

# Section 7

## Agriculture and Forestry Resources

This section addresses agriculture and forestry resources in the study area and the potential changes that could occur as a result of implementing the Delta Plan and the project alternatives. It describes the environmental setting, environmental impacts, and proposed mitigation measures. Certain topics discussed in this section, such as land cover, overlap with topics discussed in other sections of this environmental impact report (EIR); for additional information, see Section 16, Population and Housing; Section 6, Land Use and Planning; and Section 3, Water Resources.

The Delta Plan (the 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.

Projects that could directly impact farmlands, forestlands, or timber production zones (TPZ) are those that would convert land presently designated for and/or containing these uses or lead to other actions that result in such conversion. For example, projects that require a change in land use from agriculture or forestland or that propose activities that are not permitted under an adopted plan or in an agricultural land or forestland zone could result in permanent loss of farmland and forest resources. Construction- and operations-related impacts on agriculture and forestry resources could be significant, depending on various project- and site-specific factors that are presently undefined. This section identifies mitigation that could be considered by lead agencies to develop specific mitigation measures for future projects involving agriculture and forestry resources. The mitigation may reduce impacts to a less than significant level; however, depending on the specific characteristics of the project and the environment, not all mitigation measures identified would mitigate impacts to a less-than-significant level.

### 7.1 Study Area

The agricultural and forestry resources study area consists of the Delta and Suisun Marsh (Delta), Delta watershed, and areas outside the Delta that use water from the Delta (Figure 1-1). The Delta encompasses 737,370 acres and consists of the Primary Zone of the Delta (490,050 acres) and the Secondary Zone of the Delta (247,320 acres) (Figure 1-2). The Primary Zone includes portions of Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties. Unincorporated towns in the Primary Zone include Clarksburg, Courtland, Hood, Locke, Ryde, and Walnut Grove. The Secondary Zone of the Delta consists of the land and water area within the boundaries of the Delta that is not included in the Primary Zone. The unincorporated areas of the Secondary Zone encompass portions of Alameda, Contra Costa, Sacramento,

1 San Joaquin, Solano, and Yolo counties and the communities of Freeport, Bethel Island, and Discovery  
2 Bay. Isleton and portions of the cities of Antioch, Brentwood, Elk Grove, Lathrop, Manteca, Oakley,  
3 Pittsburg, Rio Vista, Sacramento, Stockton, Tracy, and West Sacramento are located inside the  
4 Secondary Zone.<sup>1</sup>

5 The Suisun Marsh totals 106,570 acres in Solano County and overlaps with the boundary of the Delta by  
6 approximately 4,300 acres. Throughout this section, all discussions of the Delta Primary Zone, Delta  
7 Secondary Zone, or Suisun Marsh refer to the total agricultural acreages within the boundaries of each of  
8 these areas, respectively. References to the Delta and Suisun Marsh in this EIR are noted and account for  
9 the total area (i.e., 839,640 acres).<sup>2</sup> Tables throughout this section include agricultural and forestry  
10 acreages for Delta Primary Zone, Delta Secondary Zone, Delta (i.e., sum of Primary Zone and  
11 Secondary Zone), Suisun Marsh, and total primary planning area (Delta and Suisun Marsh).

12 The Delta watershed includes about 28,372,800 acres, exclusive of the Delta and Suisun Marsh. The  
13 Delta watershed includes the watersheds of the Sacramento, Cosumnes, Mokelumne, Calaveras, and  
14 San Joaquin rivers.

15 Water from the Delta watershed is used in and outside of the Delta and Delta watershed, including  
16 approximately 24,120,900 acres of agricultural and urban lands outside the Delta watershed in the  
17 San Francisco Bay Area, southern San Joaquin Valley, central coast, and Southern California.

18 As described in Section 2A, Proposed Project and Alternatives, projects of various types (e.g., water  
19 reliability, water quality, ecosystem restoration, flood control) could be constructed, modified, or  
20 reoperated, and other actions undertaken, in the Delta, Delta watershed, or areas located outside the Delta  
21 that use Delta water. It is unclear where actions would be located; therefore, the analysis provides a  
22 general discussion of impacts by general area. The Delta Plan policies and recommendations will have a  
23 greater impact within the Delta than elsewhere. As a result, the analysis has a greater focus on the Delta  
24 than on areas outside the Delta.

## 25 7.2 Regulatory Framework

26 Appendix D provides an overview of the federal and State plans, policies, and regulations relating to the  
27 land use and planning within the study area, including the Delta Protection Commission's Land Use and  
28 Resource Management Plan for the Primary Zone of the Delta and the Bay Conservation and  
29 Development Commission's San Francisco Bay Plan.

