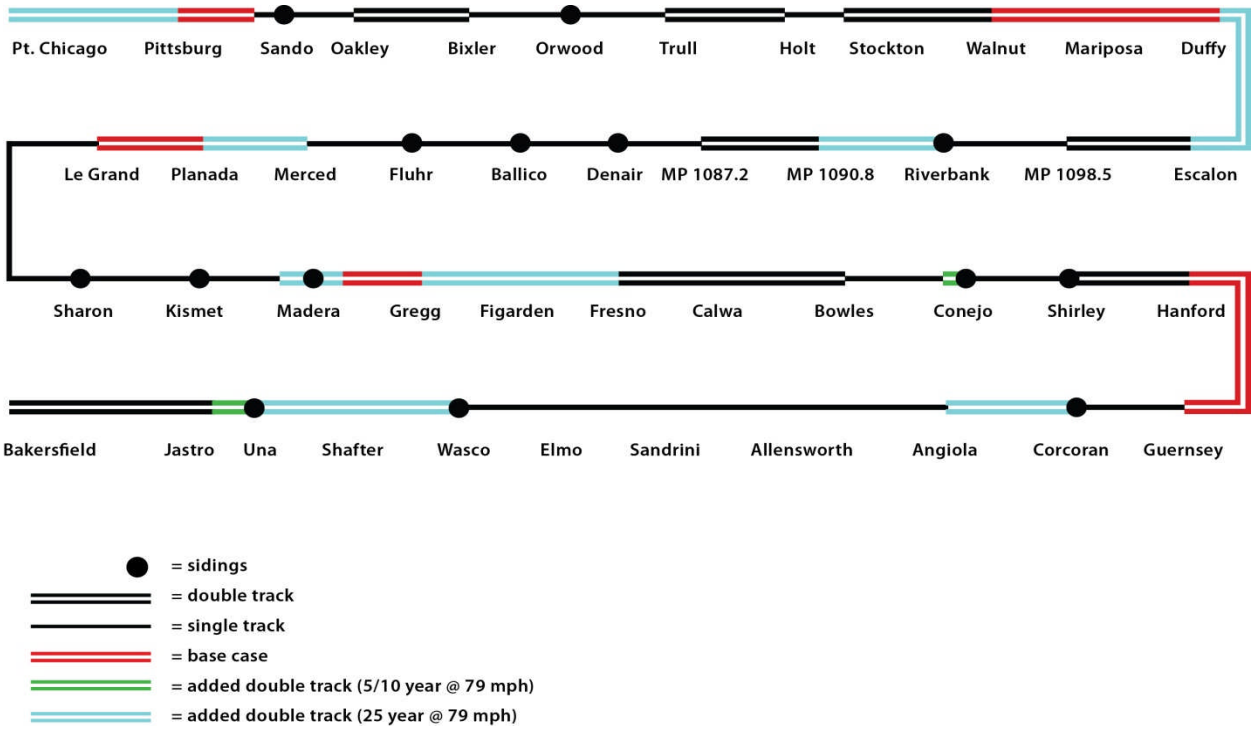
Source: Based on BNSF Railway Modeling Report; Modified from Original

Figure 1-3b: Proposed BNSF 5 / 10-Year (79 mph) Plan



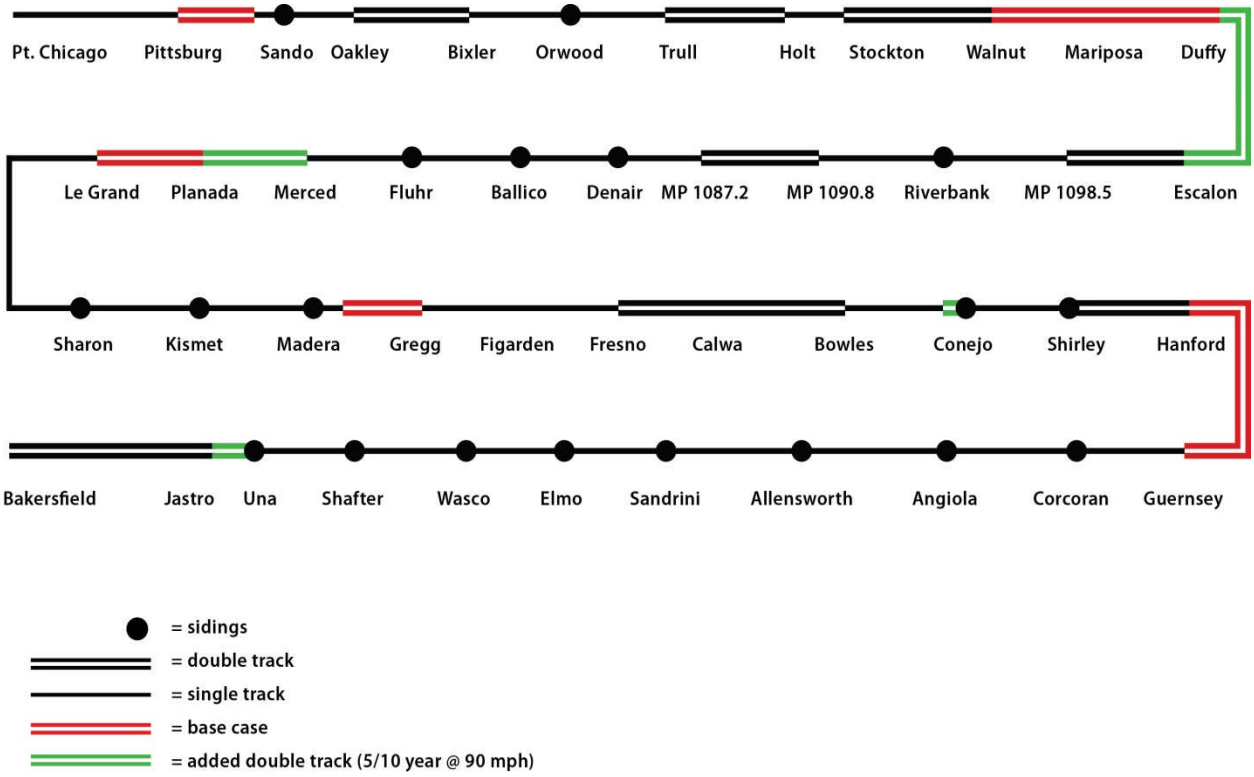
Source: Based on BNSF Railway Modeling Report; Modified from Original

Figure 1-3c: Proposed BNSF 25-Year (79 mph) Plan



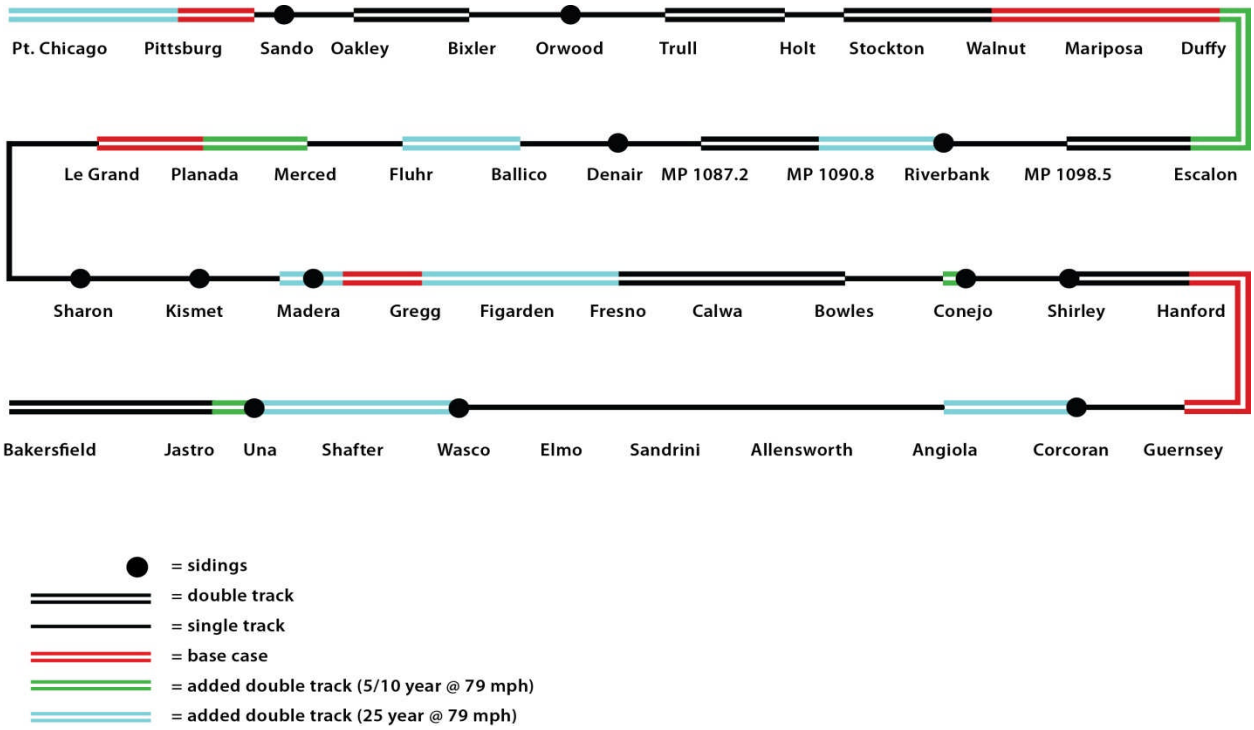
Source: Based on BNSF Railway Modeling Report; Modified from Original

Figure 1-3d: Proposed BNSF 5 / 10-Year (90 mph) Plan



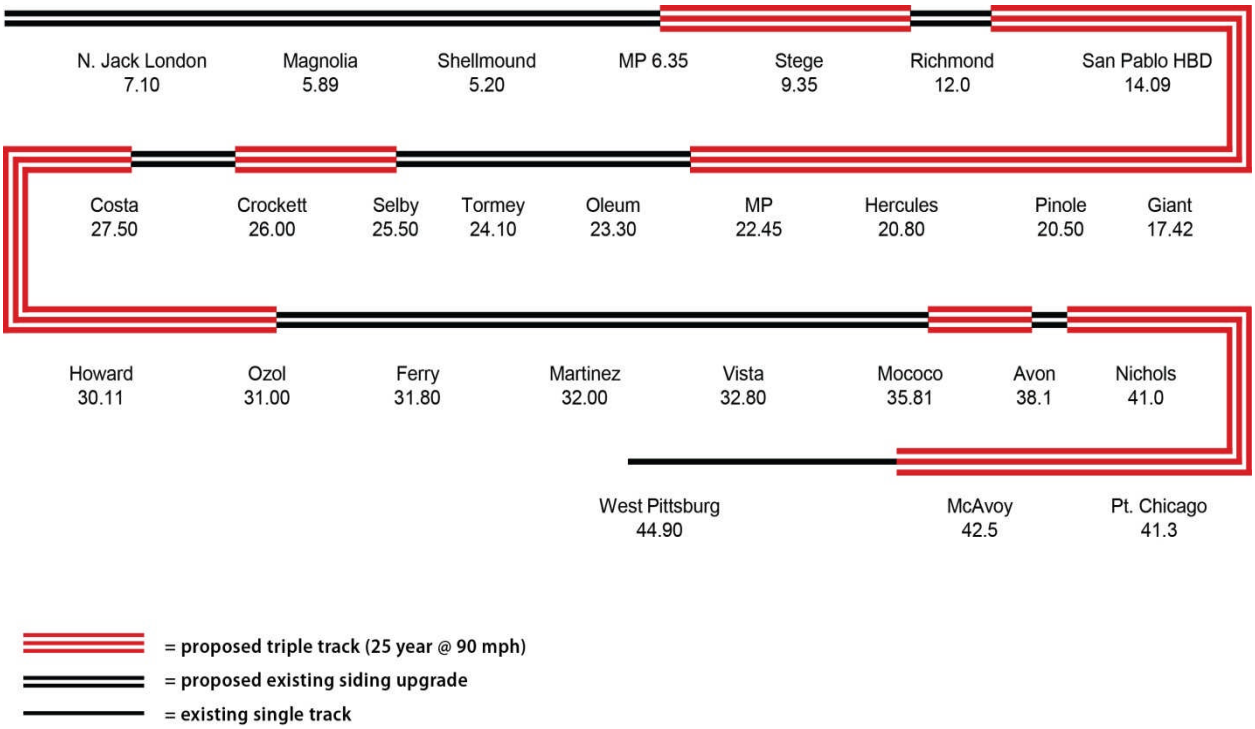
Source: Based on BNSF Railway Modeling Report; Modified from Original

Figure 1-3e: Proposed BNSF 25-Year (90 mph) Plan



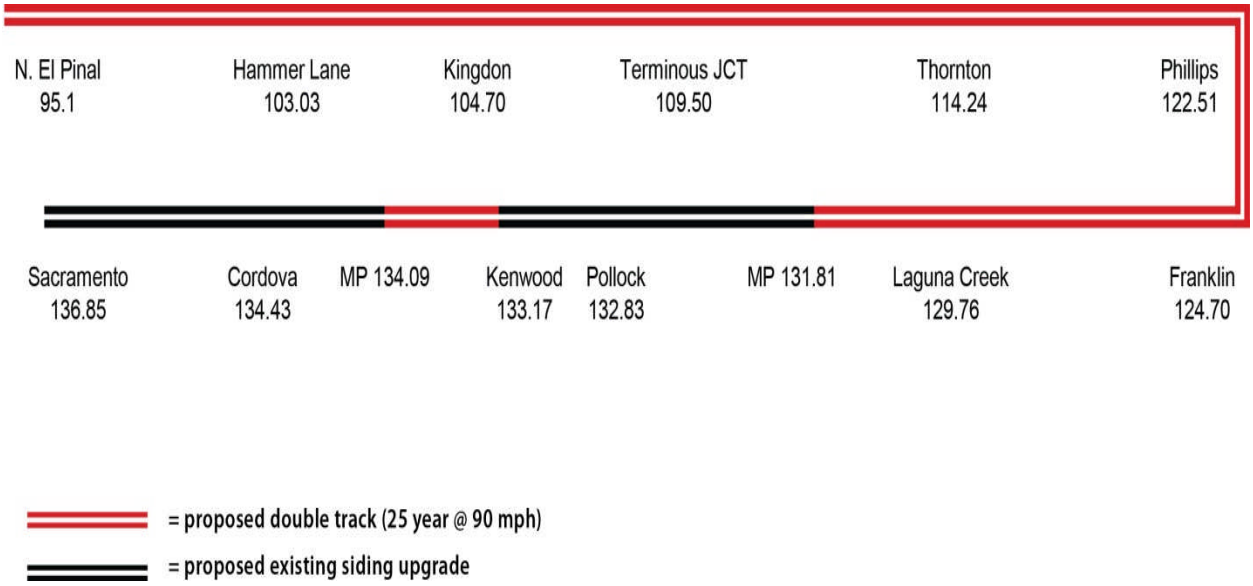
Source: Based on BNSF Railway Modeling Report; Modified from Original

Figure 1-3f: Proposed UPRR 25-Year (90 mph) Plan Niles – Tracy Subdivision



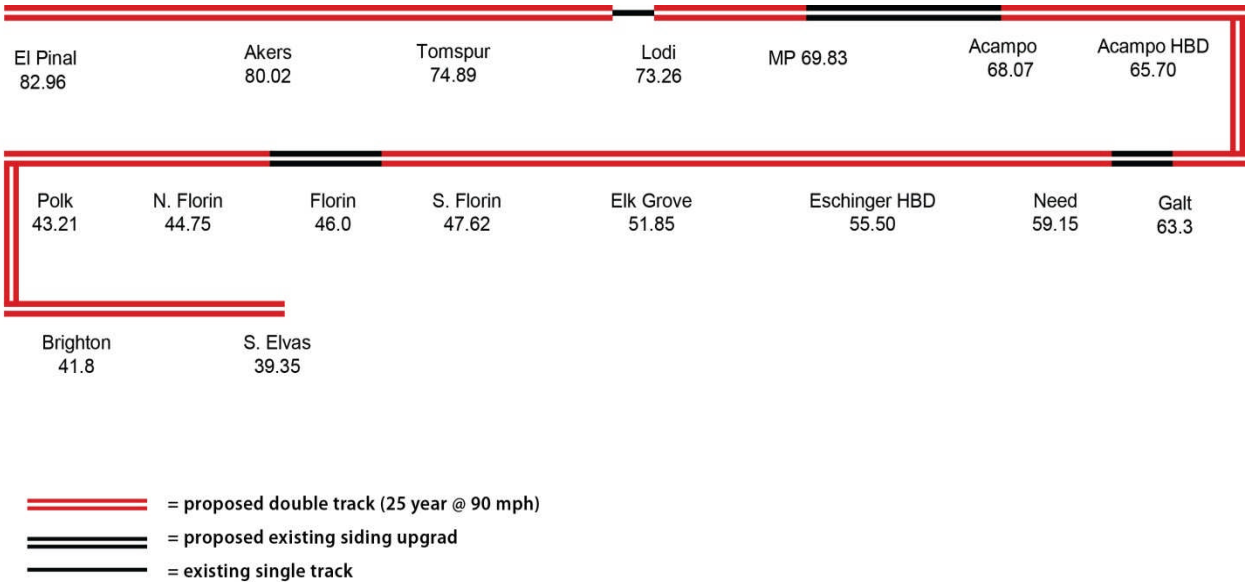
Source: J.L. Patterson & Associates, Inc.

Figure 1-3g: Proposed UPRR 25-Year (90 mph) Plan Sacramento Subdivision



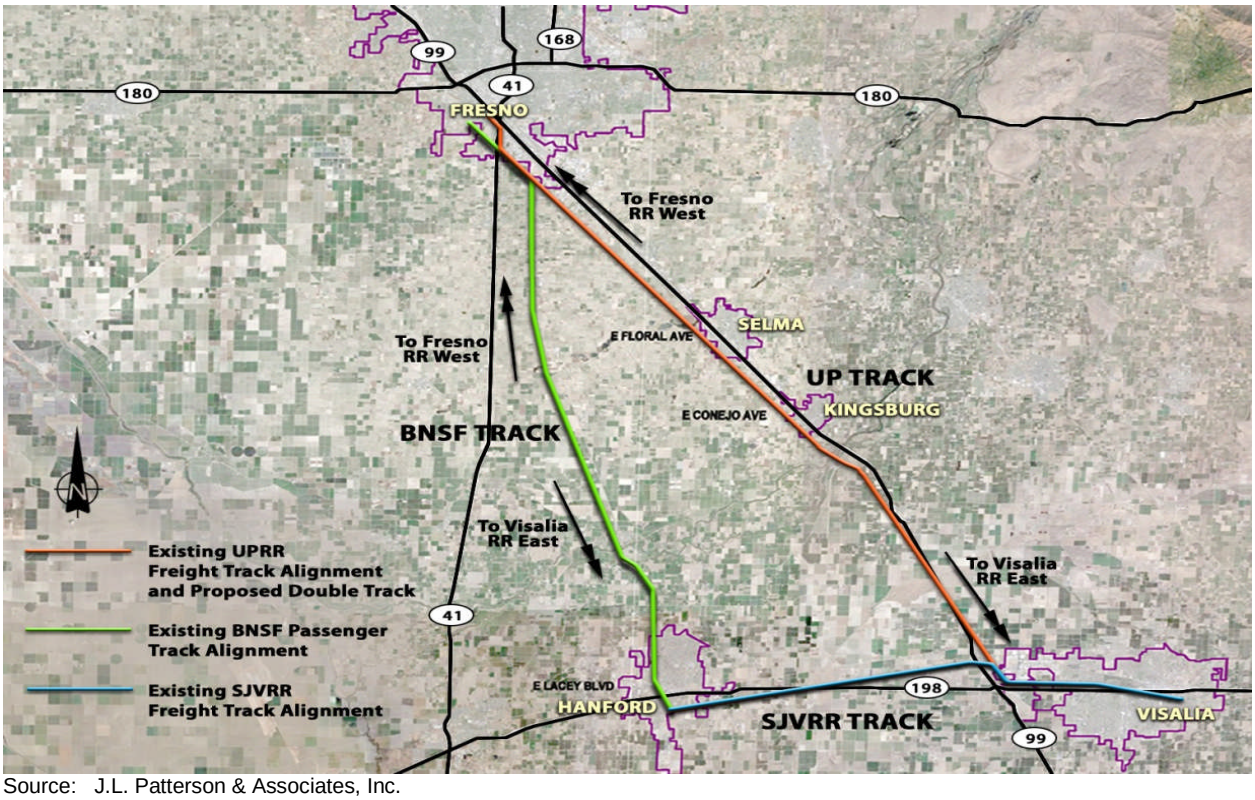
Source: J.L. Patterson & Associates, Inc.

Figure 1-3h: Proposed UPRR 25-Year (90 mph) Plan Fresno Subdivision



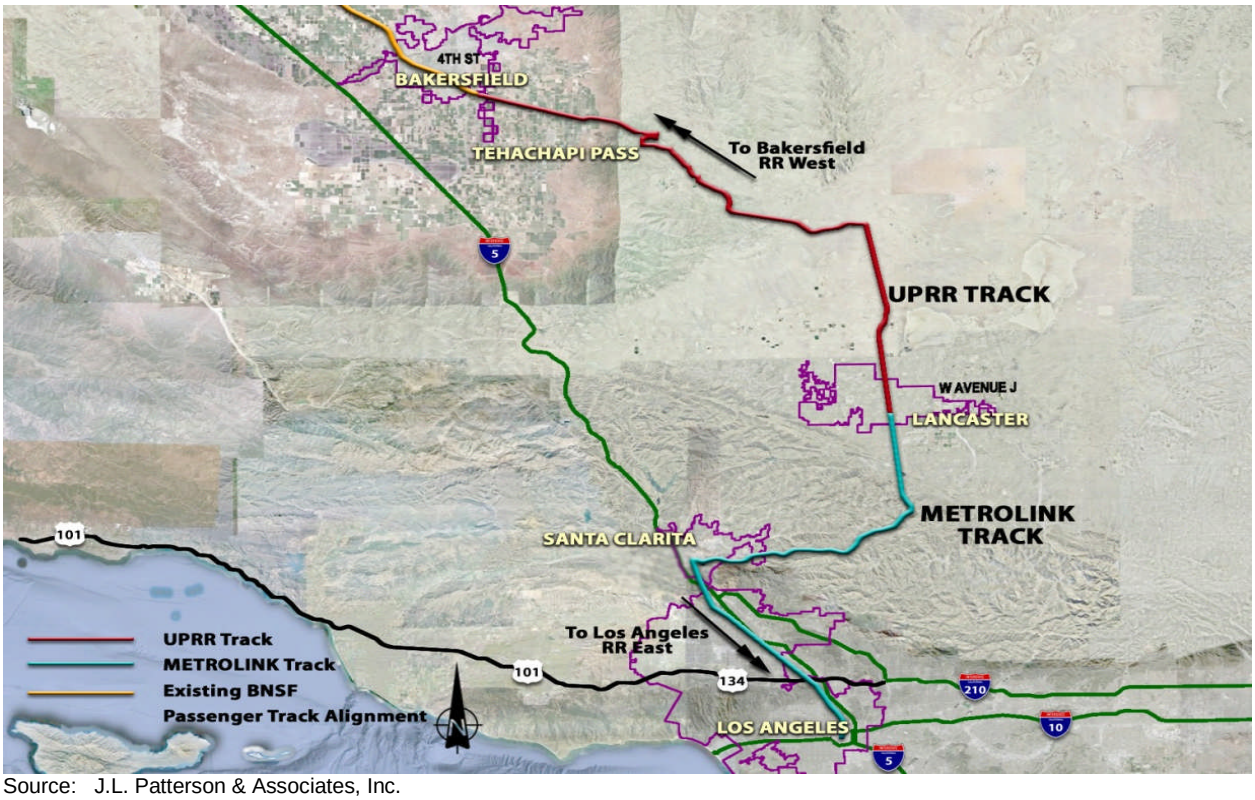
Source: J.L. Patterson & Associates, Inc.

Figure 1-4: Proposed Visalia to Hanford Route



Source: J.L. Patterson & Associates, Inc.

Figure 1-5: Alternative Project – Los Angeles Route
Los Angeles to Bakersfield (includes Tehachapi)



Source: J.L. Patterson & Associates, Inc.

Figure 1-6: Alternative Project – Port Chicago to Richmond on BNSF

Source: J.L. Patterson & Associates, Inc.

Figure 1-7: California Intercity Passenger Service System Map

Source: Amtrak California

Figure 1-8: Railroad Standard Bridge Structure

Source: Tom Dodson & Associates

Figure 1-9: Typical At-Grade Railroad Crossing Design

Source: Tom Dodson & Associates

Figure 1-10: Typical Railroad Equalizer Culvert

Source: Tom Dodson & Associates

Figure 1-11: Proposed Sacramento Maintenance Facility Site
USGS 7.5 Minute Quadrangle Map "Sacramento East"

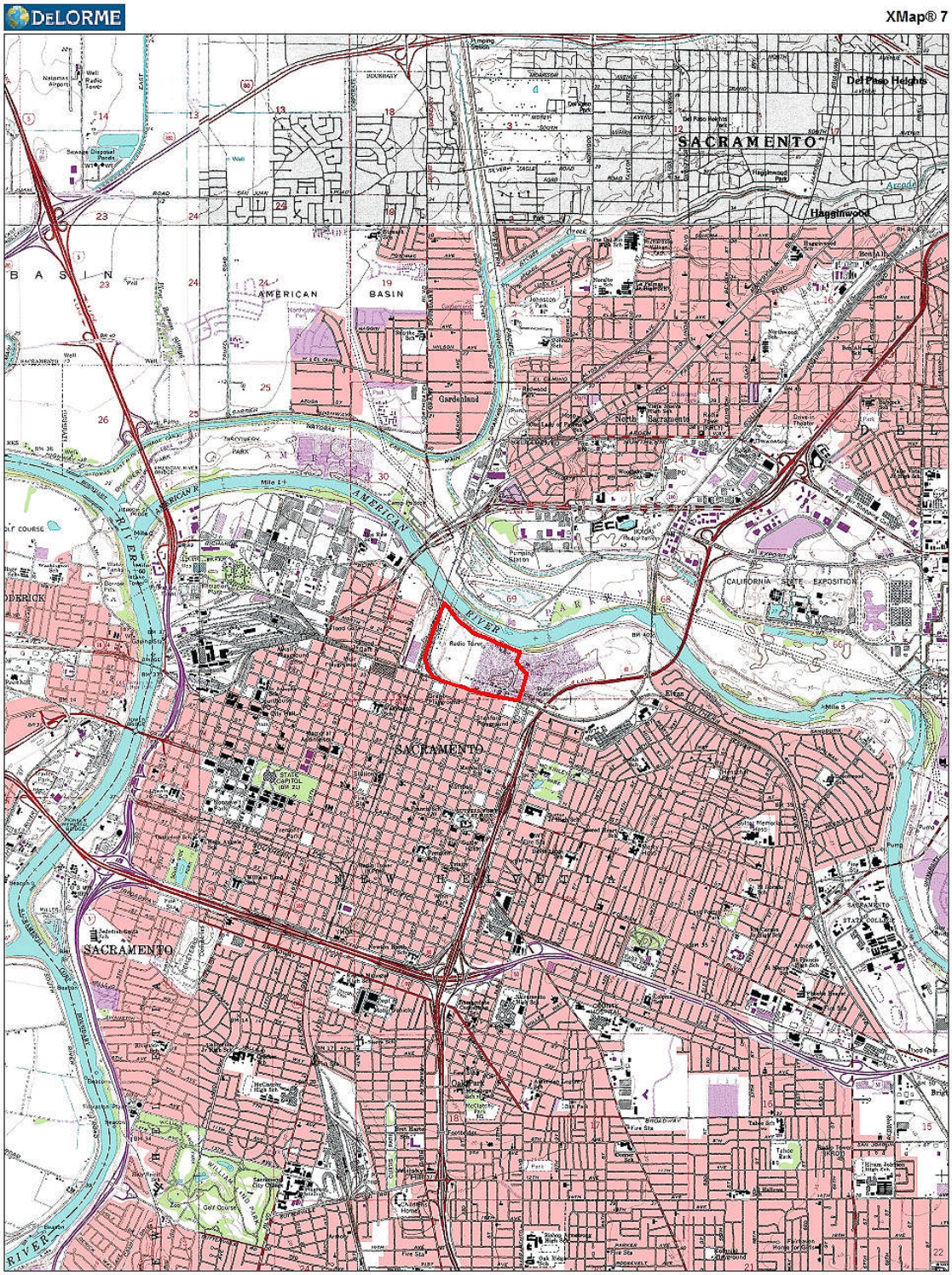
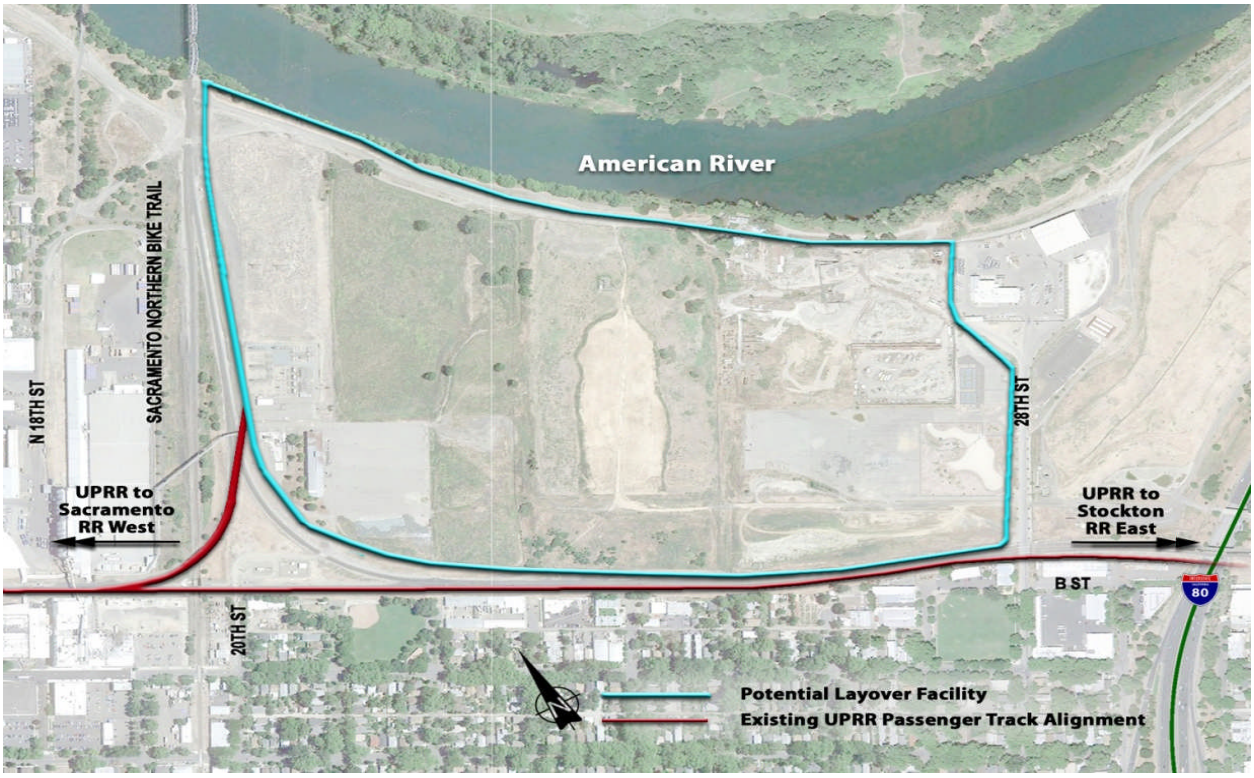


Figure 1-12: Proposed Sacramento Maintenance Facility Site



Source: J.L. Patterson & Associates, Inc.

Figure 1-13: Proposed Stockton Station Alternative Sites
USGS 7.5 Minute Quadrangle Map "Stockton West"

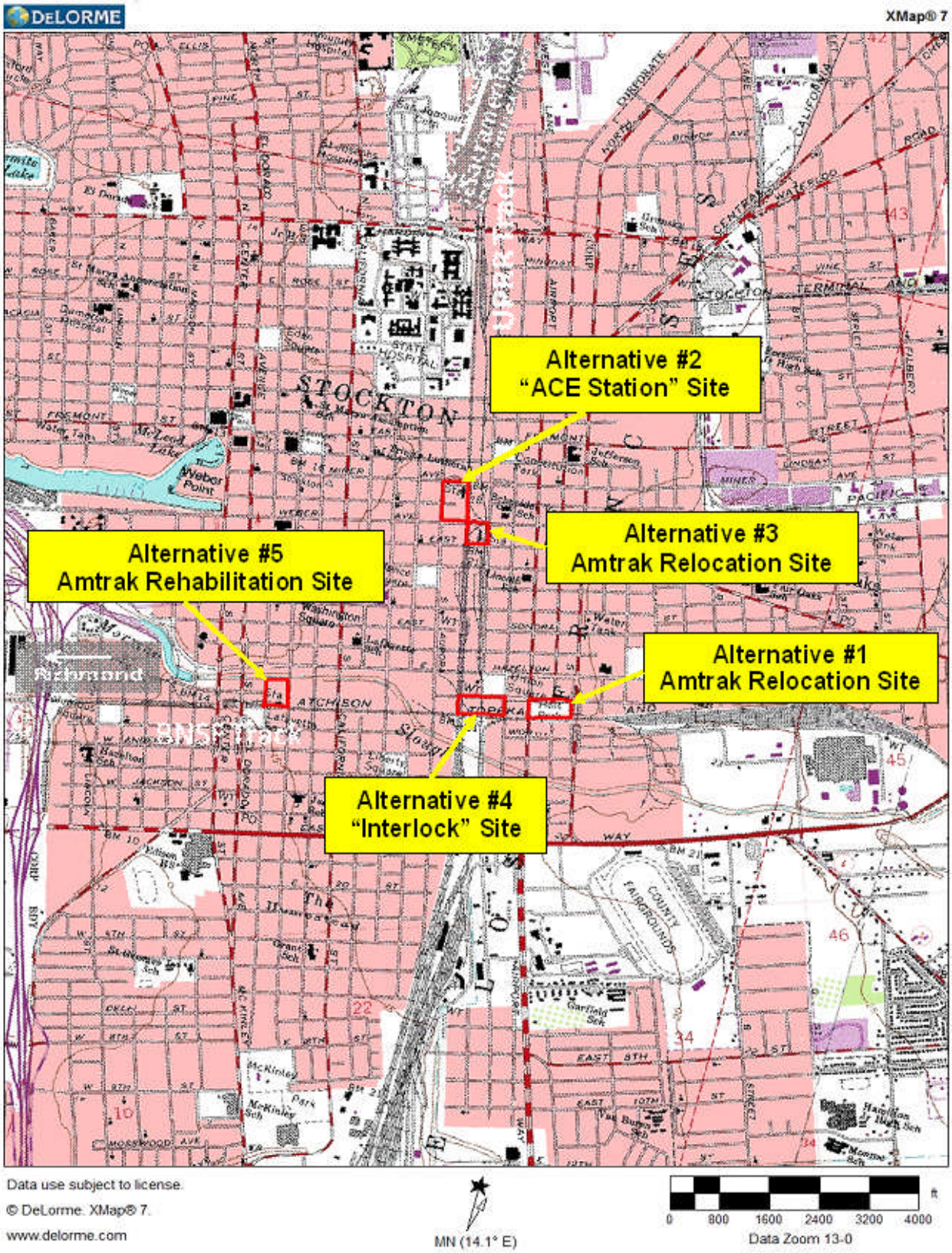
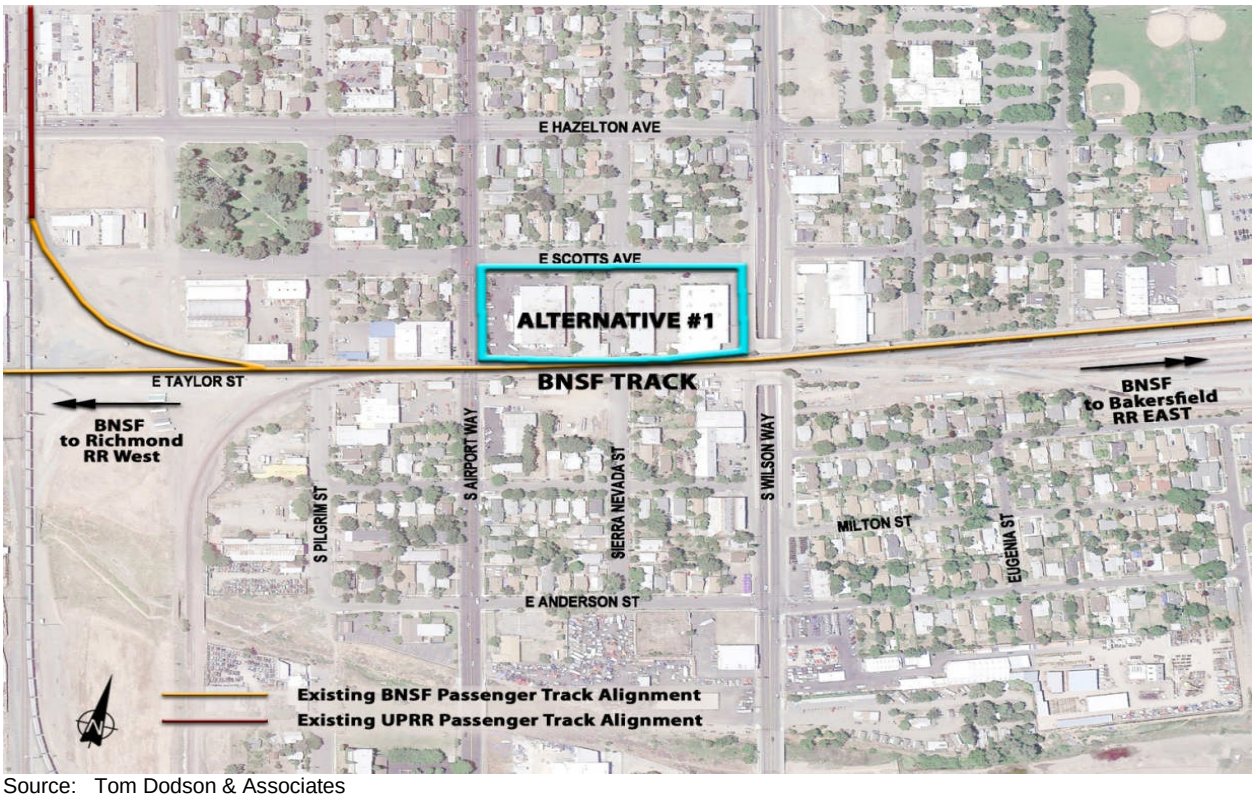
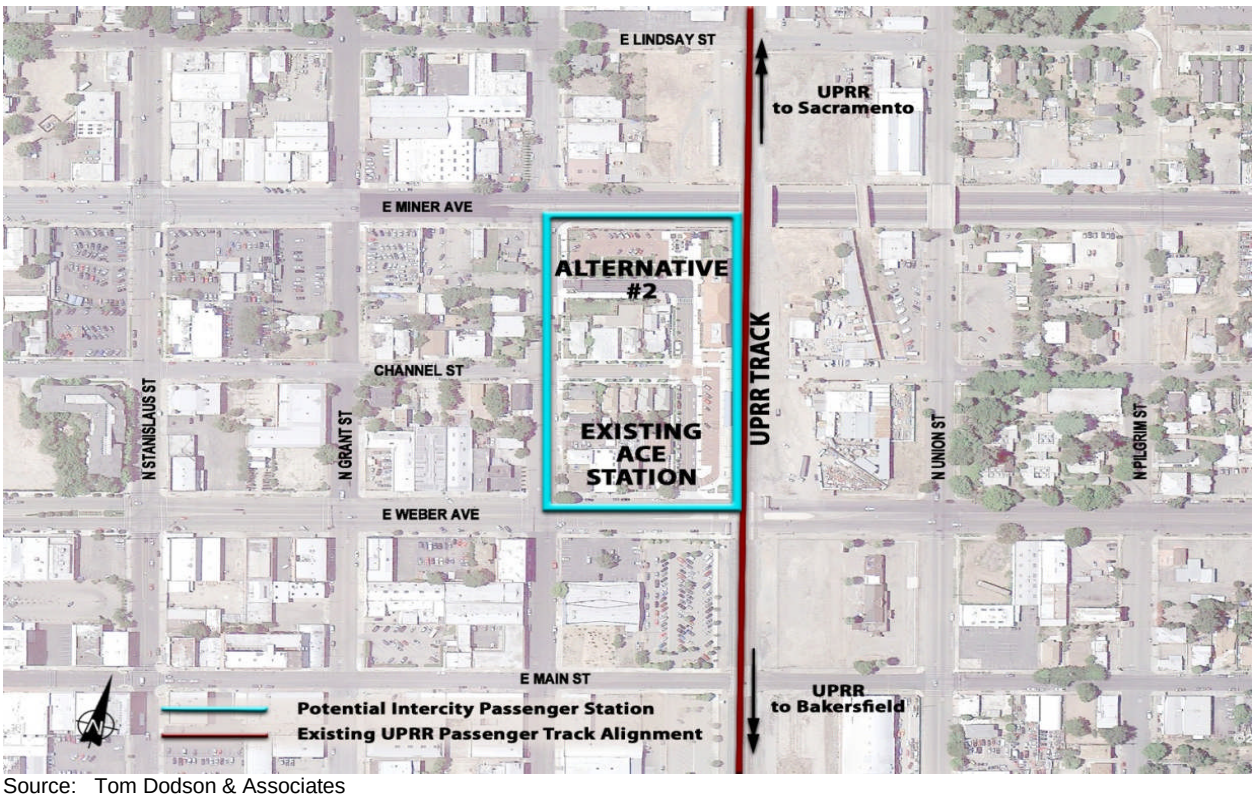


Figure 1-14: Alternative #1 – Stockton Amtrak Station Relocation Site



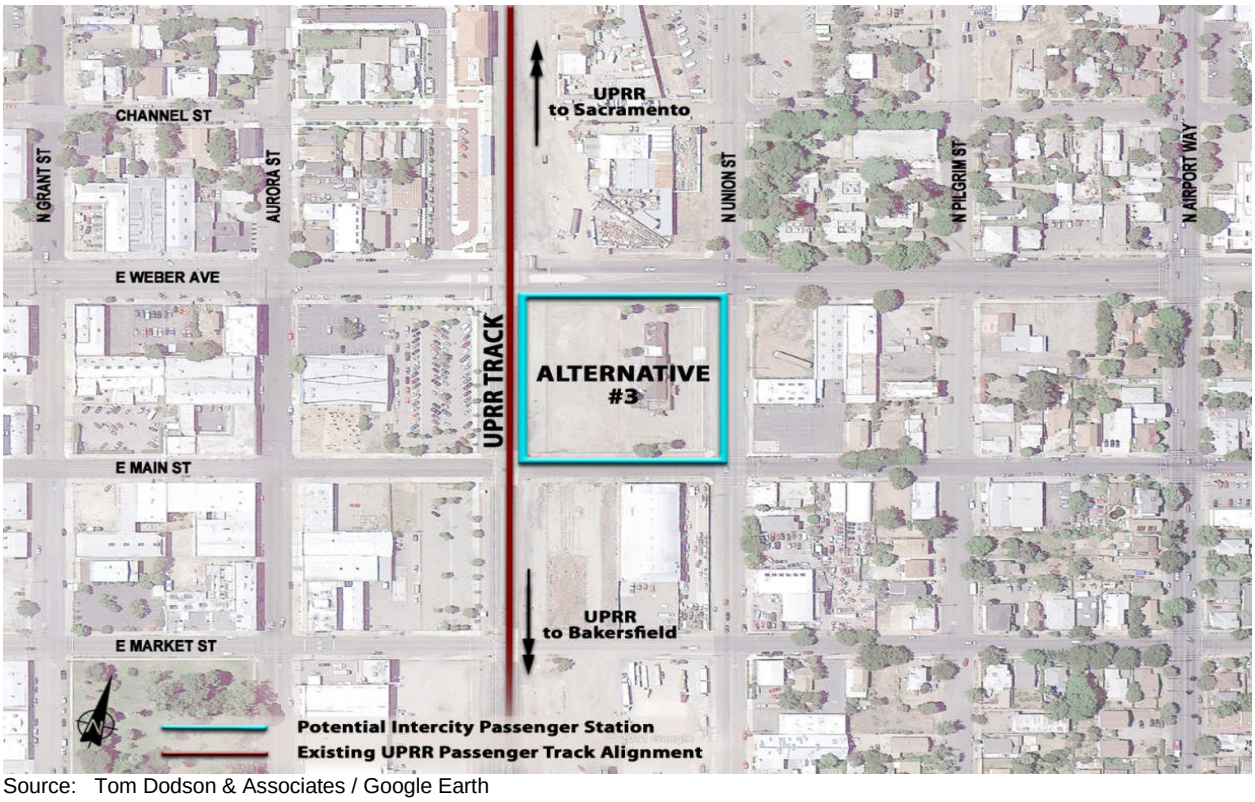
Source: Tom Dodson & Associates

Figure 1-15: Alternative #2 – Stockton Amtrak Station Relocation Site (ACE Station)



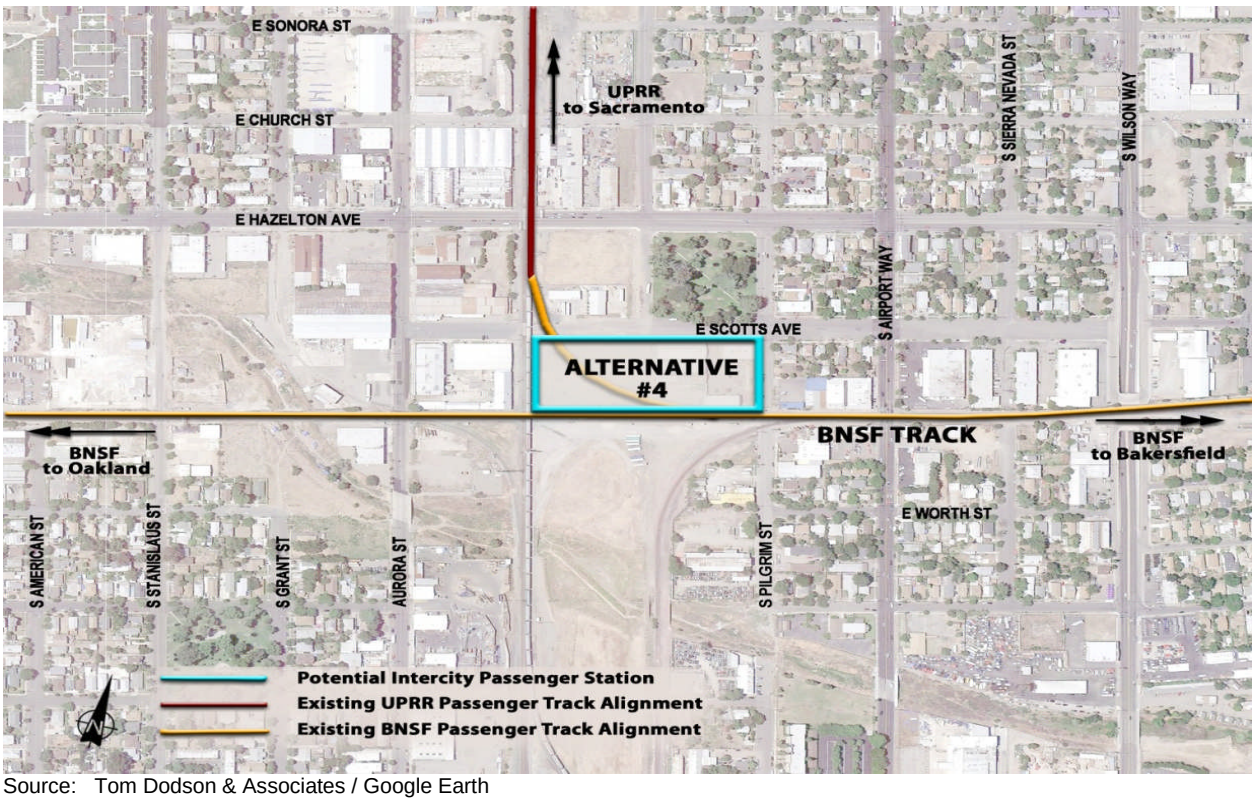
Source: Tom Dodson & Associates

Figure 1-16: Alternative #3 – Stockton Amtrak Station Relocation Site



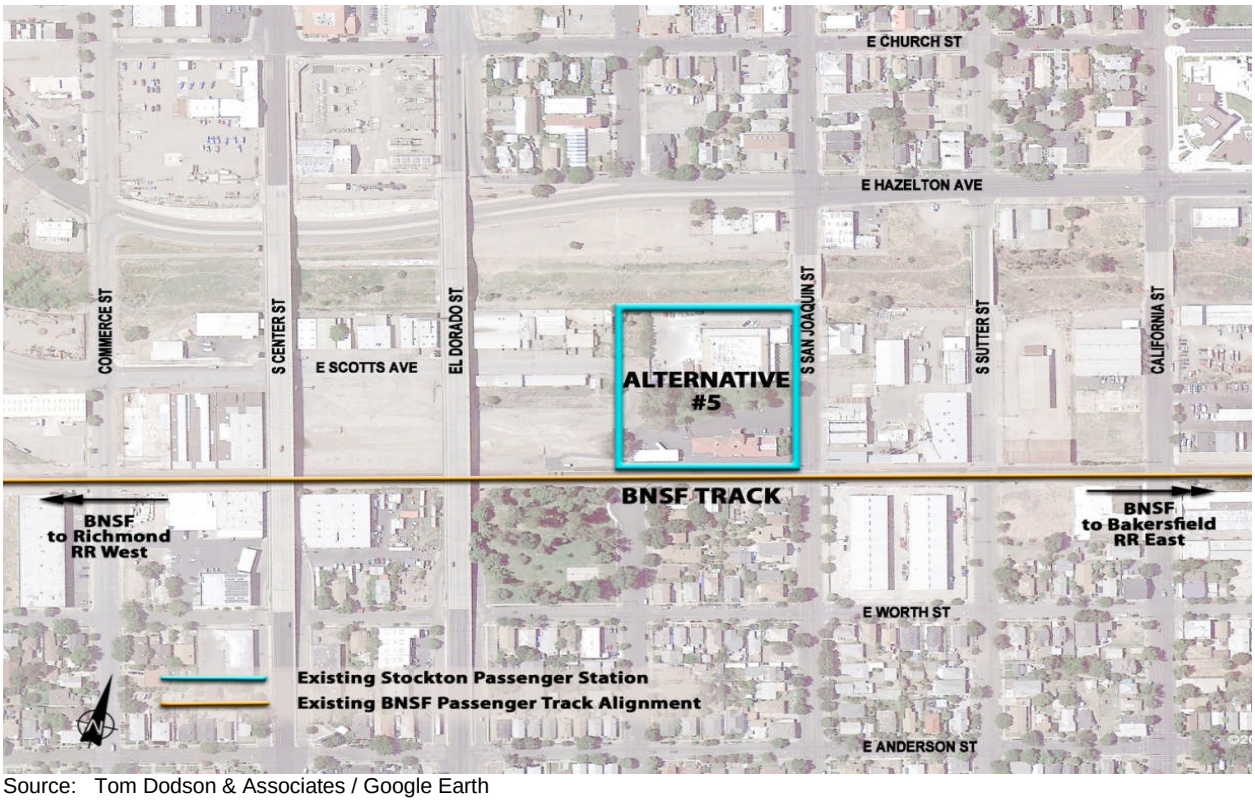
Source: Tom Dodson & Associates / Google Earth

Figure 1-17: Alternative #4 – Stockton Amtrak Station Relocation Site "The Interlock"



Source: Tom Dodson & Associates / Google Earth

Figure 1-18: Alternative #5 – Existing Stockton Amtrak Station Site



Source: Tom Dodson & Associates / Google Earth

Figure 1-19: USGS – Potential Fresno Layover Facility Site
USGS 7.5 Minute Quadrangle Map "Fresno South"

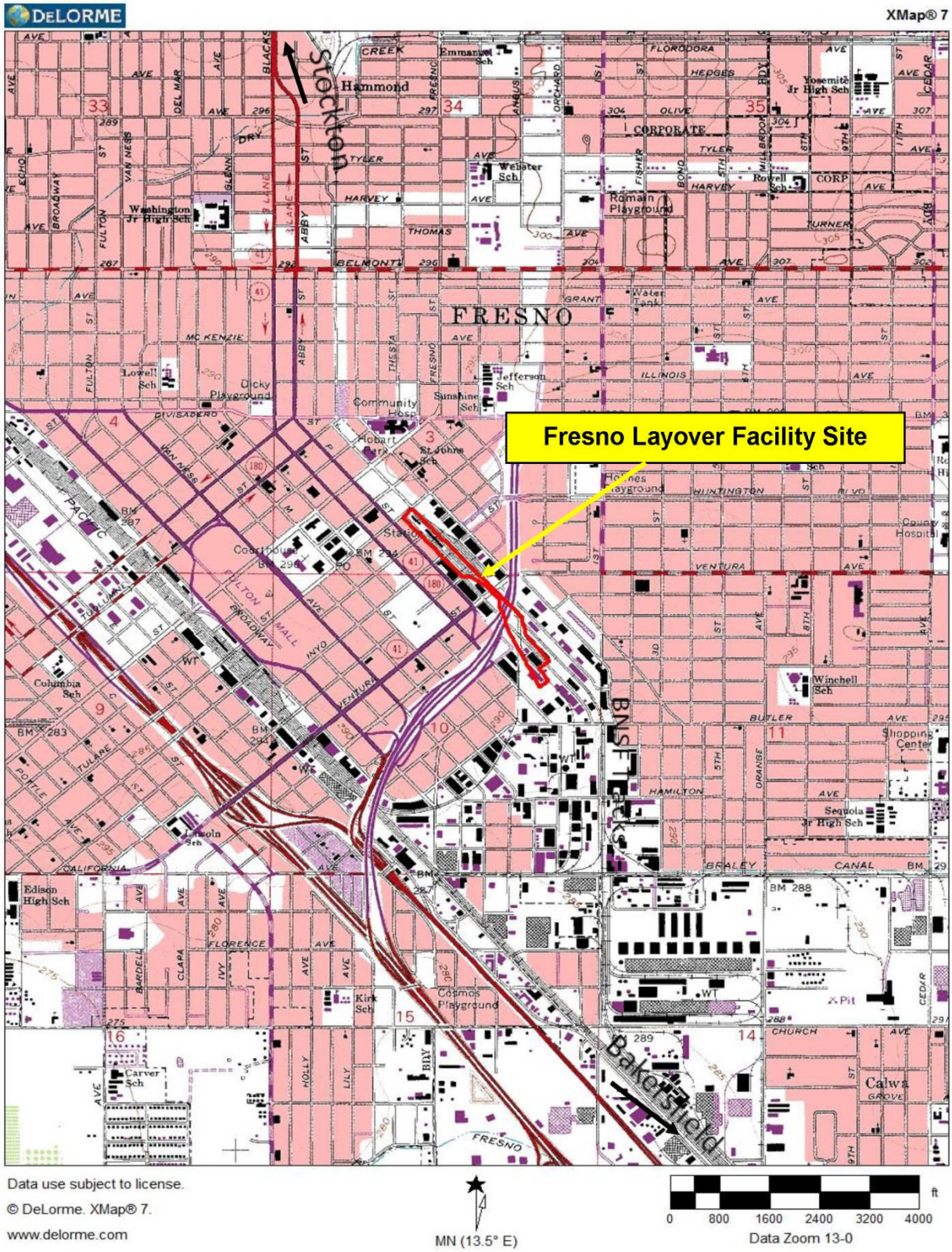
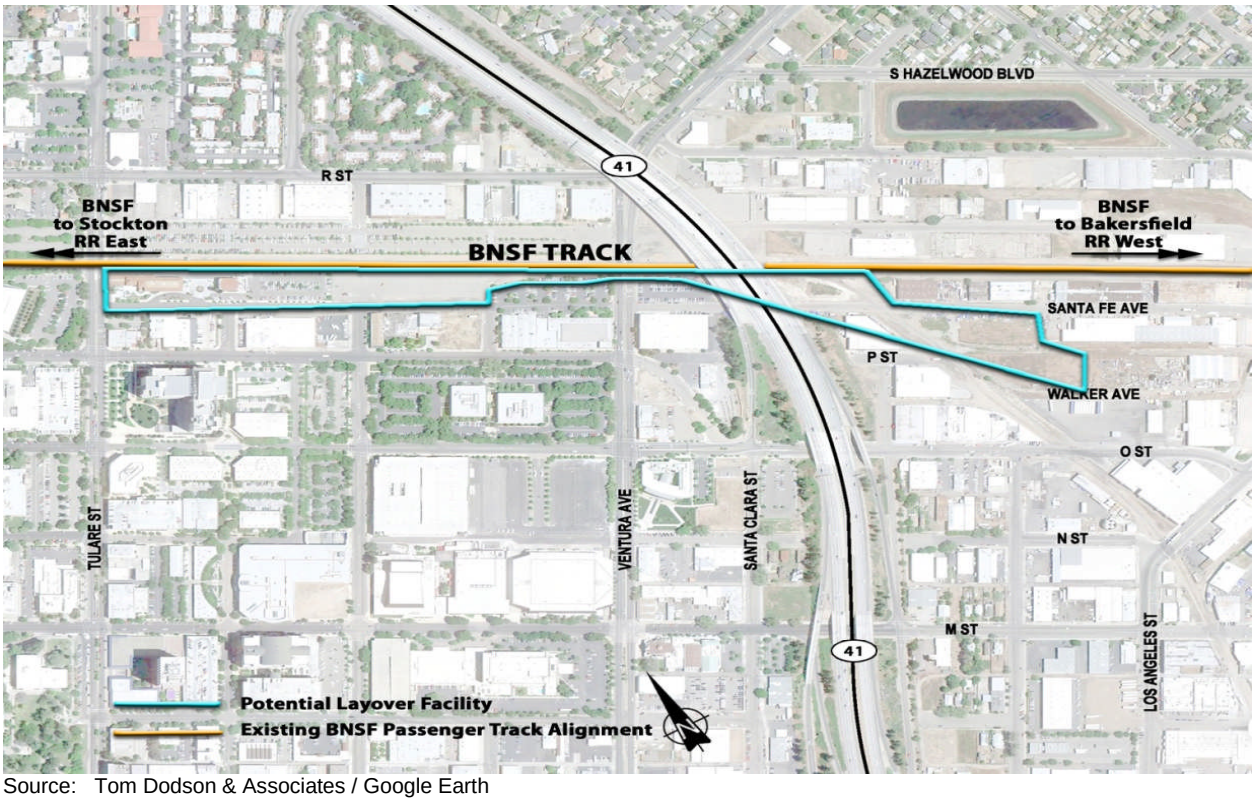
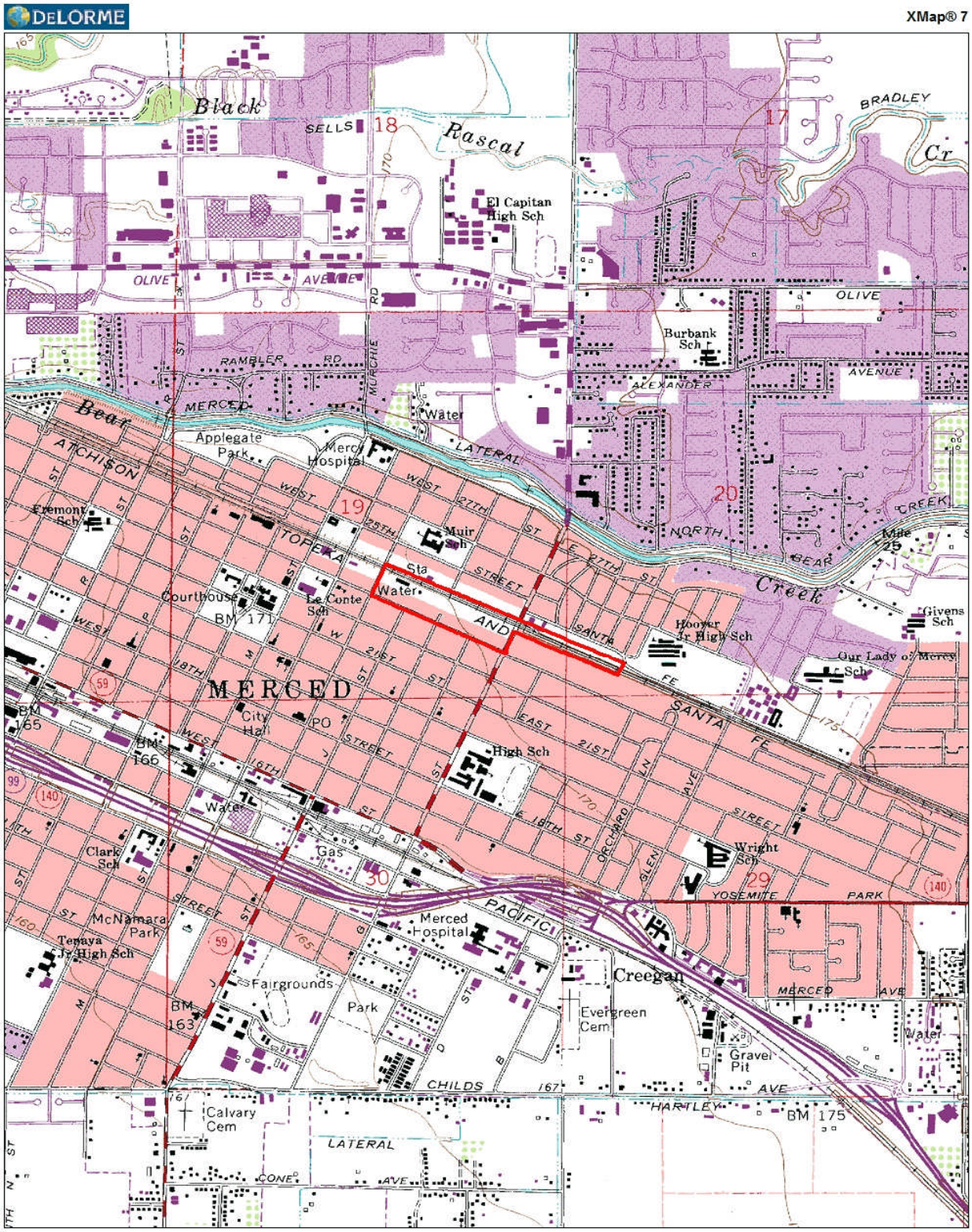


Figure 1-20: Potential Fresno Layover Facility Site



Source: Tom Dodson & Associates / Google Earth

Figure 1-21: USGS – Potential Merced Layover Facility Site
USGS 7.5 Minute Quadrangle Map "Merced"



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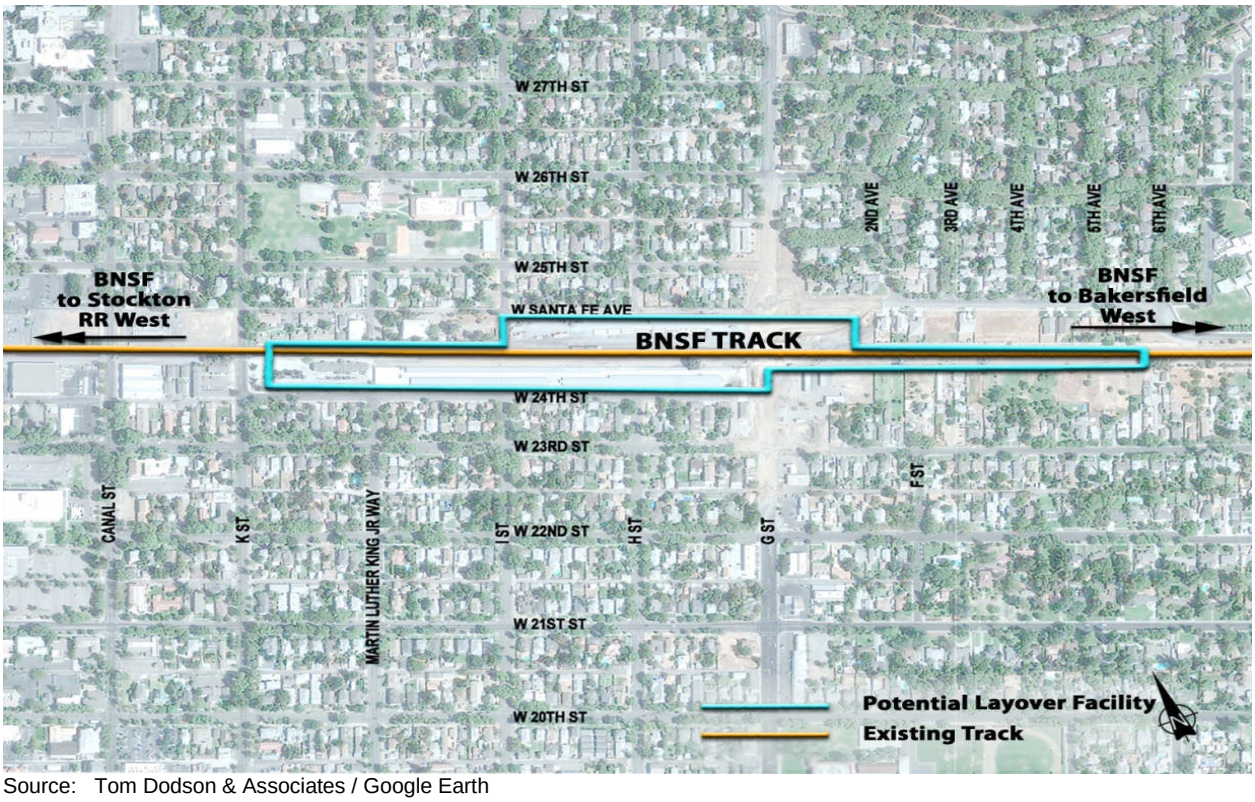
www.delorme.com

MN (13.8° E)

0 600 1200 1800 2400 3000 ft

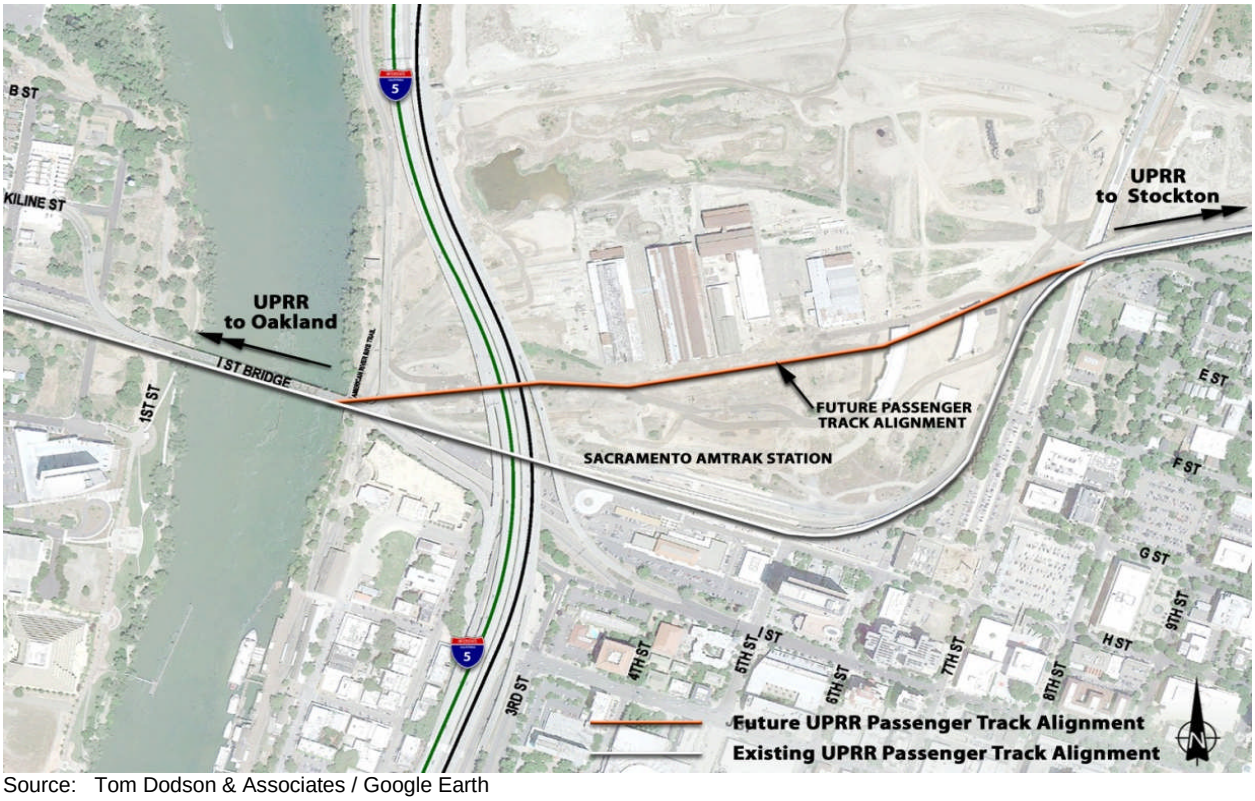
Data Zoom 13-3

Figure 1-22: Potential Merced Layover Facility Site



Source: Tom Dodson & Associates / Google Earth

Figure 1-23: Sacramento Amtrak Station – Future Track Relocation



Source: Tom Dodson & Associates / Google Earth

APPENDIX 1

San Joaquin Corridor Train and Bus Schedules

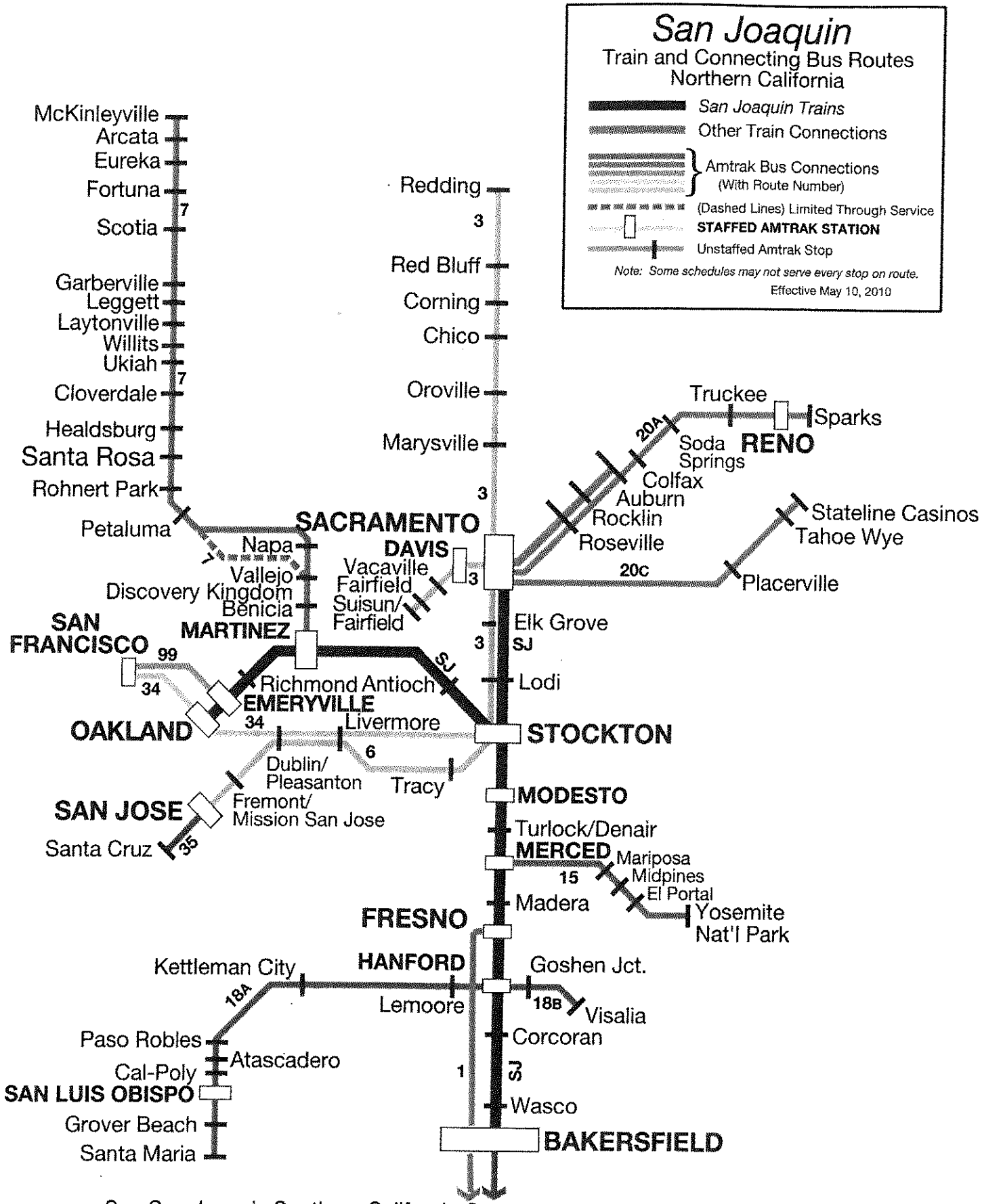
SAN JOAQUIN ROUTE

Train Service:

Oakland - Stockton - Fresno - Bakersfield
Sacramento - Stockton - Fresno - Bakersfield

Connecting Bus Routes:

San Francisco - Oakland - Stockton
San Jose - Stockton
Redding - Chico - Sacramento - Stockton
Suisun/Fairfield - Davis - Sacramento - Stockton
McKinleyville - Santa Rosa - Napa - Martinez
Merced - Yosemite
Santa Maria - San Luis Obispo - Hanford
Visalia - Hanford
Bakersfield - Los Angeles - San Diego
Bakersfield - Oxnard - Santa Barbara
Bakersfield - Barstow - Las Vegas
Bakersfield - Lancaster - Victorville
Bakersfield - San Bernardino - Hemet - Indio



See *San Joaquin* Southern California Connections Map on next page

See *San Joaquin* Northern California Connections Map
on preceeding page

SAN JOAQUIN ROUTE

Summary of Changes and Corrections

Train Schedules

San Joaquin Route -- Oakland - Emeryville/Sacramento - Stockton - Fresno - Bakersfield

There are no major schedules changes to any of the trains.

