

# Section 19

## Transportation, Traffic, and Circulation

This section discusses transportation, traffic, and circulation, hereafter referred to as transportation, in the study area. It discusses potential disruption to transportation that could occur as a result of implementing the Delta Plan and the project alternatives, such as disruption to vehicle movement and circulation as a result of levee improvements. It also discusses potential long-term changes to the operability and function of transportation facilities related to operation of the Delta Plan and the project alternatives. It describes the environmental setting, potential environmental impacts, and proposed mitigation measures.

The Delta Plan (Proposed Project) does not propose implementation of any particular physical project; rather, it seeks to influence, either through limited policy regulation or through recommendations, other agencies to take certain actions that will lead to achieving the dual goals of Delta ecosystem protection and water supply reliability. Those actions, if taken, could lead to physical changes in the environment. This is described in more detail in part 2.1 of Section 2A, Proposed Project and Alternatives, and in Section 2B, Introduction to Resource Sections.

The types of changes that could impact transportation include the partial or full closure or modification of roads, transportation routes, and railroads, which could increase congestion to the point that local levels of service fall below the local transportation management agency's minimum performance level. Conservation projects could reconfigure levees adjacent to shipping and navigational channel, thereby changing navigation in the Delta. These same conservation projects could increase the number of visitors to wildlife viewing areas and recreational areas, resulting in increased congestion on area roads.

Construction-related potential impacts on transportation would be significant but could be reduced to less than significant where feasible mitigation can be implemented. Operations-related impacts would be less than significant because the number of trips would be geographically dispersed over a broad area and would occur in different seasons. This section evaluates and discloses the significance of transportation impacts before and after the implementation of mitigation measures.

### 19.1 Study Area

As discussed in Section 2A, Proposed Project and Alternatives, facilities could be constructed, modified, or reoperated in the Delta, Delta watershed, or areas located outside the Delta that use Delta water. The transportation study area includes transportation facilities in Sacramento County, Yolo County, Solano County, San Joaquin County, Contra Costa County, and Alameda County that are within the Delta and Suisun Marsh. Transportation facilities connecting the Delta and Suisun Marsh to other areas, and areas beyond are included in the study area, but are evaluated at a more general level. The Delta Plan is more likely to have foreseeable identifiable impacts in the Delta than out of the Delta so the area in the Delta is described in greater detail. In addition, the description of projects that are either recommended or encouraged by the Delta Plan are included in the description of the study area.

## 1 19.2 Regulatory Framework

2 Appendix D presents an overview of the plans, policies, and regulations relating to transportation, traffic,  
3 and circulation within the study area.

## 4 19.3 Environmental Setting

5 The following discussion describes the local and regional setting relevant to the analysis of transportation  
6 in the Delta and Suisun Marsh. The discussion also describes transportation connecting the Delta and  
7 Suisun Marsh to other areas, and more distant areas if or where Delta Plan encouraged actions could  
8 occur, at a more general level. Specific locations of projects that are recommended or encouraged by the  
9 Delta Plan are described.

### 10 19.3.1 Major Sources of Information

11 Information for this section was compiled from documents published by various agencies, including  
12 Federal Highway Administration, California Department of Transportation (Caltrans), Metropolitan  
13 Transportation Commission, regional and local governments, and regional transportation and transit  
14 agencies. Data for the local and regional setting were compiled from publically available data sets  
15 published by Caltrans, the California Spatial Information Library, and the California Delta Chambers and  
16 Visitors Bureau. Additional sources of information are cited as necessary and listed in the references  
17 section.

### 18 19.3.2 Delta and Suisun Marsh

19 This section describes roadways (including federal and State highways, county highways, local roadways,  
20 and bridges); designated truck and emergency routes along these roadways; transit systems; railroads;  
21 ports, waterways, and ferries; and airports in the Delta and Suisun Marsh. Most of these roadway  
22 transportation corridors connect with interstate and regional corridors that extend outside of the Delta.

#### 23 19.3.2.1 Roadways

##### 24 19.3.2.1.1 Federal Highways

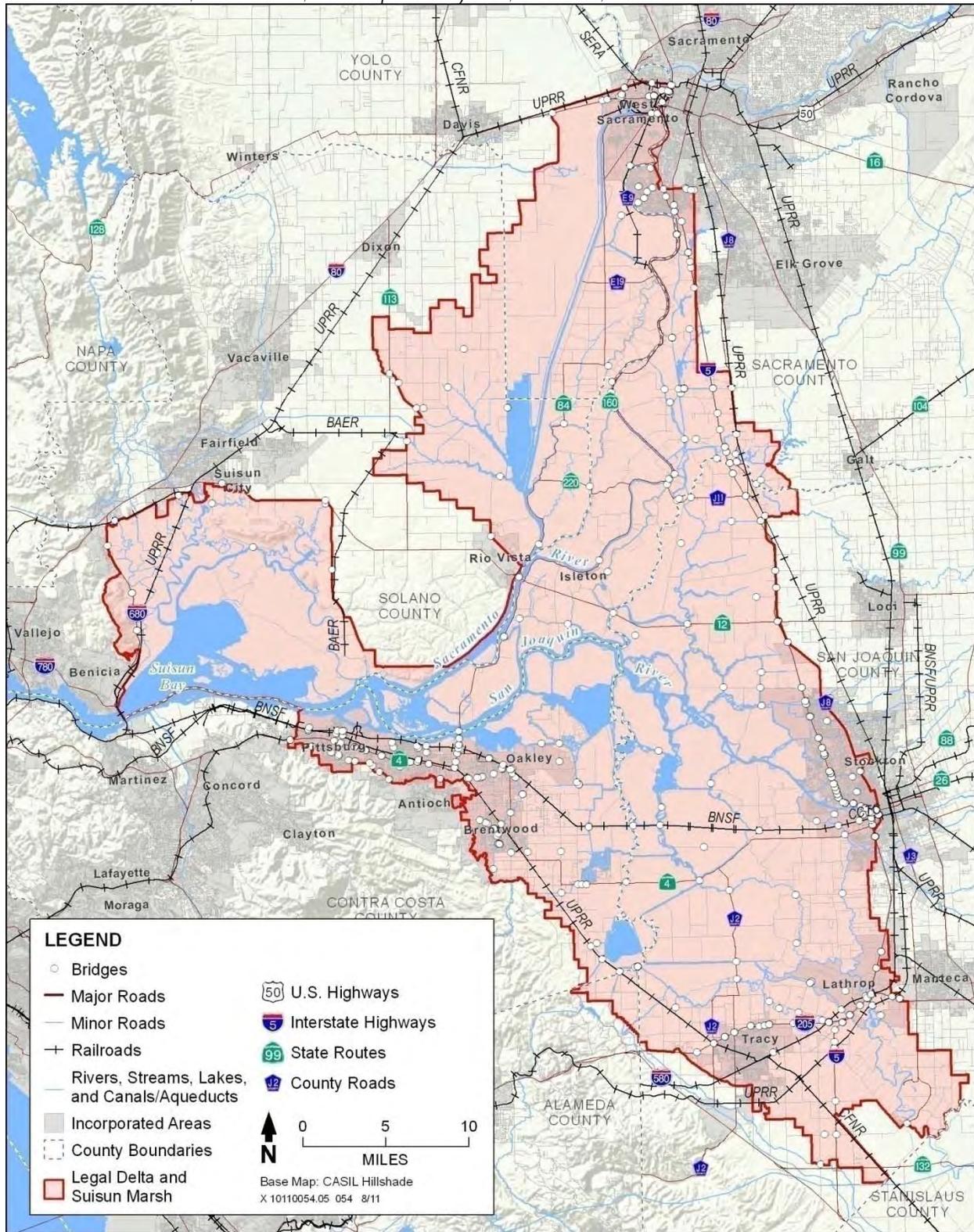
25 Federal highways in California are maintained by Caltrans and include the interstate highway system,  
26 State highways, and freeways. Figure 19-1 illustrates where State-maintained federal highways are  
27 located in and adjacent to the Delta and Suisun Marsh. Table 19-1 describes the State-maintained  
28 highways in the Delta and Suisun Marsh.

##### 29 19.3.2.1.2 State Highways

30 State highways in California are maintained by Caltrans and include the interstate highway system, State  
31 highways, and freeways. Figure 19-1 illustrates where State-maintained highways are located in and  
32 adjacent to the Delta and Suisun Marsh. Table 19-1 describes the State-maintained highways in the Delta  
33 and Suisun Marsh.

34

1 **Figure 19-1**  
 2 **Highway and Rail Facilities in the Delta and Suisun Marsh**  
 3 Sources: Caltrans 2008a; SACOG 2010; San Joaquin County 2006; ESRI 2008; Caltrans 2009a



4

**Table 19-1**  
**State-maintained Highways in the Delta and Suisun Marsh**

<b>Route</b>	<b>County</b>	<b>Width</b>	<b>Lowest Average Annual Daily Traffic (2009)</b>	<b>Highest Average Annual Daily Traffic (2009)</b>
I-5	Sacramento, San Joaquin	Two to five lanes in each direction	50,000 at various locations near the Sacramento County and San Joaquin County lines	152,000 near the SR-120 junction in Stockton
I-80	Yolo	Three to five lanes in each direction	11,600 at the U.S. 50 junction in West Sacramento	11,900 at the Yolo Causeway and West Capitol Avenue in West Sacramento
I-205	San Joaquin	Three lanes in each direction	93,000 at McArthur Road	114,000 at the I-580 junction
I-680	Solano	Two to four lanes in each direction	34,500 at the I-780 junction near Benicia	120,800 along the Benicia Bridge at the Contra Costa / Solano County line
U.S. 50	Yolo	Four lanes in each direction	86,000 at Harbor Boulevard in West Sacramento	174,000 at South River Road in West Sacramento
SR-4	Contra Costa, San Joaquin	One to two lanes in each direction	7,000 near Inland Drive in unincorporated San Joaquin County	131,000 near Bailey Road in Bay Point
SR-12	Sacramento, San Joaquin, Solano	One to two lanes in each direction	15,000 at various locations near the Sacramento / San Joaquin County line	36,500 at Grizzly Island Road / Sunset Avenue in the Fairfield and Suisun City area
SR-84	Solano, Yolo	One lane in each direction	180 at the SR-220 junction on Ryer Island	2,650 at Airport Road in Rio Vista
SR-113	Solano	One lane in each direction	3,500 at Elmira Road / Fry Road in unincorporated Solano County	7,600 at Cherry Street in Dixon (outside of the Delta)
SR-160	Contra Costa, Sacramento	One lane in each direction	1,500 at Leary Road on Grand Island	13,600 at various locations near the Contra Costa / Sacramento County line in Antioch and Sherman Island
SR-220	Solano	Two lanes in each direction	100 at the SR-84 junction on Ryer Island	900 at Grand Island Road on Grand Island

Source: Caltrans 2009b

I: Interstate

SR: State Route

U.S.: federal highway

### 1 19.3.2.1.3 County Highways

2 A number of county-maintained highways are located in the Delta and Suisun Marsh. These roadways  
 3 range from two-lane rural arterials, such as River Road along the Sacramento River, to four-lane arterials  
 4 in suburban areas, such as Tracy Boulevard in Tracy. No county-maintained highways are located in the  
 5 Delta in Alameda and Contra Costa counties. Figure 19-1 shows where these county highways are located  
 6 in the Delta and Suisun Marsh, and Table 19-2 identifies their characteristics.

**Table 19-2**  
**County Highways in the Delta and Suisun Marsh**

<b>County Route</b>	<b>County</b>	<b>Roadway Names</b>	<b>Classification</b>	<b>Average Annual Daily Traffic</b>	<b>Extent</b>
E9	Sacramento, Yolo	South River Road	Rural Arterial (one lane in each direction)	2,658 north of Clarksburg Road (County Road E19), south of the Freeport Bridge	North: Freeport Bridge (Sacramento County), between the Yolo County line and SR-160 and south along South River Road (Yolo County) South: South River Road at Sutter Slough Bridge, from SR-160 to the Yolo County line
E13	Sacramento	River Road	Rural Arterial (one lane in each direction)	6,122 north of the Walnut Grove Bridge	West: River Road, from Walnut Grove Bridge East: Twin Cities Road at Thornton Road (County Route J8)
E19	Yolo	Clarksburg Road	Rural Arterial (one lane in each direction)	841 east of Tule Road, west of South River Road (County Road E9)	West: Clarksburg Road at SR-84 East: Clarksburg Road at South River Road (County Route E9)
J2	San Joaquin	Tracy Boulevard, Lammers Road, Corral Hollow Road	Rural Arterial (one lane in each direction) to Arterial (two lanes in each direction)	7,000 on Corral Hollow Road, south of Clover Road	North: Tracy Boulevard at Lammers Road South: Corral Hollow Road, just north of Valpico Road
J3	San Joaquin	Airport Way	Rural Arterial (one lane in each direction)	2,220 north of Kasson Road	North: Airport Way at Nile Road South: Airport Way at Kasson Road
J8	San Joaquin, Sacramento	Franklin Boulevard, Thornton Road	Rural Arterial (one lane in each direction) to Arterial (two lanes in each direction)	1,486 on Franklin Boulevard, south of Hood Franklin Road; 1,800 south of Walnut Grove Road	North: Franklin Boulevard, just south of Point Pleasant Road (Sacramento County) South: Thornton Road at Hammer Lane (San Joaquin County)
J11	Sacramento, San Joaquin	River Road, Walnut Grove Road	Rural Arterial (one lane in each direction)	2,000 west of Thornton Road	West: Walnut Grove Bridge at SR-160 and south along River Road (Sacramento County) East: Walnut Grove Road, from River Road to Thornton Road (San Joaquin County)

Sources: Sacramento County 2009a, 2009b; San Joaquin County 2009, Table 8-5, pp. 8-34 to 8-41; Yolo County 2009a

#### 1 19.3.2.1.4 Local Roadways

- 2 Local roadways are maintained by cities and by counties throughout the Delta and Suisun Marsh.
- 3 The most heavily populated areas in the Delta are generally situated along interstate or State highway
- 4 corridors. These include Sacramento and Elk Grove in Sacramento County; West Sacramento in Yolo
- 5 County; Rio Vista, Fairfield, and Benicia in Solano County; Stockton, Lathrop, Manteca, and Tracy in
- 6 San Joaquin County; and Pittsburg, Antioch, Oakley, Brentwood, and the unincorporated community of

1 Discovery Bay in Contra Costa County. Local roadways in these communities range from two-lane local  
2 roads to six-lane arterials.

3 Rural areas in the Delta and Suisun Marsh area are situated along waterways (e.g., Sacramento River,  
4 San Joaquin River, Suisun Bay, and tributaries) and Delta islands. Local roadways in these rural areas are  
5 mostly two-lane rural arterials, local roads, and levee roads.

### 6 19.3.2.1.5 Bridges

7 Many bridges span the numerous waterways throughout the Delta and Suisun Marsh, supporting State-  
8 and county-maintained and locally maintained roadways and rail. The locations of the major bridges are  
9 shown in Figure 19-1. Bridge structures range from one to four lanes, such as U.S. Highway 50 (U.S. 50)  
10 over the Sacramento River (Caltrans 2011a). The longest spanned bridge in the Delta and Suisun Marsh is  
11 the Antioch Bridge, which is a part of State Route 160 (SR-160) and connects Contra Costa County with  
12 Sacramento County (MTC 2010).

13 More than 40 bridges cross the Delta waterways that are navigable waterways. Many of these bridges are  
14 operable, meaning that they may be raised or opened to allow vessels to pass. These bridges are listed in  
15 Table 19-3.

**Table 19-3**  
**Bridges in the Delta That Provide Navigation Access**

<b>Bridge Location</b>	<b>Type of Bridge</b>
Sacramento River - Union Pacific Railroad Bridge - Sacramento	Operable bridge
Sacramento River - Tower Bridge - SR-275	Operable bridge
Sacramento River - Freeport	Operable bridge
Sacramento River - SR-160 - Paintersville (south of Courtland)	Operable bridge
Sutter Slough - Courtland (near Morgans Landing)	Operable bridge
Steamboat Slough - SR-160	Operable bridge
Snodgrass Slough - Twin Cities Road	Operable bridge
Sacramento River - Walnut Grove	Operable bridge
Mokelumne River and North Fork Mokelumne River - Walnut Grove-Thornton Road - near New Hope Landing and Wimpy's	Nonoperable bridge with adequate clearance for many boats
North Fork Mokelumne River - Deadhorse Island	Operable bridge with adequate clearance for many boats
North Fork Mokelumne River - Walnut Grove-Thornton Road / Millers Ferry Bridge - near Giusti's	Operable bridge
Georgiana Slough - near Walnut Grove	Operable bridge
Sacramento River - SR-160 - Isleton	Operable bridge
Georgiana Slough - Tyler Island (near Isleton)	Operable bridge
Sacramento River - SR-12 - Rio Vista	Operable bridge
Threemile Slough - SR-160	Operable bridge
Miner Slough - SR-84	Operable bridge
Lindsey Slough - Hasting Farms	Operable bridge with adequate clearance for many boats
North Fork Mokelumne River - SR-12	Operable bridge
Little Potato Slough - SR-12 - Tower Park (near Terminous)	Operable bridge
San Joaquin River - SR-160 - Antioch	Nonoperable bridge

**Table 19-3**  
**Bridges in the Delta That Provide Navigation Access**

<b>Bridge Location</b>	<b>Type of Bridge</b>
Dutch Slough - Jersey Island Road	Nonoperable bridge
Dutch Slough - Bethel Island Road	Nonoperable bridge
Honker Cut - Eight Mile Road	Operable bridge
Bishop Cut - Eight Mile Road	Operable bridge
Connection Slough - Bacon Island Road	Operable bridge
Turner Cut	Operable bridge
Middle River - Bacon Island	Operable bridge
Burns Cut - Daggett Road	Operable bridge
San Joaquin River - Navy Drive	Operable bridge
San Joaquin River - Port of Stockton Railroad Bridge	Operable bridge
San Joaquin River - SR-4	Operable bridge
Indian Slough - Railroad Bridge	Operable bridge
Indian Slough - Orwood Road	Operable bridge
Old River - Railroad Bridge	Operable bridge
Middle River - Railroad Bridge	Operable bridge
Old River - SR-4	Operable bridge
Middle River - SR-4	Nonoperable bridge
Middle River - Howard Road	Nonoperable bridge
San Joaquin River - Howard Road	Nonoperable bridge
Grantline Canal - Tracy Boulevard	Operable bridge
San Joaquin River - Railroad Bridge at Mossdale	Operable bridge
San Joaquin River - South Manthey Road	Operable bridges
San Joaquin River - I-5, SR-120, and Railroad Bridge	Nonoperable bridges
San Joaquin River - Durham Ferry Road	Nonoperable bridge

Sources: California Delta Chambers and Visitors Bureau 2011b; Marinas.com 2011; Delta Recreation 2006; BoatHarbors.com 2011

#### 1 19.3.2.1.6 Truck Routes

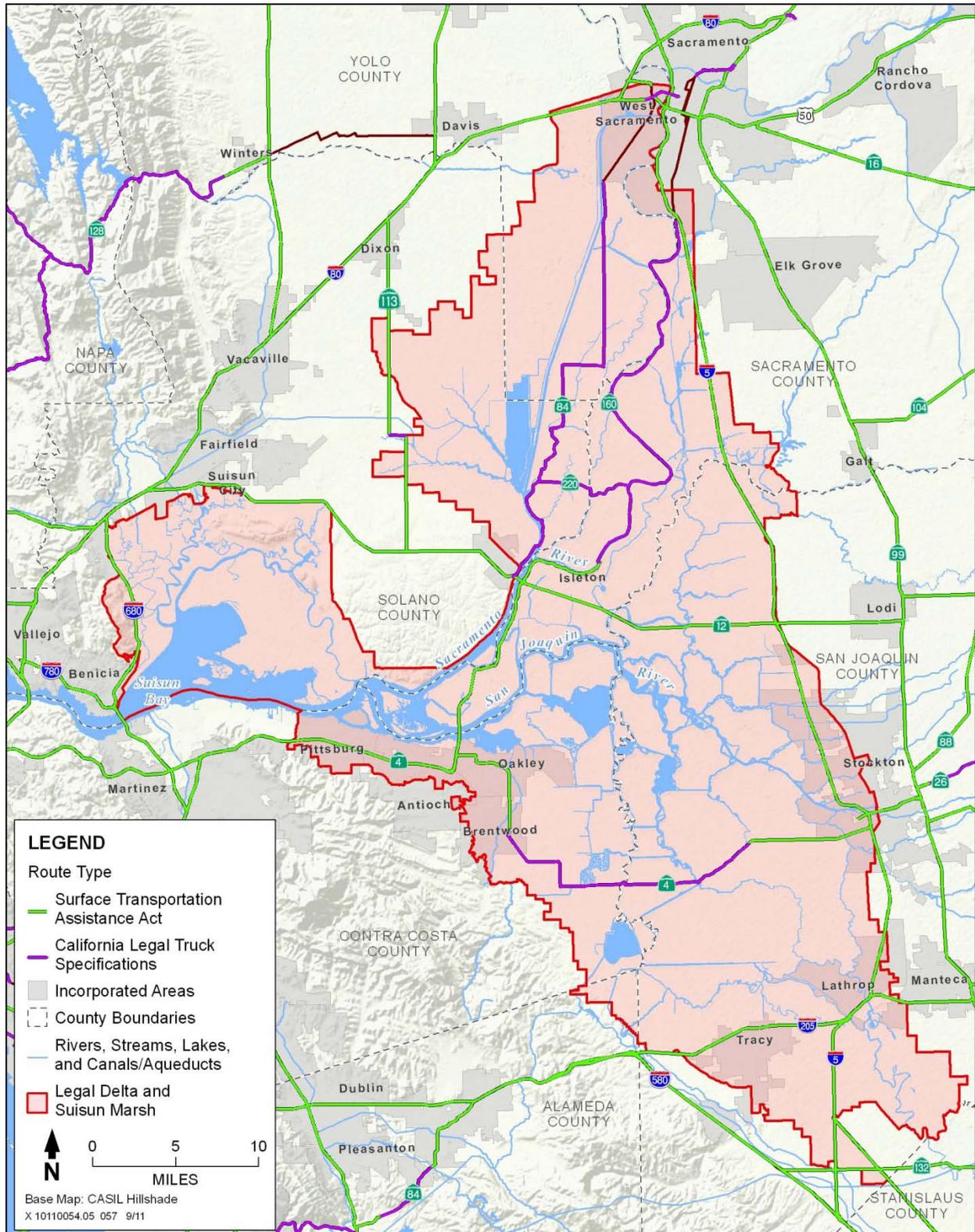
2 Designated truck routes in the Delta and Suisun Marsh are primarily located on major federal, State, and  
3 county highways and major local arterials. These routes are described below.

#### 4 *State Truck Routes*

5 Caltrans has jurisdiction over designated truck routes in. Truck routes and route types within the Delta are  
6 shown in Figure 19-2. In California, the Surface Transportation Assistance Act (STAA) network consists  
7 of national network routes and terminal access routes. STAA-designated trucks are restricted to national  
8 network and terminal access routes because these routes generally provide “reasonable access to terminals  
9 and facilities for purposes limited to fuel, food, lodging, and repair when that access is consistent with  
10 safe operation...and when the facility is within one road mile of identified points of ingress and egress...”  
11 (California Vehicle Code section 35401.5(c)). Use of unidentified local streets and roads requires  
12 approval from the local highway authority.

13

1 **Figure 19-2**  
2 **Truck Network on State Highways in the Delta and Suisun Marsh**  
3 *Source: Caltrans 2004*



4

1 STAA national network routes in the Delta and Suisun Marsh include portions of Interstate 5 (I-5), I-80,  
2 I-680, I-205, and U.S. 50. STAA terminal routes in the Delta and Suisun Marsh include portions of SR-4,  
3 SR-12, and SR-160.

4 *County and Local Truck Routes*

5 In addition to STAA and California legal truck routes, local jurisdictions can also designate local truck  
6 routes. In the Delta, only Sacramento County and the cities of Sacramento and Stockton have publically  
7 identified where local truck routes are located. For these communities, local truck routes generally  
8 connect with established STAA and California legal routes and are located in dense commercial areas,  
9 business parks, industrial areas, airports, rail facilities, and ports (Caltrans 2008b; City of Sacramento  
10 2011; City of Stockton 2009). No local truck routes for the unincorporated areas of Sacramento County  
11 are located in the Delta. Table 19-4 identifies designated local truck routes in the Delta for the cities of  
12 Sacramento and Stockton.