## 30 7.3 Environmental Setting

31 This section describes the agricultural and forestry resources setting of the Delta, Suisun Marsh, Delta  
32 watershed, and areas outside the Delta that use Delta water. It describes existing agricultural and forestry  
33 resources in the Delta and Suisun Marsh and, to a lesser extent, in the Delta watershed and areas outside  
34 the Delta that use Delta water.

---

<sup>1</sup> About 1 percent of Delta land is in Alameda County, all of which is in the Secondary Zone. This area is a small portion of total Delta acreage and contains no cities or communities. Alameda County is therefore not discussed separately in this section.

<sup>2</sup> 737,370 acres (Delta) + 106,570 acres (Suisun Marsh) – 4,300 acres (overlap) = 839,640 acres.

## 1 7.3.1 Major Sources of Information

2 Information for this section was compiled from existing published documents, including city and county  
3 general plans and land management plans. Data for the local and regional setting were compiled from  
4 publicly available data sets published by State and federal agencies, such as California Department of  
5 Conservation (DOC), California Department of Water Resources (DWR), and the U.S. Forest Service  
6 (USFS). Additional sources of information are listed in the references section.

## 7 7.3.2 Delta and Suisun Marsh

8 Table 6-3 and Figure 6-8 in Section 6, Land Use and Planning, identify the following four major  
9 categories of land cover in the Delta and Suisun Marsh: agriculture, natural habitat, developed and water.  
10 The acreages of developed areas are based on existing land cover. Because of inherent rounding and  
11 mapping discrepancies, the totals shown do not equal the actual total area for the Delta and Suisun Marsh.

### 12 7.3.2.1 Agriculture

#### 13 7.3.2.1.1 Agricultural Land Use

##### 14 *Farmland Categories and Acreage*

15 The Farmland Mapping and Monitoring Program (FMMP), which is administered by the DOC Division  
16 of Land Protection, provides a consistent data source to analyze the distribution of farmland and  
17 long-term urbanization trends based on soil type and the availability of water. Unlike existing land cover  
18 maps (Figure 6-8 and Table 6-3), FMMP data do not illustrate areas of active agriculture but can be used  
19 to analyze the potential for agricultural production. Acreages in the Delta and Suisun Marsh based on  
20 2008 FMMP data are presented in Table 7-1. FMMP data cover the entire Delta and Suisun Marsh, and  
21 the acreages represent the total land area. The FMMP data classifies farmland into the  
22 following categories:

- 23 " Prime Farmland—Land that has the best combination of features for producing agricultural crops.  
24 Prime Farmland must have been used for production of irrigated crops at some time during the  
25 4 years prior to the FMMP's mapping date.
- 26 " Farmland of Statewide Importance—Land, other than Prime Farmland, with a good combination  
27 of physical and chemical characteristics for producing crops. Farmland of Statewide Importance  
28 must have been used for production of irrigated crops at some time during the 4 years prior to the  
29 mapping date.
- 30 " Unique Farmland—Land that has been used to produce specific crops with high economic value  
31 but does not meet the criteria for Prime Farmland or Farmland of Statewide Importance. These  
32 lands usually are irrigated, but may include nonirrigated orchards or vineyards found in some  
33 climatic zones. Unique Farmland must have been used for crops at some time during the 4 years  
34 prior to the mapping date.