Bus Schedules

Route 7 -- North Bay/Redwood Empire

Bus 6318 will now stop 20 minutes earlier at all stops.

Route 15 -- Merced - Yosemite

Buses 8403, 8413 and 8417 will depart El Portal 5 minutes earlier as winter padding has been removed.

Added the seasonal round trip from Yosemite to Mammoth Lakes.

Route 19 -- Bakersfield - Inland Empire - Coachella Valley - Imperial Valley

The bus stop in Hemet at the Simpson Center has been moved to 304 E. Devonshire Ave. at the RTA Bus Stop.

Route 34 -- Stockton - Oakland - San Francisco

Bus 4401 will operate from Stockton Amtrak Station to Stockton ACE Station at 11:00 AM to connect with Train 701.

Bus 4402 will now stop at the Tracy Wendy's at 6:35 AM.

San Joaquin Route -- BAKERSFIELD - FRESNO - STOCKTON - SACRAMENTO - EMERYVILLE - OAKLAND

Northbound--Read Down

Effective May 10, 2010		5811 ® Bus Daily		5701 ® Bus Daily		5813 ® Bus Daily		565 Train Daily		769 Train Daily		775 Train Daily	
San Diego Connections		PM						AM		AM		Noon	
SAN DIEGO	Lv	10:00						7:05		9:30		12:00	
LOS ANGELES	Ar	1:15						9:50		12:15		2:40	
								AM		PM		PM	
Route 1 Bus Connection				5815 ® Bus Daily		5817 ® Bus Daily		5803 ® Bus Daily					
LOS ANGELES	Lv	1:25		AM 4:00		AM 7:35		AM 10:45		PM 1:15		PM 3:20	
BAKERSFIELD	Ar	4:40		7:00		9:50		1:05		3:30		6:05	
		AM		AM		AM		PM		PM		PM	
		711 ® San Joaquin Daily		701 ® San Joaquin Daily		713 ® San Joaquin Daily		715 ® San Joaquin Daily		717 ® San Joaquin Daily		703 ® San Joaquin Daily	
		AM		AM		AM		PM		PM		PM	
BAKERSFIELD (1,9,10,12,19)	Lv	4:55		7:15		10:05		1:20		3:45		6:20	
Wasco		5:21		7:41		10:31		1:46		4:11		6:46	
Corcoran		5:53		8:13		11:07		2:23		4:47		7:21	
HANFORD (18)		6:12		8:32		11:26		2:42		5:06		7:40	
FRESNO	Ar	6:46		9:06		12:01		3:16		5:41		8:14	
FRESNO	Lv	6:50		9:10		12:05		3:20		5:45		8:18	
Madera		7:11		9:34		12:26		3:41		6:06		8:39	
MERCED (15)		7:48		10:08		1:08		4:22		6:42		9:15	
Turlock/Denair		8:09		10:34		1:29		4:43		7:10		9:36	
MODESTO (24)		8:28		10:49		1:42		4:57		7:25		9:52	
STOCKTON (3,6,34)	Ar	8:57				2:14		5:29		7:59			
Sacramento Train Service and Route 3 Bus Connection			3711 ® Bus Daily		4401 ® Bus Daily		3713 ® Bus Daily		3715 ® Bus Daily		3717 ® Bus Daily		4403 ® Bus Daily
STOCKTON	Lv		AM 9:10		AM 11:25		PM 2:25		PM 5:35		PM 8:10		PM 10:30
Stockton-ACE Station (34)	Ar		E 0:00	11:20			F 2:50		A 5:40		G 8:10	10:25	
Lodi (3)	Ar		E 9:35	11:34			F 3:10		A 5:50		G 8:30	10:39	
Elk Grove-*Harbor Pt & Renwick*	Ar		D 9:35				D 2:50		D 6:00		D 8:30		
SACRAMENTO (CC,3,20,23)	Ar		10:00	12:30			3:15		6:25		8:55	11:30	
			AM	PM			PM		PM		PM	PM	
STOCKTON (3,6, 34)	Lv	9:01			11:30	2:18		5:33		8:03			D10:35
Antioch		9:36				2:53		6:02		8:32			
MARTINEZ (CC,7)	Ar	10:00				3:16		6:25		8:53			
MARTINEZ (CC,7)	Lv	10:03				3:19		6:28		8:56			
Richmond (CC)		10:28				3:44		6:53		9:22			
EMERYVILLE (CC, 34,99)	Ar	10:46				4:01		7:11		9:41			
EMERYVILLE (CC, 34,99)	Lv	10:48				4:03		7:13		9:43			
OAKLAND (CC,21,34, 36,99)	Ar	11:00			D 12:50	4:15		7:25		9:55			D11:55
		AM				PM		PM		PM			
Route 99 Bus Connections			6611 ® Bus Daily				6613 ® Bus Daily		6615 ® Bus Daily		6617 ® Bus Daily		
EMERYVILLE	Lv		AM 10:50		D 1:00		PM 4:05		PM 7:15		PM 9:45		D12:10
SAN FRANCISCO-Ferry Bldg.	Ar		11:20		1:20		4:40		7:45		10:10		12:35
			AM		PM		PM		PM		PM		AM

Notes: AFR: 39

See Page 5 for general notes.

AM - Light Face Type, **PM - Bold Type.**

A - Stockton ACE and Lodi connection via Bus 3815 instead of 3715.

E - Stockton ACE and Lodi connections via Bus 3811 instead of 3711.

F - Stockton ACE and Lodi connections via Bus 3833 instead of 3813.

G - Stockton ACE and Lodi connections via Bus 3837 instead of 3717.

® - Reservations required.

4/12/10 DOR/GWS

San Joaquin Route -- OAKLAND - EMERYVILLE - SACRAMENTO - STOCKTON - FRESNO - BAKERSFIELD

Southbound-Read Down

Effective May 10, 2010		4402 ® Bus Daily		6612 ® Bus Daily		6614 ® Bus Daily			6616 ® Bus Daily		4404 ® Bus Daily		6618 ® Bus Daily	
Route 99 Bus Connections		AM		AM	712 ®	AM	714 ®		PM	716 ®	AM		PM	718 ®
SAN FRANCISCO-Ferry Bldg.	Lv	4:50		7:05	San	9:35	San		12:45	San	2:35		5:15	San
EMERYVILLE	Ar	5:15		7:30	Joaquin	10:05	Joaquin		1:15	Joaquin	3:00		5:45	Joaquin
				AM	Daily	AM	Daily		PM	Daily			PM	Daily
					AM		AM			PM				PM
OAKLAND (CC,21,36,99)	Lv	5:30			7:30		10:05			1:15	3:15			5:50
EMERYVILLE (CC,99)	Ar				7:38		10:13			1:23				5:58
EMERYVILLE (CC,99)	Lv				7:40		10:15			1:25				6:00
Richmond (CC)					7:49		10:24			1:34				6:09
MARTINEZ (CC,7)	Ar				8:16		10:51			2:01				6:36
MARTINEZ (CC,7)	Lv				8:19		10:54			2:04				6:39
Antioch					8:39		11:14			2:24				6:59
STOCKTON (3,6)	Ar	7:10			9:13		11:45			2:59	5:15			7:30
			702 ®									704 ®		
			San	3812 ®		3714 ®			3716 ®			San	3718 ®	
			Joaquin	Bus		Bus			Bus			Joaquin	Bus	
Sacramento Train Service and			Daily	Daily		Daily			Daily			Daily	Daily	
Route 3 Bus Connection			AM	AM		AM			PM			PM	PM	
SACRAMENTO (CC,3,20,23)	Lv		6:40	AM		AM			PM			c 4:55	PM	
Elk Grove-*Harbor Pt & Renwick*	Lv			B 0:00					0:00				0:00	
Lodi (3)	Lv		7:18			714 ®			E 0:00			5:33		
Stockton-ACE Station	Ar	7:20	7:35						E 0:00		5:25	5:50		
STOCKTON	Ar	AM		Daily		Daily			Daily		PM		Daily	
				AM		AM			PM				PM	
STOCKTON (3,6)	Lv				9:17		11:49			3:03				7:34
MODESTO (24)			8:09		9:45		12:17			3:31		6:24		8:07
Turlock/Denair			8:27		9:58		12:30			3:44		6:37		8:20
MERCED (15)			8:51		10:31		12:59			4:13		7:06		8:47
Madera			9:22		11:02		1:36			4:49		7:37		9:23
FRESNO	Ar		9:51		11:31		2:06			5:16		8:02		9:51
FRESNO	Lv		9:55		11:35		2:10			5:20		8:06		9:55
HANFORD (18)			10:28		12:09		2:44			5:54		8:39		10:28
Corcoran			10:44		12:25		3:00			6:10		8:55		10:44
Wasco			11:20		12:56		3:33			6:41		9:26		11:15
BAKERSFIELD (1,9,10,12,19)	Ar		12:02		1:41		4:11			7:26		10:07		11:56
			PM		PM		PM			PM		PM		PM
			5802 ®		5812 ®		5814 ®			5816 ®		5804 ®		5818 ®
			Bus		Bus		Bus			Bus		Bus		Bus
Route 1 Bus Connection			Daily		Daily		Daily			Daily		Daily		Daily
BAKERSFIELD	Lv		PM		PM		PM			PM		PM		PM
LOS ANGELES	Ar		12:10		12:10		1:50			4:20		7:30		10:10
			2:30		2:40		4:20			9:50		12:55		2:45
			PM		PM		PM			PM		AM		
		580	582		784		590	592		796				
		Train	Train		Train		Train	Train		Train				
		SSH	Daily		Daily		FSSH	XSSH		Daily				
San Diego Connections		PM	PM		PM		PM	PM		PM				
LOS ANGELES	Lv	3:00	4:10		5:10		7:15	8:30		10:10				2:50
SAN DIEGO	Ar	5:45	7:00		7:50		9:55	11:15		12:50				5:35
		PM	PM		PM		PM	PM		AM				AM

Notes: AFR: 39

See Page 5 for general notes.

AM - Light Face Type, **PM - Bold Type.**

A - Via Bus 3832 from Lodi to Stockton

B - Via Bus 3712 from Elk Grove to Stockton.

E - Via Bus 3816 form Lodi to Stockton.

® - Reservations required.

4/12/10 DOR/GWS

Route 6 - SAN JOSE - STOCKTON
ROUTE 34 - SAN FRANCISCO - OAKLAND - STOCKTON
Option A - Retains connections with all trains except 703 (ACE connections with 704 and 718); requires two buses

Eastbound--Read Down

Effective May 10, 2010																	
											Bus 99-1/2 6604 Bus Daily PM						
Route 99 Bus Connection																	
San Fran-Caltrain	Lv										1:30						
San Fran-Mkt & 4th	Lv										1:40						
San Fran-Pier 39	Lv										1:55						
SAN FRAN-Ferry Building	Ar										2:10						
											PM						
DEDICATED FEEDER *El Camino Lines*		Bus 34-1 4402 ® Bus Daily AM								Bus 34-1 4404 ® Bus Daily PM							
			No Santa Cruz Connex SSH														
San Francisco-*Hyatt*	Lv	4:45															
SAN FRANCISCO-*Ferry Bldg (99)*	Lv	4:50								2:35							
EMERYVILLE (CC 99)		5:15								3:00							
OAKLAND (CC 17,21,36,99)	Lv	5:30								3:15							
			6922 Bus XSSH AM	6914 Bus XSSH AM	6974 Bus SSH AM	6916 Bus XSSH AM	6982 Bus SSH AM	6938 Bus XSSH PM	6986 Bus SSH PM				6942 Bus XSSH PM		6968 Bus SSH PM		
Route 35 Bus Connection																	
Santa Cruz-*Metro Center*	Lv		5:25	7:55	6:40	11:00	10:50	1:10	12:50				3:00		3:45		
Scotts Valley-*Transit Center*	Lv		5:40	8:10	6:55	11:15	|	|	1:05				3:15		|		
SAN JOSE (CC 21,22,CT)	Ar		6:17	8:57	7:35	11:55	11:40	2:00	1:50				4:00		4:35		
			AM	AM	AM	AM	AM	PM	PM				PM		PM		
			Bus 6-1 3912 ® Bus Daily AM		Bus 6-2 3914 ® Bus Daily AM		Bus 6-1 3916 ® Bus Daily PM		Bus 6-2 3904 ® Bus Daily PM			3204 ACE 04 XSSH PM	3218 ACE 06 XSSH PM	Note E Bus 6-1 3918 ® Bus XSSH PM	Bus 6-1 3968 ® Bus SSH PM	3278 ACE 08 XSSH PM	
SAN JOSE (CC 21,22,CT)	Lv		b 6:55		b 9:15		b 12:10		b 2:40			3:35	4:35		b 4:45	5:35	
Santa Clara-*Caltrain*												|	|			|	
Great America-*Amtrak*												3:46	4:46		5:05	5:46	
Fremont/Mission San Jose-*P&R*			7:20		9:40		12:35		3:05			|	|	5:15	5:25	|	
Fremont-*Amtrak/ACE*												4:04	5:04			6:04	
Pleasanton-*ACE*												4:26	5:26			6:26	
Dublin/Pleasanton-*BART*		6:00	7:40		10:00		12:55		3:25			|	|	5:35	5:45	|	
Livermore-*Transit Center*		6:10	7:55		10:15		1:10		3:35			4:34	5:34		6:00	6:34	
Vasco Road-*ACE*												4:39	5:39			6:39	
Tracy-*ACE*												5:09	6:09			7:09	
Tracy-*Wendy's*		6:35	8:20		10:40		1:35		4:00			|	|	6:05	6:25	|	34-1
Lathrop/Manteca-*ACE*												5:23	6:23			7:23	3837
Stockton-*ACE*	Ar											5:45	6:45	7:05		7:45	Bus
STOCKTON (SJ 3)	Ar	7:10	c 9:00		c 11:20		c 2:20		4:55	5:15		PM	PM	c 7:15	c 7:15	PM	Daily
STOCKTON (SJ 3)	Lv	7:15	AM		11:21		PM		5:00	5:20				PM	7:20		8:05
Stockton-ACE Station	Ar	c 7:20			D11:25				c 5:06	c 5:25					D 7:25		D 8:10
Lodi (SJ 3)	Ar	AM			AM				PM	PM					PM		D 8:30
		702 ® *Train Daily* AM	712 ® *Train Daily* AM		714 ® *Train Daily* AM		716 ® *Train Daily* PM					704 ® *Train Daily* PM		718 ® *Train Daily* PM			PM
San Joaquin Connection																	
Stockton-ACE	Lv	7:35										5:50					
SACRAMENTO	Ar	|										|					
STOCKTON-Amtrak	Lv	|	9:17		11:49		3:03					|		7:34			
MERCED	Ar	8:51	10:31		12:59		4:13					7:06		8:47			
FRESNO		9:51	11:31		2:06		5:16					8:02		9:51			
HANFORD		10:28	12:09		2:44		5:54					8:39		10:28			
BAKERSFIELD	Ar	12:02	1:41		4:11		7:26					10:07		11:56			
LOS ANGELES	Ar	2:30	4:10		6:40		9:50					12:55		2:45			
		PM	PM		PM		PM					AM		AM			

Notes AFR: 71

See Page 6 for general notes.

See Page 50-52 (Route 35) for complete schedules between Santa Cruz and San Jose.

AM - Light Face Type. **PM - Bold Type.**

A - Stops to discharge ACE ticket holders, does not stop on SSH.

B - Stops to pick up ACE ticket holders, does not stop on SSH.

E - After arrival in San Jose as Schedule 3913, Bus 6-2 deadheads to Fremont/MSJ to cover Schedule 3918.

® - Reservations required.

4/1/10 DOR/GWS

SAN JOAQUIN BUS CONNECTIONS

Route 6 - STOCKTON - SAN JOSE
Route 34 - STOCKTON - OAKLAND - SAN FRANCISCO

Westbound--Read Down

Effective May 10, 2010		711 ® Train Daily		701 ® Train Daily		713 ® Train Daily			715 ® Train Daily	717 ® Train Daily			703 ® Train Daily
San Joaquin Connection		AM		AM		AM			AM	PM			PM
LOS ANGELES	Lv	1:25	Bus 34-1	4:00		7:35			10:45	1:15			3:20
BAKERSFIELD	Lv	4:55	4401 ®	7:15		10:05			1:20	3:45			6:20
HANFORD		6:12	Bus	8:32		11:26		704 ®	2:42	5:06			7:40
FRESNO		6:50	Daily	9:10		12:05		Train	3:20	5:45			8:18
MERCED		7:48	AM	10:08		1:08		Daily	4:22	6:42			9:15
STOCKTON-Amtrak	Ar	8:57	11:05	|		2:14		PM	5:29	7:59			|
SACRAMENTO	Lv	AM	|	|		PM		4:55	PM	PM			|
Stockton-ACE	Ar	|	11:10	11:20		|		5:50	|	|		10:25
		Note C	|	AM		|		PM	|	|		PM
DEDICATED FEEDER		Bus 34-1	|	|		|		|	Bus 6-2	|		|
El Camino Lines		3832 ®	|	|		|		|	3915 ®	|		Bus 34-1
		Bus	|	Bus 6-2		Bus 6-1		|	Bus	Bus 6-1			4403 ®
		Daily	Bus 6-1	3901 ®		3913 ®		|	Daily	3917 ®			Bus
Lodi-Amtrak (SJ,3)	Lv	AM	3911 ®	Bus		Bus		|	PM	Bus			Daily
STOCKTON (SJ,3)	Ar	8:25	Bus	Daily		Daily		|	c 5:35	Daily			PM
Stockton-ACE Station	Lv	e 8:50	Daily	AM		PM		|	c 5:51	PM			c 10:30
STOCKTON (SJ,3)	Lv	AM	AM	c 11:25		c 2:33		|	|	c 8:05			D10:35
Stockton-ACE Station		connects	c 9:10	11:30		|		|	|	|		|
Lathrop/Manteca-ACE		with	D 9:15	|		|		|	|	|		|
Tracy-Wendy's		Trains	|	|		|		|	D 6:15	D 8:30		D11:00
Tracy-ACE		711 & 712	D 9:40	D11:55		D 2:55		|	|	|		|
Vasco Road-ACE			|	|		|		|	|	|		|
Livermore-Transit Center			D 10:10	D12:25		D 3:25		|	D 6:45	D 9:00			D11:25
Dublin/Pleasanton-BART			D 10:20	D 12:36		D 3:35		|	D 6:55	D 9:10			D11:30
Pleasanton-ACE			|	|		|		|	|	|		|
Fremont-Amtrak/ACE			|	|		|		|	|	|		|
Fremont/Mission San Jose-P&R			D 10:35	D12:50		D 3:50		|	D 7:10	D 9:25			|
Great America-Amtrak			D 10:55	|		|		|	|	|		|
Santa Clara-Caltrain			|	|		|		|	|	|		|
SAN JOSE (CC,21,22,CT)	Ar		D 11:10	b 1:20		b 4:20		|	b 7:40	b 9:45			|
			AM	PM		PM		|	PM	PM			|
		6911 Bus XSSH	6981 Bus SSH	6936 Bus XSSH	6983 Bus SSH	6913 Bus XSSH	6963 Bus SSH	6916 Bus XSSH	6993 Bus SSH	6917 Bus XSSH	6967 Bus SSH		|
Route 35 Bus Connection		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM		|
SAN JOSE (CC,21,22,CT)	Lv	11:50	12:45	1:35	2:00	4:50	4:45	7:45	7:50	10:42	10:10		|
Scotts Valley-Transit Center	Ar	D12:30	|	D 2:15	D 2:45	D 5:35	|	D 8:23	|	D11:20	D10:50		|
Santa Cruz-Metro Center	Ar	D12:50	D 1:35	D 2:35	D 3:05	D 6:05	D 5:35	D 8:38	D 8:40	D11:35	D11:10		|
		PM	PM	PM	PM	PM	PM	PM	PM	PM	PM		|
OAKLAND (CC,17,21,35,99)	Ar		D 12:50										D11:55
EMERYVILLE (CC,99)	Ar		D 1:00										D12:10
San Francisco-Caltrain (99)	Ar		|	Bus 99-1									|
San Francisco-Hyatt (99)	Ar		|	6601									D12:30
SAN FRANCISCO-Ferry Bldg (99)	Ar		D 1:20	Bus									D12:35
			PM	Daily									AM
Route 99 Bus Connection				PM									|
SAN FRAN-Ferry Bldg	Lv			1:25									|
San Fran-Pier 39	Ar			D 1:35									|
San Fran-Mkt & 4th	Ar			D 1:50									|
San Fran-Caltrain	Ar			D 2:00									|
				PM									|

Notes AFR: 71

See Page 6 for general notes.

See Page 50-52 (Route 35) for complete schedules between San Jose and Santa Cruz.

AM - Light Face Type. **PM - Bold Type.**

A - Stops to pick up ACE ticket holders, does not stop on SSH.

B - Stops to discharge ACE ticket holders, does not stop on SSH.

e - Connects with southbound Train 712.

F - ACE Train 07 (3211) will hold up to 10 minutes for late connections from Train 711. When the connection is missed, passengers will be reaccommodated on Bus 3901, which may have to divert to ACE stops for passengers ticketed to those points.

q- Regular stop XSSH, D stop on SSH.

® - Reservations required.

4/1/10 DOR/GWS

SAN JOAQUIN & CAPITOL CORRIDOR BUS CONNECTIONS

Route 3 -- REDDING - CHICO - AUBURN - DAVIS - SACRAMENTO - STOCKTON

Southbound--Read Down

Effective May 10, 2010

DEDICATED FEEDER
Preferred Charter

				from Seattle					Bus 3-3				Bus 3-5				Bus 3-7			Bus 3-2					
				11 ® Coast S'light Daily					3714 ® Bus Daily				3716 ® Bus Daily				3704 ® Bus Daily			3718 ® Bus Daily					
				AM					AM				AM				PM			PM					
Redding-Transit Center (e) Lv				e 2:21					6:20				10:05				12:45			2:30					Note F
Red Bluff-Taco Bell	Route 20					529			6:55				10:40				1:20			3:05	Bus 3-5			Bus 20-4	
Chico	Bus20-4	Bus 3-1		3:50		Train			7:55				11:40				2:20	from		4:05	3649			3603	
Oroville-Park & Ride	3623	3625	Bus 3-2			XSSH	Bus 3-1	Bus 3-4	8:20			Bus 3-1	12:05				2:45	San	from	4:30	Bus			Bus	
Marysville-Yuba Co Govt Ctr	Bus	Bus	3802 ®			AM	3812 ®	3814 ®	8:55			3816 ®	12:40				3:20	Jose	Oakland	5:05	XSSH			XSSH	
Auburn (CC,20) Lv	XSSH	Daily	Bus			6:35	Bus	Bus				Bus						538	736		PM			PM	
Rocklin (CC,20)	AM	AM	Daily			6:58	Daily	Daily				Daily						Train	Train		5:10			8:45	
Roseville (CC,20)	4:45	5:35	AM			7:08	AM	AM				PM						XSSH	SSH					9:00	
DAVIS (CC) Lv			6:00				7:25	9:30				12:50						PM	PM		5:40			9:25	
SACRAMENTO (CC,20,23) Ar	c 5:20	c 6:10	c 6:30	6:15		7:37	7:55	b10:00	z10:00			1:20	c 1:45				c 4:25	5:57	4:57	c 6:10	c 6:15			c 10:00	
	AM	AM	AM					AM									PM	6:23	5:23		PM			PM	
																		PM	PM						
	523	525								535	733			541	741	545/745					549	749			
Capitol Corridor Connection	Train	Train								Train	Train			Train	Train	Train					Train	Train			
	XSSH	XSSH								XSSH	SSH			XSSH	SSH	Daily					XSSH	SSH			
	AM	AM								AM	AM			PM	PM	PM					PM	PM			
SACRAMENTO Lv	5:30	6:20		6:35		7:40				10:10	10:40			2:10	2:15	4:40					6:40	7:10			
DAVIS Ar	5:45	6:35		6:50		7:55				10:25	10:55			2:25	2:30	4:55					6:55	7:25			
MARTINEZ Ar	6:28	7:18		7:30		8:38				11:08	11:38			3:08	3:13	5:38					7:38	8:08			
EMERYVILLE Ar	7:08	7:58		8:10		9:18				11:48	12:18			3:48	3:53	6:18					8:18	8:48			
SAN FRANCISCO-Ferry Bldg. Ar	7:55	8:40		8:55		9:60				12:25	12:55			4:20	4:25	6:46					8:50	9:25			
OAKLAND Ar	7:21	8:18		8:35		9:38				12:01	12:31			4:08	4:06	6:38					8:38	9:08			
SAN JOSE Ar	8:35	AM	702 ®	9:55	Bus 3-2	#REF!		Route 34		1:15	1:45			PM	5:20	PM	704 ®				PM	PM			
	AM		Train		3712 ®	AM		Bus 34-1		PM	PM				PM		Train								
			Daily		Bus			3832 ®									Daily								
			AM		Daily			Bus									PM								
SACRAMENTO (CC,20,23) Lv			6:40		n 7:55		8:00	Daily	10:25			n 1:25	1:55				4:55			6:25					
Elk Grove-Harbor Pt. & Renwick					8:10			AM																	
Lodi-Amtrak			7:18					8:25	11:05			2:05	2:10				5:33			6:40					
Stockton-ACE Station			7:35									G 2:30					5:50								
STOCKTON (SJ,6) Ar					c 8:50		c 8:50	8:50	c 11:35			c 2:40	c 2:50							c 7:20					
					AM		AM	AM	AM			PM	PM							PM					
							712 ®		714 ®				716 ®							718 ®					
							Train		Train				Train							Train					
San Joaquin Connection							Daily		Daily				Daily							Daily					
							AM		AM				PM							PM					
STOCKTON Lv			U 7:35				9:17		11:49				3:03				U 5:50			7:34					
MERCED Ar			8:51				10:31		12:59				4:13				7:06			8:47					
FRESNO Ar			9:51				11:31		2:06				5:16				8:02			9:51					
HANFORD Ar			10:28				12:09		2:44				5:54				8:39			10:28					
BAKERSFIELD Ar			12:02				1:41		4:11				7:26				10:07			11:56					
LOS ANGELES Ar			2:30	9:00			4:10		6:40				9:50				12:55			2:45					
			PM	PM			PM		PM				PM				AM			AM					

Notes:
See Page 6 for general notes.
AM - Light Face Type. **PM - Bold Type.**
e - Train No. 11 stops at Amtrak Station in Redding (across the tracks from the transit center).
F - Also connects with Train 14, the northbound Coast Starlight to Portland, Seattle and intermediate points.
G - Bus 3816 stops at Stockton-ACE station XSSH to pick up passengers from Schedule 3216 (ACE Train 02). Does not stop on SSH.
n - This schedule time is not shown in ARROW or public timetables.
® - Reservations required.
U - ACE Station

AFR: 71

4/1/10 DOR/GWS

SAN JOAQUIN & CAPITOL CORRIDOR BUS CONNECTIONS
Route 3 -- STOCKTON - SACRAMENTO - DAVIS - AUBURN - CHICO - REDDING

Northbound--Read Down

Effective May 10, 2010

			711 ® Train Daily				701 ® Train Daily				713 ® Train Daily						715 ® Train Daily					717 ® Train Daily		703 ® Train Daily	14 ® Coast S'light Daily
San Joaquin Connection			AM				AM				AM						AM					PM		PM	AM
LOS ANGELES	Lv		1:25				4:00				7:35						10:45					1:15		3:20	10:15
BAKERSFIELD	Lv		4:55				7:15				10:05						1:20					3:45		6:20	
HANFORD			6:12				8:32				11:26						2:42					5:06		7:40	
FRESNO			6:50				9:10				12:05						3:20					5:45		8:18	
MERCED			7:48				10:08				1:08						4:22					6:42		9:15	
STOCKTON	Ar		8:57				U11:20				2:14						5:29					7:59		U10:25	
			AM								PM						PM					PM			
					Route 34																		Route 34		
			Bus 3-2	Bus 3-1	Bus 34-1						Bus 3-3	Bus 3-3	Bus 3-1				Bus 3-5	Bus 3-1				Bus 3-2			
DEDICATED FEEDER Preferred Charter			3711 ® Bus Daily	3811 ® Bus Daily	3911 ® Bus Daily						3713 ® Bus SSSH	3763 ® Bus SSH	3833 Bus Daily				3715 ® Bus Daily	3815 ® Bus Daily				3817 ® Bus Daily		3837 Bus Daily	
			AM	AM	AM						PM	PM	PM				PM	PM				PM		PM	
STOCKTON (S.J.R)	Lv		c 9:10	c 9:10	c 9:10						c 2:25	c 2:25	2:45				c 5:35	c 5:35				c 8:10		8:05	
Stockton-ACE Station	Ar				c 9:15		11:20						D 2:50					D 5:40						D 8:10	10:25
Lodi-Amtrak				9:35	AM		11:34						D 3:10					D 5:50						D 8:30	10:39
Elk Grove-Harbor Pt. & Renwick			9:35								D 2:50	D 2:50	PM				D 6:00					D 8:30		PM	
State Capitol-10th & N St			9:55								E 3:10	E 3:10	Note B					E 6:35				E 8:50			
SACRAMENTO (CC:26,29)	Ar		10:00	10:00			12:30				3:15	3:15					6:25	z 6:40				8:55		11:30	
							PM																	PM	
		524 Train XSSH				528 Train XSSH			728 Train SSH	532 Train XSSH			734 Train SSH			736 Train SSH	538 Train XSSH			738 Train SSH	540 Train XSSH	544/744 Train Daily			
Capitol Corridor Connection						AM			AM	PM			PM			PM	PM			PM	PM	PM			
SAN JOSE	Lv	AM 6:40				9:05			9:50	12:20			12:50			2:20	3:00			4:25	4:50	5:50			8:39
OAKLAND	Lv	7:45				10:15			10:55	1:25			1:55			3:25	4:10			5:55	6:20	6:55			9:47
SAN FRANCISCO-Ferry Bldg	Lv	7:00 7:10				9:45			10:25 12:55				1:25			2:55	3:40			4:35	5:00	6:15			9:05
EMERYVILLE		7:30 7:55				10:25			11:05 1:35				2:05			3:35 4:20				4:35	5:00	7:05			10:12
MARTINEZ		8:09 8:34				11:04			11:44 2:14				2:44			4:14 4:59				5:14	5:39	7:44			10:54
DAVIS		8:52 9:17				11:47			12:27 2:57				3:27			4:57 5:42				5:57	6:22	8:27			11:33
SACRAMENTO	Ar	9:18 9:45				12:15			12:55 3:25				3:55			5:23 6:10				6:23	6:48	8:55			11:59
		AM AM				PM			PM PM				PM			PM PM				PM	PM	PM			
							Bus 3-4	Bus 3-4						Bus 3-5							Bus 3-8	Bus 3-1			
							3701 ® Bus XSSH	3751 ® Bus SSH						3834 Bus XSSH	545/745 Train Daily						3840 Bus XSSH	3844 Bus XSSH			
							PM	PM						PM	PM						PM	PM			
SACRAMENTO (CC:26,29)	Lv		v 10:15	10:15			c 12:35	c 1:00			c 3:30	c 4:00		c 4:00	4:40		c 6:30	6:45			c 6:50	c 8:05			S12:19
DAVIS (CC)	Ar			D10:40										D 4:30	4:55			D 7:10			D 7:20	D 9:35			
Roseville (CC:20)				AM										D 4:45	PM			PM			D 7:35	D 9:50			
Rocklin (CC:20)														D 5:10							D 7:50	D10:05			
Auburn (CC:20)	Ar													PM							PM	PM			
Marysville-Yuba Co Govt Ctr	Ar		D11:05				D 1:35	D 2:00			D4:20	D4:50					D 7:30								
Oroville-Park & Ride			D11:40				D 2:10	D 2:35			D4:55	D5:25					D 8:05								
Chico-Amtrak			D12:10				D 2:40	D 3:05			D5:25	D5:55					D 8:35								
Red Bluff-Tarp Rail			D13:00				D 3:30	D 3:55			D6:15	D6:45					D 9:25								1:55
Redding-Transit Center (A)	Ar		D1:30				D 4:00	D 4:25			D6:45	D7:15					D9:55								A 3:14 AM
			PM				PM	PM			PM	PM					PM								to Seattle

Notes: AFR: 71

See Page 6 for general notes.

AM - Light Face Type. **PM - Bold Type.**

A - Train No. 14 stops at Amtrak Station in Redding (across the tracks from the transit center).

B - Bus 3-1 deadheads back to Stockton to cover Schedule 3815.

C - Bus 3-7 deadheads back to Sacramento to cover Schedule 3803.

E - On request, bus will drop off passengers at the State Capitol bus stop (10th & N Sts.) enroute to Sacramento depot stop. Driver must be notified before leaving Stockton.

H - Bus departs after train arrives and passengers have transferred, even if train arrives early.

® - Reservations required.

S - Time shown as 11:59pm in ARROW and public timetables to avoid confusion concerning departure date.

U - ACE Station

v - Schedule 3711 may leave Sacramento early when there are no passengers transferring from Schedule 3811, and Train 522 or 720 has arrived.

z - Time set to "board-only" in Arrow.

4/1/10 DOR/GWS

SAN JOAQUIN & CAPITOL CORRIDOR BUS CONNECTIONS
Route 7 -- McKINLEYVILLE - ARCATA - EUREKA - WILLITS - SANTA ROSA - NAPA - VALLEJO - MARTINEZ

Southbound--Read Down

Effective May 10, 2010
DEDICATED FEEDER
Preferred Charter

								Bus 7-3			Bus 7-5
								6316 ® Bus Daily			6318 ® Bus Daily
								AM			AM
McKinleyville-*Arcata Airport*	Lv							6:15			10:10
Arcata-*Transit Plaza*								6:30			10:25
Eureka-*Denny's*								6:45			10:40
Fortuna-*Pepper's Restaurant*								7:10			11:05
Rio Dell/Scotia-*Scotia Inn*								7:25			11:20
Garberville-*Waterwheel Restaurant*								8:15			12:10
Leggett-*Pea House*								8:45			12:40
Laytonville-*Park n Takit Store*		Bus 7-1		Bus 7-2				9:10			1:05
Willits-*Skunk Train Depot*	Lv	6412 ® Bus Daily		6414 ® Bus Daily				9:35			1:30
Ukiah-*Burger King*								R10:30			R 2:25
Cloverdale-*Transit Depot*						Bus 7-4		11:00	Bus 7-3		2:55
Healdsburg-*Singletree Inn*		AM		AM		6516 ® Bus Daily		11:25	6518 ® Bus Daily		3:20
Santa Rosa-*Courtyard by Marriott*	Lv	6:00		8:30				11:50			3:50
Rohnert Park-*acr from Safeway*		6:10		8:40				**12:01**			4:05
Petaluma-*City Library*		6:25		8:55		**PM**		**12:15**	**PM**		4:20
Napa-*Wine Train Station*	Lv	|		|		**12:25**		|	**4:45**		|
Napa-*VINE Transit Center*		|		|		**12:30**		|	**4:50**		|
Vallejo-*Denny's*		7:00		9:20		**12:55**		|	**5:10**		|
Discovery Kingdom-*Main Gate (B)*		|		|		**B1:00**		|	**B 5:15**		B 5:20
MARTINEZ (CC SJ)	Ar	c 7:50		c 10:05		**c 1:45**		**c 1:45**	**c 6:05**		c 6:05
		AM		AM		**PM**		**PM**	**PM**		**PM**
			712 ® Train Daily		*714 ® Train Daily*		*716 ® Train Daily*			*718 ® Train Daily*	
San Joaquin Connection			*AM*		*AM*		***PM***			***PM***	
MARTINEZ	*Lv*		*8:19*		*10:54*		***2:04***			***6:39***	
STOCKTON	*Ar*		*9:13*		*11:45*		***2:59***			***7:30***	
MODESTO			*9:45*		***12:17***		***3:31***			***8:07***	
MERCED			*10:31*		***12:59***		***4:13***			***8:47***	
FRESNO			*11:31*		***2:06***		***5:16***			***9:51***	
HANFORD			***12:09***		***2:44***		***5:54***			***10:28***	
BAKERSFIELD	*Ar*		***1:41***		***4:11***		***7:26***			***11:56***	
LOS ANGELES	*Ar*		***4:10***		***6:40***		***9:50***			***2:45***	
			PM		***PM***		***PM***			***AM***	
		720 Train SSH	*524 Train XSSH*	*528 Train XSSH*	*728 Train SSH*	*532 Train XSSH*	*734 Train SSH*		*742 Train SSH*	*542 Train XSSH*	
Capitol Corridor Connection--East		*AM*	*AM*	*AM*	*AM*	***PM***	***PM***		***PM***	***PM***	
MARTINEZ	*Lv*	*8:09*	*8:34*	*11:04*	*11:44*	***2:14***	***2:44***		***6:19***	***6:24***	
DAVIS	*Ar*	*8:52*	*9:17*	*11:47*	***12:27***	***2:57***	***3:27***		***7:02***	***7:07***	
SACRAMENTO	*Ar*	*9:18*	*9:45*	***12:15***	***12:55***	***3:25***	***3:55***		***7:22***	***7:35***	
Roseville	*Ar*	*10:35*	*10:35*	***1:30***	***1:30***	***4:30***	***4:30***		***7:48***	***8:10***	
		AM	*AM*	***PM***	***PM***	***PM***	***PM***		***PM***	***PM***	
		529 Train XSSH	*727 Train SSH*	*535 Train XSSH*	*733 Train SSH*		*541 Train XSSH*	*741 Train SSH*		*747 Train SSH*	*547 Train XSSH*
Capitol Corridor Connection--West		*AM*	*AM*	*AM*	*AM*		***PM***	***PM***		***PM***	***PM***
MARTINEZ	*Lv*	*8:40*	*8:40*	*11:10*	*11:40*		***3:10***	***3:15***		***6:40***	***6:40***
EMERYVILLE	*Ar*	*9:18*	*9:18*	*11:48*	***12:18***		***3:48***	***3:53***		***7:18***	***7:18***
SAN FRANCISCO-Ferry Bldg.	*Ar*	*9:50*	*9:50*	***12:25***	***12:55***		***4:20***	***4:25***		***7:50***	***7:50***
OAKLAND	*Ar*	*9:38*	*9:31*	***12:01***	***12:31***		***4:08***	***4:06***		***7:31***	***7:31***
SAN JOSE	*Ar*	*AM*	*10:45*	***1:15***	***1:45***		***PM***	***5:20***		***8:45***	***8:55***
			AM	***PM***	***PM***			***PM***		***PM***	***PM***

Notes: AFR: 71
See Page 6 for general notes.
AM - Light Face Type, **PM - Bold Type.**
B - No service to or from Discovery Kingdom (Marine World) when park is closed.
N - Stops only when needed to cover for a late running Schedule 6518.
® - Reservations required.
R - Rest Stop
4/1/10 DOR/GWS

SAN JOAQUIN & CAPITOL CORRIDOR BUS CONNECTIONS
Route 7 -- MARTINEZ - VALLEJO - NAPA - SANTA ROSA - WILLITS - EUREKA - ARCATA - McKINLEYVILLE

Northbound--Read Down

Effective May 10, 2010		724 Train SSH		526 Train XSSH	532 Train XSSH		734 Train SSH	742 Train SSH		542 Train XSSH
Capitol Corridor Connection		AM		AM	PM		PM	PM		PM
SAN JOSE	Lv	7:50		9:15	**12:20**		**12:50**	**4:25**		**4:20**
OAKLAND		8:55		10:02	**1:25**		**1:55**	**5:30**		**5:30**
SAN FRANCISCO-Ferry Bldg.	Lv	8:25		9:25	**12:55**		**1:25**	**5:05**		**5:05**
EMERYVILLE		9:05		10:02	**1:35**		**2:05**	**5:40**		**5:45**
MARTINEZ	Ar	9:42			**2:12**		**2:42**	**6:17**		**6:22**
		AM		AM	PM		PM	PM		PM
		729 Train SSH		533 Train XSSH	541 Train XSSH		741 Train SSH		547/747 Train Daily	
Capitol Corridor Connection		AM		AM	PM		PM		PM	
Roseville	Lv	8:37		9:20	**2:10**		**2:15**		**5:40**	
SACRAMENTO		9:10		9:35	**2:25**		**2:30**		**5:55**	
DAVIS		9:25		10:18	**3:08**		**3:13**		**6:38**	
MARTINEZ	Ar	10:08								
		AM		AM	PM		PM		PM	
			711 ® Train Daily			713 ® Train Daily			715 ® Train Daily	
San Joaquin Connection			AM			AM			AM	
LOS ANGELES	Lv		1:25			7:35			10:45	
BAKERSFIELD	Lv		4:55			10:05			**1:20**	
HANFORD			6:12			11:26			**2:42**	
FRESNO			6:50			**12:05**			**3:20**	
MERCED			7:48			**1:08**			**4:22**	
MODESTO			8:28			**1:42**			**4:57**	
STOCKTON			9:01			**2:18**			**5:33**	
MARTINEZ	Ar		10:00			**3:16**			**6:25**	
			AM			PM			PM	
DEDICATED FEEDER *Preferred Charter*		Bus 7-1 6311 ® Bus Daily		Bus 7-4 6511 ® Bus Daily	Bus 7-4 6313 ® Bus Daily		Bus 7-3 6513 ® Bus Daily	Bus 7-3 6415 ® Bus Daily		Bus 7-5 6515 ® Bus Daily
		AM		AM	PM		PM	PM		PM
MARTINEZ (CC,SJ)	Lv	c 10:25		c 10:25	**c 3:25**		**c 3:25**	**c 6:45**		**c 6:45**
Discovery Kingdom-*Main Gate (B)*		B10:45		B10:45						
Vallejo-*Denny's*		D10:50		D10:50			**D 3:50**			**D 7:10**
Napa-*VINE Transit Center*				D11:05			**D 4:05**			**D 7:25**
Napa-*Wine Train Station*	Ar			D11:10			**D 4:10**			**D 7:30**
Petaluma-*City Library*		D11:15		AM	**D 4:15**		PM	**D 7:35**		PM
Rohnert Park-*acr from Safeway*		D11:30		Note A	**D 4:30**			**D 7:55**		
Santa Rosa-*Courtyard by Marriott*	Ar	D11:40			**D 4:40**			**D 8:05**		
Healdsburg-*Singletree Inn*		**D12:05**			**D 5:05**			PM		
Cloverdale-*Transit Depot*		**D12:20**			**D 5:20**					
Ukiah-*Burger King* (R)		**R12:50**			**R 5:50**					
Willits-*Skunk Train Depot*	Ar	**D 1:25**			**D 6:25**					
Laytonville-*Park n Takit Store*		**D 1:55**			**D 6:55**					
Leggett-*Pea House*		**D 2:30**			**D 7:30**					
Garberville-*Waterwheel Restaurant*		**D 3:00**			**D 8:00**					
Rio Dell/Scotia-*Scotia Inn*		**D 3:50**			**D 8:50**					
Fortuna-*Pepper's Restaurant*		**D 4:05**			**D 9:05**					
Eureka-*Denny's*		**D 4:25**			**D 9:20**					
Arcata-*Transit Plaza*		**D 4:40**			**D 9:40**					
McKinleyville-*Arcata Airport*	Ar	**D 4:55**			**D9:55**					
		PM			PM					
		Note A								

Notes: AFR: 71
See Page 6 for general notes.
AM - Light Face Type, **PM - Bold Type.**
A - Bus may depart Martinez early if all connecting trains have arrived and passengers have transferred.
B - No service to or from Discovery Kingdom (Marine World) when park is closed.
® - Reservations required.
R - Rest Stop.
4/1/10 DOR/GWS

SAN JOAQUIN BUS CONNECTIONS
Route 15 -- YOSEMITE - MERCED / MODESTO
Seasonal Service Mammoth Lakes - Yosemite

Effective May 10, 2010

MIXED-MODE FEEDER
Yosemite Area Regional Transit Service (YARTS)

Lv		Ar
	Mammoth Lakes	
	June Lake	
	Lee Vining	
	Yosemite Tuolomne Meadows	
	Yosemite White Wolf	
	Yosemite Crane Flat	
Ar	*Yosemite Visitors Center*	Lv
	Yosemite-Curry Village	
	Yosemite - Ahwahnee Hotel	
Lv	*Yosemite Visitors Center*	
Lv	*Yosemite-Lodge (F)*	Ar
	Yosemite Visitors Center	
	Yosemite - Ahwahnee Hotel	
	Yosemite-Curry Village	
	El Portal-Yosemite View Lodge/Parkline	
	Midpines-Hostel	
	Mariposa-Visitors' Center (B)	
Ar	**MERCED (SJ)**	Lv

San Joaquin Train Connection

Lv		Ar
	MERCED	
Ar	*MODESTO*	Lv
Ar	*STOCKTON-Amtrak*	Lv
Ar	*STOCKTON-ACE*	Lv
Ar	*SACRAMENTO*	Lv
Lv	*STOCKTON-Amtrak*	Ar
Ar	*MARTINEZ*	Lv
Ar	*EMERYVILLE*	Lv
Ar	*OAKLAND*	Lv
Ar	*SAN FRANCISCO-Ferry Bldg*	Lv

San Joaquin Train/Bus Connection

Lv		Ar
	MERCED	
Ar	*FRESNO*	Lv
Ar	*HANFORD*	Lv
Ar	*BAKERSFIELD*	Lv
Ar	*LOS ANGELES*	Lv

Westbound--Read Down

Bus 15-2 8463 ® New Bus Daily	Bus 15-3 8403 ® Bus Daily	Bus 15-1 8667 Bus Seasonal Sched (S)	Bus 15-1 8417 ® Bus Daily	Bus 15-2 8413 ® Bus Daily	Bus 15-3 8461 ® Bus XS9H(B)
PM	PM		PM	AM	AM
		S 7:00			
		S 7:50			
		S 8:20			
		S 9:05			
		S 9:50			
		S 10:20			
		S 10:55			
7:50	5:40		4:00	9:32	
7:55	5:45		4:05	9:37	
8:00	5:50		4:10	9:42	
8:20	5:55		4:15	10:00	
9:00	6:20		4:25	10:25	
9:42	7:02		5:07	11:07	
9:57	7:17		5:22	11:22	6:20
10:49	c 9:04		c 6:14	c 12:35	6:34
PM	PM		PM	PM	c 7:40
					AM
	703 ® Train Daily		717 ® Train Daily	713 ® Train Daily	711 ® Train Daily
	PM		PM	PM	AM
	9:15		6:42	1:08	7:48
	9:52		7:25	1:42	8:28
			7:59	2:14	8:57
	10:25				
	11:30		8:55	3:15	9:55
	PM		8:03	2:18	9:01
			8:53	3:16	10:00
			9:41	4:01	10:46
			9:55	4:15	11:00
			10:10	4:40	11:20
			PM	PM	AM
718 ® Train Daily		704 ® Train Daily	714 ® Train Daily	702 ® Train Daily	
PM		PM	PM	AM	
8:47		7:06	12:59	8:51	
9:51		8:02	2:06	9:51	
10:28		8:39	2:44	10:28	
11:56		10:07	4:11	12:02	
2:45		12:55	6:40	2:30	
AM		AM	PM	PM	

4403 ® Bus Daily
PM
10:30
D10:35
D12:10
D11:55
12:35
AM

Eastbound--Read Up

Bus 15-2 8400 ® Bus Daily	Bus 15-3 8402 ® Bus Daily	Bus 15-1 8662 Bus Seasonal Sched (S)	Bus 15-1 8412 ® Bus Daily	Bus 15-2 8416 ® Bus Daily
AM	AM		PM	PM
		S 8:51		
		S 8:00		
		S 7:30		
		S 6:45		
		S 6:00		
		S 5:30		
		S 5:00		
9:55	11:45		1:25	8:20
9:50	11:40		1:20	8:15
9:45	11:35		1:15	8:10
9:40	11:30		1:10	8:05
9:07	10:57		12:45	7:32
8:25	10:15		12:10	6:50
8:08	9:58		11:53	6:33
c 7:10	c 9:00		c 11:00	c 5:30
AM	AM		AM	PM
	702 ® Train Daily		712 ® Train Daily	716 ® Train Daily
	AM		AM	PM
	8:51		10:31	4:13
	8:09		9:45	3:31
			9:17	3:03
	7:35			
	6:40		AM	PM
	AM		9:13	2:59
			8:19	2:04
			7:40	1:25
			7:30	1:15
			7:05	12:45
			AM	PM
711 ® Train Daily		701 ® Train Daily	715 ® Train Daily	
AM		AM	PM	
7:48		10:08	4:22	
6:50		9:10	3:20	
6:12		8:32	2:42	
4:55		7:15	1:20	
1:25		4:00	10:45	
AM		AM	AM	

4402 ® Bus Daily
AM
7:20
7:10
5:30
4:50
AM

Notes AFR: 71

See Page 6 for general notes.

AM - Light Face Type. **PM - Bold Type.**

A - Bus 8416 serves these stops only if there are Amtrak passengers.

B - Buses also stop at YARTS bus stop, SR 140 at 7th St. (Charles St. Dinner House).

F - Buses make several stops in Yosemite Valley, consult VIA for times and locations.

® - Reservations required.

S - Seasonal Service: SA/SU only June and September, daily July and August.

4/1/10 DOR/GWS

Route 68 -- CARMEL - MONTEREY - SALINAS

Eastbound--Read Down | Westbound--Read Up

Effective May 10, 2010

DEDICATED FEEDERS
MV Transportation

Bus 68-1 4114 ® Bus Daily	Bus 68-1 4111 ® Bus Daily				Bus 68-1 4211® Bus Daily	Bus 68-1 4214® Bus Daily
PM	AM				**PM**	**PM**
4:30	9:50	Lv	Carmel-*Chevron Station*	Ar	**D 1:10**	**D 7:45**
4:45	10:05		Monterey-*Travelodge*		|	|
4:55	10:15		Monterey-*Aquarium*		**D12:45**	**D 7:35**
5:00	10:20		Monterey-*Marriott*		|	|
5:20	10:30	Lv	Monterey-*Transit Plaza*	Ar	**D12:35**	**D 7:30**
|	|		Monterey-*Travelodge*		**D12:33**	**D 7:23**
|	|		Monterey-*Marriott*		**D12:30**	**D 7:20**
5:30	10:45		Monterey-*Hyatt Regency*		**D12:25**	**D 7:15**
c 6:15	c 11:20	Ar	**SALINAS**-*Amtrak* (17,21,36)	Lv	c 11:50	**c 6:40**
PM	AM		**SALINAS**-*Amtrak* (17,21,36)		AM	**PM**

Notes AFR: 71 (37), or 74 (68)

See Page 6 for general notes.

AM - Light Face Type, **PM - Bold Type.**

Schedules 5111 and 5114 are all reserved. Buses will stop to pick-up passengers at hotel stops only if reservations have been made 60 minutes before departure. The only positive stop is the Monterey Transit Plaza, so passengers who make reservations less than 60 minutes prior to departure should board at the Transit Plaza.

® - Reservations required.

4/1/10 DOR/GWS

SAN JOAQUIN BUS CONNECTIONS
Route 18-A -- SANTA MARIA - SAN LUIS OBISPO - HANFORD

Eastbound-Read Down | Westbound-Read Up

Effective May 10, 2010

MIXED MODE FEEDER
Orange Belt Stages

Bus 18-2 4903 ® Bus Daily	Bus 18-1 4913 ® Bus Daily			Bus 18-1 4912 ® Bus Daily	Bus 18-2 4904 ® Bus Daily
PM	AM			**PM**	**AM**
3:05	7:05	Lv Santa Maria-*IHOP* (17,21) Ar		**D 3:55**	D12:15
3:30	7:30	Grover Beach (PS,17,21)		**D 3:30**	**D11:50**
3:55	7:55	**SAN LUIS OBISPO** (PS,17,21,36)		**3:05**	**11:35**
4:05	8:05	San Luis Obispo-*Cal-Poly* (17,21,36)		**3:00**	**11:30**
4:30	8:30	Atascadero-*Denny's* (17,36)		**2:35**	**11:05**
4:50	8:50	Paso Robles (17,21,36)		**2:15**	**10:45**
5:50	9:50	Kettleman City (Avenal)-*Carl's Jr.*		**D 1:00**	**9:30**
|	|	Lemoore Naval Air Sta.-*Main Gate*		|	**D 9:05**
6:20	10:20	Lv Lemoore-*Chamber of Commerce* Ar		**D12:30**	**9:00**
c 7:05	c 11:05	Ar **HANFORD** (SJ,18B) Lv		**c 12:15**	**c 8:45**
PM	AM			**PM**	**PM**

704 ® Train Daily	712 ® Train Daily	713 ® Train Daily	703 ® Train Daily
PM	**PM**	AM	**PM**
8:39	**12:09**	11:26	**7:40**
10:07	**1:41**	10:05	**6:20**
12:55	**4:10**	7:35	**3:20**
AM	**PM**	AM	**PM**

San Joaquin Connection

Lv	*HANFORD*	Ar
Ar	*BAKERSFIELD*	Lv
Ar	*LOS ANGELES*	Lv

4403 ® Bus Daily	703 ® Train Daily	713 ® Train Daily	712 ® Train Daily	4404 ® Bus Daily	704 ® Train Daily
PM	**PM**	AM	**PM**	**PM**	**PM**
|	**7:40**	11:26	**12:09**	**5:25**	**8:39**
10:30	**8:14**	**12:01**	11:35	|	**8:06**
|	**9:15**	**1:08**	10:31	**5:15**	**7:06**
D10:35	|	**2:14**	9:17	|	|
|	**10:25**	**2:50**	|	**3:00**	**5:50**
D12:10	**11:30**	**3:15**	AM	**3:15**	**4:55**
D11:55	**PM**	**2:18**	9:13	**2:35**	**PM**
12:35		**3:16**	8:19	**PM**	
AM		**4:01**	7:40		
		4:15	7:30		
		4:40	7:05		
		PM	AM		

San Joaquin Connection

Lv	*HANFORD*	Ar
Ar	*FRESNO*	
	MERCED	
Ar	*STOCKTON-Amtrak*	Lv
Ar	*STOCKTON-ACE Station*	Lv
Ar	*SACRAMENTO*	Lv
Lv	*STOCKTON-Amtrak*	Ar
	MARTINEZ	
Ar	*EMERYVILLE*	Lv
Ar	*OAKLAND*	Lv
Ar	*SAN FRANCISCO-Ferry Bldg.*	Lv

Notes: AFR: 71
See Page 6 for general notes.
AM - Light Face Type, **PM - Bold Type.**
® - Reservations required.

4/1/10 DOR/GWS

SAN JOAQUIN BUS CONNECTIONS
Route 18-B -- VISALIA - HANFORD

Westbound-Read Down | Eastbound-Read Up

Effective May 10, 2010

MIXED MODE FEEDER
Orange Belt Stages

	Bus 18-3 4704 ® Bus Daily		Bus 18-3 4712 ® Bus Daily					Bus 18-3 4713 ® Bus Daily		Bus 18-3 4703 ® Bus Daily
	PM		AM					PM		PM
	6:35		10:30	Lv	Visalia-*Transit Center*	Ar		12:40		9:20
	6:50		10:45	Lv	Goshen (Tulare)-*Bus Depot*	Ar		12:25		9:05
	c 7:05		c 11:10	Ar	**HANFORD** (SJ)	Lv		c 12:15		c 8:45
	PM		AM					PM		PM
704 ® Train Daily		712 ® Train Daily					713 ® Train Daily		703 ® Train Daily	
					San Joaquin Connection					
PM		PM		Lv	*FRESNO*	Ar	AM		PM	
8:39		12:09		Lv	*HANFORD*	Ar	11:26		7:40	
10:07		1:41		Ar	*BAKERSFIELD*	Lv	10:05		6:20	
12:55		4:10		Ar	*LOS ANGELES*	Lv	7:35		3:20	
AM		PM					AM		PM	
	703 ® Train Daily		713 ® Train Daily					712 ® Train Daily		704 ® Train Daily
					San Joaquin Connection					
4403 ® Bus Daily	PM		AM	Lv	*HANFORD*	Ar		PM	4404 ® Bus Daily	PM
	7:40		11:26	Lv	*FRESNO*	Ar		12:09		8:39
	8:18		12:05		*MERCED*			11:31		8:06
PM	9:15		1:08					10:31		7:06
10:30	10:25		2:14	Ar	*STOCKTON-Amtrak*	Lv		9:17	PM	
	11:30		2:50	Ar	*STOCKTON-ACE Station*	Lv			5:25	5:50
D10:35	PM		3:15	Ar	*SACRAMENTO*	Lv		AM		4:55
			2:18	Lv	*STOCKTON-Amtrak*	Ar		9:13	5:15	PM
D12:10			3:16		*MARTINEZ*			8:19		
D11:55			4:01	Ar	*EMERYVILLE*	Lv		7:40	3:00	
			4:15	Ar	*OAKLAND*	Lv		7:30	3:15	
12:35			4:40	Ar	*SAN FRANCISCO-Ferry Bldg.*	Lv		7:05	2:35	
AM			PM					AM	PM	

Notes: AFR: 71
See Page 6 for general notes.
AM - Light Face Type, **PM - Bold Type.**
® - Reservations required.
4/1/10 DOR/GWS

SAN JOAQUIN BUS CONNECTIONS

Route 1 -- SAN DIEGO - LOS ANGELES BASIN - BAKERSFIELD

Northbound--Read Down
Effective May 10, 2010

DEDICATED FEEDER
CUSA
Pacific Surfliner Connection
and through Bus Service

		1A Bus 1 5811 ® Bus Daily	1A Bus 2 5801 ® Bus Daily	1B Bus 3 5713 ® Bus Daily	1A Bus 5 5813 ® Bus Daily	1B Bus 8 5715 ® Bus Daily	1A Bus 9 5815 ® Bus Daily	565 Train Daily	1B Bus11 5717 ® Bus Daily	1A Bus 1 5817 ® Bus Daily	769 Train Daily	1C Bus12 5903 ® Bus Daily	1B Bus 6 5703 ® Bus Daily	775 Train Daily	1B Bus 9 5885 ® Bus Daily	785 Train Daily
SAN DIEGO	Lv	PM P10:00			AM P 5:30			AM 7:05			AM 9:30			Noon 12:00		PM 4:00
SOLANA BEACH		P10:30						7:39			10:04			12:34		4:35
OCEANSIDE		P11:00						7:55			10:18			12:49		4:52
SAN JUAN CAPISTRANO		P11:35						8:28			10:49			1:21		5:26
IRVINE		P11:50						8:46			11:05			1:36		5:41
SANTA ANA		P12:10						8:57			11:17			1:49		5:52
ANAHEIM								9:08			11:26			1:58		6:01
FULLERTON		P12:30	3:15		P 5:50			9:17			11:36			2:08		6:10
LOS ANGELES	Ar	1:15	4:00		7:15			9:50			12:15			2:40		6:45
								AM			PM			PM		PM
San Pedro-Library	Lv															
San Pedro-Catalina Terminal																
Long Beach-Queen Mary																
Long Beach-Denny's Rstrnt																
LOS ANGELES (PS.4)	Ar															
LOS ANGELES (PS.4)	Lv															
Glendale (PS.4)																
Torrance - Alpine Village		1:25	4:10		7:35											
El Segundo - Douglas Green Line Stn		1:45	4:30													
Westchester - MTA Bus Stop																
UCLA-Gayley/Strathmore																
Van Nuys-FlyAway Terminal		2:10	4:50													
VAN NUYS-Amtrak (PS.4)																
Burbank Airport (PS.4)																
Santa Clarita/Newhall -Metrolink																
Lebec		2:40	5:15													
BAKERSFIELD (SJ.9,10,12,19)	Ar	c 4:40	6:00	c 9:50	c 9:50	c 1:05	c 1:05	c 1:05	c 3:30	c 3:30	c 3:30	c 6:05	c 6:05	c 6:05		
		AM	AM	AM	AM	PM	PM	PM	PM	PM	PM	PM	PM	PM		

		1C Bus 4 5913 ® Bus Daily	1C Bus 7 5915 ® Bus Daily	1C Bus10 5917 ® Bus Daily	711 ® Train Daily	701 ® Train Daily	713 ® Train Daily	715 ® Train Daily	717 ® Train Daily	Same as 5903	1C Bus12 5953 ® Bus Daily	Same as 5885	1C Bus12 5985 ® Bus Daily	703 ® Train Daily	4401 ® Bus Daily	4403 ® Bus Daily
SAN DIEGO	Lv															
SOLANA BEACH																
OCEANSIDE																
SAN JUAN CAPISTRANO																
IRVINE																
SANTA ANA																
ANAHEIM																
FULLERTON																
LOS ANGELES	Ar															
San Pedro-Library	Lv															
San Pedro-Catalina Terminal																
Long Beach-Queen Mary																
Long Beach-Denny's Rstrnt																
LOS ANGELES (PS.4)	Ar															
LOS ANGELES (PS.4)	Lv															
Glendale (PS.4)																
Torrance - Alpine Village																
El Segundo - Douglas Green Line Stn																
Westchester - MTA Bus Stop																
UCLA-Gayley/Strathmore																
Van Nuys-FlyAway Terminal																
VAN NUYS-Amtrak (PS.4)																
Burbank Airport (PS.4)																
Santa Clarita/Newhall -Metrolink																
Lebec																
BAKERSFIELD (SJ.9,10,12,19)	Ar															

San Joaquin Connection

BAKERSFIELD	Lv	AM 5:30			AM 4:55	AM 7:15	AM 10:05	PM 1:20	PM 3:45					PM 6:20	AM 11:30	PM 10:30
HANFORD	Ar	5:45			6:12	8:32	11:26	2:42	5:06					7:40		
FRESNO		6:05			6:46	9:06	12:01	3:16	5:41					8:14		
MERCED		6:35			7:48	10:08	1:08	4:22	6:42					9:15		
STOCKTON	Ar	SA 7:10			S 8:57	U11:20	S 2:14	S 5:29	S 7:59					U10:25		
SACRAMENTO	Ar	7:30			9:55	12:30	3:15	6:25	8:55					11:30		
MARTINEZ	Ar	7:55			10:00	PM	3:16	6:25	8:53					PM		
EMERYVILLE	Ar				10:46		4:01	7:11	9:41							
OAKLAND	Ar				11:00		4:15	7:25	9:55							
SAN FRANCISCO-Ferry Bldg.	Ar	c 9:50	c 9:50	c 9:50	11:20		4:30	7:45	10:10						D1:00	D12:10
		AM	AM	AM	AM		PM	PM	PM						D12:50	D11:55
															D1:20	12:35
															AM	AM

Notes: AFR: 71

See Page 6 for general notes.
AM - Light Face Type, **PM - Bold Type.**
n - Time not shown in Public Timetables or ARROW.
P - Schedule 5811, 5813, and 5885 may carry local passengers holding prepurchased Amtrak tickets, as long as their itinerary includes train travel.
R - Stops to receive passengers only.
® - Reservations required.
S - Bus connects at Van Nuys (rest stop) with northbound Pacific Surfliner trains.
U - ACE Station

SA=TRAIN 799 SB = TRAIN 769 SC = TRAIN 775

4/1/10 DOR/GWS

SAN JOAQUIN BUS CONNECTIONS

Route 1 -- BAKERSFIELD - LOS ANGELES BASIN - SAN DIEGO

Southbound--Read Down

Effective May 10, 2010																	
San Joaquin Connection			4402 ® Bus Daily			712 ® Train Daily			714 ® Train Daily			716 ® Train Daily		4404 ® Bus Daily		718 ® Train Daily
SAN FRANCISCO-Ferry Bldg Lv		702 ® Train Daily	AM 4:45			AM 7:05			AM 9:35			PM 12:45		PM 2:35	704 ® Train Daily	PM 5:15
OAKLAND Lv			5:30			7:30			10:05			1:15		3:15	PM 4:55	5:50
EMERYVILLE Lv	1B Bus 1		5:15			7:40			10:15			1:25		3:00	U 5:50	6:00
MARTINEZ	5872 @ Bus Daily	AM 6:40				8:19			10:54			2:04			7:06	6:39
SACRAMENTO Lv		U 7:35	← 7:10 AM			AM 9:17			AM 11:49			PM 3:03		5:15 →	8:06	PM 7:34
STOCKTON	AM L 6:00	8:51				10:31			12:59			4:13		PM	8:39	8:47
MERCED	L 6:50	9:55				11:35			2:10			5:20			10:07	9:55
FRESNO	L 8:30	10:28				12:09			2:44			5:54			PM	10:28
HANFORD		12:02				1:41			4:11			7:26				11:56
BAKERSFIELD Ar		AM				PM			PM			PM				PM
DEDICATED FEEDER CUSA		1A Bus 5	1C Bus 4	1C Bus 4	1B Bus 3	1A Bus 9	1C Bus 7	1B Bus 8	1A Bus 1	1C Bus10	1C Bus10	1B Bus11	1B Bus 5	1C Bus12	1B Bus 6	1A Bus 3	1A Bus 9
		5802 ® Bus Daily	5902 ® Bus Daily	5952 ® Bus Daily	5702 Bus Daily	5812 ® Bus Daily	5912 ® Bus Daily	5712 ® Bus Daily	5814 ® Bus Daily	5914 ® Bus XSSH	5964 ® Bus SSH	5714 ® Bus Daily	5816 ® Bus Daily	5916 ® Bus Daily	5716 ® Bus Daily	5804 ® Bus Daily	5818 ® Bus Daily
BAKERSFIELD (SJ.9,10,12,19) Lv	L 8:35	PM c 12:10	PM c 12:10	PM R 1:05	PM c 12:10	PM c 1:50	PM c 1:50	PM c 1:50	PM c 4:20	PM c 4:20	PM c 4:20	PM c 4:20	PM c 7:30	PM c 7:30	PM c 7:30	PM c 10:10	PM c 11:59
Lebec			(1:05)	D 1:55													
Santa Clarita/Newhall-*Metrolink*			D 1:55	D 1:55			D 3:25			D 5:55	D 5:55			D 9:05		D11:40	D 1:30
Burbank Airport (PS.4)			D 2:05				D 3:50			D 6:20	D 6:20			D 9:30			
VAN NUYS-*Amtrak* (PS.4)			2:25	Same as 5902			SA 4:20			SB 7:00	SC 6:40			9:50			
Van Nuys-*FlyAway Terminal*																D12:10	D 2:00
UCLA-Gayley/Strathmore			D 2:55				D 4:50			D 7:30	D 7:10			D 10:20			
Westchester - MTA Bus Stop			D 3:15				D 5:15			D 7:50	D 7:30			D 10:30			
El Segundo - Douglas Green Line Stn			D 3:35				D 5:35			D 8:10	D 7:50			D 10:50			
Torrance - Alpine Village Ar			D 3:55				D 6:00			D 8:30	D 8:10			D 11:10			
Glendale (PS.4)			PM				PM			PM	PM			PM			
LOS ANGELES (PS.4) Ar	c 10:45 AM	c 2:30 PM			D 2:20 n 2:40	c 4:10 PM		D 4:00 n 4:20	c 8:40 PM			D 6:30 n 6:50	c 9:50 PM		D 9:40 n 10:00	D12:35 12:55	D 2:25 2:45
Pacific Surfliner Connection and through Bus Service	572 Train Daily	580 Train SSH	582 Train Daily				784 Train Daily			590 Train FSSH	592 Train Daily		796 Train Daily				
LOS ANGELES Lv	AM 11:10	PM 3:00	PM 4:10				PM 5:10			PM 7:15	PM 8:30		PM 10:10			L 1:05	L 2:50
FULLERTON	11:40	3:30	4:40				5:40			7:45	9:02		10:40			D 1:40	D 3:25
ANAHEIM	11:49	3:39	4:49				5:49			7:54	9:11		10:49				
SANTA ANA	11:58	3:48	4:58				5:58			8:03	9:20		10:58			D 1:55	D 3:40
IRVINE	12:11	4:02	5:09				6:11			8:17	9:31		11:09			AM	D 4:00
SAN JUAN CAPISTRANO	12:25	4:16	5:23				6:25			8:31	9:48		11:23				D 4:15
OCEANSIDE	12:59	4:52	5:55				6:57			9:03	10:19		11:55				D 4:50
SOLANA BEACH	1:19	5:10	6:13				7:13			9:19	10:35		12:11				D 5:10
SAN DIEGO Ar	1:55	5:45	7:00				7:50			9:55	11:15		12:50				D 5:35
	PM	PM	PM				PM			PM	PM		AM				AM
LOS ANGELES (PS.4) Lv					2:50			4:30				7:00			10:10		
Long Beach-*Denny's Rstrnt*					D 3:45			D 5:25				D 7:55			D11:05		
Long Beach-*Queen Mary*					D 4:00			D 5:40				D 8:10			D11:20		
San Pedro-*Catalina Terminal*					D 4:15			D 5:55				D 8:25			D11:35		
San Pedro-*Library* Ar					D 4:25			D 6:05				D 8:35			D11:45		
					PM			PM				PM			PM		

Notes: AFR: 71

See Page 6 for general notes.