**Table 19-4**  
Local Truck Routes in the Delta and Suisun Marsh

Jurisdiction	Roadway Name	Extent
City of Sacramento	Freeport Boulevard	North: Florin Road South: Stonecrest Avenue
City of Stockton	Army Court	North: Dead End South: SR-4 / West Charter Way
City of Stockton	West Charter Way	West: I-5 East: South Madison Street

Sources: City of Sacramento 2011; City of Stockton 2009

13 **19.3.2.1.7 Emergency Roadway Routes**

14 Roadway facilities are designed to accommodate the flow of everyday vehicle operations and to allow  
15 emergency evacuations necessitated by natural or human-caused events. These emergency events include  
16 medical and fire emergencies, traffic accidents, earthquakes, and flooding. Table 19-5 identifies  
17 established emergency routes in the Delta and Suisun Marsh.

**Table 19-5**  
Emergency Roadway Routes in the Delta and Suisun Marsh

County	Established Emergency Roadway Routes
Alameda	The Alameda County Sheriff's Office's Office of Homeland Security and Emergency Services, in cooperation with public protection agencies, does not have specified emergency routes. These agencies will delineate emergency routes when a disaster occurs.
Contra Costa	The Contra Costa County Office of Emergency Services, in cooperation with public protection agencies, does not have specified emergency routes. These agencies will delineate emergency routes when a disaster occurs.
Sacramento	Sacramento County does not have specified emergency routes. Each evacuation and traffic route is situationally specific and dependent on the geographical location and magnitude of the emergency. Time of day and day of the week play a role in establishing traffic routes for evacuation.  Some of the major routes out of and through Sacramento County include the following (limited to routes in the Delta): <ul style="list-style-type: none"> <li>• I-5</li> <li>• I-80</li> <li>• U.S. 50</li> <li>• SR-160</li> </ul>

**Table 19-5**  
**Emergency Roadway Routes in the Delta and Suisun Marsh**

<b>County</b>	<b>Established Emergency Roadway Routes</b>
San Joaquin	San Joaquin County’s Delta Evacuation Plan illustrates that evacuation efforts would be directed toward the following highways: <ul style="list-style-type: none"> <li>• I-5: North toward Sacramento or south toward Stanislaus County</li> <li>• I-205: Northeast toward Manteca and Stockton or west toward Alameda County</li> <li>• SR-4: East toward Stockton or west toward Contra Costa County</li> <li>• SR-12: East toward Lodi or west toward Solano County</li> </ul>
Solano	The Solano County Office of Emergency Services, in cooperation with public protection agencies, does not have specified emergency routes. These agencies will delineate emergency routes when a disaster occurs.
Yolo	In Yolo County, the focus is on three operational concerns: (1) local/community evacuation, (2) area-wide evacuation, and (3) large-scale traffic management during regional evacuations. Primary State and local arterial and secondary ground transportation routes have been identified and are included in general preparedness and response planning efforts. The following primary egress points are recognized by Yolo County as primary emergency routes in the Delta area: <ul style="list-style-type: none"> <li>• I-5: North toward Redding and south into Sacramento</li> <li>• I-80: East into Sacramento and west toward Solano County and the San Francisco Bay Area</li> <li>• SR-84: South from West Sacramento into Solano County with two crossings east into Sacramento County across the Sacramento River</li> <li>• SR-113: South from Davis to I-80</li> <li>• County Road 22: East from Woodland into West Sacramento and then into Sacramento at two locations across the Sacramento River</li> </ul>

Sources: Alameda County 2011; Contra Costa County 2005, p. 10-44; Sacramento County 2008, p. 5-4; San Joaquin County 1992, pp. III.F-2 and III.F-3; Solano County 2008, pp. HS-33–HS-34; Yolo County 2009b

1 **19.3.2.2 Transit**

2 State and nationwide transit services are provided by Greyhound bus service. Local transit services in the  
3 Delta and Suisun Marsh consist primarily of local bus service in the communities, including Sacramento,  
4 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Suisun City, Pittsburg, Antioch, Oakley,  
5 Brentwood, Stockton, Lathrop, Manteca, and Tracy. These local bus services are operated by providers  
6 that service areas at a city or regional level.

7 **19.3.2.2.1 Bay Area Rapid Transit District**

8 Bay Area Rapid Transit (BART) is a 104-mile-long, regional, fixed-rail transit system that operates in four  
9 Bay Area counties: Alameda, Contra Costa, San Francisco, and San Mateo. Existing BART trains operate  
10 on five lines and are powered by a third-rail electrical propulsion system (BART 2011). Currently, the  
11 eastern rail tracks of the Pittsburg / Bay Point to San Francisco International Airport / Millbrae line  
12 terminate at the Pittsburg / Bay Point BART station, which is located within the SR-4 median, west of  
13 Pittsburg and the Delta.

14 **19.3.2.2.2 Other Transit**

15 Greyhound is the largest provider of intercity bus transportation in the United States, serving more than  
16 2,300 destinations with 13,000 daily departures across the United States, Canada, and Mexico and  
17 accommodating nearly 25 million passengers per year (Greyhound 2011). Greyhound buses use portions  
18 of I-5, I-80, and U.S. 50 located in the Delta.

1 Delta Breeze is operated by the City of Rio Vista and offers bus service and connections to other transit  
2 providers in Rio Vista, Isleton, Antioch, Fairfield, and Suisun City on three routes operating on SR-12  
3 and SR-160 in the Delta and Suisun Marsh. In addition to flagging the bus or waiting at bus stops along  
4 intercity routes, people wishing to use the bus may call ahead for pickup service. The following Delta  
5 Breeze routes operate on roadways in the Delta and Suisun Marsh (City of Rio Vista 2011a):

- 6 ♦ Route 50: SR-12 Express (Rio Vista to Fairfield)
- 7 ♦ Route 51: Rio Vista / Isleton City Circulator
- 8 ♦ Route 52: SR-160 Express (Rio Vista to Pittsburg / Bay Point BART station)

9 Fairfield and Suisun Transit (FAST) is the local transit system for the cities of Fairfield and Suisun City  
10 and also operates many Solano Express regional routes in Solano County. FAST provides the following  
11 types of transit services (FAST 2011):

- 12 ♦ FAST: fixed-route bus service between Fairfield, Suisun City, and Cordelia
- 13 ♦ Solano Express: fixed-route bus service to Vacaville, Dixon, Davis, Sacramento, and Benicia and  
14 to the El Cerrito del Norte, Pleasant Hill, and Walnut Creek BART stations
- 15 ♦ DART: the Americans with Disabilities Act paratransit complement to FAST's local fixed routes;  
16 this service is a demand-responsive origin-to-destination service in the cities of Fairfield and  
17 Suisun City
- 18 ♦ Reduced Fare Taxi Program: taxi service in conjunction with Fairfield Cab, Fairfield Yellow Cab,  
19 and Veteran's Cab Companies

20 One FAST route operates in the Suisun Marsh area, connecting Vacaville and Fairfield to the Walnut  
21 Creek BART station.

22 The Sacramento Regional Transit District (RT) operates 64 bus routes and 37.5 miles of light-rail  
23 covering a 418-square-mile service area. Within the Delta, seven RT routes operate in Sacramento (RT  
24 2011).

25 The San Joaquin Regional Transit District (San Joaquin RTD) provides public bus services in the  
26 Stockton metropolitan area, Lodi, and Ripon, as well as intercity, interregional, and rural transit services  
27 in San Joaquin County. Within the Delta, 19 San Joaquin RTD routes operate in Stockton, Tracy,  
28 Lathrop, and unincorporated San Joaquin County (San Joaquin RTD 2011).

29 Tri Delta Transit provides public bus services to the cities of Antioch, Pittsburg, Brentwood, Oakley,  
30 Bay Point, and Concord, as well as to the town of Discovery Bay. All 17 routes operate on roadways in  
31 the Delta (Tri Delta Transit 2011).

32 The Yolo County Transportation District administers YOLOBUS, which operates local and intercity bus  
33 service 3 in Yolo County and neighboring areas. Within the Delta, seven YOLOBUS routes operate in the  
34 West Sacramento area (YCTD 2011).

### 35 **19.3.2.3 Railroads**

36 The Burlington Northern Santa Fe Railway (BNSF), the Union Pacific Railroad (UPRR), the Central  
37 California Traction Company (CCTC), and the Sierra Northern Railway operate rail lines in the Delta and  
38 Suisun Marsh. Amtrak and the Altamont Commuter Express (ACE) provide passenger rail service.  
39 Figure 19-1 illustrates where these rail lines are located in the Delta, Suisun Marsh, and vicinity.

40 BNSF operates throughout North America, including 28 states in the western two-thirds of the United  
41 States (BNSF 2011a). In the Delta, BNSF rail lines run between Pittsburg and Stockton (Figure 19-1)  
42 (BNSF 2011b).

1 UPRR operates in 23 states across the western two-thirds of the United States (UPRR 2011). As shown in  
2 Figure 19-1, UPRR's Martinez Subdivision in Northern California operates in the Delta and Suisun  
3 Marsh and includes track that runs between the Carquinez Strait and Sacramento and from Pittsburg east  
4 into San Joaquin and southern Sacramento counties. CCTC is a short-line railroad in the Stockton and  
5 Lodi areas that provides connections between the Port of Stockton, local industrial businesses, and BNSF  
6 and UPRR rail lines (Figure 19-1) (CCTC 2011a). In the Delta, CCTC rail lines operate primarily in the  
7 Port of Stockton close to I-5 and SR-4 (CCTC 2011b).

8 The Sierra Northern Railway was formed in 2004 through a merger of Sierra Railroad Company and Yolo  
9 Shortline Railroad to serve the Port of Sacramento, West Sacramento, Woodland, Oakdale, Sonora, and  
10 Riverbank. The track interfaces with BNSF and UPRR (SNR 2011). The Sacramento River Train track  
11 includes the Fremont Trestle, which crosses the Yolo Bypass parallel to I-5.

12 Amtrak operates a nationwide passenger heavy rail network, including service in the Delta and Suisun  
13 Marsh consisting of the Capitol Corridor service, which connects San Jose and Auburn, and the San  
14 Joaquin service, which connects Bakersfield and Sacramento/Oakland (Amtrak 2011). In the Delta and  
15 Suisun Marsh, the Capitol Corridor service runs between the Carquinez Strait and Sacramento.

16 ACE provides passenger rail service between Stockton and San Jose and has shared rights to operate on  
17 UPRR tracks (MTC 2006, p. 22). In the Delta, ACE service runs between Stockton and Tracy in San  
18 Joaquin County (ACE 2011).

#### 19 **19.3.2.4 Ports, Deep Water Channels, and Ferries**

20 Ports and deep water channels are imperative for the movement of goods and people in the Delta and  
21 Suisun Marsh. These marine facilities, including commercial ports and ferries, are shown in Figure 19-3  
22 and are described below.

##### 23 **19.3.2.4.1 Port of Sacramento**

24 The City of West Sacramento owns and operates the Port of Sacramento. The port is situated along the  
25 Sacramento River Deep Water Channel in West Sacramento, approximately 95 nautical miles northeast of  
26 San Francisco. Port properties provide deep water shipping, access to port facilities, rail service,  
27 highways, adjacent multiuse industrial parks, and proximity to the Sacramento International Airport (City  
28 of West Sacramento 2011).

##### 29 **19.3.2.4.2 Port of Stockton**

30 The Port of Stockton owns and operates a 2,000-acre operating port area on the Stockton Deepwater Ship  
31 Channel, approximately 75 nautical miles east of San Francisco. The port is approximately 1 mile from  
32 I-5. Rail service to the port is provided by two railroads: UPRR and BNSF.

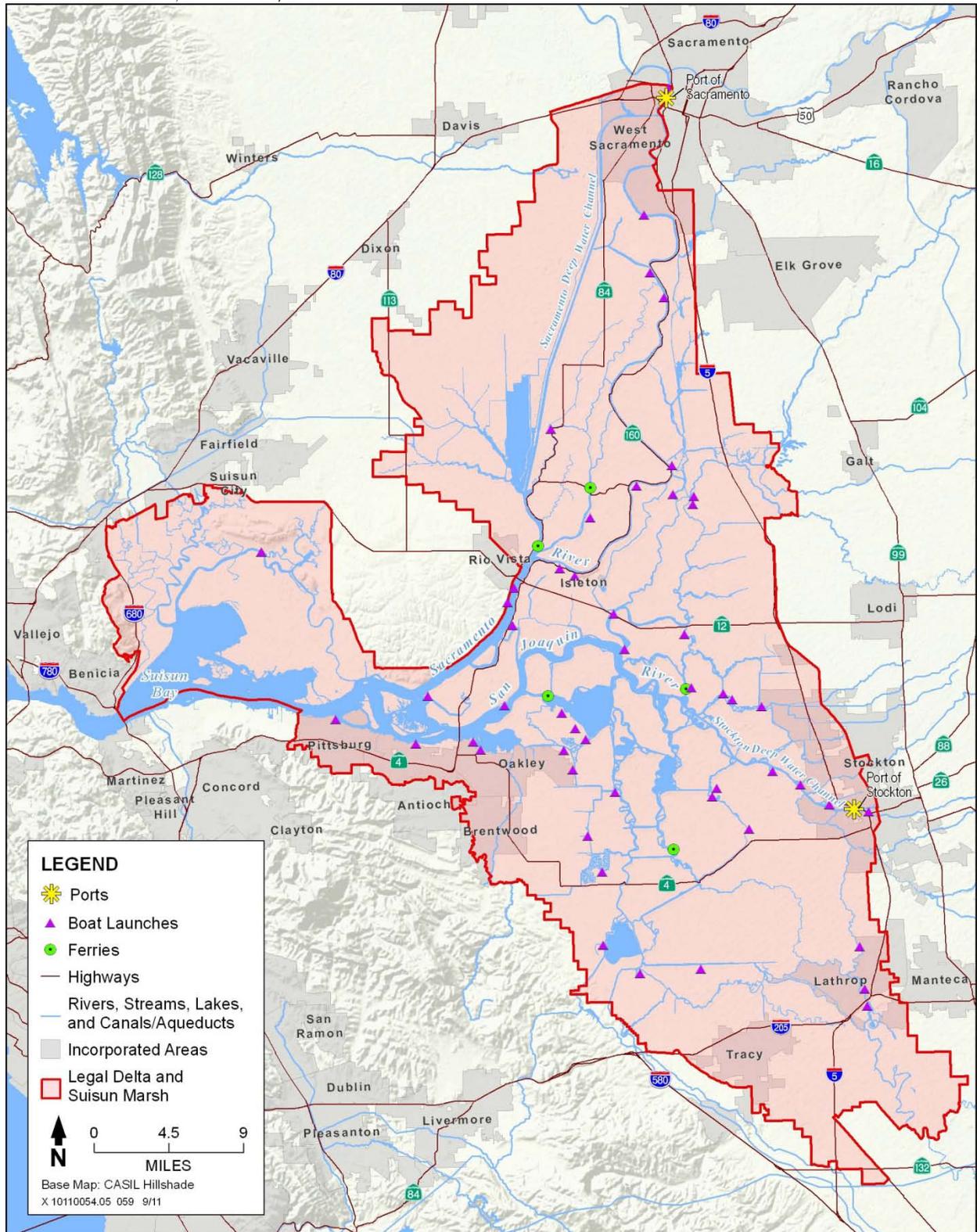
##### 33 **19.3.2.4.3 Ferry Services**

34 Five ferries area located in the Delta and Suisun Marsh connecting to public roadways. Three ferries lead  
35 to private islands. The two ferry services that allow public access to and from public land are the Real  
36 McCoy and the J-Mack ferries. The other ferries are across Little Connection Slough at Herman &  
37 Helen's Marina; across Middle River to Woodward Island; and a ferry that takes vehicles from Jersey  
38 Island to Webb Tract and Bradford Island (California Delta Chambers and Visitor's Bureau 2011a).

39

40

1 **Figure 19-3**  
 2 **Ports, Waterways, and Ferries in the Delta and Suisun Marsh**  
 3 Sources: USACE 2009; DWR 2007a, 2007b



4  
5

#### 1 19.3.2.4.4 Navigation

2 Navigation in the Delta and Suisun Marsh waterways is affected by the presence of operable gates,  
3 passive barriers, and bridges.

4 The operable gates include the Delta Cross Channel gate and the Suisun Marsh Salinity Control Gates.  
5 The Delta Cross Channel gate controls flows into a channel that connects the Sacramento River near  
6 Locke and Walnut Grove to Snodgrass Slough and the Mokelumne River. The gates are operated by the  
7 U.S. Bureau of Reclamation, as discussed in Section 3, Water Resources, and are closed during specific  
8 times to improve water supplies and water quality for the Central Valley Project. When the gates are  
9 closed, boats must access Snodgrass Slough through Georgiana Slough and North Fork Mokelumne River  
10 (California Delta Chambers and Visitor's Bureau 2011b).

11 The Suisun Marsh Salinity Control Gates on Montezuma Slough near Collinsville generally operate from  
12 October through May in accordance with Suisun Marsh salinity standards, as described in Section 3,  
13 Water Resources. A boat lock is available to provide passage when the gates are closed.

14 The California Department of Water Resources has installed seasonal rock barriers at four locations in  
15 the southern Delta, as discussed in Section 3, Water Resources: Old River near San Joaquin River  
16 (historically installed from mid-April through mid-May and from October through November), Old River  
17 near Tracy (historically installed from mid-May through November), Grantline Canal east of Tracy  
18 Boulevard (historically installed from mid-May through November), and Middle River upstream of the  
19 SR-4 crossing (historically installed from April through November). Historically, facilities have been in  
20 place to transport boats around the barriers at Old River near Tracy and Grantline Canal (California Delta  
21 Chambers and Visitors Bureau 2011b).

22 The Sacramento River Deep Water Channel connects the San Francisco Bay to the Port of Sacramento.  
23 Located in the northern portion of the Delta, the 46.5-mile-long ship channel is located in Contra Costa,  
24 Solano, Sacramento, and Yolo counties and serves marine terminal facilities at the Port of Sacramento.  
25 The U.S. Army Corps of Engineers is evaluating the deepening and widening of the navigation channel to  
26 the depth of 35 feet. Deepening of the existing ship channel would allow for movement of cargo via  
27 larger, deeper draft vessels. Widening portions of the channel would increase navigational safety by  
28 increasing maneuverability (USACE and the Port of West Sacramento 2011).

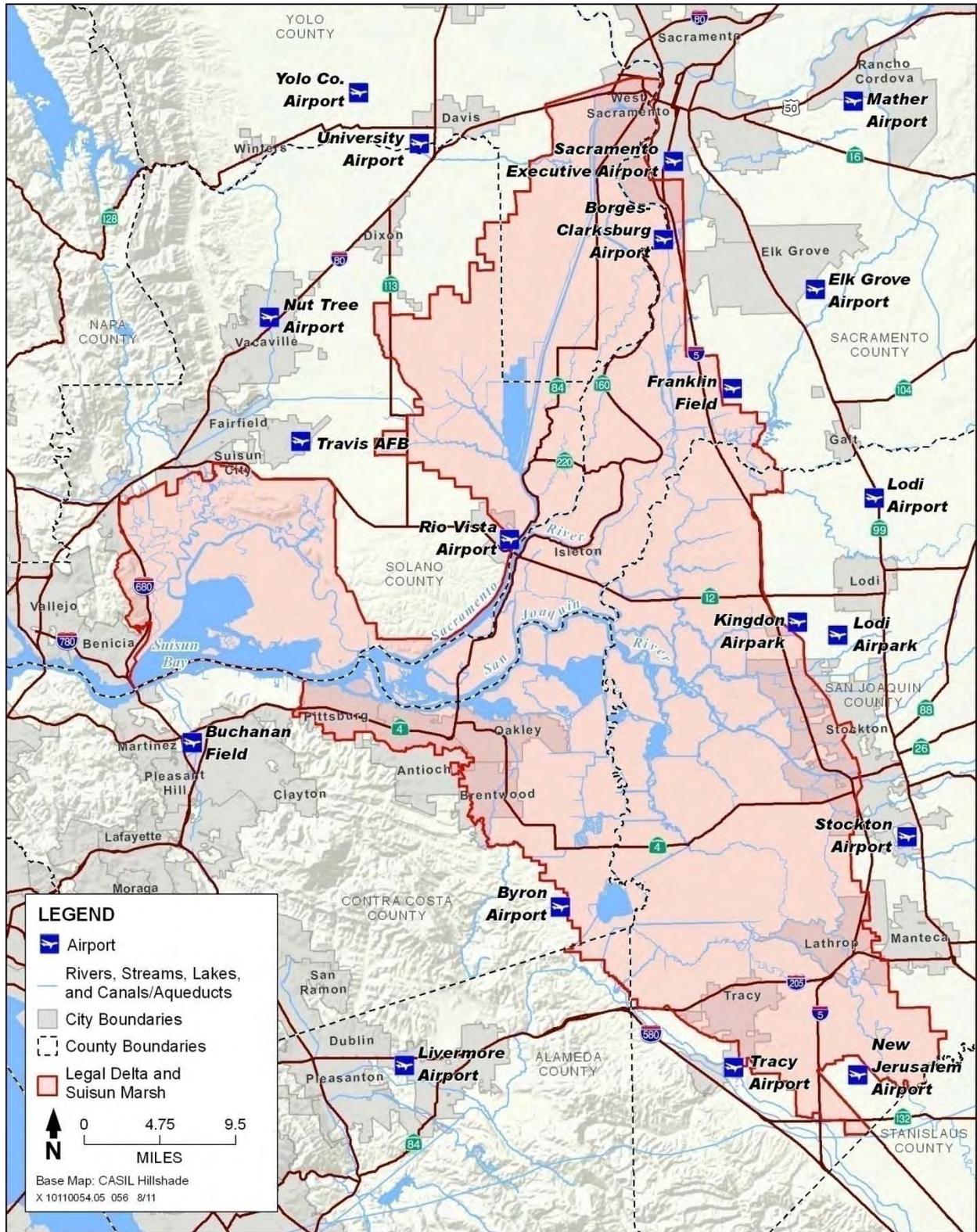
29 Stockton Deep Water Channel serves the Port of Stockton. It has an average depth of 37 feet at average  
30 low tide and an average depth at high tide of 40 feet. Vessels in the 45,000- to 55,000-ton class and  
31 maximum 60,000-ton class (for certain wide-beam vessels) can use the channel fully loaded. Up to  
32 80,000-ton-class vessels can use the channel if they are partially loaded. There is no width restriction of  
33 vessels, and ships up to 900 feet long can navigate the channel (Port of Stockton 2011).

#### 34 19.3.2.5 Airports

35 A number of airports are located in the Delta and Suisun Marsh and nearby vicinity, including smaller  
36 private airstrips and public regional airports (Figure 19-4). There are two airports that are located in the  
37 Delta. Borges-Clarksburg Airport is a privately owned and operated airport and averages approximately  
38 57 flights per week. It has one runway, provides tie-downs for aircraft parking, and supports mostly  
39 single-engine airplanes (AirNav 2011). Rio Vista Municipal Airport is a general aviation airport owned  
40 and operated by the City of Rio Vista. Airport services include flight instruction, hangars, tie-downs for  
41 overnight parking, fueling, conference rooms, and lounges (City of Rio Vista 2011b).

42

1 **Figure 19-4**  
2 **Airports In and Near the Delta and Suisun Marsh**  
3 *Source: Caltrans 2008a*



4

### 1 **19.3.2.6 Bicycle and Pedestrian Facilities**

2 In addition to promoting recreational activities, bicycle and pedestrian facilities provide a mode of  
3 transportation for local and regional travel. These facilities include paved bike and walking paths, shared  
4 bike lanes, sidewalks, and natural trails, all of which are present in the Delta and Suisun Marsh.