35 More complete information on FMMP definitions appears in Appendix G of this EIR.

**Table 7-1**  
**Farmland in the Delta and Suisun Marsh**

Category	Delta						Suisun Marsh		Delta and Suisun Marsh Total	
	Primary Zone		Secondary Zone		Total		Acres	Percent	Acres	Percent
	Acres	Percent	Acres	Percent	Acres	Percent				
<b>Agricultural Land (California Public Resources Code sections 21060.1 and 21095)</b>										
Prime Farmland	304,800	62	95,620	38	400,420	54	560	1	400,980	48
Farmland of Statewide Importance	18,400	4	15,740	6	34,140	5	180	0	34,320	4
Unique Farmland	19,550	4	10,240	4	29,790	4	120	0	29,920	4
<i>Subtotal</i>	<i>342,750</i>	<i>—</i>	<i>121,610</i>	<i>—</i>	<i>464,360</i>	<i>—</i>	<i>850</i>	<i>—</i>	<i>465,220</i>	<i>—</i>
<b>Other Farmland and Developed Land</b>										
Farmland of Local Importance	21,170	4	16,320	7	37,490	5	0	0	37,490	4
Grazing Land	28,960	6	8,130	3	37,090	5	19,910	19	55,630	7
Urban and Built-Up Land	3,580	1	72,980	30	76,560	10	540	0	77,030	9
Other Land	40,710	8	22,680	9	63,390	9	60,630	57	122,260	15
Water	52,840	11	5,620	2	58,450	8	24,640	23	81,990	10
<i>Subtotal</i>	<i>147,260</i>	<i>—</i>	<i>125,710</i>	<i>—</i>	<i>272,970</i>	<i>—</i>	<i>105,720</i>	<i>—</i>	<i>374,400</i>	<i>—</i>
<b>Total*</b>	<b>490,000</b>	<b>100</b>	<b>247,320</b>	<b>100</b>	<b>737,320</b>	<b>100</b>	<b>106,570</b>	<b>100</b>	<b>839,610</b>	<b>100</b>

Source: DOC 2009

\*Totals may vary from total area in Primary Zone, Secondary Zone, and Suisun Marsh because of rounding and mapping discrepancies.

1 Approximately two-thirds of the Delta and Suisun Marsh is made up of land with physical and chemical  
2 characteristics favorable to agriculture and a reliable irrigation water supply that allows for or currently  
3 produces crops (Figure 7-1). In particular, Delta peat soils make the region one of the most fertile  
4 agricultural areas in California. Approximately 4748 percent of the Delta and Suisun Marsh is Prime  
5 Farmland. Prime Farmland is distributed throughout the Delta, with more than 300,000 acres in the  
6 Primary Zone. Only 7 percent of the Delta and Suisun Marsh is Grazing Land. Much of the grazing land  
7 is located in the Suisun Marsh and northern Delta. The Suisun Marsh is mostly composed of other lands  
8 and grazing lands.

9 Agricultural land use changes in the Delta can be analyzed by tracking the historical designation of  
10 agricultural land in the Delta and Suisun Marsh over time. In 1984, approximately 564,160 acres of  
11 agricultural land were located in the Delta and Suisun Marsh. In 1994, just before the Delta Protection  
12 Commission's *Land Use and Resources Management Plan* was implemented, the extent of agricultural  
13 land was approximately 537,442 acres. In 2008, the extent of agricultural land was approximately  
14 503,920 acres. Between 1984 and 1994, approximately 26,718 acres of agricultural land were lost.  
15 Between 1995 and 2008, the extent of agricultural land declined by approximately 33,522 acres.

16 The total acreage of agricultural lands in the Delta and Suisun Marsh declined by 5 percent from 1984 to  
17 1996 and by 6 percent from 1994 to 2008. Urban uses made up 7 percent of the Delta and Suisun Marsh  
18 land area in 1984, increasing to about 8 percent in 1995 and 10 percent in 2008.

19 Figure 7-2 illustrates how land use patterns have changed over time. As shown, the amount of urban land  
20 on the periphery of the Delta near Oakley, Brentwood, Tracy, and Lathrop increased noticeably from  
21 1984 to 2008. These figures clearly show an increase in the acreage for urban land uses (primarily outside  
22 of the Primary Zone and adjacent to the Delta or Suisun Marsh) and a corresponding decrease in  
23 agricultural lands.