AM - Light Face Type. **PM - Bold Type.**

L - Schedules 5804, 5818, and 5872 may carry local passengers holding prepurchased Amtrak tickets, as long as their itinerary includes train travel.

n - Time not shown in Public Timetables or ARROW.

® - Reservations required.

S - Bus holds at Van Nuys (rest stop) for arrival of Pacific Surfliner train from Santa Barbara. SA=TRAIN 784 SB = TRAIN 798 SC = TRAIN 792

U - ACE Station

4/1/10 DOR/GWS

SAN JOAQUIN BUS CONNECTIONS
Route 10 -- BAKERSFIELD - OXNARD - SANTA BARBARA

Westbound-Read Down

716 ® Train Daily	714 ® Train Daily	712 ® Train Daily	4402 ® Bus Daily
PM	AM	AM	AM
12:45	9:35	7:05	4:50
1:15	10:05	7:30	5:30
1:25	10:15	7:40	5:15
2:04	10:54	8:19	|
2:59	11:45	9:13	7:10
PM	AM	AM	|
|	|	|	7:20
3:03	11:49	9:17	AM
4:13	12:59	10:31	
5:20	2:10	11:35	
5:54	2:44	12:09	
7:26	4:11	1:41	
PM	PM	PM	
↓	↓	↓	
Bus 10-4	Bus 10-3	Bus 10-2	
4616 ® Bus Daily	4614 ® Bus Daily	4612 ® Bus Daily	
PM	PM	PM	
c 7:30	c 4:20	c 1:50	
D 9:10	D 6:00	D 3:30	
D 9:25	D 6:15	D 3:45	
D 9:50	D 6:40	D 4:10	
D10:10	D 7:00	D 4:30	
D10:25	D 7:15	D 4:45	
D10:45	D 7:35	D 5:05	
PM	PM	PM	

Effective May 10, 2010

702 ® Train Daily	San Joaquin Connection			713 ® Train Daily	715 ® Train Daily	717 ® Train Daily	703 ® Train Daily	4403 ® Bus Daily
		Lv	SAN FRANCISCO-Ferry Bldg	Ar	PM	PM	PM	PM
AM					4:40	7:45	10:10	12:35
6:40		Lv	OAKLAND	Ar	4:15	7:25	9:55	D11:55
7:35		Lv	EMERYVILLE	Ar	4:01	7:11	9:41	D12:10
|			MARTINEZ	Ar	3:16	6:25	8:53	|
8:51		Ar	STOCKTON-Amtrak	Lv	2:18	5:33	8:03	PM
9:55		Lv	SACRAMENTO	Ar	3:15	6:25	8:55	D10:35
10:28		Lv	Stockton-ACE Station	Ar	D 2:50	D 5:40	D 8:10	11:30
12:02		Lv	STOCKTON-Amtrak	Ar	2:14	5:29	7:59	|
AM			MERCED		1:08	4:22	6:42	9:15
↓			FRESNO		12:01	3:16	5:41	8:14
Bus 10-1		Lv	HANFORD	Ar	11:26	2:42	5:06	7:40
4602 ® Bus Daily		Ar	BAKERSFIELD	Lv	10:05	1:20	3:45	6:20
PM					AM	PM	PM	PM
c 12:10					↑	↑	↑	↑
D 1:50					Bus 10-1	Bus 10-2	Bus 10-3	Bus 10-4
D 2:05					4613 ® Bus Daily	4615 ® Bus Daily	4617 ® Bus Daily	4603 ® Bus Daily
D 2:30					AM	PM	PM	PM
D 2:50					c 9:55	c 1:05	c 3:30	c 6:05
D 3:05					7:55	11:00	1:30	3:55
D 3:25					7:40	10:45	1:15	3:40
PM					7:10	10:15	12:45	3:10
					6:45	9:50	12:20	2:45
					6:25	9:30	12:01	2:25
					6:05	9:10	11:40	2:05
					AM	AM	AM	PM

DEDICATED FEEDER
Silverado Stages

Lv	**BAKERSFIELD** (SJ,1,9,12,19)	Ar
Ar	Fillmore-*Int'l House of Pancakes*	Lv
	Santa Paula-*Carrows*	
	OXNARD-*Trans Center* (PS,4)	
	Ventura (PS,4)	
	Carpinteria (PS,4)	
Ar	**SANTA BARBARA** (PS,4,17,21)	Lv

Eastbound-Read Up

Notes: AFR: 71

See Page 6 for general notes.

AM - Light Face Type, **PM - Bold Type.**

® - Reservations required.

4/1/10 DOR/GWS

SAN JOAQUIN BUS CONNECTIONS

Route 9 -- BAKERSFIELD - BARSTOW - LAS VEGAS
Route 12 -- BAKERSFIELD - LANCASTER - VICTORVILLE

Southbound-Read Down | Northbound-Read Up

Effective May 10, 2010

716 ® Train Daily	712 ® Train Daily		San Joaquin Connection		713 ® Train Daily	715 ® Train Daily	717 ® Train Daily
PM	AM				PM	PM	PM
12:45	7:05	Lv	SAN FRANCISCO-Ferry Bldg.	Ar	4:40	7:45	10:10
1:15	7:30	Lv	OAKLAND	Ar	4:15	7:25	9:55
1:25	7:40	Lv	EMERYVILLE	Ar	4:01	7:11	9:41
2:04	8:19	Lv	MARTINEZ	Ar	3:16	6:25	8:53
3:03	9:17	Lv	STOCKTON-Amtrak	Ar	2:14	5:29	7:59
PM	AM	Lv	SACRAMENTO	Ar	3:15	6:25	8:55
		Lv	STOCKTON-ACE	Ar	D 2:50	D 5:40	D 8:10
3:31	9:45	Lv	STOCKTON-Amtrak	Ar	1:42	4:57	7:25
4:13	10:31		MERCED		1:08	4:22	6:42
5:20	11:35		FRESNO		12:01	3:16	5:41
5:54	12:09	Lv	HANFORD	Ar	11:26	2:42	5:06
7:26	1:41	Ar	BAKERSFIELD	Lv	10:05	1:20	3:45
PM	PM				AM	PM	PM

Bus 12-4	Bus 9-3	Bus 12-2				Bus 12-1	Bus 12-2	Bus 9-3	Bus 9-3
4216 ® Bus Daily	4312 ® Bus Daily	4212 ® Bus Daily	DEDICATED FEEDER CUSA			4213 ® Bus Daily	4215 ® Bus Daily	4317 ® Bus Daily (A)	4357 ® Bus Note B
PM	PM	PM				AM	PM	PM	PM
c 7:30	c 1:50	c 1:50	Lv	**BAKERSFIELD** (SJ,1,10,19)	Ar	c 9:50	c 1:05	c 3:30	c 3:30
D 8:15	|	D 2:35	Ar	Tehachapi-*Burger King*	Lv	8:45	11:55	2:20	1:20
D 8:40	|	D 3:00		Mojave-*Carls Jr.*		8:20	11:30	1:50	12:50
D 9:00	|	D 3:20		Rosamond (Edwards AFB)-*B&K Store*		7:55	11:05	|	|
D 9:20	|	D 3:40		Lancaster-*Metrolink*		7:40	10:50	|	5/31
D 9:30	|	D 3:50		Palmdale-*Transportation Center*		7:25	10:35	|	7/5
D 9:45	|	D 4:05		Littlerock-*Come & Save Grocery*		7:05	10:15	|	9/6
D10:25	|	D 4:45		Adelanto Jct.-*Adelanto Mktplace*		6:25	9:35	|	Only
D10:35	|	D 4:55	Ar	Victorville-*Transit Center*	Lv	6:10	9:20	|	|
PM	D 3:50	PM	Ar	Barstow-*Amtrak*	Lv	AM	AM	12:20	11:20
	D 3:55		Ar	Barstow-*Barstow Station (M)*	Lv			12:15	11:15
	D 5:20			Baker-*Baker Shell (M)*				10:35	9:35
	D 6:10		Ar	Primm, NV-*Whiskey Pete's*	Lv			9:45	8:45
	D6:50		Ar	Las Vegas, NV-*Greyhound Depot*	Lv			9:05	8:05
	PM							AM	AM

Notes: AFR: 71 (Except as noted)

See Page 6 for general notes.

AM - Light Face Type, **PM - Bold Type.**

B - All departures for Bus 4357 will depart each stop one (1) hour earlier on 5/31, 7/5 and 9/6.

M - 15 minute Rest Stop either at Barstow Station or at Baker.

® - Reservations required.

SAN JOAQUIN BUS CONNECTIONS

Route 19 -- BAKERSFIELD - INLAND EMPIRE - COACHELLA VALLEY - IMPERIAL VALLEY

Effective May 10, 2010

Southbound-Read Down						Northbound-Read Up			
716 ® Train Daily	714 ® Train Daily	712 ® Train Daily	702 ® Train Daily	4402 ® Bus Daily		713 ® Train Daily	715 ® Train Daily	717 ® Train Daily	703 ® Train Daily	4403 ® Bus Daily
PM	AM	AM	AM	AM		PM	PM	PM	PM	PM
12:45	9:35	7:05	6:40	4:45		4:40	7:45	10:10	11:30	12:35
1:15	10:05	7:30	7:35	5:30		4:15	7:25	9:55	10:25	D11:55
1:25	10:15	7:40	8:51	5:15		4:01	7:11	9:41	→ 10:30	D12:10
2:04	10:54	8:19	9:55	7:10		3:16	6:25	8:53	PM	D10:35
3:03	11:49	9:17	10:28	← 7:20		2:14	5:29	7:59		
PM	AM	AM	12:02	AM		3:15	6:25	8:55		
3:03	11:49	9:17	AM			D 2:50	D 5:40	D 8:10		
4:13	12:59	10:31				2:14	5:29	7:59		
5:20	2:10	11:35				1:08	4:22	6:42		
5:54	2:44	12:09				12:01	3:16	5:41		
7:26	4:11	1:41				11:26	2:42	5:06		
PM	PM	PM				10:05	1:20	3:45		
						AM	PM	PM	PM	
Bus 19-3	Bus 19-2	Bus 19-1	Bus 19-4			Bus 19-4	Bus 19-1	Bus 19-2	Bus 19-3	
5416 ® Bus Daily	5414 ® Bus Daily	5412 ® Bus Daily	5402 ® Bus Daily			5413 ® Bus Daily	5415 ® Bus Daily	5417 ® Bus Daily	5403 ® Bus Daily	
PM	PM	PM	PM			AM	PM	PM	PM	
c 7:30	c 4:20	c 1:50	c12:10			c9:50	c 1:05	c 3:30	c 6:05	
D 9:20	D 6:10	D 3:40	D 2:00			7:40	10:50	1:20	3:25	
D 9:35	D 6:25	D 3:55	D 2:15			7:10	10:25	12:55	3:00	
D10:25	D 7:15	D 4:45	D 3:05			6:25	9:45	12:15	2:25	
D10:40	D 7:30	D 5:00	D 3:20			6:05	9:20	11:50	2:00	
N10:42	N 7:32	|	|			|	|	|	|
D11:05	A	A	A			5:40	8:55	B	1:40	
D11:25	D 7:50	5:20	D 3:40			5:20	8:35	11:25	1:20	
|	D 7:55	5:25	D 3:45			AM	8:30	11:20	1:15	
N11:30	R 8:00	N 5:30	R 3:50				R 8:25	|	R 1:10	
PM	D 8:20	D 5:50	D 4:10				|	10:55	|	
	|	D 6:15	|				|	10:35	|	
	|	D 6:30	|				|	10:20	|	
	|	D 6:45	|				|	10:05	|	
	|	D 7:05	|				|	9:40	|	
	|	D 7:10	|				|	9:30	|	
	D 9:05	PM	D 4:55				7:50	AM	12:35	
	D 9:35		D 5:25				7:20		12:05	
	D 9:55		D 5:45				7:00		11:45	
	D 10:20		D 6:10				6:40		11:25	
	PM		PM				AM		AM	
4 ® Train Daily						3 ® Train Daily				
PM						PM				
8:03						5:53				
8:28						5:32				
10:26						3:39				
12:56						12:49				
6:11						9:57				
12:12						4:45				
7:26						10:55				
3:20						3:15				
PM						PM				

San Joaquin Connection

Lv	SAN FRANCISCO-Ferry Bldg	Ar
Lv	OAKLAND	Ar
Lv	EMERYVILLE	Ar
	MARTINEZ	Ar
Ar	STOCKTON-Amtrak	Lv
Lv	SACRAMENTO	Ar
Lv	Stockton-ACE Station	Ar
Lv	STOCKTON-Amtrak	Ar
	MERCED	
	FRESNO	
Lv	HANFORD	Ar
Ar	BAKERSFIELD	Lv

DEDICATED FEEDER
Coach USA

Lv	**BAKERSFIELD** (S.J.1,9,10,12)	Ar
Ar	La Crescenta-Lowell & Honolulu	Lv
	Pasadena-Hilton Hotel	
	Claremont-Metrolink	
	Ontario-Amtrak	
	Ontario-Andy's Burgers (N)	
	Riverside-Metrolink	
Ar	San Bernardino-Amtrak (ML)	Lv
Lv	San Bernardino-Amtrak (ML)	Ar
Ar	San Bernardino-McDonalds (N)	Lv
	Riverside-Metrolink	
	Moreno Valley-Big O Tires	
	Perris-IHOP	
	Sun City-CL Travel	
	Hemet-Coco's Restaurant	
Ar	Hemet-Simpson Center	Lv
	Beaumont-Civic Center Pkg Lot	
	Palm Springs-Airport	
	Thousand Palms-Jack in the Box	
Ar	Indio-Hwy 111 at Monroe	Lv

Southwest Chief Connection

Lv	Riverside	Ar
Lv	SAN BERNARDINO	Ar
Ar	Barstow	Lv
	Needles, CA	
	FLAGSTAFF, AZ (MST)	
	ALBUQUERQUE, NM (MT)	
	KANSAS CITY, MO (CT)	
Ar	CHICAGO, IL (CT)	Lv

Notes: AFR: 71

See Page 6 for general notes.
AM - Light Face Type, **PM - Bold Type.**
A - Bus stops at Riverside after San Bernardino.
B - Bus stops at Riverside before San Bernardino.
D - Stops to discharge passengers only.
N - Late night alternative drop-off stop.
R - Rest stop
Hemet Simpson Center Stop now at 304 E. Devonshire Ave.
® - Reservations required.

APPENDIX 2

Passenger Demand Forecast Modeling

Forecast Results for Future San Joaquin Valley Service
(prepared 6/21/11)

	Baseline 2011		Baseline 2012		10 year Plan 79mph service 2020	10 year Plan 90mph service 2020	25 year Plan 90mph service 2035
Annual Forecasts							
Ridership	1,016,300	*	1,069,500	**	1,665,600	1,721,200	3,044,500
Ticket Revenue	$31,341,000	*	$34,748,000	**	$67,896,000	$70,732,000	$144,527,000
Passenger-Miles	139,410,000	*	149,140,000	**	248,330,000	258,920,000	461,890,000
Service Characteristics							
Train Frequency	Daily		Daily		Daily	Daily	Daily
Oakland - Stockton	4		4		6	6	10
Sacramento - Stockton	2		2		3	3	6
Stockton - Merced	6		6		7	7	10
Merced - Bakersfield	6		6		8	8	11
Avg. Travel Time (minutes)							
Oakland - Bakersfield	368		368		346 (-6%)	327 (-11%)	324 (-12%)
Sacramento - Bakersfield	318		318		312 (-2%)	302 (-5%)	300 (-6%)

Notes:

These forecasts are based solely upon information available to AECOM as of 6/21/11.
These forecasts are provided for the sole use of Amtrak and Caltrans.
They are not intended for disclosure in a financial offering statement.

* FY11 Estimate (prepared May 2011)
** FY12 Budget (prepared May 2011)

Market Growth
Based on California Department of Finance growth and population projections
Auto Congestion
Auto travel times increase by 2% every five years due to increased congestion
Service Changes
Changes in frequency and travel time as shown above (timetables provided by Caltrans 5/21/11 & 5/31/11)
OTP at 90% in all years
Pricing Actions
+2% per year applied to all prices (assume no ridership loss since increase matches inflation rate)

2020 Forecast Results by Train for Future San Joaquin Valley Service

(prepared 6/21/11)

	Future Ten Year Plan - 79-mph service*				Future 10 Year Plan - 90-mph service**			
	Train	Time at Bakersfield	North End	Ridership 2020	Train	Time at Bakersfield	North End	Ridership 2020
Northbound	new 1	2:25 AM	Oakland	41,494	new 1	2:36 AM	Oakland	42,665
	711	4:55 AM	Oakland	75,962	711	5:06 AM	Oakland	79,573
	701	→	Sacramento	29,836	701	→	Sacramento	32,082
	new 3	8:25 AM	Oakland	116,071	new 3	8:36 AM	Oakland	122,561
	713	10:25 AM	Oakland	112,518	713	10:36 AM	Oakland	111,396
	new 5	→	Sacramento	65,911	new 5	→	Sacramento	67,438
	715	12:55 PM	Oakland	149,126	715	1:06 PM	Oakland	149,862
	717exp	3:35 PM	Oakland	128,503	717exp	3:43 PM	Oakland	132,906
	703	6:25 PM	Sacramento	82,407	703	6:36 PM	Sacramento	89,761
	new 7	8:25 PM	Merced	18,027	new 7	8:36 PM	Merced	18,614
Southbound	new 2	8:29 AM	Merced	34,979	new 2	8:21 AM	Merced	36,202
	702	11:59 AM	Sacramento	110,652	702	11:51 AM	Sacramento	115,807
	712	1:59 PM	Oakland	126,854	712	1:51 PM	Oakland	130,322
	714	3:59 PM	Oakland	119,263	714	3:51 PM	Oakland	123,648
	new 4	←	Sacramento	54,894	new 4	←	Sacramento	57,765
	716exp	6:49 PM	Oakland	140,969	716exp	6:43 PM	Oakland	147,675
	new 6	9:59 PM	Oakland	101,927	new 6	9:51 PM	Oakland	105,437
	704	←	Sacramento	51,675	704	←	Sacramento	55,079
	718	11:59 PM	Oakland	72,591	718	11:51 PM	Oakland	72,475
	new 8	1:59 AM	Oakland	31,939	new 8	1:51 AM	Oakland	29,932
	TOTAL			1,665,600	TOTAL			1,721,200

Notes:

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These forecasts are provided for the sole use of Amtrak and Caltrans.
They are not intended for disclosure in a financial offering statement.

* Proposed future San Joaquin valley service (timetables provided by Caltrans 5/21/11)
** Proposed future San Joaquin valley service (timetables provided by Caltrans 5/31/11)
*** Ridership on Sacramento split trains only includes travel to/from/within Sacramento-Stockton segment; all local ridership between Stockton and Bakersfield is included with the Oakland-Bakersfield train

2035 Forecast Results by Train for Future San Joaquin Valley Service

(prepared 6/21/11)

Future 25-Year Plan - 90-mph service**

	Train	Time at Bakersfield	North End	Ridership 2035
Northbound	1	2:36 AM	Oakland	50,498
	3	→	Sacramento	21,728
	5	4:43 AM	Oakland	85,377
	7	6:36 AM	Oakland	122,651
	9	→	Sacramento	52,016
	11	8:43 AM	Oakland	130,768
	13	10:36 AM	Oakland	152,228
	15	→	Sacramento	88,960
	17	12:36 PM	Oakland	158,742
	19	→	Sacramento	95,844
	21	2:43 PM	Oakland	164,388
	23	4:36 PM	Oakland	131,570
	25	→	Sacramento	70,615
	27	6:43 PM	Oakland	90,688
	29	8:36 PM	Oakland	41,157
	31	→	Sacramento	12,234
	33	9:36 PM	Merced	15,776
Southbound	2	7:51 AM	Merced	46,659
	4	←	Sacramento	64,571
	6	11:51 AM	Oakland	150,081
	8	1:43 PM	Oakland	119,237
	10	←	Sacramento	75,170
	12	2:51 PM	Oakland	121,257
	14	3:43 PM	Oakland	127,609
	16	←	Sacramento	76,276
	18	5:51 PM	Oakland	169,078
	20	←	Sacramento	72,971
	22	7:51 PM	Oakland	165,889
	24	9:43 PM	Oakland	108,009
	26	←	Sacramento	61,043
	28	10:51 PM	Oakland	79,309
	30	11:43 PM	Oakland	67,114
	32	←	Sacramento	19,967
	34	1:51 AM	Oakland	35,021
	TOTAL			3,044,500

Notes:

These forecasts are based solely upon information available to AECOM as of 6/21/11.
These forecasts are provided for the sole use of Amtrak and Caltrans.
They are not intended for disclosure in a financial offering statement.

** Proposed future San Joaquin valley service (timetables provided by Caltrans 5/31/11)
*** Ridership on Sacramento split trains only includes travel to/from/within Sacramento-Stockton segment; all local ridership between Stockton and Bakersfield is included with the Oakland-Bakersfield train

Proposed San Joaquin Service - Expansion Grid - CalTrans - Version 1 - Five Year Plan & Ten Year Plan

(79MPH Maximum Speed)

	SOUTHWARD / EASTWARD -- READ DOWN:												NORTHWARD / WESTWARD -- READ UP:									
	new 2	702	712	new 4	714	716exp	704	new 6	718	new 8	Stations, sidings, and double-track segments:		new 1	711	701	new 3	713	new 5	715	717exp	703	new 7
	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily			Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily
Dp			8:10 AM		10:05 AM	1:20 PM		4:05 PM	6:10 PM	8:10 PM	Oakland, CA	Ar	8:13 AM	10:49 AM		2:13 PM	4:19 PM		6:43 PM	9:04 PM		
Dp			8:20 AM		10:15 AM	1:30 PM		4:15 PM	6:20 PM	8:20 PM	Emeryville, CA	Dp	D 8:03 AM	D 10:39 AM		D 2:03 PM	D 4:09 PM		D 6:33 PM	D 8:54 PM		
Dp			8:29 AM		10:24 AM	1:39 PM		4:24 PM	6:29 PM	8:29 PM	Richmond, CA	Dp	7:44 AM	10:20 AM		1:44 PM	3:50 PM		6:14 PM	8:35 PM		
Dp			8:59 AM		10:54 AM	2:09 PM		4:54 PM	6:59 PM	8:59 PM	Martinez, CA	Dp	7:17 AM	9:53 AM		1:17 PM	3:23 PM		5:47 PM	8:08 PM		
			9:03 AM		10:58 AM	2:13 PM		4:58 PM	7:03 PM	9:03 PM	Mococco (EEDT)		7:10 AM	9:46 AM		1:10 PM	3:16 PM		5:40 PM	8:01 PM		
			9:07 AM		11:02 AM	2:17 PM		5:02 PM	7:07 PM	9:07 PM	Port Chicago (UP)		7:06 AM	9:42 AM		1:06 PM	3:12 PM		5:36 PM	7:57 PM		
			9:07 AM		11:02 AM	2:17 PM		5:02 PM	7:07 PM	9:07 PM	Port Chicago (BNSF)		7:06 AM	9:42 AM		1:06 PM	3:12 PM		5:36 PM	7:57 PM		
			9:13 AM		11:08 AM	2:23 PM		5:08 PM	7:13 PM	9:13 PM	Pittsburg (sdg)		7:00 AM	9:35 AM		1:00 PM	3:06 PM		5:30 PM	7:51 PM		
Dp			9:19 AM		11:14 AM	2:27 PM		5:14 PM	7:19 PM	9:19 PM	Antioch-Pittsburg, CA	Dp	6:55 AM	9:31 AM		12:55 PM	3:01 PM		5:25 PM	7:48 PM		
			9:23 AM		11:18 AM	2:29 PM		5:18 PM	7:23 PM	9:23 PM	Sando (sdg)		6:50 AM	9:26 AM		12:50 PM	2:56 PM		5:20 PM	7:45 PM		
			9:25 AM		11:20 AM	2:31 PM		5:20 PM	7:25 PM	9:25 PM	Oakley (WEDT)		6:48 AM	9:24 AM		12:48 PM	2:54 PM		5:18 PM	7:43 PM		
			9:30 AM		11:25 AM	2:36 PM		5:25 PM	7:30 PM	9:30 PM	Bixler (EEDT)		6:43 AM	9:19 AM		12:43 PM	2:49 PM		5:13 PM	7:38 PM		
			9:32 AM		11:27 AM	2:38 PM		5:27 PM	7:32 PM	9:32 PM	Orwood (sdg)		6:41 AM	9:17 AM		12:41 PM	2:47 PM		5:11 PM	7:36 PM		
			9:35 AM		11:30 AM	2:41 PM		5:30 PM	7:35 PM	9:35 PM	Trull (WEDT)		6:38 AM	9:14 AM		12:38 PM	2:44 PM		5:08 PM	7:33 PM		
			9:39 AM		11:34 AM	2:45 PM		5:34 PM	7:39 PM	9:39 PM	Holt (EEDT)		6:34 AM	9:10 AM		12:34 PM	2:40 PM		5:04 PM	7:29 PM		
			9:44 AM		11:39 AM	2:50 PM		5:39 PM	7:44 PM	9:44 PM	West Stockton (WEDT)		6:29 AM	9:05 AM		12:29 PM	2:35 PM		4:59 PM	7:24 PM		
Dp			9:46 AM		11:41 AM	2:52 PM		5:41 PM	7:46 PM	9:46 PM	Stockton, CA (SKN)	Dp	6:27 AM	9:03 AM		12:27 PM	2:33 PM		4:57 PM	7:22 PM		
Dp		6:50 AM		10:40 AM			4:40 PM				Sacramento, CA	Ar			10:17 AM			3:47 PM			11:37 PM	
		6:58 AM		10:48 AM			4:48 PM				XEC - Elvas, CA				9:49 AM			3:19 PM			11:09 PM	
		7:03 AM		10:53 AM			4:53 PM				Polk (SEDT)				9:44 AM			3:14 PM			11:04 PM	
		7:12 AM		11:02 AM			5:02 PM				S. Elk Grove (SEDT)				9:35 AM			3:05 PM			10:55 PM	
		7:17 AM		11:07 AM			5:07 PM				S. Need (SEDT)				9:30 AM			3:00 PM			10:50 PM	
		7:23 AM		11:13 AM			5:13 PM				Acampo (sdg)				9:24 AM			2:54 PM			10:44 PM	
Dp		7:28 AM		11:18 AM			5:18 PM				Lodi, CA (S.T., at N.E. sdg)	Dp			9:21 AM			2:51 PM			10:41 PM	
		7:30 AM		11:20 AM			5:20 PM				S. E. Lodi (sdg)				9:18 AM			2:48 PM			10:38 PM	
		7:33 AM		11:23 AM			5:23 PM				Tomspur (sdg)				9:15 AM			2:45 PM			10:35 PM	
		7:35 AM		11:25 AM			5:25 PM				Akers (NEDT)				9:13 AM			2:43 PM			10:33 PM	
Dp		7:42 AM		11:32 AM			5:32 PM				Stockton, CA (SKT)	Dp			9:08 AM			2:38 PM			10:28 PM	
		7:48 AM		11:38 AM			5:38 PM				Church (BNSF Conn. Trk.)				9:06 AM			2:36 PM			10:26 PM	
		7:50 AM	9:47 AM	11:40 AM	11:42 AM	2:53 PM	5:40 PM	5:42 PM	7:47 PM	9:47 PM	Keddie Jct. (SAC trains)		6:25 AM	9:01 AM	9:05 AM	12:25 PM	2:31 PM	2:35 PM	4:55 PM	7:20 PM	10:25 PM	
Ar		7:53 AM	9:53 AM	11:43 AM	11:47 AM	2:59 PM	5:43 PM	5:47 PM	7:53 PM	9:53 PM	New BNSF Stockton	Dp	6:24 AM	9:00 AM	9:04 AM	12:24 PM	2:20 PM	2:34 PM	4:54 PM	7:19 PM	10:24 PM	
Dp		7:57 AM	9:57 AM		11:57 AM	3:03 PM		5:57 PM	7:57 PM	9:57 PM	Station (MP1120.3)	Ar	6:20 AM	8:50 AM		12:20 PM	2:20 PM		4:50 PM	7:15 PM	10:20 PM	
		8:00 AM	10:00 AM		12:00 PM	3:06 PM		6:00 PM	8:00 PM	10:00 PM	Wheat (EEDT)		6:12 AM	8:42 AM		12:12 PM	2:12 PM		4:42 PM	7:07 PM	10:12 PM	
		8:06 AM	10:06 AM		12:06 PM	3:12 PM		6:06 PM	8:06 PM	10:06 PM	Duffy (sdg)		6:06 AM	8:36 AM		12:06 PM	2:06 PM		4:36 PM	7:01 PM	10:06 PM	
		8:11 AM	10:11 AM		12:11 PM	3:17 PM		6:11 PM	8:11 PM	10:11 PM	W. Escalon (WEDT)		6:01 AM	8:31 AM		12:01 PM	2:01 PM		4:31 PM	6:56 PM	10:01 PM	
		8:14 AM	10:14 AM		12:14 PM	3:20 PM		6:14 PM	8:14 PM	10:14 PM	E. Escalon (EEDT)		5:58 AM	8:28 AM		11:58 AM	1:58 PM		4:28 PM	6:53 PM	9:58 PM	
		8:17 AM	10:17 AM		12:17 PM	3:23 PM		6:17 PM	8:17 PM	10:17 PM	Riverbank (sdg)		5:55 AM	8:25 AM		11:55 AM	1:55 PM		4:25 PM	6:50 PM	9:55 PM	
Dp		8:22 AM	10:22 AM		12:22 PM	3:28 PM		6:22 PM	8:22 PM	10:22 PM	Modesto, CA	Dp	5:52 AM	8:22 AM		11:52 AM	1:52 PM		4:22 PM	6:47 PM	9:52 PM	
		8:26 AM	10:26 AM		12:26 PM	3:32 PM		6:26 PM	8:26 PM	10:26 PM	Modesto-Empire Jct. (sdg)		5:46 AM	8:16 AM		11:46 AM	1:52 PM		4:16 PM	6:41 PM	9:46 PM	
		8:31 AM	10:31 AM		12:31 PM	3:37 PM		6:31 PM	8:31 PM	10:31 PM	W. E. Denair (sdg)		5:41 AM	8:11 AM		11:41 AM	1:41 PM		4:11 PM	6:37 PM	9:41 PM	
Dp		8:34 AM	10:34 AM		12:34 PM	3:38 PM		6:34 PM	8:34 PM	10:34 PM	Denair, CA (& E.E. sdg)	Dp	5:39 AM	8:09 AM		11:39 AM	1:39 PM		4:09 PM	6:36 PM	9:39 PM	
		8:42 AM	10:42 AM		12:42 PM	3:44 PM		6:42 PM	8:42 PM	10:42 PM	Ballico (sdg)		5:30 AM	8:00 AM		11:30 AM	1:30 PM		4:00 PM	6:28 PM	9:30 PM	
		8:48 AM	10:48 AM		12:48 PM	3:50 PM		6:48 PM	8:48 PM	10:48 PM	Fluhr (sdg)		5:24 AM	7:54 AM		11:24 AM	1:24 PM		3:54 PM	6:22 PM	9:24 PM	
Dp	5:30 AM	9:00 AM	11:00 AM		1:00 PM	4:02 PM		7:00 PM	9:00 PM	11:00 PM	Merced, CA (& W.E.sdg)	Dp	5:18 AM	7:48 AM		11:18 AM	1:18 PM		3:48 PM	6:16 PM	9:18 PM	11:12 PM
	5:33 AM	9:03 AM	11:03 AM		1:03 PM	4:05 PM		7:03 PM	9:03 PM	11:03 PM	E.E. Merced (sdg)		5:09 AM	7:39 AM		11:09 AM	1:09 PM		3:39 PM	6:07 PM	9:09 PM	11:09 PM
	5:39 AM	9:09 AM	11:09 AM		1:09 PM	4:11 PM		7:09 PM	9:09 PM	11:09 PM	Planada (sdg)		5:03 AM	7:33 AM		11:03 AM	1:03 PM		3:33 PM	6:01 PM	9:03 PM	11:03 PM
	5:43 AM	9:13 AM	11:13 AM		1:13 PM	4:15 PM		7:13 PM	9:13 PM	11:13 PM	Legrand (sdg)		4:59 AM	7:29 AM		10:59 AM	12:59 PM		3:29 PM	5:57 PM	8:59 PM	10:59 PM
	5:51 AM	9:21 AM	11:21 AM		1:21 PM	4:23 PM		7:21 PM	9:21 PM	11:21 PM	Sharon (sdg)		4:51 AM	7:21 AM		10:51 AM	12:51 PM		3:21 PM	5:49 PM	8:51 PM	10:51 PM
	5:55 AM	9:25 AM	11:25 AM		1:25 PM	4:27 PM		7:25 PM	9:25 PM	11:25 PM	Kismet (sdg)		4:47 AM	7:17 AM		10:47 AM	12:47 PM		3:17 PM	5:45 PM	8:47 PM	10:47 PM
Dp	6:01 AM	9:31 AM	11:31 AM		1:31 PM	4:30 PM		7:31 PM	9:31 PM	11:31 PM	Madera, CA (& W.E.sdg)	Dp	4:42 AM	7:12 AM		10:42 AM	12:42 PM		3:12 PM	5:42 PM	8:42 PM	10:42 PM
	6:03 AM	9:33 AM	11:33 AM		1:33 PM	4:31 PM		7:33 PM	9:33 PM	11:33 PM	E.E. Madera (sdg)		4:39 AM	7:09 AM		10:39 AM	12:39 PM		3:09 PM	5:41 PM	8:39 PM	10:39 PM
	6:09 AM	9:39 AM	11:39 AM		1:39 PM	4:37 PM		7:39 PM	9:39 PM	11:39 PM	Gregg (sdg)		4:33 AM	7:03 AM		10:33 AM	12:33 PM		3:03 PM	5:35 PM	8:33 PM	10:33 PM
	6:14 AM	9:44 AM	11:44 AM		1:44 PM	4:42 PM		7:44 PM	9:44 PM	11:44 PM	Figarden (sdg)		4:28 AM	6:58 AM		10:28 AM	12:28 PM		2:58 PM	5:30 PM	8:28 PM	10:28 PM
Ar	6:26 AM	9:56 AM	11:56 AM		1:56 PM	4:54 PM		7:56 PM	9:56 PM	11:56 PM	Fresno, CA (& WEDT)	Dp	4:21 AM	6:51 AM		10:21 AM	12:21 PM		2:51 PM	5:23 PM	8:21 PM	10:21 PM
Dp	6:30 AM	10:00 AM	12:00 PM		2:00 PM	4:58 PM		8:00 PM	10:00 PM	12:00 AM		Ar	4:17 AM	6:47 AM		10:17 AM	12:17 PM		2:47 PM	5:19 PM	8:17 PM	10:17 PM
	6:43 AM	10:13 AM	12:13 PM		2:13 PM	5:11 PM		8:13 PM	10:13 PM	12:13 AM	Floral (EEDT)		4:00 AM	6:30 AM		10:00 AM	12:00 PM		2:30 PM	5:02 PM	8:00 PM	10:00 PM
	6:47 AM	10:17 AM	12:17 PM		2:17 PM	5:15 PM		8:17 PM	10:17 PM	12:17 AM	Conejo (sdg)		3:56 AM	6:26 AM		9:56 AM	11:56 AM		2:26 PM	4:58 PM	7:56 PM	9:56 PM
	6:55 AM	10:25 AM	12:25 PM		2:25 PM	5:23 PM		8:25 PM	10:25 PM	12:25 AM	E.E. Shirley (sdg & WEDT)		3:48 AM	6:18 AM		9:48 AM	11:48 AM		2:18 PM	4:50 PM	7:48 PM	9:48 PM
Dp	7:03 AM	10:33 AM	12:33 PM		2:33 PM	5:31 PM		8:33 PM	10:33 PM	12:33 AM	Hanford, CA	Dp	3:43 AM	6:13 AM		9:43 AM	11:43 AM		2:13 PM	4:45 PM	7:43 PM	9:43 PM
	7:06 AM	10:36 AM	12:36 PM		2:36 PM	5:34 PM		8:36 PM	10:36 PM	12:36 AM	E. Hanford (EEDT)		3:37 AM	6:07 AM		9:37 AM	11:37 AM		2:07 PM	4:39 PM	7:37 PM	9:37 PM
	7:11 AM	10:41 AM	12:41 PM		2:41 PM	5:39 PM		8:41 PM	10:41 PM	12:41 AM	Guernsey (sdg)		3:32 AM	6:02 AM		9:32 AM	11:32 AM		2:02 PM	4:34 PM	7:32 PM	9:32 PM
	7:16 AM	10:46 AM	12:46 PM		2:46 PM	5:43 PM		8:46 PM	10:46 PM	12:46 AM	W.E. Corcoran (sdg)		3:27 AM	5:57 AM		9:27 AM	11:27 AM		1:57 PM	4:30 PM	7:27 PM	9:27 PM
Dp	7:19 AM	10:49 AM	12:49 PM		2:49 PM	5:44 PM		8:49 PM	10:49 PM	12:49 AM	Corcoran, CA	Dp	3:25 AM	5:55 AM		9:25 AM	11:25 AM		1:55 PM	4:29 PM	7:25 PM	9:25 PM
	7:21 AM	10:51 AM	12:51 PM		2:51 PM	5:45 PM		8:51 PM	10:51 PM	12:51 AM	E.E. Corcoran (sdg)		3:22 AM	5:52 AM		9:22 AM	11:22 AM		1:52 PM	4:28 PM	7:22 PM	9:22 PM
	7:28 AM	10:58 AM	12:58 PM		2:58 PM	5:52 PM		8:58 PM	10:58 PM	12:58 AM	Angiola (sdg)		3:15 AM	5:45 AM		9:15 AM	11:15 AM		1:45 PM	4:21 PM	7:15 PM	9:15 PM
	7:35 AM	11:05 AM	1:05 PM		3:05 PM	5:59 PM		9:05 PM	11:05 PM	1:05 AM	Allensworth (sdg)		3:08 AM	5:38 AM		9:08 AM	11:15 AM		1:38 PM	4:14 PM	7:08 PM	9:08 PM
	7:41 AM	11:11 AM	1:11 PM		3:11 PM	6:05 PM		9:11 PM	11:11 PM	1:11 AM	Sandrini (sdg)		3:02 AM	5:32 AM		9:02 AM	11:02 AM		1:32 PM	4:08 PM	7:02 PM	9:02 PM
	7:45 AM	11:15 AM	1:15 PM		3:15 PM	6:09 PM		9:15 PM	11:15 PM	1:15 AM	Elmo (sdg)		2:58 AM	5:28 AM		8:58 AM	10:58 AM		1:28 PM	4:04 PM	6:58 PM	8:58 PM
Dp	7:51 AM	11:21 AM	1:21 PM		3:21 PM	6:13 PM		9:21 PM	11:21 PM	1:21 AM	Wasco,CA(S.T.=W.E.sdg)	Dp	2:53 AM	5:23 AM		8:53 AM	10:53 AM		1:23 PM	4:01 PM	6:53 PM	8:53 PM
	7:54 AM	11:24 AM	1:24 PM		3:24 PM	6:14 PM		9:24 PM	11:24 PM	1:24 AM	E.E. Wasco (sdg)		2:53 AM	5:19 AM		8:49 AM	10:49 AM		1:19 PM	3:59 PM	6:49 PM	8:49 PM
	7:59 AM	11:29 AM	1:29 PM		3:29 PM	6:19 PM		9:29 PM	11:29 PM	1:29 AM	W.E. Shafter (sdg)		2:44 AM	5:14 AM		8:44 AM	10:44 AM		1:14 PM	3:54 PM	6:44 PM	8:44 PM
	8:01 AM	11:31 AM	1:31 PM		3:31 PM	6:21 PM		9:31 PM	11:31 PM	1:31 AM	E.E. Shafter (sdg)		2:42 AM	5:12 AM		8:42 AM	10:42 AM		1:12 PM	3:52 PM	6:42 PM	8:42 PM
	8:05 AM	11:35 AM	1:35 PM		3:35 PM	6:25 PM		9:35 PM	11:35 PM	1:35 AM	Una (sdg)		2:38 AM	5:08 AM		8:38 AM	10:38 AM		1:08 PM	3:48 PM	6:38 PM	8:38 PM
	8:08 AM	11:38 AM	1:38 PM		3:38 PM	6:28 PM		9:38 PM	11:38 PM	1:38 AM	Lopez (WEDT)		2:35 AM	5:05 AM		8:35 AM	10:35 AM		1:05 PM	3:45 PM	6:35 PM	8:35 PM
	8:14 AM	11:44 AM	1:44 PM		3:44 PM	6:34 PM		9:44 PM	11:44 PM	1:44 AM	Bakersfield (Atk Lead begins)		2:29 AM	4:59 AM		8:29 AM	10:29 AM		12:59 PM	3:39 PM	6:29 PM	8:29 PM
Ar	8:29 AM	11:59 AM	1:59 PM		3:59 PM	6:49 PM		9:59 PM	11:59 PM	1:59 AM	Bakersfield, CA	Dp	2:25 AM	4:55 AM		8:25 AM	10:25 AM		12:55 PM	3:35 PM	6:25 PM	8:25 PM

5/6/10

Notes:

New BNSF Stockton station assumed for all trains.

No time added for single track meed, assume 2 MT capacity to be added.

Proposed San Joaquin Service - Expansion Grid - CalTrans - Version 1 - Five Year Plan & Ten Year Plan

(90 MPH Maximum Speed)

SOUTHWARD / EASTWARD -- READ DOWN:

new 2	702	712	new 4	714	716exp	704	new 6	718	new 8		Stations, sidings, and double-track segments:		new 1	711	701	new 3	713	new 5	715	717exp	703	new 7
700	**702**	**712**	**---**	**714**	**716 (exp)**	**---**	**718**	**720**	**722**				**709**	**711**	**---**	**713**	**715**	**---**	**717**	**719 (Exp)**	**703**	**721**
Daily	**Daily**	**Daily**	**Daily**	**Daily**	**Daily**	**Daily**	**Daily**	**Daily**	**Daily**				**Daily**	**Daily**	**Daily**	**Daily**	**Daily**	**Daily**	**Daily**	**Daily**	**Daily**	**Daily**
		08:21 AM		**10:15 AM**	**01:32 PM**		**04:15 PM**	**06:21 PM**	**08:21 PM**	Dp	**Oakland, CA**	Ar	**08:05 AM**	**10:41 AM**		**02:05 PM**	**04:11 PM**		**06:35 PM**	**08:55 PM**		
		09:18 AM		*11:12 AM*	*02:29 PM*		*05:12 PM*	*07:18 PM*	*09:18 PM*		*Port Chicago (BNSF/UP)*		*06:58 AM*	*09:34 AM*		*12:58 PM*	*03:04 PM*		*05:28 PM*	*7:48 PM*		
	7:01 AM		**10:51 AM**			**4:51 PM**				Dp	**Sacramento, CA**	Ar			**10:06 AM**			**03:36 PM**			**11:26 PM**	
	8:01 AM		*11:51 AM*			*5:51 PM*					*Keddie Jct. (SAC trains)*				*8:54 AM*			*2:24 PM*			*10:14 PM*	
	8:04 AM	**10:04 AM**	**11:54 AM**	**11:58 AM**	**3:13 PM**	**5:54 PM**	**5:58 PM**	**8:04 PM**	**10:04 PM**	Ar	**New BNSF Stockton**	Dp	**6:13 AM**	**8:49 AM**	**8:53 AM**	**12:13 PM**	**2:19 PM**	**2:23 PM**	**4:43 PM**	**7:05 PM**	**10:13 PM**	
	08:08 AM	**10:08 AM**		**12:08 PM**	**03:17 PM**		**06:08 PM**	**08:08 PM**	**10:08 PM**	Dp	**Station (MP1120.3)**	Ar	**06:09 AM**	**08:39 AM**		**12:09 PM**	**02:09 PM**		**04:39 PM**	**7:01 PM**	**10:09 PM**	
5:37 AM										Dp	**Merced, CA** ***(& W.E.sdg)***	Ar										**11:11 PM**
6:26 AM	**9:56 AM**	**11:56 AM**		**1:56 PM**	**4:56 PM**		**7:56 PM**	**9:56 PM**	**11:56 PM**	Ar	**Fresno**	Dp	**4:20 AM**	**6:50 AM**		**10:20 AM**	**12:20 PM**		**2:50 PM**	**5:20 PM**	**8:20 PM**	**10:20 PM**
6:30 AM	**10:00 AM**	**12:00 PM**		**2:00 PM**	**5:00 PM**		**8:00 PM**	**10:00 PM**	**12:00 AM**	Dp	**Fresno**	Ar	**4:16 AM**	**6:46 AM**		**10:16 AM**	**12:16 PM**		**2:46 PM**	**5:16 PM**	**8:16 PM**	**10:16 PM**
6:42 AM	*10:12 AM*	*12:12 PM*		*2:12 PM*	*5:12 PM*		*8:12 PM*	*10:12 PM*	*12:12 AM*		*Floral*		*4:00 AM*	*6:30 AM*		*10:00 AM*	*12:00 PM*		*2:30 PM*	*5:00 PM*	*8:00 PM*	*10:00 PM*
08:21 AM	**11:51 AM**	**01:51 PM**		**03:51 PM**	**06:43 PM**		**09:51 PM**	**11:51 PM**	**01:51 AM**	Ar	**Bakersfield, CA**	Dp	**2:36 AM**	**5:06 AM**		**8:36 AM**	**10:36 AM**		**1:06 PM**	**3:43 PM**	**6:36 PM**	**8:36 PM**

Oakland Train Transfer Times

Sacramento Train Transfer Times

Proposed San Joaquin Service - Expansion Grid - CalTrans - Version 1 - Twenty Year Plan

(80 MPH Maximum Speed)

SOUTHWARD / EASTWARD - - READ DOWN:

	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34
	700	**702-s**	**702**	**712(exp)**	**714-s**	**714**	**716(exp)**	**718-s**	**718**	**720-s**	**720**	**722(exp)**	**724-s**	**724**	**726(exp)**	**728-s**	**728**
	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily		Daily	Daily		Daily
Sc			06:15 AM	06:32 AM		09:15 AM	10:32 AM		12:15 PM		02:15 PM	04:32 PM		05:15 PM	06:32 PM		08:15 PM
			07:22 AM	03:29 AM		10:22 AM	11:29 AM		01:12 PM		03:12 PM	05:29 PM		06:12 PM	07:29 PM		09:12 PM
Dv		06:31 AM			08:51 AM			12:51 PM		02:51 PM			05:51 PM			08:51 PM	
		07:31 AM			10:51 AM			01:51 PM		03:51 PM			06:51 PM			09:51 PM	
Ar		7:54 AM	7:58 AM	10:13 AM	10:58 AM	10:58 AM	12:13 PM	1:54 PM	1:58 PM	3:54 PM	3:58 PM	6:13 PM	6:54 PM	6:58 PM	8:13 PM	9:54 PM	9:58 PM
Sc			08:08 AM	10:17 AM		11:08 AM	12:17 PM		02:08 PM		04:08 PM	06:17 PM		07:08 PM	08:17 PM		10:08 PM
Sv	5:07 AM																
	5:58 AM		9:56 AM	11:56 AM		12:56 PM	1:56 PM		3:56 PM		5:56 PM	7:56 PM		8:56 PM	9:56 PM		11:56 PM
	6:00 AM		10:00 AM	12:00 PM		1:00 PM	2:00 PM		4:00 PM		6:00 PM	8:00 PM		9:00 PM	10:00 PM		12:00 AM
	6:12 AM		*10:12 AM*	*12:12 PM*		*1:12 PM*	*2:12 PM*		*4:12 PM*		*6:12 PM*	*8:12 PM*		*9:12 PM*	*10:12 PM*		*12:12 AM*
Sc	07:51 AM		11:51 AM	01:43 PM		02:51 PM	03:43 PM		05:51 PM		07:51 PM	09:43 PM		10:51 PM	11:43 PM		01:51 AM

Stations, sidings, and double-track segments	
Oakland, CA	Sc
Port Chicago (BNSF/UP)	
Sacramento, CA	Sc
Auburn Jct. (UP/ CAL trains)	
New BNSF Stockton	**Ar**
Station (MP1120.3)	**Sc**
Merced, CA (@ W.E.only)	Sc
Fresno	Sc
Fresno	Ar
Floral	
Bakersfield, CA	Sc

NORTHWARD / WESTWARD - - READ UP:

	1	3	5	7	9	11	13	15	17	19	21	23	25	27	29	31	33
	709	**709-s**	**711(exp)**	**713**	**713-s**	**715(exp)**	**717**	**717-s**	**719**	**719-s**	**721(exp)**	**723**	**723-s**	**725(exp)**	**727**	**727-s**	**729**
	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily	Daily			Daily			Daily
Sc	06:11 AM		09:51 AM	12:11 PM		01:51 PM	04:11 PM		06:11 PM		07:55 PM	10:11 PM		11:55 PM	02:11 AM		
	07:04 AM		*10:48 AM*	*01:04 AM*		*02:48 PM*	*03:04 PM*		*05:04 PM*		*06:48 PM*	*09:04 PM*		*10:48 PM*	*01:04 AM*		
Sc			7:36 AM		11:36 AM			3:36 PM		5:36 PM		9:36 PM				1:36 AM	
			6:24 AM		*10:24 AM*			*2:24 PM*		*4:24 PM*		*8:24 PM*				*12:24 AM*	
Sc	6:15 AM	6:23 AM	8:05 AM	10:10 AM	10:23 AM	12:05 PM	2:10 PM	2:23 PM	4:10 PM	4:23 PM	6:05 PM	8:10 PM	8:23 PM	10:05 PM	12:10 AM	12:23 AM	
Ar	06:09 AM		08:01 AM	10:09 AM		12:01 PM	02:09 PM		04:09 PM		06:01 PM	08:09 PM		10:01 PM	12:09 AM		
Sc																	
Sc	4:20 AM		6:20 AM	8:20 AM		10:20 AM	12:20 PM		2:20 PM		4:20 PM	6:20 PM		8:20 PM	10:20 PM		12:20 PM
Ar	4:16 AM		6:16 AM	8:16 AM		10:16 AM	12:16 PM		2:16 PM		4:16 PM	6:16 PM		8:16 PM	10:16 PM		11:16 PM
	4:00 AM		*6:00 AM*	*8:00 AM*		*10:00 AM*	*12:00 PM*		*2:00 PM*		*4:00 PM*	*6:00 PM*		*8:00 PM*	*10:00 PM*		*11:00 PM*
Sc	02:36 AM		04:43 AM	06:36 AM		08:43 AM	10:36 AM		12:36 PM		02:43 PM	04:36 PM		06:43 PM	08:36 PM		09:36 PM

Oakland Train Transfer Times

Sacramento Train Transfer Tims

ASSUMPTIONS

General

• The pivot point for meets is Floral-Fresno. Though the length of double-track is likely to be extended south by the 25-year scenario, the lack of specific projects guides the assumption remain the same.

• Northbound trains, as practical, arrive at Floral as a southbound leaves Fresno.

• BNSF estimates two minutes saved Fresno-Hanford at 90mph. Although slightly optimistic, I removed one minute from the running time for Frenso-Floral, about 9 miles of the 27 miles Calwa-Hanford.

• No changes on UP – assumed no 90mph running.

• Merced – Fresno :49; Fresno – Merced :51 w/2 min. pad.

• Merced is a stop on all trains; not shown for through trains as not significant time point except on trains that start/stop there.

• Express Trains miss Antioch, Denair, Madera, Cocoran and Wasco.

• Endpoint Pads: 10-minute pad into Oakland; 20-minute or 12-minute pad into Sacramento (depending on reference used); 11-minute pad into Bakersfield.

Note that some cells are filled with formulas and others are times. I used whatever was most efficient to fill the complex train patterns.

5-10 Year Only

• Assume a bus operates to the opposite end point (Sacramento or Oakland) from that at which the train terminates, on non-split trains.

• One express round trip.

25 Year Only

• Due to higher frequencies and more splits, assume no connecting buses to northern endpoints not served by a particular train.

• Changed pattern to four express each direction due to six-seven daily trains already serving each non-express stop and the fortunate spacing of trains in this scenario.

2020 Annual Ridership for San Joaquin Trains
Station ONs & OFFs by Trains
Proposed Future 79mph San Joaquin Schedule (based on timetable provided by Caltrans 5/21/10)
(forecasts prepared 6/21/11)

	Southbound Trains																													
Station	new 2			702			712			714			new 4			716exp			new 6			704			718			new 8		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Sacramento	0		0	40,142		0	0		0	0		0	44,236		0	0		0	0		0	41,896		0	0		0	0		0
		0			40,142			0			0			44,236			0			0			41,896			0			0	
Lodi	0		0	1,532		776	0		0	0		0	1,638		813	0		0	0		0	1,506		1,389	0		0	0		0
		0			40,898			0			0			45,061			0			0			42,013			0			0	
Stockton-Downtown	0		0	8,733		930	0		0	0		0	9,020		1,621	0		0	0		0	8,273		2,679	0		0	0		0
		0			48,701			0			0			52,460			0			0			47,607			0			0	
Oakland	0		0	0		0	12,695		0	10,734		0	0		0	12,670		0	11,378		0	0		0	11,667		0	5,659		0
		0			48,701			12,695			10,734			52,460			12,670			11,378			47,607			11,667			5,659	
Emeryville	0		0	0		0	16,670		52	16,081		62	0		0	19,130		50	15,549		48	0		0	12,773		99	6,386		47
		0			48,701			29,313			26,753			52,460			31,750			26,879			47,607			24,341			11,998	
Richmond	0		0	0		0	7,977		28	6,916		27	0		0	8,467		23	8,428		23	0		0	6,488		45	3,037		23
		0			48,701			37,262			33,642			52,460			40,194			35,284			47,607			30,784			15,012	
Martinez	0		0	0		0	17,543		3,199	14,476		1,579	0		0	17,254		1,851	15,073		1,950	0		0	10,076		4,099	4,611		2,032
		0			48,701			51,606			46,539			52,460			55,597			48,407			47,607			36,761			17,591	
Antioch-Pittsburg	0		0	0		0	5,937		834	5,332		632	0		0	0		0	6,181		1,199	0		0	3,597		866	1,650		456
		0			48,701			56,709			51,239			52,460			55,597			53,389			47,607			39,492			18,785	
Stockton	0		0	15,060		500	22,889		11,329	16,103		9,900	0		0	30,704		11,502	14,611		16,097	0		0	14,377		12,733	7,018		5,930
		0			63,261			68,269			57,442			52,460			74,799			51,903			47,607			41,136			19,873	
Modesto	0		0	7,931		4,279	6,608		4,406	8,302		3,458	0		2,985	9,129		5,385	6,103		5,319	0		4,457	2,711		4,956	1,371		2,144
		0			66,913			70,471			62,286			49,475			78,543			52,687			43,150			38,891			19,100	
Denair	0		0	2,154		737	1,712		967	2,342		836	0		563	0		0	1,810		1,178	0		802	708		1,059	306		457
		0			68,330			71,216			63,792			48,912			78,543			53,319			42,348			38,540			18,949	
Merced	4,667		0	6,225		5,836	5,034		6,618	6,092		5,966	0		3,550	7,331		9,112	4,346		7,648	0		4,683	1,810		6,579	614		3,083
		4,667			68,719			69,632			63,918			45,362			76,762			50,017			37,665			33,771			16,480	
Madera	775		60	918		1,516	843		1,591	997		1,498	0		988	0		0	666		1,861	0		1,257	289		1,291	49		677
		5,382			68,121			68,884			63,417			44,374			76,762			48,822			36,408			32,769			15,852	
Fresno	20,454		1,356	19,599		20,091	20,125		21,399	21,193		18,846	0		13,290	28,725		30,123	13,054		22,222	0		16,077	6,298		14,587	896		8,081
		24,480			67,629			67,610			65,764			31,084			75,364			39,654			20,331			24,480			8,667	
Hanford	6,815		8,669	6,213		14,723	6,690		14,311	7,697		14,421	0		6,288	7,559		22,766	3,523		13,675	0		6,352	1,459		7,103	255		2,237
		22,626			59,119			59,989			59,040			24,796			60,157			29,502			13,979			18,836			6,685	
Corcoran	1,056		1,843	1,133		2,036	1,132		2,252	1,499		2,735	0		641	0		0	623		2,148	0		590	221		910	41		212
		21,839			58,216			58,869			57,804			24,155			60,157			27,977			13,389			18,147			6,514	
Wasco	1,212		538	1,012		1,268	999		1,319	1,499		1,485	0		677	0		0	582		1,047	0		518	117		597	46		108
		22,513			57,960			58,549			57,818			23,478			60,157			27,512			12,871			17,667			6,452	
Bakersfield	0		22,513	0		57,960	0		58,549	0		57,818	0		23,478	0		60,157	0		27,512	0		12,871	0		17,667	0		6,452
Max Load		**24,480**			**68,719**			**71,216**			**65,764**			**52,460**			**78,543**			**53,389**			**47,607**			**41,136**			**19,873**	
Total	**34,979**		**34,979**	**110,652**		**110,652**	**126,854**		**126,854**	**119,263**		**119,263**	**54,894**		**54,894**	**140,969**		**140,969**	**101,927**		**101,927**	**51,675**		**51,675**	**72,591**		**72,591**	**31,939**		**31,939**

2020 Annual Ridership for San Joaquin Trains
Station ONs & OFFs by Trains
Proposed Future 79mph San Joaquin Schedule (based on timetable provided by Caltrans 5/21/10)
(forecasts prepared 6/21/11)

	Northbound Trains																													
Station	**new 1**			**711**			**701**			**new 3**			**713**			**new 5**			**715**			**717exp**			**703**			**new 7**		
	On	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**
Bakersfield	3,971		0	19,566		0	7,520		0	46,407		0	50,365		0	26,403		0	63,308		0	58,118		0	47,464		0	13,329		0
		3,971			19,566			7,520			46,407			50,365			26,403			63,308			58,118			47,464			13,329	
Wasco	198		61	795		416	313		0	1,376		931	1,039		842	669		0	1,513		1,062	0		0	1,283		1,379	250		785
		4,108			19,945			7,833			46,852			50,562			27,072			63,759			58,118			47,368			12,794	
Corcoran	464		70	1,952		411	352		0	2,367		933	1,871		1,011	668		0	2,527		1,201	0		0	2,333		1,345	708		741
		4,502			21,486			8,185			48,286			51,422			27,740			65,085			58,118			48,356			12,761	
Hanford	3,967		477	13,057		3,210	3,809		0	15,000		5,459	13,110		5,695	7,175		0	16,344		6,741	19,107		6,877	12,485		7,254	3,208		3,844
		7,992			31,333			11,994			57,827			58,837			34,915			74,688			70,348			53,587			12,125	
Fresno	9,755		2,167	16,017		12,797	8,994		0	21,993		16,497	20,223		18,146	16,928		0	26,788		21,836	27,380		26,541	11,359		20,196	512		9,659
		15,580			34,553			20,988			63,323			60,914			51,843			79,640			71,187			44,750			2,978	
Madera	892		92	1,222		483	696		0	1,642		731	1,486		832	1,253		0	2,358		1,098	0		0	900		914	20		400
		16,380			35,292			21,684			64,234			61,568			53,096			80,900			71,187			44,736			2,598	
Merced	4,994		834	5,515		3,323	2,739		0	6,997		4,436	6,044		5,514	4,396		0	9,131		6,690	8,434		7,642	2,916		4,369	0		2,598
		20,540			37,484			24,423			66,795			62,098			57,492			83,341			71,979			43,283			0	
Denair	803		338	756		1,167	447		0	1,035		1,611	801		1,864	674		0	1,470		2,463	0		0	434		1,596	0		0
		21,005			37,073			24,870			66,219			61,035			58,166			82,348			71,979			42,121			0	
Modesto	4,153		1,351	3,576		4,120	2,446		0	4,884		6,098	3,620		7,177	3,598		0	6,480		8,672	4,998		8,818	2,170		5,018	0		0
		23,807			36,529			27,316			65,005			57,478			61,764			80,156			68,159			39,273			0	
Stockton-SJ	9,911		9,668	11,389		9,832	0		0	11,137		26,304	10,038		15,362	0		0	15,202		34,238	8,955		31,686	256		8,536	0		0
		24,050			38,086			27,316			49,838			52,154			61,764			61,120			45,428			30,993			0	
Antioch-Pittsburg	700		2,392	683		3,769	0		0	644		4,708	789		4,838	0		0	1,173		6,991	0		0	0		0	0		0
		22,358			35,000			27,316			45,774			48,105			61,764			55,302			45,428			30,993			0	
Martinez	1,631		5,943	1,366		10,114	0		0	2,489		13,355	3,014		14,761	0		0	2,745		17,969	1,458		15,355	0		0	0		0
		18,046			26,252			27,316			34,908			36,358			61,764			40,078			31,531			30,993			0	
Richmond	16		4,203	18		5,988	0		0	25		6,905	31		7,243	0		0	25		9,129	19		7,137	0		0	0		0
		13,859			20,282			27,316			28,028			29,146			61,764			30,974			24,413			30,993			0	
Emeryville	39		7,496	50		11,861	0		0	75		16,268	87		16,792	0		0	62		17,785	34		14,641	0		0	0		0
		6,402			8,471			27,316			11,835			12,441			61,764			13,251			9,806			30,993			0	
Oakland	0		6,402	0		8,471	0		0	0		11,835	0		12,441	0		0	0		13,251	0		9,806	0		0	0		0
		0			0			27,316			0			0			61,764			0			0			30,993			0	
Stockton-Downtown	0		0	0		0	1,658		5,010	0		0	0		0	2,697		12,282	0		0	0		0	475		6,793	0		0
		0			0			23,964			0			0			52,179			0			0			24,675			0	
Lodi	0		0	0		0	862		790	0		0	0		0	1,450		1,916	0		0	0		0	332		1,076	0		0
		0			0			24,036			0			0			51,713			0			0			23,931			0	
Sacramento	0		0	0		0	0		24,036	0		0	0		0	0		51,713	0		0	0		0	0		23,931	0		0
Max Load		**24,050**			**38,086**			**27,316**			**66,795**			**62,098**			**61,764**			**83,341**			**71,979**			**53,587**			**13,329**	
Total	**41,494**		**41,494**	**75,962**		**75,962**	**29,836**		**29,836**	**116,071**		**116,071**	**112,518**		**112,518**	**65,911**		**65,911**	**149,126**		**149,126**	**128,503**		**128,503**	**82,407**		**82,407**	**18,027**		**18,027**

2020 Annual Ridership for San Joaquin Trains
Station ONs & OFFs by Trains
Proposed Future 90mph San Joaquin Schedule (based on timetable provided by Caltrans 5/31/11)
(forecasts prepared 6/21/11)