## 5 **19.3.3 Delta Watershed**

6 This discussion describes transportation facilities in the Delta watershed area. The Delta watershed  
7 extends across a broad area encompassing about 44,330 square miles that covers approximately  
8 27 percent of the land in the state. Major transportation corridors in agricultural and rural areas are  
9 generally focused on interstate and State highways and railroads. I-5 is the main north-south interstate  
10 freeway in the region. Several major arterials run north-south, generally parallel to the Sacramento River.  
11 SR-99 and SR-70 run north-south; certain sections of both of these routes are expressways. SR-273 runs  
12 north-south from Redding, generally paralleling the Sacramento River before it intersects with I-5 several  
13 miles north of the Shasta/Tehama county line. Major east-west routes on the east side of the Sacramento  
14 Valley include SRs-70, -49, and -88; U.S. 50; and I-80.

15 The UPRR and Western Pacific Railroad both have rail lines serving the region. The UPRR main line  
16 follows the I-5 alignment. The UPRR and Atchison, Topeka, and Santa Fe lines provide primary rail  
17 service connecting the Delta region to the San Joaquin River basin. The alignments of these rail lines  
18 generally follow the I-5 alignment through the San Joaquin Valley.

19 A number of airports of various sizes in terms of acreage and daily operations are located in the vicinity  
20 of the Delta and Suisun Marsh. Twenty-one airports located in the Delta watershed in the vicinity of the  
21 Delta and Suisun Marsh are shown on Figure19-4.

## 22 **19.3.4 Areas Outside the Delta That Use Delta Water**

23 Major transportation corridors in agricultural and rural areas are generally focused on interstate and State  
24 highways and railroads. Local roadways in the rural areas generally do not have substantial congestion  
25 except near intersections with the major corridors. In suburban and urban areas, major transportation  
26 corridors include interstate and State highways, major multi-lane roadways, light-rail systems, airports,  
27 and railroads. Traffic congestion is substantial in many of these areas and can increase during major  
28 construction activities.

29 Numerous freeways and expressways serve portions of the areas that use Delta water. U.S. 101 extends  
30 north and south near the coast from San Luis Obispo south to Los Angeles, and I-5 runs north-south  
31 through the Central Valley to Los Angeles and on to San Diego. An extensive, intricate freeway system  
32 serves the Los Angeles area. I-10 runs east from Los Angeles to Arizona, while I-8 runs east-west from  
33 San Diego to Arizona.

34 The UPRR line runs north-south near the coast, from the San Francisco Bay Area through Los Angeles,  
35 then southeast toward the Arizona/Mexico border.

36 The Los Angeles–Long Beach installation on San Pedro Bay is one of the leading ports of California. The  
37 growth of Los Angeles led to the creation of its artificial harbors. Other harbors in this area serving  
38 commercial shipping include Port Hueneme, Los Angeles, Long Beach, and San Diego harbors  
39 (CALFED 2000b).

## 19.4 Impacts Analysis of Project and Alternatives

### 19.4.1 Assessment Methods

The Proposed Project (Delta Plan) and alternatives would not directly result in construction or operation of projects or facilities, and therefore would result in no direct transportation impacts.

The Proposed Project and alternatives could encourage the implementation of actions or activities by other agencies to construct and operate facilities or infrastructure that are described in Section 2A, Proposed Project and Alternatives. Examples of potential actions that could affect transportation include land use changes, conversion of agricultural lands to wetlands or other tidal habitats, or modification of existing roadways because of levee reconstruction or relocation. Projects or programs that could be implemented may include the development of water and wastewater treatment plants; conveyance facilities, including pumping plants; surface water or groundwater storage facilities; ecosystem restoration projects; flood control levees; or recreation facilities. Implementation of these types of actions and construction and operation of these types of facilities could result in transportation impacts.

There are several ways that implementation of the projects encouraged in the Proposed Project could affect transportation facilities that are analyzed in this section. Congestion could increase on area roads and intersections for both short periods of time and over the long-term. Construction-related impacts are considered short-term effects. There may be circumstances where the installation of water conveyance facilities or ecosystem restoration project would displace existing roadways, requiring them to be relocated or redesigned to accommodate the implementation of actions stemming from adoption of the Delta Plan.

Operations-related impacts are long-term effects associated with implementation of location-specific water resource, ecosystem restoration, flood protection, and land use changes. For example, roadway capacity or navigability in waterways and the deep water ship channels could be reduced from these changes.

The precise magnitude and extent of project-specific transportation-related impacts would depend on the type of action or project being proposed, its specific location, its total size, and a variety of project- and site-specific factors. Project-specific transportation impacts would be addressed in project-specific environmental studies conducted by the lead agency proposing the action or project at the time the projects are proposed for implementation. Federal, State, and local transportation authorities use levels of service to measure the amount or quality of the roadway facilities to plan and implement its roadway improvement projects. Each transportation authority selects the way in which it will measure its facilities (for example, vehicle miles travelled, time delay at intersections, or tonnage delivered per year), and it identifies the acceptable standard level of service for each measurement.

A similar measure of level of service is the design and use criteria for STAA truck routes. California legal trucks can travel on STAA routes, California legal routes, and advisory routes. California legal trucks have access to the entire State highway system, except where prohibited (Caltrans 2011b). Specifications for STAA and California legal trucks are shown in Table 19-6.

**Table 19-6**  
**STAA and California Legal Truck Specifications**

<b>Truck Route Type</b>	<b>Semitrailer, Single</b>	<b>Semitrailer, Double</b>
Surface Transportation Assistance Act	Semitrailer length: Up to 48 feet KPRA: No limit Overall length: No limit	Trailer length: Up to 28 feet, 6 inches (each trailer) Overall length: No limit
California legal	Semitrailer length: No limit KPRA: Up to 40 feet for trailers with two or more axles; 38 feet maximum for single-axle trailers Overall length: Up to 65 feet	Trailer length: Up to 28 feet, 6 inches (each trailer) Overall length: Up to 65 feet <hr/> Trailer length: Up to 28 feet, 6 inches; other trailer can be longer than 28 feet, 6 inches Overall length: Up to 65 feet

Source: Caltrans 2011b  
 KPRA: kingpin-to-rear-axle

- 1 The methodology to assess potential indirect impacts of the Proposed Project encouraged actions or
- 2 projects on the transportation system is dependent on the specific mode of transportation to be affected
- 3 and the location of the transportation feature. Those actions and projects are reviewed to determine
- 4 whether roadways, truck routes, emergency routes, transit, railroads, navigational routes, airports, and
- 5 bicycle and pedestrian facilities would be modified, relocated, or function impaired.
  
- 6 For purposes of this analysis, given the uncertainty of timing and location of future activities/actions that
- 7 could be encouraged by the Delta Plan, it is not feasible to determine the how roadway levels of service in
- 8 the vicinity of the actions/activities could be affected. Accordingly, this analysis generally describes how
- 9 construction of actions or projects encouraged by the Delta Plan could disrupt transportation facilities and
- 10 their function, then proposes mitigation measures to minimize that disruption as appropriate. The analysis
- 11 also generally discusses how these actions or projects, once constructed and operational could result in
- 12 permanent impairment of transportation facilities and their function, then proposes associated mitigation
- 13 measures as appropriate. When an agency actually proposes a specific project, the agency would evaluate
- 14 the site-specific potential impacts based on the detailed project description and the existing background
- 15 traffic volumes. Overall, most transportation-related impacts are associated with construction of physical
- 16 features, including water conveyance facilities, ecosystem restoration, and levee improvements. Other
- 17 potential impacts could result from roadway, bridge, rail line, and bicycle and pedestrian facility improve-
- 18 ments or relocation to accommodate actions/activities that could be influenced by the Delta Plan
- 19 alternatives.
  
- 20 This EIR proposes mitigation measures for transportation impacts. The ability of these measures to reduce
- 21 transportation impacts to less-than-significant levels depends on project-specific environmental studies;
- 22 enforceability of these measures depends on whether or not the project being proposed is a covered
- 23 action. This is discussed in more detail in Section 19.4.4.6 and in Section 2B, Introduction to Resource
- 24 Sections.

## 19.4.2 Thresholds of Significance

Based on Appendix G of the California Environmental Quality Act (CEQA) Guidelines, a transportation impact is considered significant if the Proposed Project would do any of the following:

- ◆ 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 nonmotorized 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
- ◆ 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
- ◆ 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
- ◆ Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)
- ◆ Result in inadequate emergency access
- ◆ Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities

## 19.4.3 Issues Not Discussed in Further Detail

The goals and objectives of the State-mandated (California Government Code section 65089) congestion management program (CMP) are aimed at reducing congestion on highways and roads in California. The CMP emphasizes travel demand measures to reduce the number of miles driven per capita, infrastructure improvements to reduce single-occupancy vehicle trips, land use regulations to encourage the use of alternative modes of transportation instead of cars, and monitoring and enforcement of travel demand measure implementation by development projects. Short-term, construction-related impacts are not regulated by CMPs. While population growth may be indirectly induced through implementation of the Proposed Project, CMPs would be developed based on land use and population projections developed by the regional transportation agency in coordination with council of governments, the regional body responsible for coordinated regional growth. The Delta Plan would not interfere with regional plans for orderly growth or with the implementation of CMPs by regional transportation authorities. Accordingly, **no impact** would occur and potential conflicts with applicable CMPs are not discussed further.

Neither the Proposed Project nor the alternatives would affect air traffic patterns because no airport facilities are proposed as part of the project and there would be no increase in demand for travel because neither the Proposed Project nor the alternatives would generate new population that would increase demand for airport services. There is insufficient information available to estimate whether additional populations would increase user demand at a specific transportation facility or airport. Such an analysis would be highly speculative at this point in time. Although Delta ecosystem restoration could increase habitat for waterfowl and other avian species, there is insufficient information to determine whether restoration actions would be sufficiently close to a specific commercial airport to pose an increased risk of hazard.

The following discussion of environmental impacts is limited to those potential impacts that could result from actions or projects the Delta Plan or its alternatives could encourage or influence. As individual activities are proposed by other agencies, these individual activities will need to be evaluated in

1 site-specific environmental documents prepared by those agencies. Please consult Section 2B,  
2 Introduction to Resource Sections, about this approach.

### 3 **19.4.4 Proposed Project**

#### 4 **19.4.4.1 Reliable Water Supply**

5 As described in Sections 2A, Proposed Project and Alternatives, and 2B, Introduction to Resource  
6 Sections, the Delta Plan does not direct the construction of specific projects, nor would projects be  
7 implemented under the direct authority of the Delta Stewardship Council. However, the Delta Plan seeks  
8 to improve water supply reliability by encouraging various actions that, if taken, could lead to completion,  
9 construction, and/or operation of projects that could provide more reliable water supply. Such projects  
10 and their features could include the following:

- 11 ♦ Surface water projects (water intakes, treatment and conveyance facilities, reservoirs,  
12 hydroelectric generation)
- 13 ♦ Groundwater projects (wells, wellhead treatment, conveyance facilities)
- 14 ♦ Ocean desalination projects (water intakes, brine outfalls, treatment and conveyance facilities)
- 15 ♦ Recycled wastewater and stormwater projects (treatment and conveyance facilities)
- 16 ♦ Water transfers
- 17 ♦ Water use efficiency and conservation program implementation

18 The number and location of all potential projects that would be implemented are not known at this time.  
19 Three possible projects, however, are known to some degree and are named in the Delta Plan: the North  
20 of Delta Offstream Storage Investigation (aka Sites Reservoir), Los Vaqueros Reservoir Project (Phase 2),  
21 and the Upper San Joaquin River Basin Storage Investigation Plan (aka Temperance Flat). Of these three  
22 projects, the Los Vaqueros Reservoir Project has undergone project-specific environmental review  
23 (Los Vaqueros Reservoir Expansion EIS/EIR) (Reclamation et al. 2009). The Delta Plan also refers to  
24 California Department of Water Resources (DWR) Bulletin 118. The bulletin presents a list of  
25 10 recommendations for the management of groundwater but does not result in a specific project the  
26 construction or operation of which could affect transportation; therefore, Bulletin 118 is not evaluated in  
27 this section.

#### 28 **19.4.4.1.1 Impact 19-1a: Construction- and Operations-related Conflict with an Applicable Plan, 29 Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the 30 Circulation System, Taking into Account All Modes of Transportation**

31 Construction of actions or projects the Delta Plan could influence have the potential to conflict with  
32 applicable transportation plans, ordinances, and policies on a temporary basis during construction and on  
33 a long-term basis during operations. For impacts that would be potentially significant, lead agencies could  
34 require mitigation measures described below to reduce the significance of the impacts.

#### 35 *Effects of Project Construction*

##### 36 *Roadways*

37 Construction-related activities at construction sites for water supply reliability projects, including water  
38 treatment plants, desalination plants, pipelines, wastewater treatment plants, stormwater treatment  
39 facilities, and agricultural runoff treatment could affect the use of federal, State, and local highways and  
40 bridges by temporary full and partial road closures. Road/lane closures may be necessary for the

1 installation of conveyance facilities to cross roads when jack and bore or tunneling may not be feasible or  
2 necessary. Roads may also need to be relocated outside of the inundation area of water storage projects.  
3 The import and export of fill material may require a substantial increase in the numbers of trucks at  
4 intersections and on road segments. These construction activities could lead to a substantial increase in  
5 traffic congestion such that a level of service at an intersection or road segment would be reduced below  
6 the minimum standard. If a roadway that is affected by construction is a designated truck route, there  
7 would be an impact if the types of trucks as defined in STAA (Table 19-6) are not able to operate on the  
8 designated truck route during this period. Construction impacts could also substantially degrade a  
9 transportation facility by the use of haul trucks such that repairs to the facility are required.

10 It is unclear at this time how implementation of the Proposed Project would result in specific construction  
11 activities, including the location, number, capacity, methods, and duration of construction activities.  
12 However, the Delta Plan encourages at least to some degree implementation of the North of Delta  
13 Offstream Storage Investigation, Los Vaqueros Reservoir Project (Phase 2), and the Upper San Joaquin  
14 River Basin Storage Investigation Plan. These are possible new or expanded surface water facilities.

15 The Los Vaqueros Project has undergone project-specific environmental review via an EIS/EIR; the other  
16 two projects have not. The Los Vaqueros EIS/EIR provides analogous information about the impacts  
17 expected from construction of surface water facilities that is applicable to the two other projects, which  
18 are similar to the Los Vaqueros Project. In addition, the project-specific EIR for another surface storage  
19 project (not named in the Delta Plan)—the Calaveras Dam Replacement Project—also provides  
20 analogous information.

21 The Los Vaqueros Reservoir Expansion EIS/EIR (Reclamation et al. 2009) evaluated three alternatives to  
22 increase water storage, a new Delta intake structure, and conveyance facilities. In this case, a number of  
23 road segments and intersections were studied based on anticipated haul routes. The lead agency found that  
24 with implementation of mitigation measures, construction of the Los Vaqueros Reservoir Expansion  
25 project would have a less-than-significant impact on traffic circulation.

26 The San Francisco Public Utilities Commission (SFPUC) found in the EIR prepared for the Calaveras  
27 Dam Replacement project (SFPUC 2011) that that project would not have a significant impact on traffic  
28 circulation and that no mitigation was required.

29 Construction of the types of water supply reliability projects listed in Section 19.4.4.1 other than surface  
30 water facilities (groundwater projects, ocean desalination projects, recycled wastewater and stormwater  
31 projects, water use efficiency and conservation programs, and hydroelectric generation facilities)  
32 generally would have transportation impacts similar to the transportation impacts caused by the  
33 construction of surface water facilities, as follows.

34 Although not named in the Delta Plan, the following projects, based on a review of their project-specific  
35 EIRs, are illustrative of the types of construction-related transportation impacts associated with non-  
36 surface-water water supply reliability project: the Davis-Woodland Water Supply Project (City of Davis  
37 2007), which includes a water intake in the Sacramento River, pumping plants, and conveyance and water  
38 treatment facilities; the Huntington Beach Seawater Desalination Project (City of Huntington Beach  
39 2005) and the Carlsbad Precise Development Plan and Desalination Plant Project (City of Carlsbad 2005),  
40 both of which illustrate some of the likely transportation impacts of constructing seawater desalination  
41 plants; and the Western Municipal Water District Riverside-Corona Feeder Pipeline Project (WMWD and  
42 Reclamation 2011), which includes the installation of a 28-mile-long underground pipeline and  
43 groundwater treatment, water storage, and pumping facilities.

44 The City of Davis found that constructing the diversion/intake structure and groundwater would require  
45 lane closures, thereby reducing roadway capacity relative to existing traffic and construction traffic. The  
46 City of Davis required mitigation measures during project construction that would reduce traffic impacts

1 to a less-than-significant level. Like the City of Davis, the City of Huntington Beach found that  
2 construction of the ocean desalination plant and appurtenant facilities would have potentially significant  
3 traffic impacts. The City of Huntington Beach decided that with implementation of similar mitigation  
4 measures (i.e., preparation and implementation of a traffic control plan), impacts on traffic would be  
5 reduced to a less-than-significant level. The City of Carlsbad also required the preparation of a traffic  
6 control plan as mitigation in order to conclude that construction of an ocean desalination plant would have  
7 less-than-significant traffic circulation impacts during construction. Western Municipal Water District  
8 found that installation of an underground water pipeline could have significant construction-related traffic  
9 impacts. Mitigation measures were required that reduced construction-related traffic impacts to a less-  
10 than-significant level.

11 Project-level impacts related to the Delta Plan would be addressed in future site-specific environmental  
12 analysis conducted at the time such projects are proposed by lead agencies. However, because of the  
13 potential that increased traffic-related construction activities would result in intersections or road  
14 segments operating below minimum local level of service standards (e.g., when roads need to be closed  
15 temporarily for the installation of conveyance across the road) the potential impacts are considered  
16 **significant**.

#### 17 Transit

18 The primary form of transit in the Delta, Delta watershed, and areas outside of the Delta that use Delta  
19 water is bus service. Construction-related impacts from water supply reliability projects that result in  
20 increased traffic congestion: road and lane closures and haul truck traffic could adversely affect transit  
21 service by causing delays. These delays would be temporary and localized to the construction area,  
22 thereby not affecting large numbers of commuters. Detour routes would likely be available to the transit  
23 provider.

24 The EIS/EIR for the Los Vaqueros Reservoir Expansion Project (Reclamation et al. 2009), a named  
25 project in the Delta Plan, did not evaluate construction-related effects on transit. The EIR for the  
26 Calaveras Dam Replacement Project (SFPUC 2011) also did not evaluate construction-related effects on  
27 transit. As for illustrative EIRs for other water supply reliability projects that are not named in the Delta  
28 Plan and that do not involve surface storage facilities, the lead agencies (City of Davis, City of  
29 Huntington Beach, City of Carlsbad, Western Municipal Water District) did not find construction-related  
30 impacts on transit to be an issue of concern.

31 Because transit delays would be temporary and localized would not affect substantial numbers of  
32 commuters, construction-related impacts resulting from the implementation of the water supply reliability  
33 projects would have a **less-than-significant** impact on transit and no mitigation is required.

#### 34 Railroads

35 Construction-related impacts on railroads from water supply reliability projects would be similar to road  
36 and transit impacts because tracks and trestles may require temporary closures. No rail lines would be  
37 relocated. Water supply reliability facilities would be designed to avoid permanent impacts on rail lines.  
38 Adverse effects of track closure would be temporary and could require that passengers and freight may  
39 need to be rerouted. Rerouting trains could cause passenger and freight delays. These delays would be  
40 temporary and would affect private freight companies and a small number of commuters.

41 The EIS/EIR for the Los Vaqueros Reservoir Expansion Project (Reclamation et al. 2009), a named  
42 project in the Delta Plan, did not evaluate construction-related effects on railroads. The EIR for the  
43 Calaveras Dam Replacement Project (SFPUC 2011) also did not evaluate construction-related effects on  
44 railroads. As for illustrative EIRs for other water supply reliability projects that are not named in the Delta  
45 Plan and that do not involve surface storage facilities (Section 19.4.4.1), none of the lead agencies (City

1 of Davis, City of Huntington Beach, City of Carlsbad, Western Municipal Water District) found  
2 construction-related impacts on railroads to be an issue of concern.

3 Because no rail lines would be relocated and possible track closures would be temporary causing short-  
4 term delays, construction-related impacts resulting from the implementation of the Delta Plan would have  
5 a **less-than-significant** impact on railroads and no mitigation is required.

#### 6 Navigation, Ports, Waterways, and Ferries

7 The construction of water supply reliability features would not be conducted in navigable waterways.  
8 Therefore, water supply reliability actions would have **no impact** on navigation, and no mitigation is  
9 required.

#### 10 Bicycle and Pedestrian Facilities

11 Construction-related impacts from implementing water supply reliability actions on bicycle and  
12 pedestrian facilities would be similar to the roadway impacts described above.

13 The EIS/EIR for the Los Vaqueros Reservoir Expansion Project (Reclamation et al. 2009), a named  
14 project in the Delta Plan, did not evaluate construction-related effects on bicycle and pedestrian facilities.  
15 The EIR for the Calaveras Dam Replacement Project (SFPUC 2011) did evaluate construction-related  
16 effects on bicycle and pedestrian facilities and found the potential impacts to be less than significant, not  
17 requiring mitigation. As for illustrative EIRs for other water supply reliability projects not named in the  
18 Delta Plan, none of the lead agencies (City of Davis, City of Huntington Beach, City of Carlsbad,  
19 Western Municipal Water District) found construction-related impacts on bicycle and pedestrian facilities  
20 to be an issue of concern.

21 Depending on the location of water supply reliability actions, bicycle and pedestrian facilities could  
22 require temporary relocation or complete removal of such facilities. Temporary impacts of less than  
23 3 months are considered to be less than significant. However, complete closure of bicycle and pedestrian  
24 paths for greater than 3 months could be required. Because of the potential that bicycle and pedestrian  
25 facilities would be closed for more than 3 months (e.g., if a bike path is located in a staging area or  
26 borrow site for a multiple-year construction project) the potential impacts are considered **significant**.

#### 27 *Effects of Project Operation*

##### 28 Roadways

29 Operations of surface water facilities, groundwater projects, recycled wastewater and stormwater projects,  
30 and water use efficiency and conservation programs would not increase traffic or cause circulation  
31 problems at intersections or road segments because either the projects and programs would not generate  
32 any traffic during peak-hour periods or they would involve a minor increase in the number of workers in  
33 locations generally free of traffic congestion problems and little truck traffic. Operation of ocean  
34 desalination projects, however, could cause changes in the level of service at localized intersections or  
35 road segments to the extent trucks are required to haul away brine waste. All of the lead agencies  
36 (Reclamation et al., SFPUC, City of Davis, City of Huntington Beach, City of Carlsbad, and Western  
37 Municipal Water District) found no traffic impacts from project operations in their respective project  
38 EIRs. The Seawater Desalination at Huntington Beach Project Subsequent EIR (City of Huntington  
39 Beach 2010) determined, however, that operations would not change traffic patterns because trucks would  
40 not be used to dispose of brine wastes. In other examples, project operations would not generate  
41 additional traffic that would contribute to congestion or affect roadway level of service.

42 Project-level impacts for other desalination projects would be addressed in future site-specific  
43 environmental analysis conducted at the time such projects are proposed by lead agencies. If such projects

1 require additional truck traffic as part of normal operations, the potential exists that increased traffic  
2 congestion would cause roadways to operate below the minimum level of service standard. For example,  
3 increased brine disposal traffic could cause an intersection to operate below the minimum level of service  
4 standard if it results in traffic backups that exceeds local standards.. This potential impact is considered  
5 **significant**.

#### 6 Transit

7 Operations of surface water facilities, groundwater projects, ocean desalination projects, recycled  
8 wastewater and stormwater projects, and water use efficiency and conservation programs would not result  
9 in additional demands on transit, nor would it impair existing transit efficiency. All of the lead agencies  
10 (Reclamation et al., SFPUC, City of Davis, City of Huntington Beach, City of Carlsbad, and Western  
11 Municipal Water District) found no transit impacts from project operations in their respective project  
12 EIRs. Because operations of water supply reliability facilities named or otherwise encouraged in the Delta  
13 Plan would result in no changes in transit service, water supply reliability activities would have **no**  
14 **impact** on transit in the Delta, Delta watershed, or areas outside of the Delta that use Delta water.