#### 24 *Williamson Act*

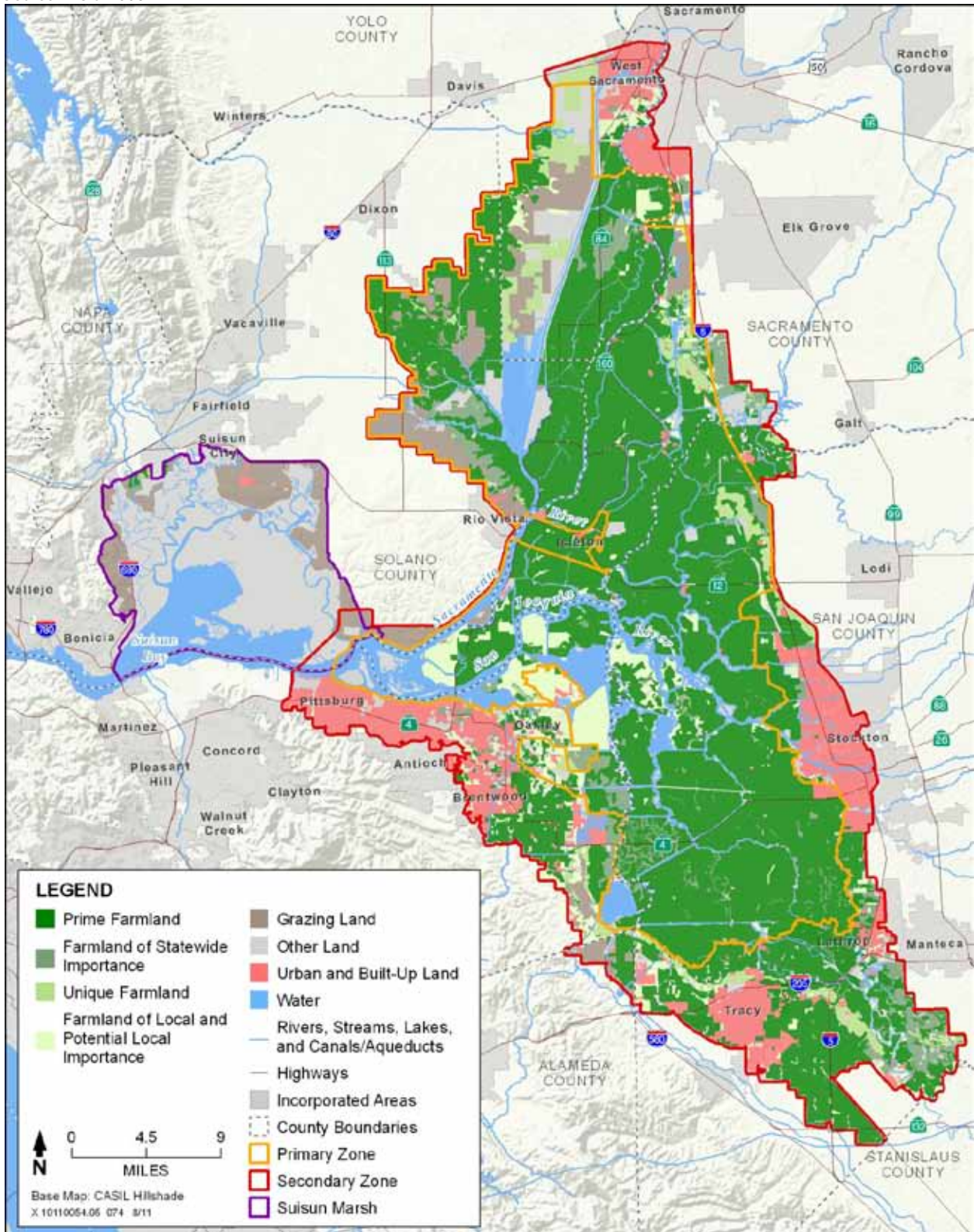
25 Much of the farmland in the Delta is enrolled in the Williamson Act Program. In 2009, approximately  
26 411,600 acres of land (49 percent of the total Delta and Suisun Marsh) were under Williamson Act  
27 contracts in the Delta and Suisun Marsh (Table 7-2). Over 75 percent of this land is located in the Primary  
28 Zone. In addition, there are over 32,000 acres of Farmland Security Zone (FSZ) lands in the Delta.  
29 An FSZ is an area created within an agricultural preserve by a board of supervisors (board) upon request  
30 by a landowner or group of landowners. An agricultural preserve defines the boundary of an area within  
31 which a city or county will enter into Williamson Act contracts with landowners. The boundary is  
32 designated by resolution of the board or city council having jurisdiction. Agricultural preserves must  
33 generally be at least 100 acres in size. There are no FSZ lands located in the Suisun Marsh. Williamson  
34 Act and FSZ lands are shown in Figure 7-3.

#### 35 7.3.2.1.2 Agricultural Production

36 Delta agricultural land uses that support a variety of crops, including grains, fruits, field crops, nuts,  
37 seeds, alfalfa, and vegetables. Other agricultural uses include dairies, livestock grazing, agricultural  
38 industrial uses, agricultural commercial uses, and farm-based tourism (e.g., hunting, fishing, wildlife  
39 study, educational experiences, festivals, tours, wine-tasting rooms, inns, and "pick-your-own"  
40 operations). Agricultural land uses in Suisun Marsh are mainly grazing lands with limited farmlands that  
41 support a much smaller variety of crops and agricultural uses.