	Southbound Trains																													
Station	**new 2**			**702**			**712**			**714**			**new 4**			**716exp**			**new 6**			**704**			**718**			**new 8**		
	On	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**
Sacramento	0		0	41,712		0	0		0	0		0	45,499		0	0		0	0		0	43,801		0	0		0	0		0
		0			41,712			0			0			45,499			0			0			43,801			0			0	
Lodi	0		0	1,621		739	0		0	0		0	1,829		720	0		0	0		0	1,686		1,252	0		0	0		0
		0			42,594			0			0			46,608			0			0			44,235			0			0	
Stockton-Downtown	0		0	9,434		865	0		0	0		0	10,437		1,371	0		0	0		0	9,592		2,259	0		0	0		0
		0			51,163			0			0			55,674			0			0			51,568			0			0	
Oakland	0		0	0		0	13,013		0	11,669		0	0		0	12,850		0	11,521		0	0		0	11,060		0	4,543		0
		0			51,163			13,013			11,669			55,674			12,850			11,521			51,568			11,060			4,543	
Emeryville	0		0	0		0	17,310		0	16,109		0	0		0	19,170		0	15,799		0	0		0	12,708		0	6,005		0
		0			51,163			30,323			27,778			55,674			32,020			27,320			51,568			23,768			10,548	
Richmond	0		0	0		0	8,227		29	6,892		35	0		0	8,461		22	8,527		23	0		0	6,345		40	2,858		16
		0			51,163			38,521			34,635			55,674			40,459			35,824			51,568			30,073			13,390	
Martinez	0		0	0		0	17,766		3,269	14,722		2,815	0		0	17,552		2,194	15,331		2,112	0		0	9,897		3,713	4,464		1,147
		0			51,163			53,018			46,542			55,674			55,817			49,043			51,568			36,257			16,707	
Antioch-Pittsburg	0		0	0		0	5,973		795	5,510		603	0		0	0		0	6,258		1,180	0		0	3,545		801	1,614		401
		0			51,163			58,196			51,449			55,674			55,817			54,121			51,568			39,001			17,920	
Stockton	0		0	16,214		465	23,597		11,050	17,152		9,458	0		0	33,450		10,825	15,372		15,433	0		0	14,554		12,015	6,949		5,284
		0			66,912			70,743			59,143			55,674			78,442			54,060			51,568			41,540			19,585	
Modesto	0		0	8,711		4,257	7,008		4,228	8,948		3,327	0		2,983	10,407		5,120	6,647		4,962	0		4,370	2,874		4,541	1,317		1,957
		0			71,366			73,523			64,764			52,691			83,729			55,745			47,198			39,873			18,945	
Denair	0		0	2,375		739	1,849		938	2,551		802	0		563	0		0	2,004		1,115	0		798	770		977	298		422
		0			73,002			74,434			66,513			52,128			83,729			56,634			46,400			39,666			18,821	
Merced	5,303		0	6,500		6,006	5,306		6,652	6,426		5,889	0		3,685	7,988		9,110	4,627		7,570	0		4,879	1,938		6,294	589		2,957
		5,303			73,496			73,088			67,050			48,443			82,607			53,691			41,521			35,310			16,453	
Madera	817		68	940		1,619	864		1,664	1,035		1,540	0		1,037	0		0	706		1,947	0		1,353	305		1,320	50		681
		6,052			72,817			72,288			66,545			47,406			82,607			52,450			40,168			34,295			15,822	
Fresno	20,854		1,538	19,849		21,372	20,416		22,411	21,723		19,374	0		14,054	29,807		31,620	13,605		23,158	0		17,301	6,524		14,887	907		8,107
		25,368			71,294			70,293			68,894			33,352			80,794			42,897			22,867			25,932			8,622	
Hanford	6,944		8,663	6,294		15,291	6,812		14,594	7,858		14,545	0		6,641	7,990		23,380	3,750		14,080	0		6,933	1,567		7,223	255		2,338
		23,649			62,297			62,511			62,207			26,711			65,404			32,567			15,934			20,276			6,539	
Corcoran	1,071		1,841	1,157		2,098	1,170		2,283	1,542		2,720	0		675	0		0	676		2,232	0		653	250		937	40		230
		22,879			61,356			61,398			61,029			26,036			65,404			31,011			15,281			19,589			6,349	
Wasco	1,213		565	1,000		1,352	1,011		1,391	1,511		1,546	0		729	0		0	614		1,149	0		592	138		625	43		117
		23,527			61,004			61,018			60,994			25,307			65,404			30,476			14,689			19,102			6,275	
Bakersfield	0		23,527	0		61,004	0		61,018	0		60,994	0		25,307	0		65,404	0		30,476	0		14,689	0		19,102	0		6,275
Max Load		**25,368**			**73,496**			**74,434**			**68,894**			**55,674**			**83,729**			**56,634**			**51,568**			**41,540**			**19,585**	
Total	**36,202**		**36,202**	**115,807**		**115,807**	**130,322**		**130,322**	**123,648**		**123,648**	**57,765**		**57,765**	**147,675**		**147,675**	**105,437**		**105,437**	**55,079**		**55,079**	**72,475**		**72,475**	**29,932**		**29,932**

2020 Annual Ridership for San Joaquin Trains
Station ONs & OFFs by Trains
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(forecasts prepared 6/21/11)

	Northbound Trains																													
Station	**new 1**			**711**			**701**			**new 3**			**713**			**new 5**			**715**			**717exp**			**703**			**new 7**		
	On	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**
Bakersfield	6,623		0	23,510		0	9,059		0	53,669		0	48,183		0	26,991		0	63,627		0	60,149		0	52,680		0	13,983		0
		6,623			23,510			9,059			53,669			48,183			26,991			63,627			60,149			52,680			13,983	
Wasco	220		83	865		479	354		0	1,452		1,011	1,091		790	721		0	1,599		1,031	0		0	1,374		1,376	253		764
		6,760			23,896			9,413			54,110			48,484			27,712			64,195			60,149			52,678			13,472	
Corcoran	485		101	1,999		476	382		0	2,388		1,053	1,907		961	711		0	2,587		1,177	0		0	2,372		1,397	701		748
		7,144			25,419			9,795			55,445			49,430			28,423			65,605			60,149			53,653			13,425	
Hanford	4,059		677	13,294		3,614	4,097		0	15,242		6,204	13,316		5,362	7,593		0	16,730		6,565	19,713		6,731	12,998		7,660	3,193		4,018
		10,526			35,099			13,892			64,483			57,384			36,016			75,770			73,131			58,991			12,600	
Fresno	9,910		2,685	16,654		13,780	9,597		0	22,573		18,259	20,744		17,426	17,789		0	27,921		21,453	29,204		26,237	12,434		21,256	465		10,115
		17,751			37,973			23,489			68,797			60,702			53,805			82,238			76,098			50,169			2,950	
Madera	899		115	1,272		536	739		0	1,695		807	1,538		808	1,322		0	2,469		1,091	0		0	992		961	19		410
		18,535			38,709			24,228			69,685			61,432			55,127			83,616			76,098			50,200			2,559	
Merced	4,545		1,019	5,397		3,801	2,825		0	6,765		5,089	6,024		5,479	4,590		0	9,034		6,841	8,813		8,086	3,073		5,037	0		2,559
		22,061			40,305			27,053			71,361			61,977			59,717			85,809			76,825			48,236			0	
Denair	720		392	715		1,332	445		0	976		1,816	776		1,897	681		0	1,418		2,575	0		0	442		1,842	0		0
		22,389			39,688			27,498			70,521			60,856			60,398			84,652			76,825			46,836			0	
Modesto	3,703		1,566	3,335		4,625	2,401		0	4,562		6,879	3,425		7,164	3,578		0	6,089		8,904	4,991		9,874	2,217		5,892	0		0
		24,526			38,398			29,899			68,204			57,117			63,976			81,837			71,942			43,161			0	
Stockton-SJ	9,078		10,089	10,493		10,636	0		0	10,406		28,220	10,866		15,050	0		0	13,858		35,051	8,540		34,321	280		9,684	0		0
		23,515			38,255			29,899			50,390			52,933			63,976			60,644			46,161			33,757			0	
Antioch-Pittsburg	667		2,334	664		3,832	0		0	614		4,860	730		4,989	0		0	1,107		6,887	0		0	0		0	0		0
		21,848			35,087			29,899			46,144			48,674			63,976			54,864			46,161			33,757			0	
Martinez	1,741		5,965	1,357		10,347	0		0	2,199		13,881	2,759		14,871	0		0	3,394		17,764	1,482		15,368	0		0	0		0
		17,624			26,097			29,899			34,462			36,562			63,976			40,494			32,275			33,757			0	
Richmond	15		4,075	18		5,926	0		0	20		6,871	37		7,502	0		0	29		9,049	14		7,209	0		0	0		0
		13,564			20,189			29,899			27,611			29,097			63,976			31,474			25,080			33,757			0	
Emeryville	0		7,316	0		11,869	0		0	0		16,221	0		16,920	0		0	0		17,877	0		15,124	0		0	0		0
		6,248			8,320			29,899			11,390			12,177			63,976			13,597			9,956			33,757			0	
Oakland	0		6,248	0		8,320	0		0	0		11,390	0		12,177	0		0	0		13,597	0		9,956	0		0	0		0
		0			0			29,899			0			0			63,976			0			0			33,757			0	
Stockton-Downtown	0		0	0		0	1,403		6,008	0		0	0		0	2,212		13,274	0		0	0		0	520		7,852	0		0
		0			0			25,294			0			0			52,914			0			0			26,425			0	
Lodi	0		0	0		0	780		928	0		0	0		0	1,250		2,006	0		0	0		0	379		1,210	0		0
		0			0			25,146			0			0			52,158			0			0			25,594			0	
Sacramento	0		0	0		0	0		25,146	0		0	0		0	0		52,158	0		0	0		0	0		25,594	0		0
Max Load		**24,526**			**40,305**			**29,899**			**71,361**			**61,977**			**63,976**			**85,809**			**76,825**			**58,991**			**13,983**	
Total	**42,665**		**42,665**	**79,573**		**79,573**	**32,082**		**32,082**	**122,561**		**122,561**	**111,396**		**111,396**	**67,438**		**67,438**	**149,862**		**149,862**	**132,906**		**132,906**	**89,761**		**89,761**	**18,614**		**18,614**

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	Southbound Trains																													
Station	new 2			702			712			714			new 4			716exp			new 6			704			718			new 8		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Sacramento	0		0	153		0	0		0	0		0	168		0	0		0	0		0	159		0	0		0	0		0
		0			153			0			0			168			0			0			159			0			0	
Lodi	0		0	6		3	0		0	0		0	6		3	0		0	0		0	6		5	0		0	0		0
		0			155			0			0			171			0			0			160			0			0	
Stockton-Downtown	0		0	33		4	0		0	0		0	34		6	0		0	0		0	31		10	0		0	0		0
		0			185			0			0			199			0			0			181			0			0	
Oakland	0		0	0		0	48		0	41		0	0		0	48		0	43		0	0		0	44		0	22		0
		0			185			48			41			199			48			43			181			44			22	
Emeryville	0		0	0		0	63		0	61		0	0		0	73		0	59		0	0		0	49		0	24		0
		0			185			111			102			199			121			102			181			92			46	
Richmond	0		0	0		0	30		0	26		0	0		0	32		0	32		0	0		0	25		0	12		0
		0			185			142			128			199			153			134			181			117			57	
Martinez	0		0	0		0	67		12	55		6	0		0	66		7	57		7	0		0	38		16	18		8
		0			185			196			177			199			211			184			181			140			67	
Antioch-Pittsburg	0		0	0		0	23		3	20		2	0		0	0		0	23		5	0		0	14		3	6		2
		0			185			215			195			199			211			203			181			150			71	
Stockton	0		0	57		1	87		43	61		38	0		0	117		44	56		61	0		0	55		48	27		23
		0			240			259			218			199			284			197			181			156			76	
Modesto	0		0	30		16	25		17	32		13	0		11	35		20	23		20	0		17	10		19	5		8
		0			254			268			237			188			298			200			164			148			73	
Denair	0		0	8		3	7		4	9		3	0		2	0		0	7		4	0		3	3		4	1		2
		0			260			271			242			186			298			203			161			146			72	
Merced	18		0	24		22	19		25	23		23	0		13	28		35	17		29	0		18	7		25	2		12
		18			261			265			243			172			292			190			143			128			63	
Madera	3		0	3		6	3		6	4		6	0		4	0		0	3		7	0		5	1		5	0		3
		20			259			262			241			169			292			186			138			125			60	
Fresno	78		5	74		76	76		81	81		72	0		51	109		114	50		84	0		61	24		55	3		31
		93			257			257			250			118			286			151			77			93			33	
Hanford	26		33	24		56	25		54	29		55	0		24	29		87	13		52	0		24	6		27	1		9
		86			225			228			224			94			229			112			53			72			25	
Corcoran	4		7	4		8	4		9	6		10	0		2	0		0	2		8	0		2	1		3	0		1
		83			221			224			220			92			229			106			51			69			25	
Wasco	5		2	4		5	4		5	6		6	0		3	0		0	2		4	0		2	0		2	0		0
		86			220			222			220			89			229			105			49			67			25	
Bakersfield	0		86	0		220	0		222	0		220	0		89	0		229	0		105	0		49	0		67	0		25
Max Load		**93**			**261**			**271**			**250**			**199**			**298**			**203**			**181**			**156**			**76**	
Total	**133**		**133**	**420**		**420**	**482**		**482**	**453**		**453**	**209**		**209**	**536**		**536**	**387**		**387**	**196**		**196**	**276**		**276**	**121**		**121**

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	Northbound Trains																													
Station	**new 1**			**711**			**701**			**new 3**			**713**			**new 5**			**715**			**717exp**			**703**			**new 7**		
	On	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**
Bakersfield	15		0	74		0	29		0	176		0	191		0	100		0	241		0	221		0	180		0	51		0
		15			74			29			176			191			100			241			221			180			51	
Wasco	1		0	3		2	1		0	5		4	4		3	3		0	6		4	0		0	5		5	1		3
		16			76			30			178			192			103			242			221			180			49	
Corcoran	2		0	7		2	1		0	9		4	7		4	3		0	10		5	0		0	9		5	3		3
		17			82			31			183			195			105			247			221			184			48	
Hanford	15		2	50		12	14		0	57		21	50		22	27		0	62		26	73		26	47		28	12		15
		30			119			46			220			224			133			284			267			204			46	
Fresno	37		8	61		49	34		0	84		63	77		69	64		0	102		83	104		101	43		77	2		37
		59			131			80			241			231			197			303			271			170			11	
Madera	3		0	5		2	3		0	6		3	6		3	5		0	9		4	0		0	3		3	0		2
		62			134			82			244			234			202			307			271			170			10	
Merced	19		3	21		13	10		0	27		17	23		21	17		0	35		25	32		29	11		17	0		10
		78			142			93			254			236			218			317			274			164			0	
Denair	3		1	3		4	2		0	4		6	3		7	3		0	6		9	0		0	2		6	0		0
		80			141			95			252			232			221			313			274			160			0	
Modesto	16		5	14		16	9		0	19		23	14		27	14		0	25		33	19		34	8		19	0		0
		90			139			104			247			218			235			305			259			149			0	
Stockton-SJ	38		37	43		37	0		0	42		100	38		58	0		0	58		130	34		120	1		32	0		0
		91			145			104			189			198			235			232			173			118			0	
Antioch-Pittsburg	3		9	3		14	0		0	2		18	3		18	0		0	4		27	0		0	0		0	0		0
		85			133			104			174			183			235			210			173			118			0	
Martinez	6		23	5		38	0		0	9		51	11		56	0		0	10		68	6		58	0		0	0		0
		69			100			104			133			138			235			152			120			118			0	
Richmond	0		16	0		23	0		0	0		26	0		28	0		0	0		35	0		27	0		0	0		0
		53			77			104			107			111			235			118			93			118			0	
Emeryville	0		28	0		45	0		0	0		62	0		64	0		0	0		68	0		56	0		0	0		0
		24			32			104			45			47			235			50			37			118			0	
Oakland	0		24	0		32	0		0	0		45	0		47	0		0	0		50	0		37	0		0	0		0
		0			0			104			0			0			235			0			0			118			0	
Stockton-Downtown	0		0	0		0	6		19	0		0	0		0	10		47	0		0	0		0	2		26	0		0
		0			0			91			0			0			198			0			0			94			0	
Lodi	0		0	0		0	3		3	0		0	0		0	6		7	0		0	0		0	1		4	0		0
		0			0			91			0			0			197			0			0			91			0	
Sacramento	0		0	0		0	0		91	0		0	0		0	0		197	0		0	0		0	0		91	0		0
Max Load		**91**			**145**			**104**			**254**			**236**			**235**			**317**			**274**			**204**			**51**	
Total	**158**		**158**	**289**		**289**	**113**		**113**	**441**		**441**	**428**		**428**	**250**		**250**	**567**		**567**	**488**		**488**	**313**		**313**	**69**		**69**

2020 Typical Peak Day Ridership for San Joaquin Trains
Station ONs & OFFs by Trains
Proposed Future 90mph San Joaquin Schedule (based on timetable provided by Caltrans 5/31/11)
(forecasts prepared 6/21/11)

	Southbound Trains																													
Station	new 2			702			712			714			new 4			716exp			new 6			704			718			new 8		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Sacramento	0		0	159		0	0		0	0		0	173		0	0		0	0		0	166		0	0		0	0		0
		0			159			0			0			173			0			0			166			0			0	
Lodi	0		0	6		3	0		0	0		0	7		3	0		0	0		0	6		5	0		0	0		0
		0			162			0			0			177			0			0			168			0			0	
Stockton-Downtown	0		0	36		3	0		0	0		0	40		5	0		0	0		0	36		9	0		0	0		0
		0			195			0			0			212			0			0			196			0			0	
Oakland	0		0	0		0	49		0	44		0	0		0	49		0	44		0	0		0	42		0	17		0
		0			195			49			44			212			49			44			196			42			17	
Emeryville	0		0	0		0	66		0	61		0	0		0	73		0	60		0	0		0	48		0	23		0
		0			195			115			106			212			122			104			196			90			40	
Richmond	0		0	0		0	31		0	26		0	0		0	32		0	32		0	0		0	24		0	11		0
		0			195			146			132			212			154			136			196			114			51	
Martinez	0		0	0		0	68		12	56		11	0		0	67		8	58		8	0		0	38		14	17		4
		0			195			201			177			212			212			186			196			138			63	
Antioch-Pittsburg	0		0	0		0	23		3	21		2	0		0	0		0	24		4	0		0	13		3	6		2
		0			195			221			196			212			212			206			196			148			68	
Stockton	0		0	62		2	90		42	65		36	0		0	127		41	58		59	0		0	55		46	26		20
		0			254			269			225			212			298			205			196			158			74	
Modesto	0		0	33		16	27		16	34		13	0		11	40		19	25		19	0		17	11		17	5		7
		0			271			279			246			200			318			212			179			152			72	
Denair	0		0	9		3	7		4	10		3	0		2	0		0	8		4	0		3	3		4	1		2
		0			277			283			253			198			318			215			176			151			72	
Merced	20		0	25		23	20		25	24		22	0		14	30		35	18		29	0		19	7		24	2		11
		20			279			278			255			184			314			204			158			134			63	
Madera	3		0	4		6	3		6	4		6	0		4	0		0	3		7	0		5	1		5	0		3
		23			277			275			253			180			314			199			153			130			60	
Fresno	79		6	75		81	78		85	83		74	0		53	113		120	52		88	0		66	25		57	3		31
		96			271			267			262			127			307			163			87			99			33	
Hanford	26		33	24		58	26		55	30		55	0		25	30		89	14		54	0		26	6		27	1		9
		90			237			238			236			102			249			124			61			77			25	
Corcoran	4		7	4		8	4		9	6		10	0		3	0		0	3		8	0		2	1		4	0		1
		87			233			233			232			99			249			118			58			74			24	
Wasco	5		2	4		5	4		5	6		6	0		3	0		0	2		4	0		2	1		2	0		0
		89			232			232			232			96			249			116			56			73			24	
Bakersfield	0		89	0		232	0		232	0		232	0		96	0		249	0		116	0		56	0		73	0		24
Max Load		**96**			**279**			**283**			**262**			**212**			**318**			**215**			**196**			**158**			**74**	
Total	**138**		**138**	**440**		**440**	**495**		**495**	**470**		**470**	**220**		**220**	**561**		**561**	**401**		**401**	**209**		**209**	**275**		**275**	**114**		**114**

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(forecasts prepared 6/21/11)

	Northbound Trains																													
Station	**new 1**			**711**			**701**			**new 3**			**713**			**new 5**			**715**			**717exp**			**703**			**new 7**		
	On	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**
Bakersfield	25		0	89		0	34		0	204		0	183		0	103		0	242		0	229		0	200		0	53		0
		25			89			34			204			183			103			242			229			200			53	
Wasco	1		0	3		2	1		0	6		4	4		3	3		0	6		4	0		0	5		5	1		3
		26			91			36			206			184			105			244			229			200			51	
Corcoran	2		0	8		2	1		0	9		4	7		4	3		0	10		4	0		0	9		5	3		3
		27			97			37			211			188			108			249			229			204			51	
Hanford	15		3	51		14	16		0	58		24	51		20	29		0	64		25	75		26	49		29	12		15
		40			133			53			245			218			137			288			278			224			48	
Fresno	38		10	63		52	36		0	86		69	79		66	68		0	106		82	111		100	47		81	2		38
		67			144			89			261			231			204			313			289			191			11	
Madera	3		0	5		2	3		0	6		3	6		3	5		0	9		4	0		0	4		4	0		2
		70			147			92			265			233			209			318			289			191			10	
Merced	17		4	21		14	11		0	26		19	23		21	17		0	34		26	33		31	12		19	0		10
		84			153			103			271			236			227			326			292			183			0	
Denair	3		1	3		5	2		0	4		7	3		7	3		0	5		10	0		0	2		7	0		0
		85			151			104			268			231			230			322			292			178			0	
Modesto	14		6	13		18	9		0	17		26	13		27	14		0	23		34	19		38	8		22	0		0
		93			146			114			259			217			243			311			273			164			0	
Stockton-SJ	34		38	40		40	0		0	40		107	41		57	0		0	53		133	32		130	1		37	0		0
		89			145			114			191			201			243			230			175			128			0	
Antioch-Pittsburg	3		9	3		15	0		0	2		18	3		19	0		0	4		26	0		0	0		0	0		0
		83			133			114			175			185			243			208			175			128			0	
Martinez	7		23	5		39	0		0	8		53	10		57	0		0	13		68	6		58	0		0	0		0
		67			99			114			131			139			243			154			123			128			0	
Richmond	0		15	0		23	0		0	0		26	0		29	0		0	0		34	0		27	0		0	0		0
		52			77			114			105			111			243			120			95			128			0	
Emeryville	0		28	0		45	0		0	0		62	0		64	0		0	0		68	0		57	0		0	0		0
		24			32			114			43			46			243			52			38			128			0	
Oakland	0		24	0		32	0		0	0		43	0		46	0		0	0		52	0		38	0		0	0		0
		0			0			114			0			0			243			0			0			128			0	
Stockton-Downtown	0		0	0		0	5		23	0		0	0		0	8		50	0		0	0		0	2		30	0		0
		0			0			96			0			0			201			0			0			100			0	
Lodi	0		0	0		0	3		4	0		0	0		0	5		8	0		0	0		0	1		5	0		0
		0			0			96			0			0			198			0			0			97			0	
Sacramento	0		0	0		0	0		96	0		0	0		0	0		198	0		0	0		0	0		97	0		0
Max Load		**93**			**153**			**114**			**271**			**236**			**243**			**326**			**292**			**224**			**53**	
Total	**162**		**162**	**302**		**302**	**122**		**122**	**466**		**466**	**423**		**423**	**256**		**256**	**569**		**569**	**505**		**505**	**341**		**341**	**71**		**71**

2020 Annual Ridership for San Joaquin Trains
Station ONs & OFFs by Trains
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(forecasts prepared 6/21/11)

	Southbound Trains																													
Station	new 2			702			712			714			new 4			716exp			new 6			704			718			new 8		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Sacramento	0		0	40,142		0	0		0	0		0	44,236		0	0		0	0		0	41,896		0	0		0	0		0
		0			40,142			0			0			44,236			0			0			41,896			0			0	
Lodi	0		0	1,532		776	0		0	0		0	1,638		813	0		0	0		0	1,506		1,389	0		0	0		0
		0			40,898			0			0			45,061			0			0			42,013			0			0	
Stockton-Downtown	0		0	8,733		930	0		0	0		0	9,020		1,621	0		0	0		0	8,273		2,679	0		0	0		0
		0			48,701			0			0			52,460			0			0			47,607			0			0	
Oakland	0		0	0		0	12,695		0	10,734		0	0		0	12,670		0	11,378		0	0		0	11,667		0	5,659		0
		0			48,701			12,695			10,734			52,460			12,670			11,378			47,607			11,667			5,659	
Emeryville	0		0	0		0	16,670		52	16,081		62	0		0	19,130		50	15,549		48	0		0	12,773		99	6,386		47
		0			48,701			29,313			26,753			52,460			31,750			26,879			47,607			24,341			11,998	
Richmond	0		0	0		0	7,977		28	6,916		27	0		0	8,467		23	8,428		23	0		0	6,488		45	3,037		23
		0			48,701			37,262			33,642			52,460			40,194			35,284			47,607			30,784			15,012	
Martinez	0		0	0		0	17,543		3,199	14,476		1,579	0		0	17,254		1,851	15,073		1,950	0		0	10,076		4,099	4,611		2,032
		0			48,701			51,606			46,539			52,460			55,597			48,407			47,607			36,761			17,591	
Antioch-Pittsburg	0		0	0		0	5,937		834	5,332		632	0		0	0		0	6,181		1,199	0		0	3,597		866	1,650		456
		0			48,701			56,709			51,239			52,460			55,597			53,389			47,607			39,492			18,785	
Stockton	0		0	15,060		500	22,889		11,329	16,103		9,900	0		0	30,704		11,502	14,611		16,097	0		0	14,377		12,733	7,018		5,930
		0			63,261			68,269			57,442			52,460			74,799			51,903			47,607			41,136			19,873	
Modesto	0		0	7,931		4,279	6,608		4,406	8,302		3,458	0		2,985	9,129		5,385	6,103		5,319	0		4,457	2,711		4,956	1,371		2,144
		0			66,913			70,471			62,286			49,475			78,543			52,687			43,150			38,891			19,100	
Denair	0		0	2,154		737	1,712		967	2,342		836	0		563	0		0	1,810		1,178	0		802	708		1,059	306		457
		0			68,330			71,216			63,792			48,912			78,543			53,319			42,348			38,540			18,949	
Merced	4,667		0	6,225		5,836	5,034		6,618	6,092		5,966	0		3,550	7,331		9,112	4,346		7,648	0		4,683	1,810		6,579	614		3,083
		4,667			68,719			69,632			63,918			45,362			76,762			50,017			37,665			33,771			16,480	
Madera	775		60	918		1,516	843		1,591	997		1,498	0		988	0		0	666		1,861	0		1,257	289		1,291	49		677
		5,382			68,121			68,884			63,417			44,374			76,762			48,822			36,408			32,769			15,852	
Fresno	20,454		1,356	19,599		20,091	20,125		21,399	21,193		18,846	0		13,290	28,725		30,123	13,054		22,222	0		16,077	6,298		14,587	896		8,081
		24,480			67,629			67,610			65,764			31,084			75,364			39,654			20,331			24,480			8,667	
Hanford	6,815		8,669	6,213		14,723	6,690		14,311	7,697		14,421	0		6,288	7,559		22,766	3,523		13,675	0		6,352	1,459		7,103	255		2,237
		22,626			59,119			59,989			59,040			24,796			60,157			29,502			13,979			18,836			6,685	
Corcoran	1,056		1,843	1,133		2,036	1,132		2,252	1,499		2,735	0		641	0		0	623		2,148	0		590	221		910	41		212
		21,839			58,216			58,869			57,804			24,155			60,157			27,977			13,389			18,147			6,514	
Wasco	1,212		538	1,012		1,268	999		1,319	1,499		1,485	0		677	0		0	582		1,047	0		518	117		597	46		108
		22,513			57,960			58,549			57,818			23,478			60,157			27,512			12,871			17,667			6,452	
Bakersfield	0		22,513	0		57,960	0		58,549	0		57,818	0		23,478	0		60,157	0		27,512	0		12,871	0		17,667	0		6,452
Max Load		**24,480**			**68,719**			**71,216**			**65,764**			**52,460**			**78,543**			**53,389**			**47,607**			**41,136**			**19,873**	
Total	**34,979**		**34,979**	**110,652**		**110,652**	**126,854**		**126,854**	**119,263**		**119,263**	**54,894**		**54,894**	**140,969**		**140,969**	**101,927**		**101,927**	**51,675**		**51,675**	**72,591**		**72,591**	**31,939**		**31,939**

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Station ONs & OFFs by Trains
Proposed Future 79mph San Joaquin Schedule (based on timetable provided by Caltrans 5/21/10)
(forecasts prepared 6/21/11)

	Northbound Trains																													
Station	**new 1**			**711**			**701**			**new 3**			**713**			**new 5**			**715**			**717exp**			**703**			**new 7**		
	On	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**
Bakersfield	3,971		0	19,566		0	7,520		0	46,407		0	50,365		0	26,403		0	63,308		0	58,118		0	47,464		0	13,329		0
		3,971			19,566			7,520			46,407			50,365			26,403			63,308			58,118			47,464			13,329	
Wasco	198		61	795		416	313		0	1,376		931	1,039		842	669		0	1,513		1,062	0		0	1,283		1,379	250		785
		4,108			19,945			7,833			46,852			50,562			27,072			63,759			58,118			47,368			12,794	
Corcoran	464		70	1,952		411	352		0	2,367		933	1,871		1,011	668		0	2,527		1,201	0		0	2,333		1,345	708		741
		4,502			21,486			8,185			48,286			51,422			27,740			65,085			58,118			48,356			12,761	
Hanford	3,967		477	13,057		3,210	3,809		0	15,000		5,459	13,110		5,695	7,175		0	16,344		6,741	19,107		6,877	12,485		7,254	3,208		3,844
		7,992			31,333			11,994			57,827			58,837			34,915			74,688			70,348			53,587			12,125	
Fresno	9,755		2,167	16,017		12,797	8,994		0	21,993		16,497	20,223		18,146	16,928		0	26,788		21,836	27,380		26,541	11,359		20,196	512		9,659
		15,580			34,553			20,988			63,323			60,914			51,843			79,640			71,187			44,750			2,978	
Madera	892		92	1,222		483	696		0	1,642		731	1,486		832	1,253		0	2,358		1,098	0		0	900		914	20		400
		16,380			35,292			21,684			64,234			61,568			53,096			80,900			71,187			44,736			2,598	
Merced	4,994		834	5,515		3,323	2,739		0	6,997		4,436	6,044		5,514	4,396		0	9,131		6,690	8,434		7,642	2,916		4,369	0		2,598
		20,540			37,484			24,423			66,795			62,098			57,492			83,341			71,979			43,283			0	
Denair	803		338	756		1,167	447		0	1,035		1,611	801		1,864	674		0	1,470		2,463	0		0	434		1,596	0		0
		21,005			37,073			24,870			66,219			61,035			58,166			82,348			71,979			42,121			0	
Modesto	4,153		1,351	3,576		4,120	2,446		0	4,884		6,098	3,620		7,177	3,598		0	6,480		8,672	4,998		8,818	2,170		5,018	0		0
		23,807			36,529			27,316			65,005			57,478			61,764			80,156			68,159			39,273			0	
Stockton-SJ	9,911		9,668	11,389		9,832	0		0	11,137		26,304	10,038		15,362	0		0	15,202		34,238	8,955		31,686	256		8,536	0		0
		24,050			38,086			27,316			49,838			52,154			61,764			61,120			45,428			30,993			0	
Antioch-Pittsburg	700		2,392	683		3,769	0		0	644		4,708	789		4,838	0		0	1,173		6,991	0		0	0		0	0		0
		22,358			35,000			27,316			45,774			48,105			61,764			55,302			45,428			30,993			0	
Martinez	1,631		5,943	1,366		10,114	0		0	2,489		13,355	3,014		14,761	0		0	2,745		17,969	1,458		15,355	0		0	0		0
		18,046			26,252			27,316			34,908			36,358			61,764			40,078			31,531			30,993			0	
Richmond	16		4,203	18		5,988	0		0	25		6,905	31		7,243	0		0	25		9,129	19		7,137	0		0	0		0
		13,859			20,282			27,316			28,028			29,146			61,764			30,974			24,413			30,993			0	
Emeryville	39		7,496	50		11,861	0		0	75		16,268	87		16,792	0		0	62		17,785	34		14,641	0		0	0		0
		6,402			8,471			27,316			11,835			12,441			61,764			13,251			9,806			30,993			0	
Oakland	0		6,402	0		8,471	0		0	0		11,835	0		12,441	0		0	0		13,251	0		9,806	0		0	0		0
		0			0			27,316			0			0			61,764			0			0			30,993			0	
Stockton-Downtown	0		0	0		0	1,658		5,010	0		0	0		0	2,697		12,282	0		0	0		0	475		6,793	0		0
		0			0			23,964			0			0			52,179			0			0			24,675			0	
Lodi	0		0	0		0	862		790	0		0	0		0	1,450		1,916	0		0	0		0	332		1,076	0		0
		0			0			24,036			0			0			51,713			0			0			23,931			0	
Sacramento	0		0	0		0	0		24,036	0		0	0		0	0		51,713	0		0	0		0	0		23,931	0		0
Max Load		**24,050**			**38,086**			**27,316**			**66,795**			**62,098**			**61,764**			**83,341**			**71,979**			**53,587**			**13,329**	
Total	**41,494**		**41,494**	**75,962**		**75,962**	**29,836**		**29,836**	**116,071**		**116,071**	**112,518**		**112,518**	**65,911**		**65,911**	**149,126**		**149,126**	**128,503**		**128,503**	**82,407**		**82,407**	**18,027**		**18,027**

2020 Annual Ridership for San Joaquin Trains
Station ONs & OFFs by Trains
Proposed Future 90mph San Joaquin Schedule (based on timetable provided by Caltrans 5/31/11)
(forecasts prepared 6/21/11)

	Southbound Trains																													
Station	**new 2**			**702**			**712**			**714**			**new 4**			**716exp**			**new 6**			**704**			**718**			**new 8**		
	On	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**
Sacramento	0		0	41,712		0	0		0	0		0	45,499		0	0		0	0		0	43,801		0	0		0	0		0
		0			41,712			0			0			45,499			0			0			43,801			0			0	
Lodi	0		0	1,621		739	0		0	0		0	1,829		720	0		0	0		0	1,686		1,252	0		0	0		0
		0			42,594			0			0			46,608			0			0			44,235			0			0	
Stockton-Downtown	0		0	9,434		865	0		0	0		0	10,437		1,371	0		0	0		0	9,592		2,259	0		0	0		0
		0			51,163			0			0			55,674			0			0			51,568			0			0	
Oakland	0		0	0		0	13,013		0	11,669		0	0		0	12,850		0	11,521		0	0		0	11,060		0	4,543		0
		0			51,163			13,013			11,669			55,674			12,850			11,521			51,568			11,060			4,543	
Emeryville	0		0	0		0	17,310		0	16,109		0	0		0	19,170		0	15,799		0	0		0	12,708		0	6,005		0
		0			51,163			30,323			27,778			55,674			32,020			27,320			51,568			23,768			10,548	
Richmond	0		0	0		0	8,227		29	6,892		35	0		0	8,461		22	8,527		23	0		0	6,345		40	2,858		16
		0			51,163			38,521			34,635			55,674			40,459			35,824			51,568			30,073			13,390	
Martinez	0		0	0		0	17,766		3,269	14,722		2,815	0		0	17,552		2,194	15,331		2,112	0		0	9,897		3,713	4,464		1,147
		0			51,163			53,018			46,542			55,674			55,817			49,043			51,568			36,257			16,707	
Antioch-Pittsburg	0		0	0		0	5,973		795	5,510		603	0		0	0		0	6,258		1,180	0		0	3,545		801	1,614		401
		0			51,163			58,196			51,449			55,674			55,817			54,121			51,568			39,001			17,920	
Stockton	0		0	16,214		465	23,597		11,050	17,152		9,458	0		0	33,450		10,825	15,372		15,433	0		0	14,554		12,015	6,949		5,284
		0			66,912			70,743			59,143			55,674			78,442			54,060			51,568			41,540			19,585	
Modesto	0		0	8,711		4,257	7,008		4,228	8,948		3,327	0		2,983	10,407		5,120	6,647		4,962	0		4,370	2,874		4,541	1,317		1,957
		0			71,366			73,523			64,764			52,691			83,729			55,745			47,198			39,873			18,945	
Denair	0		0	2,375		739	1,849		938	2,551		802	0		563	0		0	2,004		1,115	0		798	770		977	298		422
		0			73,002			74,434			66,513			52,128			83,729			56,634			46,400			39,666			18,821	
Merced	5,303		0	6,500		6,006	5,306		6,652	6,426		5,889	0		3,685	7,988		9,110	4,627		7,570	0		4,879	1,938		6,294	589		2,957
		5,303			73,496			73,088			67,050			48,443			82,607			53,691			41,521			35,310			16,453	
Madera	817		68	940		1,619	864		1,664	1,035		1,540	0		1,037	0		0	706		1,947	0		1,353	305		1,320	50		681
		6,052			72,817			72,288			66,545			47,406			82,607			52,450			40,168			34,295			15,822	
Fresno	20,854		1,538	19,849		21,372	20,416		22,411	21,723		19,374	0		14,054	29,807		31,620	13,605		23,158	0		17,301	6,524		14,887	907		8,107
		25,368			71,294			70,293			68,894			33,352			80,794			42,897			22,867			25,932			8,622	
Hanford	6,944		8,663	6,294		15,291	6,812		14,594	7,858		14,545	0		6,641	7,990		23,380	3,750		14,080	0		6,933	1,567		7,223	255		2,338
		23,649			62,297			62,511			62,207			26,711			65,404			32,567			15,934			20,276			6,539	
Corcoran	1,071		1,841	1,157		2,098	1,170		2,283	1,542		2,720	0		675	0		0	676		2,232	0		653	250		937	40		230
		22,879			61,356			61,398			61,029			26,036			65,404			31,011			15,281			19,589			6,349	
Wasco	1,213		565	1,000		1,352	1,011		1,391	1,511		1,546	0		729	0		0	614		1,149	0		592	138		625	43		117
		23,527			61,004			61,018			60,994			25,307			65,404			30,476			14,689			19,102			6,275	
Bakersfield	0		23,527	0		61,004	0		61,018	0		60,994	0		25,307	0		65,404	0		30,476	0		14,689	0		19,102	0		6,275
Max Load		**25,368**			**73,496**			**74,434**			**68,894**			**55,674**			**83,729**			**56,634**			**51,568**			**41,540**			**19,585**	
Total	**36,202**		**36,202**	**115,807**		**115,807**	**130,322**		**130,322**	**123,648**		**123,648**	**57,765**		**57,765**	**147,675**		**147,675**	**105,437**		**105,437**	**55,079**		**55,079**	**72,475**		**72,475**	**29,932**		**29,932**

2020 Annual Ridership for San Joaquin Trains
Station ONs & OFFs by Trains
Proposed Future 90mph San Joaquin Schedule (based on timetable provided by Caltrans 5/31/11)
(forecasts prepared 6/21/11)

	Northbound Trains																													
Station	**new 1**			**711**			**701**			**new 3**			**713**			**new 5**			**715**			**717exp**			**703**			**new 7**		
	On	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**	**On**	**Aboard**	**Off**
Bakersfield	6,623		0	23,510		0	9,059		0	53,669		0	48,183		0	26,991		0	63,627		0	60,149		0	52,680		0	13,983		0
		6,623			23,510			9,059			53,669			48,183			26,991			63,627			60,149			52,680			13,983	
Wasco	220		83	865		479	354		0	1,452		1,011	1,091		790	721		0	1,599		1,031	0		0	1,374		1,376	253		764
		6,760			23,896			9,413			54,110			48,484			27,712			64,195			60,149			52,678			13,472	
Corcoran	485		101	1,999		476	382		0	2,388		1,053	1,907		961	711		0	2,587		1,177	0		0	2,372		1,397	701		748
		7,144			25,419			9,795			55,445			49,430			28,423			65,605			60,149			53,653			13,425	
Hanford	4,059		677	13,294		3,614	4,097		0	15,242		6,204	13,316		5,362	7,593		0	16,730		6,565	19,713		6,731	12,998		7,660	3,193		4,018
		10,526			35,099			13,892			64,483			57,384			36,016			75,770			73,131			58,991			12,600	
Fresno	9,910		2,685	16,654		13,780	9,597		0	22,573		18,259	20,744		17,426	17,789		0	27,921		21,453	29,204		26,237	12,434		21,256	465		10,115
		17,751			37,973			23,489			68,797			60,702			53,805			82,238			76,098			50,169			2,950	
Madera	899		115	1,272		536	739		0	1,695		807	1,538		808	1,322		0	2,469		1,091	0		0	992		961	19		410
		18,535			38,709			24,228			69,685			61,432			55,127			83,616			76,098			50,200			2,559	
Merced	4,545		1,019	5,397		3,801	2,825		0	6,765		5,089	6,024		5,479	4,590		0	9,034		6,841	8,813		8,086	3,073		5,037	0		2,559
		22,061			40,305			27,053			71,361			61,977			59,717			85,809			76,825			48,236			0	
Denair	720		392	715		1,332	445		0	976		1,816	776		1,897	681		0	1,418		2,575	0		0	442		1,842	0		0
		22,389			39,688			27,498			70,521			60,856			60,398			84,652			76,825			46,836			0	
Modesto	3,703		1,566	3,335		4,625	2,401		0	4,562		6,879	3,425		7,164	3,578		0	6,089		8,904	4,991		9,874	2,217		5,892	0		0
		24,526			38,398			29,899			68,204			57,117			63,976			81,837			71,942			43,161			0	
Stockton-SJ	9,078		10,089	10,493		10,636	0		0	10,406		28,220	10,866		15,050	0		0	13,858		35,051	8,540		34,321	280		9,684	0		0
		23,515			38,255			29,899			50,390			52,933			63,976			60,644			46,161			33,757			0	
Antioch-Pittsburg	667		2,334	664		3,832	0		0	614		4,860	730		4,989	0		0	1,107		6,887	0		0	0		0	0		0
		21,848			35,087			29,899			46,144			48,674			63,976			54,864			46,161			33,757			0	
Martinez	1,741		5,965	1,357		10,347	0		0	2,199		13,881	2,759		14,871	0		0	3,394		17,764	1,482		15,368	0		0	0		0
		17,624			26,097			29,899			34,462			36,562			63,976			40,494			32,275			33,757			0	
Richmond	15		4,075	18		5,926	0		0	20		6,871	37		7,502	0		0	29		9,049	14		7,209	0		0	0		0
		13,564			20,189			29,899			27,611			29,097			63,976			31,474			25,080			33,757			0	
Emeryville	0		7,316	0		11,869	0		0	0		16,221	0		16,920	0		0	0		17,877	0		15,124	0		0	0		0
		6,248			8,320			29,899			11,390			12,177			63,976			13,597			9,956			33,757			0	
Oakland	0		6,248	0		8,320	0		0	0		11,390	0		12,177	0		0	0		13,597	0		9,956	0		0	0		0
		0			0			29,899			0			0			63,976			0			0			33,757			0	
Stockton-Downtown	0		0	0		0	1,403		6,008	0		0	0		0	2,212		13,274	0		0	0		0	520		7,852	0		0
		0			0			25,294			0			0			52,914			0			0			26,425			0	
Lodi	0		0	0		0	780		928	0		0	0		0	1,250		2,006	0		0	0		0	379		1,210	0		0
		0			0			25,146			0			0			52,158			0			0			25,594			0	
Sacramento	0		0	0		0	0		25,146	0		0	0		0	0		52,158	0		0	0		0	0		25,594	0		0
Max Load		**24,526**			**40,305**			**29,899**			**71,361**			**61,977**			**63,976**			**85,809**			**76,825**			**58,991**			**13,983**	
Total	**42,665**		**42,665**	**79,573**		**79,573**	**32,082**		**32,082**	**122,561**		**122,561**	**111,396**		**111,396**	**67,438**		**67,438**	**149,862**		**149,862**	**132,906**		**132,906**	**89,761**		**89,761**	**18,614**		**18,614**

2035 Annual Ridership for San Joaquin Trains
Station ONs & OFFs by Trains
Proposed Future 90mph San Joaquin Schedule (based on timetable provided by Caltrans 5/31/11)
(forecasts prepared 6/21/11)

Southbound Trains

Station	2			4			6			8			10			12			14			16		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Sacramento	0		0	50,400		0	0		0	0		0	60,846		0	0		0	0		0	61,998		0
		0			50,400			0			0			60,846			0			0			61,998	
Lodi	0		0	2,143		866	0		0	0		0	2,340		869	0		0	0		0	2,326		842
		0			51,677			0			0			62,317			0			0			63,482	
Stockton-Downtown	0		0	12,028		1,531	0		0	0		0	11,984		1,627	0		0	0		0	11,952		1,600
		0			62,174			0			0			72,674			0			0			73,834	
Oakland	0		0	0		0	13,535		0	13,549		0	0		0	12,729		0	12,268		0	0		0
		0			62,174			13,535			13,549			72,674			12,729			12,268			73,834	
Emeryville	0		0	0		0	17,238		0	16,728		0	0		0	15,478		0	17,821		0	0		0
		0			62,174			30,773			30,277			72,674			28,207			30,089			73,834	
Richmond	0		0	0		0	8,282		27	7,449		42	0		0	6,524		47	7,195		34	0		0
		0			62,174			39,028			37,684			72,674			34,684			37,250			73,834	
Martinez	0		0	0		0	16,794		3,514	16,337		4,617	0		0	12,977		4,333	17,056		2,672	0		0
		0			62,174			52,308			49,404			72,674			43,328			51,634			73,834	
Antioch-Pittsburg	0		0	0		0	6,305		952	0		0	0		0	6,909		858	0		0	0		0
		0			62,174			57,661			49,404			72,674			49,379			51,634			73,834	
Stockton	0		0	0		0	22,768		12,003	16,937		9,061	0		0	14,460		8,932	21,075		8,721	0		0
		0			62,174			68,426			57,280			72,674			54,907			63,988			73,834	
Modesto	0		0	0		3,736	12,337		4,365	9,026		3,287	0		3,758	8,515		2,856	11,546		3,547	0		4,088
		0			58,438			76,398			63,019			68,916			60,566			71,987			69,746	
Denair	0		0	0		673	3,406		1,017	0		0	0		677	3,476		1,036	0		0	0		751
		0			57,765			78,787			63,019			68,239			63,006			71,987			68,995	
Merced	5,897		0	0		4,614	9,087		7,736	6,594		5,891	0		4,581	6,930		5,040	7,797		6,610	0		5,249
		5,897			53,151			80,138			63,722			63,658			64,896			73,174			63,746	
Madera	944		63	0		1,238	1,326		1,929	0		0	0		1,286	1,463		1,992	0		0	0		1,458
		6,778			51,913			79,535			63,722			62,372			64,367			73,174			62,288	
Fresno	27,464		1,536	0		16,717	27,318		24,177	25,231		19,730	0		18,340	20,925		17,836	25,063		21,471	0		20,170
		32,706			35,196			82,676			69,223			44,032			67,456			76,766			42,118	
Hanford	9,535		10,831	0		7,192	8,707		17,146	7,386		14,816	0		8,279	7,442		12,271	7,788		16,362	0		9,069
		31,410			28,004			74,237			61,793			35,753			62,627			68,192			33,049	
Corcoran	1,349		2,277	0		666	1,627		2,673	0		0	0		790	1,799		2,954	0		0	0		864
		30,482			27,338			73,191			61,793			34,963			61,472			68,192			32,185	
Wasco	1,470		734	0		683	1,351		1,588	0		0	0		845	1,630		1,808	0		0	0		893
		31,218			26,655			72,954			61,793			34,118			61,294			68,192			31,292	
Bakersfield	0		31,218	0		26,655	0		72,954	0		61,793	0		34,118	0		61,294	0		68,192	0		31,292
Max Load		**32,706**			**62,174**			**82,676**			**69,223**			**72,674**			**67,456**			**76,766**			**73,834**	
Total	**46,659**		**46,659**	**64,571**		**64,571**	**150,081**		**150,081**	**119,237**		**119,237**	**75,170**		**75,170**	**121,257**		**121,257**	**127,609**		**127,609**	**76,276**		**76,276**

Station	18			20			22			24			26			28			30			32			34		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Sacramento	0		0	58,125		0	0		0	0		0	50,558		0	0		0	0		0	16,206		0	0		0
		0			58,125			0			0			50,558			0			0			16,206			0	
Lodi	0		0	2,275		1,063	0		0	0		0	1,645		1,383	0		0	0		0	531		548	0		0
		0			59,337			0			0			50,820			0			0			16,189			0	
Stockton-Downtown	0		0	12,571		1,992	0		0	0		0	8,840		2,407	0		0	0		0	3,230		927	0		0
		0			69,916			0			0			57,253			0			0			18,492			0	
Oakland	15,568		0	0		0	15,098		0	13,308		0	0		0	11,151		0	12,639		0	0		0	6,508		0
		15,568			69,916			15,098			13,308			57,253			11,151			12,639			18,492			6,508	
Emeryville	19,931		0	0		0	19,963		0	17,458		0	0		0	13,090		0	14,265		0	0		0	7,399		0
		35,499			69,916			35,061			30,766			57,253			24,241			26,904			18,492			13,907	
Richmond	8,612		46	0		0	9,804		40	8,654		31	0		0	7,010		38	6,501		49	0		0	3,475		27
		44,065			69,916			44,825			39,389			57,253			31,213			33,356			18,492			17,355	
Martinez	17,130		4,750	0		0	19,240		4,040	16,208		3,339	0		0	11,863		3,888	10,215		4,673	0		0	5,244		2,423
		56,445			69,916			60,025			52,258			57,253			39,188			38,898			18,492			20,176	
Antioch-Pittsburg	6,428		742	0		0	7,349		1,036	0		0	0		0	6,509		1,457	0		0	0		0	2,184		574
		62,131			69,916			66,338			52,258			57,253			44,240			38,898			18,492			21,786	
Stockton	19,264		11,121	0		0	23,052		14,923	18,503		13,449	0		0	10,103		12,424	8,164		11,826	0		0	5,408		6,854
		70,274			69,916			74,467			57,312			57,253			41,919			35,236			18,492			20,340	
Modesto	11,730		4,084	0		4,780	11,498		5,448	8,467		4,937	0		5,297	4,081		4,041	3,593		3,689	0		1,850	1,792		1,946
		77,920			65,136			80,517			60,842			51,956			41,959			35,140			16,642			20,186	
Denair	3,544		1,029	0		862	3,365		1,276	0		0	0		940	1,689		1,353	0		0	0		322	449		483
		80,435			64,274			82,606			60,842			51,016			42,295			35,140			16,320			20,152	
Merced	9,735		7,659	0		5,892	9,397		9,537	5,729		8,112	0		6,086	2,668		6,597	2,435		5,937	0		2,049	795		3,096
		82,511			58,382			82,466			58,459			44,930			38,366			31,638			14,271			17,851	
Madera	1,582		2,059	0		1,605	1,401		2,505	0		0	0		1,558	537		2,203	0		0	0		532	84		763
		82,034			56,777			81,362			58,459			43,372			36,700			31,638			13,739			17,172
Fresno	36,060		25,689	0		21,991	32,932		31,972	16,287		25,991	0		19,459	7,109		17,396	7,853		13,915	0		6,674	1,226		8,381
		92,405			34,786			82,322			48,755			23,913			26,413			25,576			7,065			10,017	
Hanford	13,945		21,427	0		8,885	9,752		24,790	3,395		16,096	0		7,169	2,453		8,432	1,449		7,292	0		2,127	347		2,546
		84,923			25,901			67,284			36,054			16,744			20,434			19,733			4,938			7,818	
Corcoran	2,577		3,959	0		794	1,623		3,848	0		0	0		623	578		1,828	0		0	0		163	56		301
		83,541			25,107			65,059			36,054			16,121			19,184			19,733			4,775			7,573	
Wasco	2,972		2,138	0		776	1,415		1,881	0		0	0		555	468		986	0		0	0		112	54		157
		84,375			24,331			64,593			36,054			15,566			18,666			19,733			4,663			7,470
Bakersfield	0		84,375	0		24,331	0		64,593	0		36,054	0		15,566	0		18,666	0		19,733	0		4,663	0		7,470
Max Load		**92,405**			**69,916**			**82,606**			**60,842**			**57,253**			**44,240**			**38,898**			**18,492**			**21,786**	
Total	**169,078**		**169,078**	**72,971**		**72,971**	**165,889**		**165,889**	**108,009**		**108,009**	**61,043**		**61,043**	**79,309**		**79,309**	**67,114**		**67,114**	**19,967**		**19,967**	**35,021**		**35,021**

Northbound Trains

Station	1			3			5			7			9			11			13			15		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Bakersfield	7,751		0	3,483		0	22,306		0	44,850		0	17,691		0	62,601		0	63,571		0	34,817		0
		7,751			3,483			22,306			44,850			17,691			62,601			63,571			34,817	
Wasco	329		141	127		0	0		0	1,752		1,552	548		0	0		0	1,812		1,256	943		0
		7,939			3,610			22,306			45,050			18,239			62,601			64,127			35,760	
Corcoran	757		173	176		0	0		0	3,624		1,292	565		0	0		0	3,080		1,544	967		0
		8,523			3,786			22,306			47,382			18,804			62,601			65,663			36,727	
Hanford	4,461		969	2,240		0	14,611		2,055	15,936		6,923	6,192		0	16,985		6,988	17,402		6,978	10,558		0
		12,015			6,026			34,862			56,395			24,996			72,598			76,087			47,285	
Fresno	10,221		3,495	7,160		0	23,272		13,334	23,977		19,653	15,382		0	23,808		24,297	28,150		22,208	24,715		0
		18,741			13,186			44,800			60,719			40,378			72,109			82,029			72,000	
Madera	1,203		207	614		0	0		0	2,509		1,178	1,161		0	0		0	2,552		1,310	1,770		0
		19,737			13,800			44,800			62,050			41,539			72,109			83,271			73,770	
Merced	4,885		1,313	2,700		0	7,144		4,706	8,028		6,041	4,307		0	7,428		6,981	8,252		7,010	6,051		0
		23,309			16,500			47,238			64,037			45,846			72,556			84,513			79,821	
Denair	921		687	455		0	0		0	1,327		2,838	628		0	0		0	1,309		2,973	885		0
		23,543			16,955			47,238			62,526			46,474			72,556			82,849			80,706	
Modesto	3,688		1,971	2,726		0	3,855		5,607	4,433		7,522	3,413		0	4,220		9,444	4,708		8,904	4,875		0
		25,260			19,681			45,486			59,437			49,887			67,332			78,653			85,581	
Stockton-SJ	12,708		6,277	0		0	11,269		11,713	12,293		15,256	0		0	12,164		17,894	15,692		18,692	0		0
		31,691			19,681			45,042			56,474			49,887			61,602			75,653			85,581	
Antioch-Pittsburg	1,136		3,793	0		0	0		0	962		6,742	0		0	0		0	1,256		8,111	0		0
		29,034			19,681			45,042			50,694			49,887			61,602			68,798			85,581	
Martinez	2,417		7,956	0		0	2,890		12,900	2,926		14,659	0		0	3,531		18,777	4,391		20,766	0		0
		23,495			19,681			35,032			38,961			49,887			46,356			52,423			85,581	
Richmond	21		5,476	0		0	30		7,646	34		8,033	0		0	31		8,947	53		10,696	0		0
		18,040			19,681			27,416			30,962			49,887			37,440			41,780			85,581	
Emeryville	0		9,616	0		0	0		15,718	0		17,995	0		0	0		21,836	0		24,041	0		0
		8,424			19,681			11,698			12,967			49,887			15,604			17,739			85,581	
Oakland	0		8,424	0		0	0		11,698	0		12,967	0		0	0		15,604	0		17,739	0		0
		0			19,681			0			0			49,887			0			0			85,581	
Stockton-Downtown	0		0	1,302		3,066	0		0	0		0	1,393		7,804	0		0	0		0	2,168		12,620
		0			17,917			0			0			43,476			0			0			75,129	
Lodi	0		0	745		502	0		0	0		0	736		1,463	0		0	0		0	1,211		2,508
		0			18,160			0			0			42,749			0			73,832			73,832	
Sacramento	0		0	0		18,160	0		0	0		0	0		42,749	0		0	0		0	0		73,832
Max Load		**31,691**			**19,681**			**47,238**			**64,037**			**49,887**			**72,598**			**84,513**			**85,581**	
Total	**50,498**		**50,498**	**21,728**		**21,728**	**85,377**		**85,377**	**122,651**		**122,651**	**52,016**		**52,016**	**130,768**		**130,768**	**152,228**		**152,228**	**88,960**		**88,960**

Station	17			19			21			23			25			27			29			31			33		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Bakersfield	70,714		0	38,924		0	74,919		0	62,254		0	26,928		0	54,709		0	27,029		0	6,568		0	12,975		0
		70,714			38,924			74,919			62,254			26,928			54,709			27,029			6,568			12,975	
Wasco	1,846		1,370	997		0	0		0	2,103		2,085	827		0	0		0	639		1,124	161		0	285		639
		71,190			39,921			74,919			62,272			27,755			54,709			26,544			6,729			12,621
Corcoran	3,007		1,595	964		0	0		0	4,580		2,187	806		0	0		0	1,331		1,120	135		0	540		703
		72,602			40,885			74,919			64,665			28,561			54,709			26,755			6,864			12,458
Hanford	16,015		7,701	10,205		0	21,390		8,600	20,516		11,111	8,816		0	13,516		8,443	5,547		4,680	1,438		0	1,818		3,412
		80,916			51,090			87,709			74,070			37,377			59,782			27,622			8,302			10,864	
Fresno	25,261		23,740	24,368		0	31,865		31,609	21,103		31,490	20,205		0	12,227		28,027	4,506		11,374	2,773		0	151		8,738
		82,437			75,458			87,965			63,683			57,582			43,982			20,754			11,075			2,277
Madera	2,460		1,414	1,864		0	0		0	2,048		1,646	1,414		0	0		0	365		622	165		0	7		430
		83,483			77,322			87,965			64,085			58,996			43,982			20,497			11,240			1,854
Merced	8,661		8,205	7,080		0	11,114		10,409	5,704		7,683	5,089		0	3,310		6,919	674		3,022	528		0	0		1,854
		83,939			84,402			88,670			62,106			64,085			40,373			18,149			11,768			0
Denair	1,428		3,358	1,073		0	0		0	929		3,450	705		0	0		0	99		1,394	61		0	0		0
		82,009			85,475			88,670			59,585			64,790			40,373			16,854			11,829			0
Modesto	5,275		10,417	6,054		0	6,193		13,780	3,173		9,449	3,769		0	1,832		7,702	256		4,109	295		0	0		0
		76,867			91,529			81,083			53,309			68,559			34,503			13,001			12,124			0
Stockton-SJ	16,912		21,042	0		0	15,365		27,596	7,110		19,054	0		0	4,345		11,791	445		6,526	0		0	0		0
		72,737			91,529			68,852			41,365			68,559			27,057			6,920			12,124			0
Antioch-Pittsburg	1,510		8,349	0		0	0		0	592		6,317	0		0	0		0	35		1,162	0		0	0		0
		65,898			91,529			68,852			35,640			68,559			27,057			5,793			12,124			0
Martinez	5,608		20,498	0		0	3,510		20,903	1,440		13,108	0		0	744		9,248	228		1,849	0		0	0		0
		51,008			91,529			51,459			23,972			68,559			18,553			4,172			12,124			0
Richmond	45		10,746	0		0	32		10,639	18		5,663	0		0	5		3,991	3		625	0		0	0		0
		40,307			91,529			40,852			18,327			68,559			14,567			3,550			12,124			0
Emeryville	0		22,065	0		0	0		23,736	0		10,925	0		0	0		8,742	0		2,161	0		0	0		0
		18,242			91,529			17,116			7,402			68,559			5,825			1,389			12,124			0
Oakland	0		18,242	0		0	0		17,116	0		7,402	0		0	0		5,825	0		1,389	0		0	0		0
		0			91,529			0			0			68,559			0			0			12,124			0
Stockton-Downtown	0		0	2,743		14,655	0		0	0		0	1,358		14,371	0		0	0		0	74		3,867	0		0
		0			79,617			0			0			55,546			0			0			8,331			0
Lodi	0		0	1,572		2,786	0		0	0		0	698		2,608	0		0	0		0	36		631	0		0
		0			78,403			0			0			53,636			0			0			7,736			0
Sacramento	0		0	0		78,403	0		0	0		0	0		53,636	0		0	0		0	0		7,736	0		0
Max Load		**83,939**			**91,529**			**88,670**			**74,070**			**68,559**			**59,782**			**27,622**			**12,124**			**12,975**	
Total	**158,742**		**158,742**	**95,844**		**95,844**	**164,388**		**164,388**	**131,570**		**131,570**	**70,615**		**70,615**	**90,688**		**90,688**	**41,157**		**41,157**	**12,234**		**12,234**	**15,776**		**15,776**

2035 Typical Peak Day Ridership for San Joaquin Trains
Station ONs & OFFs by Trains
Proposed Future 90mph San Joaquin Schedule (based on timetable provided by Caltrans 5/31/11)
(forecasts prepared 6/21/11)

Southbound Trains

Station	2			4			6			8			10			12			14			16		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Sacramento	0		0	192		0	0		0	0		0	231		0	0		0	0		0	236		0
		0			192			0			0			231			0			0			236	
Lodi	0		0	8		3	0		0	0		0	9		3	0		0	0		0	9		3
		0			196			0			0			237			0			0			241	
Stockton-Downtown	0		0	46		6	0		0	0		0	46		6	0		0	0		0	45		6
		0			236			0			0			276			0			0			281	
Oakland	0		0	0		0	51		0	51		0	0		0	48		0	47		0	0		0
		0			236			51			51			276			48			47			281	
Emeryville	0		0	0		0	66		0	64		0	0		0	59		0	68		0	0		0
		0			236			117			115			276			107			114			281	
Richmond	0		0	0		0	31		0	28		0	0		0	25		0	27		0	0		0
		0			236			148			143			276			132			142			281	
Martinez	0		0	0		0	64		13	62		18	0		0	49		16	65		10	0		0
		0			236			199			188			276			165			196			281	
Antioch-Pittsburg	0		0	0		0	24		4	0		0	0		0	26		3	0		0	0		0
		0			236			219			188			276			188			196			281	
Stockton	0		0	0		0	87		46	64		34	0		0	55		34	80		33	0		0
		0			236			260			218			276			209			243			281	
Modesto	0		0	0		14	47		17	34		12	0		14	32		11	44		13	0		16
		0			222			290			239			262			230			274			265	
Denair	0		0	0		3	13		4	0		0	0		3	13		4	0		0	0		3
		0			220			299			239			259			239			274			262	
Merced	22		0	0		18	35		29	25		22	0		17	26		19	30		25	0		20
		22			202			305			242			242			247			278			242	
Madera	4		0	0		5	5		7	0		0	0		5	6		8	0		0	0		6
		26			197			302			242			237			245			278			237	
Fresno	104		6	0		64	104		92	96		75	0		70	80		68	95		82	0		77
		124			134			314			263			167			256			292			160	
Hanford	36		41	0		27	33		65	28		56	0		31	28		47	30		62	0		34
		119			106			282			235			136			238			259			126	
Corcoran	5		9	0		3	6		10	0		0	0		3	7		11	0		0	0		3
		116			104			278			235			133			234			259			122	
Wasco	6		3	0		3	5		6	0		0	0		3	6		7	0		0	0		3
		119			101			277			235			130			233			259			119	
Bakersfield	0		119	0		101	0		277	0		235	0		130	0		233	0		259	0		119
Max Load		**124**			**236**			**314**			**263**			**276**			**256**			**292**			**281**	
Total	**177**		**177**	**245**		**245**	**570**		**570**	**453**		**453**	**286**		**286**	**461**		**461**	**485**		**485**	**290**		**290**

Station	18			20			22			24			26			28			30			32			34		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Sacramento	0		0	221		0	0		0	0		0	192		0	0		0	0		0	62		0	0		0
		0			221			0			0			192			0			0			62			0	
Lodi	0		0	9		4	0		0	0		0	6		5	0		0	0		0	2		2	0		0
		0			225			0			0			193			0			0			62			0	
Stockton-Downtown	0		0	48		8	0		0	0		0	34		9	0		0	0		0	12		4	0		0
		0			266			0			0			218			0			0			70			0	
Oakland	0		0	0		0	57		0	51		0	0		0	42		0	48		0	0		0	25		0
		59			266			57			51			218			42			48			70			25	
Emeryville	0		0	0		0	76		0	66		0	0		0	50		0	54		0	0		0	28		0
		135			266			133			117			218			92			102			70			53	
Richmond	0		0	0		0	37		0	33		0	0		0	27		0	25		0	0		0	13		0
		167			266			170			150			218			119			127			70			66	
Martinez	0		18	0		0	73		15	62		13	0		0	45		15	39		18	0		0	20		9
		214			266			228			199			218			149			148			70			77	
Antioch-Pittsburg	0		3	0		0	28		4	0		0	0		0	25		6	0		0	0		0	8		2
		236			266			252			199			218			168			148			70			83	
Stockton	0		42	0		0	88		57	70		51	0		0	38		47	31		45	0		0	21		26
		267			266			283			218			218			159			134			70			77	
Modesto	45		16	0		18	44		21	32		19	0		20	16		15	14		14	0		7	7		7
		296			248			306			231			197			159			134			63			77	
Denair	13		4	0		3	13		5	0		0	0		4	6		5	0		0	0		1	2		2
		306			244			314			231			194			161			134			62			77	
Merced	37		29	0		22	36		36	22		31	0		23	10		25	9		23	0		8	3		12
		314			222			313			222			171			146			120			54			68	
Madera	6		8	0		6	5		10	0		0	0		6	2		8	0		0	0		2	0		3
		312			216			309			222			165			139			120			52			65	
Fresno	137		98	0		84	125		121	62		99	0		74	27		66	30		53	0		25	5		32
		351			132			313			185			91			100			97			27			38	
Hanford	53		81	0		34	37		94	13		61	0		27	9		32	6		28	0		8	1		10
		323			98			256			137			64			78			75			19			30	
Corcoran	10		15	0		3	6		15	0		0	0		2	2		7	0		0	0		1	0		1
		317			95			247			137			61			73			75			18			29	
Wasco	11		8	0		3	5		7	0		0	0		2	2		4	0		0	0		0	0		1
		321			92			245			137			59			71			75			18			28	
Bakersfield	0		321	0		92	0		245	0		137	0		59	0		71	0		75	0		18	0		28
Max Load		**351**			**266**			**314**			**231**			**218**			**168**			**148**			**70**			**83**
Total	**642**		**642**	**277**		**277**	**630**		**630**	**410**		**410**	**232**		**232**	**301**		**301**	**255**		**255**	**76**		**76**	**133**		**133**

Northbound Trains

Station	1			3			5			7			9			11			13			15		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Bakersfield	29		0	13		0	85		0	170		0	67		0	238		0	242		0	132		0
		29			13			85			170			67			238			242			132	
Wasco	1		1	0		0	0		0	7		6	2		0	0		0	7		5	4		0
		30			14			85			171			69			238			244			136	
Corcoran	3		1	1		0	0		0	14		5	2		0	0		0	12		6	4		0
		32			14			85			180			71			238			250			140	
Hanford	17		4	9		0	56		8	61		26	24		0	65		27	66		27	40		0
		46			23			132			214			95			276			289			180	
Fresno	39		13	27		0	88		51	91		75	58		0	90		92	107		84	94		0
		71			50			170			231			153			274			312			274	
Madera	5		1	2		0	0		0	10		4	4		0	0		0	10		5	7		0
		75			52			170			236			158			274			316			280	
Merced	19		5	10		0	27		18	31		23	16		0	28		27	31		27	23		0
		89			63			180			243			174			276			321			303	
Denair	3		3	2		0	0		0	5		11	2		0	0		0	5		11	3		0
		89			64			180			238			177			276			315			307	
Modesto	14		7	10		0	15		21	17		29	13		0	16		36	18		34	19		0
		96			75			173			226			190			256			299			325	
Stockton-SJ	48		24	0		0	43		45	47		58	0		0	46		68	60		71	0		0
		120			75			171			215			190			234			287			325	
Antioch-Pittsburg	4		14	0		0	0		0	4		26	0		0	0		0	5		31	0		0
		110			75			171			193			190			234			261			325	
Martinez	9		30	0		0	11		49	11		56	0		0	13		71	17		79	0		0
		89			75			133			148			190			176			199			325	
Richmond	0		21	0		0	0		29	0		31	0		0	0		34	0		41	0		0
		69			75			104			118			190			142			159			325	
Emeryville	0		37	0		0	0		60	0		68	0		0	0		83	0		91	0		0
		32			75			44			49			190			59			67			325	
Oakland	0		32	0		0	0		44	0		49	0		0	0		59	0		67	0		0
		0			75			0			0			190			0			0			325	
Stockton-Downtown	0		0	5		12	0		0	0		0	5		30	0		0	0		0	8		48
		0			68			0			0			165			0			0			285	
Lodi	0		0	3		2	0		0	0		0	3		6	0		0	0		0	5		10
		0			69			0			0			162			0			0			281	
Sacramento	0		0	0		69	0		0	0		0	0		162	0		0	0		0	0		281
Max Load		**120**			**75**			**180**			**243**			**190**			**276**			**321**			**325**	
Total	**192**		**192**	**83**		**83**	**324**		**324**	**466**		**466**	**198**		**198**	**497**		**497**	**578**		**578**	**338**		**338**

Station	17			19			21			23			25			27			29			31			33		
	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off	On	Aboard	Off
Bakersfield	269		0	148		0	285		0	237		0	102		0	208		0	103		0	25		0	49		0
		269			148			285			237			102			208			103			25			49	
Wasco	7		5	4		0	0		0	8		8	3		0	0		0	2		4	1		0	1		2
		271			152			285			237			105			208			101			26			48	
Corcoran	11		6	4		0	0		0	17		8	3		0	0		0	5		4	1		0	2		3
		276			155			285			246			109			208			102			26			47	
Hanford	61		29	39		0	81		33	78		42	34		0	51		32	21		18	5		0	7		13
		307			194			333			281			142			227			105			32			41	
Fresno	96		90	93		0	121		120	80		120	77		0	46		107	17		43	11		0	1		33
		313			287			334			242			219			167			79			42			9	
Madera	9		5	7		0	0		0	8		6	5		0	0		0	1		2	1		0	0		2
		317			294			334			244			224			167			78			43			7	
Merced	33		31	27		0	42		40	22		29	19		0	13		26	3		11	2		0	0		7
		319			321			337			236			244			153			69			45			0	
Denair	5		13	4		0	0		0	4		13	3		0	0		0	0		5	0		0	0		0
		312			325			337			226			246			153			64			45			0	
Modesto	20		40	23		0	24		52	12		36	14		0	7		29	1		16	1		0	0		0
		292			348			308			203			261			131			49			46			0	
Stockton-SJ	64		80	0		0	58		105	27		72	0		0	17		45	2		25	0		0	0		0
		276			348			262			157			261			103			26			46			0	
Antioch-Pittsburg	6		32	0		0	0		0	2		24	0		0	0		0	0		4	0		0	0		0
		250			348			262			135			261			103			22			46			0	
Martinez	21		78	0		0	13		79	5		50	0		0	3		35	1		7	0		0	0		0
		194			348			196			91			261			71			16			46			0	
Richmond	0		41	0		0	0		40	0		22	0		0	0		15	0		2	0		0	0		0
		153			348			155			70			261			55			13			46			0	
Emeryville	0		84	0		0	0		90	0		42	0		0	0		33	0		8	0		0	0		0
		69			348			65			28			261			22			5			46			0	
Oakland	0		69	0		0	0		65	0		28	0		0	0		22	0		5	0		0	0		0
		0			348			0			0			261			0			0			46			0	
Stockton-Downtown	0		0	10		56	0		0	0		0	5		55	0		0	0		0	0		15	0		0
		0			303			0			0			211			0			0			32			0	
Lodi	0		0	6		11	0		0	0		0	3		10	0		0	0		0	0		2	0		0
		0			298			0			0			204			0			0			29			0	
Sacramento	0		0	0		298	0		0	0		0	0		204	0		0	0		0	0		29	0		0
Max Load		**319**			**348**			**337**			**281**			**261**			**227**			**105**			**46**			**49**	
Total	**603**		**603**	**364**		**364**	**625**		**625**	**500**		**500**	**268**		**268**	**345**		**345**	**156**		**156**	**46**		**46**	**60**		**60**

APPENDIX 3

BNSF Report *San Joaquin Valley Capacity Analysis, Summary of RTC Simulations*

BNSF Railway

Line Capacity Planning: San Joaquin Double Track projects

San Joaquin Valley Capacity Analysis

Summary of RTC Simulations

Amtrak/BNSF/Caltrans Meeting – San Bernardino CA
October 20, 2010

BNSF Railway

Line Capacity Planning: San Joaquin Double Track projects

San Joaquin Valley Capacity Analysis

October 8, 2010

Summary of RTC Simulations

Modeling completed by
Willard Keeney

Summary prepared by
Gary Agnew

Section Headline

Presenter's Name

Line Capacity Planning: San Joaquin DT projects

- **The State of California approached BNSF in March 2010 about potential changes to the San Joaquin passenger train services. There is no funding available at this time to add more train services, but the State wanted to identify future capacity needs in order to prepare for required environmental, permitting, and engineering design work.**
- **Current San Joaquin passenger train plan:**
  - 6 trains per day each way on the Bakersfield – Stockton segment (total of 12 trains).
  - 4 trains per day each way on the Stockton – Port Chicago segment (total of 8 trains).
- **Four different schedule proposals were analyzed:**
  - 8 trains per day each way on the full Bakersfield – Port Chicago segment (total of 16 trains) with the passenger trains operating at a maximum speed of 79 mph (the 5/10 year 79 mph plan).
  - 11 trains per day each way on the full Bakersfield – Port Chicago segment (total of 22 trains) with the passenger trains operating at a maximum speed of 79 mph (the 25 year 79 mph plan).
  - 8 trains per day each way on the full Bakersfield – Port Chicago segment (total of 16 trains) with the passenger trains operating at a maximum speed of 90 mph (the 5/10 year 90 mph plan).
  - 11 trains per day each way on the full Bakersfield – Port Chicago segment (total of 22 trains) with the passenger trains operating at a maximum speed of 90 mph (the 25 year 90 mph plan).
  - Each of the 5/10 cases reflects a scenario where 1 passenger train pair is an "express" schedule, with intermediate stops at Stockton, Modesto, Merced, Fresno, and Hanford only. The other 5/10 cases reflect all trains stopping at all stations.
  - ***In the 5/10 cases the freight counts were increased by 14 trains per week (2 intermodal Z1-7, 10 intermodal Q/S and 2 unit). The freight counts were then kept at those levels for the 25 year cases (in order to identify just the scope of projects needed for the changed passenger services beyond the 5/10 year plan).***

BNSF RAILWAY

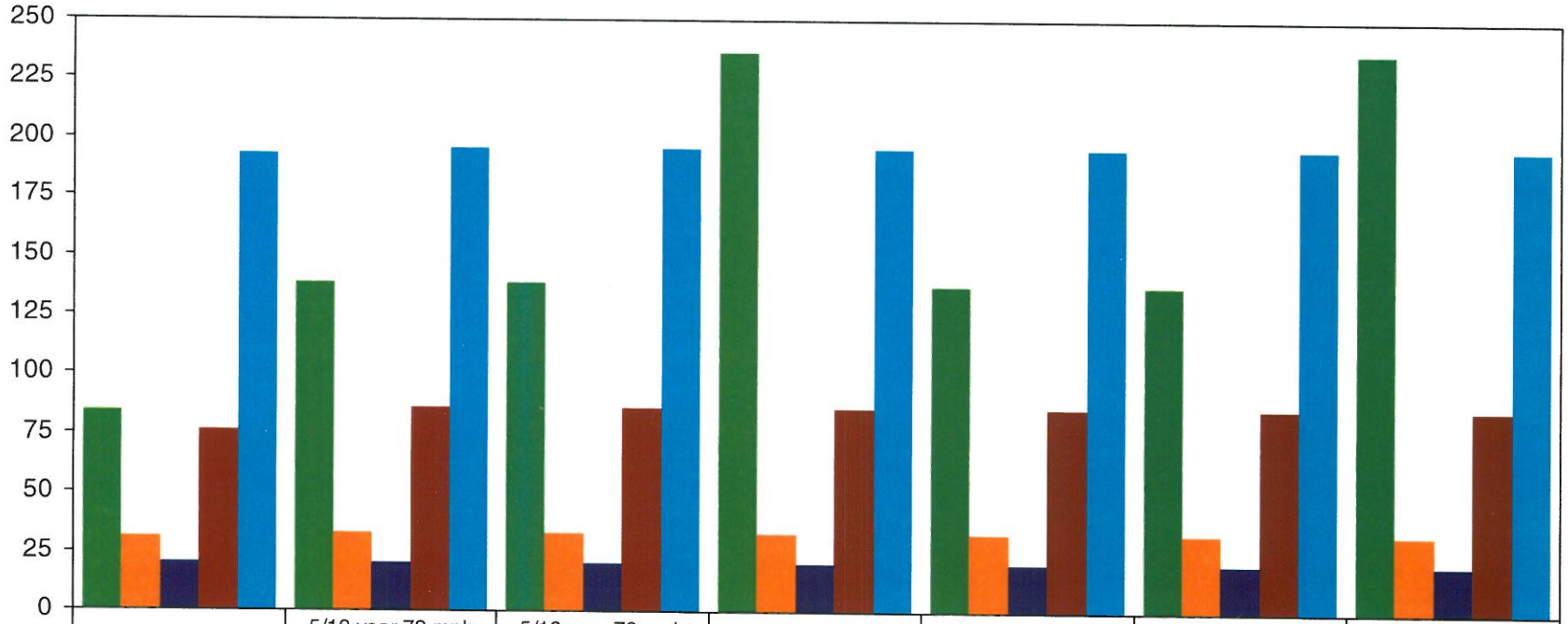
Line Capacity Planning: San Joaquin DT projects

- **The following 5 projects were assumed to be part of the "base case":**
  - Double track Guernsey - Hanford, with crossovers in between. Retains Shirley siding (6 miles).
  - Convert Gregg siding to double track segment milepost 1008.9 to 1013.9 (5 miles).
  - Double track LeGrand to Planada with crossovers in between (9 miles).
  - Double track milepost 1107.0 to Walnut with associated crossover and power turnout work (9 miles).
  - Convert Pittsburg siding to double track and extend east to milepost 1152.7 (5 miles).
- **With regard to the above listed projects:**
  - Grading is complete for 4 miles of new double track in the Guernsey - Hanford segment. This 4 mile segment is expected to be completed by January 2011.
  - Funding is in place for the design work for the Gregg siding project.
  - Funding is in place for the design work for the LeGrand - Planada project.