#### 15 Railroads

16 Operations of surface water facilities, groundwater projects, ocean desalination projects, recycled  
17 wastewater and stormwater projects, and water use efficiency and conservation programs would not result  
18 in additional demands on railroads, nor would it impair existing railroad efficiency. All of the lead  
19 agencies (Reclamation et al., SFPUC, City of Davis, City of Huntington Beach, City of Carlsbad, and  
20 Western Municipal Water District) found no impacts on railroads from project operations in their  
21 respective project EIRs. Because operations of water supply reliability facilities named or otherwise  
22 encouraged in the Delta Plan would result in no changes in rail service, water supply reliability activities  
23 would have **no impact** on railroads in the Delta, Delta watershed, or areas outside of the Delta that use  
24 Delta water.

#### 25 Navigation, Ports, Waterways, and Ferries

26 Operations of surface water facilities, groundwater projects, ocean desalination projects, recycled  
27 wastewater and stormwater projects, and water use efficiency and conservation programs would not  
28 substantially change navigation, nor would it result in additional navigation hazards. All of the lead  
29 agencies (Reclamation et al., SFPUC, City of Davis, City of Huntington Beach, City of Carlsbad, and  
30 Western Municipal Water District) found no impacts on navigation from project operations in their  
31 respective project EIRs. Because operations of water supply reliability facilities named or otherwise  
32 encouraged in the Delta Plan would result in no changes in navigation, water supply reliability activities  
33 would have **no impact** on navigation in the Delta, Delta watershed, or areas outside of the Delta that use  
34 Delta water.

#### 35 Bicycle and Pedestrian Facilities

36 Operations of surface water facilities, groundwater projects, ocean desalination projects, recycled  
37 wastewater and stormwater projects, and water use efficiency and conservation programs would not  
38 increase traffic or cause changes in bicycle and pedestrian facilities. All of the lead agencies (Reclamation  
39 et al., SFPUC, City of Davis, City of Huntington Beach, City of Carlsbad, and Western Municipal Water  
40 District) found no impacts on bicycle and pedestrian facilities from project operations in their respective  
41 project EIRs. Because operations of water supply reliability facilities named or otherwise encouraged in  
42 the Delta Plan would result in no changes in traffic circulation or bicycle and pedestrian facilities, water  
43 supply reliability activities would have **no impact** on bicycle and pedestrian facilities.

## 1 *Summary of Conclusions for Construction and Operations*

2 As stated for each mode of transportation, project-level impacts would be addressed in future site-specific  
3 environmental analysis at the time such projects are proposed by lead agencies. Regarding construction,  
4 because of the potential for intersections and road segments to operate below the local agency's minimum  
5 level of service standard during construction and the potential for bicycle and pedestrian facilities to be  
6 closed for more than 3 months, this potential impact would be **significant**. Regarding operations, because,  
7 desalination projects could require brine haul trips that could cause an intersection or road segment to  
8 operate below a local agency's minimum level of service standard, this potential impact would be  
9 **significant**.

### 10 19.4.4.1.2 Impact 19-2a: Potential Increase in Hazards Related to a Design Feature

11 Section 19.4.4.1 describes the types of actions/activities the Delta Plan could encourage for water supply  
12 reliability. Transportation infrastructure, that could be affected by these actions/activities include roads,  
13 bridges, railroads, and waterways. Some of these projects could require the relocation of road segments,  
14 vehicular bridges, and railroad bridges. While specific locations of these facilities are not known, water  
15 supply reliability projects would be implemented in the Delta, Delta watershed, and areas outside of the  
16 Delta that use Delta water. These relocations could require substantial alterations in the horizontal and  
17 vertical alignments of these facilities.

18 Current engineering standards are based on design criteria to minimize hazards to the maximum amount  
19 practicable with respect to horizontal and vertical lines of site, adequate lane widths, shoulder widths, and  
20 guardrail safety devices. If the existing facilities are older and considered functionally or structurally  
21 obsolete, the construction activities could include replacement with functionally and structurally sound  
22 facilities designed to current standards. State and local building design criteria would prevent construction  
23 of facilities that would not comply with the new design criteria.

24 The EIS/EIR for the Los Vaqueros Reservoir Expansion Project (Reclamation et al. 2009), a named  
25 project in the Delta Plan, did not evaluate the introduction of design-related hazards because the project  
26 did not propose new roads, bridges, rail lines, or trestles. For the same reason, the EIR for the Calaveras  
27 Dam Replacement Project (SFPUC 2011) also did not evaluate the introduction of design-related hazards.  
28 As for illustrative EIRs for other water supply reliability projects that are not named in the Delta Plan and  
29 that do not involve surface storage facilities, none of the lead agencies (City of Davis, City of Huntington  
30 Beach, City of Carlsbad, Western Municipal Water District) found the introduction of design-related  
31 hazards to be an issue of concern.

32 Because facilities would be designed to meet the safety criteria existing at the time that the action is  
33 proposed, there is no potential for an increased hazard related to design of the feature; therefore, this  
34 potential impact would be **less than significant**.

### 35 19.4.4.1.3 Impact 19-3a: Potential Reduction in Adequate Emergency Access

36 Section 19.4.4.1 describes the types of actions or projects the Delta Plan would encourage regarding water  
37 supply. Construction of these activities could result in the need to temporarily close or relocate emergency  
38 routes. In addition, construction traffic or congestion near temporary closures, could delay response time  
39 for emergency vehicles. The emergency routes primarily involve roadways but also include boat access.

40 It is unclear at this time which specific activities permitted/encouraged by the Proposed Project would  
41 result in construction and operations of projects, including the location, number, capacity, operational  
42 criteria, methods, and duration of construction activities. However, the Delta Plan encourages  
43 implementation of the North of Delta Offstream Storage Investigation, Los Vaqueros Reservoir Project  
44 (Phase 2), and the Upper San Joaquin River Basin Storage Investigation Plan. These are possible new or  
45 expanded surface water facilities.

1 The Los Vaqueros Reservoir Project has undergone project-specific environmental review via an  
2 EIS/EIR; the other two projects have not. The Los Vaqueros EIS/EIR provides analogous information  
3 about the impacts expected from construction of surface water facilities that is applicable to the two other  
4 projects, which are similar to the Los Vaqueros Project. In addition, the project-specific EIR for another  
5 surface storage project (not named in the Delta Plan)—the Calaveras Dam Replacement Project—also  
6 provides analogous information.

7 The Los Vaqueros Reservoir Expansion EIS/EIR (Reclamation et al. 2009) evaluated three alternatives to  
8 increase water storage, a new Delta intake structure, and conveyance facilities. In this case, a number of  
9 road segments and intersections were studied based on anticipated construction sites and staging areas.  
10 The lead agency found that with implementation of mitigation measures, construction of the  
11 Los Vaqueros Reservoir Expansion project would have a less-than-significant impact on emergency  
12 access.

13 On the other hand, the SFPUC found that the Calaveras Dam Replacement project (SFPUC 2011) would  
14 substantially reduce emergency access. The lead agency determined that after implementation of  
15 mitigation, reduced emergency access would be a significant and unavoidable impact.

16 Construction of the types of water supply reliability projects listed in Section 19.4.4.1 other than surface  
17 water facilities (groundwater projects, ocean desalination projects, recycled wastewater and stormwater  
18 projects, water use efficiency and conservation programs, and hydroelectric generation facilities)  
19 generally would have impacts on emergency access similar to the impacts caused by the construction of  
20 surface water facilities.

21 As described in Section 19.4.4.1.1, additional documents reviewed for examples of potential impacts of  
22 water supply reliability projects other than surface water projects include EIRs for the Davis-Woodland  
23 Water Supply Project (City of Davis 2007), Huntington Beach Seawater Desalination Project (City of  
24 Huntington Beach 2005), Carlsbad Precise Development Plan and Desalination Plant Project (City of  
25 Carlsbad 2005), and Western Municipal Water District Riverside-Corona Feeder Pipeline Project  
26 (WMWD and Reclamation 2011).

27 The City of Davis found that constructing the diversion/intake structure and groundwater would require  
28 lane closures, thereby reducing emergency access and possibly increasing emergency response times. The  
29 City of Davis required mitigation measures during project construction that would reduce impacts on  
30 emergency access to a less-than-significant level. The cities of Huntington Beach and Carlsbad did not  
31 find emergency access to be an issue of concern. Western Municipal Water District found that installation  
32 of an underground water pipeline could have significant impacts on emergency access. Mitigation  
33 measures were required that reduced impacts on emergency access to a less-than-significant level.

34 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
35 time such projects are proposed by lead agencies. However, because of the potential for actions to  
36 interfere with emergency access on land or water (e.g., when the installation of a conveyance facility  
37 requires local road closure) the potential impacts are considered **significant**.

#### 38 19.4.4.1.4 Impact 19-4a: Construction- and Operations-related Conflict with Adopted Policies, 39 Plans, or Programs Regarding Bicycle or Pedestrian Facilities

40 Construction of the types of actions/activities that the Delta Plan could influence (see Section 19.4.4.1)  
41 could affect existing bicycle and pedestrian paths and trails, both those contiguous to roadways and within  
42 their own dedicated rights-of-way and those within established recreational areas.

43 The EIS/EIR for the Los Vaqueros Reservoir Expansion Project (Reclamation et al. 2009), a named  
44 project in the Delta Plan, did not discuss potential conflicts with adopted policies, plans, or programs  
45 regarding bicycle or pedestrian facilities. The EIR for the Calaveras Dam Replacement Project (SFPUC

1 2011) also did not discuss potential conflicts with adopted policies, plans, or programs regarding bicycle  
2 or pedestrian facilities. As for illustrative EIRs for other water supply reliability projects that are not  
3 named in the Delta Plan and that do not involve surface storage facilities, the City of Davis and Western  
4 Municipal Water District discussed potential conflicts with adopted policies, plans, or programs regarding  
5 bicycle or pedestrian facilities; the cities of Huntington Beach and Carlsbad did not. The City of Davis  
6 found that conflicts with policies regarding bicycle and pedestrian facilities would be a less-than-  
7 significant impact and did not require mitigation. Western Municipal Water District found potential  
8 impacts to adopted policies to be significant. With implementation of mitigation measures, the impacts  
9 resulting from conflicts with adopted policies were reduced to a less-than-significant level.

10 As discussed in Section 19.4.4.1.1, implementation of reliable water supply actions could require the  
11 closure of these facilities for more than 3 months, thereby causing a conflict with bicycle or pedestrian  
12 facilities plans. For the same reasons described in the aforementioned section, this potential impact would  
13 be **significant**.

#### 14 **19.4.4.2 Delta Ecosystem Restoration**

15 As described in Sections 2A, Proposed Project and Alternatives, and 2B, Introduction to Resource  
16 Sections, the Delta Plan does not direct the construction of specific projects, nor would projects be  
17 implemented under the direct authority of the Delta Stewardship Council. However, the Delta Plan seeks  
18 to improve the Delta ecosystem by encouraging various actions and projects that, if taken, could lead to  
19 completion, construction, and/or operation of projects that could improve the Delta ecosystem.

20 Features of such actions and projects that could be implemented as part of efforts to restore the Delta  
21 ecosystem include the following:

- 22 ♦ Floodplain restoration
- 23 ♦ Riparian restoration
- 24 ♦ Tidal marsh restoration
- 25 ♦ Ecosystem stressor management (e.g., continuation of ongoing programs managing pesticide  
26 runoff, water quality, water flows)
- 27 ♦ Invasive species management (including removal of invasive vegetation)

28 The number and location of all potential projects that would be implemented are not known at this time.  
29 The following restoration areas, projects, and programs, however, are known to varying degrees and are  
30 named in the Delta Plan:

- 31 ♦ Cosumnes River-Mokelumne River Confluence: North Delta Flood Control and Ecosystem  
32 Restoration Project
- 33 ♦ Suisun Marsh Habitat Management, Preservation, and Restoration Plan (includes Hill Slough  
34 Restoration Project)
- 35 ♦ Cache Slough Complex (includes Prospect Island Restoration Project)
- 36 ♦ Yolo Bypass
- 37 ♦ Lower San Joaquin River Bypass Proposal
- 38 ♦ Water Quality Control Plan Update for the San Francisco Bay/Sacramento–San Joaquin Delta  
39 Estuary (water flow objectives update)
- 40 ♦ Delta Conservancy Strategic Plan

- 1       ♦ Variance of the U.S. Army Corps of Engineers' (USACE's) Vegetation Policy
- 2       ♦ California Department of Fish and Game's (DFG's) Stage Two Actions for Nonnative Invasive
- 3       Species included in the Ecosystem Restoration Plan for the Sacramento-San Joaquin Bay Delta.

4 Of these, the North Delta Flood Control and Ecosystem Restoration Project (North Delta Flood Control  
5 and Ecosystem Restoration Project EIR) (DWR 2010) and the Suisun Marsh project (Suisun Marsh  
6 Habitat Management, Preservation, and Restoration Plan Draft EIS/EIR) (Reclamation et al. 2010) have  
7 undergone project-specific environmental review.

8 The Water Quality Control Plan Update for the San Francisco Bay/Sacramento–San Joaquin Delta  
9 Estuary would establish water flow objectives to sustain beneficial uses. There would be no substantive  
10 change to transportation facilities or roadway capacity.

11 The Delta Conservancy Strategic Plan, currently under development, will provide strategy for conserving  
12 the Delta and would not lead directly to a project that would affect transportation.

13 A variance to the USACE's Vegetation Policy would result in no impact on transportation because there  
14 would be no changes to how vegetation is currently managed on levees. DFG's Stage Two Actions  
15 include continued implementation of the CALFED Nonnative Invasive Species Strategic Plan and the  
16 California Aquatic Invasive Species Management Plan; continued funding of mapping, research and  
17 monitoring, and studies; development of sampling standards; collection and analysis of samples; an  
18 assessment; and establishment of a program based on collected information to manage nonnative invasive  
19 species and parasites. Ongoing activities, research, and publications would not change transportation from  
20 existing conditions.

21 Because Delta water flows, conservation strategies, vegetation maintenance, and nonnative species  
22 management would not change existing transportation conditions, these actions are not discussed further.

#### 23 **19.4.4.2.1 Impact 19-1b: Construction- and Operations-related Conflict with an Applicable Plan,** 24 **Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the** 25 **Circulation System, Taking into Account All Modes of Transportation**

26 Construction of actions or projects the Delta Plan is encouraging to restore the Delta ecosystem has the  
27 potential to conflict with applicable transportation plans, ordinances, and policies on a temporary basis  
28 during construction and on a long-term basis during operations. For impacts that would be potentially  
29 significant, lead agencies could require mitigation measures described below to reduce the significance of  
30 the impacts.

#### 31 *Effects of Construction*

##### 32 Roadways

33 Construction-related activities for ecosystem restoration projects would have impacts on traffic and  
34 circulation similar to those described for the water supply reliability projects and could be constructed  
35 within the Delta, Delta watershed, and areas outside the Delta that use Delta water. Roads may also need  
36 to be relocated outside of the inundation area of floodplain restoration projects, causing new rerouted  
37 traffic at an intersection that is not designed to accommodate the additional traffic. The export of fill  
38 material from levee degradation may require a substantial increase in the numbers of trucks at rural  
39 intersections and on road segments that are not designed to accommodate increased levels of traffic.  
40 These activities could cause traffic congestion at intersections or road segments that results in facilities  
41 operating below minimum level of service standards. If a roadway that is affected by construction is a  
42 designated truck route, there would be an impact if the types of trucks as defined in STAA (Table 19-6)  
43 are not able to operate on the designated truck route during this period. Construction impacts could also

1 substantially degrade a transportation facility by the use of haul trucks such that repairs to the facility are  
2 required.

3 The types and locations of specific restoration projects that could conflict with applicable plans,  
4 ordinances and policies are not currently known. However, the Delta Plan encourages implementation of  
5 ecosystem restoration in the five geographic areas listed in Section 19.4.4.2. Restoration projects in these  
6 areas are similar to ongoing projects, including the Suisun Marsh Habitat Management, Preservation, and  
7 Restoration Plan (a project named in the Delta Plan) and North Delta Flood Control and Ecosystem  
8 Restoration Project. The restoration projects are anticipated to have impacts comparable to those  
9 identified during environmental review for the example, ongoing projects.

10 The Suisun Marsh Management, Preservation, and Restoration Plan EIS/EIR (Reclamation et al. 2010)  
11 evaluated three alternatives to restore marsh habitat and create managed wetlands in Suisun Marsh. The  
12 lead agency found that construction activities would not result in significant traffic congestion. No  
13 mitigation was required for construction.

14 The North Delta Flood Control and Ecosystem Restoration Project (DWR 2010) involves more  
15 construction activities than the Suisun Marsh Management, Preservation, and Restoration Plan. DWR  
16 found that construction-related traffic would be less than significant. Mitigation measures were not  
17 required.

18 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
19 time such projects are proposed by lead agencies. However, because there is a potential that increased  
20 traffic-related construction activities would result in intersections or road segments operating below  
21 minimum local level of service standards (e.g., when floodplain restoration requires a road relocation  
22 outside of the inundation area, causing new rerouted traffic at an existing intersection that is not designed  
23 to accommodate the additional traffic), the potential impacts are considered **significant**.

#### 24 Transit

25 Construction of ecosystem restoration projects would have a **less-than-significant** impact on transit  
26 services for the same reasons described in Section 19.4.4.1.1.

#### 27 Railroads

28 Construction of ecosystem restoration projects would have a **less-than-significant** impact on railroads for  
29 the same reasons described in Section 19.4.4.1.1.

#### 30 Navigation, Ports, Waterways, and Ferries

31 The use of cofferdams, in-channel construction equipment including floating dredging equipment, and  
32 barge deliveries during construction of ecosystem restoration actions could temporarily obstruct vessel  
33 navigation. Restoration actions that could obstruct navigation include channel repair, operable gates  
34 installation, and levee degradation.

35 Construction equipment, such as pile drivers, barges, and dredges, could obstruct boat passage during  
36 times of high boat traffic. Speed restrictions in construction areas could also cause boat traffic delays.  
37 Actions/activities implemented as part of the Delta Plan would be required to would comply with all  
38 requirements of sections 9 and 10 of the Rivers and Harbors Act that address placing obstructions or  
39 constructing structures in navigable waters; dredging or disposing of dredged materials; and completing  
40 excavation, filling, and channel reconstruction activities.

41 It is unclear at this time how implementation of the Proposed Project would result in construction  
42 activities, including the location, number, capacity, methods, and duration of construction activities.  
43 However, the Delta Plan encourages and/or mentions implementation of the projects listed in

1 Section 19.4.4.2. These restoration projects are similar to ongoing projects, including the Suisun Marsh  
2 Habitat Management, Preservation, and Restoration Plan (a project named in the Delta Plan) and North  
3 Delta Flood Control and Ecosystem Restoration Project. The restoration projects are anticipated to have  
4 impacts comparable to those identified during environmental review for the example, ongoing projects.

5 The Suisun Marsh Management, Preservation, and Restoration Plan EIS/EIR (Reclamation et al. 2010)  
6 evaluated three alternatives to restore marsh habitat and create managed wetlands in Suisun Marsh. The  
7 lead agency found that construction activities could limit boat access in localized areas of the marsh  
8 during construction. The lead agencies considered this a less-than-significant impact because of the  
9 limited duration of disruption. It also found the changes in hydrology in the canals in the marsh would  
10 improve navigability and therefore made a beneficial finding. No mitigation was required for  
11 construction.

12 The North Delta Flood Control and Ecosystem Restoration Project EIR (DWR2010) evaluates  
13 construction activities that could affect navigation in the Delta. Types of equipment used for these  
14 activities include pile drivers, derrick cranes, scrapers, and graders. DWR evaluated the significance of  
15 fluctuating water levels and found that it would have a less-than-significant impact on navigation. No  
16 mitigation was required.

17 Project-level impacts on navigation from ecosystem restoration projects would be addressed in future site-  
18 specific environmental analysis conducted at the time such projects are proposed by lead agencies.  
19 However, because of the potential for reduced navigability (e.g., when the use of cofferdams and in-  
20 channel construction equipment during construction of tidal marsh or riparian habitat restoration  
21 temporarily obstructs vessel navigation and causes substantial boat traffic delays), the potential impacts  
22 are considered **significant**.

### 23 Bicycle and Pedestrian Facilities

24 Construction of ecosystem restoration projects would have a **significant** impact on bicycle and pedestrian  
25 facilities for the same reasons described in Section 19.4.4.1.1.

### 26 *Effects of Operation*

#### 27 Roadways

28 Operations-related activities for ecosystem restoration projects would have unique potential impacts on  
29 traffic and circulation related to floodplain management actions that result in floodwaters overtopping  
30 roads and eroding road bases. Actions or projects the Delta Plan is encouraging could be constructed  
31 within the Delta and Delta watershed. Operations of ecosystem restoration actions that would affect  
32 roadways are not anticipated in areas outside of the Delta that use Delta water. Flooding and erosion  
33 related to operations of the projects encouraged by the Delta Plan also could cause traffic congestion at  
34 intersections or road segments that results in facilities operating below minimum level of service  
35 standards.

36 The Delta Plan encourages and/or mentions implementation of the projects listed in Section 19.4.4.2.  
37 These restoration projects are similar to ongoing projects, including the Suisun Marsh Habitat  
38 Management, Preservation, and Restoration Plan (a project named in the Delta Plan) and North Delta  
39 Flood Control and Ecosystem Restoration Project. The restoration projects are anticipated to have impacts  
40 comparable to those identified during environmental review for the example, ongoing projects.

41 The Suisun Marsh Management, Preservation, and Restoration Plan EIS/EIR (Reclamation et al. 2010)  
42 evaluated three alternatives to restore marsh habitat and create managed wetlands in Suisun Marsh. The  
43 lead agencies found that no impacts on roadways or bridges would occur with implementation of 5,000–  
44 7,000 acres of marsh restoration operations.

1 The North Delta Flood Control and Ecosystem Restoration Project EIR (DWR 2010) evaluated changes  
2 in circulation resulting from an operations standpoint. DWR found that project elements to optimize  
3 fluvial processes and seasonal floodplains would change traffic patterns because lowering the height of  
4 levees and, subsequently, the elevation of levee roads would make them impassable during flood control  
5 operations. The agency considered the existing frequency with which water overtops levee roads and  
6 determined that future conditions with the project would not be substantially different from current  
7 conditions. The agency concluded that changes in circulation patterns from operating floodplains would  
8 be a less-than-significant impact and did not require mitigation.

9 Project-level roadway impacts from operating ecosystem restoration projects would be addressed in future  
10 site-specific environmental analysis conducted at the time such projects are proposed by lead agencies.  
11 Such projects could involve lowering of levee roads such that they would be flooded more frequently than  
12 under existing conditions, unlike the North Delta example above. Accordingly, because of the potential  
13 for increased flooding of roads in the Delta and resulting traffic congestion, this potential impact is  
14 considered **significant**.

#### 15 Transit

16 Operation of ecosystem restoration projects would have **no impact** on transit services for the same  
17 reasons described in Section 19.4.4.1.1.

#### 18 Railroads

19 Operations-related activities for ecosystem restoration projects would have potential impacts on railroads  
20 similar to those described for roadways, with floodplain management actions resulting in floodwaters  
21 overtopping rail lines and eroding railroad base. Actions or projects the Delta Plan is encouraging could  
22 be constructed within the Delta and Delta watershed. Operations of ecosystem restoration are not  
23 anticipated in areas outside of the Delta that use Delta water. Flooding and erosion related to operations of  
24 the projects encouraged by the Delta Plan also could cause impacts on railroad service.

25 The Delta Plan encourages and/or mentions implementation the projects listed in Section 19.4.4.2. These  
26 ecosystem restoration projects are similar to ongoing projects, including the Suisun Marsh Habitat  
27 Management, Preservation, and Restoration Plan (a project named in the Delta Plan) and North Delta  
28 Flood Control and Ecosystem Restoration Project. The ecosystem restoration projects are anticipated to  
29 have impacts comparable to those identified during environmental review for the example, ongoing  
30 projects.

31 As opposed to the findings for roadways, the Suisun Marsh Management, Preservation, and Restoration  
32 Plan EIS/EIR (Reclamation et al. 2010) found that restoration actions taken in Suisun Marsh could  
33 decrease rail line integrity and interrupt rail service. Restoration or other activities could affect the  
34 integrity of levees holding the rail line for the UPRR by causing increased inundation and erosion,  
35 depending on the specific location and type of activities implemented. Work occurring within a particular  
36 right-of-way determined by the railroads could result in delays or other temporary disruptions to rail  
37 service, depending on the type of activities implemented. A significance finding was avoided by  
38 designing levee breaches to avoid levees where rail lines sit and designing restoration activities to protect  
39 rail lines. No additional mitigation was required for construction.