42

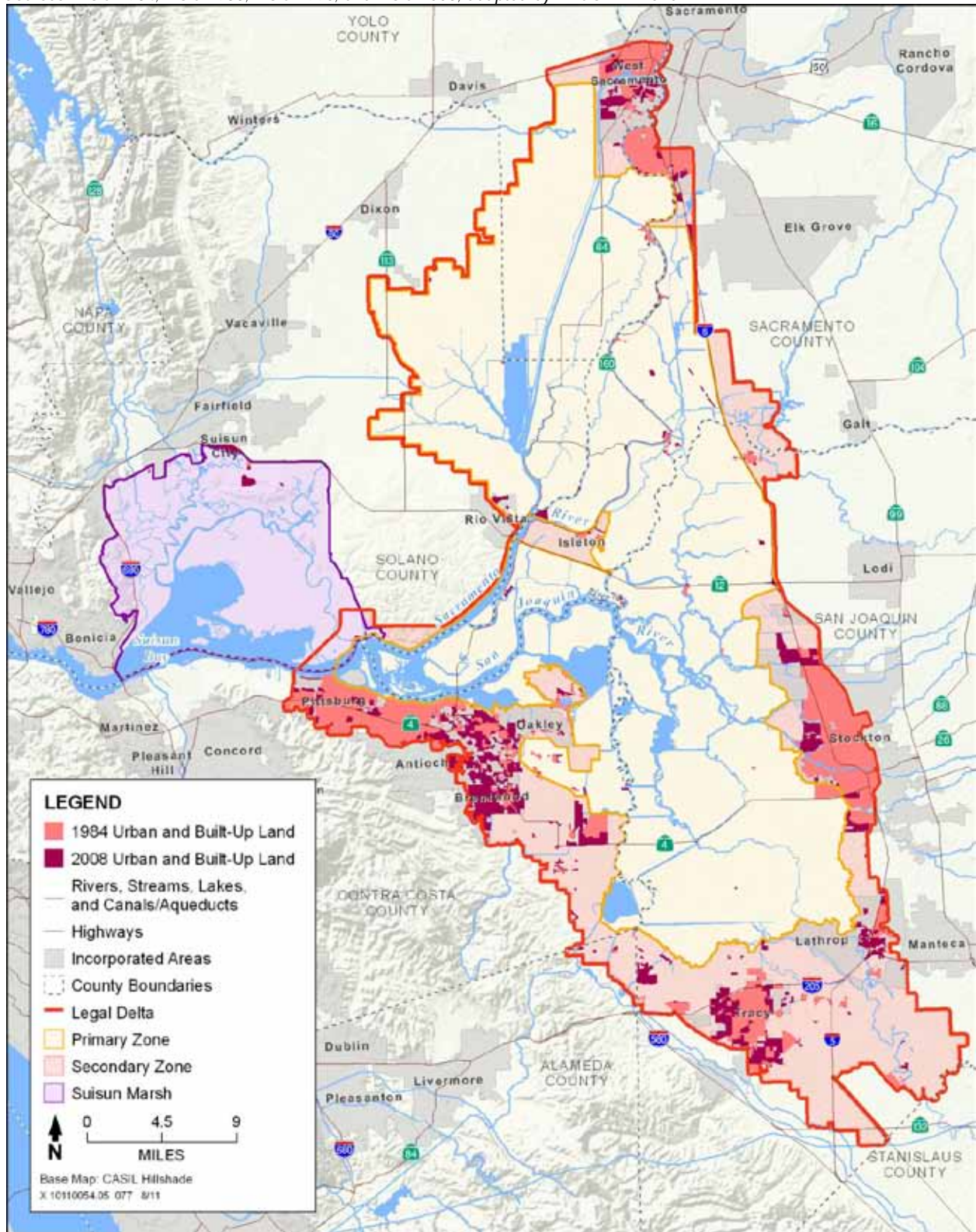
1 **Figure 7-1**  
 2 **Delta and Suisun Marsh Farmland in 2008**  
 3 *Source: DOC 2008*



4



1 **Figure 7-2**  
2 **Change in Delta and Suisun Marsh Farmland between 1984 and 2008**  
3 Sources: DOC 1984; DOC 1988; DOC 1990; and DOC 2008; adapted by AECOM in 2010