BNSF RAILWAY

Line Capacity Planning: San Joaquin DT projects

RTC results: Measured trains per week

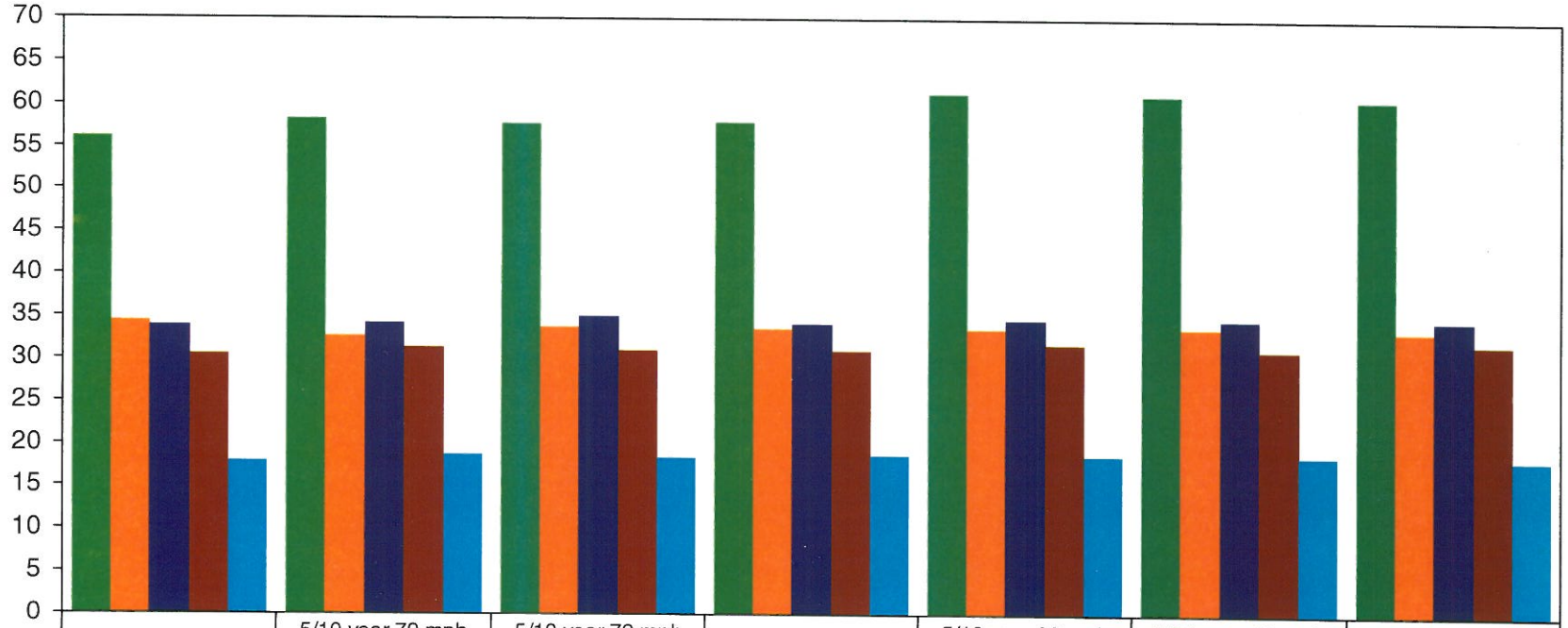


	Base case	5/10 year 79 mph plan (1 express schedule)	5/10 year 79 mph plan (no express schedules)	25 year 79 mph plan	5/10 year 90 mph plan (1 express schedule)	5/10 year 90 mph plan (no express schedules)	25 year 90 mph plan
Passenger	84	138	138	236	137	137	236
Z1-7	31	33	33	33	33	33	33
Z8-9	20	20	20	20	20	20	20
Other lmdl	76	86	86	86	86	86	86
Other freight	193	195	195	195	195	195	195

BNSF RAILWAY

Line Capacity Planning: San Joaquin DT projects

RTC results: Average speed (mph)

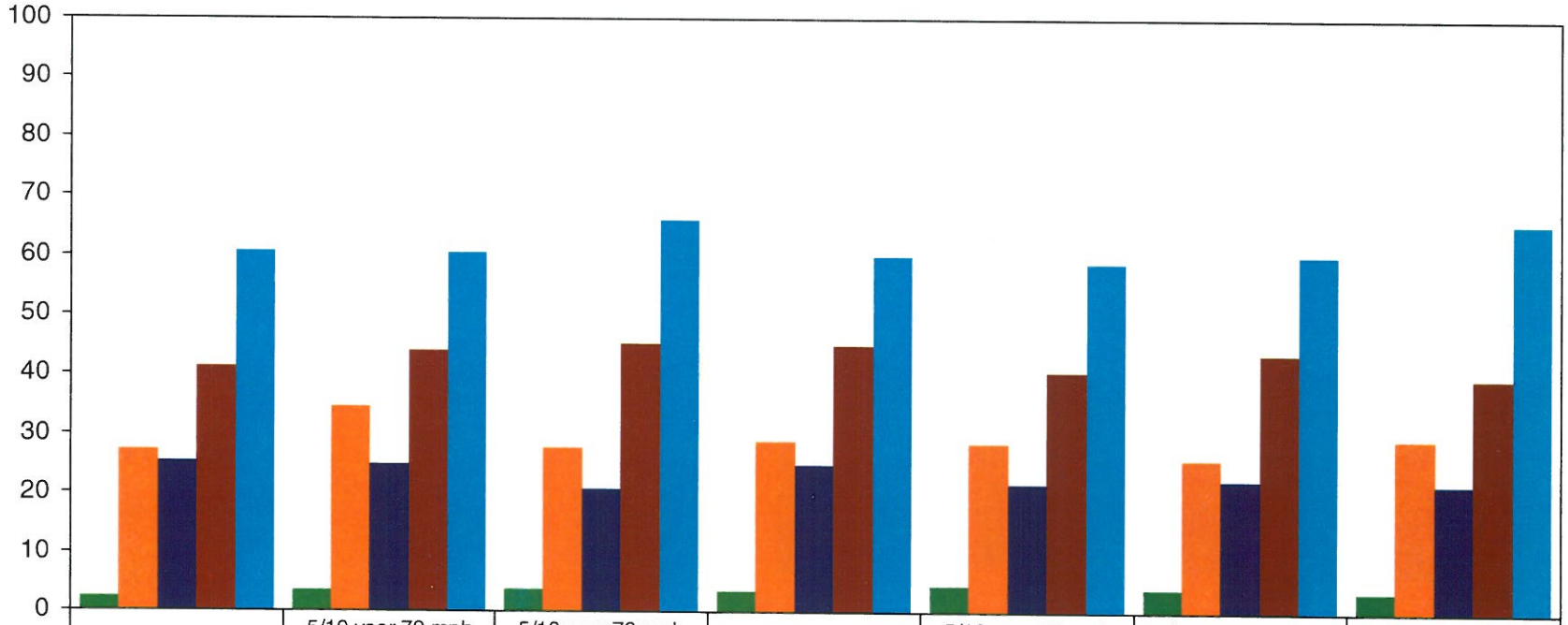


	Base case	5/10 year 79 mph plan (1 express schedule)	5/10 year 79 mph plan (no express schedules)	25 year 79 mph plan	5/10 year 90 mph plan (1 express schedule)	5/10 year 90 mph plan (no express schedules)	25 year 90 mph plan
Passenger	56.1	58.2	57.7	57.8	61.2	61.1	60.6
Z1-7	34.3	32.5	33.7	33.6	33.5	33.7	33.4
Z8-9	33.8	34.2	35.0	34.2	34.7	34.6	34.6
Other lmdl	30.4	31.2	31.0	31.0	31.7	31.1	31.9
Other freight	17.9	18.6	18.3	18.7	18.7	18.7	18.3

BNSF RAILWAY

Line Capacity Planning: San Joaquin DT projects

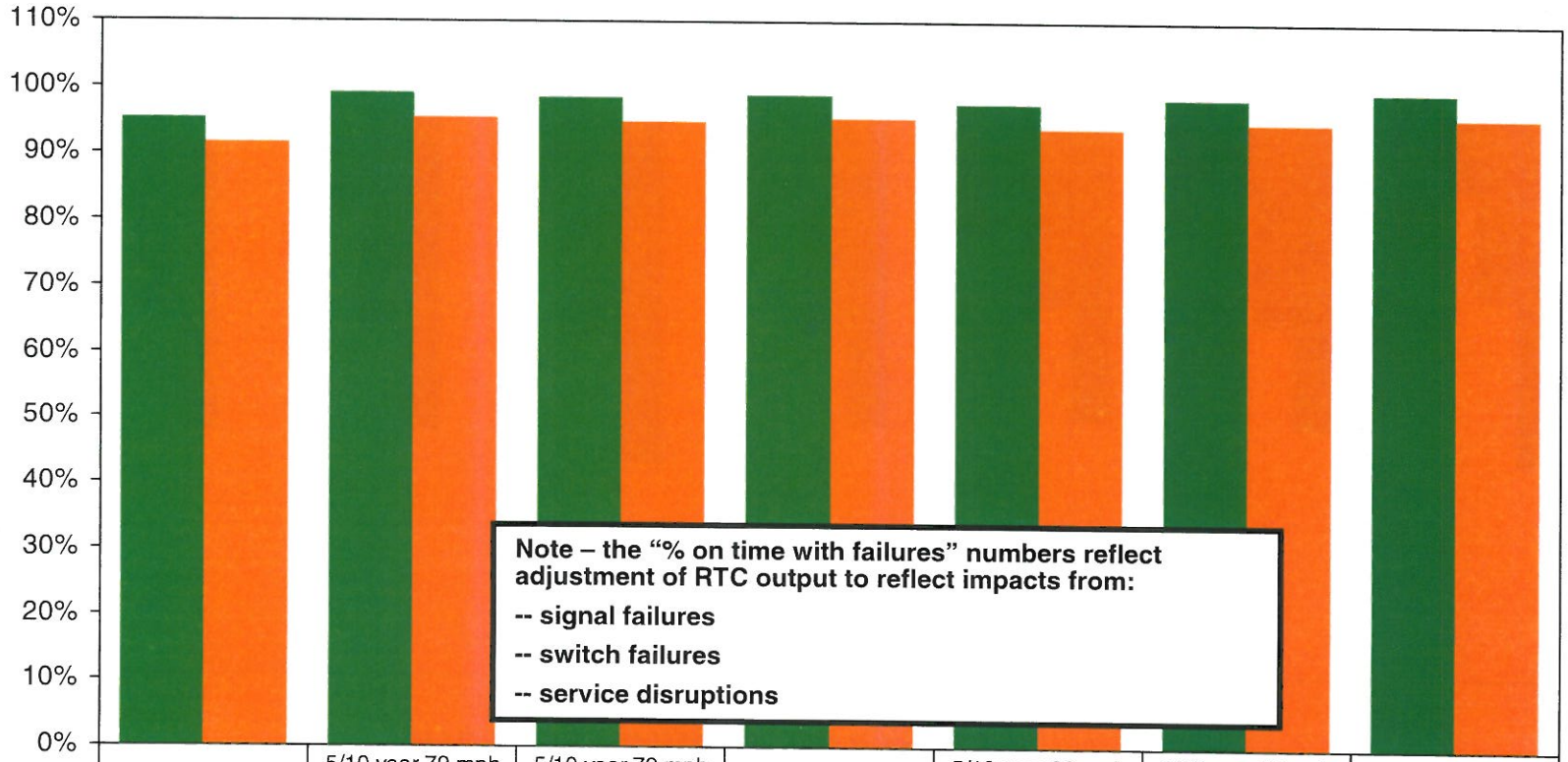
RTC results: delay per 100 train miles



	Base case	5/10 year 79 mph plan (1 express schedule)	5/10 year 79 mph plan (no express schedules)	25 year 79 mph plan	5/10 year 90 mph plan (1 express schedule)	5/10 year 90 mph plan (no express schedules)	25 year 90 mph plan
Passenger	2.23	3.51	3.77	3.57	4.29	3.82	3.50
Z1-7	27.11	34.55	27.69	28.72	28.55	25.89	29.22
Z8-9	25.28	24.79	20.81	24.81	21.72	22.36	21.74
Other lmdl	41.18	44.07	45.07	44.83	40.44	43.47	39.52
Other freight	60.50	60.38	65.94	60.00	58.66	60.08	65.51

BNSF RAILWAY

Line Capacity Planning: San Joaquin DT projects



	Base case	5/10 year 79 mph plan (1 express schedule)	5/10 year 79 mph plan (no express schedules)	25 year 79 mph plan	5/10 year 90 mph plan (1 express schedule)	5/10 year 90 mph plan (no express schedules)	25 year 90 mph plan
% on time - no failures	95.2%	99.2%	98.4%	99.0%	97.6%	98.4%	99.5%
% on time with failures	91.5%	95.5%	94.7%	95.3%	93.9%	94.7%	95.8%

BNSF RAILWAY

Line Capacity Planning: San Joaquin DT projects

"xxx" indicates those areas where freight performance metric degrades from base case

Type	Metric	5/10 year 79 mph express	5/10 year 79 mph No express	25 year 79 mph	5/10 year 90 mph express	5/10 year 90 mph no express	25 year 90 mph
Z1-7	Speed	xxx	xxx	xxx	xxx	xxx	xxx
Z1-7	Delay / 100	xxx	xxx	xxx	xxx		xxx
Z8-9	Speed						
Z8-9	Delay / 100						
Other Intermodal	Speed						
Other Intermodal	Delay / 100	xxx	xxx	xxx		xxx	
Other Freight	Speed						
Other Freight	Delay / 100		xxx				xxx

BNSF RAILWAY

Line Capacity Planning: San Joaquin DT projects

- **Notes for those areas where freight performance metrics degrade:**
  - **Z1-Z7** train speeds degrade under all scenarios. The base case speed is 34.3 mph. The lowest the Z1-Z7 speed gets in any of the scenarios is 32.5 mph.
  - **Z1-Z7** train delay per 100 train miles degrades under all but one of the scenarios. The base case delay per 100 train miles is 27.11 minutes. The highest the Z1-Z7 delay per 100 train mile gets is 34.55 minutes (in the 5/10 year 79 mph plan with the express schedule), for a variance of 7.44 minutes. On a 225 mile run between Mariposa and Bakersfield, that represents about 17 minutes of additional delay per train. The other scenarios with degraded metrics have variances ranging from 0.58 to 2.11 minutes per 100 train miles. On the 225 mile run, that equates to 1 to 5 minutes of additional delay per train.
  - **Other intermodal** train delay per 100 train miles degrades under all but two of the scenarios. The base case delay per 100 train miles is 41.18 minutes. The highest the other intermodal delay per 100 train mile gets is 45.07 minutes (in the 5/10 year 79 mph plan with no express schedules), for a variance of 3.89 minutes. On a 225 mile run, that represents about 9 minutes of additional delay per train. The other scenarios with degraded metrics have variances ranging from 2.29 to 3.65 minutes per 100 train miles. That equates to 5 to 8 minutes of additional delay per train.
  - **Other freight** train delay per 100 train miles degrades in only two of the scenarios. The base case delay per 100 train miles is 60.50 minutes. The highest the other intermodal delay per 100 train mile gets is 65.94 minutes (in the 5/10 year 79 mph plan with no express schedules), for a variance of 5.44 minutes. On a 235 mile run between Stockton and Bakersfield, that represents about 13 minutes of additional delay per train. The other scenario with degraded metrics has variance from base case very similar, at 5.01 minutes per 100 train miles. That equates to 12 minutes of additional delay per train.

Line Capacity Planning: San Joaquin DT projects

- **The following projects were modeled for the 5/10 year 79 mph plans:**
  - **Double track Guernsey - Hanford, with crossovers in between. Retains Shirley siding (6 miles).**
  - **Convert Gregg siding to double track segment milepost 1008.9 to 1013.9 (5 miles).**
  - **Double track LeGrand to Planada with crossovers in between (9 miles).**
  - **Double track milepost 1107.0 to Walnut with associated crossover and power turnout work (9 miles).**
  - **Convert Pittsburg siding to double track and extend east to milepost 1152.7 (5 miles).**
  - **Conejo drill track.**

Line Capacity Planning: San Joaquin DT projects

- **The following projects were modeled for the 25 year 79 mph plan:**
  - Double track Guernsey - Hanford, with crossovers in between. Retains Shirley siding (6 miles).
  - Convert Gregg siding to double track segment milepost 1008.9 to 1013.9 (5 miles).
  - Double track LeGrand to Planada with crossovers in between (9 miles).
  - Double track milepost 1107.0 to Walnut with associated crossover and power turnout work (9 miles).
  - Convert Pittsburg siding to double track and extend east to milepost 1152.7 (5 miles).
  - Conejo drill track.
  - Double track Jastro – Shafter. Retains Una siding (13 miles).
  - Double track Angiola – Corcoran. Retains Corcoran siding (12 miles).
  - Double track Figarden to milepost 1008.6 (5 miles).
  - Double track milepost 1013.9 – Madera. Retains Madera siding (6 miles).
  - Double track Planada to Merced (8 miles).
  - Double track Escalon – Duffy (9 miles).
  - Double track Pittsburg – Port Chicago (8 miles).
- **Although not initially modeled, BNSF recommends that the following be addressed from an environmental and permitting standpoint:**
  - In addition to the Jastro – Shafter double track, extend double track out to Wasco (7 miles).
  - In addition to the Gregg and Figarden double track projects, extend double track Figarden to Fresno, and double track milepost 1008.6 to 1008.9, requiring new bridge across San Joaquin river (6 miles).
  - Extend double track west from milepost 1090.8 to Riverbank (5 miles).

Line Capacity Planning: San Joaquin DT projects

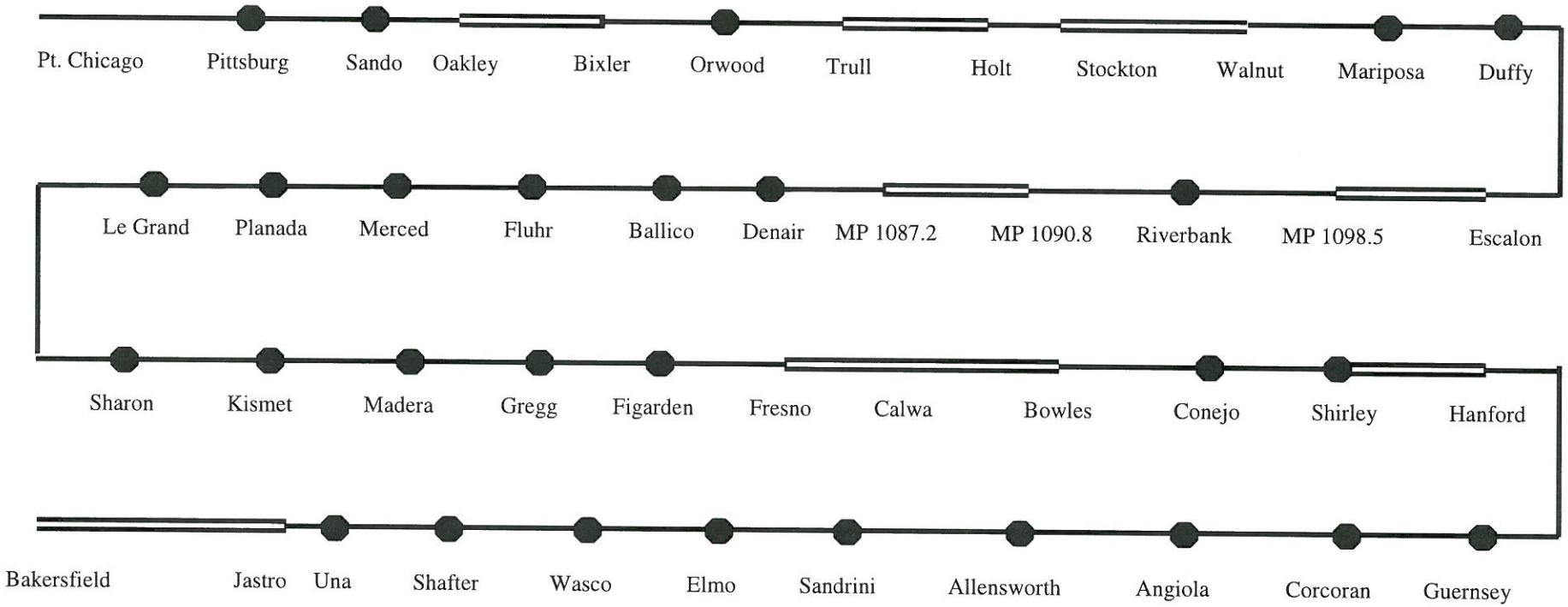
- **The following projects were modeled for the 5/10 year 90 mph plan:**
  - Double track Guernsey - Hanford, with crossovers in between. Retains Shirley siding (6 miles).
  - Convert Gregg siding to double track segment milepost 1008.9 to 1013.9 (5 miles).
  - Double track LeGrand to Planada with crossovers in between (9 miles).
  - Double track milepost 1107.0 to Walnut with associated crossover and power turnout work (9 miles).
  - Convert Pittsburg siding to double track and extend east to milepost 1152.7 (5 miles).
  - Conejo drill track.
  - Double track Jastro – Una. Retains Una siding (13 miles).
  - Double track Planada to Merced (8 miles).
  - Double track Escalon – Duffy (9 miles) .

Line Capacity Planning: San Joaquin DT projects

- **The following projects were modeled for the 25 year 90 mph plan:**
  - Double track Guernsey - Hanford, with crossovers in between. Retains Shirley siding (6 miles).
  - Convert Gregg siding to double track segment milepost 1008.9 to 1013.9 (5 miles).
  - Double track LeGrand to Planada with crossovers in between (9 miles).
  - Double track milepost 1107.0 to Walnut with associated crossover and power turnout work (9 miles).
  - Convert Pittsburg siding to double track and extend east to milepost 1152.7 (5 miles).
  - Conejo drill track.
  - Double track Jastro – Una. Retains Una siding (13 miles).
  - Double track Planada to Merced (8 miles).
  - Double track Escalon – Duffy (9 miles).
  - Double track Una – Shafter (8 miles).
  - Wasco siding extended.
  - Double track Elmo – Sandrini (8 miles).
  - Double track Allensworth - Angiola – Corcoran. Retains Corcoran siding (22 miles).
  - Double track Figarden to milepost 1008.6 (5 miles).
  - Double track milepost 1013.9 – Madera. Retains Madera siding (6 miles).
  - Double track Fluhr – Ballico (11 miles).
  - Double track Pittsburg – Port Chicago (8 miles).
- **Although not initially modeled, BNSF recommends that the following be addressed from an environmental and permitting standpoint:**
  - In addition to the Jastro – Shafter double track, extend double track out to Wasco instead of the Wasco siding (7 miles).
  - In addition to the Gregg and Figarden double track projects, extend double track Figarden to Fresno, and double track milepost 1008.6 to 1008.9, requiring new bridge across San Joaquin river (6 miles).
  - Extend double track west from milepost 1090.8 to Riverbank (5 miles).

BNSF RAILWAY

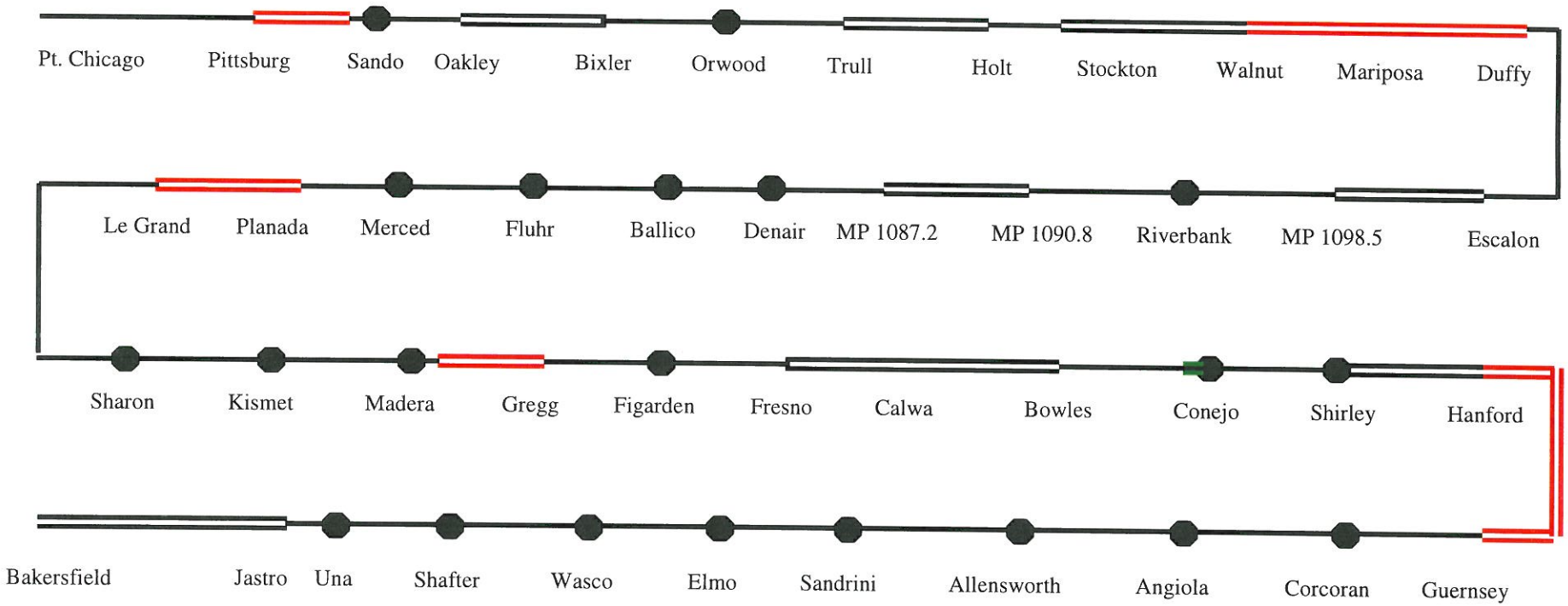
Line Capacity Planning: San Joaquin DT projects



= sidings
= double track
= single track

Current Track structure

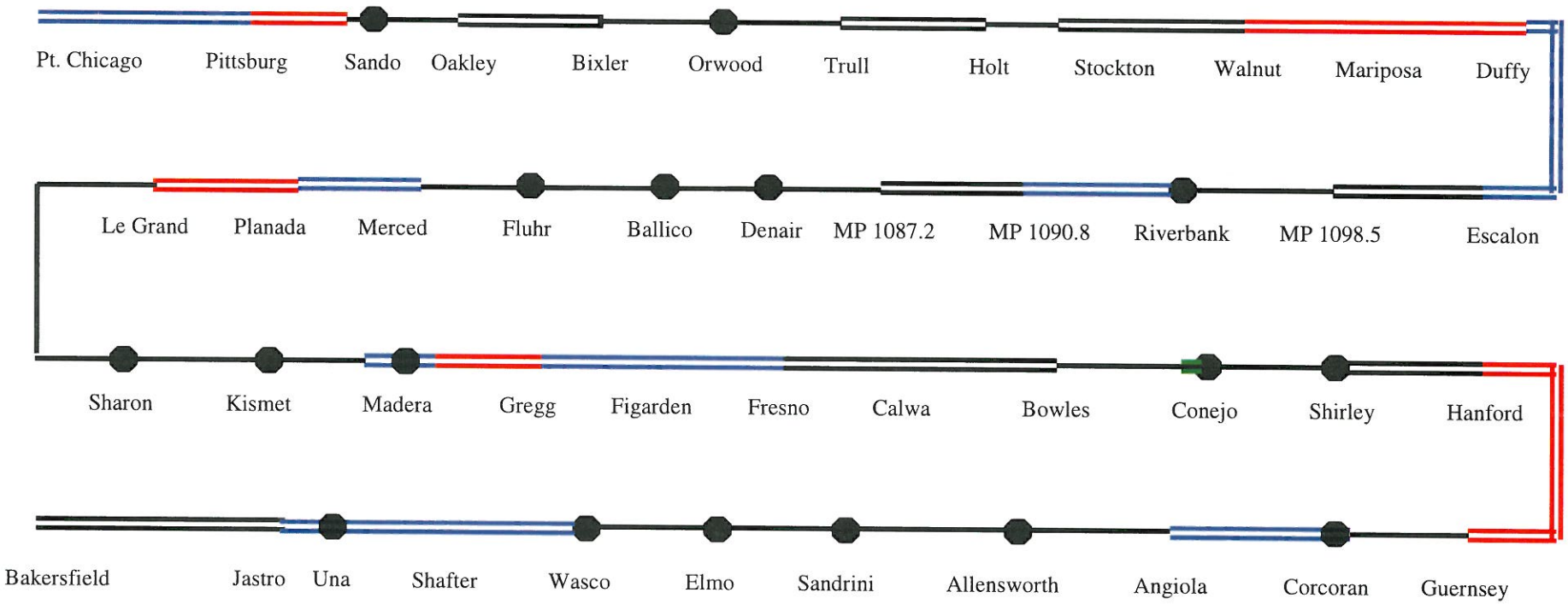
Line Capacity Planning: San Joaquin DT projects



= sidings
= double track
= single track
= put in to base case
= added double track (5/10 year @ 79 mph)

Potential track additions to support 5 / 10 year passenger case (79 mph trains)

Line Capacity Planning: San Joaquin DT projects



= sidings
= double track
= single track
= put in to base case
= added double track (5/10 year @ 79 mph)
= added double track (25 year @ 79 mph)

Potential track additions to support 25 year passenger case (79 mph trains)

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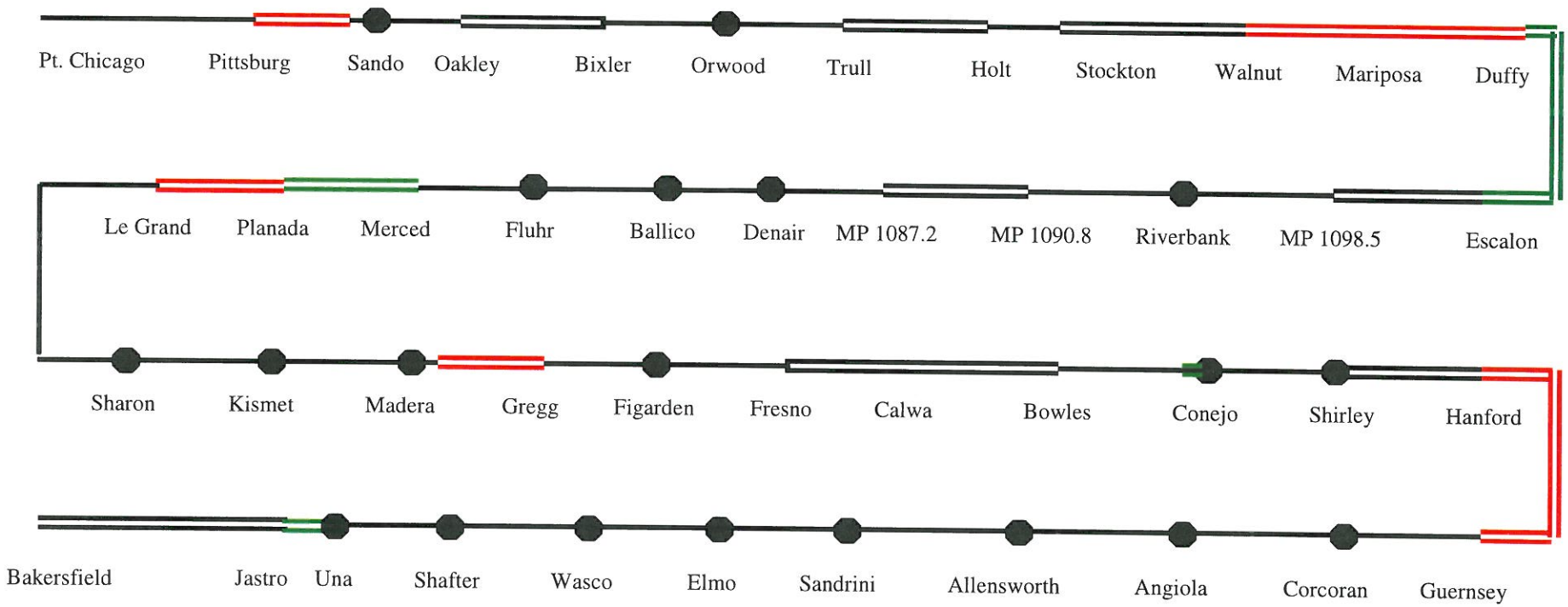
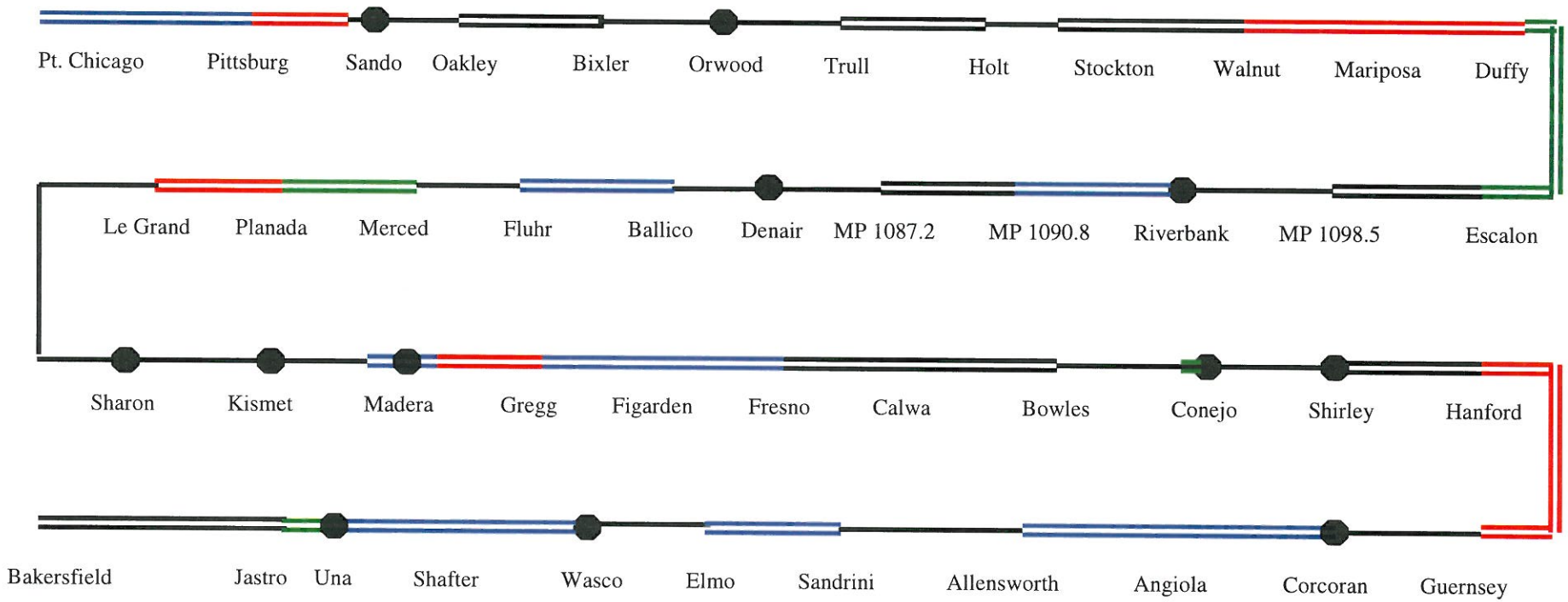
Line Capacity Planning: San Joaquin DT projects



= sidings
= double track
= single track
= put in to base case
= added double track (5/10 year @ 90 mph)

Potential track additions to support 5 / 10 year passenger case (90 mph trains)

Line Capacity Planning: San Joaquin DT projects

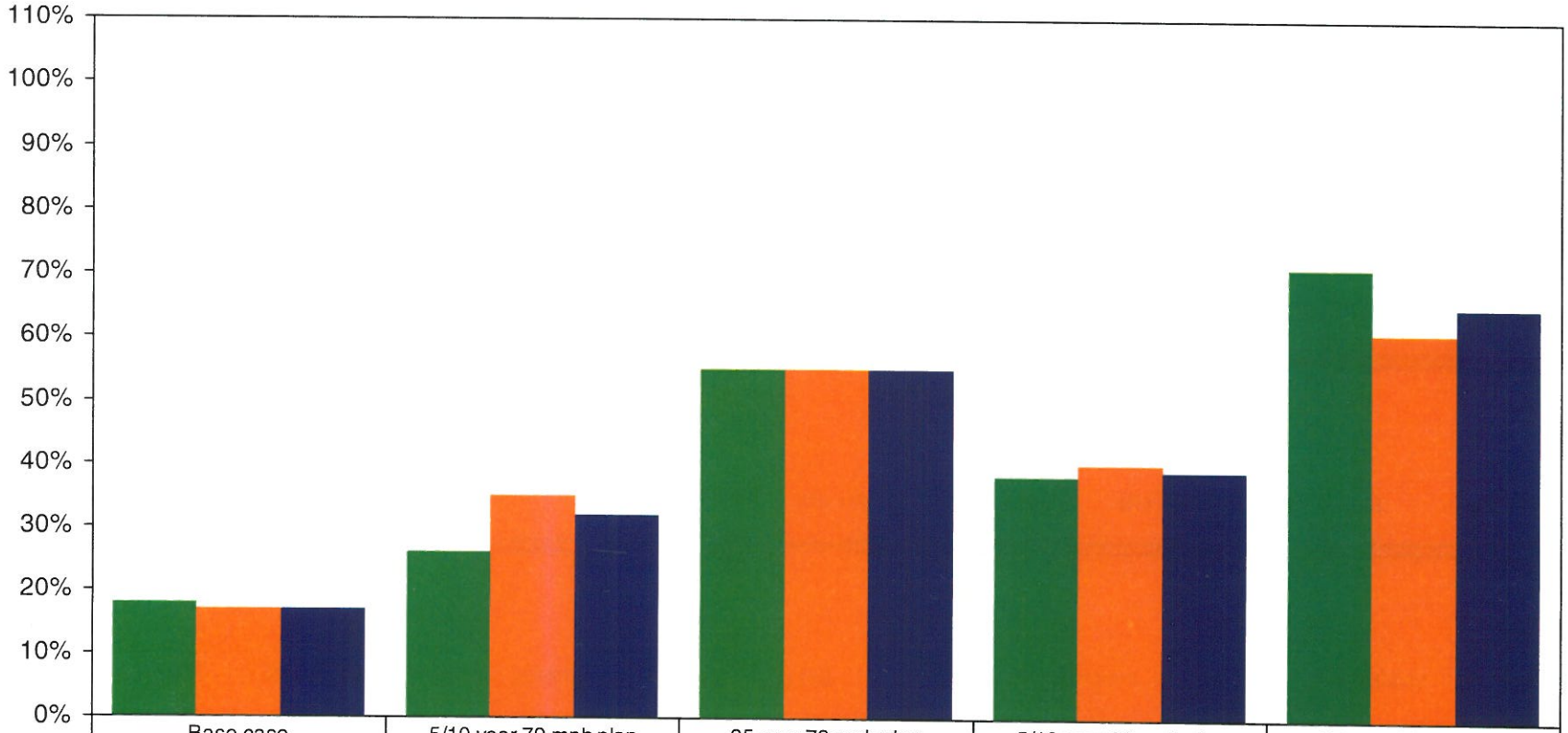


= sidings
= double track
= single track
= put in to base case
= added double track (5/10 year @ 90 mph)
= added double track (25 year @ 90 mph)

Potential track additions to support 25 year passenger case (90 mph trains)

Line Capacity Planning: San Joaquin DT projects

Percent of double track mileage Bakersfield - Port Chicago



	Base case	5/10 year 79 mph plan	25 year 79 mph plan	5/10 year 90 mph plan	25 year 90 mph plan
Bakersfield	18%	26%	55%	38%	71%
Stockton	17%	35%	55%	40%	61%
Combined	17%	32%	55%	39%	65%

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APPENDIX 4

UP Letter, *San Joaquin Service Bakersfield – Oakland*

Jerry Wilmoth
General Manager Network Infrastructure

March 4, 2010

William D. Bronte
Chief - Division of Rail
State of California - Department of Transportation
1120 N Street
P. O. Box 942874-MS 74
Sacramento, California 94274-0001

Re: San Joaquin Service Bakersfield – Oakland

Dear Mr. Bronte:

Union Pacific is pleased to provide the following guidance in relation to current discussions about added San Joaquin passenger service frequency between Port Chicago and Oakland.

As you know, the Martinez Sub is one of the most constrained route segments on Union Pacific's transcontinental rail system. It handles a dense network of high performance, service-sensitive passenger trains as well as acting as a key freight link connecting the nation with vital Bay Area ports, industries and distribution facilities. While an ultimate decision on added passenger trains will require in-depth analysis, modeling and Engineering evaluation, we see a definite need for the following in any scenario which adds to the net number of passenger trains on this route:

a) Double track required between Port Chicago and Martinez
b) Full triple track required between Martinez and Oakland with universal crossovers every 6-8 miles
c) Upgraded station design allowing unimpeded flow of trains on all tracks at track speed while passenger trains load and unload at stations (including any necessary retrofit for existing station locations). This typically involves grade separated platform access and passenger barriers to restrict access to active mainlines.

In addition to the above, depending on the portion of the route in question, there may be a need to provide auxiliary running tracks or switching leads to enable fluid mainline operation while providing industry switching and yard classification services for current and prospective local businesses. Furthermore, it is recognized that rail and tie renewals for the line may be required as well in order to provide the robust track structure needed for increased service levels service levels.

Also, as a prerequisite to future discussions, Union Pacific respectfully request that the parties initiate discussions regarding Article 4 (C) of Contract 75Y200 to develop a formula to determine the appropriate reimbursement for Union Pacific's maintenance and operating expense for the Auburn-Sacramento-San Jose corridor.

We look forward to our upcoming March 10 meeting to discuss these matters further with Caltrans.

Sincerely,

Jerry S. Wilmoth
General Manager – Network Infrastructure

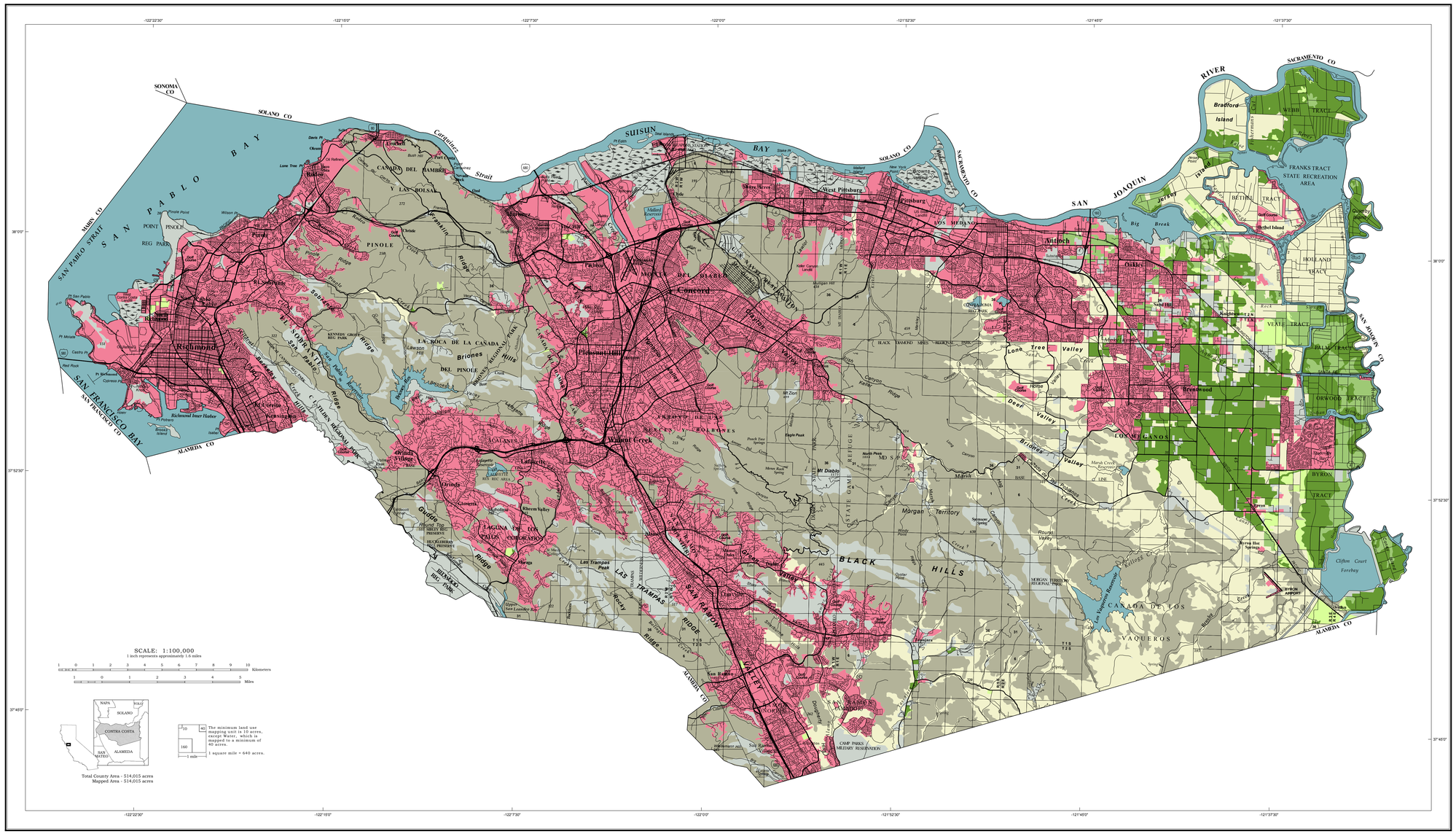
APPENDIX A

WILLIAMSON ACT MAPS
(Farmland Maps)

STATE OF CALIFORNIA
Arnold Schwarzenegger, *Governor*
THE NATURAL RESOURCES AGENCY
Mike Chrisman, *Secretary*
DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

CONTRA COSTA COUNTY IMPORTANT FARMLAND 2008

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
FARMLAND MAPPING AND MONITORING PROGRAM



SCALE: 1:100,000
1 inch represents approximately 1.6 miles

1 0 1 2 3 4 5 6 7 8 9 10 Kilometers
1 0 1 2 3 4 5 Miles

Total County Area - 514,015 acres
Mapped Area - 514,015 acres

10 acres — The minimum land use mapping unit is 10 acres, except Water, which is mapped to a minimum of 40 acres.

160 acres — 1 square mile = 640 acres.

PRIME FARMLAND - 26,788 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 7,555 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 3,123 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF LOCAL IMPORTANCE - 53,449 acres

THE LANDS WITHIN THE TASSAJARA AREA, EXTENDING EASTWARD TO THE COUNTY BOUNDARY AND BORDERED ON THE NORTH BY THE BLACK HILLS, THE DEER, LONE TREE AND BRIONES VALLEYS, THE ANTIOCH AREA, AND THE DELTA. THESE LANDS ARE TYPICALLY USED FOR LIVESTOCK GRAZING. THEY ARE CAPABLE OF PRODUCING DRYLAND GRAIN ON A TWO YEAR SUMMER FALLOW OR LONGER ROTATION WITH VOLUNTEER HAY AND PASTURE. THE FARMLANDS IN THIS CATEGORY ARE INCLUDED IN THE U.S. NATURAL RESOURCES CONSERVATION SERVICE'S LAND CAPABILITY CLASSES I, II, III, AND IV, AND LACK SOME IRRIGATION WATER.

GRAZING LAND - 168,905 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

URBAN AND BUILT-UP LAND - 151,336 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

OTHER LAND - 49,096 acres

OTHER LAND IS LAND NOT INCLUDED IN ANY OTHER MAPPING CATEGORY. COMMON EXAMPLES INCLUDE LOW DENSITY RURAL DEVELOPMENTS, BRUSH, TIMBER, WETLAND, AND RIPARIAN AREAS NOT SUITABLE FOR LIVESTOCK GRAZING, CONFINED LIVESTOCK, POULTRY, OR AQUACULTURE FACILITIES, STRIP MINES, BORROW PITS, AND WATER BODIES SMALLER THAN 40 ACRES. VACANT AND NONAGRICULTURAL LAND SURROUNDED ON ALL SIDES BY URBAN DEVELOPMENT AND GREATER THAN 40 ACRES IS MAPPED AS OTHER LAND.

WATER - 53,763 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

Important Farmland Maps are compiled by the Farmland Mapping and Monitoring Program (FMMP) pursuant to Section 65570 of the California Government Code. To create the maps, FMMP combines current land use information with U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) soil survey data. Soil units qualifying for Prime Farmland and Farmland of Statewide Importance are determined by the NRCS. Changes to soil profiles subsequent to publication of NRCS soil surveys are not reflected on this map. This map was developed using NRCS digital soil data (SSURGO) and may contain individual soil units as small as one acre.

Land use status is determined using current and historic aerial imagery, supplemental GIS data, and field verification. Imagery sources may include public domain datasets, web-based information, and commercially purchased data, depending on data availability. Supplemental data on land management status is obtained from federal, state, and local governments. Map reviewers at the local level contribute valuable information with their comments and suggestions. Please refer to FMMP field analyst reports for each county to obtain specific citations.

Cultural base information for the Important Farmland Maps was derived from public domain data sets, based upon design of the U.S. Geological Survey, with updates generated by digitizing over current imagery.

This map should be used within the limits of its purpose - as a current inventory of agricultural land resources. This map does not necessarily reflect general plan or zoning designations, city limit lines, changing economic or market conditions, or other factors which may be taken into consideration when land use policies are determined. This map is not designed for parcel-specific planning purposes due to its scale and the ten-acre minimum land use mapping unit. Classification of important farmland and urban areas on this map is based on best available data. The information has been delineated as accurately as possible at 1:24,000-scale, but no claim to meet 1:24,000 National Map Accuracy Standards is made due to variations in the quality of source data.

The Department of Conservation makes no warranties as to the suitability of this product for any particular purpose.

Additional data is available at www.conservation.ca.gov/dlrp/fmmp, including detail on the program, full size PDF maps, map categories, statistics, field summaries, and GIS data for download. Contact the:

Farmland Mapping and Monitoring Program
801 K Street, MS 18-01
Sacramento, CA 95814
Phone: (916) 324-0859
e-mail: fmmp@conservation.ca.gov

© California Department of Conservation, Division of Land Resource Protection, 2009.

Map published June 2009.

STATE OF CALIFORNIA
Arnold Schwarzenegger, *Governor*

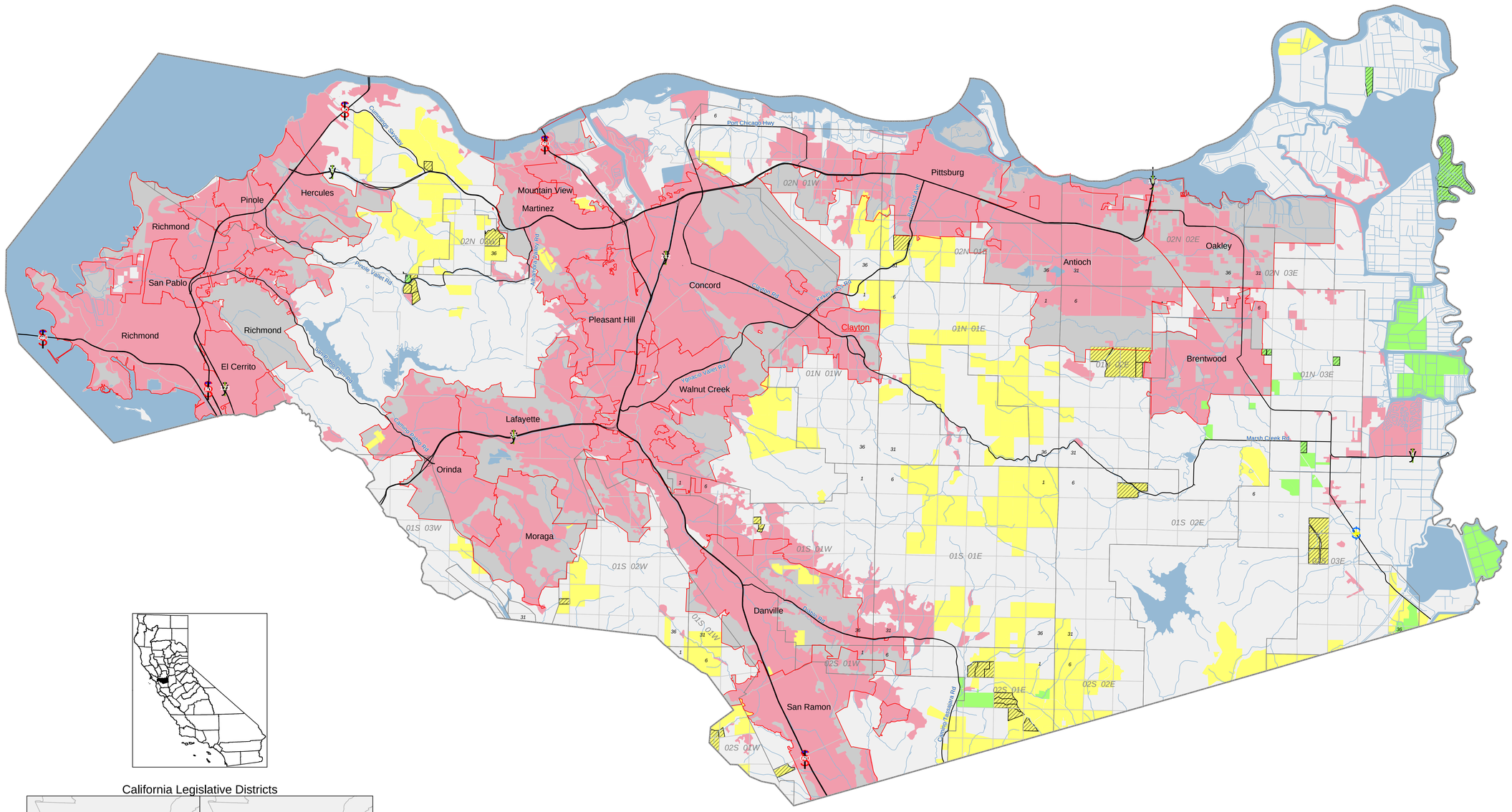
THE RESOURCES AGENCY
Mike Chrisman, *Secretary for Resources*

DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

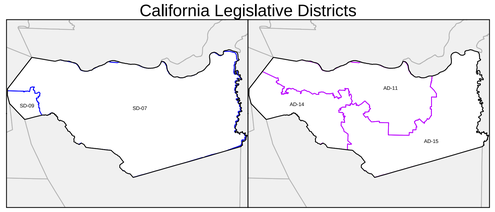
Contra Costa County Williamson Act Lands 2007

Land Enrolled in Williamson Act and Farmland Security Zone Contracts as of 01-01-2007

Department of Conservation
Division of Land Resource Protection
Williamson Act Program



California Legislative Districts



- Williamson Act - Prime Enrolled Agricultural Land
- Williamson Act - Non-Prime Enrolled Agricultural Land
- Williamson Act - Agricultural Land in Non-Renewal
- Water
- Urban and Built-up Land
- Incorporated City Land
- Public Land Survey System
- Highways

1:100,000

0 4
Miles

Williamson Act - Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and meets any of the following criteria (as set forth under California Government Code Section 51201):
1: Land which qualifies for rating as class I or class II in the Natural Resources Conservation Service land use capability classifications;
2: Land which qualifies for rating 80 to 100 in the Storie Index Rating;
3: Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture;
4: Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars per acre;
5: Land which has returned from the production of unprocessed agricultural plant production and has an annual gross value of not less than two hundred dollars per acre for three of the previous five years.

Williamson Act - Non-Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and does not meet any of the criteria for classification as Prime Agricultural Land. Non-Prime Land is defined as Open Space Land of statewide Significance under the California Open Space Subvention Act (see California Government Code Section 16143), and may be identified as such in other documents. Most Non-Prime Land is in agricultural uses such as grazing or non-irrigated crops. However, Non-Prime Land may also include other open space uses which are compatible with agriculture and consistent with local general plans.

Williamson Act - Land in on-Renewal

During the Non-Renewal process, the annual tax assessment gradually increases. At the end of the 9-year Non-Renewal period, the contract is terminated.

Non-Enrolled Land

County land not enrolled with the Williamson Act Program.

Urban and Built-up Land

Land occupied by structures with a build density of at least one unit to one and one-half acres. The areal extent of Developed Land was provided by the Department of Conservation's Farmland Mapping and Monitoring Program.

The California Land Conservation Act of 1965 - commonly referred to as the Williamson Act - is the State's primary program for the conservation of private land in agricultural and open space use. It is a voluntary, locally administered program that offers preferential property taxes on lands which have enforceable restrictions on their use via contracts between individual landowners and local governments. For more information on the Williamson Act please contact the **Department of Conservation, 801 K Street, MS18-01, Sacramento, CA 95814. Phone (916) 324-0850; email: dlrp@conservation.ca.gov; web page: www.consrv.ca.gov/DLRP**

Maps depicting Williamson Act enrollment are produced in cooperation with the participating counties and the California Department of Conservation's Division of Land Resource Protection using manual cartographic methods and Geographic Information Systems. The Department of Conservation is mandated to record, analyze and publish data regarding areas enrolled under Williamson Act contract.

The information necessary to depict areas enrolled under contract was derived from sources supplied by county planning agencies and / or assessor offices. This map is intended for internal review and update only and should be used within the limits of this purpose. All questions regarding the contract status of specific property should be directed to the county assessor or planning agency office.

The Department of Conservation makes no warranties as to suitability of this map for any particular purpose.