40 The North Delta Flood Control and Ecosystem Restoration Project EIR (DWR 2010) did not arrive at the  
41 same conclusions as the Suisun Marsh Management, Preservation, and Restoration Plan EIS/EIR. DWR  
42 found that operations would not affect rail lines and no mitigation measures were required.

43 Project-level impacts on railroads from operations of ecosystem restoration projects would be addressed  
44 in future site-specific environmental analysis conducted at the time such projects are proposed by lead  
45 agencies. However, because of the potential that ecosystem restoration operations could result in

1 increased interruption of rail service (e.g., when floodplain or tidal marsh restoration actions cause rail  
2 line inundation, thereby interrupting service), the potential impacts are considered **significant**.

### 3 Navigation, Ports, Waterways, and Ferries

4 Restoration actions/activities such as those involving operable barriers, channelization, and levee  
5 degradation could affect navigation in waterways and deep water channels. The design and installation of  
6 structures in or adjacent to navigable waters would be in accordance with current engineering standards  
7 and criteria. However, operation of some restoration actions/activities could result in indirect effects that  
8 pose navigation hazards. Operations could cause accumulation of debris, including tree snags and other  
9 types of floating or submerged debris. Such an accumulation of debris may pose navigational hazards or  
10 cause damage to vessels in the channel. Operations may increase the accumulation of sediment that could  
11 form shoals or increase the size of existing shoals. In addition, malfunctions could expose boaters  
12 navigating in the channel to additional hazards, including increased water velocities or collisions with  
13 structures or other vessels. These impacts would occur in the Delta and Delta watershed.

14 Neither the Suisun Marsh Management, Preservation, and Restoration Plan EIS/EIR (Reclamation et al.  
15 2010) nor the North Delta Flood Control and Ecosystem Restoration Project EIR (DWR 2010) evaluated  
16 changes in navigation from project operations.

17 Project-level impacts on navigation would be addressed in future site-specific environmental analysis  
18 conducted at the time such projects are proposed by lead agencies. However, because of the potential for  
19 operations of ecosystem restoration actions to cause navigation hazards (e.g., when operations of operable  
20 barriers cause debris accumulation), the potential impacts are considered **significant**.

### 21 Bicycle and Pedestrian Facilities

22 Operation of ecosystem restoration projects would have **no impact** on bicycle and pedestrian facilities for  
23 the same reasons described in Section 19.4.4.1.1.

### 24 *Summary of Conclusions for Construction and Operations*

25 As stated for each mode of transportation, project-level impacts would be addressed in future site-specific  
26 environmental analysis at the time such projects are proposed by lead agencies. Regarding construction,  
27 because of the potential for intersections and road segments to operate below the local agency's minimum  
28 level of service standard, for bicycle and pedestrian facilities to be closed for more than 3 months, and for  
29 navigability to be reduced, this potential impact would be **significant**. Regarding operations, because of  
30 the increased frequency of flooding of roads and erosion of railroad base, as well as reduced navigability  
31 during operations, the potential impacts would be **significant**.

#### 32 19.4.4.2.2 Impact 19-2b: Potential Increase in Hazards Related to a Design Feature

33 For the reasons stated in Section 19.4.4.1.2, there would be **no impact** resulting from Delta ecosystem  
34 restoration-related actions/activities that require the relocation of roads and bridges because there would  
35 be no increase in hazards related to the design of these features.

36 Restoration actions/activities such as operable barriers, channelization, and levee degradation could affect  
37 navigation in waterways and deep water channels. Similar to the engineering standards for roads, bridges,  
38 and railroads, the design, installation, of structures in or adjacent to navigable waters would be in  
39 accordance with current engineering standards and criteria. However, some restoration actions/activities  
40 could result in indirect effects that pose navigation hazards. Operations could cause accumulation of  
41 debris, including tree snags and other types of floating or submerged debris. Such an accumulation of  
42 debris may pose navigational hazards or damage to vessels navigating in the channel. Operations may  
43 increase the accumulation of sediment that could form shoals or increase the size of existing shoals. In

1 addition, malfunctions could expose boaters navigating in the channel to additional hazards, including  
2 increased water velocities or collisions with structures or other vessels. These impacts would occur in the  
3 Delta and Delta watershed.

4 Neither the Suisun Marsh Management, Preservation, and Restoration Plan EIS/EIR (Reclamation et al.  
5 2010) nor the North Delta Flood Control and Ecosystem Restoration Project EIR (DWR 2010) evaluated  
6 potential increased hazards related to a design feature.

7 Project-level impacts on navigation from ecosystem restoration projects would be addressed in future site-  
8 specific environmental analysis conducted at the time such projects are proposed by lead agencies.  
9 However, because of the potential for operations of ecosystem restoration actions to cause navigation  
10 hazards (e.g., when operations of operable gates cause the accumulation of debris), the potential impacts  
11 are considered **significant**.

#### 12 19.4.4.2.3 Impact 19-3b: Potential Reduction in Adequate Emergency Access

13 Section 19.4.4.2 lists the types of ecosystem restoration actions or projects that the Delta Plan would  
14 encourage. Construction of these activities could result in the need to temporarily close or relocate  
15 emergency routes. In addition, construction traffic or congestion near temporary closures could delay  
16 response time for emergency vehicles. The emergency routes primarily involve roadways but also involve  
17 boat access.

18 It is unclear at this time which specific activities permitted/encouraged by the Proposed Project would  
19 result in construction and operations of projects, including the location, number, capacity, operational  
20 criteria, methods, and duration of construction activities. However, the Delta Plan encourages and/or  
21 mentions implementation of the projects listed in Section 19.4.4.2. The restoration projects are anticipated  
22 to have impacts comparable to those identified during environmental review for the example, ongoing  
23 projects.

24 The Suisun Marsh Management, Preservation, and Restoration Plan EIS/EIR (Reclamation et al. 2010)  
25 evaluated three alternatives to restore marsh habitat and create managed wetlands in Suisun Marsh. The  
26 lead agency found that none of the alternatives would substantially reduce emergency access by boat or  
27 by land. The agencies did not require mitigation measures.

28 The North Delta Flood Control and Ecosystem Restoration Project (DWR 2010) involves more  
29 construction activities than the Suisun Marsh Management, Preservation, and Restoration Plan. Types of  
30 equipment used for these activities include dredges, pile drivers, derrick cranes, scrapers, graders, and tug  
31 boats. DWR found that construction of the project would not substantially reduce emergency access. It  
32 concluded that impacts would be less than significant and that no mitigation measures were required.

33 Project-level impacts on emergency access from ecosystem restoration projects would be addressed in  
34 future site-specific environmental analysis conducted at the time such projects are proposed by lead  
35 agencies. However, because construction activities related to floodplain restoration in remote locations in  
36 the Delta could result in the need to temporarily close or relocate emergency routes, delaying response  
37 time for emergency vehicles and limiting boat access, the potential impacts are considered **significant**.

#### 38 19.4.4.2.4 Impact 19-4b: Construction- and Operations-related Conflict with Adopted Policies, 39 Plans, or Programs Regarding Bicycle or Pedestrian Facilities

40 Construction of the types of actions/activities that the Delta Plan could influence (see Section 19.4.4.2)  
41 could affect existing bicycle and pedestrian paths and trails, both those contiguous to roadways and within  
42 their own dedicated rights-of-way and those within established recreational areas. As discussed in  
43 Section 19.4.4.2.1, implementation of Delta ecosystem restoration actions could require the closure of  
44 these facilities for more than 3 months, thereby causing a conflict with bicycle or pedestrian facilities

1 plans. For the same reasons described in the aforementioned section, this potential impact would be  
2 **significant**.

### 3 **19.4.4.3 Water Quality Improvement**

4 As described in Sections 2A, Proposed Project and Alternatives, and 2B, Introduction to Resource  
5 Sections, the Delta Plan does not direct the construction of specific projects, nor would projects be  
6 implemented under the direct authority of the Delta Stewardship Council. However, the Delta Plan seeks  
7 to improve water quality by encouraging various actions and projects that, if taken, could lead to  
8 completion, construction and/or construction of projects that could improve water quality.

9 Features of such actions and projects that could be implemented as part of efforts to improve water  
10 quality include the following:

- 11 ♦ Water treatment plants
- 12 ♦ Conveyance facilities (pipelines, pumping plants)
- 13 ♦ Wastewater treatment and recycle facilities
- 14 ♦ Municipal stormwater treatment facilities
- 15 ♦ Agricultural runoff treatment facilities (eliminate, capture and treat/reuse)
- 16 ♦ Wellhead treatment facilities
- 17 ♦ Wells (withdrawal, recharge, and monitoring)

18 The number and location of all potential actions and projects that would be implemented are not known at  
19 this time. Various projects, however, are known to varying degrees and are named in the Delta Plan:

- 20 ♦ North Bay Aqueduct Alternative Intake Project
- 21 ♦ Central Valley Drinking Water Policy
- 22 ♦ Central Valley Pesticide Total Maximum Daily Load and Basin Plan Amendment for diazinon  
23 and chlorpyrifos (regulatory processes, research, and monitoring)
- 24 ♦ Central Valley Pesticide Total Maximum Daily Load and Basin Plan Amendment for pyrethroids  
25 (regulatory processes, research, and monitoring)
- 26 ♦ Total Maximum Daily Load and Basin Plan Amendments for selenium and methylmercury  
27 (regulatory processes, research, and monitoring)
- 28 ♦ Water Quality Control Plan Update for the San Francisco Bay/ Sacramento–San Joaquin Delta  
29 Estuary (water flow objectives update)
- 30 ♦ State Water Resources Control Board/Central Valley Regional Water Quality Control Board  
31 Strategic Workplan
- 32 ♦ Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS)

33 Of these named projects/actions, only the North Bay Aqueduct Project and the CV-SALTS effort would  
34 involve construction and/or operation of facilities that could have transportation impacts. The remaining  
35 are programs, policies, or studies that would not result in a specific project the construction or operation  
36 of which could affect transportation; therefore, these programs, policies, and studies are not evaluated in  
37 this section.

1 **19.4.4.3.1 Impact 19-1c: Construction- and Operations-related Conflict with an Applicable Plan,**  
2 **Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the**  
3 **Circulation System, Taking into Account All Modes of Transportation**

4 Construction of actions or projects the Delta Plan is encouraging have the potential to conflict with  
5 applicable transportation plans, ordinances, and policies on a temporary basis during construction and on  
6 a long-term basis during operations. For impacts that would be potentially significant, lead agencies could  
7 require mitigation measures described below to reduce the significance of the impacts.

8 *Effects of Construction*

9 Roadways

10 Construction-related activities for water quality improvement projects listed in Section 19.4.4.3 would  
11 have impacts on traffic and circulation similar to those described for the water supply reliability projects  
12 (Section 19.4.4.1.1). Actions or projects that the Delta Plan encourages could be constructed within the  
13 Delta, Delta watershed, and areas outside of the Delta that use Delta water. Construction of the projects  
14 encouraged by the Delta Plan also could cause traffic congestion at intersections or road segments that  
15 results in facilities operating below minimum level of service standards.

16 The Delta Plan encourages and/or mentions implementation of the North Bay Aqueduct Alternative  
17 Intake Project and the CV-SALTS effort. CV-SALTS would result in the construction of new wastewater  
18 treatment facilities. The new North Bay Alternative Intake Structure serves the purpose of meeting  
19 CV-SALTS and water discharge requirements. The intake structure would be located on the Sacramento  
20 River in a rural area of Sacramento or Yolo County, and the new pipeline would extend from the new  
21 intake structure to the existing North Bay Regional Water Treatment Plant.

22 The diversion/intake structure and water conveyance pipeline are similar to those identified for the Davis-  
23 Woodland Water Supply Project, which is not named in the Delta Plan but is analogous to named projects  
24 and has undergone project-specific environmental review. The Davis-Woodland Water Supply Project  
25 EIR (City of Davis 2007) found that project construction would have a significant impact on existing  
26 levels of service at local intersections and road segments. Mitigation measures were required. With  
27 mitigation, traffic impacts were reduced to a less-than-significant level.

28 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
29 time such projects are proposed by lead agencies. However, because of the potential that increased traffic-  
30 related construction activities would cause intersections or road segments to operate below minimum  
31 local level of service standards (e.g., when a road requires closure for the installation of conveyance  
32 facilities across the road), the potential impacts are considered **significant**.

33 Transit

34 Construction of water quality improvement projects would have a **less-than-significant** impact on transit  
35 services for the same reasons described in Section 19.4.4.1.1.

36 Railroads

37 Construction of water quality improvement projects would have a **less-than-significant** impact on  
38 railroads for the same reasons described in Section 19.4.4.1.1.

39 Navigation, Ports, Waterways, and Ferries

40 Construction of water quality improvement projects would have **no impact** on navigation for the same  
41 reasons described in Section 19.4.4.1.1.

1 Bicycle and Pedestrian Facilities

2 Construction of water quality improvement projects would have a **significant** impact on bicycle and  
3 pedestrian facilities for the same reasons described in Section 19.4.4.1.1.

4 *Operations*

5 Roadways

6 Water quality improvement operations of water treatment plants, pipelines, wastewater treatment plants,  
7 stormwater treatment, and agricultural runoff treatment facilities would not increase traffic or cause  
8 circulation problems at intersections or road segments. Therefore, these water quality improvement  
9 activities would have **no impact** on roads and bridges in the Delta, Delta watershed, or areas outside of  
10 the Delta that use Delta water.

11 Transit

12 Operations of water quality improvement projects would have **no impact** on transit services for the same  
13 reasons described in Section 19.4.4.1.1.

14 Railroads

15 Operations of water quality improvement projects would have **no impact** on railroads for the same  
16 reasons described in Section 19.4.4.1.1.

17 Navigation, Ports, Waterways, and Ferries

18 Operations of water quality improvement projects would have **no impact** on navigation for the same  
19 reasons described in Section 19.4.4.1.1.

20 Bicycle and Pedestrian Facilities

21 Operations of water quality improvement projects would have **no impact** on bicycle and pedestrian  
22 facilities for the same reasons described in Section 19.4.4.1.1.

23 *Summary of Conclusions for Construction and Operations*

24 As stated for each mode of transportation, project-level impacts would be addressed in future site-specific  
25 environmental analysis at the time such projects are proposed by lead agencies. Regarding construction,  
26 because of the potential for intersections and road segments to operate below the local agency's minimum  
27 level of service standard during construction and for bicycle and pedestrian facilities to be closed for more  
28 than 3 months, these impacts would be **significant**. There would be **no impact** during operations.

29 **19.4.4.3.2 Impact 19-2c: Potential Increase in Hazards Related to a Design Feature**

30 For the reasons stated in Section 19.4.4.1.2, there would be **no impact** resulting from implementing water  
31 quality improvement actions/activities that require the relocation of roads and bridges because there  
32 would be no increase in hazards related to the design of these features. Water quality improvement  
33 actions/activities would not change operations that would affect navigation.

34 **19.4.4.3.3 Impact 19-3c: Potential Reduction in Adequate Emergency Access**

35 The water quality improvement projects encouraged and/or mentioned in the Delta Plan are listed in  
36 Section 19.4.4.3. Construction of these activities could result in the need to temporarily close or relocate  
37 emergency routes. In addition, construction traffic or congestion near temporary closures could delay  
38 response time for emergency vehicles.

1 As with the categories of actions already discussed, it is unclear what construction activities would result  
2 from implementation of the Proposed Project, including the location, number, methods, and duration of  
3 activities. The Delta Plan encourages implementation of the North Bay Aqueduct Alternative Intake  
4 Project and CV SALTS. The new alternative intake structure would be located on the Sacramento River  
5 in a rural area of Sacramento or Yolo County, and the new pipeline would extend from the new intake  
6 structure to the existing North Bay Regional Water Treatment Plant. The diversion/intake structure and  
7 water conveyance pipeline are similar to those associated with the Davis-Woodland Water Supply  
8 Project, an analogous project previously mentioned.

9 The Davis-Woodland Water Supply Project EIR (City of Davis 2007) found that the project would have  
10 the potential to substantially reduce emergency access. The agency found that the level of impacts on  
11 emergency access would be less than significant after implementation of mitigation measures. Emergency  
12 vehicle access by water was not evaluated.

13 The specific location of project sites and staging areas is not known at this time. Therefore, construction-  
14 related interference with emergency access cannot be accurately determined, and it is uncertain whether  
15 feasible mitigation measures would be available for implementation. In addition, in the Delta and other  
16 areas where waterways are used to access structures, construction of bridges or siphons could interfere  
17 with emergency boat access.

18 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
19 time such projects are proposed by lead agencies. However, because of the potential for actions to  
20 interfere with emergency access (e.g., when roads need to be closed for the installation of conveyance  
21 across the road), the potential impacts are considered **significant**.

#### 22 19.4.4.3.4 Impact 19-4c: Construction- and Operations-related Conflict with Adopted Policies, 23 Plans, or Programs Regarding Bicycle or Pedestrian Facilities

24 Construction of the types of actions/activities that the Delta Plan could influence (Section 19.4.4.3) could  
25 affect existing bicycle and pedestrian paths and trails, both those contiguous to roadways and within their  
26 own dedicated rights-of-way and those within established recreational areas. As discussed in Section  
27 19.4.4.3.1, implementation of water quality improvement actions could require the closure of these  
28 facilities for more than 3 months, thereby causing a conflict with bicycle or pedestrian facilities plans. For  
29 the same reasons described in the aforementioned section, this potential impact would be **significant**.

#### 30 19.4.4.4 Flood Risk Reduction

31 As described in Sections 2A, Proposed Project and Alternatives, and 2B, Introduction to Resource  
32 Sections, the Delta Plan does not direct the construction of specific projects, nor would projects be  
33 implemented under the direct authority of the Delta Stewardship Council. However, the Delta Plan seeks  
34 to reduce the risk of floods in the Delta by encouraging various actions that, if taken, could lead to  
35 completion, construction, and/or operation of projects that could reduce flood risks in the Delta. Such  
36 projects and their features include the following:

- 37 ♦ Setback levees
- 38 ♦ Floodplain expansion
- 39 ♦ Levee maintenance
- 40 ♦ Levee modification
- 41 ♦ Dredging
- 42 ♦ Stockpiling of rock for flood emergencies
- 43 ♦ Subsidence reversal
- 44 ♦ Reservoir reoperation

1 The number and location of all potential projects that would be implemented are not known at this time.  
2 Two possible projects, however, are known to some degree and are named in the Delta Plan: the  
3 Sacramento Deep Water Ship Channel and Stockton Deep Water Ship Channel Dredging (the United  
4 States Army Corps of Engineer's *Delta Dredged Sediment Long-Term Management Strategy* included in  
5 Appendix C, Attachment C-7 of this EIR) and DWR's A Framework for Department of Water Resources  
6 Investments in Delta Integrated Flood Management. There is no project-specific environmental evaluation  
7 of the Sacramento Deep Water Ship Channel and Stockton Deep Water Ship Channel Maintenance  
8 Project. The DWR framework is a program, not an activity that would affect transportation; therefore, it is  
9 not evaluated in this section.

10 **19.4.4.4.1 Impact 19-1d: Construction- and Operations-related Conflict with an Applicable Plan,**  
11 **Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the**  
12 **Circulation System, Taking into Account All Modes of Transportation**

13 Construction of actions or projects the Delta Plan is encouraging have the potential to conflict with  
14 applicable transportation plans, ordinances, and policies on a temporary basis during construction and on  
15 a long-term basis during operations. For impacts that would be potentially significant, lead agencies could  
16 require mitigation measures described below to reduce the significance of the impacts.

17 *Effects of Construction*

18 Roadways

19 Construction-related activities for flood risk reduction projects would have impacts on traffic and  
20 circulation similar to those described for the water supply reliability projects (Section 19.4.4.1.1). Actions  
21 or projects that the Delta Plan is encouraging could be constructed within the Delta, Delta watershed, and  
22 areas outside of the Delta that use Delta water. Construction of the projects encouraged by the Delta Plan  
23 also could cause traffic congestion at intersections or road segments that result in facilities operating  
24 below minimum level of service standards.

25 The Delta Plan encourages and/or mentions implementation of the Sacramento Deep Water Ship Channel  
26 and Stockton Deep Water Ship Channel Dredging Project. The Sacramento Deep Water Ship Channel and  
27 the Stockton Deep Water Ship Channel would not affect traffic because dredged material would be  
28 discharged into the ocean. Therefore, there would be **no impact** on surface transportation facilities from  
29 project construction of a named project.

30 Other flood risk reduction activities could include the construction of levees, setback levees, and  
31 floodplain restoration. As stated in the subsection that discusses ecosystem restoration (Section  
32 19.4.4.2.1), the North Delta Flood Control and Ecosystem Restoration Project (DWR 2010) is  
33 representative of these types of activities. DWR found that construction-related traffic would be less than  
34 significant. Mitigation measures were not required.

35 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
36 time such projects are proposed by lead agencies. However, because of the potential that increased traffic-  
37 related construction activities would result in intersections or road segments operating below minimum  
38 local level of service standards (e.g., when substantial importation of fill during the construction of  
39 setback levees results in significant numbers of haul trucks or when road requires closure for levee  
40 degradation for floodplain expansion in remote areas of the Delta), the potential impacts are considered  
41 **significant**.

42 Transit

43 Construction of flood risk reduction projects would have a **less-than-significant** impact on transit  
44 services for the same reasons described in Section 19.4.4.1.1.

## 1 Railroads

2 Construction of flood risk reduction projects would have a **less-than-significant** impact on railroads for  
3 the same reasons described in Section 19.4.4.1.1.

## 4 Navigation, Ports, Waterways, and Ferries

5 The use of cofferdams, the use of in-channel construction equipment including floating dredging  
6 equipment, and barge deliveries during construction of flood risk reduction actions, such as levee  
7 improvements, could temporarily obstruct vessel navigation. Erosion repair is an example of a levee  
8 improvement action that could obstruct navigation.

9 The Delta Plan encourages and/or mentions implementation of the Sacramento Deep Water Ship Channel  
10 and Stockton Deep Water Ship Channel Dredging Project. The USACE Draft Supplemental EIS/EIR for  
11 the Sacramento River Deep Water Ship Channel (USACE and Port of West Sacramento 2011) evaluated  
12 the types of activities expected from a representative dredging project. The lead agency evaluated the  
13 effects of dredging on the movement of marine vessels. It determined that dredging equipment would be  
14 easily avoided, construction would be of a relatively short duration, and the project would result in a net  
15 benefit to navigation when compared with baseline conditions. A no impact conclusion was made, and no  
16 mitigation measures were required.

17 As described in the discussion of ecosystem restoration actions (Section 19.4.4.2.1), construction  
18 equipment such as pile drivers, barges, and dredges could obstruct boat passage during times of high boat  
19 traffic. Speed restrictions in construction areas could also cause boat traffic delays. Compliance with  
20 sections 9 and 10 of the Rivers and Harbors Act is not expected to reduce the significance of temporary  
21 and short-term adverse effects of construction on boat navigation.

22 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
23 time such projects are proposed by lead agencies. However, because of the potential that construction  
24 activities would interfere with navigation (e.g., when the use of barges for waterside dredging interferes  
25 with boat traffic), the potential impacts are considered **significant**.

## 26 Bicycle and Pedestrian Facilities

27 Construction of flood risk reduction projects would have a **significant** impact on bicycle and pedestrian  
28 facilities for the same reasons described in Section 19.4.4.1.1.

## 29 *Effects of Operation*

### 30 Roadways

31 Operations of flood risk reduction projects that would be implemented as part of the Delta Plan, including  
32 maintenance of setback levees, levees, and floodplains, could affect traffic on roads and bridges. It is  
33 unclear at this time how implementation of the Proposed Project would operate. However, the Delta Plan  
34 encourages implementation of the Sacramento Deep Water Ship Channel and Stockton Deep Water Ship  
35 Channel Dredging Project. The ongoing project that involves hydraulic dredging similar to that associated  
36 with this project is the North Delta Flood Control and Ecosystem Restoration Project (DWR 2010). The  
37 Sacramento Deep Water Ship Channel and the Stockton Deep Water Ship Channel would not affect  
38 traffic because dredged material would be discharged into navigable waters.