4

**Table 7-2**  
**Williamson Act Program Land in the Delta and Suisun Marsh in 2009**

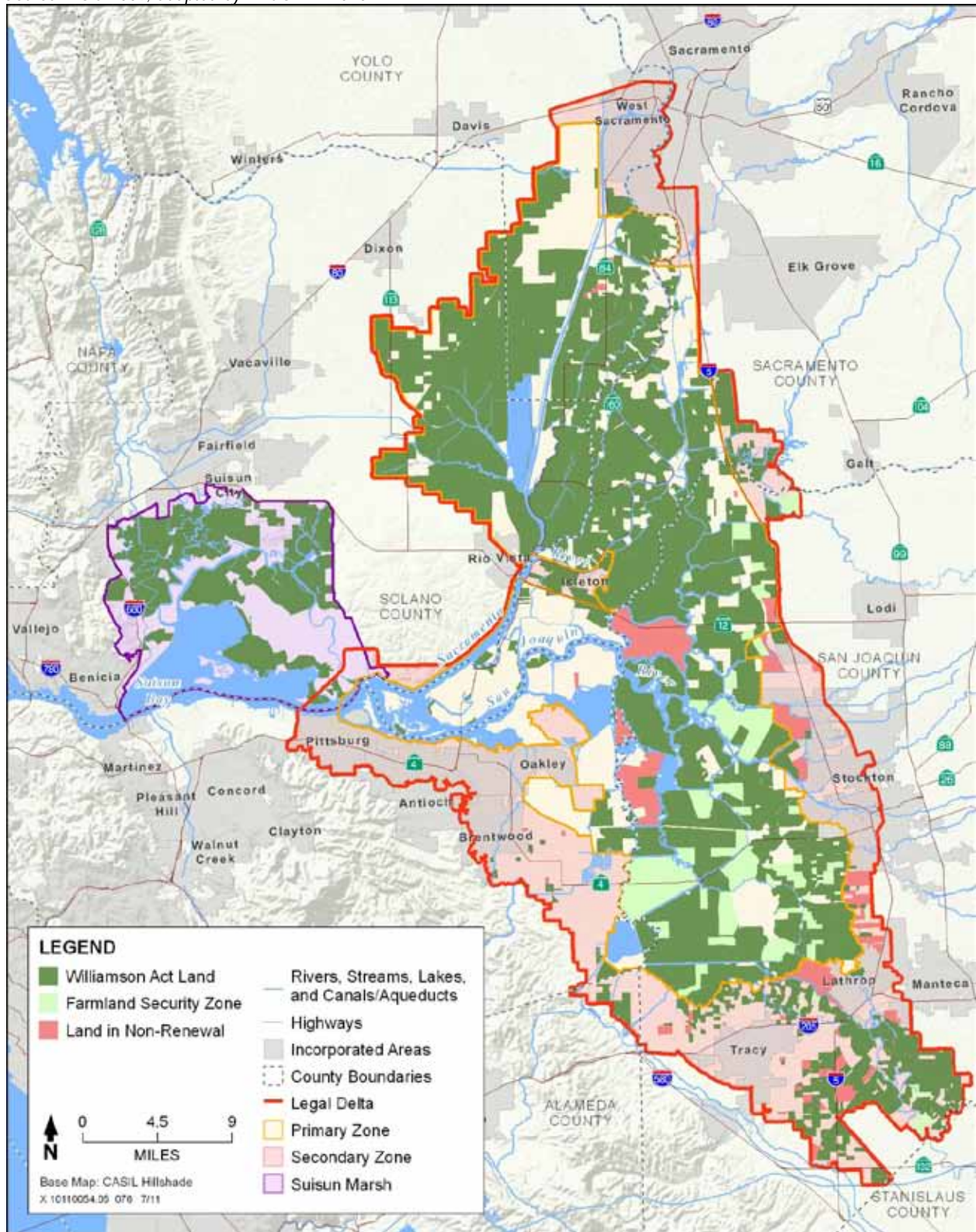
Category	Delta						Suisun Marsh		Delta and Suisun Marsh Total	
	Primary Zone		Secondary Zone		Total		Acres	Percent*	Acres	Percent*
	Acres	Percent*	Acres	Percent*	Acres	Percent*				
Williamson Act Land	265,910	54	43,180	17	309,090	42	45,630	43	351,020	42
Land in Nonrenewal	13,860	3	11,690	5	25,550	3	0	0	25,550	3
Farmland Security Zone (FSZ)	29,500	6	2,530	1	32,030	4	0	0	32,030	4
<b>Total</b>	<b>309,270</b>	<b>63</b>	<b>57,400</b>	<b>23</b>	<b>366,680</b>	<b>50</b>	<b>45,630</b>	<b>43</b>	<b>411,600</b>	<b>49</b>

\* Percent of total acreage in Primary Zone, Secondary Zone, Suisun Marsh, or Delta and Suisun Marsh Total, respectively.