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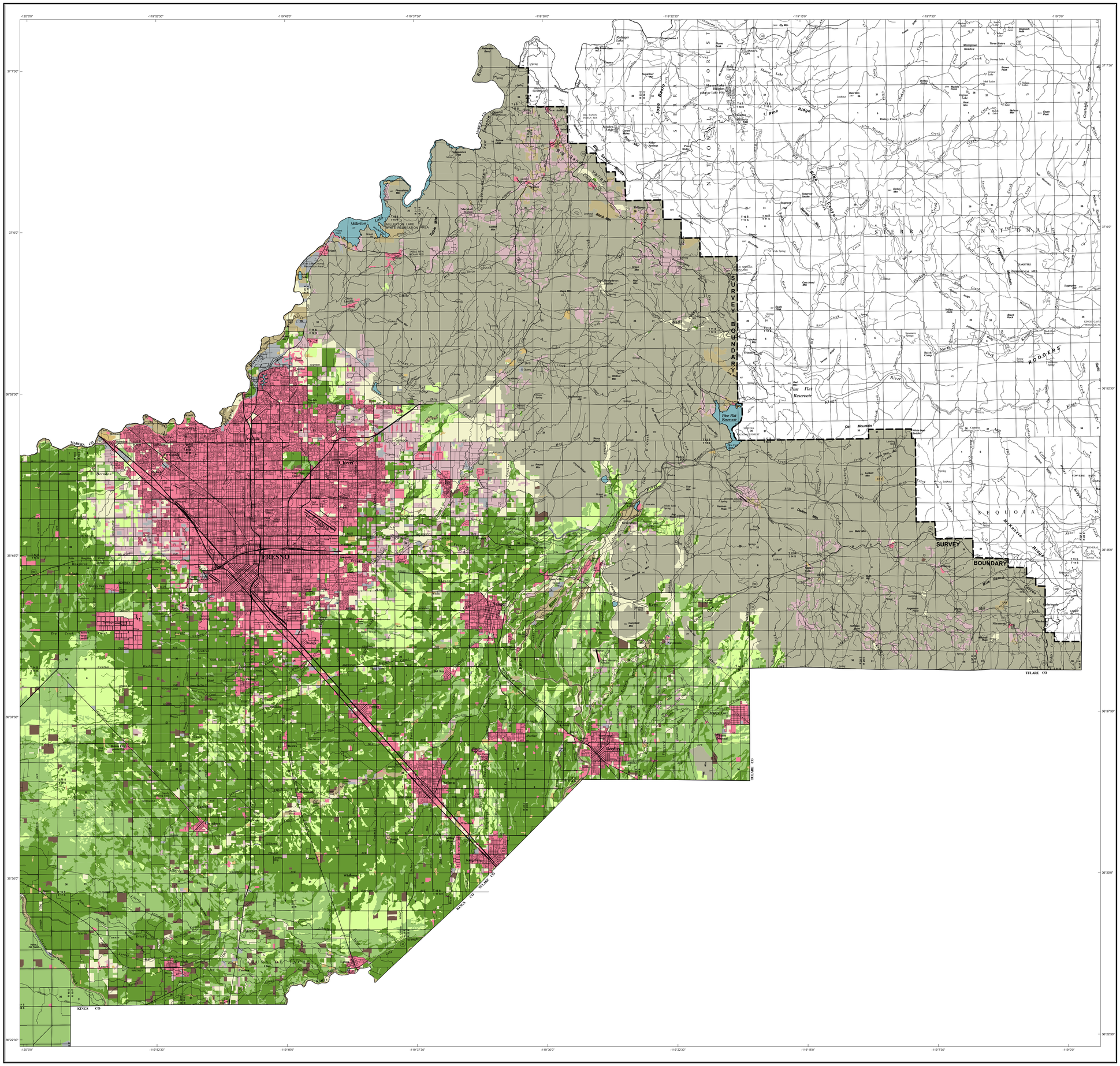
STATE OF CALIFORNIA
Arnold Schwarzenegger, *Governor*
THE NATURAL RESOURCES AGENCY
Lester A. Snow, *Secretary*
DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

RURAL LAND MAPPING EDITION

FRESNO COUNTY IMPORTANT FARMLAND 2008

SHEET 2 OF 2

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
FARMLAND MAPPING AND MONITORING PROGRAM



PRIME FARMLAND - 693,173 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 439,020 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 94,177 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF LOCAL IMPORTANCE - 137,507 acres

ALL FARMABLE LANDS WITHIN FRESNO COUNTY THAT DO NOT MEET THE DEFINITIONS OF PRIME, STATEWIDE, OR UNIQUE. THIS INCLUDES LAND THAT IS OR HAS BEEN USED FOR IRRIGATED PASTURE, DRYLAND FARMING, CONFINED LIVESTOCK AND DAIRY, POULTRY FACILITIES, AQUACULTURE AND GRAZING LAND.

GRAZING LAND - 826,955 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

CONFINED ANIMAL AGRICULTURE - 12,399 acres

CONFINED ANIMAL AGRICULTURAL LANDS INCLUDE POULTRY FACILITIES, FEEDLOTS, DAIRY FACILITIES, AND FISH FARMS. IN SOME COUNTIES, CONFINED ANIMAL AGRICULTURE IS A COMPONENT OF THE FARMLAND OF LOCAL IMPORTANCE CATEGORY.

NONAGRICULTURAL AND NATURAL VEGETATION - 33,466 acres

NONAGRICULTURAL AND NATURAL VEGETATION INCLUDES HEAVILY WOODED, ROCKY OR BARREN AREAS, RIPARIAN AND WETLAND AREAS, GRASSLAND AREAS WHICH DO NOT QUALIFY FOR GRAZING LAND DUE TO THEIR SIZE OR LAND MANAGEMENT RESTRICTIONS, SMALL WATER BODIES AND RECREATIONAL WATER SKI LAKES. CONSTRUCTED WETLANDS ARE ALSO INCLUDED IN THIS CATEGORY.

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND - 6,721 acres

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND INCLUDES FARMSTEADS, AGRICULTURAL STORAGE AND PACKING SHEDS, UNPAVED PARKING AREAS, COMPOSTING FACILITIES, EQUINE FACILITIES, FIREWOOD LOTS, AND CAMPGROUNDS.

VACANT OR DISTURBED LAND - 30,611 acres

VACANT OR DISTURBED LAND INCLUDES OPEN FIELD AREAS THAT DO NOT QUALIFY FOR AN AGRICULTURAL CATEGORY, MINERAL AND OIL EXTRACTION AREAS, OFF ROAD VEHICLE AREAS, ELECTRICAL SUBSTATIONS, CHANNELIZED CANALS, AND RURAL FREEWAY INTERCHANGES.

RURAL RESIDENTIAL LAND - 40,906 acres

RURAL RESIDENTIAL LAND INCLUDES RESIDENTIAL AREAS OF ONE TO FIVE STRUCTURES PER TEN ACRES.

URBAN AND BUILT-UP LAND - 117,568 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

WATER - 4,915 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

SCALE: 1:120,000
1 inch represents approximately 2 miles

1 0 1 2 3 4 5 6 7 8 9 10 Kilometers
1 0 1 2 3 4 5 Miles

10 | 40 | 160 — The minimum land use mapping unit is 10 acres, except Water, which is mapped to a minimum of 40 acres.
1 mile — 1 square mile = 640 acres.

SHEET 2 OF 2
Total County Area - 3,846,311 acres
Mapped Area - 2,437,418 acres

Important Farmland Maps are compiled by the Farmland Mapping and Monitoring Program (FMMP) pursuant to Section 65570 of the California Government Code. To create the maps, FMMP combines current land use information with U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) soil survey data. Soil units qualifying for Prime Farmland and Farmland of Statewide Importance are determined by the NRCS. Changes to soil profiles subsequent to publication of NRCS soil surveys are not reflected on this map. This map was developed using NRCS digital soil data (SSURGO) and may contain individual soil units as small as one acre.

Land use status is determined using current and historic aerial imagery, supplemental GIS data, and field verification. Imagery sources may include public domain datasets, web-based information, and commercially purchased data, depending on data availability. Supplemental data on land management status is obtained from federal, state, and local governments. Map reviewers at the local level contribute valuable information with their comments and suggestions. Please refer to FMMP field analyst reports for each county to obtain specific citations.

Cultural base information for the Important Farmland Maps was derived from public domain data sets, based upon design of the U.S. Geological Survey, with updates generated by digitizing over current imagery.

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Additional data is available at www.conservation.ca.gov/dlrp/fmmp, including detail on the program, full size PDF maps, map categories, statistics, field summaries, and GIS data for download. Contact the:

Farmland Mapping and Monitoring Program
801 K Street, MS 18-01
Sacramento, CA 95814
Phone: (916) 324-0859
e-mail: fmmp@conservation.ca.gov

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Map published May 2010.

STATE OF CALIFORNIA
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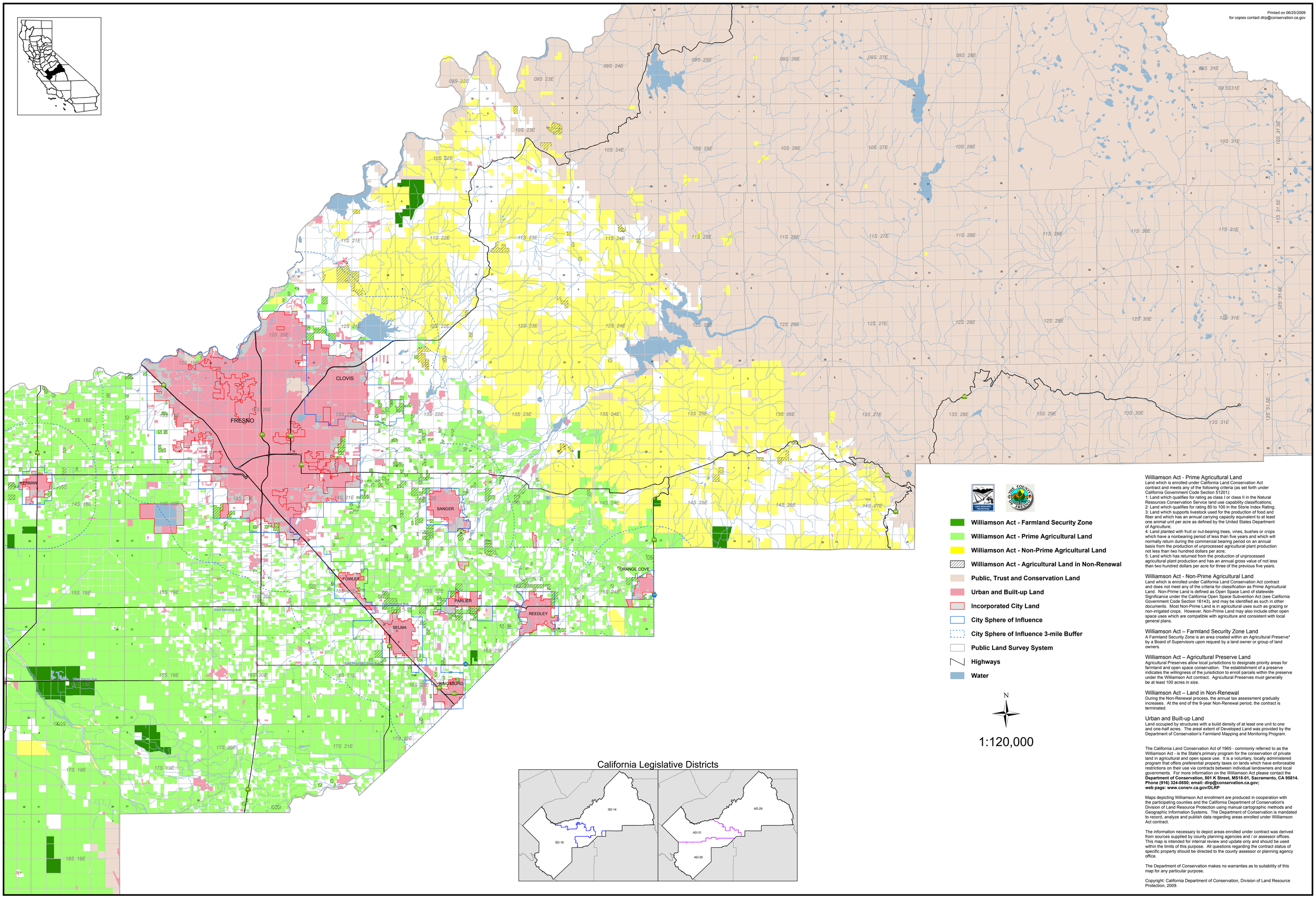
Mike Chrisman, *Secretary*

DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

Fresno County Williamson Act Lands 2008

Land Enrolled in Williamson Act and Farmland Security Zone Contracts as of 1-1-2008

Department of Conservation
Division of Land Resource Protection
Williamson Act Program



Williamson Act - Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and meets any of the following criteria (as set forth under California Government Code Section 51201):
1: Land which qualifies for rating as class I or class II in the Natural Resources Conservation Service land use capability classifications;
2: Land which qualifies for rating 80 to 100 in the Storie Index Rating;
3: Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture;
4: Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars per acre;
5: Land which has returned from the production of unprocessed agricultural plant production and has an annual gross value of not less than two hundred dollars per acre for three of the previous five years.

Williamson Act - Non-Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and does not meet any of the criteria for classification as Prime Agricultural Land. Non-Prime Land is defined as Open Space Land of statewide Significance under the California Open Space Subvention Act (see California Government Code Section 16143), and may be identified as such in other documents. Most Non-Prime Land is in agricultural uses such as grazing or non-irrigated crops. However, Non-Prime Land may also include other open space uses which are compatible with agriculture and consistent with local general plans.

Williamson Act – Farmland Security Zone Land

A Farmland Security Zone is an area created within an Agricultural Preserve* by a Board of Supervisors upon request by a land owner or group of land owners.

Williamson Act – Agricultural Preserve Land

Agricultural Preserves allow local jurisdictions to designate priority areas for farmland and open space conservation. The establishment of a preserve indicates the willingness of the jurisdiction to enroll parcels within the preserve under the Williamson Act contract. Agricultural Preserves must generally be at least 100 acres in size.

Williamson Act – Land in Non-Renewal

During the Non-Renewal process, the annual tax assessment gradually increases. At the end of the 9-year Non-Renewal period, the contract is terminated.

Urban and Built-up Land

Land occupied by structures with a build density of at least one unit to one and one-half acres. The areal extent of Developed Land was provided by the Department of Conservation's Farmland Mapping and Monitoring Program.

The California Land Conservation Act of 1965 - commonly referred to as the Williamson Act - is the State's primary program for the conservation of private land in agricultural and open space use. It is a voluntary, locally administered program that offers preferential property taxes on lands which have enforceable restrictions on their use via contracts between individual landowners and local governments. For more information on the Williamson Act please contact the **Department of Conservation, 801 K Street, MS18-01, Sacramento, CA 95814. Phone (916) 324-0850; email: dlrp@conservation.ca.gov; web page: www.consrv.ca.gov/DLRP**

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Fresno County Williamson Act Lands 2008

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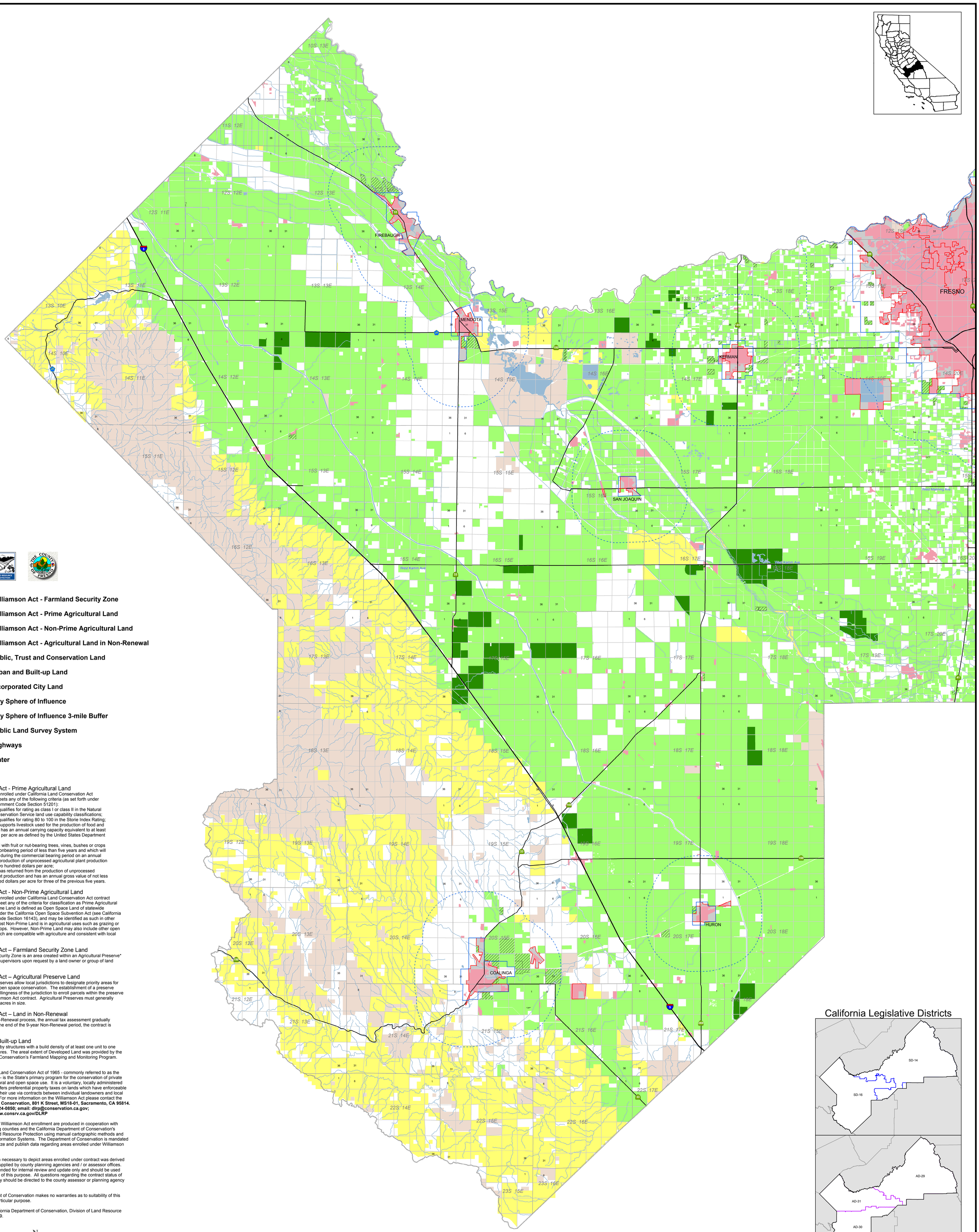
Department of Conservation
Division of Land Resource Protection
Williamson Act Program



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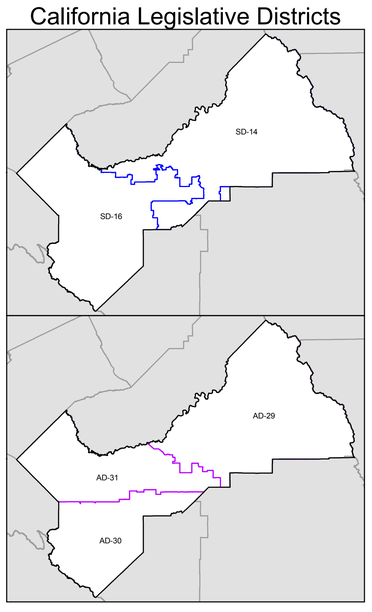
1:120,000

California Legislative Districts



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STATE OF CALIFORNIA
Arnold Schwarzenegger, Governor

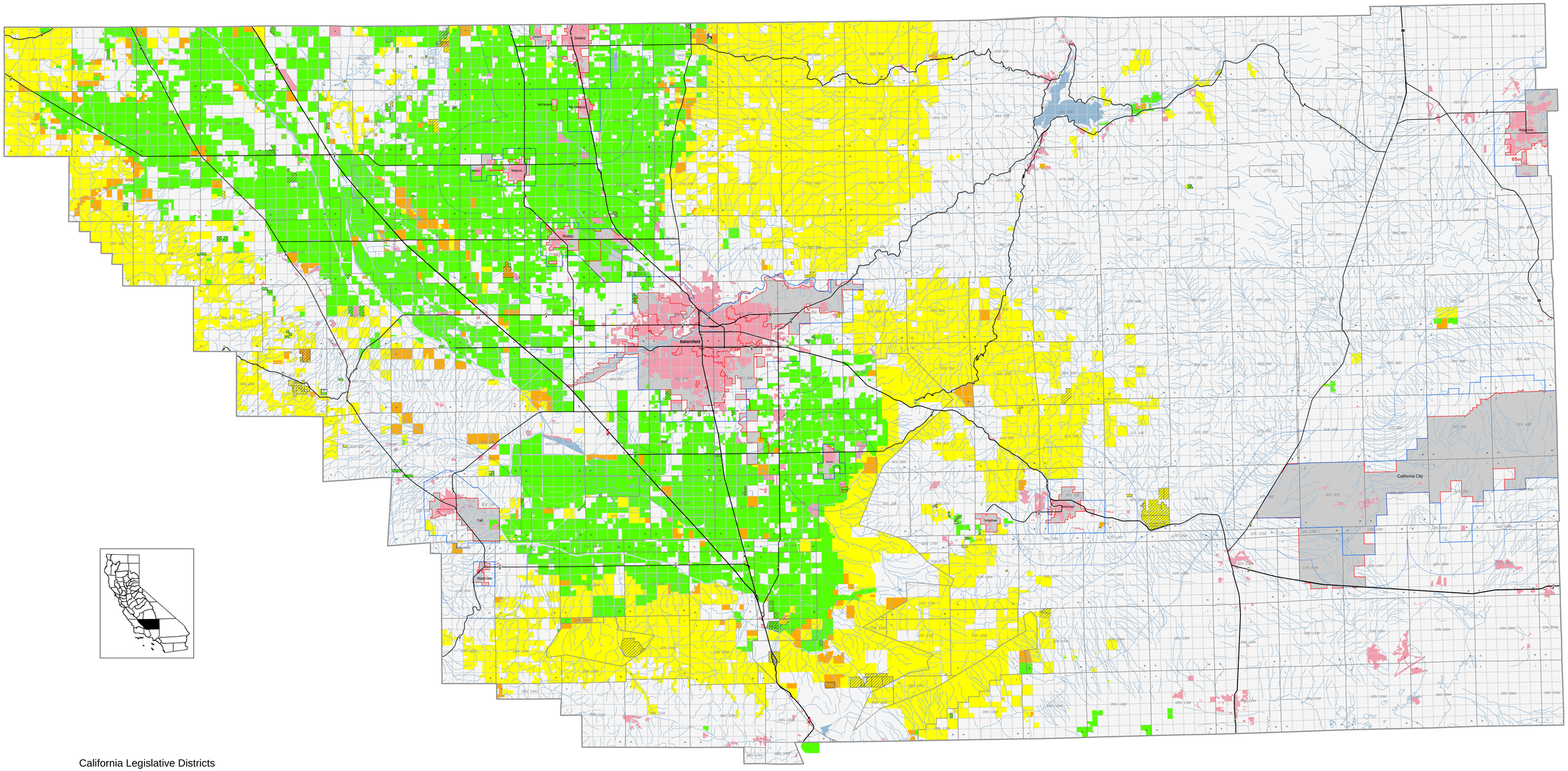
THE RESOURCES AGENCY
Mike Chrisman, Secretary for Resources

DEPARTMENT OF CONSERVATION
Bridgett Luther, Director

Kern County Williamson Act Lands 2005

Land Enrolled in Williamson Act and Farmland Security Zone Contracts as of 01-01-2005

Department of Conservation
Division of Land Resource Protection
Williamson Act Program



California Legislative Districts

1:175,000

- Williamson Act - Farmland Security Zone Land
- Williamson Act - Prime Agricultural Land
- Williamson Act - Non-Prime Agricultural Land
- Williamson Act - Mixed Enrollment Agricultural Land
- Williamson Act - Agricultural Land in Non-Renewal
- Urban and Built Up Land
- Incorporated City Land
- Water
- Non-Enrolled Land
- Incorporated City Boundary
- City Sphere of Influence 3-mile buffer
- Public Land Survey System
- Highways

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Mixed Enrolled Agricultural Land:
Mixed Acreage parcels contain Prime, Non-Prime, Open Space Easement or other contracted or enrolled land and are not yet spatially defined.

Non-Renewal
During the Non-Renewal process, the annual tax assessment gradually increases. At the end of the 9-year Non-Renewal period, the contract is terminated.

Non-Enrolled Land:
County land not enrolled with the Williamson Act Program.

Developed Land
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NOTE: Parcel boundary information was downloaded from County web site and considered highly accurate. Williamson Act Categories are "best-guess" as they are lifted from hand colored County provided scans of paper maps that, in turn, have been georeffernced by DoC.

Printed on 04-05-2006
by DLRP staff James Nordstrom 916-324-2782

KERN COUNTY IMPORTANT FARMLAND 2008
RURAL LAND EDITION
SHEET 2 OF 3

STATE OF CALIFORNIA
Arnold Schwarzenegger, *Governor*
THE NATURAL RESOURCES AGENCY
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CALIFORNIA DEPARTMENT OF CONSERVATION
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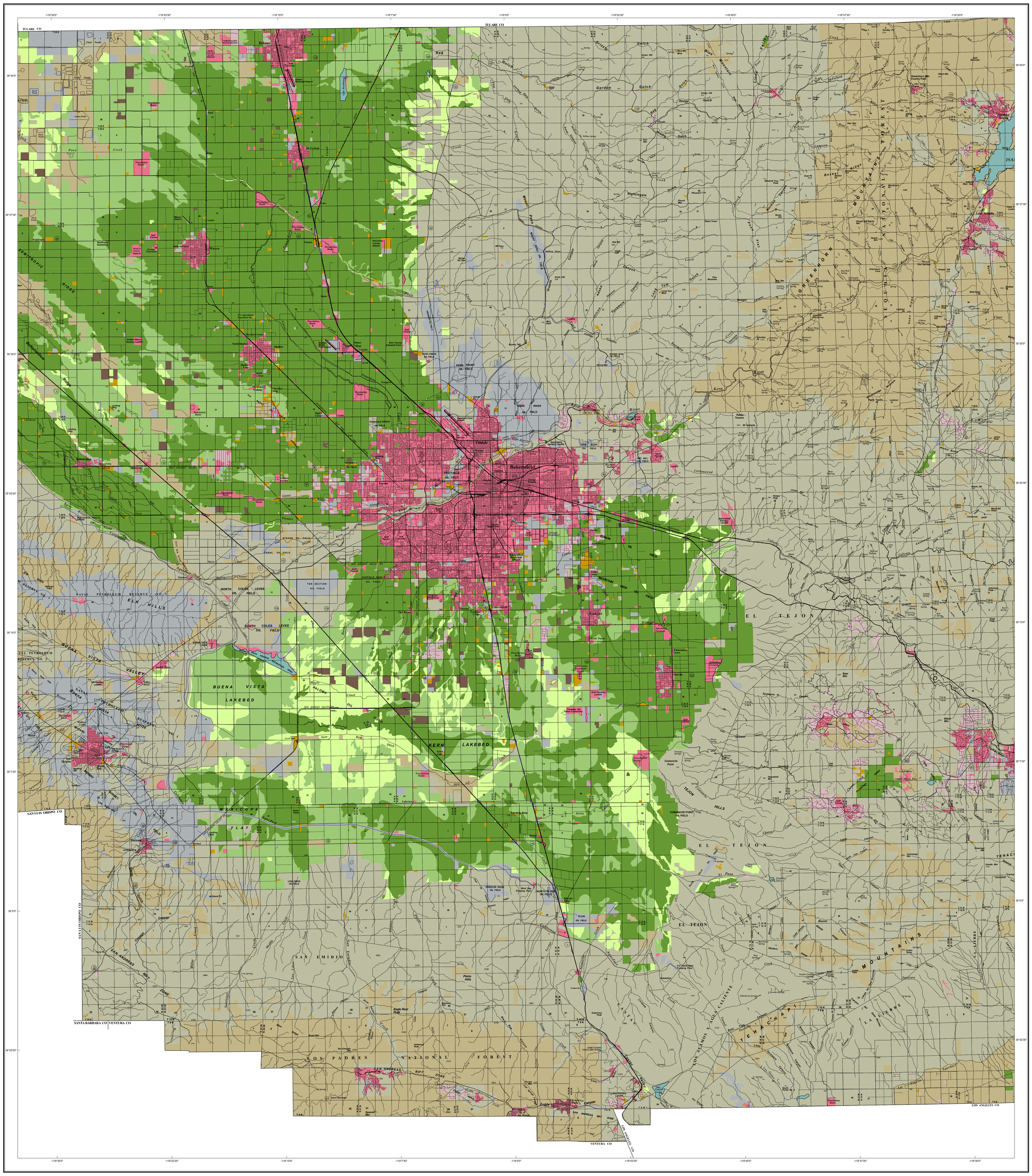

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VACANT OR DISTURBED LAND - 244,660 acres

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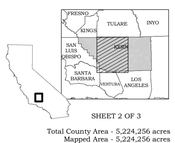

SHEET 2 OF 3

Total County Area - 5,224,256 acres
Mapped Area - 5,224,256 acres

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801 K Street, MS 18-01
Sacramento, CA 95814
Phone: (916) 324-0859
e-mail: fmmp@conservation.ca.gov

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Map published January 2010.

RURAL LAND MAPPING EDITION
KERN COUNTY IMPORTANT FARMLAND 2010
SHEET 3 OF 3

STATE OF CALIFORNIA
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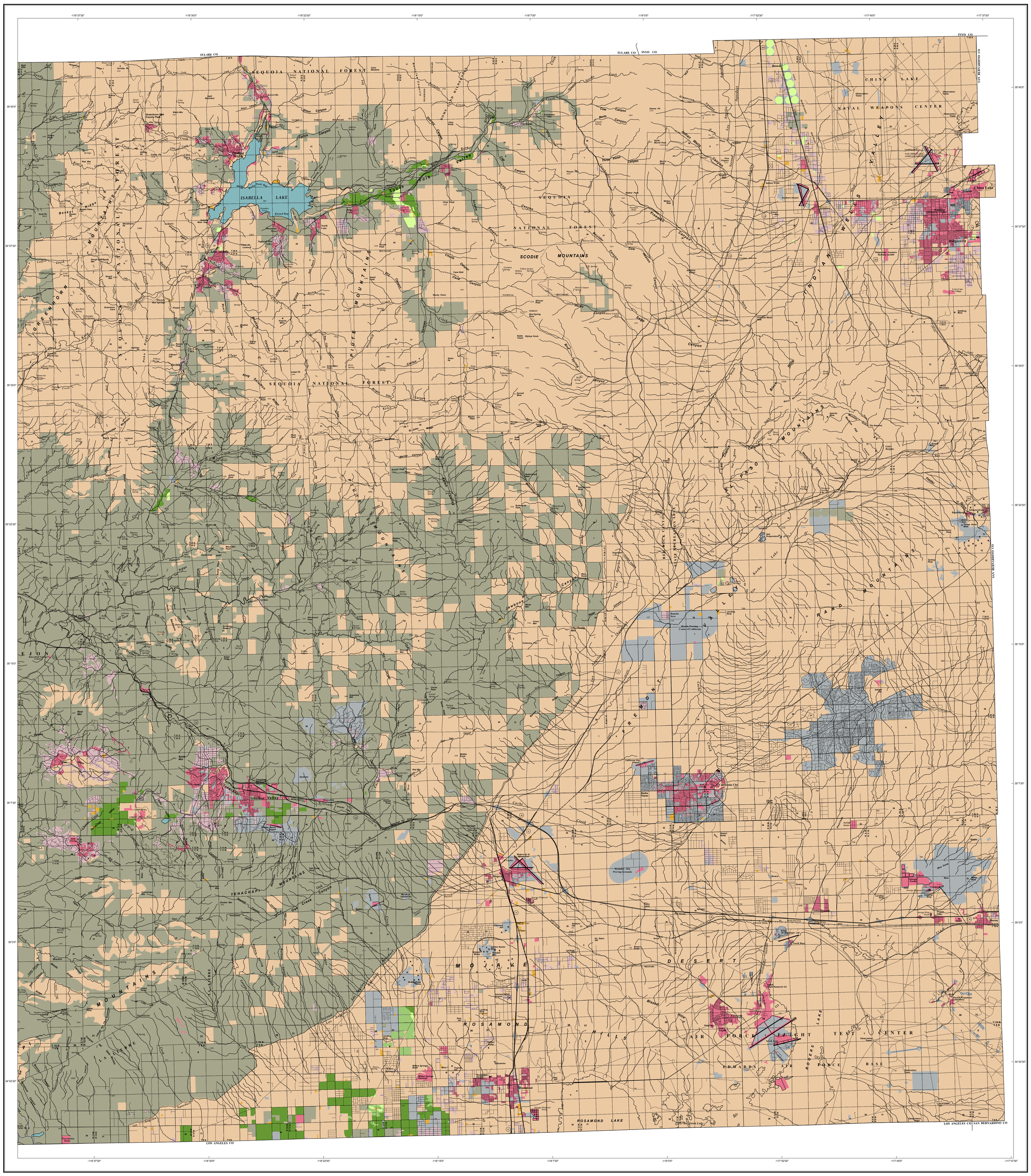
DEPARTMENT OF CONSERVATION
Mark Nechodom, *Director*

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
FARMLAND MAPPING AND MONITORING PROGRAM



PRIME FARMLAND - 608,789 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 213,465 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 91,830 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

GRAZING LAND - 1,827,391 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

CONFINED ANIMAL AGRICULTURE - 7,549 acres

CONFINED ANIMAL AGRICULTURAL LANDS INCLUDE POULTRY FACILITIES, FEEDLOTS, DAIRY FACILITIES, AND FISH FARMS. IN SOME COUNTIES, CONFINED ANIMAL AGRICULTURE IS A COMPONENT OF THE FARMLAND OF LOCAL IMPORTANCE CATEGORY.

NONAGRICULTURAL AND NATURAL VEGETATION - 2,026,045 acres

NONAGRICULTURAL AND NATURAL VEGETATION INCLUDES HEAVILY WOODED, ROCKY OR BARREN AREAS, RIPARIAN AND WETLAND AREAS, GRASSLAND AREAS WHICH DO NOT QUALIFY FOR GRAZING LAND DUE TO THEIR SIZE OR LAND MANAGEMENT RESTRICTIONS, SMALL WATER BODIES AND RECREATIONAL WATER SKI LAKES. CONSTRUCTED WETLANDS ARE ALSO INCLUDED IN THIS CATEGORY.

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND - 11,629 acres

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND INCLUDES FARMSTEADS, AGRICULTURAL STORAGE AND PACKING SHEDS, UNPAVED PARKING AREAS, COMPOSTING FACILITIES, EQUINE FACILITIES, FIREWOOD LOTS, AND CAMPGROUNDS.

VACANT OR DISTURBED LAND - 247,072 acres

VACANT OR DISTURBED LAND INCLUDES OPEN FIELD AREAS THAT DO NOT QUALIFY FOR AN AGRICULTURAL CATEGORY, MINERAL AND OIL EXTRACTION AREAS, OFF ROAD VEHICLE AREAS, ELECTRICAL SUBSTATIONS, CHANNELIZED CANALS, AND RURAL FREEWAY INTERCHANGES.

RURAL RESIDENTIAL LAND - 38,703 acres

RURAL RESIDENTIAL LAND INCLUDES RESIDENTIAL AREAS OF ONE TO FIVE STRUCTURES PER TEN ACRES.

URBAN AND BUILT-UP LAND - 141,899 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

WATER - 9,890 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

SCALE: 1:120,000
1 inch represents approximately 2 miles

1 0 1 2 3 4 5 6 7 8 9 10 Kilometers
1 0 1 2 3 4 5 Miles

10 40 160 1 mile
The minimum land use mapping unit is 10 acres, except Water, which is mapped to a minimum of 40 acres.
1 square mile = 640 acres.

Total County Area - 5,224,262 acres
Mapped Area - 5,224,262 acres

Important Farmland Maps are compiled by the Farmland Mapping and Monitoring Program (FMMP) pursuant to Section 65570 of the California Government Code. To create the maps, FMMP combines current land use information with U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) soil survey data. Soil units qualifying for Prime Farmland and Farmland of Statewide Importance are determined by the NRCS. Changes to soil profiles subsequent to publication of NRCS soil surveys are not reflected on this map. This map was developed using NRCS digital soil data (SSURGO) and may contain individual soil units as small as one acre.

Land use status is determined using current and historic aerial imagery, supplemental GIS data, and field verification. Imagery sources may include public domain datasets, web-based information, and commercially purchased data, depending on data availability. Supplemental data on land management status is obtained from federal, state, and local governments. Map reviewers at the local level contribute valuable information with their comments and suggestions. Please refer to FMMP field analyst reports for each county to obtain specific citations.

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Map published February 2012.

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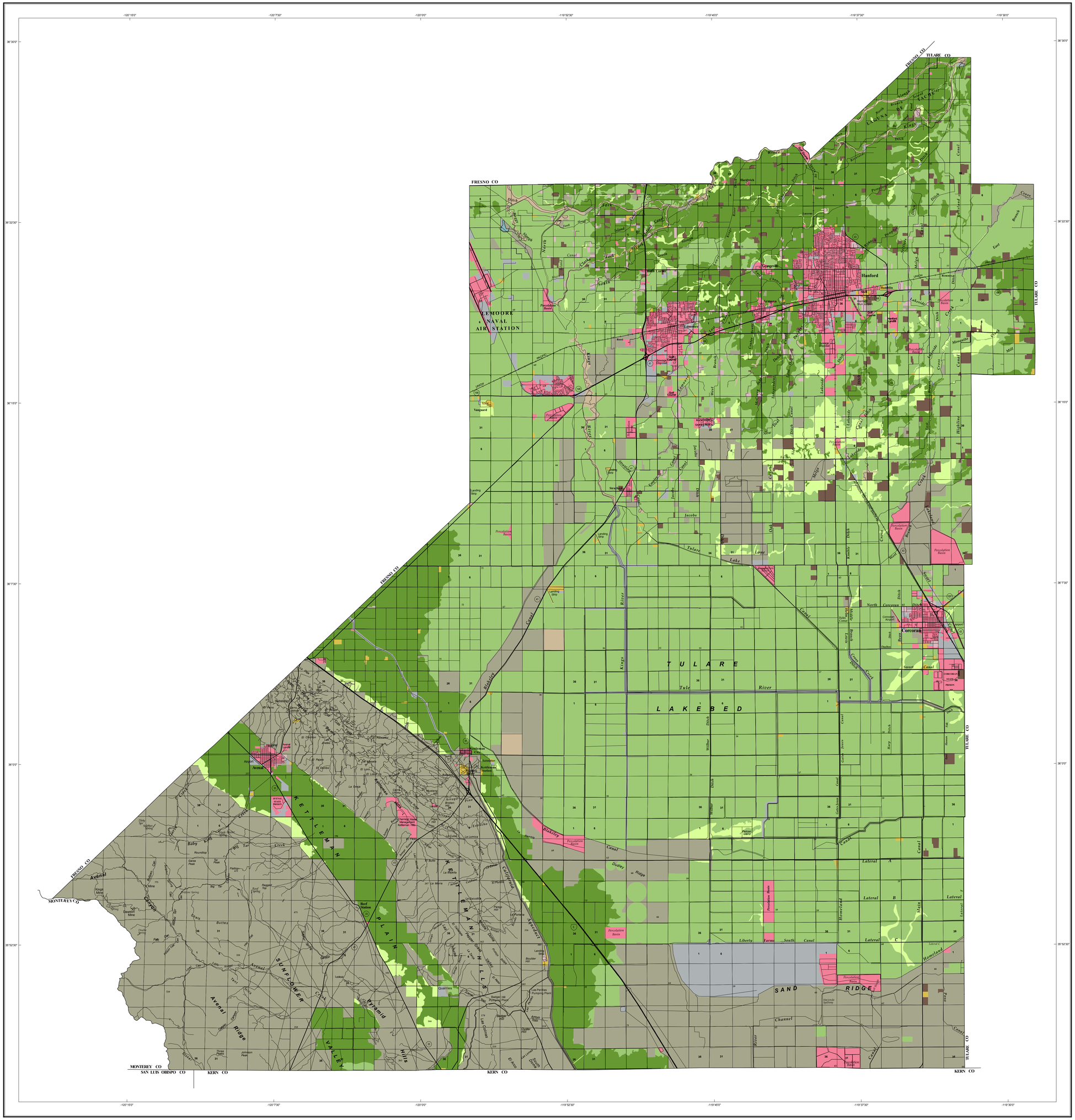
Lester A. Snow, *Secretary*
DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

RURAL LAND MAPPING EDITION
KINGS COUNTY IMPORTANT FARMLAND 2008

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
FARMLAND MAPPING AND MONITORING PROGRAM



PRIME FARMLAND - 138,088 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 397,064 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 22,927 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

GRAZING LAND - 257,746 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

CONFINED ANIMAL AGRICULTURE - 10,024 acres

CONFINED ANIMAL AGRICULTURAL LANDS INCLUDE POULTRY FACILITIES, FEEDLOTS, DAIRY FACILITIES, AND FISH FARMS. IN SOME COUNTIES, CONFINED ANIMAL AGRICULTURE IS A COMPONENT OF THE FARMLAND OF LOCAL IMPORTANCE CATEGORY.

NONAGRICULTURAL AND NATURAL VEGETATION - 5,859 acres

NONAGRICULTURAL AND NATURAL VEGETATION INCLUDES HEAVILY WOODED, ROCKY OR BARREN AREAS, RIPARIAN AND WETLAND AREAS, GRASSLAND AREAS WHICH DO NOT QUALIFY FOR GRAZING LAND DUE TO THEIR SIZE OR LAND MANAGEMENT RESTRICTIONS, SMALL WATER BODIES AND RECREATIONAL WATER SKI LAKES. CONSTRUCTED WETLANDS ARE ALSO INCLUDED IN THIS CATEGORY.

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND - 2,551 acres

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND INCLUDES FARMSTEADS, AGRICULTURAL STORAGE AND PACKING SHEDS, UNPAVED PARKING AREAS, COMPOSTING FACILITIES, EQUINE FACILITIES, FIREWOOD LOTS, AND CAMPGROUNDS.

VACANT OR DISTURBED LAND - 20,382 acres

VACANT OR DISTURBED LAND INCLUDES OPEN FIELD AREAS THAT DO NOT QUALIFY FOR AN AGRICULTURAL CATEGORY, MINERAL AND OIL EXTRACTION AREAS, OFF ROAD VEHICLE AREAS, ELECTRICAL SUBSTATIONS, CHANNELIZED CANALS, AND RURAL FREEWAY INTERCHANGES.

RURAL RESIDENTIAL LAND - 3,862 acres

RURAL RESIDENTIAL LAND INCLUDES RESIDENTIAL AREAS OF ONE TO FIVE STRUCTURES PER TEN ACRES.

URBAN AND BUILT-UP LAND - 32,218 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

WATER - 62 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

SCALE: 1:100,000
1 inch represents approximately 1.6 miles

1 0 1 2 3 4 5 6 7 8 9 10 Kilometers
1 0 1 2 3 4 5 Miles

10 | 40 | 160 | 1 mile

The minimum land use mapping unit is 10 acres, except Water, which is mapped to a minimum of 40 acres.

1 square mile = 640 acres.

Total County Area - 890,784 acres
Mapped Area - 890,784 acres

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Land use status is determined using current and historic aerial imagery, supplemental GIS data, and field verification. Imagery sources may include public domain datasets, web-based information, and commercially purchased data, depending on data availability. Supplemental data on land management status is obtained from federal, state, and local governments. Map reviewers at the local level contribute valuable information with their comments and suggestions. Please refer to FMMP field analyst reports for each county to obtain specific citations.

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Map published July 2010.

STATE OF CALIFORNIA
Arnold Schwarzenegger, *Governor*

NATURAL RESOURCES AGENCY
Mike Chrisman, *Secretary*

DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

Kings County Williamson Act Lands 2009

Land Enrolled in the Williamson Act and Farmland Security Zone Contracts as of 01-01-09

Department of Conservation
Division of Land Resource Protection
Williamson Act Program

- Williamson Act - Farmland Security Zone Land
- Williamson Act - Prime Agricultural Land
- Williamson Act - Non-Prime Agricultural Land
- Williamson Act - Land in Non-Renewal
- Water
- Urban and Built-up Land
- Incorporated City
- Public Land Survey System
- HIghways

Williamson Act - Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and meets any of the following criteria (as set forth under California Government Code Section 51201):
1: Land which qualifies for rating as class I or class II in the Natural Resources Conservation Service land use capability classifications;
2: Land which qualifies for rating 80 to 100 in the Storie Index Rating;
3: Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture;
4: Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars per acre;
5: Land which has returned from the production of unprocessed agricultural plant production and has an annual gross value of not less than two hundred dollars per acre for three of the previous five years.

Williamson Act - Non-Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and does not meet any of the criteria for classification as Prime Agricultural Land. Non-Prime Land is defined as Open Space Land of statewide Significance under the California Open Space Subvention Act (see California Government Code Section 16143), and may be identified as such in other documents. Most Non-Prime Land is in agricultural uses such as grazing or non-irrigated crops. However, Non-Prime Land may also include other open space uses which are compatible with agriculture and consistent with local general plans.

Williamson Act – Farmland Security Zone Land

A Farmland Security Zone is an area created within an Agricultural Preserve* by a Board of Supervisors upon request by a land owner or group of land owners.

Agricultural Preserve Land

Agricultural Preserves allow local jurisdictions to designate priority areas for farmland and open space conservation. The establishment of a preserve indicates the willingness of the jurisdiction to enroll parcels within the preserve under the Williamson Act contract. Agricultural Preserves must generally be at least 100 acres in size.

Williamson Act – Land in Non-Renewal

During the Non-Renewal process, the annual tax assessment gradually increases. At the end of the 9-year Non-Renewal period, the contract is terminated.

Urban and Built-up Land

Land occupied by structures with a build density of at least one unit to one and one-half acres. The areal extent of Developed Land was provided by the Department of Conservation's Farmland Mapping and Monitoring Program.

The California Land Conservation Act of 1965 - commonly referred to as the Williamson Act - is the State's primary program for the conservation of private land in agricultural and open space use. It is a voluntary, locally administered program that offers preferential property taxes on lands which have enforceable restrictions on their use via contracts between individual landowners and local governments. For more information on the Williamson Act please contact the **Department of Conservation, 801 K Street, MS18-01, Sacramento, CA 95814. Phone (916) 324-0850; email: dlrp@conservation.ca.gov; web page: www.consrv.ca.gov/DLRP**

Maps depicting Williamson Act enrollment are produced in cooperation with the participating counties and the California Department of Conservation's Division of Land Resource Protection using manual cartographic methods and Geographic Information Systems. The Department of Conservation is mandated to record, analyze and publish data regarding areas enrolled under Williamson Act contract.

The information necessary to depict areas enrolled under contract was derived from sources supplied by county planning agencies and / or assessor offices. This map is intended for internal review and update only and should be used within the limits of this purpose. All questions regarding the contract status of specific property should be directed to the county assessor or planning agency office.

The Department of Conservation makes no warranties as to suitability of this map for any particular purpose.

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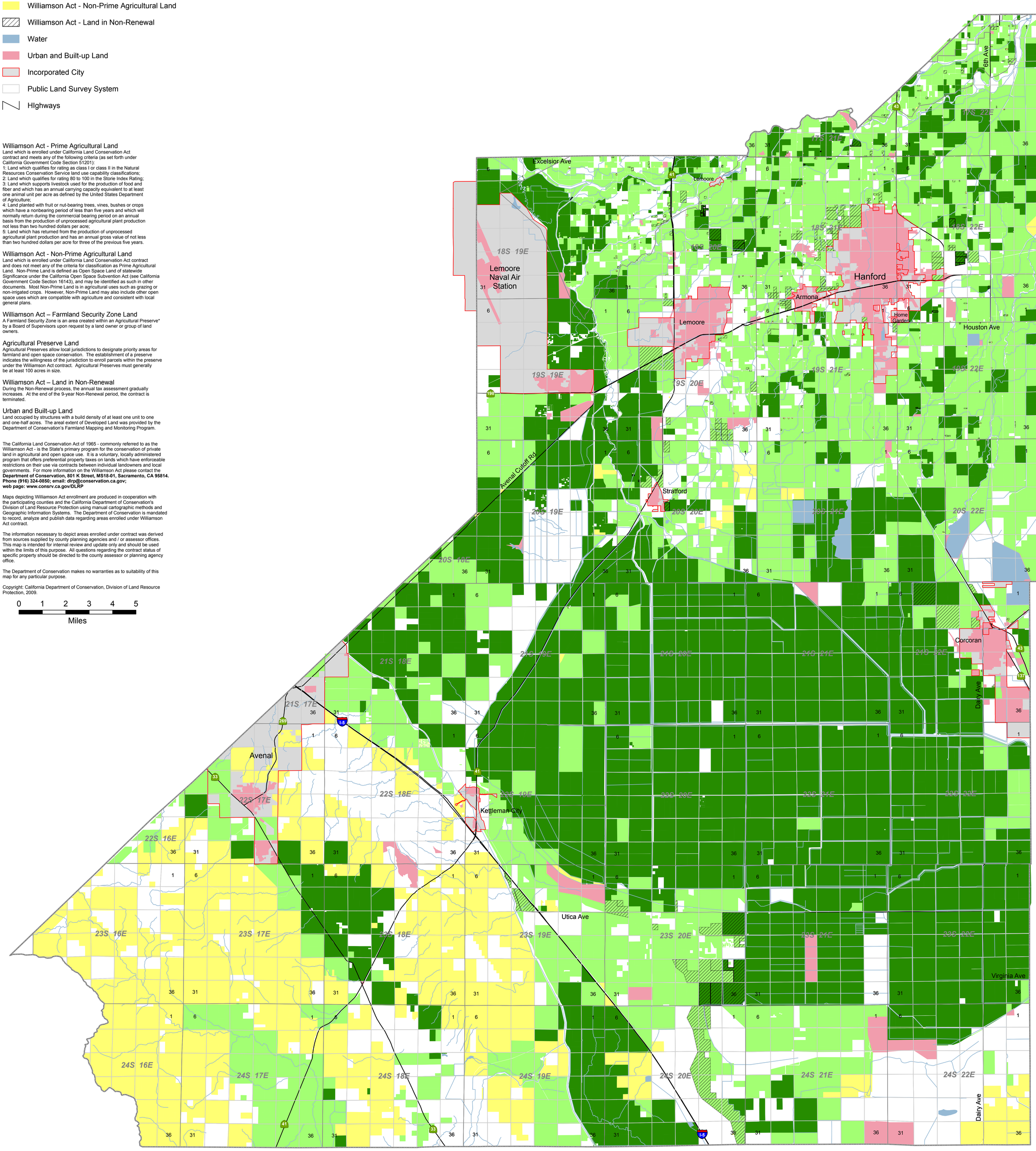
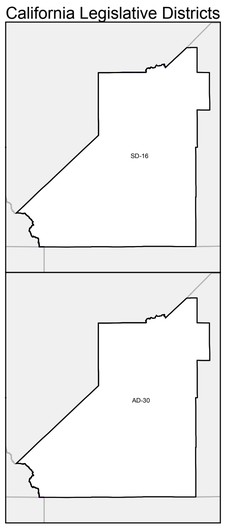


California Legislative Districts



Printed on 01-21-2010, by James Nordstrom GIS Analyst
Copies available, contact dlrp@conservation.ca.gov

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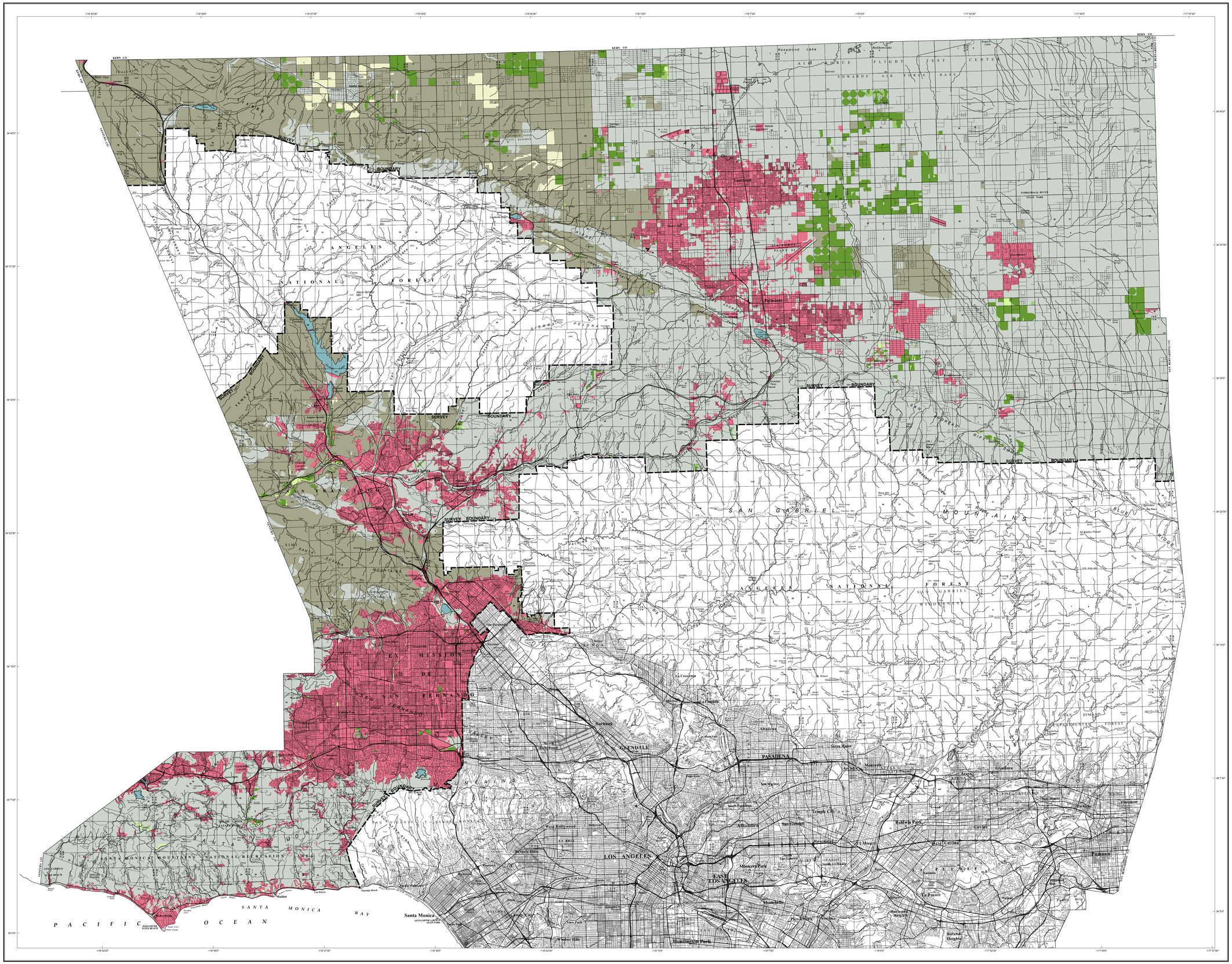
John Laird, *Secretary*
DEPARTMENT OF CONSERVATION
Derek Chernow, *Acting Director*

LOS ANGELES COUNTY IMPORTANT FARMLAND 2010

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
FARMLAND MAPPING AND MONITORING PROGRAM



PRIME FARMLAND - 30,876 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 952 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 1,129 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF LOCAL IMPORTANCE - 6,855 acres

PRODUCING LANDS THAT WOULD MEET THE STANDARD CRITERIA FOR PRIME OR STATEWIDE BUT ARE NOT IRRIGATED.

GRAZING LAND - 231,475 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

URBAN AND BUILT-UP LAND - 174,888 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

OTHER LAND - 674,568 acres

OTHER LAND IS LAND NOT INCLUDED IN ANY OTHER MAPPING CATEGORY. COMMON EXAMPLES INCLUDE LOW DENSITY RURAL DEVELOPMENTS, BRUSH, TIMBER, WETLAND, AND RIPARIAN AREAS NOT SUITABLE FOR LIVESTOCK GRAZING, CONFINED LIVESTOCK, POULTRY, OR AQUACULTURE FACILITIES, STRIP MINES, BORROW PITS, AND WATER BODIES SMALLER THAN 40 ACRES. VACANT AND NONAGRICULTURAL LAND SURROUNDED ON ALL SIDES BY URBAN DEVELOPMENT AND GREATER THAN 40 ACRES IS MAPPED AS OTHER LAND.

WATER - 3,318 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

SCALE: 1:120,000
1 inch represents approximately 2 miles

KILOMETERS 1 0 1 2 3 4 5 6 7 8 9 10
MILES 1 0 1 2 3 4 5

10 (40)	The minimum land use mapping unit is 10 acres, except Water, which is mapped to a minimum of 40 acres.
160	1 square mile = 640 acres.

Total County Area - 2,612,674 acres
Mapped Area - 1,124,061 acres

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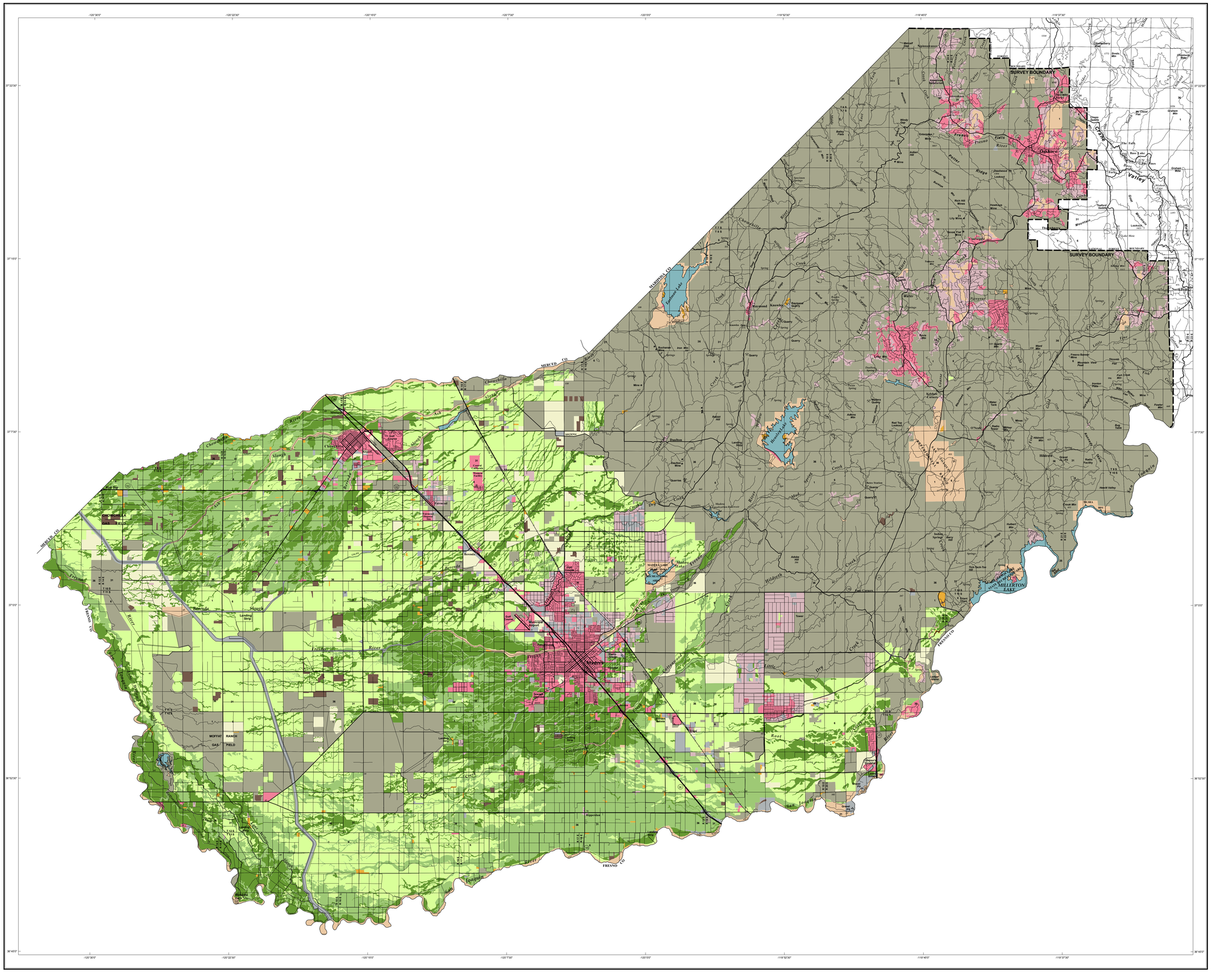
DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

RURAL LAND MAPPING EDITION

MADERA COUNTY IMPORTANT FARMLAND 2008

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
FARMLAND MAPPING AND MONITORING PROGRAM



PRIME FARMLAND - 97,490 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 85,136 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 163,974 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF LOCAL IMPORTANCE - 16,142 acres

LANDS THAT ARE PRESENTLY UNDER CULTIVATION FOR SMALL GRAIN CROPS, BUT ARE NOT IRRIGATED. ALSO LANDS THAT ARE CURRENTLY IRRIGATED PASTURE, BUT HAVE THE POTENTIAL TO BE CULTIVATED FOR ROW/FIELD CROP USE.

GRAZING LAND - 399,500 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

CONFINED ANIMAL AGRICULTURE - 4,073 acres

CONFINED ANIMAL AGRICULTURAL LANDS INCLUDE POULTRY FACILITIES, FEEDLOTS, DAIRY FACILITIES, AND FISH FARMS. IN SOME COUNTIES, CONFINED ANIMAL AGRICULTURE IS A COMPONENT OF THE FARMLAND OF LOCAL IMPORTANCE CATEGORY.

NONAGRICULTURAL AND NATURAL VEGETATION - 20,991 acres

NONAGRICULTURAL AND NATURAL VEGETATION INCLUDES HEAVILY WOODED, ROCKY OR BARREN AREAS, RIPARIAN AND WETLAND AREAS, GRASSLAND AREAS WHICH DO NOT QUALIFY FOR GRAZING LAND DUE TO THEIR SIZE OR LAND MANAGEMENT RESTRICTIONS, SMALL WATER BODIES AND RECREATIONAL WATER SKI LAKES. CONSTRUCTED WETLANDS ARE ALSO INCLUDED IN THIS CATEGORY.

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND - 1,821 acres

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND INCLUDES FARMSTEADS, AGRICULTURAL STORAGE AND PACKING SHEDS, UNPAVED PARKING AREAS, COMPOSTING FACILITIES, EQUINE FACILITIES, FIREWOOD LOTS, AND CAMPGROUNDS.

VACANT OR DISTURBED LAND - 10,471 acres

VACANT OR DISTURBED LAND INCLUDES OPEN FIELD AREAS THAT DO NOT QUALIFY FOR AN AGRICULTURAL CATEGORY, MINERAL AND OIL EXTRACTION AREAS, OFF ROAD VEHICLE AREAS, ELECTRICAL SUBSTATIONS, CHANNELIZED CANALS, AND RURAL FREEWAY INTERCHANGES.

RURAL RESIDENTIAL LAND - 28,381 acres

RURAL RESIDENTIAL LAND INCLUDES RESIDENTIAL AREAS OF ONE TO FIVE STRUCTURES PER TEN ACRES.

URBAN AND BUILT-UP LAND - 27,011 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

WATER - 6,055 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

SCALE: 1:100,000
1 inch represents approximately 1.6 miles

1 0 1 2 3 4 5 6 7 8 9 10 Kilometers
1 0 1 2 3 4 5 Miles

10 | 40 | 160 | 1 mile

The minimum land use mapping unit is 10 acres, except Water, which is mapped to a minimum of 40 acres.

1 square mile = 640 acres.

Total County Area - 1,377,535 acres
Mapped Area - 861,045 acres

Important Farmland Maps are compiled by the Farmland Mapping and Monitoring Program (FMMP) pursuant to Section 65570 of the California Government Code. To create the maps, FMMP combines current land use information with U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) soil survey data. Soil units qualifying for Prime Farmland and Farmland of Statewide Importance are determined by the NRCS. Changes to soil profiles subsequent to publication of NRCS soil surveys are not reflected on this map. This map was developed using NRCS digital soil data (SSURGO) and may contain individual soil units as small as one acre.

Land use status is determined using current and historic aerial imagery, supplemental GIS data, and field verification. Imagery sources may include public domain datasets, web-based information, and commercially purchased data, depending on data availability. Supplemental data on land management status is obtained from federal, state, and local governments. Map reviewers at the local level contribute valuable information with their comments and suggestions. Please refer to FMMP field analyst reports for each county to obtain specific citations.

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Additional data is available at www.conservation.ca.gov/dlrp/fmmp, including detail on the program, full size PDF maps, map categories, statistics, field summaries, and GIS data for download. Contact the:

Farmland Mapping and Monitoring Program
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Sacramento, CA 95814
Phone: (916) 324-0859
e-mail: fmmp@conservation.ca.gov

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Map published October 2009.

STATE OF CALIFORNIA
Arnold Schwarzenegger, *Governor*

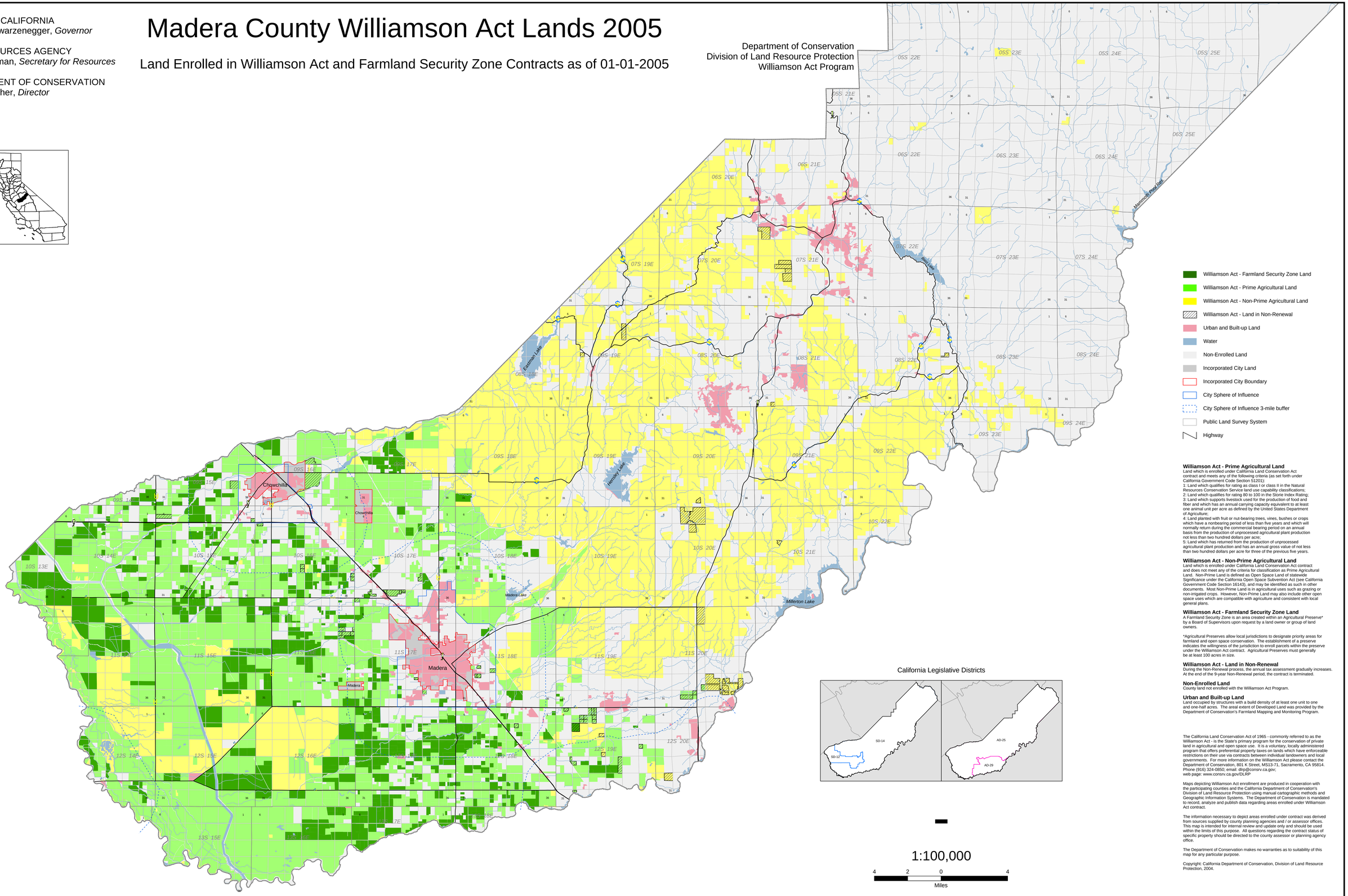
THE RESOURCES AGENCY
Mike Chrisman, *Secretary for Resources*

DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

Madera County Williamson Act Lands 2005

Land Enrolled in Williamson Act and Farmland Security Zone Contracts as of 01-01-2005

Department of Conservation
Division of Land Resource Protection
Williamson Act Program



California Legislative Districts

1:100,000

4 2 0 4
Miles

Williamson Act - Prime Agricultural Land
Land which is enrolled under California Land Conservation Act contract and meets any of the following criteria (as set forth under California Government Code Section 51201):
1: Land which qualifies for rating as class I or class II in the Natural Resources Conservation Service land use capability classifications;
2: Land which qualifies for rating 80 to 100 in the Storie Index Rating;
3: Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture;
4: Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars per acre;
5: Land which has returned from the production of unprocessed agricultural plant production and has an annual gross value of not less than two hundred dollars per acre for three of the previous five years.

Williamson Act - Non-Prime Agricultural Land
Land which is enrolled under California Land Conservation Act contract and does not meet any of the criteria for classification as Prime Agricultural Land. Non-Prime Land is defined as Open Space Land of statewide Significance under the California Open Space Subvention Act (see California Government Code Section 16143), and may be identified as such in other documents. Most Non-Prime Land is in agricultural uses such as grazing or non-irrigated crops. However, Non-Prime Land may also include other open space uses which are compatible with agriculture and consistent with local general plans.

Williamson Act - Farmland Security Zone Land
A Farmland Security Zone is an area created within an Agricultural Preserve* by a Board of Supervisors upon request by a land owner or group of land owners.