39 The North Delta Flood Control and Ecosystem Restoration Project EIR (DWR 2010) evaluated changes  
40 in circulation resulting from an operations standpoint. DWR found that project elements to optimize  
41 fluvial processes and seasonal floodplains would change traffic patterns because lowering the height of  
42 levees and, subsequently, the elevation of levee roads would make them impassable during flood control  
43 operations. The agency considered the existing frequency with which water overtops levee roads and

1 determined that future conditions with the project would not be substantially different from current  
2 conditions. The agency concluded that changes in circulation patterns from operating floodplains would  
3 be a less-than-significant impact and did not require mitigation.

4 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
5 time such projects are proposed by lead agencies. Such projects could involve lowering of levee roads  
6 such that they would be flooded more frequently than under existing conditions. Accordingly, because of  
7 the potential for increased flooding of roads in the Delta and resulting traffic congestion, this potential  
8 impact is considered **significant**.

#### 9 Transit

10 Operations of flood risk reduction facilities would have **no impact** on transit for the same reasons  
11 described in Section 19.4.4.1.1.

#### 12 Railroads

13 Operations of Flood Risk facilities would have **no impact** on railroads for the same reasons described in  
14 Section 19.4.4.1.1.

#### 15 Navigation, Ports, Waterways, and Ferries

16 Operations of flood risk reduction projects would have **no impact** on navigation because Flood Risk  
17 facilities would not operate in navigable waterways.

#### 18 Bicycle and Pedestrian Facilities

19 Operations of flood risk reduction facilities would have **no impact** on bicycle and pedestrian facilities for  
20 the same reasons described in Section 19.4.4.1.1.

#### 21 *Summary of Conclusions for Construction and Operations*

22 As stated for each mode of transportation, project-level impacts would be addressed in future site-specific  
23 environmental analysis at the time such projects are proposed by lead agencies. Regarding construction,  
24 because of the potential for intersections and road segments to operate below the local agency's minimum  
25 level of service standard, for bicycle and pedestrian facilities to be closed for more than 3 months, and for  
26 navigability to be reduced, the potential impact would be **significant**. Regarding operations, because of  
27 the potential for intersections and road segments to operate below the local agency's minimum level of  
28 service standard due to floodwaters overtopping levee roads with greater frequency, the potential impact  
29 would be **significant**.

#### 30 19.4.4.4.2 Impact 19-2d: Potential Increase in Hazards Related to a Design Feature

31 For the reasons stated in Section 19.4.4.1.2, there would be **no impact** resulting from implementing flood  
32 risk reduction actions/activities that require the relocation of roads and bridges because there would be no  
33 increase in hazards related to the design of these features. In addition, no operable barriers or other  
34 structures would be installed in navigable water that could cause a design-related hazard to navigation.  
35 Flood risk reduction actions/activities would not change operations that would affect navigation.

36 The EIR on the North Delta Flood Control and Ecosystem Restoration Project (DWR 2010), a project that  
37 provides an example of levee work, did not evaluate potential increased hazards related to a design  
38 feature.

#### 1 19.4.4.4.3 Impact 19-3d: Potential Reduction in Adequate Emergency Access

2 Section 19.4.4.4 describes the types of actions or projects that the Delta Plan would encourage.  
3 Construction of these activities could result in the need to temporarily close or relocate emergency routes.  
4 In addition, construction traffic or congestion near temporary closures could delay response time for  
5 emergency vehicles. The emergency routes primarily involve roadways but also involve boat access.

6 It is unclear what construction activities would result from implementation of the Proposed Project,  
7 including the location, number, methods, and duration of activities. However, the Delta Plan encourages  
8 implementation of the Sacramento Deep Water Ship Channel and Stockton Deep Water Ship Channel  
9 Dredging Project. The ongoing project that involves hydraulic dredging similar to this project is the North  
10 Delta Flood Control and Ecosystem Restoration Project (DWR 2010).

11 The North Delta Flood Control and Ecosystem Restoration Project, a project that is representative of  
12 projects that involve levee maintenance, was discussed in Section 19.4.4.2.3. In the draft and final EIRs  
13 on the project, DWR found that implementing the project would not substantially reduce  
14 emergency access and did not require mitigation measures.

15 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
16 time such projects are proposed by lead agencies. However, because construction activities related to  
17 floodplain expansion in remote locations in the Delta could result in the need to temporarily close or  
18 relocate emergency routes, construction traffic could delay response time for emergency vehicles and  
19 could limit boat access during levee modification construction, the potential impacts are considered  
20 **significant**.

#### 21 19.4.4.4.4 Impact 19-4d: Construction- and Operations-related Conflict with Adopted Policies, 22 Plans, or Programs Regarding Bicycle or Pedestrian Facilities

23 Construction of the types of flood risk reduction actions/activities that the Delta Plan could influence  
24 (Section 19.4.4.4) could affect existing bicycle and pedestrian paths and trails, both those contiguous to  
25 roadways and within their own dedicated rights-of-way and those within established recreational areas.  
26 As discussed in Section 19.4.4.4.1, implementation of flood risk reduction actions could require the  
27 closure of these facilities for more than 3 months, thereby causing a conflict with bicycle or pedestrian  
28 facilities plans. For the same reasons described in the aforementioned section, this potential impact would  
29 be **significant**.

#### 30 19.4.4.5 Protection and Enhancement of Delta as an Evolving Place

31 As described in Sections 2A, Proposed Project and Alternatives, and 2B, Introduction to Resource  
32 Sections, the Delta Plan does not direct the construction of specific projects, nor would projects be  
33 implemented under the direct authority of the Delta Stewardship Council. However, the Delta Plan seeks  
34 to protect and enhance the Delta as an evolving place by encouraging various actions and projects that, if  
35 taken, could lead to completion, construction, and/or operation of associated projects. Features of such  
36 actions could include the following:

- 37 ♦ Gateways, bike lanes, parks, trails, and marinas and facilities to support wildlife viewing, angling,  
38 and hunting opportunities
- 39 ♦ Additional retail and restaurants in legacy towns to support tourism

40 The number and location of all potential projects that would be implemented are not known at this time.  
41 However, three possible projects are known to some degree and are named in the Delta Plan: new State  
42 parks at Barker Slough, at Elkhorn Basin, and in the southern Delta. There are no project-specific  
43 environmental evaluations of these State park projects. The Delta Plan also names the Economic

1 Sustainability Plan. The Economic Stability Plan is not an activity that would generate transportation-  
2 related impacts; therefore, it is not evaluated in this section.

3 **19.4.4.5.1 Impact 19-1e: Construction- and Operations-related Conflict with an Applicable Plan,**  
4 **Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the**  
5 **Circulation System, Taking into Account All Modes of Transportation**

6 Construction of actions or projects the Delta Plan is encouraging have the potential to conflict with  
7 applicable transportation plans, ordinances, and policies on a temporary basis during construction and on  
8 a long-term basis during operations. For impacts that would be potentially significant, lead agencies could  
9 require mitigation measures described below to reduce the significance of the impacts.

10 *Effects of Construction*

11 Roadways

12 Construction-related activities for Delta enhancement projects (Section 19.4.4.5) would have impacts on  
13 traffic and circulation similar to those described for the water supply reliability projects  
14 (Section 19.4.4.1.1). Actions or projects that the Delta Plan is encouraging to enhance the Delta would be  
15 constructed within the Delta. Construction of the projects encouraged by the Delta Plan could cause  
16 traffic congestion at intersections or road segments that results in facilities operating below minimum  
17 level of service standards.

18 The Delta Plan encourages and/or mentions implementation of State parks at Barker Slough, at Elkhorn  
19 Basin, and in the southern Delta. These Delta enhancement projects are similar to ongoing park projects,  
20 including the Bidwell-Sacramento River State Park Habitat Restoration and Outdoor Recreation Facilities  
21 Development Project (The Nature Conservancy and California Department of Parks and Recreation 2008)  
22 and San Luis Rey River Park (San Diego County Department of Parks and Recreation 2008). The Delta  
23 enhancement projects are anticipated to have impacts comparable to those identified during  
24 environmental review for the example/analogous, ongoing projects.

25 In its project-specific EIR, the lead agency found that the Bidwell-Sacramento River State Park Habitat  
26 Restoration and Outdoor Recreation Facilities Development Project would have less-than-significant  
27 construction-related traffic and circulation impacts because a small number of truck trips would be needed  
28 to construct the project. The Draft Programmatic EIR for the San Luis Rey River Park Master Plan  
29 (San Diego County Department of Parks and Recreation 2008) found that construction activities would  
30 have a less-than-significant impact because the construction contractors would be required to implement  
31 the county's construction traffic control plan when constructing the proposed park. No additional  
32 mitigation measures were required.

33 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
34 time such projects are proposed by lead agencies. It is possible that congestion would increase because  
35 construction activities could reduce levels of service below the minimum identified in an applicable plan,  
36 regulation, or ordinance. For example, if additional retail and restaurant uses are constructed in legacy  
37 towns, improvements may require lane closures and traffic rerouting. Because there are limited numbers  
38 of streets to accommodate construction traffic, there may be unavoidable increases in local traffic  
39 congestion. It is also possible that road modifications could make STAA designated truck routes  
40 impassible to trucks during construction for this same reason. These construction impacts are considered  
41 **significant**

42 Transit

43 Construction of Delta enhancement projects (Section 19.4.4.5) would have a **less-than-significant** impact  
44 on transit services for the same reasons described in Section 19.4.4.1.1.

1 Railroads

2 Construction of Delta enhancement projects (Section 19.4.4.5) would have a **less-than-significant** impact  
3 on railroads for the same reasons described in Section 19.4.4.1.1.

4 Navigation, Ports, Waterways, and Ferries

5 Construction of Delta enhancement projects (Section 19.4.4.5) would have a **less-than-significant** impact  
6 on navigation for reasons similar to those described in Section 19.4.4.1.1. In addition, marinas are  
7 expected to be improved, thereby improving access and navigability in the Delta.

8 Bicycle and Pedestrian Facilities

9 Construction of Delta enhancement projects (Section 19.4.4.5) would have a **significant** impact on  
10 bicycle and pedestrian facilities for the same reasons described in Section 19.4.4.1.1.

11 *Operations*

12 Roadways

13 Operations of Delta enhancement projects that are listed in Section 19.4.4.5 could affect traffic circulation  
14 on area roads and bridges. It is unclear at this time how implementation of the Proposed Project would  
15 operate because the location of sites and the number trips associated with their use are not currently  
16 known. However, the Delta Plan encourages and/or mentions implementation of State parks at Barker  
17 Slough, at Elkhorn Basin, and in the southern Delta. These Delta enhancement projects are similar to  
18 ongoing park projects, including the Bidwell-Sacramento River State Park Habitat Restoration and  
19 Outdoor Recreation Facilities Development Project (The Nature Conservancy and California Department  
20 of Parks and Recreation 2008) and San Luis Rey River Park (San Diego County Department of Parks and  
21 Recreation 2008). The Delta enhancement projects are anticipated to have impacts comparable to those  
22 identified during environmental review for the example, ongoing projects.

23 In its project-specific EIR, the lead agency found that the Bidwell-Sacramento River State Park Habitat  
24 Restoration and Outdoor Recreation Facilities Development Project would have less-than-significant  
25 traffic and circulation impacts because few vehicle trips would occur during the peak commute hours. The  
26 Draft Programmatic EIR for the San Luis Rey River Park Master Plan (San Diego County Department of  
27 Parks and Recreation 2008), on the other hand, found that the proposed park would result in a number of  
28 potentially significant traffic and circulation impacts that would cause intersections and road segments to  
29 operate at levels of service below the county's minimum standards. A menu of mitigation measures was  
30 identified, ranging from installing turn restrictions to making a fair share contribution to signalization  
31 upgrades for an intersection. The lead agency determined that implementation of these mitigation  
32 measures would reduce potential operational traffic impacts to a less-than-significant level.

33 The specific location of Delta enhancement sites and the number of visitor trips that would be generated  
34 are not known, and it is unknown whether the resulting traffic congestion would cause the level of service  
35 at an intersection or on road segments to be reduced below the minimum level of service standard.  
36 Therefore, Delta enhancement operations-related impacts on roadway levels of service cannot be  
37 accurately determined, and it is uncertain whether feasible mitigation measures would be available for  
38 implementation.

39 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
40 time such projects are proposed by lead agencies. However, because of the potential that traffic  
41 congestion at intersections or roadways (e.g., from new trips generated by new retail and restaurant uses  
42 in legacy towns), would cause these facilities to operate below the minimum level of service standard, this  
43 potential impact is considered **significant**.

1 Transit

2 Operations of Delta enhancement facilities (Section 19.4.4.5) have **no impact** on transit in the Delta,  
3 Delta watershed, or areas outside of the Delta that use Delta water for the same reasons described in  
4 Section 19.4.4.1.1.

5 Railroads

6 Operations of Delta enhancement facilities (Section 19.4.4.5) would **no impact** on railroads for the same  
7 reasons described in Section 19.4.4.1.1.

8 Navigation, Ports, Waterways, and Ferries

9 Operations of Delta enhancement projects (Section 19.4.4.5) would have **less-than-significant** impact on  
10 navigation for reasons similar to those described in Section 19.4.4.1.1. In addition, marinas are expected  
11 to be improved, thereby improving access in the Delta.

12 Bicycle and Pedestrian Facilities

13 Operations of Delta enhancement facilities (Section 19.4.4.5) would have **no impact** on bicycle and  
14 pedestrian facilities for the same reasons described in Section 19.4.4.1.1.

15 *Summary of Conclusions for Construction and Operations*

16 As stated for each mode of transportation, project-level impacts would be addressed in future site-specific  
17 environmental analysis at the time such projects are proposed by lead agencies. Because construction of  
18 frontage improvements for new retail and restaurant uses in Delta legacy towns could cause an  
19 intersection or road segment to operate below the local agency's minimum level of service standard, the  
20 potential impact would be **significant**. New retail and restaurant uses in Delta legacy towns, as well as  
21 new State parks, would generate new traffic that could cause an intersection or road segment to operate  
22 below the local agency's minimum level of services standard; therefore, operations of these projects  
23 would be **significant**.

24 **19.4.4.5.2 Impact 19-2e: Potential Increase in Hazards Related to a Design Feature**

25 For the reasons stated in Section 19.4.4.1.2, there would be **no impact** resulting from implementing Delta  
26 enhancement actions/activities (Section 19.4.4.5) that require the relocation of roads, bridges, railroads,  
27 and waterways because there would be no increase in hazards related to the design of these features. Delta  
28 enhancement actions/activities (Section 19.4.4.5) would not change operations that would affect  
29 navigation.

30 **19.4.4.5.3 Impact 19-3e: Potential Reduction in Adequate Emergency Access**

31 Section 19.4.4.5 lists the types of actions or projects that the Delta Plan would encourage. Construction of  
32 these activities could result in the need to temporarily close or relocate emergency access locations. In  
33 addition, construction traffic or congestion near temporary closures, could delay response time for  
34 emergency vehicles. Emergency access primarily involves roadways but also involves boat access.

35 It is not known at this time what types of specific Delta enhancement actions that could reduce emergency  
36 access would be constructed or where they would be constructed. However, the Delta Plan encourages  
37 implementation of the Barker Slough and Elkhorn Basin State parks. This Delta enhancement project is  
38 similar to ongoing park projects, including the Bidwell-Sacramento River State Park Habitat Restoration  
39 and Outdoor Recreation Facilities Development Project (The Nature Conservancy and California  
40 Department of Parks and Recreation 2008) and San Luis Rey River Park (San Diego County Department  
41 of Parks and Recreation 2008). The Delta enhancement projects are anticipated to have impacts  
42 comparable to those identified during environmental review for the example, ongoing projects.

1 In both cases, the lead agency found that project implementation would not substantially reduce  
2 emergency access. Neither agency required mitigation.

3 The specific location of project sites and staging areas is not known at this time. Therefore, construction-  
4 related interference with emergency access cannot be accurately determined, and it is uncertain whether  
5 feasible mitigation measures would be available for implementation. In addition, in the Delta and other  
6 areas where waterways are used to access structures, construction of bridges or siphons could interfere  
7 with emergency boat access.

8 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
9 time such projects are proposed by lead agencies. However, because of the potential for actions to  
10 interfere with emergency access during construction in areas of limited roadway circulation or restricted  
11 waterway movement, the potential impacts are considered **significant**. There would be **no impact** during  
12 operations.

#### 13 19.4.4.5.4 Impact 19-4e: Construction- and Operations-related Conflict with Adopted Policies, 14 Plans, or Programs Regarding Bicycle or Pedestrian Facilities

15 Construction of the types of actions/activities listed in Section 19.4.4.5 could affect existing bicycle and  
16 pedestrian paths and trails, both those contiguous to roadways and within their own dedicated rights-of-  
17 way and those within established recreational areas. As discussed in Section 19.4.4.5.1, implementation  
18 of Delta enhancement actions could require the closure of these facilities for more than 3 months, thereby  
19 causing a conflict with bicycle or pedestrian facilities plans. For the same reasons described in the  
20 aforementioned section, this potential impact would be **significant**.

#### 21 19.4.4.6 Mitigation Measures

22 Any covered action that would have one or more of the significant environmental impacts listed above  
23 shall incorporate the following features and/or requirements related to such impacts (e.g., preparation of  
24 traffic control plans for construction-related traffic impacts).

25 With regard to covered actions implemented under the Delta Plan, these mitigation measures will reduce  
26 the impacts of the Proposed Project. Project-level analysis by the agency proposing the covered action  
27 will determine whether the measures are sufficient to reduce those impacts to a less-than-significant level.  
28 Generally speaking, many of these measures are commonly employed to minimize the severity of an  
29 impact and in many cases would reduce impacts to a less-than-significant level, as discussed below in  
30 more detail.

31 With regard to actions taken by other agencies on the basis of Delta Plan recommendations (i.e., activities  
32 that are not covered actions), the implementation and enforcement of these measures would be within the  
33 responsibility and jurisdiction of public agencies other than the Delta Stewardship Council. Those  
34 agencies can and should adopt these measures as part of their approval of such actions, but the Delta  
35 Stewardship Council does not have the authority to require their adoption. Therefore, significant impacts  
36 of noncovered actions could remain significant and unavoidable.

37 How mitigation measures in this EIR relate to covered and noncovered actions is discussed in more detail  
38 in Section 2B, Introduction to Resource Sections.

1 **19.4.4.6.1 Mitigation Measure 19-1**

2 The following mitigation measures would reduce the effects of Impact 19-1a through e, Construction- and  
3 Operations-related Conflict with an Applicable Plan, Ordinance, or Policy Establishing Measures of  
4 Effectiveness for the Performance of the Circulation System, Taking into Account All Modes of  
5 Transportation:

- 6 ♦ Avoid modifications to federal, State, and county highways, local roadways, and bridges that may  
7 reduce vehicle capacity, to the extent feasible.
- 8 ♦ Develop and implement a traffic control plan to reduce effects of roadway construction activities,  
9 including full and partial lane closures, bicycle and pedestrian facility closures, and reduced  
10 access to adjacent properties. Minimize lane closures during morning and evening peak hours.  
11 Limit lane closures near the affected segment. Reroute bicycle and pedestrian access around the  
12 project area. Prevent bicyclists and pedestrians from entering the work area.
- 13 ♦ For project operations that increase traffic, prepare a traffic study. Determine haul routes that  
14 would be used. Evaluate the levels of service at affected intersections and road segments during  
15 the peak a.m. and peak p.m. periods. Model changes in traffic with project traffic. If the level of  
16 service is maintained at levels acceptable to the appropriate agency, then no additional mitigation  
17 is required. If project traffic causes an intersection or road segment to perform below the  
18 minimum level of service standard, then select an alternate route for project traffic or schedule  
19 project trips for non-peak-hour periods. If alternate routes are not feasible, then design and  
20 construct facility improvements to intersections or road segments to maintain the acceptable level  
21 of service.
- 22 ♦ For roads that will be flooded during floodplain operation, prepare and implement vehicular  
23 traffic detour planning as necessary. Provide convenient and parallel vehicular traffic detours for  
24 routes closed because of inundation. A detour plan shall be prepared and implemented in  
25 accordance with current Caltrans Standard Plans and Specifications. (A temporary crossing  
26 structure, for example at Bailey Bridge, may be used to maintain circulation and avoid a detour  
27 plan.) The detour plan shall be implemented before roadway inundation.

28 The detour plan will include an assessment of existing roadway conditions, whether paved or  
29 unpaved, and provisions for repair and maintenance if the roadway conditions are substantially  
30 degraded from increased use. After the detour route is identified and before flood flows are  
31 released that would overtop roads, the condition of the detour road surface will be assessed and  
32 documented. The documentation will be submitted to the local agency responsible for  
33 maintenance of the road. After the detour is no longer needed, the condition of the road surface  
34 will be assessed and documented. The documentation will identify substantial changes in the  
35 condition of the road surface, such as potholing or rutting. Repair and maintenance actions  
36 needed to restore the road surface to predetour conditions will be identified. In coordination with  
37 the local maintenance agency, the repair and maintenance actions may be conducted by the  
38 agency conducting the floodplain operation or by the local maintenance agency to be  
39 proportionately reimbursed by the flood management authority.

40 The detour plan will prioritize paved roads for use as detour routes. If use of paved roadway  
41 detours is not feasible during flood flow road inundation periods, the detour plan will require that  
42 visible dust emissions from unpaved detour routes will be limited to the percent opacity indicated  
43 by the appropriate air pollution control district. The following dust control measures may be used  
44 to stabilize unpaved roadways:

- 45 • Watering
- 46 • Uniform layer of washed gravel

- 1           • Roadmix  
2           • Paving
- 3           Any other method that can be demonstrated to the satisfaction of the appropriate air pollution  
4           control district that effectively limits visible dust emission to the local percent opacity standard  
5           and meets the conditions of a stabilized unpaved road.
- 6           ◆ For Delta enhancement projects, traffic impact reports shall be prepared that meet the applicable  
7           agencies' standards to assess potential impacts on appropriate street segments and intersections.  
8           The traffic impact reports shall identify impacts that exceed the agencies' guidelines for  
9           significance and identify appropriate mitigation. Acceptable mitigation measures may include:
- 10          • Turn restrictions
- 11          • Roadway widening to add lanes or shoulders
- 12          • Redesign of freeway on- and off-ramps
- 13          • Median construction/modification to restrict access
- 14          • Flaring of intersections to add turn lanes
- 15          • Provision of passing lanes or turnouts
- 16          • Acceleration and deceleration lanes
- 17          • Removal of obstructions
- 18          • Roundabouts
- 19          • Restriping to add lanes with or without parking removal and restrictions
- 20          • Protected left-turn pockets or free right-turn lanes
- 21          • Parking restrictions, daily or during peak hours
- 22          • Fair share contributions to approved projects identified in the agency's Capital Improvement  
23          Plan
- 24          • Fair share contributions to traffic signals identified in the agency's traffic signal plan
- 25          ◆ Prepare and implement a waterway traffic control plan to ensure safe and efficient vessel  
26          navigation during construction in waterways. The plan shall identify vessel traffic control  
27          measures to minimize congestion and navigation hazards to the extent feasible. Construction  
28          areas in the waterway will be barricaded or guarded by readily visible barriers or other effective  
29          means to warn boaters of their presence and restrict access. Warning devices and signage will be  
30          consistent with the California Uniform State Waterway Marking System and effective during  
31          nondaylight hours and periods of dense fog.
- 32          ◆ Where temporary partial channel closure is necessary, a temporary channel closure plan shall be  
33          developed. The waterway closure plan will identify and implement alternate detour routing and  
34          procedures for notifying boaters of construction activities and partial closures, including  
35          coordination with the U.S. Coast Guard, local boating organizations and marinas.
- 36          ◆ To the extent feasible, ensure that safe boat access to public launch and docking facilities,  
37          businesses, and residences is maintained.

- 1       ♦ Coordinate with transit system operators to establish appropriate alternate transit system routes to  
2       be rerouted during construction activities, as appropriate.
- 3       ♦ Boat passage facilities shall be provided as an integral component of operable gate facilities,  
4       when feasible. Boat passage facilities shall be designed to provide uninterrupted boat passage  
5       when gate are in the “up” position. Floating docks with mooring bits shall be provided along the  
6       shoreline on both sides of the boat passage facility for boaters to use while they await passage.  
7       Floating barriers will guide boats into the passage facility chambers.
- 8       ♦ Implement a program to provide boater education on procedures for waiting at and using the boat  
9       passage facility.
- 10      ♦ Minimize impacts on bicycle and pedestrian circulation where feasible by avoiding impacts,  
11      minimizing closure of paths, and providing for temporary or permanent relocation of the facility  
12      to the extent feasible. Consult with the appropriate public works department to determine the  
13      most feasible alignment for facility relocation.