Source: DOC 2009; adapted by AECOM in 2010



1 **Figure 7-3**  
2 **Williamson Act Farmland in the Delta and Suisun Marsh**  
3 *Source: DOC 2009; adapted by AECOM in 2010*



4

## 1 *Crop Types*

2 According to recent county agricultural commissioners' annual crop reports, more than 90 plant and  
3 animal products are produced by one or more of the Delta's five counties (Trott 2007). Common crop  
4 types include corn, alfalfa, grain and hay, rice, tomatoes, asparagus, grapes, sugar beets, pears, walnuts,  
5 almonds, apples, apricots, sunflowers, cherries, peaches, and nectarines. Livestock production in the Delta  
6 includes feed lots, dairies, and poultry farms.

7 Crop locations change based on rotation schedules, crop values, weather, and other factors. Over the past  
8 25 years, the Delta has seen a significant shift to higher-value permanent crops, such as fruit trees, nuts,  
9 and vineyards (DWR 2007). As discussed in Section 4, Biological Resources, permanent planting such as  
10 orchards (4 percent) and vineyards (6 percent) made up around 10 percent of the total agricultural acres.  
11 The rest consisted of crop types (e.g., alfalfa, irrigated pasture, and other cultivated crops) that can be  
12 rotated on a regular basis. Rice (1 percent of agricultural land) is located primarily in the Yolo Bypass and  
13 eastern edge of the Delta near Stockton and Lodi.

## 14 **7.3.2.2 Forest Resources**

### 15 **7.3.2.2.1 Forestland and Timber Resources**

16 Both forestland and timberland resources provide a range of public, economic, and environmental  
17 benefits for the State and are managed as a valuable natural resource. California law defines forestland as  
18 "land that can support 10-percent native tree cover of any species, including hardwoods, under natural  
19 conditions, and that allows for management of one or more forest resources, including timber, aesthetics,  
20 fish and wildlife, biodiversity, water quality, recreation, and other public benefits" (Public Resources  
21 Code section 12220[g]). Timberland (i.e., nonfederally held timber resources) is a subset of forestland or  
22 forest resources based on its economic or production value. State law defines timberland as "land, other  
23 than land owned by the federal government and land designated as experimental forestland, which is  
24 available for, and capable of, growing a crop of trees of any commercial species used to produce lumber  
25 and other forest products, including Christmas trees" (Public Resources Code section 4526). The criterion  
26 used by USFS to determine whether forestland qualifies as timberland is whether the land is capable of  
27 growing 20 cubic feet or more of industrial wood per acre per year (CAL FIRE 2003).

28 USFS provides estimates for forestland acres and timberland acres by county; however, these data cannot  
29 be used to describe the specific location of forestlands on the ground in the Delta or Suisun Marsh; the  
30 data can be used only for the entire county. USFS's 2001 to 2009 estimates for the five Delta counties  
31 (Table 7-3) indicate that approximately 44,530 acres of private timberland, one-half of which is composed  
32 of western oaks, are located in the five Delta counties. Timberland represents about one-quarter of  
33 forestland in the five Delta counties. Federal, State, and local governments hold approximately 16 percent  
34 of total forestland resources. Western oaks make up approximately 75 percent of nontimberland forest  
35 resources, making them the most abundant forest type in the five Delta counties.

36 The California Department of Forestry and Fire Protection's Fire and Resource Assessment Program  
37 (FRAP) defines California's forestlands as those lands that have at least 10 percent cover of live trees as  
38 interpreted from satellite imagery. FRAP estimates vary from USFS forestland estimates. The FRAP  
39 definition of "forestland" includes not only conifer and hardwood forests but also considerable areas of  
40 woodlands, although chaparral and shrublands are excluded. FRAP has estimated forestland based solely  
41 on the 10-percent cover rule. USFS includes forestlands that were stocked (commercial plantings) in the  
42 past in its estimates (CAL FIRE 2003). FRAP data are combined and available in the California Wildlife  
43 Habitat Relationship System database. FRAP estimates a total of 3,288 acres of hardwood habitats in the  
44 Delta and Suisun Marsh.