*Agricultural Preserves allow local jurisdictions to designate priority areas for farmland and open space conservation. The establishment of a preserve indicates the willingness of the jurisdiction to enroll parcels within the preserve under the Williamson Act contract. Agricultural Preserves must generally be at least 100 acres in size.

Williamson Act - Land in Non-Renewal
During the Non-Renewal process, the annual tax assessment gradually increases. At the end of the 9-year Non-Renewal period, the contract is terminated.

Non-Enrolled Land
County land not enrolled with the Williamson Act Program.

Urban and Built-up Land
Land occupied by structures with a build density of at least one unit to one and one-half acres. The areal extent of Developed Land was provided by the Department of Conservation's Farmland Mapping and Monitoring Program.

The California Land Conservation Act of 1965 - commonly referred to as the Williamson Act - is the State's primary program for the conservation of private land in agricultural and open space use. It is a voluntary, locally administered program that offers preferential property taxes on lands which have enforceable restrictions on their use via contracts between individual landowners and local governments. For more information on the Williamson Act please contact the Department of Conservation, 801 K Street, MS13-71, Sacramento, CA 95814. Phone (916) 324-0850; email: dlrp@consrv.ca.gov; web page: www.consrv.ca.gov/DLRP

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The information necessary to depict areas enrolled under contract was derived from sources supplied by county planning agencies and / or assessor offices. This map is intended for internal review and update only and should be used within the limits of this purpose. All questions regarding the contract status of specific property should be directed to the county assessor or planning agency office.

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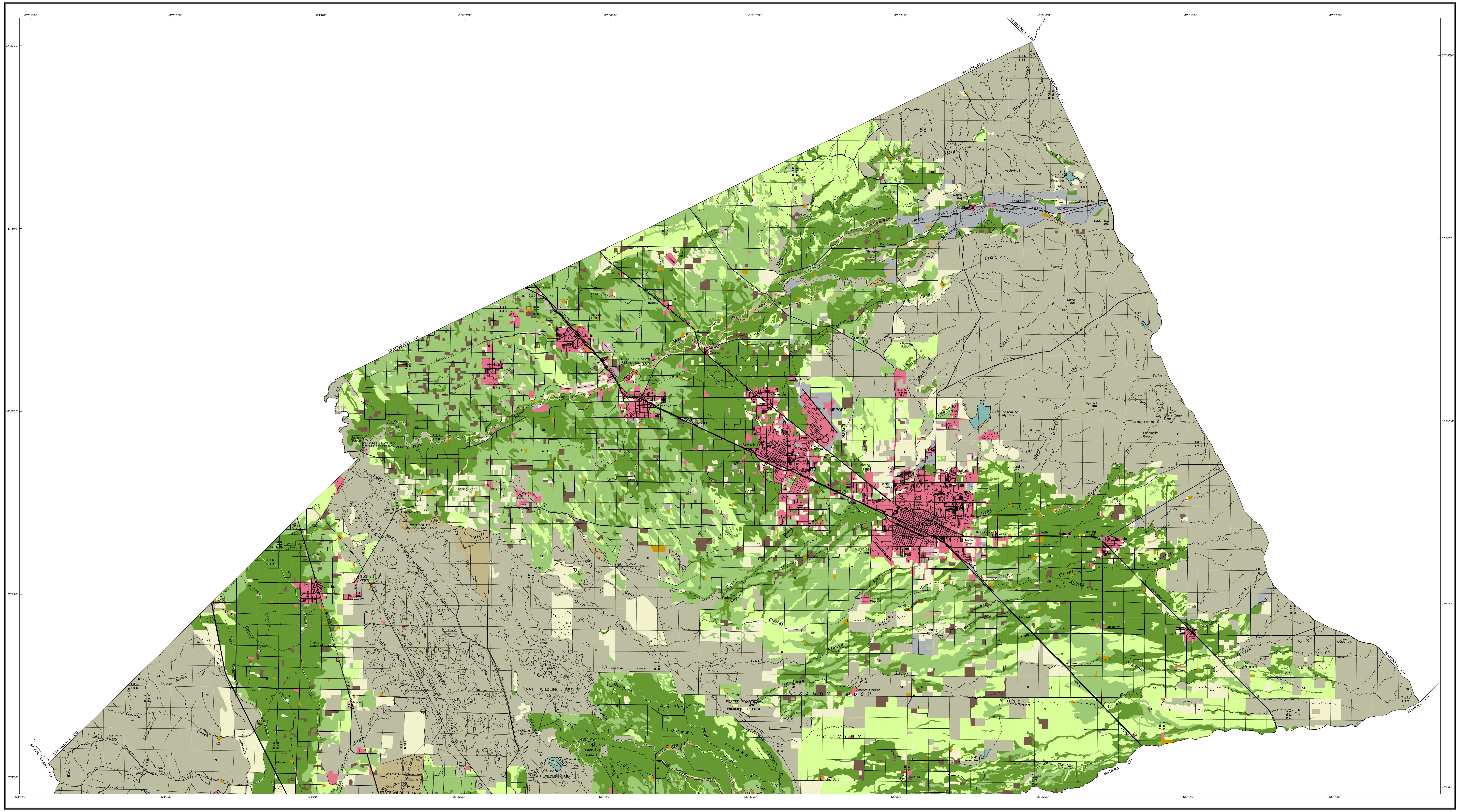
THE NATURAL RESOURCES AGENCY
Mike Chrisman, *Secretary*
DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

RURAL LAND MAPPING EDITION
MERCED COUNTY IMPORTANT FARMLAND 2008
SHEET 1 OF 2

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
FARMLAND MAPPING AND MONITORING PROGRAM



PRIME FARMLAND - 270,644 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 150,874 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 103,992 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF LOCAL IMPORTANCE - 67,984 acres

FARMLANDS THAT HAVE PHYSICAL CHARACTERISTICS THAT WOULD QUALIFY FOR PRIME OR STATEWIDE EXCEPT FOR THE LACK OF IRRIGATION WATER. ALSO, FARMLANDS THAT PRODUCE CROPS THAT ARE NOT LISTED UNDER UNIQUE BUT ARE IMPORTANT TO THE ECONOMY OF THE COUNTY OR CITY.

GRAZING LAND - 567,391 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

CONFINED ANIMAL AGRICULTURE - 14,188 acres

CONFINED ANIMAL AGRICULTURAL LANDS INCLUDE POULTRY FACILITIES, FEEDLOTS, DAIRY FACILITIES, AND FISH FARMS. IN SOME COUNTIES, CONFINED ANIMAL AGRICULTURE IS A COMPONENT OF THE FARMLAND OF LOCAL IMPORTANCE CATEGORY.

NONAGRICULTURAL AND NATURAL VEGETATION - 12,345 acres

NONAGRICULTURAL AND NATURAL VEGETATION INCLUDES HEAVILY WOODED, ROCKY OR BARREN AREAS, RIPARIAN AND WETLAND AREAS, GRASSLAND AREAS WHICH DO NOT QUALIFY FOR GRAZING LAND DUE TO THEIR SIZE OR LAND MANAGEMENT RESTRICTIONS, SMALL WATER BODIES AND RECREATIONAL WATER SKI LAKES. CONSTRUCTED WETLANDS ARE ALSO INCLUDED IN THIS CATEGORY.

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND - 3,603 acres

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND INCLUDES FARMSTEADS, AGRICULTURAL STORAGE AND PACKING SHEDS, UNPAVED PARKING AREAS, COMPOSTING FACILITIES, EQUINE FACILITIES, FIREWOOD LOTS, AND CAMPGROUNDS.

VACANT OR DISTURBED LAND - 15,012 acres

VACANT OR DISTURBED LAND INCLUDES OPEN FIELD AREAS THAT DO NOT QUALIFY FOR AN AGRICULTURAL CATEGORY, MINERAL AND OIL EXTRACTION AREAS, OFF ROAD VEHICLE AREAS, ELECTRICAL SUBSTATIONS, CHANNELIZED CANALS, AND RURAL FREEWAY INTERCHANGES.

RURAL RESIDENTIAL LAND - 5,310 acres

RURAL RESIDENTIAL LAND INCLUDES RESIDENTIAL AREAS OF ONE TO FIVE STRUCTURES PER TEN ACRES.

URBAN AND BUILT-UP LAND - 37,417 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

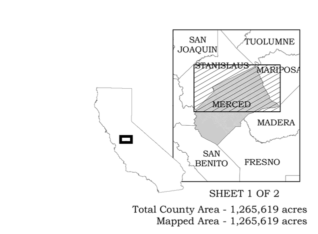
WATER - 16,859 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

SCALE: 1:100,000
1 inch represents approximately 1.6 miles

Kilometers: 1 0 1 2 3 4 5 6 7 8 9 10
Miles: 1 0 1 2 3 4 5

The minimum land use mapping unit is 10 acres, except Water, which is mapped to a minimum of 40 acres.
1 square mile = 640 acres.



SHEET 1 OF 2
Total County Area - 1,265,619 acres
Mapped Area - 1,265,619 acres

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Map published January 2010.

STATE OF CALIFORNIA
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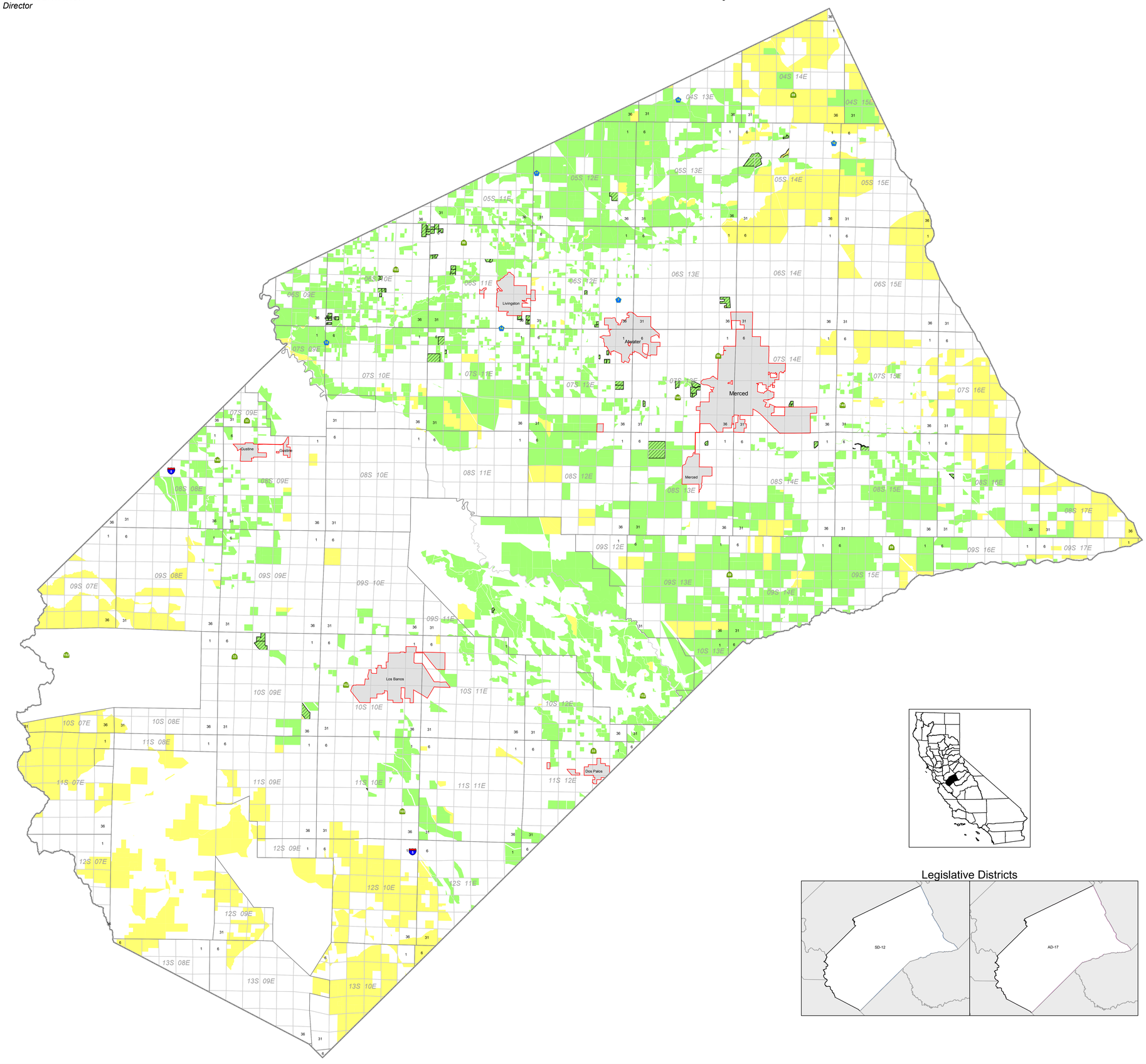
THE RESOURCES AGENCY
Lester A. Snow, *Secretary for Resources*

DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

Merced County Williamson Act Lands 2007

Land Enrolled in Williamson Act and Farmland Security Zone Contracts as of 01-01-2007

Department of Conservation
Division of Land Resource Protection
Williamson Act Program



Williamson Act - Prime Agricultural Land
Williamson Act - Non-Prime Agricultural Land
Williamson Act - Land in Non-Renewal
Water
Urban and Built-up Land
Incorporated City Land
Public Land Survey System
Highways

N

1:125,000

Legislative Districts

Williamson Act - Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and meets any of the following criteria (as set forth under California Government Code Section 51201):
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2: Land which qualifies for rating 80 to 100 in the Storie Index Rating;
3: Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture;
4: Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars per acre;
5: Land which has returned from the production of unprocessed agricultural plant production and has an annual gross value of not less than two hundred dollars per acre for three of the previous five years.

Williamson Act - Non-Prime Agricultural Land

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Williamson Act - Land in Non-Renewal

During the Non-Renewal process, the annual tax assessment gradually increases. At the end of the 9-year Non-Renewal period, the contract is terminated.

Non-Enrolled Land

County land not enrolled with the Williamson Act Program.

Urban and Built-up Land

Land occupied by structures with a build density of at least one unit to one and one-half acres. The areal extent of Developed Land was provided by the Department of Conservation's Farmland Mapping and Monitoring Program.

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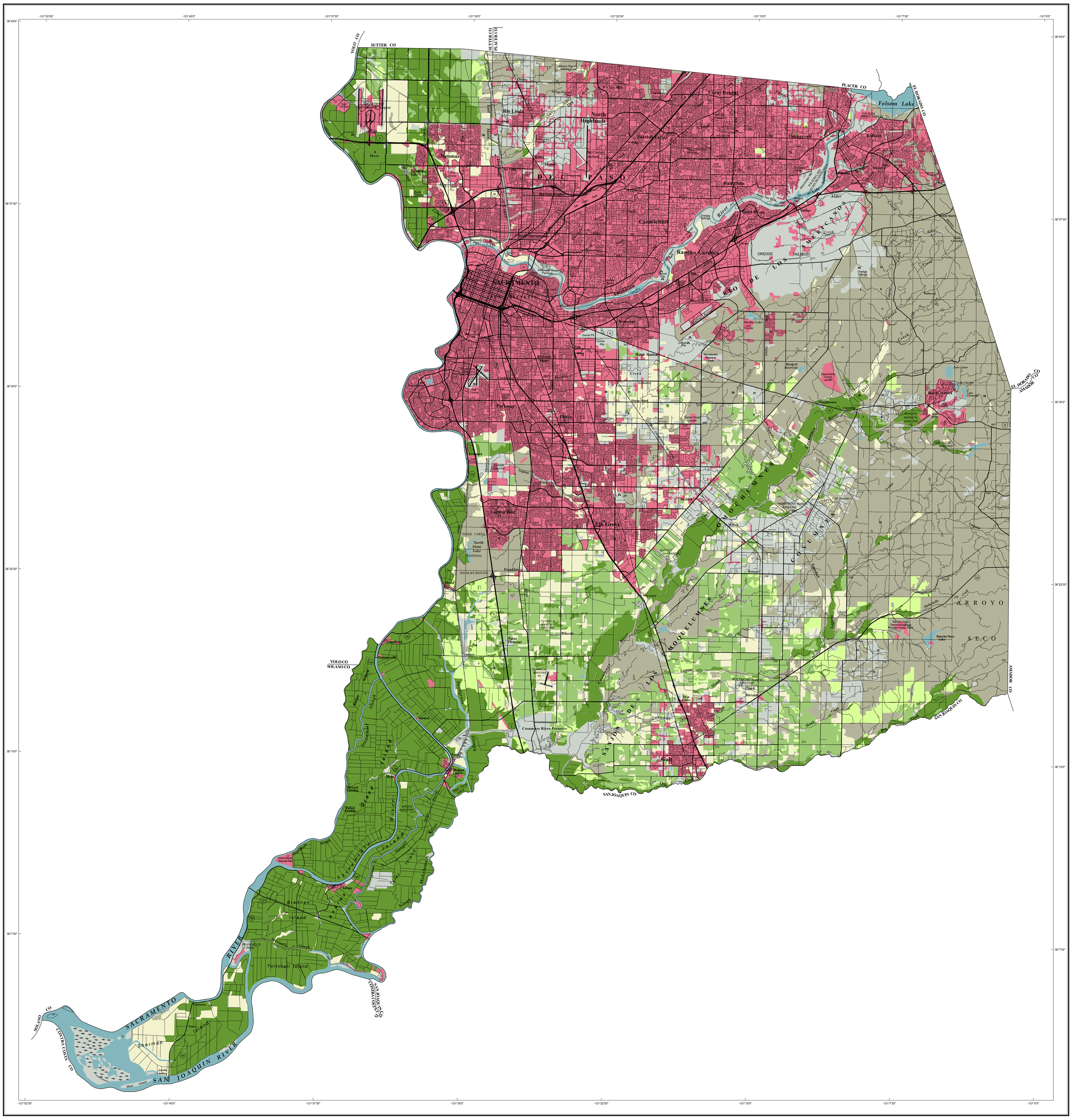
Lester A. Snow, *Secretary*
DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

SACRAMENTO COUNTY IMPORTANT FARMLAND 2008

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
FARMLAND MAPPING AND MONITORING PROGRAM



PRIME FARMLAND - 104,367 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 49,470 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 15,462 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF LOCAL IMPORTANCE - 43,819 acres

LANDS WHICH DO NOT QUALIFY AS PRIME, STATEWIDE, OR UNIQUE DESIGNATION BUT ARE CURRENTLY IRRIGATED CROPS OR PASTURE OR NONIRRIGATED CROPS; LANDS THAT WOULD BE PRIME OR STATEWIDE DESIGNATION AND HAVE BEEN IMPROVED FOR IRRIGATION BUT ARE NOW IDLE; AND LANDS WHICH CURRENTLY SUPPORT CONFINED LIVESTOCK, POULTRY OPERATIONS, AND AQUACULTURE.

GRAZING LAND - 156,146 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

URBAN AND BUILT-UP LAND - 177,914 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

OTHER LAND - 70,757 acres

OTHER LAND IS LAND NOT INCLUDED IN ANY OTHER MAPPING CATEGORY. COMMON EXAMPLES INCLUDE LOW DENSITY RURAL DEVELOPMENTS, BRUSH, TIMBER, WETLAND, AND RIPARIAN AREAS NOT SUITABLE FOR LIVESTOCK GRAZING, CONFINED LIVESTOCK, POULTRY, OR AQUACULTURE FACILITIES, STRIP MINES, BORROW PITS, AND WATER BODIES SMALLER THAN 40 ACRES. VACANT AND NONAGRICULTURAL LAND SURROUNDED ON ALL SIDES BY URBAN DEVELOPMENT AND GREATER THAN 40 ACRES IS MAPPED AS OTHER LAND.

WATER - 18,148 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

SCALE: 1:100,000
1 inch represents approximately 1.6 miles

1 0 1 2 3 4 5 6 7 8 9 10 Kilometers
1 0 1 2 3 4 5 Miles

10 40 160 1 mile

The minimum land use mapping unit is 10 acres, except Water, which is mapped to a minimum of 40 acres.

1 square mile = 640 acres.

Total County Area - 636,083 acres
Mapped Area - 636,083 acres

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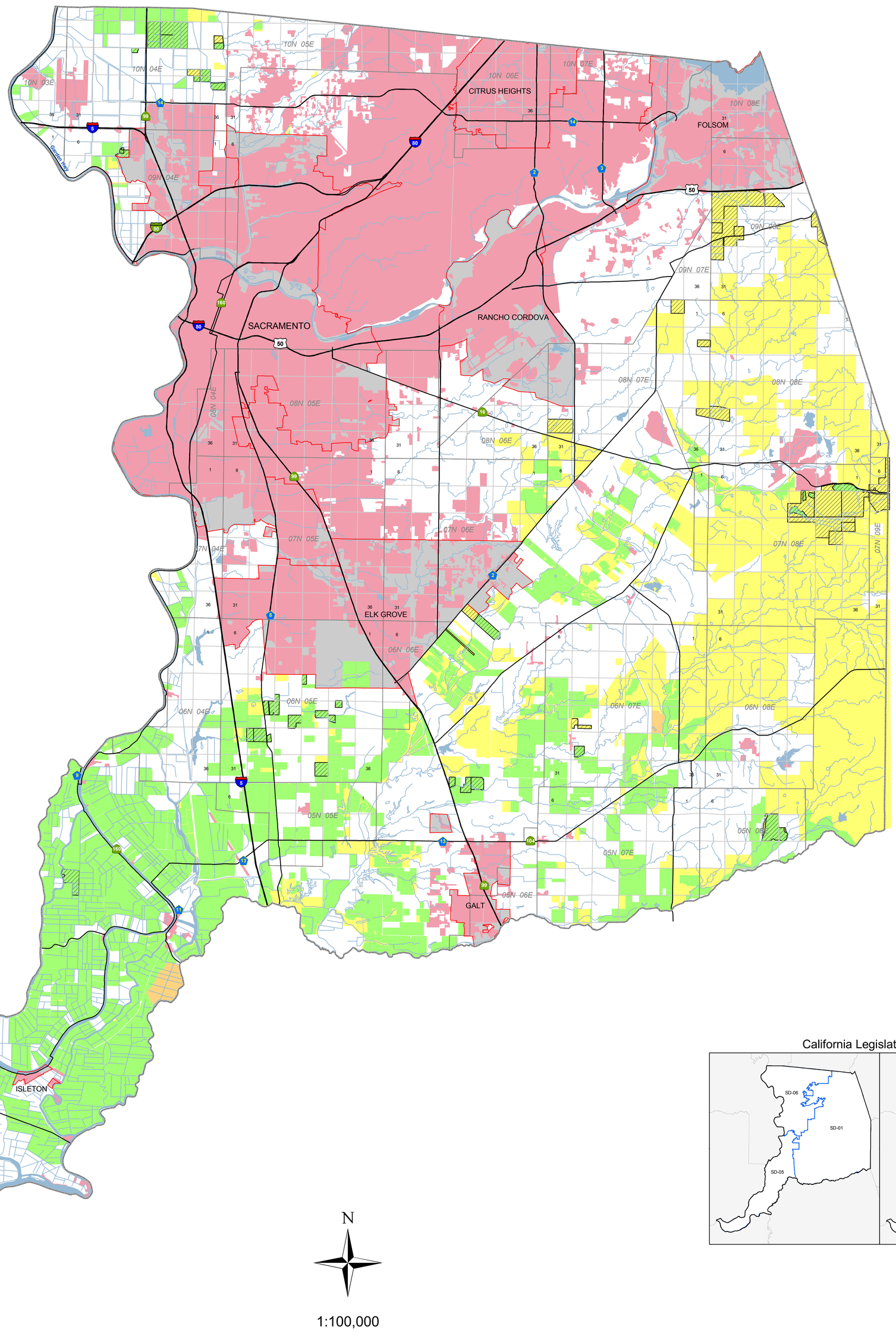
DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

Sacramento County Williamson Act Lands 2009

Land Enrolled in Williamson Act and Farmland Security Zone Contracts as of 01-01-2009

Department of Conservation
Division of Land Resource Protection
Williamson Act Program



- Williamson Act - Prime Agricultural Land
- Williamson Act - Non-Prime Agricultural Land
- Wiiliamson Act - Mixed Agricultural Land
- Williamson Act - Agricultural Land in Non-Renewal
- Water
- Built-up Land
- Incorporated City Boundaries
- Public Land Survey System Grid
- Highway

Williamson Act - Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and meets any of the following criteria (as set forth under California Government Code Section 51201):
1: Land which qualifies for rating as class I or class II in the Natural Resources Conservation Service land use capability classifications;
2: Land which qualifies for rating 80 to 100 in the Storie Index Rating;
3: Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture;
4: Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars per acre;
5: Land which has returned from the production of unprocessed agricultural plant production and has an annual gross value of not less than two hundred dollars per acre for three of the previous five years.

Williamson Act - Non-Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and does not meet any of the criteria for classification as Prime Agricultural Land. Non-Prime Land is defined as Open Space Land of statewide Significance under the California Open Space Subvention Act (see California Government Code Section 16143), and may be identified as such in other documents. Most Non-Prime Land is in agricultural uses such as grazing or non-irrigated crops. However, Non-Prime Land may also include other open space uses which are compatible with agriculture and consistent with local general plans.

Williamson Act – Mixed Enrolled Agricultural Land

Mixed Acreage parcels contain Prime, Non-Prime, Open Space Easement or other contracted or enrolled land and are not yet spatially defined.

Williamson Act - Land in Non-Renewal

During the Non-Renewal process, the annual tax assessment gradually increases. At the end of the 9-year Non-Renewal period, the contract is terminated.

Non-Enrolled Land

County land not enrolled with the Williamson Act Program.

Urban and Built-up Land

Land occupied by structures with a build density of at least one unit to one and one-half acres. The areal extent of Developed Land was provided by the Department of Conservation's Farmland Mapping and Monitoring Program.

The California Land Conservation Act of 1965 - commonly referred to as the Williamson Act - is the State's primary program for the conservation of private land in agricultural and open space use. It is a voluntary, locally administered program that offers preferential property taxes on lands which have enforceable restrictions on their use via contracts between individual landowners and local governments. For more information on the Williamson Act please contact the **Department of Conservation, 801 K Street, MS13-71, Sacramento, CA 95814. Phone (916) 324-0850; email: dlrp@conservation.ca.gov; web page: www.consrv.ca.gov/DLRP**

Maps depicting Williamson Act enrollment are produced in cooperation with the participating counties and the California Department of Conservation's Division of Land Resource Protection using manual cartographic methods and Geographic Information Systems. The Department of Conservation is mandated to record, analyze and publish data regarding areas enrolled under Williamson Act contract.

The information necessary to depict areas enrolled under contract was derived from sources supplied by county planning agencies and / or assessor offices. This map is intended for internal review and update only and should be used within the limits of this purpose. All questions regarding the contract status of specific property should be directed to the county assessor or planning agency office.

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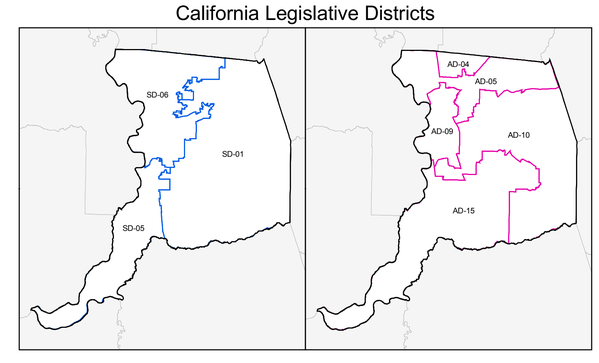
California Legislative Districts



Printed on 11-02-2009
copies available, contact dlrp@conservation.ca.gov

STATE OF CALIFORNIA
Arnold Schwarzenegger, *Governor*

THE RESOURCES AGENCY
Mike Chrisman, *Secretary for Resources*

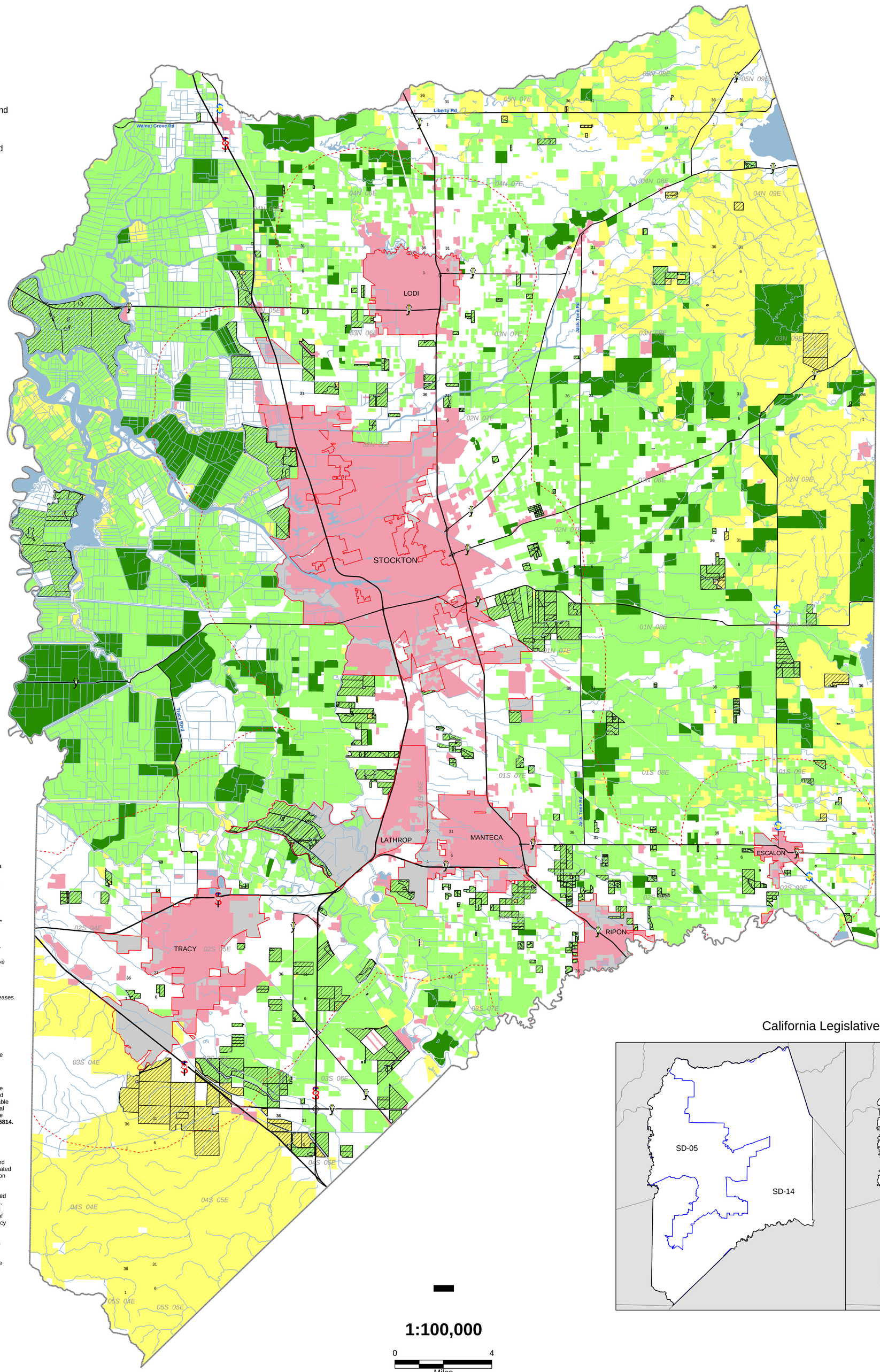
DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

San Joaquin County Williamson Act Lands 2007

Land Enrolled in Williamson Act and Farmland Security Zone Contracts as of 01-01-2007

Department of Conservation
Division of Land Resource Protection
Williamson Act Program

- Williamson Act - Farmland Security Zone Land
- Williamson Act - Prime Agricultural Land
- Williamson Act - Non-Prime Agricultural Land
- Land in Non-Renewal
- Non-Enrolled Land
- Built-up Land
- Incorporated City Land
- Water
- Incorporated City Boundary
- City Sphere of Influence 3 mile buffer
- Public Land Survey System
- Highways



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Williamson Act - Farmland Security Zone Land
A Farmland Security Zone is an area created within an Agricultural Preserve* by a Board of Supervisors upon request by a land owner or group of land owners.

**Agricultural Preserves allow local jurisdictions to designate priority areas for farmland and open space conservation. The establishment of a preserve indicates the willingness of the jurisdiction to enroll parcels within the preserve under the Williamson Act contract. Agricultural Preserves must generally be at least 100 acres in size.*

Williamson Act - Land in Non-Renewal
During the Non-Renewal process, the annual tax assessment gradually increases. At the end of the 9-year Non-Renewal period, the contract is terminated.

Non-Enrolled Land
County land not enrolled with the Williamson Act Program.

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Miles

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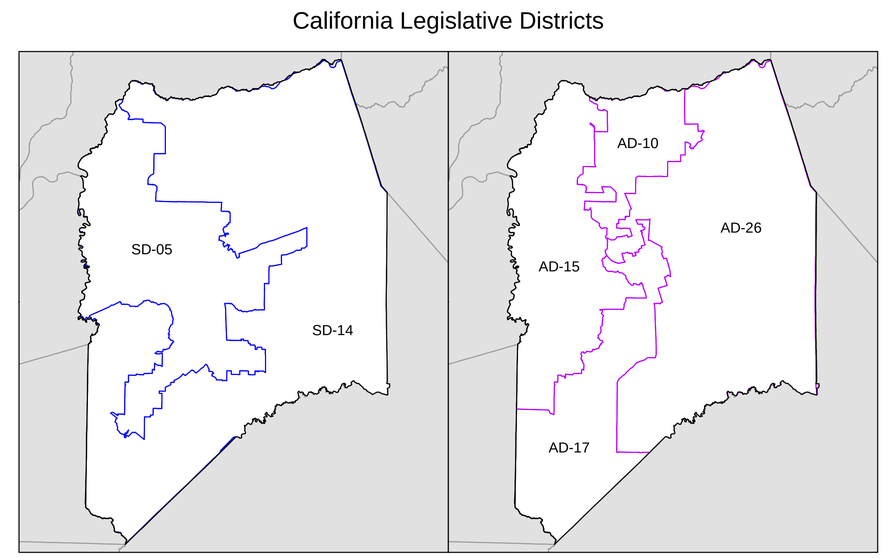

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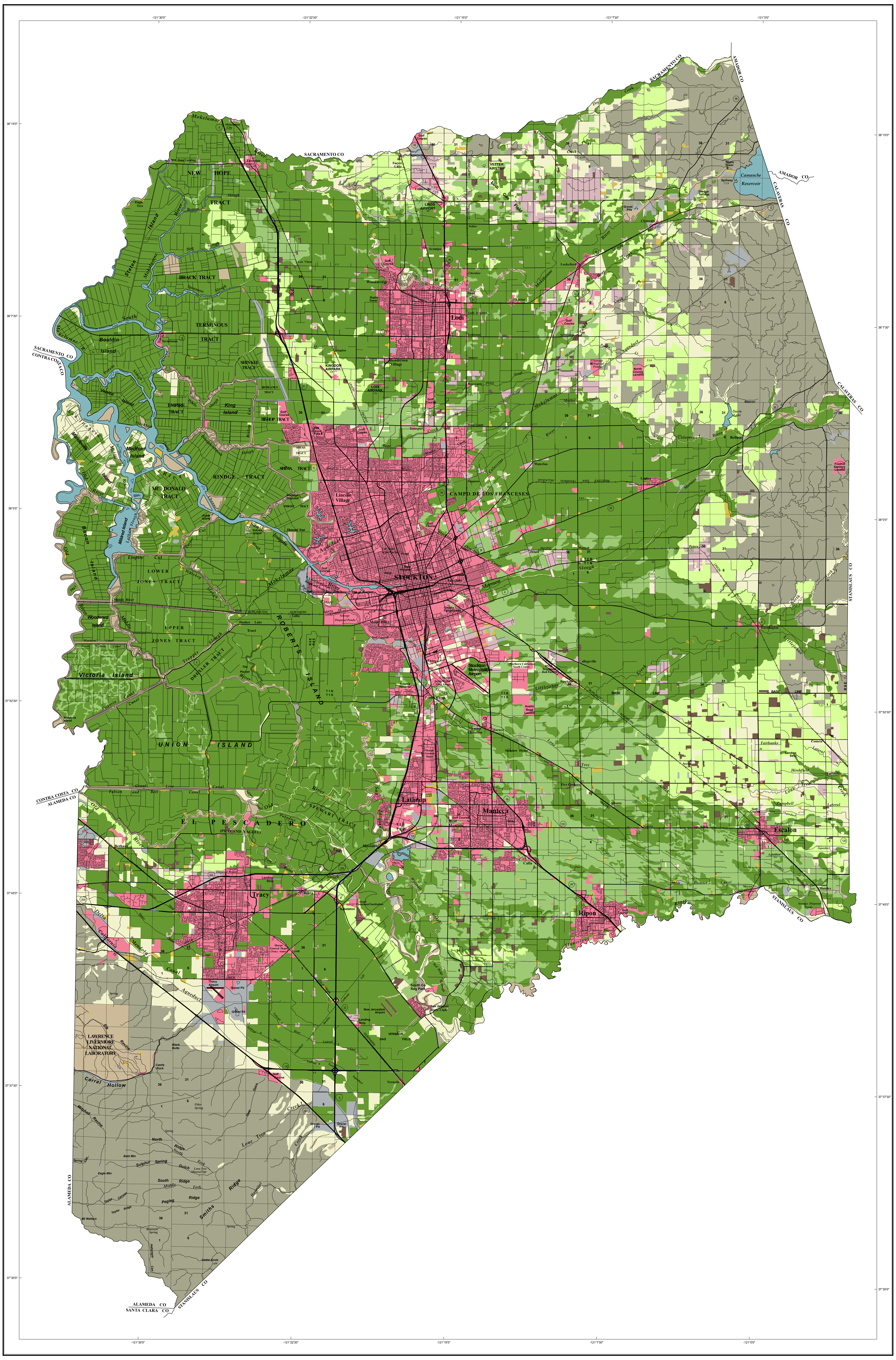
THE NATURAL RESOURCES AGENCY
Lester A. Snow, *Secretary*
DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

RURAL LAND MAPPING EDITION

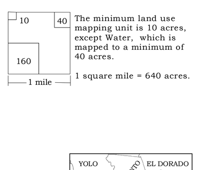
SAN JOAQUIN COUNTY IMPORTANT FARMLAND 2008

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
FARMLAND MAPPING AND MONITORING PROGRAM



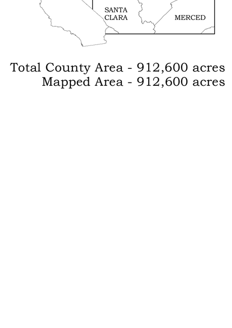
SCALE: 1:100,000
1 inch represents approximately 1.6 miles

Kilometers 1 0 1 2 3 4 5 6 7 8 9 10
Miles 1 0 1 2 3 4 5



The minimum land use mapping unit is 10 acres, except Water, which is mapped to a minimum of 40 acres.

1 square mile = 640 acres.



Total County Area - 912,600 acres
Mapped Area - 912,600 acres

PRIME FARMLAND - 396,985 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 86,299 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 66,624 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF LOCAL IMPORTANCE - 65,788 acres

ALL FARMABLE LAND WITHIN SAN JOAQUIN COUNTY NOT MEETING THE DEFINITIONS OF "PRIME FARMLAND," "FARMLAND OF STATEWIDE IMPORTANCE," AND "UNIQUE FARMLAND." THIS INCLUDES LAND THAT IS OR HAS BEEN USED FOR IRRIGATED PASTURE, DRYLAND FARMING, CONFINED LIVESTOCK OR DAIRY FACILITIES, AQUACULTURE, POULTRY FACILITIES, AND DRY GRAZING. IT ALSO INCLUDES SOILS PREVIOUSLY DESIGNATED BY SOIL CHARACTERISTICS AS "PRIME FARMLAND," "FARMLAND OF STATEWIDE IMPORTANCE," AND "UNIQUE FARMLAND" THAT HAS SINCE BECOME IDLE.

GRAZING LAND - 142,460 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

CONFINED ANIMAL AGRICULTURE - 5,552 acres

CONFINED ANIMAL AGRICULTURAL LANDS INCLUDE POULTRY FACILITIES, FEEDLOTS, DAIRY FACILITIES, AND FISH FARMS. IN SOME COUNTIES, CONFINED ANIMAL AGRICULTURE IS A COMPONENT OF THE FARMLAND OF LOCAL IMPORTANCE CATEGORY.

NONAGRICULTURAL AND NATURAL VEGETATION - 23,140 acres

NONAGRICULTURAL AND NATURAL VEGETATION INCLUDES HEAVILY WOODED, ROCKY OR BARREN AREAS, RIPARIAN AND WETLAND AREAS, GRASSLAND AREAS WHICH DO NOT QUALIFY FOR GRAZING LAND DUE TO THEIR SIZE OR LAND MANAGEMENT RESTRICTIONS, SMALL WATER BODIES AND RECREATIONAL WATER SKI LAKES. CONSTRUCTED WETLANDS ARE ALSO INCLUDED IN THIS CATEGORY.

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND - 4,047 acres

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND INCLUDES FARMSTEADS, AGRICULTURAL STORAGE AND PACKING SHEDS, UNPAVED PARKING AREAS, COMPOSTING FACILITIES, EQUINE FACILITIES, FIREWOOD LOTS, AND CAMPGROUNDS.

VACANT OR DISTURBED LAND - 10,372 acres

VACANT OR DISTURBED LAND INCLUDES OPEN FIELD AREAS THAT DO NOT QUALIFY FOR AN AGRICULTURAL CATEGORY, MINERAL AND OIL EXTRACTION AREAS, OFF ROAD VEHICLE AREAS, ELECTRICAL SUBSTATIONS, CHANNELIZED CANALS, AND RURAL FREEWAY INTERCHANGES.

RURAL RESIDENTIAL LAND - 14,582 acres

RURAL RESIDENTIAL LAND INCLUDES RESIDENTIAL AREAS OF ONE TO FIVE STRUCTURES PER TEN ACRES.

URBAN AND BUILT-UP LAND - 90,530 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

WATER - 11,773 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

Important Farmland Maps are compiled by the Farmland Mapping and Monitoring Program (FMMP) pursuant to Section 65570 of the California Government Code. To create the maps, FMMP combines current land use information with U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) soil survey data. Soil units qualifying for Prime Farmland and Farmland of Statewide Importance are determined by the NRCS. Changes to soil profiles subsequent to publication of NRCS soil surveys are not reflected on this map. This map was developed using NRCS digital soil data (SSURGO) and may contain individual soil units as small as one acre.

Land use status is determined using current and historic aerial imagery, supplemental GIS data, and field verification. Imagery sources may include public domain datasets, web-based information, and commercially purchased data, depending on data availability. Supplemental data on land management status is obtained from federal, state, and local governments. Map reviewers at the local level contribute valuable information with their comments and suggestions. Please refer to FMMP field analyst reports for each county to obtain specific citations.

Cultural base information for the Important Farmland Maps was derived from public domain data sets, based upon design of the U.S. Geological Survey, with updates generated by digitizing over current imagery.

This map should be used within the limits of its purpose - as a current inventory of agricultural land resources. This map does not necessarily reflect general plan or zoning designations, city limit lines, changing economic or market conditions, or other factors which may be taken into consideration when land use policies are determined. This map is not designed for parcel-specific planning purposes due to its scale and the ten-acre minimum land use mapping unit. Classification of important farmland and urban areas on this map is based on best available data. The information has been delineated as accurately as possible at 1:24,000-scale, but no claim to meet 1:24,000 National Map Accuracy Standards is made due to variations in the quality of source data.

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Additional data is available at www.conservation.ca.gov/dlrp/fmmp, including detail on the program, full size PDF maps, map categories, statistics, field summaries, and GIS data for download. Contact the:

Farmland Mapping and Monitoring Program
801 K Street, MS 18-01
Sacramento, CA 95814
Phone: (916) 324-0859
e-mail: fmmp@conservation.ca.gov

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Map published August 2010.

STATE OF CALIFORNIA
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THE NATURAL RESOURCES AGENCY
Lester A. Snow, *Secretary*
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Bridgett Luther, *Director*

RURAL LAND MAPPING EDITION

STANISLAUS COUNTY IMPORTANT FARMLAND 2008

SHEET 1 OF 2

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
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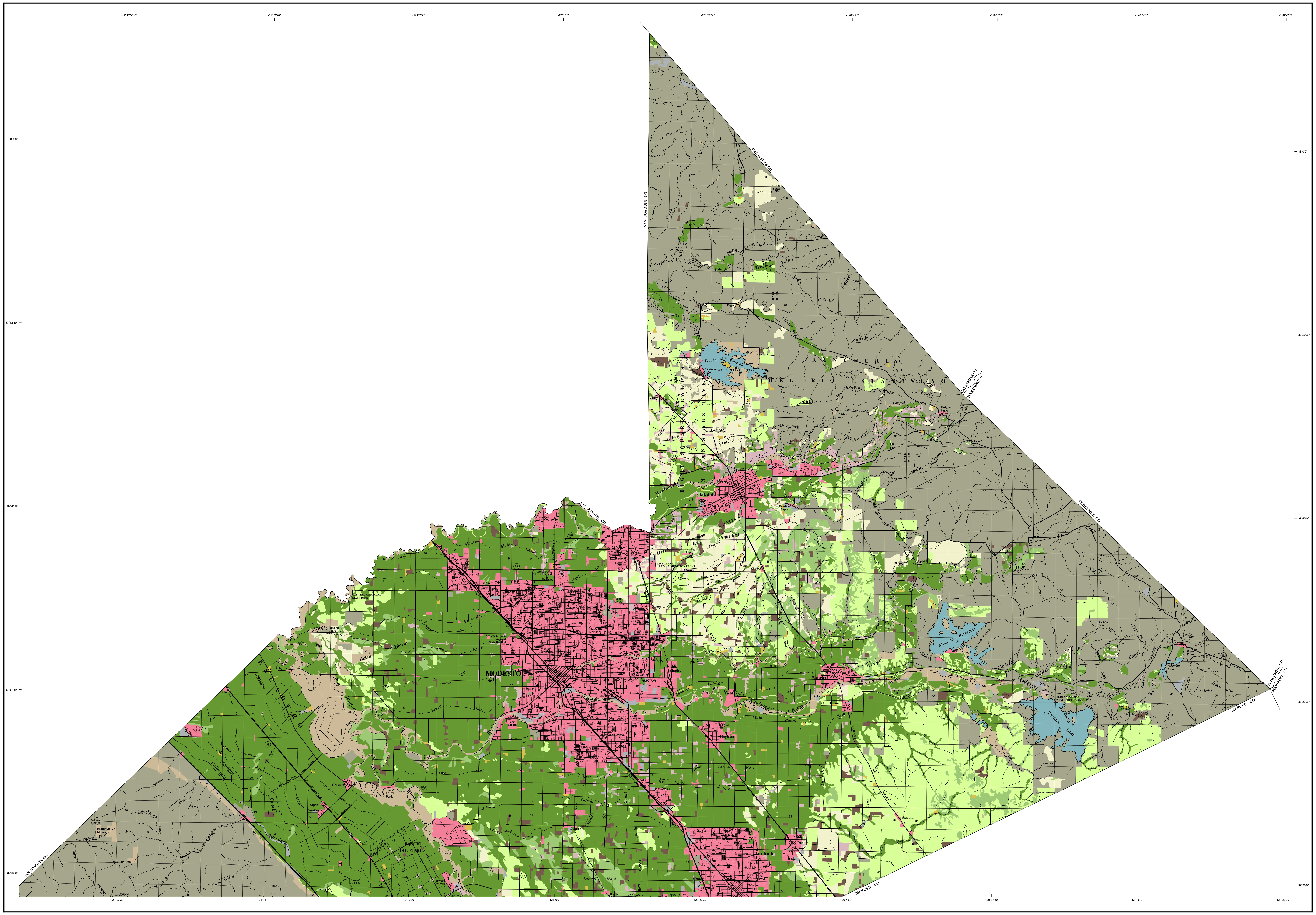

PRIME FARMLAND - 256,165 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 31,448 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 81,368 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF LOCAL IMPORTANCE - 31,159 acres

FARMLANDS GROWING DRYLAND PASTURE, DRYLAND SMALL GRAINS, AND IRRIGATED PASTURE.

GRAZING LAND - 434,136 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

CONFINED ANIMAL AGRICULTURE - 11,593 acres

CONFINED ANIMAL AGRICULTURAL LANDS INCLUDE POULTRY FACILITIES, FEEDLOTS, DAIRY FACILITIES, AND FISH FARMS. IN SOME COUNTIES, CONFINED ANIMAL AGRICULTURE IS A COMPONENT OF THE FARMLAND OF LOCAL IMPORTANCE CATEGORY.

NONAGRICULTURAL AND NATURAL VEGETATION - 35,301 acres

NONAGRICULTURAL AND NATURAL VEGETATION INCLUDES HEAVILY WOODED, ROCKY OR BARREN AREAS, RIPARIAN AND WETLAND AREAS, GRASSLAND AREAS WHICH DO NOT QUALIFY FOR GRAZING LAND DUE TO THEIR SIZE OR LAND MANAGEMENT RESTRICTIONS, SMALL WATER BODIES AND RECREATIONAL WATER SKI LAKES. CONSTRUCTED WETLANDS ARE ALSO INCLUDED IN THIS CATEGORY.

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND - 2,569 acres

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND INCLUDES FARMSTEADS, AGRICULTURAL STORAGE AND PACKING SHEDS, UNPAVED PARKING AREAS, COMPOSTING FACILITIES, EQUINE FACILITIES, FIREWOOD LOTS, AND CAMPGROUNDS.

VACANT OR DISTURBED LAND - 5,476 acres

VACANT OR DISTURBED LAND INCLUDES OPEN FIELD AREAS THAT DO NOT QUALIFY FOR AN AGRICULTURAL CATEGORY, MINERAL AND OIL EXTRACTION AREAS, OFF ROAD VEHICLE AREAS, ELECTRICAL SUBSTATIONS, CHANNELIZED CANALS, AND RURAL FREEWAY INTERCHANGES.

RURAL RESIDENTIAL LAND - 9,516 acres

RURAL RESIDENTIAL LAND INCLUDES RESIDENTIAL AREAS OF ONE TO FIVE STRUCTURES PER TEN ACRES.

URBAN AND BUILT-UP LAND - 63,971 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

WATER - 7,467 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

SCALE: 1:100,000
1 inch represents approximately 1.6 miles

Kilometers: 1 0 1 2 3 4 5 6 7 8 9 10
Miles: 1 0 1 2 3 4 5

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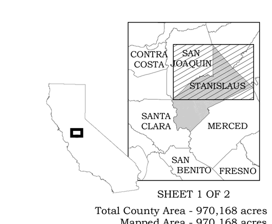

SHEET 1 OF 2
Total County Area - 970,168 acres
Mapped Area - 970,168 acres

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Map published June 2010.

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DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

Stanislaus County Williamson Act Lands 2006

Land Enrolled in Williamson Act and Farmland Security Zone Contracts as of 01-01-2006

Department of Conservation
Division of Land Resource Protection
Williamson Act Program

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- **Williamson Act - Non-Prime Agricultural Land**
- **Williamson Act - Agricultural Land in Non-Renewal**
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- **Urban and Built-up**
- **Incorporated City Land**
- **Water**
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- **Public Land Survey System**
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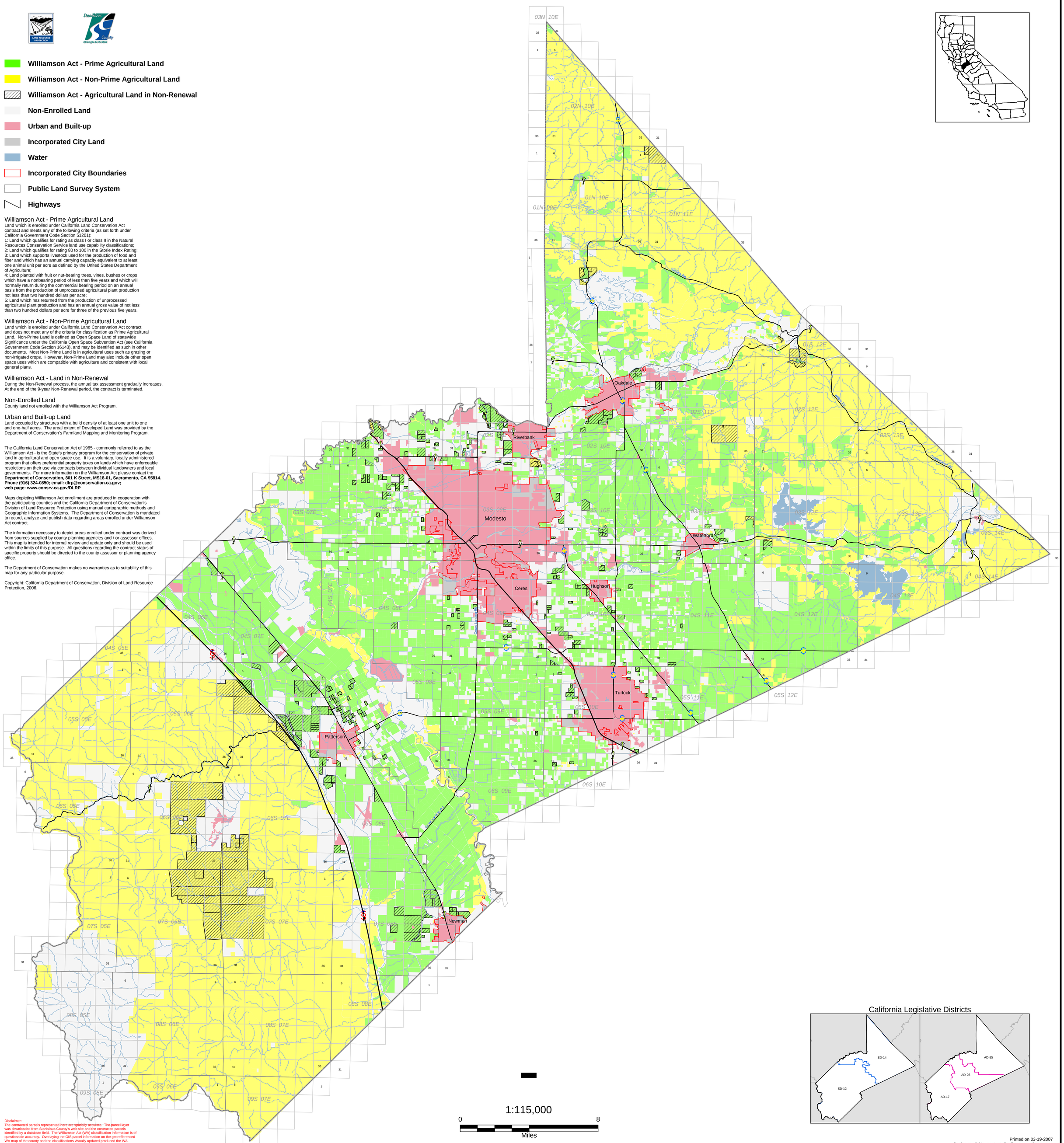
Oakdale
Riverbank
Modesto
Waterford
Ceres
Hughson
Turlock
Patterson
Newman
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01N 11E
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Stanislaus River
Tuolumne River
Merced River
Dry Creek
Bear Creek
Tuolumne River
Stanislaus

STATE OF CALIFORNIA
Arnold Schwarzenegger, *Governor*

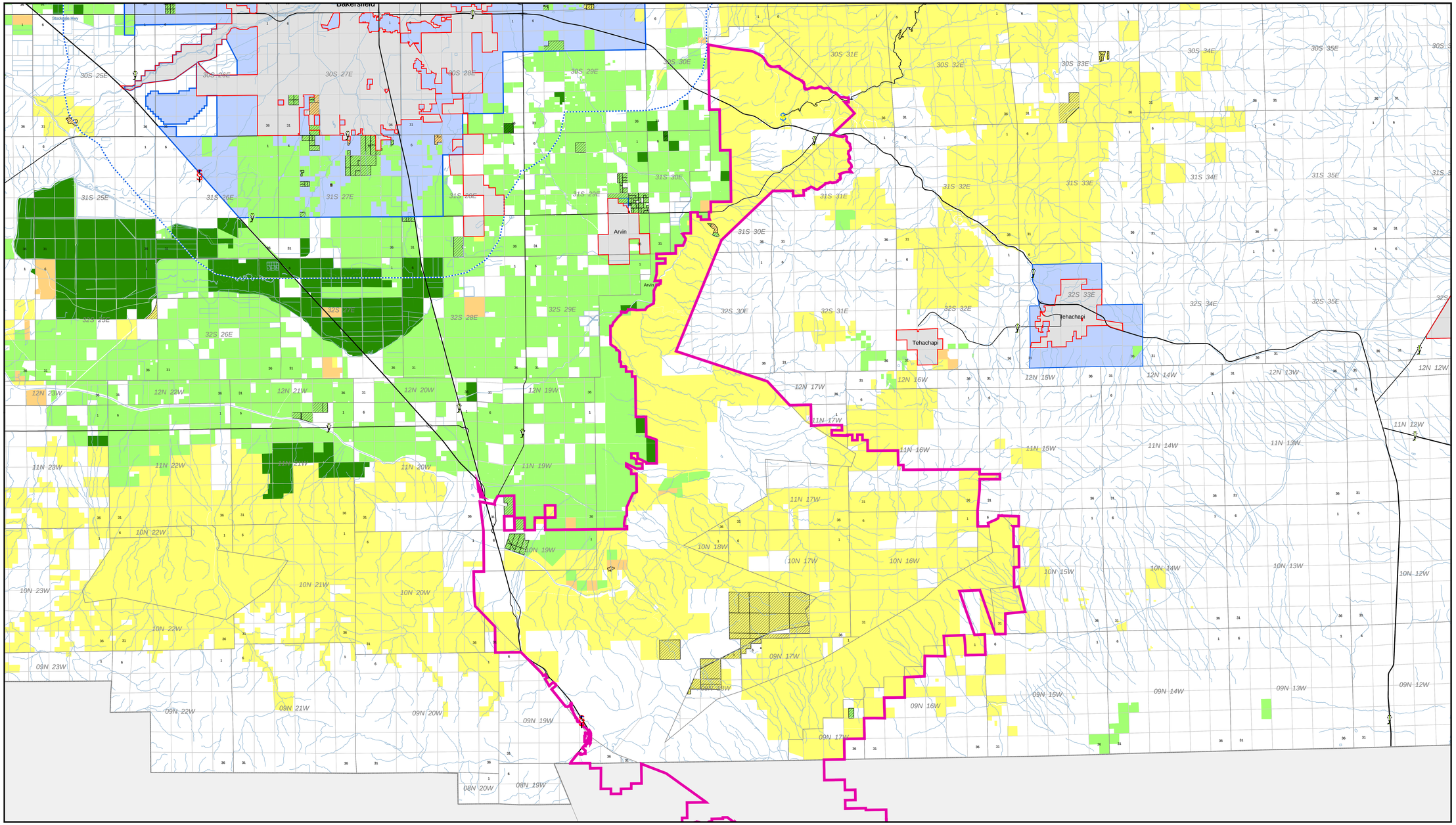
THE RESOURCES AGENCY
Mike Chrisman, *Secretary for Resources*

DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

Kern County Williamson Act Lands 2007

Land Enrolled in Williamson Act and Farmland Security Zone Contracts as of 01-01-2007

Department of Conservation
Division of Land Resource Protection
Williamson Act Program



- Williamson Act - Farmland Security Zone Land
- Williamson Act - Prime Agricultural Land
- Williamson Act - Non-Prime Agricultural Land
- Williamson Act - Mixed Enrollment Agricultural Land
- Williamson Act - Agricultural Land in Non-Renewal
- Urban and Built Up Land
- Incorporated City Land
- City Sphere of Influence Area
- Water
- Non-Enrolled Land
- Tejon Ranch Boundary
- Incorporated City Boundary
- Incorporated City Boundary 3-mile buffer
- City Sphere of Influence
- City Sphere of Influence 3-mile buffer
- Public Land Survey System
- Highways

Williamson Act - Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and meets any of the following criteria (as set forth under California Government Code Section 51201):
1: Land which qualifies for rating as class I or class II in the Natural Resources Conservation Service land use capability classifications;
2: Land which qualifies for rating 80 to 100 in the Storie Index Rating;
3: Land which supports livestock used for the production of food and fiber and which has an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture;
4: Land planted with fruit or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years and which will normally return during the commercial bearing period on an annual basis from the production of unprocessed agricultural plant production not less than two hundred dollars per acre;
5: Land which has returned from the production of unprocessed agricultural plant production and has an annual gross value of not less than two hundred dollars per acre for three of the previous five years.

Williamson Act - Non-Prime Agricultural Land

Land which is enrolled under California Land Conservation Act contract and does not meet any of the criteria for classification as Prime Agricultural Land. Non-Prime Land is defined as Open Space Land of statewide Significance under the California Open Space Subvention Act (see California Government Code Section 16143), and may be identified as such in other documents. Most Non-Prime Land is in agricultural uses such as grazing or non-irrigated crops. However, Non-Prime Land may also include other open space uses which are compatible with agriculture and consistent with local general plans.

Williamson Act - Farmland Security Zone Land

A Farmland Security Zone is an area created within an Agricultural Preserve* by a Board of Supervisors upon request by a land owner or group of land owners.

**Agricultural Preserves allow local jurisdictions to designate priority areas for farmland and open space conservation. The establishment of a preserve indicates the willingness of the jurisdiction to enroll parcels within the preserve under the Williamson Act contract. Agricultural Preserves must generally be at least 100 acres in size.*

Williamson Act - Mixed Enrolled Agricultural Land

Mixed Acreage parcels contain Prime, Non-Prime, Open Space Easement or other contracted or enrolled land and are not yet spatially defined.

Williamson Act - Land in Non-Renewal

During the Non-Renewal process, the annual tax assessment gradually increases. At the end of the 9-year Non-Renewal period, the contract is terminated.

Non-Enrolled Land

County land not enrolled with the Williamson Act Program.

Urban and Built-up Land

Land occupied by structures with a build density of at least one unit to one and one-half acres. The areal extent of Developed Land was provided by the Department of Conservation's Farmland Mapping and Monitoring Program.

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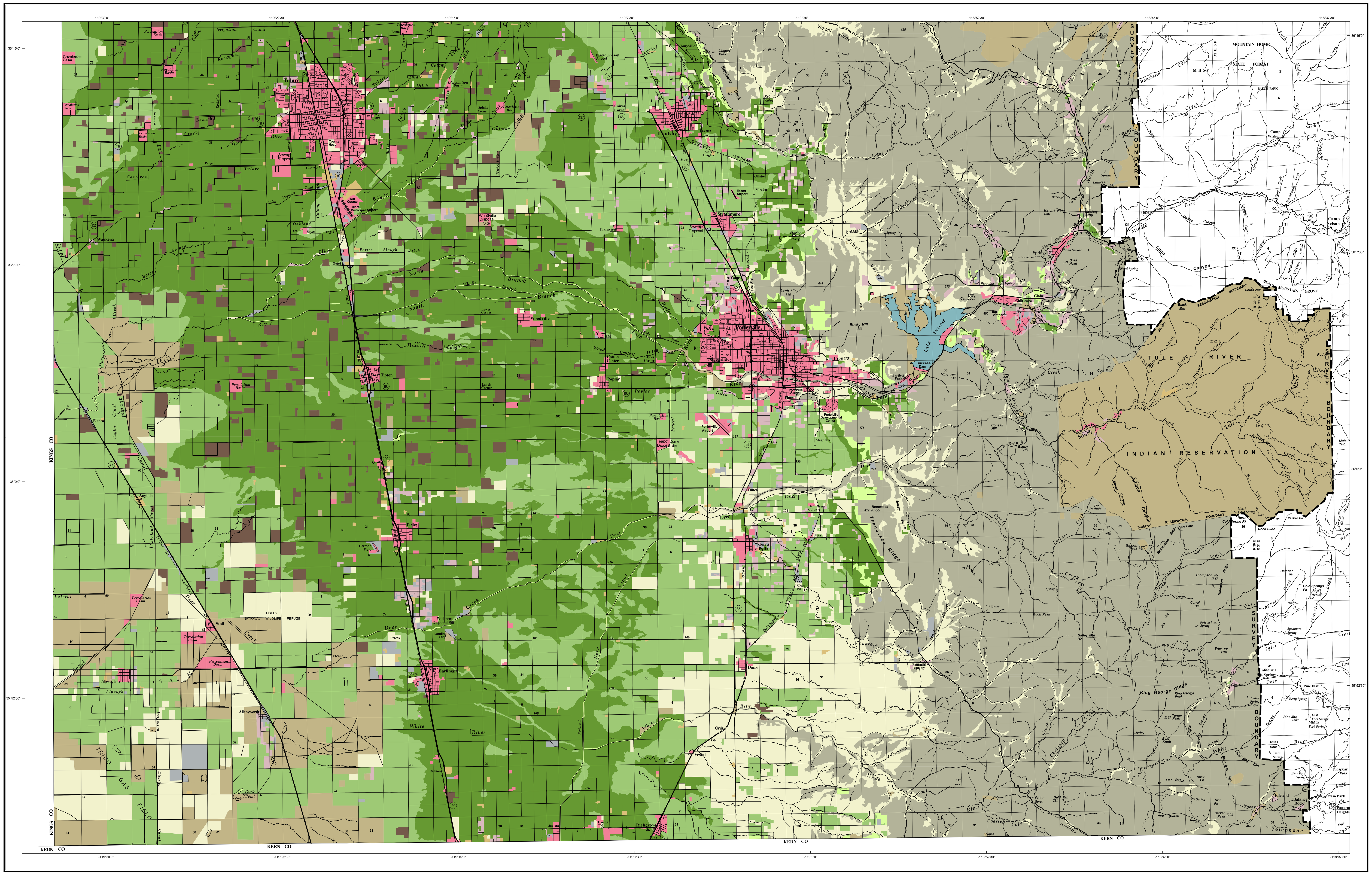
THE NATURAL RESOURCES AGENCY
Mike Chrisman, *Secretary*
DEPARTMENT OF CONSERVATION
Bridgett Luther, *Director*

RURAL LAND MAPPING EDITION

TULARE COUNTY IMPORTANT FARMLAND 2008

SHEET 2 OF 2

CALIFORNIA DEPARTMENT OF CONSERVATION
DIVISION OF LAND RESOURCE PROTECTION
FARMLAND MAPPING AND MONITORING PROGRAM



PRIME FARMLAND - 375,119 acres

PRIME FARMLAND HAS THE BEST COMBINATION OF PHYSICAL AND CHEMICAL FEATURES ABLE TO SUSTAIN LONG-TERM AGRICULTURAL PRODUCTION. THIS LAND HAS THE SOIL QUALITY, GROWING SEASON, AND MOISTURE SUPPLY NEEDED TO PRODUCE SUSTAINED HIGH YIELDS. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF STATEWIDE IMPORTANCE - 327,204 acres

FARMLAND OF STATEWIDE IMPORTANCE IS SIMILAR TO PRIME FARMLAND BUT WITH MINOR SHORTCOMINGS, SUCH AS GREATER SLOPES OR LESS ABILITY TO STORE SOIL MOISTURE. LAND MUST HAVE BEEN USED FOR IRRIGATED AGRICULTURAL PRODUCTION AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

UNIQUE FARMLAND - 11,920 acres

UNIQUE FARMLAND CONSISTS OF LESSER QUALITY SOILS USED FOR THE PRODUCTION OF THE STATE'S LEADING AGRICULTURAL CROPS. THIS LAND IS USUALLY IRRIGATED, BUT MAY INCLUDE NONIRRIGATED ORCHARDS OR VINEYARDS AS FOUND IN SOME CLIMATIC ZONES IN CALIFORNIA. LAND MUST HAVE BEEN CROPPED AT SOME TIME DURING THE FOUR YEARS PRIOR TO THE MAPPING DATE.

FARMLAND OF LOCAL IMPORTANCE - 126,977 acres

LANDS THAT PRODUCE DRYLAND GRAINS (BARLEY AND WHEAT); LANDS THAT HAVE PHYSICAL CHARACTERISTICS THAT WOULD QUALIFY FOR "PRIME" OR "STATEWIDE IMPORTANT" FARMLANDS EXCEPT FOR THE LACK OF IRRIGATION WATER; AND LANDS THAT CURRENTLY SUPPORT CONFINED LIVESTOCK, POULTRY, AND/OR AQUACULTURE OPERATIONS.

GRAZING LAND - 439,851 acres

GRAZING LAND IS LAND ON WHICH THE EXISTING VEGETATION IS SUITED TO THE GRAZING OF LIVESTOCK.