14      These mitigation measures are commonly employed on a variety of construction projects. In many cases,  
15      they reduce significant construction-related transportation-related impacts to less-than-significant levels.  
16      Implementation of these mitigation measures would reduce the significance of traffic impacts by  
17      controlling traffic through construction sites during construction and maintaining access through  
18      construction sites. These measures provide for a waterway traffic control plan for in-water construction  
19      work to ensure safe passage of vessels around project sites similar to traffic control plans for area roads  
20      and intersections. The measures mitigate for impacts during project operations by constructing facility  
21      improvements, such as left turn lanes, to maintain acceptable levels of service and by rerouting traffic  
22      when a levee road may be closed due to flooding from floodplain operations. The mitigation measures  
23      minimize impacts on bicycle and pedestrian facilities by replacing facilities that may require removal for  
24      project construction.

25      In cases when road closures or truck traffic cause intersections or road segments to operated below the  
26      agency’s minimum level of service standard, or when traffic engineering solutions to improve level of  
27      service at intersections or road segments are not feasible due to the cost of improvements relative cost of  
28      the project as a whole, construction- and operations-related traffic impacts would remain **significant**.

#### 29      19.4.4.6.2 Mitigation Measure 19-2

30      The following mitigation measures would reduce the effects of Impact 19-2a through e, Potential Increase  
31      in Hazards Related to a Design Feature:

- 32      ♦ Develop and implement a program that will include procedures for routine inspections and  
33      emergency facility operation to allow safe navigation should the facility become damaged or  
34      malfunction. The program will include the following specific components:
  - 35      • Routine inspections and correction procedures to ensure that facility safety features are in  
36      good working order.
  - 37      • Routine inspections and correction procedures for navigational hazards around facilities,  
38      including floating or submerged debris and the formation of shoals.
  - 39      • Contingency and emergency operating procedures to address the possibility that a boat  
40      colliding with the flow control facilities will damage the facilities or otherwise render them  
41      unable to operate as engineered, and provisions to allow safe navigation.

42      These mitigation measures are commonly employed on a variety of projects that potentially involve  
43      hazards to navigation. Implementation of these mitigation measures would reduce, to less-than-significant

1 levels in many cases, navigation hazards related to the design and installation of facilities in waters by  
2 routinely inspecting facilities to identify hazards and fixing them. These measures also provide  
3 contingency procedures for emergency situations to avoid navigation hazards during emergency work.  
4 Navigation hazards cannot be completely eliminated because the bottom of waterways is not always  
5 visible and submerged debris can accumulate without being seen; therefore, the potential navigation  
6 hazard would remain **significant**.

#### 7 19.4.4.6.3 Mitigation Measure 19-3

8 The following mitigation measures would reduce the effects of Impact 19-3a through e, Potential  
9 Reduction in Adequate Emergency Access:

- 10 ♦ Coordinate with responsible local agencies to establish appropriate emergency routes during  
11 construction activities and before existing emergency routes are reclassified to a nonemergency  
12 route use.
- 13 ♦ Phase construction activities, and use multiple routes to and from offsite locations to minimize  
14 the daily amount of traffic on individual roadways.
- 15 ♦ Post warnings about the potential presence of slow-moving vehicles.
- 16 ♦ Use traffic-control personnel when appropriate.
- 17 ♦ Place and maintain barriers, and install traffic-control devices necessary for safety, as specified in  
18 Caltrans' Manual of Traffic Controls for Construction and Maintenance Work Zones and in  
19 accordance with city and county requirements.
- 20 ♦ Notify appropriate emergency service providers of project construction throughout the  
21 construction period to ensure that emergency access through construction areas is maintained.

22 These mitigation measures are commonly employed on a variety of projects. In many cases, they reduce  
23 significant construction-related transportation-related impacts to emergency access to less-than-significant  
24 levels. Implementation of these mitigation measures would minimize impacts on emergency access  
25 through coordination with emergency service providers and maintaining through traffic to the extent  
26 practicable. In cases where roadways must be closed completely and provide the only means of  
27 emergency access allowing standard response times, there would remain a **significant** impact on  
28 emergency access because emergency service response times could exceed the agency's level of service  
29 standard.

#### 30 19.4.4.6.4 Mitigation Measure 19-4

31 The following mitigation measure would reduce the effects of Impact 19-4a through e, Construction- and  
32 Operations-related Conflict with Adopted Policies, Plans, or Programs Regarding Bicycle or Pedestrian  
33 Facilities:

- 34 ♦ Implement Mitigation Measure 19-1. The portion of the measure that addresses minimizing  
35 impacts on bicycle and pedestrian circulation also would apply to Impact 19-4a through e.

36 These mitigation measures are commonly employed on a variety of projects. Implementation of this  
37 mitigation measure would reduce, to less-than-significant levels in many cases, conflicts with bicycle and  
38 pedestrian facilities planning by (a) minimizing or avoiding temporary closures during construction and  
39 (b) replacing facilities that may need to be removed by the project. In cases where relocating bicycle or  
40 pedestrian facilities is not feasible because the cost of replacement is prohibitive relative to the overall  
41 cost of the project, the project could conflict with bicycle and pedestrian planning and the impact would  
42 remain **significant**.

## 1 19.4.5 No Project Alternative

2 As described in Section 2A, Proposed Project and Alternatives, the No Project Alternative is based on the  
3 continuation of existing plans and policies and the continued operation of existing facilities into the future  
4 and permitted and funded projects. Seven ongoing projects under construction and/or permitted have been  
5 identified as part of the No Project Alternative. The list of projects included in the No Project Alternative  
6 is presented in Table 2-2.

7 The significance of transportation impacts is associated with the effects of project construction and  
8 operation on the performance of intersections and road segments relative to the local agency's level of  
9 service standard. Other transportation impacts include the introduction of hazards from design features,  
10 reduced emergency access, and conflicts with a local agency's bicycle and pedestrian facility planning  
11 efforts. With the No Project Alternative, project construction at the seven specific project sites is expected  
12 to be completed within the next 2–5 years.

13 To the extent that intersections and road segments are operating relative to the minimum level of service  
14 standard, the number of haul trips required, and the need for partial or full road closure during  
15 construction, construction of these facilities could have significant construction-related transportation  
16 impacts in the near-term period. After construction is completed, construction-related impacts would  
17 cease, and project operations would commence. There may be a period of time between the completion of  
18 construction and the start of operations.

19 Each of the projects listed for the No Project Alternative was subject to environmental review by the  
20 respective implementing agency. All but the Contra Costa Water District Rock Slough Fish Screen were  
21 approved with the adoption of an EIR. The Rock Slough Fish Screen was adopted with a mitigated  
22 negative declaration. None of the lead agencies found potentially significant transportation impacts from  
23 project operations, and none required mitigation for project operations.

24 With the No Project Alternative, the Delta Plan would not be in place to encourage various other projects  
25 to move forward. To the extent that the absence of the Delta Plan prevents those projects from moving  
26 forward, there could be fewer construction-related transportation impacts in the near term and fewer  
27 construction- and operations-related transportation impacts over the long-term.

28 The No Project Alternative likely would result in **significant** construction-related transportation impacts  
29 but **less-than-significant** operations transportation impacts.

30 The No Project Alternative is expected to have **fewer** construction- and operations-related transportation  
31 impacts than the Proposed Project.

## 32 19.4.6 Alternative 1A

33 With Alternative 1A, the construction and operation of surface water projects (water intakes, treatment  
34 and conveyance facilities, and reservoirs) would be the same as under the Proposed Project. As described  
35 in Section 2A, Proposed Project and Alternatives, there would be fewer groundwater projects (wells,  
36 wellhead treatment, conveyance facilities), ocean desalination projects, and recycled wastewater and  
37 stormwater projects (treatment and conveyance facilities) compared to the Proposed Project. Water  
38 transfers and water use efficiency and conservation programs would be reduced relative to the Proposed  
39 Project, but these activities would not be expected to affect traffic.

40 Projects to restore the Delta ecosystem would be reduced relative to the Proposed Project. Implementation  
41 of flow objectives would not affect transportation. Ecosystem stressor management activities and invasive  
42 species management (including removal of invasive vegetation) would be the same as described for the  
43 Proposed Project.

1 Project and actions to improve water quality would be the same as under the Proposed Project. Flood risk  
2 reduction projects also would be the same as under the Proposed Project, except that there would be less  
3 emphasis on levee maintenance and modification for levees that protect agricultural land and more  
4 emphasis on levees that protect water supply corridors and urban areas. This difference would result in an  
5 overall reduction in levee modification activities. Projects to protect and enhance the Delta as an evolving  
6 place would be the same as for the Proposed Project.

#### 7 19.4.6.1.1 Impact 19-1: Construction- and Operations-related Conflict with an Applicable Plan, 8 Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the 9 Circulation System, Taking into Account All Modes of Transportation

10 The same types of transportation impacts from construction and operations would occur for  
11 Alternative 1A as described for the Proposed Project, except that there would be fewer water supply  
12 reliability projects constructed, levees modified, and Delta ecosystem restoration projects implemented.  
13 water supply reliability projects described in Section 19.4.4.4.1, including construction and operations of  
14 groundwater projects, ocean desalination projects, recycled wastewater and stormwater projects would  
15 produce fewer transportation impacts for Alternative 1A than with the Proposed Project because fewer  
16 projects would be constructed.

17 With Alternative 1A, less emphasis would be placed on levee construction in sparsely populated  
18 agricultural areas, which could lead to a reduction in levee construction relative to the Proposed Project.  
19 While fewer miles of levee would be modified, an overall reduction in transportation impacts is not  
20 certain. Levee construction in more urban areas could affect a greater number of travelers, but more  
21 alternate routes are available for people to adapt to construction-related impacts. Interruptions to  
22 transportation in more rural, less populated area could be considered more significant because there are  
23 fewer routes for residents to use to access their communities. Given this trade-off, implementation of  
24 Alternative 1A, transportation impacts might be considered similar to but less than those of the Proposed  
25 Project. Other flood risk reduction actions would be the same as those of the Proposed Project; therefore,  
26 significant impacts on navigation resulting from dredging would be the same with this alternative as with  
27 the Proposed Project.

28 There would be fewer Delta ecosystem restoration projects implemented with Alternative 1A than with  
29 the Proposed Project, thereby reducing the number of potential impacts on transportation from partial and  
30 full closures and relocations of roadways, railroads, and bicycle and pedestrian facilities. There would,  
31 however, be the same amount of construction-related congestion impacts from vegetation removal of  
32 nonnative invasive species management as described for the Proposed Project.

33 There would be the same transportation impacts with Alternative 1A as with the Proposed Project,  
34 described in Section 19.4.4.3.1 (water quality improvement) and Section 19.4.4.5.1 (Delta enhancement)  
35 because the same number of projects would be built and operated.

36 Overall, significant impacts related to construction- and operations-related conflict with an applicable  
37 plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation  
38 system under Alternative 1A would be **less than** under the Proposed Project.

39 As compared to existing conditions, the impacts related to construction- and operations-related conflict  
40 with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance  
41 of the circulation system under Alternative 1A would be **significant**.

#### 42 19.4.6.1.2 Impact 19-2: Potential Increase in Hazards Related to a Design Feature

43 Neither the Proposed Project nor Alternative 1A would introduce hazards related to design features with  
44 implementation of water supply reliability, Water Quality, or Delta enhancements. Alternative 1A would  
45 also not introduce hazards related to design. For the Proposed Project, the introduction of navigation

1 hazards was considered a significant impact. Flood risk reduction projects described in Section 19.4.4.4  
2 would introduce navigation hazards from construction activities associated with dredging and water-side  
3 levee repairs but not from operations of flood risk reduction actions. Therefore, impacts related to  
4 navigation hazards from dredging would be the same with this alternative as with the Proposed Project. It  
5 is reasonable to assume that the potential to introduce navigation hazards through the actions described in  
6 Section 19.4.4.2.2 (ecosystem restoration) would be less for Alternative 1A than for the Proposed Project  
7 because fewer Delta ecosystem restoration actions would be taken.

8 Overall, significant impacts related to the potential increase in hazards related to a design feature under  
9 Alternative 1A would be the **less than** under the Proposed Project.

10 As compared to existing conditions, the impacts related to the potential increase in hazards related to a  
11 design feature under Alternative 1A would be **significant**.

#### 12 19.4.6.1.3 Impact 19-3: Potential Reduction in Adequate Emergency Access

13 The same types of temporary emergency access impacts (by land and by water) from construction and  
14 operations described for the Proposed Project would occur as part of Alternative 1A. Fewer water supply  
15 reliability projects (Section 19.4.4.1) groundwater, ocean desalination, recycled wastewater and  
16 stormwater projects would be constructed for Alternative 1A than with the Proposed Project. The  
17 difference in the number or size of projects is not known at this time. Fewer Delta ecosystem restoration  
18 actions would be taken with Alternative 1A than with the Proposed Project, resulting in a lower potential  
19 for impacts on emergency access as described in Section 19.4.4.2.3 (ecosystem restoration).

20 As discussed Section 19.4.6.1.1, Alternative 1A would result in fewer overall levee construction projects,  
21 and those projects would likely occur in more urban areas rather than less populated rural areas. Given  
22 that alternate routes and emergency services would be more locally available in urban areas, construction  
23 impacts on emergency might be more readily mitigated than impacts on emergency access in remote  
24 locations in the Delta, where emergency services would have to travel farther than they already have to  
25 travel. It is reasonable to assume that emergency response times would therefore be increased more with  
26 implementation of the Proposed Project than with Alternative 1A. Construction-associated land and water  
27 emergency access impacts from flood risk reduction actions with Alternative 1A would be less than those  
28 with the Proposed Project.

29 The same number of water quality improvement and Delta enhancement actions would be taken with  
30 Alternative 1A and with the Proposed Project. Therefore, impacts on emergency access from possible  
31 road or lane closures for installing conveyance facilities across roads or frontage improvements for new  
32 retail and restaurant uses would be the same for Alternative 1A as for the Proposed Project.

33 Overall, significant impacts related to a potential reduction in adequate emergency access under  
34 Alternative 1A would be **less than** under the Proposed Project.

35 As compared to existing conditions, the impacts related to a potential reduction in adequate emergency  
36 access under Alternative 1A would be **significant**.

#### 37 19.4.6.1.4 Impact 19-4: Construction- and Operations-related Conflict with Adopted Policies, Plans, 38 or Programs Regarding Bicycle or Pedestrian Facilities

39 As discussed in Section 19.4.4.1.1 and for the reasons described in Section 19.4.6.1.1 (Reliable Water  
40 Supply), implementation of the Proposed Project (including ecosystem restoration, water quality  
41 improvements, flood risk reduction, and Delta enhancement) could have significant impacts on bicycle  
42 and pedestrian facilities. Fewer water supply reliability projects (groundwater, ocean desalination,  
43 recycled and stormwater projects) described in Section 19.4.4.1 would be constructed under  
44 Alternative 1A than with the Proposed Project. For the reasons given in Section 19.4.6.1.1 (Impact 19-1),

1 fewer impacts on bicycle and pedestrian facilities would be expected for Delta ecosystem restoration with  
2 Alternative 1A than with the Proposed Project. The same amount of impacts on bicycle and pedestrian  
3 facilities would occur with Alternative 1A and the Proposed Project because a fewer number of actions  
4 would be taken.

5 As discussed above in Sections 19.4.6.1.1 (Impact 19-1) and 19.4.6.1.3 (Impact 19-3), levee construction  
6 would be concentrated primarily in urban areas rather than less populated areas. Bicycle and pedestrian  
7 facilities would be more likely found in population centers rather than in agricultural areas in the Delta.  
8 Therefore, while the Proposed Project would have more overall levee construction, the effects of levee  
9 construction on bicycle and pedestrian facilities would be in the same areas as that affected by  
10 Alternative 1A. Impacts on bicycle and pedestrian facilities would be the same for Alternative 1A as for  
11 the Proposed Project.

12 With Alternative 1A, impacts on bicycle and pedestrian facilities from implementation of water quality  
13 improvement and Delta enhancement actions would be the same as with the Proposed Project because the  
14 same number of actions would be taken.

15 Overall, significant impacts related to construction- and operations-related conflict with adopted policies,  
16 plans, or programs regarding bicycle or pedestrian facilities under Alternative 1A would be **less than**  
17 under the Proposed Project.

18 As compared to existing conditions, the impacts related to construction- and operations-related conflict  
19 with adopted policies, plans, or programs regarding bicycle or pedestrian facilities under Alternative 1A  
20 would be **significant**.

#### 21 **19.4.6.2 Mitigation Measures**

22 Mitigation measures for Alternative 1A would be the same as those described in Sections 19.4.4.6.1  
23 (Mitigation Measure 19-1), 19.4.4.6.2 (Mitigation Measure 19-2), 19.4.4.6.3 (Mitigation Measure 19-3),  
24 and 19.4.4.6.4 (Mitigation Measure 19-4) for the Proposed Project. Because it is not known whether the  
25 mitigation measures listed above would reduce Impacts 19-1, 19-2, 19-3, and 19-4 to a less-than-  
26 significant level for Alternative 1A, these potential impacts are considered **significant and unavoidable**.

### 27 **19.4.7 Alternative 1B**

28 Under Alternative 1B, the construction and operation of surface water projects (water intakes, treatment  
29 and conveyance facilities, and reservoirs) would be the same as under the Proposed Project. As described  
30 in Section 2A, Proposed Project and Alternatives, there would be fewer groundwater projects (wells,  
31 wellhead treatment, conveyance facilities), and recycled wastewater and stormwater projects (treatment  
32 and conveyance facilities). There would be no transportation impacts attributable to water transfers and  
33 conservation programs. There would be no ocean desalination projects.

34 Projects to restore the Delta ecosystem would be reduced in extent relative to the Proposed Project and  
35 would not emphasize restoration of floodplains in the lower San Joaquin River. Ecosystem stressor  
36 management activities would not result in transportation impacts. Invasive species management  
37 (including removal of invasive vegetation) would be increased relative to the Proposed Project, and a  
38 variance to the USACE Levee Vegetation Policy would not be pursued. Exception from required  
39 conformance with the habitat types and elevation maps presented in the Conservation Strategy for  
40 Restoration of the Sacramento-San Joaquin Delta Ecological Management Zone and the Sacramento and  
41 San Joaquin Valley Regions (DFG 2011) under Alternative 1B would have no transportation impacts.

42 Water quality improvement projects, including water treatment plants, conveyance facilities, and wells  
43 and wellhead treatment facilities, would be less emphasized relative to the Proposed Project, and greater

1 emphasis would be placed on the construction and operation of wastewater treatment and recycle facilities  
2 and municipal stormwater treatment facilities.

3 Flood risk reduction would place greater emphasis on levee modification/maintenance and dredging than  
4 the Proposed Project, but there would be no setback levees or subsidence reversal projects. Floodplain  
5 expansion projects would be fewer or less extensive. Actions to protect and enhance the Delta as an  
6 evolving place would be consistent with the Economic Sustainability Plan, but the locations for new  
7 parks, as encouraged by the Proposed Project, would not be emphasized.

8 **19.4.7.1.1 Impact 19-1: Construction- and Operations-related Conflict with an Applicable Plan,**  
9 **Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the**  
10 **Circulation System, Taking into Account All Modes of Transportation**

11 The same types of transportation impacts from construction and operations would occur with  
12 Alternative 1B as described as part of the Proposed Project. The same number of roadway, railroad, and  
13 bicycle and pedestrian facility partial and full closures and relocations would be needed for surface water  
14 projects with Alternative 1B as with the Proposed Project, but fewer transportation impacts would result  
15 from groundwater, recycled wastewater, and stormwater projects because fewer actions would be taken.  
16 Because ocean desalination is not included under Alternative 1B, there would be a lower potential than  
17 under the Proposed Project for congestion impacts related to brine haul trips.

18 Fewer acres of habitat would be restored with this alternative, but temporary transportation impacts from  
19 vegetation removal would be greater for Alternative 1B than for the Proposed Project because a variance  
20 to the USACE Levee Vegetation Policy would not be pursued. In addition, more nonnative vegetation  
21 removal activities would be implemented with this alternative, which would cause more construction  
22 impacts on transportation.

23 Under Alternative 1B, the emphasis on the types of water quality projects would shift toward more  
24 wastewater treatment and recycle facilities and municipal stormwater treatment facilities and fewer of the  
25 other types of water quality improvement facilities. It is unclear if this shift would result in more or less  
26 construction activity; therefore, transportation impacts are expected to be similar to those under the  
27 Proposed Project.

28 More levee modifications and dredging projects (Section 19.4.4.4.1) would occur with Alternative 1B  
29 than with the Proposed Project with the associated impacts on transportation and navigation. Fewer  
30 construction-related impacts from the construction of setback levees would occur with Alternative 1B  
31 than with the Proposed Project. Fewer floodplain restoration projects would be implemented, and as a  
32 result, levee roads would be flooded with less frequency than would happen under the Proposed Project.  
33 The same would be likely for railroad and pedestrian bicycle facilities.

34 The same number of Delta enhancement actions would be implemented with Alternative 1B as with the  
35 Proposed Project. The key difference between Alternative 1B and the Proposed Project is that the three  
36 parks named in the Delta Plan could be located anywhere in the Delta instead of their specified locations.  
37 Therefore, impacts on transportation would be located someplace else that could be more or less sensitive  
38 to construction traffic and trips generated by the parks. For purposes of this comparison, traffic impacts  
39 from the parks are considered the same for Alternative 1B as for the Proposed Project. Impacts from  
40 possible road or lane closures required for frontage improvements for new retail and restaurant uses  
41 would be the same for Alternative 1B as for the Proposed Project.

42 Overall, significant impacts related to construction- and operations-related conflict with an applicable  
43 plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation  
44 system under Alternative 1B would be **less than** under the Proposed Project.

1 As compared to existing conditions, the impacts related to construction- and operations-related conflict  
2 with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance  
3 of the circulation system under Alternative 1B would be **significant**.

#### 4 19.4.7.1.2 Impact 19-2: Potential Increase in Hazards Related to a Design Feature

5 Neither the Proposed Project nor Alternative 1B would introduce hazards related to design features with  
6 implementation of water supply reliability, water quality, or Delta enhancement actions. For the Proposed  
7 Project, the introduction of navigation hazards was considered a significant impact. Flood risk reduction  
8 projects described in Section 19.4.4.4 would introduce navigation hazards from construction activities  
9 associated with dredging and water-side levee repairs but not from operations of flood risk reduction  
10 actions. Therefore, impacts related to navigation hazards from dredging would be the same with this  
11 alternative as with the Proposed Project. For the reasons given in Section 19.4.6.1.2 (Impact 19-2), the  
12 potential to introduce navigation hazards with implementation of Delta ecosystem restoration would be  
13 less for Alternative 1B than for the Proposed Project because fewer Delta ecosystem restoration actions  
14 would be taken.

15 Overall, significant impacts related to the potential increase in hazards related to a design feature under  
16 Alternative 1B would be the **same** as under the Proposed Project.

17 As compared to existing conditions, the impacts related to the potential increase in hazards related to a  
18 design feature under Alternative 1B would be **significant**.

#### 19 19.4.7.1.3 Impact 19-3: Potential Reduction in Adequate Emergency Access

20 The same type of temporary emergency access impacts (by land and by water) from construction and  
21 operations would occur under Alternative 1B as described for the Proposed Project. The same number of  
22 impacts would result from construction of surface water projects with Alternative 1B as with the  
23 Proposed Project, but fewer impacts would be expected from groundwater projects and ocean  
24 desalination. Fewer Delta ecosystem restoration actions would be taken with Alternative 1B than with the  
25 Proposed Project, resulting in a lower potential for impacts on emergency access as described in Section  
26 19.4.4.2.3 (ecosystem restoration). Because vegetation removal (nonnative species management and levee  
27 maintenance) could occur along roads that require lane closure, the increased amount of vegetation  
28 removal with Alternative 1B could cause greater emergency access impacts than the Proposed Project.