CONFINED ANIMAL AGRICULTURE - 23,218 acres

CONFINED ANIMAL AGRICULTURAL LANDS INCLUDE POULTRY FACILITIES, FEEDLOTS, DAIRY FACILITIES, AND FISH FARMS. IN SOME COUNTIES, CONFINED ANIMAL AGRICULTURE IS A COMPONENT OF THE FARMLAND OF LOCAL IMPORTANCE CATEGORY.

NONAGRICULTURAL AND NATURAL VEGETATION - 184,162 acres

NONAGRICULTURAL AND NATURAL VEGETATION INCLUDES HEAVILY WOODED, ROCKY OR BARREN AREAS, RIPARIAN AND WETLAND AREAS, GRASSLAND AREAS WHICH DO NOT QUALIFY FOR GRAZING LAND DUE TO THEIR SIZE OR LAND MANAGEMENT RESTRICTIONS, SMALL WATER BODIES AND RECREATIONAL WATER SKI LAKES. CONSTRUCTED WETLANDS ARE ALSO INCLUDED IN THIS CATEGORY.

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND - 5,602 acres

SEMI-AGRICULTURAL AND RURAL COMMERCIAL LAND INCLUDES FARMSTEADS, AGRICULTURAL STORAGE AND PACKING SHEDS, UNPAVED PARKING AREAS, COMPOSTING FACILITIES, EQUINE FACILITIES, FIREWOOD LOTS, AND CAMPGROUNDS.

VACANT OR DISTURBED LAND - 9,537 acres

VACANT OR DISTURBED LAND INCLUDES OPEN FIELD AREAS THAT DO NOT QUALIFY FOR AN AGRICULTURAL CATEGORY, MINERAL AND OIL EXTRACTION AREAS, OFF ROAD VEHICLE AREAS, ELECTRICAL SUBSTATIONS, CHANNELIZED CANALS, AND RURAL FREEWAY INTERCHANGES.

RURAL RESIDENTIAL LAND - 19,674 acres

RURAL RESIDENTIAL LAND INCLUDES RESIDENTIAL AREAS OF ONE TO FIVE STRUCTURES PER TEN ACRES.

URBAN AND BUILT-UP LAND - 57,948 acres

URBAN AND BUILT-UP LAND IS OCCUPIED BY STRUCTURES WITH A BUILDING DENSITY OF AT LEAST 1 UNIT TO 1.5 ACRES, OR APPROXIMATELY 6 STRUCTURES TO A 10-ACRE PARCEL. COMMON EXAMPLES INCLUDE RESIDENTIAL, INDUSTRIAL, COMMERCIAL, INSTITUTIONAL FACILITIES, CEMETERIES, AIRPORTS, GOLF COURSES, SANITARY LANDFILLS, SEWAGE TREATMENT, AND WATER CONTROL STRUCTURES.

WATER - 4,656 acres

PERENNIAL WATER BODIES WITH AN EXTENT OF AT LEAST 40 ACRES.

SCALE: 1:100,000
1 inch represents approximately 1.6 miles

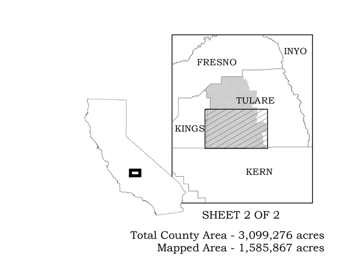
1 0 1 2 3 4 5 6 7 8 9 10 Kilometers

1 0 1 2 3 4 5 Miles

10 | 40 | 160 | 1 mile

The minimum land use mapping unit is 10 acres, except Water, which is mapped to a minimum of 40 acres.

1 square mile = 640 acres.



SHEET 2 OF 2

Total County Area - 3,099,276 acres
Mapped Area - 1,585,867 acres

Important Farmland Maps are compiled by the Farmland Mapping and Monitoring Program (FMMP) pursuant to Section 65570 of the California Government Code. To create the maps, FMMP combines current land use information with U.S. Department of Agriculture-Natural Resources Conservation Service (NRCS) soil survey data. Soil units qualifying for Prime Farmland and Farmland of Statewide Importance are determined by the NRCS. Changes to soil profiles subsequent to publication of NRCS soil surveys are not reflected on this map. This map was developed using NRCS digital soil data (SSURGO) and may contain individual soil units as small as one acre.

Land use status is determined using current and historic aerial imagery, supplemental GIS data, and field verification. Imagery sources may include public domain datasets, web-based information, and commercially purchased data, depending on data availability. Supplemental data on land management status is obtained from federal, state, and local governments. Map reviewers at the local level contribute valuable information with their comments and suggestions. Please refer to FMMP field analyst reports for each county to obtain specific citations.

Cultural base information for the Important Farmland Maps was derived from public domain data sets, based upon design of the U.S. Geological Survey, with updates generated by digitizing over current imagery.

This map should be used within the limits of its purpose - as a current inventory of agricultural land resources. This map does not necessarily reflect general plan or zoning designations, city limit lines, changing economic or market conditions, or other factors which may be taken into consideration when land use policies are determined. This map is not designed for parcel-specific planning purposes due to its scale and the ten-acre minimum land use mapping unit. Classification of important farmland and urban areas on this map is based on best available data. The information has been delineated as accurately as possible at 1:24,000-scale, but no claim to meet 1:24,000 National Map Accuracy Standards is made due to variations in the quality of source data.

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Additional data is available at www.conservation.ca.gov/dlrp/fmmp, including detail on the program, full size PDF maps, map categories, statistics, field summaries, and GIS data for download. Contact the:

Farmland Mapping and Monitoring Program
801 K Street, MS 18-01
Sacramento, CA 95814
Phone: (916) 324-0859
e-mail: fmmp@conservation.ca.gov

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Map published November 2009.

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THE RESOURCES AGENCY
Lester A. Snow, *Secretary for Resources*

DEPARTMENT OF CONSERVATION
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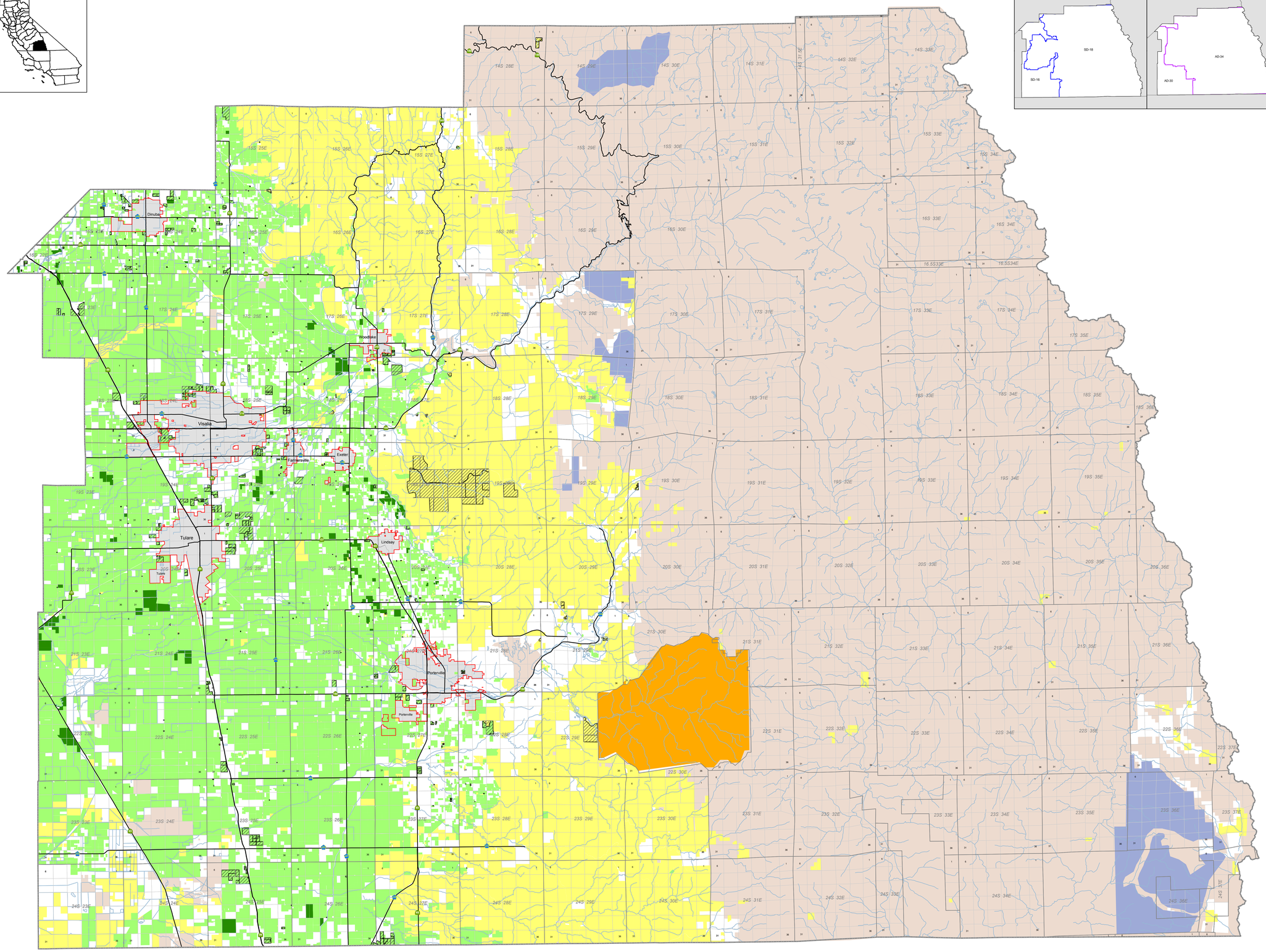
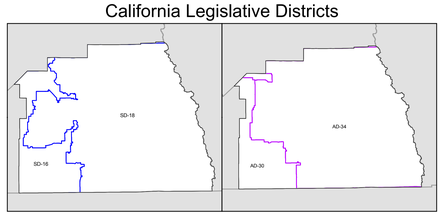
Tulare County Williamson Act Lands 2009

Land Enrolled in Williamson Act and Farmland Security Zone Contracts as of 01-01-2009

Department of Conservation
Division of Land Resource Protection
Williamson Act Program



California Legislative Districts



- Williamson Act - Farmland Security Zone Land
- Williamson Act - Prime Agricultural Land
- Williamson Act - Non-Prime Agricultural Land
- Williamson Act - Agricultural Land in Non-Renewal
- Public, Trust and Conservation Land
- Tule River Reservation
- Wilderness Area
- Urban and Built-up Land
- Incorporated City Land
- Water
- Public Land Survey System
- Highways

N

1:150,000

0 6
Miles

Williamson Act - Prime Agricultural Land

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Williamson Act - Land in Non-Renewal

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APPENDIX B

HAZARDOUS CONTAMINANTS LIST

APPENDIX B
HAZARDOUS CONTAMINANTS LIST

The following list is derived from the State of California's Department of Toxic Substances EnviroStor Database, which includes Federal Superfund Sites (NPL), State Response Sites, Voluntary Cleanup Sites, School Cleanup Sites and Hazardous Waste Permit Sites. In summary, there are numerous hazardous cleanup sites, including superfund sites, along the project alignment. The following list provides the site location, type of hazardous site and information regarding regulatory oversight. Some sites have been certified while others are under continuing review. Additional information is provided when sites are on property currently or historically owned by the railroads. Sites on the Geotracker Leaking Underground Fuel Tank (LUFT) and (SLIC) are included if the cases are open and adjacent to the project alignment, or they are on property currently or historically owned by the railroads, or the case is on or adjacent to a site identified in the project description for proposed project facilities. Data compiled in March 2012.

<u>Sacramento Maintenance Facility</u>

Harbor Sand and Gravel
200 28th Street
Sacramento, CA 95814
Cleanup Program Site - Geotracker SLIC
Cleanup Status: Open - Inactive as of 1994. No spill data provided.

Blair Leasing Company
206 24th Street
Sacramento, CA 95816
LUST Cleanup Site
Cleanup Status: Completed - Case Closed as of 12/27/2002 after excavation and disposal of affected soil under regulatory oversight.

<u>UPRR from Sacramento to Stockton - western alignment</u>

Ken's Buff and Plating (70000051)
1816 21st Street
Sacramento, CA 95814
Sacramento County
Site Type: State Response
Status: Backlog

Sacramento Cable (34480005)
2175 Perkins Way
Sacramento, CA 95818
Sacramento County
Site Type: State Response or NPL
Status: Certified / Operation & Maintenance with Land Use Restrictions

U.S. Cold Storage (34890001)
2338 9th Avenue
Sacramento, CA 95818
Sacramento County
Site Type: Voluntary Cleanup
Status: Inactive - Action Required

Union Pacific Railroad, Curtis Park (34400003)
3675 Western Pacific Avenue
Sacramento, CA 95818
Sacramento County
Site Type: State Response or NPL
Status: Active
Groundwater (other than drinking water) and soil have been impacted by historic railroad car maintenance activities. The Site is divided into active (24 acres) and inactive (about 70 acres) portions of the Rail Yard. The active portion is currently operating as a switching yard by Union Pacific Rail Road Company. Land use restrictions apply. DTSC - Site Cleanup Program - Lead

Hewitt Property
4200 24th St
Sacramento, CA 95822
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Fruitridge Vista Water Company
Wells 1, 2, 11, &12 37th and 47th Streets
Sacramento, CA 95824
Cleanup Program Site
Cleanup Status: Open - Inactive

Franklin Auxiliary Field #6 (J09ca0809) (80000567)
Bruceville Road
Elk Grove, CA 95757
Sacramento County
Site Type: Fuds
DTSC - Site Cleanup Program

PG&E Thornton Dehydrator Station
CR J8 and Barber Rd (4mi N of Thornton)
Thornton, CA
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Universal Forest Products (39240017)
26200 Nowell Road
Thornton, CA 95686
San Joaquin County
Site Type: Voluntary Cleanup
No Further Action as of 4/13/2005

PG&E Las Vinas Dehydrator Station
Woodbridge Rd
Lodi, CA
Cleanup Program Site
Cleanup Status: Open - Assessment & Interim Remedial Action

SJRRC Maintenance Facility (39240003) (American Moulding and Millwork)
West Lane and Alpine Avenue
Stockton, CA 95204
Site Type: Voluntary Cleanup
Status: Certified O&M - Land Use Restrictions Only

Stockton Developmental Center
1252 Stanislaus St
Stockton, CA 95202
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

PG&E North Union Street (60001427)
425 North Union Street
Stockton, CA 95205
Site Type: Voluntary Cleanup
Status: Active

Aurora Auto Body Works
446 North Aurora Street
Stockton, CA 95205
Cleanup Program Site
Cleanup Status: Open - Inactive

Merlo Property (Former SP RR)
936 Weber Ave E
Stockton, CA 95202
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Capitol Venture Enterprises
400 Aurora St S
Stockton, CA 95201
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Beaulieu Chemical Company
400 S Aurora St
Stockton, CA 95203
Voluntary Cleanup Site
No Further Action as of 6/28/1995

Santa Fe Railway
1033 Scotts Ave E
Stockton, CA 95205
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Santa Fe Railway
748 Union St S
Stockton, CA 95202
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

<u>Stockton to Sacramento UPRR - eastern alignment</u>

Suburban Roofing
5613 Elvas Ave
Sacramento, CA 95819
LUST Cleanup Site
Cleanup Status: Open - Remediation

Procter & Gamble Mfg. Co. (34280055)
Power Inn & Fruitridge Roads
Sacramento, CA 95813
Site Type: Evaluation
Case Closed

Sacramento Army Depot
8350 Fruitridge Road
Sacramento, CA 95813
Federal Superfund Site
Land Use Restrictions
DTSC - Site Cleanup Program
US EPA - Lead

Sacramento Army Depot - Area II
8350 Fruitridge Road
Sacramento, CA 95813
State Response Site
Certified as of 6/30/1998
Pine Mountain Corporation (34240035)
6001 Power Inn Road
Sacramento, CA 95824

Site Type: Evaluation
Open - Inactive
Lifetime Doors
8280 Elder Creek Road
Sacramento, CA 95828
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Andrew Corp. (71003424)
8430 Rovana Circle
Sacramento, CA 95828
Site Type: Tiered Permit
Status: Inactive - Needs Evaluation

Sjostededt Property
8344 Florin Rd
Sacramento, CA 95828
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Georgia-Pacific Chemicals (60001558)
10399 E. Stockton Blvd.
Elk Grove, CA 95624
Site Type: Voluntary Cleanup
Status: Active

Ace Oil Company (34510001)
323 a Street
Galt, CA 95632
Site Type: State Response
Status: Certified

City of Lodi Groundwater Plumes - City of Lodi Groundwater Plumes
110 East Turner Road
Lodi, CA 95240
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Italian Swiss Colony Wines (39200020)
1 West Turner Road
Lodi, CA 95241
Site Type: Evaluation
Status: Refer: Other Agency

Lustre-CAL Nameplate Corp
110 E. Turner Road
Lodi, CA 95240
State Response Site
The City of Lodi will be the lead for the groundwater cleanup task. DTSC referred this site to the RWQCB in May 2005.

Lodi Chrome (71004110)
316 N. Main Street
Lodi, CA 95240
Site Type: Tiered Permit
Status: Inactive - Needs Evaluation

Manufactured Gas Plant Lodi - 2 (39490013)
Main & Locust Streets
Lodi, CA 95240
Site Type: Evaluation
Status: Inactive - Needs Evaluation

Busy Bee Laundry (39720024)
40 North Main Street
Lodi, CA 95240
Site Type: State Response
Status: Refer: RWQCB

PG&E Lodi-1 (Former Manufactured Gas Plant)
712 South Sacramento Street
Lodi, CA
Site Type: Voluntary Cleanup
Cleanup Status: Open - Assessment & Interim Remedial Action

Holz Rubber Co., Inc. (71002658)
1129 S. Sacramento Street
Lodi, CA 95240
Site Type: Tiered Permit
Status: Inactive - Needs Evaluation

American Moulding and Millwork
2801 North West Lane
Stockton, CA 95204
State Response Site
DTSC - Site Cleanup Program - Lead
Cleanup Status: Open - Inactive

SJRRC Maintenance Facility (39240003) (American Moulding and Millwork)
West Lane and Alpine Avenue
Stockton, CA 95204
Site Type: Voluntary Cleanup
Status: Certified O&M - Land Use Restrictions Only

Stockton Developmental Center
1252 Stanislaus St
Stockton, CA 95202
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

PG&E North Union Street (60001427)
425 North Union Street
Stockton, CA 95205
Site Type: Voluntary Cleanup
Status: Active

Aurora Auto Body Works
446 North Aurora Street
Stockton, CA 95205
Cleanup Program Site
Cleanup Status: Open - Inactive

Merlo Property (Former SP RR)
936 Weber Ave E
Stockton, CA 95202
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Capitol Venture Enterprises
400 Aurora St S
Stockton, CA 95201
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Beaulieu Chemical Company
400 S Aurora St
Stockton, CA 95203
Voluntary Cleanup Site
No Further Action as of 6/28/1995

Santa Fe Railway
1033 Scotts Ave E
Stockton, CA 95205
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Santa Fe Railway
748 Union St S
Stockton, CA 95202
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Bakersfield to Oakland alignment

Sunland Refining Corporation
2152 Coffee Road
Bakersfield, CA 93308-5746
Cleanup Program Site
Cleanup Status: Open - Remediation

Kern Water Bank Authority
I-5 and Hwy 43
Bakersfield, CA 93380
Voluntary Cleanup Site
Certified as of 1/27/2000

Brown and Bryant - Shafter Facility
135 Commercial Drive
Shafter, CA 93263
State Response Site
Kern County RWQCB 5F - Central Valley
DTSC - Site Cleanup Program - Lead
US EPA
The Brown and Bryant-Shafter facility began operations in 1955. The site is approximately 15 acres and was used for blending/repackaging liquid fertilizers, insecticides, herbicides, fumigants and defoliants. DTSC requested Santa Fe (landowner of 1/3 of the site) to extend the west site fenceline further west to prevent public exposure of off-site soil contamination. EPA subsequently issued a 106 Order to Santa Fe requiring them to assess the site and develop plans to stabilize and winterize the site to further prevent public exposure potential.

Lone Star Gas Liquids Processing, Inc. (71003216)
19430 Beech Avenue/7th Standard
Shafter, CA 93263
Site Type: Tiered Permit
Status: Inactive - Needs Evaluation

Santa Fe Railway Property - Wasco
7th and H Streets
Wasco, CA 93280
State Response Site - Land Use Restrictions
Certified / Operation & Maintenance as of 6/30/1997
DTSC issued a certification on June 30, 1997 of completion of removal actions in accordance to the approval Removal Action Workplan.

Caltrans - Wasco Station
201 J St
Wasco, CA 93280
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Rio Grande Market
800 Whitley Ave
Corcoran, CA 93212
LUST Cleanup Site
Cleanup Status: Open - Remediation

Hang 'Em High
761 Yoder Blvd
Corcoran, CA 93212
State Response Site
Certified as of 6/19/1987

Puregro-Corcoran
6991 Nevada Avenue
Corcoran, CA 93212
State Response Site
DTSC - Site Cleanup Program - Lead

Sanchez Property (Former Houston Ave Landfill)
11300 Houston Ave
Hanford, CA 93230-9510
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Old Hanford City Dump (16490003)
North Houston Ave between 10 1/2 & 11th Sts
Hanford, CA 93230
Site Type: Evaluation
Status: Refer: RWQCB

SFPP/LP Fresno Terminal (71003519)
4149 S. Maple Avenue
Fresno, CA 93725
Site Type: Tiered Permit
Status: Inactive - Needs Evaluation

Wilbur & Ellis (60001049)
2903 S. Cedar Street
Fresno, CA 93725
Site Type: Evaluation
Status: Inactive - Action Required

Cal Trans Fresno
2796 Railroad St S
Fresno, CA 93725
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Truck City
2768 Railroad S
Fresno, CA 93725
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Weir Floway Inc.
2494 South Railroad Avenue, P.O. Box 164
Fresno, CA 93707
State Response Site
DTSC - Site Cleanup Program - Lead

Valley Foundry and Machine Works
2510 South East Avenue
Fresno, CA 93717
State Response Site
DTSC- Site Cleanup Program - Lead

FMC Corporation - Fresno
2501 South Sunland Avenue
Fresno, CA 93725
State Response Site
DTSC- Site Cleanup Program - Lead
US EPA

Former Burlington Northern Santa Fe Ice House
3090 E Church Ave
Fresno, CA 93721
State Response Site
Active
DTSC - Site Cleanup Program - Lead
Potential Contaminants of Concern Include Chromium Vi and Halogenated Organic Compounds and Trichloroethylene (TCE). In 2002 DTSC issued an Imminent and Substantial Endangerment and Remedial Action Order to the Burlington Northern and Santa Fe Railroad Company.

South Fresno Regional Groundwater Plume (10400005)
North of Church Avenue at South East Ave
Fresno, CA 93721
Site Type: State Response
Status: Active

Former Ice House
702 P St
Fresno, CA 93721
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Santa Fe Railway Motor Car Shd
2650 Tulare Ave E
Fresno, CA 93721
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

BNSF/Amtrak Depot
2650 Tulare St
Fresno, CA 93721
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Macgillis and Gibbs
11272 Road 32
Madera, CA 93639
State Response Site
DTSC- Site Cleanup Program - Lead
The site is comprised of six parcels owned the Burlington Northern Santa Fe (BNSF) Railroad, the MacGillis and Gibbs Company. Removal actions conducted by BNSF have resulted in the removal of the all structures, equipment and features associated with the operations. A remedial action conducted by BNSF involved the consolidation of all contaminated soil to on-site asphalt capped, and double lined

consolidation unit. The consolidation unit is fenced, its asphalt surface inspected and maintained and its leak detection unit monitored annually. Subsurface investigation indicates that a perched water zone present beneath is contaminated with PCP. Monitoring of the deeper regional aquifer indicates that contamination of the PCP is confined to the perched water zones. A pilot study is underway to determine the effectiveness of enhanced bioremediation using Hydrogen Release Compounds (HRC) and Oxygen Release Compounds (ORC) for remediating the perched water zones. A Remedial Action Plan to address the perched water groundwater zone is expected to be approved in March 2007.

Crop Production Services, Merced
265 N. Arboleda Drive
Merced, CA 95340
Cleanup Program Site
Cleanup Status: Open - Remediation

former Streeter, Patterson, and J&M Flying Service
3240 S. Arboleda Rd
Merced, CA 95431
Cleanup Program Site
Cleanup Status: Open - Inactive

Bac-Pritchard Inc (24240006)
3058 North Beachwood Drive
Merced, CA 95340
Site Type: Evaluation
Status: Refer: RWQCB

Castle Air Force Base
2,777 Acres; 5 Mi NW of Merced, CA
Atwater, CA 95342
Federal Superfund Site
Land Use Restrictions
Certified / Operation & Maintenance as of 9/26/2007
DTSC - Site Cleanup Program - Lead

Oxychem - Hughson (50280021)
4012 Santa Fe Avenue
Hughson, CA 95326
Site Type: Evaluation
Status: Refer: Other Agency

Hughson Chemical Co (50070012)
6800 E Whitmore
Hughson, CA 95326
Site Type: Evaluation
Status: Refer: Other Agency

Riverbank Dump Site (50490001)
Terminal Ave
Riverbank, CA 95367
Site Type: Evaluation
Status: Inactive - Action Required

Riverbank Army Ammunition Depot (50340001)
5300 Claus Road
Riverbank, CA 95367
Site Type: Federal Superfund
Status: Active

Elmwood Estates (A&A AUTO)
5536 Roselle Avenue
Riverbank, CA
Cleanup Program Site
Cleanup Status: Open - Inactive

Ripon-Pacific, Inc (39200003)
5050 East Carpenter Road
Stockton, CA 95205
Site Type: Evaluation
Status: Refer: RWQCB

Santa Fe Railway
801 Diamond St
Stockton, CA 95205
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Rotor Blades, Inc
1514 East Scotts Avenue
Stockton, CA 95205
Voluntary Cleanup Site
Inactive - Action Required as of 3/18/2009
DTSC- Site Cleanup Program - Lead

Ocampo Property
821 Wilson Way S
Stockton, CA 95210
LUST Cleanup Site
Cleanup Status: Open - Remediation

Santa Fe Railway
748 Union St S
Stockton, CA 95202
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Siebold Construction Co
820 American St S
Stockton, CA 95206
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

PG&E (39490015)
530 South Center Street
Stockton, CA 95203
Site Type: Voluntary Cleanup
Status: Certified / Operation & Maintenance
Land Use Restrictions

R V Circuits
916 South Center Street
Stockton, CA 95206
State Response Site
No Further Action as of 5/14/2002
DTSC - Site Cleanup Program - Lead

Great Western Chemical Company
826 South Center Street
Stockton, CA 95206
State Response Site
Certified as of 10/21/1994

ACME-STOCKTON Galvanizing Works (39340018)
540 West Scotts Avenue
Stockton, CA 95203
Site Type: State Response
Land Use Restrictions
Certified / Operation & Maintenance as of 1/30/1991
DTSC - Site Cleanup Program - Lead

Lika Corporation - Navy Drive
2041 Navy Drive
Stockton, CA 95206
State Response Site
Certified as of 6/29/1990
DTSC - Site Cleanup Program - Lead

Learner Company, the
2711 Navy Drive
Stockton, CA 95203
Voluntary Cleanup Site
Active as of 12/3/2008
DTSC - Site Cleanup Program - Lead

Southern Pacific Pipeline Spill (39460001)
W Side of Cook Rd, 2000 Ft N of Holt Rd
Holt, CA 95234
Site Type: Voluntary Cleanup
Status: Inactive - Action Required

KMEP Orwood Block Valve Release
Orwood
Brentwood, CA 94513
Cleanup Program Site
Cleanup Status: Open - Assessment & Interim Remedial Action

PG&E Dutch Slough Dehydrator Station
1126 Fetzer Lane
Oakley, CA 94561-6004
Cleanup Program Site
Cleanup Status: Open - Remediation

Contra Costa Auto Salvage
1731 Main Street
Oakley, CA 94561
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead
Status: Certified

PG&E Antioch Natural Gas Terminal
5900 Bridgehead Road
Oakley, CA
Cleanup Program Site
Cleanup Status: Open - Assessment & Interim Remedial Action

Industrial Lot with Railroad Siding (07990014)
2600 Wilbur Avenue
Antioch, CA 94509
Site Type: Voluntary Cleanup
Status: Certified

Vineyard Tract
E. 18th Street
Antioch, CA 94509
Voluntary Cleanup Site
Certified as of 12/19/2005
Contra Costa County
RWQCB 5s - Central Valley
DTSC - Site Cleanup Program - Lead

East Mill
2603 Wilbur Avenue
Antioch, ca 94509
Voluntary Cleanup Site
RWQCB 5s - Central Valley
DTSC - Site Cleanup Program - Lead

West Mill (07260002)
2301 Wilbur Avenue
Antioch, CA 94509
Site Type: Voluntary Cleanup
Status: Certified

Industrial Lot with Tank (07990013)
Wilbur Avenue
Antioch, CA 94509
Site Type: Voluntary Cleanup
Status: Certified

Gaylord Tracts (07790001)
1030 Apollo Court
Antioch, CA 94509
Site Type: Voluntary Cleanup
Status: Certified / Operation & Maintenance
Land Use Restrictions

GWF Power Plant - Antioch
1900 Wilbur Avenue
Antioch, CA
Cleanup Program Site
Cleanup Status: Open - Verification Monitoring

Almond Orchard
2101 E. 18th Street
Antioch, CA 94509
Voluntary Cleanup Site
Certified as of 6/13/2005
DTSC - Site Cleanup Program - Lead

Recreational Tract
1030 Apollo Court
Antioch, CA 94509
Voluntary Cleanup Site
Land Use Restrictions
Certified / Operation & Maintenance as of 6/30/2005
DTSC - Site Cleanup Program - Lead

Industrial Lot with Tank
Wilbur Avenue
Antioch, CA 94509
Voluntary Cleanup Site
Certified as of 1/30/2006
Contra Costa County
RWQCB 5s - Central Valley
DTSC - Site Cleanup Program - Lead

Hickmott Cannery
6th and A Streets
Antioch, CA 94509
State Response Site
RWQCB 5s - Central Valley - Lead
DTSC - Site Cleanup Program

Fulton Shipyard
307 Fulton Shipyard Road
Antioch, CA 94509
State Response Site
DTSC - Site Cleanup Program - Lead

A Street Extension
Antioch, CA 94531
LUST Cleanup Site
Cleanup Status: Open - Verification Monitoring

Prospects
820 2nd St
Antioch, CA 94509
LUST Cleanup Site
Cleanup Status: Open - Assessment & Interim Remedial Action

Antioch Radiator Exchange (07750009)
908 West Second St.
Antioch, CA 94509
Site Type: Evaluation
Status: Refer: Other Agency

US Steel Posco Industries
900 Loveridge Rd
Pittsburg, CA 94565
Case Closed
Land Use Restrictions

The Dow Chemical Company
901 Loveridge Rd
Pittsburg, CA 94565
Haz Waste - Operating Permit

Kemwater Pittsburg Plant (07280165)
1401 Loveridge Road
Pittsburg, CA 94565
Site Type: Evaluation
Status: Refer: RWQCB

Continental Can Company-Plant 80 (70000149)
1300 Loveridge Road
Pittsburg, CA 94590
Site Type: Evaluation
Status: Refer: RWQCB

USS Industrial Park Site #2
1101 Loveridge Rd
Pittsburg, CA 94565
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Burlington Northern Santa Fe Railway Company
Adjoining USS Posco Steel Facility
Pittsburg, CA 94565
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead
The Site is currently owned and operated as a railroad right-of-way by BNSF. The Site consists of only a portion of the BNSF right-of-way in Pittsburg, California. The Site encompasses a rectangular area of approximately 150-feet by 550-feet and contains 11 rail lines trending in an east-west direction. The rail lines are currently used to stage rail cars that are awaiting classification and transport. No prior ownership information was available; however, the Site has reportedly been used as a rail car staging area since at least the early 1940's. The Site is paralleled to the north by a Union Pacific Rail Road (UPRR) right-of-way. Immediately north of the BNSF and UPRR right-of-ways is the USS-POSCO Industries (UPI) facility. The Site is bordered to the south by a residential development, and to the east and west by adjacent portions of the BNSF right-of-way.

Delta Auto Wrecker
6 Industry Road
Pittsburg, CA 94565
State Response Site
DTSC - Hazardous Waste Management Program - Lead

Johns Manville
East 3rd Street
Pittsburg, CA 94565
Voluntary Cleanup Site
Land Use Restrictions
Status: Certified / Operation & Maintenance

Pittsburg St Redevlopment #1
1095 Railroad Ave
Pittsburg, CA 94565
LUST Cleanup Site
Cleanup Status: Open - Assessment & Interim Remedial Action

Acme Steel Co. (71002838)
855 N. Parkside Drive
Pittsburg, CA 94565
Site Type: Tiered Permit
Status: Refer: Other Agency

Trans Bay Cable Converter Station
570 to 620 and 650 W. 10th Street
Pittsburg, CA 94565
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead

PG&E Pittsburg Power Plant (07490048)
595 West 10th Street
Pittsburg, CA 94565
Site Type: Evaluation
Status: Refer: RCRA

Greif Brothers Corporation
701 Willow Pass Road
Pittsburg, CA 94565
Voluntary Cleanup Site
Land Use Restrictions
Certified / Operation & Maintenance as of 3/13/2009
DTSC- Site Cleanup Program - Lead

Narco
1555 Parkside N
Pittsburg, CA 94565
Cleanup Program Site
Cleanup Status: Open - Inactive

Molino Enterprises, Inc.
1215 Willow Pass Road
Pittsburg, CA 94565
Cleanup Program Site
Cleanup Status: Open - Inactive

Triangle PWC
1666 Willow Pass Road
Pittsburg, CA 94565
State Response Site
Certified as of 7/9/1993
DTSC - Site Cleanup Program - Lead

Shell Chemical Company (07280025)
2840 Willow Pass Road
Pittsburg, CA 94565
Site Type: Evaluation
Status: Refer: RCRA

Port Chicago Highway Site (07330029)
805 Port Chicago Highway
West Pittsburg, CA 94565
Site Type: Evaluation
Status: Inactive - Needs Evaluation

Western States Chemical Company (07280073)
East of Nichols Road on Port Chicago Hwy
Pittsburg, CA 94565
Site Type: Evaluation
Status: No Action Required

Union Collier (07280070)
Nichols Rd. & Port Chicago Hwy
Pittsburg, CA 94565
Site Type: Evaluation
Status: Refer: RWQCB

Chemical and Pigment Company
600 Nichols Road
Pittsburg, CA 94565
State Response Site
DTSC- Site Cleanup Program - Lead

Allied Signal Bay Point (07280164)
501 Nichols Road
Pittsburg, CA 94565
Site Type: Voluntary Cleanup
Status: Active

Military Ocean Terminal Concord (07970004)
Port Chicago Highway
Concord, CA 94520
Site Type: Federal Superfund
Status: Active

Tosco Avon Refinery
1 Solano Way
Martinez, CA 94553
Cleanup Program Site
Cleanup Status: Open - Remediation

Exxon Bulls Head
Dna No Street
Martinez, CA
Cleanup Program Site
Cleanup Status: Open - Inactive

Texaco Trading
Mocco Rd @ Waterfront Rd
Martinez, CA
Cleanup Program Site
Cleanup Status: Open - Inactive

Amorco Terminal
200 Waterfront Road
Martinez, CA 94553
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Tosco Pipeline - Wickland
Waterfront Rd at Waterbird Way
Martinez, CA
Cleanup Program Site
Cleanup Status: Open - Inactive

Shell Refinery Martinez
1801 Marina Vista
Martinez, CA 94553
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Rhodia Inc Basic Chemicals
100 Mococo Road
Martinez, CA 94553-1340
Cleanup Program Site
Cleanup Status: Open - Verification Monitoring

Rhone-Poulenc Basic Chemicals Co.
100 Mococo Road
Martinez, CA 94553
State Response Site
DTSC

Caltrans Benicia-Martinez Toll Bridge
Martinez, CA 94553
Voluntary Cleanup Site
No Further Action as of 7/1/1999
DTSC - Site Cleanup Program - Lead

Martinez Refining Co., Div. Of Equilon Ent. (71002268)
Marina Vista & Shell Avenue
Martinez, CA 94553
Site Type: Tiered Permit
Status: Refer: Other Agency

Southern Pacific Property - Martinez
Marina Vista at Ferry St
Martinez, CA
Cleanup Program Site
Cleanup Status: Completed - Case Closed

Al Auto Detail
209 Berrellesa
Martinez, CA 94533
Cleanup Program Site
Cleanup Status: Open - Inactive

Alhambra Site Bank of Oakland
3500 Alhambra Ave
Martinez, CA
Cleanup Program Site
Cleanup Status: Open - Inactive

Caltrans Carquinez Toll Bridge
Crocket, CA 94591
Voluntary Cleanup Site
Inactive - Action Required as of 7/8/2009
DTSC - Site Cleanup Program - Lead

Selby Slag
Shoreline and marsh adjacent to Carquinez Strait
Selby, CA 94802
State Response Site
RWQCB 2 - San Francisco Bay
DTSC - Site Cleanup Program - Lead

Kinder Morgan - Rodeo/Crockett Terminal - Selby Pond Release
north of San Pablo Ave
Rodeo, CA 94572
Cleanup Program Site
Cleanup Status: Open - Verification Monitoring

San Francisco Refinery, Rodeo
1380 San Pablo Ave
Rodeo, CA 94572
Cleanup Program Site
Cleanup Status: Open - Remediation

Rodeo Marina UST
13 Pacific Ave.
Rodeo, CA 94572
LUST Cleanup Site
Cleanup Status: Open - Remediation

Bio-rad Laboratories
2000 Alfred Nobel Drive
Hercules, CA 94547
State Response Site
Certified as of 3/12/1984
DTSC - Site Cleanup Program - Lead

Hercules Properties, Ltd.
560 Railroad Avenue
Hercules, CA 94547
State Response Site
Land Use Restrictions
Certified / Operation & Maintenance as of 6/9/1997
DTSC - Site Cleanup Program

Hercules Middle School
Sycamore Avenue/Willet Street
Hercules, CA 94547
School Cleanup Site
DTSC - Site Cleanup Program - Lead

Point Pinole Properties
5000 Giant Road
Richmond, CA 94806
State Response Site
Land Use Restrictions
Certified / Operation & Maintenance as of 7/30/1987
RWQCB 2 - San Francisco Bay - Lead
DTSC - Site Cleanup Program

Pinole Point Steel/MSC Facility
None
Richmond, CA
Cleanup Program Site
Cleanup Status: Open - Inactive

Reaction Products
840 Morton Avenue
Richmond, CA 94806
State Response Site
DTSC - Site Cleanup Program - Lead

Parkway Transit Village
North End of Goodrick Avenue
Richmond, CA 94806
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead

Dennison Eastman Corp.
3451 Collins St
Richmond, CA 94801
State Response Site
No Further Action as of 5/23/2007
DTSC - Site Cleanup Program - Lead

American Standard Products: OU-III/IJR
3002 Giant Road
San Pablo, CA 94806
State Response Site
Land Use Restrictions
Certified / Operation & Maintenance as of 12/6/1996
DTSC - Site Cleanup Program

Cooper Chemical
2801 Giant Road
Richmond, CA 94806
State Response Site
Land Use Restrictions
Certified / Operation & Maintenance as of 3/7/1997
DTSC - Site Cleanup Program - Lead

Hildreth Holdings
2812 Giant Road
San Pablo, CA 94804
State Response Site
Contra Costa County - Lead

FMC Corporation - Richmond
855 Parr Blvd
Richmond, CA 94801
State Response Site
Land Use Restrictions
Certified / Operation & Maintenance as of 5/29/1992
DTSC - Site Cleanup Program - Lead

Former BNSF Property
Rumrill Blvd at Chelsey Avenue
San Pablo, CA 94806
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead
This vacant site was formerly used as a maintenance support facility by Atchison, Topeka & Santa Fe Railway Company (AT&SF), the former property owner. The site included an above and below ground tank farm. The facility ceased operation in the early 1980s, and was subsequently used for various businesses, including mattress manufacturing, fork lift repair, pallet construction, silver recovery and a vegetable oil business. By 1988, the site was abandoned, with debris, drums of hazardous waste, waste water filled sumps and areas of stained soil on-site. Debris and waste materials were removed by AT&SF from 1988 to 1994. Portions of the site were subsequently used by a wood chipping operation and for storage. In 1996, AT&SF merged with Burlington Northern Railway to form BNSF. Property ownership transferred to the Redevelopment Agency of San Pablo in 2003. The site currently contains weedy vegetation and debris piles, wood chips, bricks and refuse that have accumulated since the completion of remedial activities in the 1990s.

North America Packaging Corporation
801 Chesley Avenue
Richmond, CA 94801
Voluntary Cleanup Site
No Further Action as of 1/8/1996
Contra Costa County - Lead
DTSC - Site Cleanup Program - Lead

Certainteed, Richmond (07290021)
1014 Chesley Avenue
Richmond, CA 94804
Site Type: Evaluation
Status: Refer: RWQCB

Atchison Topeka and Santa Fe Railway
Unknown Rumrill Blvd
Richmond, CA 94804
Cleanup Program Site
Cleanup Status: Completed - Case Closed

World Oil
1014 Chesley
Richmond, CA 94801
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Richmond Townhouse Apartments
2887 and 2989 Pullman Avenue
Richmond, CA 94804
State Response Site
Land Use Restrictions
Certified / Operation & Maintenance as of 6/19/2002
Contra Costa County
DTSC - Site Cleanup Program - Lead
US EPA

Carlson Property
APN 513-10-020
Richmond, CA 94804
State Response Site
Certified / Operation & Maintenance as of 10/21/2001
DTSC - Site Cleanup Program - Lead

University of California - Richmond Field Station
1301 South 46th St
Richmond, CA
Cleanup Program Site
Cleanup Status: Open - Remediation

Zeneca Richmond Ag Products (07280002)
1415 South 47th Street
Richmond, CA 94804
Site Type: State Response
Status: Active
Land Use Restrictions

Harborfront Tract
Meade South 49th East Montgomery
Richmond, CA 94804
State Response Site
DTSC - Site Cleanup Program - Lead

Liquid Gold Oil Corp
Hoffman Blvd and S 47th St
Richmond, CA 94804
Federal Superfund Site
Land Use Restrictions
DTSC - Site Cleanup Program - Lead
US EPA

The site was owned by the Southern Pacific Transportation Company and is now owned by Union Pacific Railroad. From 1974 to 1982, the site was leased by Liquid Gold Oil Corporation to store, re-refine and recycle oil and other substances. The hazardous substances stored in over 20 storage tanks and drums included waste motor oil, organic solvents, bunker oil, diesel fuel, oil-water emulsions and mixtures and tank bottom waste. As a result of site operations, hazardous substances leaked or spilled onto the ground and were discharged into ponds, sumps and ditches and drained into wetland areas. Subsequently, site remedial investigations were perfomed, remedial actions completed, and the site was de-listed by the U.S. Environmental Protection Agency from the National Priorities List in 1995.

Blair Southern Pacific Landfill
At the Foot of South 51st Street
Richmond, CA 94804
State Response Site
DTSC - Site Cleanup Program - Lead

Curoco Steel Systems (Toxic)
536 Cleveland
Albany, CA 94710
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Western Forge & Flange (01350092)
540 Cleveland Avenue
Albany, CA 94706
Site Type: Evaluation
Status: Certified

Ge Imatron / Caral Manufacturing
578 Cleveland
Albany, CA 94710
Cleanup Program Site
Cleanup Status: Completed - Case Closed

Fleming Point Property
1100 Eastshore Hwy
Albany, CA
Cleanup Program Site
Cleanup Status: Open - Inactive

Harrison Street Playing Fields
Fourth and Harrison Streets
Berkeley, CA 94710
Voluntary Cleanup Site
RWQCB2 - San Francisco Bay

Dover Sales
707 Park Way
Berkeley, CA 94710
State Response Site
Certified as of 1/1/1984
Berkeley, City of - Lead

Berkeley Redevelopment Agency Site
1631 Fifth Street
Berkeley, CA 94710
Voluntary Cleanup Site
Certified as of 6/10/2004
Berkeley, City of
DTSC - Site Cleanup Program - Lead

Aquatic Park Science Center
2222 3rd Street
Berkeley, CA 94710
Voluntary Cleanup Site
No Further Action as of 7/18/2008
Berkeley, City of
DTSC - Site Cleanup Program - Lead

Peerless Electric
2220 4th Street
Berkeley, CA 94710
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead

Berkeley Industrial Court
729 Heinz Avenue
Berkeley, CA 94710
State Response Site
Berkeley, City of
RWQCB 2 - San Francisco Bay - Lead

Triangle Coatings (60000938)
2222 Third Street
Berkeley, CA 94710
Site Type: Voluntary Cleanup
Status: Refer: Local Agency

Wareham Properties
700 Heinz Avenue
Berkeley, CA 94710
State Response Site
Certified as of 11/19/2003
DTSC - Site Cleanup Program - Lead

Transo/lacoste Site
1600 64th Street/6401 Bay Street
Emeryville, CA 94608
State Response Site
No Further Action as of 2/21/1995
DTSC - Site Cleanup Program - Lead

63rd Street Trunk Sewer Project
63rd Street
Emeryville, CA 94608
Voluntary Cleanup Site
No Further Action as of 9/28/2000
DTSC - Site Cleanup Program - Lead

Bay Street Extension
64th and Powell Streets
Emeryville, CA 94608
Voluntary Cleanup Site
Land Use Restrictions
Certified / Operation & Maintenance as of 7/9/1997
Alameda County
DTSC - Site Cleanup Program - Lead

Emeryville Marketplace
between 64th and Powell St on N and S, by Hwy 80
Emeryville, CA 94608
State Response Site
Land Use Restrictions
Certified / Operation & Maintenance as of 11/7/1995
Alameda County
DTSC - Site Cleanup Program - Lead

Emeryville Mound Parcel
5899 Peladeau Street
Emeryville, CA 94608
Voluntary Cleanup Site
RWQCB 2 - San Francisco Bay
DTSC - Site Cleanup Program - Lead
US EPA - Lead

Michel and Pelton
5743 Landregan St
Emeryville, CA
Cleanup Program Site
Cleanup Status: Open - Inactive

South Bay Front Site B
1525-1535 Powell St and 5760-5770 Shellmound St
Emeryville, CA 94608
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead

Horton Landing Park (60001477)
Stanford Avenue & Horton Street
Emeryville, CA 94608
Site Type: Voluntary Cleanup
Status: Refer: Other Agency

Southern Pacific Right-of-Way Emeryville
West of 4525 Hollis Street
Emeryville, CA 94608
State Response Site
DTSC - Site Cleanup Program - Lead
The Site is located immediately adjacent to Pacific Gas and Electric Company's (PG&E) Materials Distribution Center. The Materials Distribution Center has served as a warehouse, repair shop, and storage yard since the early 1920's for equipment used by PG&E's substations and electrical distribution network. In the past, fluids in transformers and capacitors contained polychlorinated biphenyls (PCBs). The Site is currently owned by Chiron Corporation and Wareham Development. Chiron operates a research and development facility and the area where residual PCB-contaminated soil may be present is paved. Wareham Development has a parking lot on its property that it leases to Chiron. DTSC is

currently evaluating whether land use restrictions on the area where residual contamination may be present are required.

South Bayfront Project
4650, 5500, and 5600 Shellmound Street
Emeryville, CA 94608
Voluntary Cleanup Site
Land Use Restrictions
Certified / Operation & Maintenance as of 8/22/2000
DTSC - Site Cleanup Program - Lead

Shellmound Venture Project
Shellmound Street
Emeryville, CA 94608
Voluntary Cleanup Site
Land Use Restrictions
Certified / Operation & Maintenance as of 4/17/1998
DTSC - Site Cleanup Program - Lead

Sherwin Williams
1450 Sherwin Avenue
Emeryville, CA 94608
State Response Site
Alameda County
RWQCB 2 - San Francisco Bay
DTSC - Site Cleanup Program - Lead

UPRR Parcel D
North of Sherwin Avenue and Halleck Street
Emeryville, CA 94608
Voluntary Cleanup Site
DTSC - Site Cleanup Program
Site is a vacant parcel located to the north of the intersection of Sherwin Avenue and Halleck Street in Emeryville, California. The Site is bounded by the Sherwin-Williams Site on the east and north, Union Pacific Railroad tracks on the west, and the southern edge of Sherwin Avenue on the South. It incorporates the Technichem facility's Solid Waste Management Unit #6 on the southwest corner of the Site adjacent to the building that formerly housed Technichem. The City of Emeryville is preparing the Site for redevelopment. Under the MOA between the City of Emeryville, DTSC and the Water Board, the City provided oversight for the Redevelopment Agency's site characterzation activities and development of a Final Cleanup Plan for the Site.

Technichem, Inc.
4245 Halleck Street
Emeryville, CA 94608
State Response Site
DTSC - Site Cleanup Program - Lead

Ikea (Former Barbary Coast)
4300 Eastshore Highway
Emeryville, CA 94608
State Response Site
Land Use Restrictions
Certified / Operation & Maintenance as of 9/19/2000
DTSC- Site Cleanup Program - Lead

Cypress Freeway/bikeway Project
Maritime to Shellmound Street
Emeryville, CA 94608
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead

Thomas A. Short Company
3430 Wood Street
Oakland, CA 94607
Voluntary Cleanup Site
Certified as of 1/9/2004
DTSC - Site Cleanup Program - Lead

Sutta Recycling
3401 Wood Street
Oakland, CA 94607
Voluntary Cleanup Site
Certified as of 6/18/2007
DTSC - Site Cleanup Program - Lead

General Transportation
3211 Wood Street
Oakland, CA 94607
Voluntary Cleanup Site
No Further Action as of 4/16/1997
DTSC - Site Cleanup Program - Lead

AT and SF Railroad Property
Along Wood and 32nd Street
Oakland, CA 94607
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead
This property is part of Cypress Reconstruction Project in Oakland. The property is located west of Wood Street between 26th and 34th streets. The property was owned and operated by AT&SF Railroad since the late 1800's. The land use has been a railroad yard used to store rail cars in route to or returning from the Port of Oakland from the AT&SF Richmond railyard. The property may have been contaminated from spills and leaks from railcars and general maintenance activities.

Former Hall Property
2601 Wood Street
Oakland, CA 94607
Voluntary Cleanup Site
DTSC - Site Cleanup Program - Lead

BNSF Wood Street Yard
Wood Street and West Grand Avenue
Oakland, CA 94607
State Response Site
Land Use Restrictions
Certified / Operation & Maintenance as of 6/28/2006
DTSC - Site Cleanup Program - Lead

Southern Pacific Oakland
1707 Wood Street
Oakland, CA 94607
State Response Site

RWQCB 2 - San Francisco Bay - Lead
Historical land uses have included a foundry, vehicle repair activities, rail terminal, door manufacturing operation, training maintenance area. Known or suspected contaminates include: lead, petroleum hydrocarbons, PAH's and volatile organic hydrocarbons.

Visalia to Hanford Route

So Cal Gas/Hanford MGP (16490005)
325 East 5th Street
Hanford, CA 93230
Site Type: Voluntary Cleanup
Status: Active
Land Use Restrictions

Silva's Oil Company
175 10th Ave S
Hanford, CA 93230
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Hitchcock Trans Co.
9150 E. Lacey Boulevard
Hanford, CA 93230
Cleanup Program Site
Cleanup Status: Completed - Case Closed

Souza's Enterprises, Inc.
8148 E Lacey Blvd
Hanford, CA 93230-4872
Cleanup Program Site
Cleanup Status: Completed - Case Closed

Holiday RV Park
6610 Betty Drive
Goshen, CA 93227
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Union Pacific Railroad - Goshen Junction
Effie
Goshen, CA 93227
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Former Cargill Property
31189 Road 68
Goshen, CA 93227
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Valley Warehouse
31071 Road 68
Goshen, CA 93227
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Exide Corporation
8127 Goshen Avenue
Visalia, CA 93291
Cleanup Program Site
Cleanup Status: Completed - Case Closed

Goshen Avenue and Shirk Road Site (54270005)
6941 and 6707 West Goshen Avenue
Visalia, CA 93291
Site Type: State Response
Status: Active

Kaweah Crop Duster-green Acres Airport (54070060)
2530 West Goshen
Visalia, CA 93219
Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

Visalia Custom Chrome (71003379)
1414 W Switzer Ave
Visalia, CA 93291
Site Type: Tiered Permit
Status: Inactive - Needs Evaluation

One Hour Martinizing (60000236)
717 West Main Street
Visalia, CA 93291
Site Type: State Response
Status: Active

Millers Dry Cleaners (60000242)
110 North Willis
Visalia, CA 93291
Site Type: State Response
Status: Active

Paragon Dry Cleaners (60000240)
119 South Willis Street
Visalia, CA 93291
Site Type: State Response
Status: Active

Van Duesens Dry Cleaners (60000244)
220 North Encina Street
Visalia, CA 93291
Site Type: Evaluation
Status: Active

Pressure Vessel Services, Inc. (71003308)
7625 W. Sunnyvale Avenue
Visalia, CA 93291
Site Type: Tiered Permit
Status: Inactive - Needs Evaluation

Visalia Dry Cleaner Investigation (60000403)
Central City Area
Visalia, CA 93277
Site Type: State Response
Status: Active

So Cal Gas/Visalia MGP (54490015)
300 North Tipton Street
Visalia, CA 93277
Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

Visalia Civic Center Brownfields Development (60000965)
NW Burke Street and Oak Avenue, Visalia, CA 93291
Visalia, CA 93291
Site Type: Voluntary Cleanup
Status: Certified

Pole Storage Area (Visalia Pole Yard) (54490020)
432 N Ben Maddox Way
Visalia, CA 93292
Site Type: State Response
Status: Certified

Former Lamoure's Cleaners and Laundry, Noble (60001055)
1415 E. Noble Avenue
Visalia, CA 93291
Site Type: State Response
Status: Active

Parisian Dry Cleaners (60000243)
1014 East Mineral King Avenue
Visalia, CA 93292
Site Type: Evaluation
Status: No Action Required

Sierra Beverage Co.
1001 S. Ben Maddox Way
Visalia, CA 93292-3656
Cleanup Program Site
Cleanup Status: Open - Inactive

City of Kingsburg - Old Municipal Landfill (54990001)
Avenue 392 and Road 20
Kingsburg, CA 93631
Site Type: Voluntary Cleanup
Status: Inactive - Action Required

Heublein, Inc.
965 Sierra St
Kingsburg, CA 93631-1512
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Selma Treating Company (10240051)
1735 Dockery Ave & Adjoining
Selma, CA 93662
Site Type: Federal Superfund
Status: Active
Land Use Restrictions

Selma Ag Supply
1053 Golden St. Blvd.
Selma, CA 93662-9793
Cleanup Program Site
Cleanup Status: Open - Inactive

Selma Electroplating (10340011)
2336 Chandler Street
Selma, CA 93662
Site Type: State Response
Status: Certified

PG&E Manufactured Gas Plant Sq-fk-fow (10490099)
W.fresno near S. 8th Street
Fowler, CA 93625
Site Type: Evaluation
Status: Inactive - Needs Evaluation

Simonian Farms (60000854)
228, 230, 304 and 308 N 8th Street
Fowler, CA 93625
Site Type: Voluntary Cleanup
Status: No Further Action

D. Turner Chrome Plating (10340135)
4388 S. Willow Avenue
Fresno, CA 93725
Site Type: Evaluation
Status: Inactive - Needs Evaluation

Golden State Market
3269 Golden State Blvd.
Fresno, CA 93725
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Santa Fe Intermodal Yard
2989 Golden State Blvd S
Calwa, CA 93725
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

<u>Port Chicago to Richmond on BNSF</u>

Chemical and Pigment Company (07280017)
600 Nichols Road
Bay Point, CA 94565
Site Type: State Response
Status: Active

Monsanto Chemical Facility
1778 Monsanto Way
Martinez, CA 94553
Cleanup Program Site
Cleanup Status: Open - Remediation

Scaife Property
921 Arnold Dr
Martinez, CA 94553
LUST Cleanup Site
Cleanup Status: Open - Remediation

Landscape Care Company
4026 Pacheco Blvd
Martinez, CA 94533
Cleanup Program Site
Cleanup Status: Open - Inactive

Santa Fe Railway
Unknown Franklin Canyon Rd
Hercules, CA 94547
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Centex Homes of California (07650001)
Between I-80 and San Pablo Avenue
HERCULES, CA 94547
Site Type: State Response
Status: Certified

Hercules Inc (07280156)
Corner of San Pablo & Sycamore Avenue
Hercules, CA 94547

Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

Square Deal Garage
2500 San Pablo Ave
Pinole, CA 94564
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Chevron
550 San Pablo Ave
Pinole, CA 94564
LUST Cleanup Site
Cleanup Status: Open - Remediation

Point Pinole Properties (07340065)
5000 Giant Road
Richmond, CA 94806
Site Type: State Response
Status: Certified O&M - Land Use Restrictions Only
Land Use Restrictions

Pinole Point Steel/MSC Facility
None
Richmond, CA
Cleanup Program Site
Cleanup Status: Open - Inactive

Lazy J Ranch/chevron Pipeline Site
3001 Giant Rd
Richmond/san Pablo, CA
Cleanup Program Site
Cleanup Status: Open - Inactive

American Standard Products: OU-II/FMF (07320037)
3002 Giant Road
San Pablo, CA 94806
Site Type: State Response
Status: Certified O&M - Land Use Restrictions Only
Land Use Restrictions

Broadway Project American Standard
3002 Giant Rd
Richmond, CA 94801
Cleanup Program Site
Cleanup Status: Open - Inactive

Cooper Chemical (07280154)
2801 Giant Road
Richmond, CA 94806
Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

Hildreth Holdings (07410002)
2812 Giant Road
San Pablo, CA 94804
Site Type: State Response
Status: Refer: Other Agency

FMC Corporation - Richmond (07280011)
855 Parr Blvd
Richmond, CA 94801
Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

Shell Pipeline at Brooksite Drive
Brookside Drive
Richmond, CA 94801
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Matlack Inc
850 Brookside Dr
Richmond, CA 94801
LUST Cleanup Site
Cleanup Status: Open - Verification Monitoring

Former BNSF Property, Rumrill Blvd. (70000080)
Rumrill Blvd at Chelsey Avenue
San Pablo, CA 94806
Site Type: Voluntary Cleanup

Atchison Topeka and Santa Fe Railway
Unknown Rumrill Blvd
Richmond, CA 94804
Cleanup Program Site
Cleanup Status: Completed - Case Closed

<u>Stockton Station Alternative #5, Amtrak Rehabilitation Site</u>
Issues on nearby parcels:

PG&E, Stockton (39490015)
530 South Center Street
Stockton, CA 95203
Site Type: Voluntary Cleanup
Status: Certified / Operation & Maintenance
Land Use Restrictions

Stockton Plating (60000493)
632 South El Dorado Street
Stockton, CA 95203
Site Type: Evaluation
Status: Inactive - Needs Evaluation

Fabricare
711 San Joaquin St S
Stockton, CA 95203
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

<u>Stockton Station Alternative #4, Interlock Site, Preferred Alternative</u>

Santa Fe Railway
748 Union St S
Stockton, CA 95202
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Santa Fe Railway
1033 Scotts Ave E
Stockton, CA 95205
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Stockton Warehouse Bldg
935 Scotts Ave E
Stockton, CA 95203
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Merced Layover Facility

former Streeter, Patterson, and J&M Flying Service
3240 S. ARBOLEDA RD
Merced, CA 95431
Cleanup Program Site
Cleanup Status: Open - Inactive

Fresno Layover Facility

California Products Company
3000 Butler Ave E
Fresno, CA 93721
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Great Western Chemical Co.
200 Santa Fe Ave
Fresno, CA 93714
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Former Ice House
702 P St
Fresno, CA 93721

LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Santa Fe Railway Motor Car Shd
2650 Tulare Ave E
Fresno, CA 93721
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

BNSF/Amtrak Depot
2650 Tulare St
Fresno, CA 93721
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Bakersfield to Los Angles Alignment (Figure 1-5)

J R Simplot, Edison
430 Pepper Drive
Edison, CA 93220
Site Type: State Response
Status: Active
Land Use Restrictions

J. R. Simplot - Bena (Aka: Bena Fertilizer)
Edison, CA 93220
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Stonybrook Corporation
29700 Woodford-Tehachapi Rd (Old Hwy 58)
Keene, CA 93531
LUST Cleanup Site
Cleanup Status: Open - Remediation

Tehachapi Shell
106 Tehachapi Blvd
Tehachapi, CA 93561
LUST Cleanup Site
Cleanup Status: Open - Remediation

Chevron USA Bulk Fuel Plant (Former)
401 East H Street
Tehachapi, CA 93561-1410
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Products Research & Chemical Corp
11601 United Street
Mojave, CA 93501
Site Type: State Response
Status: Backlog

Purdy Company
12901 United Road
Mojave, CA 93501
Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

United Metal Recovery
12433 United Street
Mojave, CA 93501
Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

Silver Queen Junkyard
Back Lot at 11847 United Street
Mojave, CA 93501
Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

Commodity Refining Exchange
11847 United Street
Mojave, CA 93501
Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

Mobile Smelting
United Street & Reed Road
Mojave, CA 93501
Site Type: State Response
Status: Active

Courtaulds Aerospace
United Street and Reed Avenue
Mojave, CA 93501
Site Type: Voluntary Cleanup
Status: Active

Rosamond Minerals
1616 W. Rosamond Blvd
Rosamond, CA 93560
Site Type: Voluntary Cleanup
Status: No Further Action

B-52 Market
3000 N Sierra Hwy
Rosamond, CA 93560
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Bridges and Son Trucking
1200 Orange Avenue
Rosamond, CA 93560
Site Type: State Response
Status: Active

Osage Industries, 15th Street
2001 15th Street, West
Rosamond, CA 93560
Site Type: State Response
Status: Active

S R Kilby Property
2021 West 15th Street
Rosamond, CA 93560
Site Type: State Response
Status: Active

Grossi/Calandri Property
Intersection of Marie Ave & W 15th St
Rosamond, CA 93560
Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

John Alexander Research Inc
1753 Sierra Highway
Rosamond, CA 93560
Site Type: State Response
Status: Certified / Operation & Maintenance

Mission Linen Supply
44926 North Yucca Avenue
Lancaster, CA 93535
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Caltrans Maintenance Station
44023 Sierra Highway
Lancaster, CA 93534
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Sierra Hwy & Ave S
37205 Sierra Hwy
Palmdale, CA 93550
LUST Cleanup Site
Cleanup Status: Open - Verification Monitoring

Lubrication Company of America
12500 Lang Station Road
Canyon Country, CA 91350
Site Type: State Response
Status: Active

Golden Valley Road Golden Valley Road
Golden Valley Road
Santa Clarita, CA
Cleanup Program Site
Cleanup Status: Open - Site Assessment

National Technical Systems
20988 Golden Triangle Road
Santa Clarita, CA 91350
Site Type: Voluntary Cleanup
Status: No Further Action

Whittaker Bermite/Rail Station - Site a (19281203)
22116 West Soledad Canyon Road
Santa Clarita, CA 91350
Site Type: State Response
Status: Active

Saugus Swap Meet Property (60000428)
22500 Soledad Canyon Road
Santa Clarita, CA 91350
Site Type: Voluntary Cleanup
Status: Inactive - Action Required

Keysor-Century Corp. (71002295)
26000 Springbrook Avenue
Saugus, CA 91350
Site Type: Tiered Permit
Status: Refer: Other Agency

Whittaker Offsite Groundwater/CLWA (Castaic Lake Water Agency) (60000168)
Area West & North of 22116 Soledad Canyon Road
Santa Clarita, CA 91350
Site Type: Voluntary Cleanup
Status: Active

Thatcher Glass Manufacturing Company (19320186)
25655 Springbrook Avenue
Saugus, CA 91350
Site Type: Voluntary Cleanup
Status: No Further Action

ARCO #1904
1753 Truman St
San Fernando, CA 91340
LUST Cleanup Site
Cleanup Status: Open - Remediation

Gem Fuel
1601 Truman St
San Fernando, CA 91340
LUST Cleanup Site
Cleanup Status: Open - Assessment & Interim Remedial Action

San Fernando Electric (19360532)
1501 First Street
San Fernando, CA 91340
Site Type: Voluntary Cleanup
Status: No Further Action

Holchem Inc.
13546 Desmond St.
Pacoima, CA 91331
Cleanup Program Site
Cleanup Status: Open - Site Assessment

D & M Steel, Inc. (60000652)
11035 Sutter Avenue
Pacoima, CA 91331
Site Type: State Response
Status: No Further Action

Valley Generating Station Gravel Pit (19490246)
11801 Sheldon Street
Sun Valley, CA 91352
Site Type: Voluntary Cleanup
Status: Active

Timm Fuel & Tire Service Inc.
8579 San Fernando Road
Sun Valley, CA 91352
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

World Oil Station No. 19
8181 Sunland Boulevard
Sun Valley, CA
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Vinten Equipment, Inc.
8115 Clyborn Ave.
Sun Valley, CA 91352
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Photo Chem Etch
7710 San Fernando Rd.
Sun Valley, CA 91352
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Cal-air Processing
3014 N. Hollywood Way.
Burbank, CA 91504
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Steve's Plating Corp.
3111 N. San Fernando Blvd.
Burbank, CA 91504
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Chesystems
2150 N. Lincoln St.
Burbank, CA 91504
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Lockheed Plant B1
1705 Victory Pl.
Burbank, CA 91505
Cleanup Program Site
Cleanup Status: Open - Remediation

Mastercraft Metal
1010 Victory Pl.
Burbank, CA 91502
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Oroamerica
443 N. Varney St.
Burbank, CA 91502
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Gilderfluke & Co.
205 S. Flower St.
Burbank, CA 91502
Cleanup Program Site
Cleanup Status: Open - Site Assessment

City of Burbank Environmental
500 S. Flower St.
Burbank, CA 91502
Cleanup Program Site
Cleanup Status: Open - Site Assessment

RSD
715 S. Flower St.
Burbank, CA 91502
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Home Depot - Itt Aerospace Controls-div.
1200 Flower
Burbank, CA 91502
Cleanup Program Site
Cleanup Status: Open - Remediation

Trojan Rivet
1837 Dana St.
Glendale, CA 91201
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Automation Plating
902 E. Thompson Ave.
Glendale, CA 91201
Cleanup Program Site
Cleanup Status: Open - Site Assessment

John & Theresa Ippolito Trust/ J & M Cabinet Shop
1706 Standard Avenue
Glendale, CA
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Walt Disney Company
833 N. Sonora Ave.
Glendale, CA 91201
Cleanup Program Site
Cleanup Status: Open - Site Assessment

San Fernando Valley (Area 2) (19990012)
Crystal Springs Wellfield Area
Glendale, CA 91209
Site Type: Federal Superfund
Status: Active

San Fernando Valley (Area 4) (19990009)
Pollock Wellfield
Los Angeles, CA 90086
Site Type: Federal Superfund
Status: Certified / Operation & Maintenance

Franciscan Ceramics, Inc. (19320112)
2901 Los Feliz Boulevard
Los Angeles, CA 90039
Site Type: State Response
Status: Certified / Operation & Maintenance
Land Use Restrictions

Zehrung Corp.
3273 Casitas
Los Angeles, CA 90039
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Nelson Nameplate Co.
3191 Casitas
Los Angeles, CA 90039
Cleanup Program Site
Cleanup Status: Open - Site Assessment

S. P. Tran (Taylor Yard)
2850 Kerr St.
Los Angeles, CA
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Southern Pacific - Taylor Yard/active (19470006)
2800 Kerr Street
Los Angeles, CA 90039
Site Type: State Response
Status: Active

Weiand Automotive Industries (19340781)
2316-2324 North San Fernando Road
Los Angeles, CA 90065
Site Type: Voluntary Cleanup
Status: Active

Taylor Yard - Parcel C (60001553)
Northwest of Granada St and San Fernando Road
Los Angeles, CA 90039
Site Type: Voluntary Cleanup
Status: Active

Union Pacific Railroad - Cornfield Yard
1245 North Spring St
Los Angeles, CA 90012
Cleanup Program Site
Cleanup Status: Open - Verification Monitoring

Union Pacific/Railroad Company
1322 Broadway N
Los Angeles, CA 90012
LUST Cleanup Site
Cleanup Status: Completed - Case Closed

Vacant
1245 Spring St N
Los Angeles, CA 90012
LUST Cleanup Site
Cleanup Status: Open - Site Assessment

Pacific Pipeline 2000
S. Alameda St.
Los Angeles, CA 90001
Cleanup Program Site
Cleanup Status: Open - Site Assessment

LA to Pasadena Metro Blue Line Construction Author
Los Angeles, CA
Cleanup Program Site
Cleanup Status: Open - Site Assessment

Metro Rail
Union Station
Los Angeles, CA 90023
Cleanup Program Site
Cleanup Status: Open