29 Under Alternative 1B, the emphasis on the types of water quality projects would shift toward more  
30 wastewater treatment and recycle facilities and municipal stormwater treatment facilities and fewer of the  
31 other types of water quality improvement facilities. It is unclear if this shift would result in more or less  
32 construction activity; therefore, impacts on emergency access with this alternative are expected to be  
33 similar to those under the Proposed Project. For the reasons described in Section 19.4.6.2.3 (Impact 19-3),  
34 construction-associated land and water emergency access impacts from flood risk reduction actions with  
35 Alternative 1B would be less than with the Proposed Project because levee construction would be  
36 concentrated in more urban areas.

37 The same number of Delta enhancement actions would be implemented with Alternative 1B as with the  
38 Proposed Project, with the exception that construction-related impacts on emergency access for three  
39 parks would occur in locations in the Delta other than the specified locations. Impacts on emergency  
40 access from possible road or lane closures required for frontage improvements for new retail and  
41 restaurant uses would be the same for Alternative 1B as for the Proposed Project.

42 Overall, significant impacts related to a potential reduction in adequate emergency access under  
43 Alternative 1B would be **less than** under the Proposed Project.

1 As compared to existing conditions, the impacts related to a potential reduction in adequate emergency  
2 access under Alternative 1B would be **significant**.

#### 3 **19.4.7.1.4 Impact 19-4: Construction- and Operations-related Conflict with Adopted Policies, Plans, 4 or Programs Regarding Bicycle or Pedestrian Facilities**

5 As discussed in Section 19.4.4.1.1 and for the reasons described in Section 19.4.6.1.1, implementation of  
6 the Proposed Project (including ecosystem restoration, water quality improvements, flood risk reduction,  
7 and Delta enhancement) would have significant impacts on bicycle and pedestrian facilities. In addition to  
8 the reduced likelihood of construction of water supply reliability actions described in Section 19.4.4.1  
9 (fewer groundwater and recycled wastewater and stormwater projects and no ocean desalination),  
10 ecosystem restoration actions described in Section 19.4.4.2 (reduced extent of Delta ecosystem  
11 restoration) may be less likely for Alternative 1B than for the Proposed Project. Impacts would remain the  
12 same for flood risk reduction projects described in Section 19.4.4.4 because rather than setback levees  
13 being constructed in the Delta, where fewer facilities would be encountered, levee modifications would  
14 occur in urban locations where bicycle and pedestrian facilities are located. For the reasons given above  
15 in Section 19.4.7.1.1 (Impact 19-1), water quality improvement and Delta enhancement actions would be  
16 similar and the same as those of the Proposed Project, respectively.

17 Overall, significant impacts related to construction- and operations-related conflict with adopted policies,  
18 plans, or programs regarding bicycle or pedestrian facilities under Alternative 1B would be **less than**  
19 under the Proposed Project.

20 As compared to existing conditions, the impacts related to construction- and operations-related conflict  
21 with adopted policies, plans, or programs regarding bicycle or pedestrian facilities under Alternative 1B  
22 would be **significant**.

#### 23 **19.4.7.2 Mitigation Measures**

24 Mitigation measures for Alternative 1B would be the same as those described in Sections 19.4.4.6.1  
25 (Mitigation Measure 19-1), 19.4.4.6.2 (Mitigation Measure 19-2), 19.4.4.6.3 (Mitigation Measure 19-3),  
26 and 19.4.4.6.4 (Mitigation Measure 19-4) for the Proposed Project. Because it is not known whether the  
27 mitigation measures listed above would reduce Impacts 19-1, 19-2, 19-3, and 19-4 to a less-than-  
28 significant level for Alternative 1B, these potential impacts are considered **significant and unavoidable**.

### 29 **19.4.8 Alternative 2**

30 As described in Section 2A, Proposed Project and Alternatives, Alternative 2 would place greater  
31 emphasis on groundwater, ocean desalination, and recycled water projects and less emphasis on surface  
32 water projects. Greater emphasis also would be placed on water transfers and water use efficiency and  
33 conservation programs, but these activities would not be expected to result in transportation impacts. The  
34 surface storage reservoirs considered under the DWR Surface Water Storage Investigation would not be  
35 encouraged; instead, surface storage in the Tulare Basin would be emphasized.

36 Ecosystem restoration projects similar to but less extensive than those encouraged by the Proposed  
37 Project would be emphasized without the requirement to conform to the ERP habitat types and elevation  
38 map. Alternative 2 would emphasize the development of flow objectives that take into consideration  
39 updated flow criteria that support a more natural flow regime, water rights, and greater protection of the  
40 Public Trust resources, none of which affect transportation.

41 Actions to improve water quality would be similar to or greater than under the Proposed Project,  
42 especially the treatment of wastewater and agricultural runoff. Actions to reduce flood risk under  
43 Alternative 2 would emphasize floodplain expansion and reservoir reoperation rather than levee

1 construction and modification. The stockpiling of rock and encouragement of subsidence reversal projects  
2 (which would not affect transportation) would be the same as under the Proposed Project, as would  
3 actions to protect and enhance the Delta as an evolving place.

#### 4 **19.4.8.1.1 Impact 19-1: Construction- and Operations-related Conflict with an Applicable Plan,** 5 **Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the** 6 **Circulation System, Taking into Account All Modes of Transportation**

7 The same types of transportation impacts from construction and operations would occur under  
8 Alternative 2 as described for the Proposed Project. Under Alternative 2, there would be more  
9 construction of groundwater, ocean desalination, and recycled water facilities, potentially causing more  
10 roadway, railroad, and bicycle and pedestrian facility partial and full closures and relocations. Increased  
11 ocean desalination could also result in a greater number of truck trips for brine disposal, which could  
12 result in greater congestion impacts at local intersections or road segments. There would be fewer surface  
13 water projects implemented that are named in the Delta Plan, possibly reducing the potential for  
14 construction-related transportation impacts. There would be more construction in the Tule Basin region,  
15 potentially causing construction-related transportation impacts. Depending on the intensity of  
16 construction activities, these construction impacts could nullify reductions of construction-related impacts  
17 for the surface water projects identified for the Proposed Project.

18 Construction-related impacts from Delta ecosystem restoration actions under Alternative 2 would be less  
19 than, but not substantially less than, under the Proposed Project because there would be fewer restoration  
20 projects implemented. There would be the same extent of impacts on navigation resulting from  
21 implementing ecosystem restoration (Section 19.4.4.2.1) actions.

22 There would be more wastewater treatment and agricultural runoff facilities constructed under  
23 Alternative 2 than under the Proposed Project. A similar number of other types of water quality  
24 improvement facilities would be constructed. It is unclear whether this shift would result in more or less  
25 construction activity; therefore, transportation impacts are expected to be similar but possibly greater  
26 compared to the Proposed Project, depending on the intensity of construction.

27 Flood risk reduction projects described in Section 19.4.4.4.1, including construction of setback levees in  
28 the Delta, may be less likely under Alternative 2 because floodplain expansion and dam operations would  
29 be emphasized more under Alternative 2 than under the Proposed Project. Construction-related  
30 transportation impacts from levee construction would be reduced and construction-related impacts from  
31 degrading levees would be the similar and slightly greater than for the Proposed Project. Operations of  
32 floodplains for flood risk management could result in levee roads being flooded with greater frequency  
33 than would happen under the Proposed Project. The same would be likely for railroad and pedestrian and  
34 bicycle facilities. The extent of impacts on navigation from levee improvements would be the same as  
35 under the Proposed Project. Transportation impacts from stockpiling rock for flood emergencies would be  
36 the same with Alternative 2 as with the Proposed Project. Alternative 2 would result in fewer dredging  
37 projects and fewer associated impacts on navigation compared with the Proposed Project. Dam operations  
38 would not affect transportation. Construction-related transportation impacts from Delta enhancement  
39 projects would be the same with Alternative 2 as with the Proposed Project because the same number of  
40 actions would be taken.

41 Overall, significant impacts related to construction- and operations-related conflict with an applicable  
42 plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation  
43 system under Alternative 2 would be the **same as** those under the Proposed Project.

44 As compared to existing conditions, the impacts related to construction- and operations-related conflict  
45 with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance  
46 of the circulation system under Alternative 2 would be **significant**.

1 **19.4.8.1.2 Program Impact 19-2: Potential Increase in Hazards Related to a Design Feature**

2 Neither the Proposed Project nor Alternative 2 would introduce hazards related to design features with  
3 implementation of water supply reliability, water quality, or Delta enhancement actions. For the Proposed  
4 Project, the introduction of navigation hazards was considered a significant impact. Delta ecosystem and  
5 flood risk reduction actions would introduce navigation hazards from construction activities associated  
6 with operation of operable gates and dredging and water-side levee repairs. The introduction of  
7 navigation hazards would be the same with the Alternative 2 and the Proposed Project.

8 Overall, significant impacts related to the potential increase in hazards related to a design feature under  
9 Alternative 2 would be the **same** as under the Proposed Project.

10 As compared to existing conditions, the impacts related to the potential increase in hazards related to a  
11 design feature under Alternative 2 would be **significant**.

12 **19.4.8.1.3 Impact 19-3: Potential Reduction in Adequate Emergency Access**

13 The same type of temporary emergency access impacts (by land and by water) from construction and  
14 operations would occur under Alternative 2 as described for the Proposed Project.

15 Alternative 2 would result in more groundwater, ocean desalination, and recycled water projects and  
16 fewer surface water projects than identified in the Delta Plan. Surface water projects would be focused in  
17 the Tule Basin area. Therefore, construction-related impacts on emergency access associated with the  
18 groundwater, ocean desalination, and recycled water projects and the emergency access impacts that  
19 would have occurred in the areas named in the Delta Plan would be transferred to some extent to the Tule  
20 Basin. Emergency access impacts from construction of water supply reliability actions with Alternative 2  
21 would be the same as with the Proposed Project.

22 There would be slightly fewer Delta ecosystem restoration actions. These actions would be located in the  
23 same remote regions in the Delta under Alternative 2 as under the Proposed Project. Because the  
24 significance of the impact is related to the existing limited access to these rural areas, Alternative 2 would  
25 not substantially reduce the significance of the project even though fewer restoration projects might be  
26 constructed compared to the Proposed Project. Therefore, Alternative 2 would have the same Delta  
27 ecosystem restoration impacts on emergency access as compared to the Proposed Project.

28 There would be more wastewater treatment and agricultural runoff facilities constructed under  
29 Alternative 2 than under the Proposed Project. A similar number of other types of water quality  
30 improvement facilities would be constructed. It is unclear whether this shift would result in more or less  
31 construction activities; therefore, impacts on emergency access are expected to be similar but possibly  
32 greater compared to the Proposed Project, depending on the location of the proposed facilities,

33 Floodplain expansion and dam operations would receive more emphasis under Alternative 2 than under  
34 the Proposed Project. Construction-related impacts on emergency access from levee construction would  
35 be reduced compared with the Proposed Project, and construction-related impacts on emergency access  
36 from degrading levees would be the same as for the Proposed Project. Because the significance of the  
37 impact is related to the existing limited access to these rural areas, Alternative 2 would not substantially  
38 reduce the significance of the impact even though fewer levee construction projects might be constructed  
39 compared to the Proposed Project. Operations of floodplains for flood risk management could result in  
40 levee roads being flooded with the same frequency as expected under the Proposed Project. Construction-  
41 and operations-related impacts on emergency access from Delta enhancement projects would be the same  
42 with Alternative 2 as with the Proposed Project.

43 The same number of Delta enhancement actions would be implemented with Alternative 2 as with the  
44 Proposed Project. Impacts on emergency access from possible road or lane closures required for frontage

1 improvements for new parks and retail and restaurant uses would be the same for Alternative 2 as for the  
2 Proposed Project.

3 Overall, significant impacts related to a potential reduction in adequate emergency access under  
4 Alternative 2 would be the **same** as under the Proposed Project.

5 As compared to existing conditions, the impacts related to a potential reduction in adequate emergency  
6 access under Alternative 2 would be **significant**.

#### 7 **19.4.8.1.4 Impact 19-4: Construction- and Operations-related Conflict with Adopted Policies, Plans,** 8 **or Programs Regarding Bicycle or Pedestrian Facilities**

9 More groundwater, ocean desalination, and recycled water projects, described in Section 19.4.4.1, would  
10 be constructed under Alternative 2 than under the Proposed Project. Surface water projects would be  
11 located in the Tule Basin region instead of the areas identified in the Delta Plan. For the reasons given in  
12 Section 19.4.8.1.1 (Impact 19-1), a greater number of impacts on bicycle and pedestrian facilities would  
13 be expected for water supply reliability actions with Alternative 2 than with the Proposed Project.

14 Because Delta ecosystem restoration actions would be located in remote locations of the Delta where  
15 bicycle and pedestrian facilities are less likely to be located, implementation of Alternative 2 would have  
16 the same impacts as the Proposed Project even though the extent of restoration would be smaller under  
17 this alternative.

18 With Alternative 2, flood risk management would favor floodplain expansion and dam operations. As  
19 discussed above, the levees that would be degraded for floodplain expansion would be located in less  
20 populated areas, where bicycle and pedestrian facilities would less likely be found. Therefore, impacts on  
21 bicycle and pedestrian facilities with implementation of flood risk reduction actions under Alternative 2  
22 would be less than under the Proposed Project.

23 With Alternative 2, impacts on bicycle and pedestrian facilities from implementation of water quality  
24 improvement and Delta enhancement actions would be the same as the Proposed Project because the  
25 same number of actions would be taken.

26 Overall, significant impacts related to construction- and operations-related conflict with adopted policies,  
27 plans, or programs regarding bicycle or pedestrian facilities under Alternative 2 would be the **same** as  
28 under the Proposed Project.

29 As compared to existing conditions, the impacts related to construction- and operations-related conflict  
30 with adopted policies, plans, or programs regarding bicycle or pedestrian facilities under Alternative 2  
31 would be **significant**.

#### 32 **19.4.8.2 Mitigation Measures**

33 Mitigation measures for Alternative 2 would be the same as those described in Sections 19.4.4.6.1  
34 (Mitigation Measure 19-1), 19.4.4.6.2 (Mitigation Measure 19-2), 19.4.4.6.3 (Mitigation Measure 19-3),  
35 and 19.4.4.6.4 (Mitigation Measure 19-4) for the Proposed Project. Because it is not known whether the  
36 mitigation measures listed above would reduce Impacts 19-1, 19-2, 19-3, and 19.4 to a less-than-  
37 significant level for Alternative 2, these potential impacts are considered **significant and unavoidable**.

### 38 **19.4.9 Alternative 3**

39 As described in Section 2A, Proposed Project and Alternatives, the water supply reliability projects and  
40 actions with Alternative 3 would be similar to those of the Proposed Project, although there would be less  
41 emphasis on surface water projects. Ecosystem restoration (floodplain restoration, riparian restoration,

1 tidal marsh restoration, and floodplain expansion) would be limited in extent to the Proposed Project and  
2 focused on publicly owned lands, especially in Suisun Marsh and the Yolo Bypass. There would be more  
3 ecosystem stressor management actions (e.g., programs for water quality, water flows) and more  
4 management for nonnative invasive species. Ecosystem stressor management actions would not affect  
5 transportation. Water quality improvements would be the same as under the Proposed Project.

6 Actions under Alternative 3 to reduce flood risk would not include setback levees or subsidence reversal,  
7 but would result in greater levee modification/maintenance and dredging relative to the Proposed Project.  
8 Reservoir reoperation and materials stockpiling would be the same as under the Proposed Project, as  
9 would activities to protect and enhance the Delta as an evolving place.

#### 10 19.4.9.1.1 Impact 19-1: Construction- and Operations-related Conflict with an Applicable Plan, 11 Ordinance, or Policy Establishing Measures of Effectiveness for the Performance of the 12 Circulation System, Taking into Account All Modes of Transportation

13 The same types of transportation impacts from construction and operations would occur under  
14 Alternative 3 as described for the Proposed Project. Under Alternative 3, there would be more  
15 construction of groundwater, ocean desalination, and recycled water facilities, potentially causing more  
16 roadway, railroad, and bicycle and pedestrian facility partial and full closures and relocations. Increased  
17 ocean desalination could also result in a greater number of truck trips for brine disposal, which could  
18 result in greater congestion impacts at local intersections or road segments. Fewer surface water projects  
19 than those named in the Delta Plan would be implemented, possibly reducing the potential for  
20 construction-related transportation impacts. It is unclear whether this shift would result in more or less  
21 construction activity; therefore, transportation impacts are expected to be similar compared to the  
22 Proposed Project, depending on the number and location of water supply reliability projects that are not  
23 surface water projects.

24 There would be slightly fewer Delta ecosystem restoration actions, thereby reducing, but not by a  
25 substantial amount, construction-related transportation impacts with Alternative 3 compared to the  
26 Proposed Project. In addition, more nonnative vegetation removal activities would be implemented with  
27 this alternative, potentially causing more construction-related impacts on transportation. There would be  
28 fewer impacts on navigation resulting from implementing the ecosystem restoration actions described in  
29 Section 19.4.4.2.1. There would be the same transportation impacts from water quality improvement  
30 actions with Alternative 3 as with the Proposed Project because the same number of projects would be  
31 implemented.

32 More levee modifications and dredging projects, with the associated impacts on transportation and  
33 navigation, would occur with Alternative 3 than with the Proposed Project. Fewer construction-related  
34 impacts from the construction of setback levees would occur with Alternative 1B than with the Proposed  
35 Project. Levee heights would likely be reduced for floodplain management because the flood risk  
36 reduction actions would be more likely. These operational long-term impacts would be similar to those  
37 associated with the Ecosystem Improvement actions expected for the Proposed Project. The extent of  
38 impacts on navigation from levee improvements would be the same as for the Proposed Project because  
39 more water-side levee improvement actions would likely be taken than would be expected for the other  
40 alternatives.

41 The same number of Delta enhancement actions would be implemented with Alternative 1B as with the  
42 Proposed Project. Impacts from possible road or lane closures required for frontage improvements for  
43 new parks and retail and restaurant uses would be the same for Alternative 3 as for the Proposed Project.

44 Overall, significant impacts related to construction- and operations-related conflict with an applicable  
45 plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation  
46 system under Alternative 3 would be the **same as** those under the Proposed Project.

1 As compared to existing conditions, the impacts related to construction- and operations-related conflict  
2 with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance  
3 of the circulation system under Alternative 3 would be **significant**.

#### 4 19.4.9.1.2 Impact 19-2: Potential Increase in Hazards Related to a Design Feature

5 Neither the Proposed Project nor Alternative 3 would introduce hazards related to design features with  
6 implementation of water supply reliability, water quality, or Delta enhancement actions. For the Proposed  
7 Project, the introduction of navigation hazards was considered a significant impact. Delta ecosystem flood  
8 risk reduction actions would introduce navigation hazards from construction activities associated with  
9 operation of operable gates and dredging and water-side levee repairs. The introduction of navigation  
10 hazards would be the same with the Alternative 3 and the Proposed Project. Overall, significant impacts  
11 related to the potential increase in hazards related to a design feature under Alternative 3 would be the  
12 **same** as under the Proposed Project.

13 As compared to existing conditions, the impacts related to the potential increase in hazards related to a  
14 design feature under Alternative 3 would be **significant**.

#### 15 19.4.9.1.3 Impact 19-3: Potential Reduction in Adequate Emergency Access

16 Temporary emergency access impacts from construction of conveyance and habitat restoration would be  
17 similar to those associated with the Proposed Project.

18 Alternative 3 would result in more groundwater, ocean desalination, and recycled water projects and  
19 fewer surface water projects identified in the Delta Plan. Therefore, there would be more construction-  
20 related impacts on emergency access related to groundwater, ocean desalination, and recycled water  
21 projects and fewer emergency access impacts related to surface water projects compared with the  
22 Proposed Project. It is unclear whether this shift would result in more or less construction activity;  
23 therefore, impacts on emergency access are expected to be similar compared to the Proposed Project,  
24 depending on the number and location of water supply reliability projects that are not surface water  
25 projects.

26 There would be slightly fewer Delta ecosystem restoration actions. These actions would be located in the  
27 same remote regions in the Delta under Alternative 3 as under the Proposed Project. Because the  
28 significance of the impact is related to the existing limited access to these rural areas, Alternative 3 would  
29 not substantially reduce the significance of the impact even though fewer restoration projects might be  
30 constructed and the projects would be located on public lands compared to the Proposed Project.  
31 Therefore, Alternative 3 would have the same Delta ecosystem restoration impacts on emergency access  
32 as compared to the Proposed Project.

33 The same water quality improvement projects would be constructed under Alternative 3 as under the  
34 Proposed Project. Therefore, there would be the same number of impacts on emergency access with  
35 Alternative 3 as with the Proposed Project.

36 For the reasons described in Section 19.4.6.2.3 (Impact 19-3), construction-associated land and water  
37 emergency access impacts from flood risk reduction actions with Alternative 3 would be less than with  
38 the Proposed Project.

39 The same number of actions would be implemented for Delta enhancement under Alternative 3 as under  
40 the Proposed Project. Impacts on emergency access from possible road or lane closures required for  
41 frontage improvements for new parks and retail and restaurant uses would be the same for Alternative 3  
42 as for the Proposed Project.

43 Overall, significant impacts related to a potential reduction in adequate emergency access under  
44 Alternative 3 would be the **same** as under the Proposed Project.

1 As compared to existing conditions, the impacts related to a potential reduction in adequate emergency  
2 access under Alternative 3 would be **significant**.

#### 3 **19.4.9.1.4 Impact 19-4: Construction- and Operations-related Conflict with Adopted Policies, Plans,** 4 **or Programs Regarding Bicycle or Pedestrian Facilities**

5 More groundwater, ocean desalination, and recycled water projects, described in Section 19.4.4.1, would  
6 be constructed under Alternative 3 than under the Proposed Project. Fewer surface water projects would  
7 be identified in the Delta Plan, possibly reducing the potential for construction-related impacts on bicycle  
8 and pedestrian facilities. It is unclear whether this shift would result in more or less construction activity;  
9 therefore, impacts on bicycle and pedestrian facilities are expected to be similar compared to the Proposed  
10 Project, depending on the number and location of water supply reliability projects that are not surface  
11 water projects.

12 Because Delta ecosystem restoration actions would be located in remote locations of the Delta, where  
13 bicycle and pedestrian facilities are less likely to be located, implementation of Alternative 3 would have  
14 the same impacts as the Proposed Project even though the extent of restoration would be smaller under  
15 this alternative.

16 With Alternative 3, flood risk management would favor levee modifications and dredging. Levee  
17 modifications would occur in urban locations, where bicycle and pedestrian facilities are more likely to be  
18 located, rather than in the Delta, where construction of setback levees would likely encounter fewer  
19 facilities. Therefore, impacts on bicycle and pedestrian facilities would be the same with Alternative 3 as  
20 with the Proposed Project.

21 With Alternative 3, impacts on bicycle and pedestrian facilities from implementation of water quality  
22 improvement and Delta enhancement actions would be the same as with the Proposed Project because the  
23 same number of actions would be taken.

24 Alternative 3 would result in fewer water supply reliability and ecosystem restoration actions and less  
25 land disturbance compared with the Proposed Project.

26 Overall, significant impacts related to construction- and operations-related conflict with adopted policies,  
27 plans, or programs regarding bicycle or pedestrian facilities under Alternative 2 would be the **same** as  
28 under the Proposed Project.

29 As compared to existing conditions, the impacts related to construction- and operations-related conflict  
30 with adopted policies, plans, or programs regarding bicycle or pedestrian facilities under Alternative 3  
31 would be **significant**.

#### 32 **19.4.9.2 Mitigation Measures**

33 Mitigation measures for Alternative 3 would be the same as those described in Sections 19.4.4.6.1  
34 (Mitigation Measure 19-1), 19.4.4.6.2 (Mitigation Measure 19-2), 19.4.4.6.3 (Mitigation Measure 19-3),  
35 and 19.4.4.6.4 (Mitigation Measure 19-4) for the Proposed Project. Because it is not known whether the  
36 mitigation measures listed above would reduce Impacts 19-1, 19-2, 19-3, and 19.4 to a less-than-  
37 significant level for Alternative 3, these potential impacts are considered **significant and unavoidable**.

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