45

**Table 7-3**  
Estimated Forest Resources for Sacramento, Yolo, Solano, San Joaquin, and Contra Costa Counties

Forest-type Group	Ownership			Total
	Federal	State and Local Government	Private	
<b>Timberland</b>				
Elm/ash/cottonwood group	–	–	20,487	20,487
Western oak group	–	–	23,960	23,960
Exotic hardwoods group	–	–	84 <sup>a</sup>	84 <sup>a</sup>
Subtotal timberland	–	–	44,530	44,530
<b>Other Forestland</b>				
Pinyon/juniper group	6,249	–	–	6,249
Western oak group	–	21,342	85,870	107,212
Tanoak/laurel group	–	–	7,798	7,798
Nonstocked	–	–	6,085	6,085
Subtotal other forestland	6,249	21,342	93,753	127,344
<b>Total</b>	<b>6,249</b>	<b>21,342</b>	<b>144,283</b>	<b>171,875</b>

Source: USFS 2011

1 As described in greater detail in Section 4, Biological Resources, there are between 9,000 and  
 2 10,000 acres of wooded riparian habitat in the Delta. Riparian woodlands are considered forestland since  
 3 they are not harvested commercially, at least legally. These areas typically are found as long, linear  
 4 patches separating other terrestrial biological communities from agricultural or urban land or as  
 5 low-lying, flood-prone patches near river bends, canals, or breached levees. They can be located along  
 6 major waterways, drainage channels, pond margins, and oxbows and in abandoned, low-lying fields.

7 Before the 1800s, riparian forests were common along wide, natural river levees and in well-drained flood  
 8 sediments (DWR and CCC 2008, p. 3.4-14). However, old-growth stands of riparian forest have nearly  
 9 vanished as a functional part of the Delta ecosystem. Some examples exist on larger channel islands and  
 10 at The Nature Conservancy's Cosumnes River Preserve (DWR and CCC 2008, p. 3.4-14). In some areas,  
 11 naturally recruited "second-growth" woodlands composed of walnuts grow along narrow levees and  
 12 provide important riparian woodland habitat (DWR and CCC 2008, p. 3.4-14).

### 13 7.3.2.2.2 Timber Production Zones

14 Based on the Forest Practices Act and the Z'berg-Warren-Keene-Collier Forest Taxation Reform Act  
 15 of 1976, TPZs were established to preserve and protect timberland from conversion to other uses and  
 16 avoid land use conflicts. TPZs were established in 1976 on lands for which timber production and  
 17 accessory uses would be the highest and best use. The Timberland Productivity Act of 1982 later  
 18 formalized the State's policy in favor of sustainable harvest, focusing on the long-term availability of  
 19 timber resources. Lands zoned as TPZs must be maintained for timber production for 10 years following  
 20 the zoning declaration; after 10 years, the TPZ status automatically renews each year. If a property owner  
 21 petitions to have his or her land rezoned out of TPZ, the land may be required to remain in TPZ for 1 year  
 22 after the rezoning declaration is made. The minimum parcel size for TPZ zoning is 160 acres, although  
 23 smaller parcels may be zoned TPZ if they are covered by a joint timber management plan.

24 As discussed previously, commercially viable timberland is a subset of forestlands. According to a FRAP  
 25 study, none of the five Delta counties had land zoned TPZ in 2000 to 2001 (CAL FIRE 2002, p. 5).  
 26 In contrast, California has 5.4 million acres of TPZ land, much of which is located in the counties that  
 27 have land in the Delta watershed and areas outside the Delta that use Delta water (CAL FIRE 2002, p. 5).

### 1 7.3.3 Delta Watershed

2 The following discussion describes major agriculture and forestry resources in the Delta watershed area.  
3 The Delta watershed extends across a broad area encompassing about 28,372,800 acres that covers  
4 approximately 27 percent of the land in the state. The patterns of land cover for agriculture, developed  
5 areas, natural habitat or open space, and water in the Delta watershed and areas outside the Delta that use  
6 Delta water are presented in Figure 6-11. This description of land cover is based on an analysis of satellite  
7 imagery verified by field data and, although similar, is not the same as existing land use. As shown,  
8 agriculture covers about 16 percent of the area.

#### 9 7.3.3.1 Agriculture

10 As shown in Table 7-4, there are more than 2 million acres of Prime Farmland in the Delta watershed  
11 area. These lands are part of the Central Valley, which includes lands in 19 counties and stretches for  
12 450 miles. Agriculture in the Central Valley produces 57 percent of California's agricultural products  
13 (Great Valley Center 2011) and, as shown in Figure 7-4, comprises a contiguous stretch of farmland in  
14 the core of the state. Outside of the Central Valley, land is mostly urban, built up, or other not suitable  
15 for farming.

Table 7-4  
Farmland in the Delta Watershed

Category	Acres	Percent
<b>Agricultural Land (California Public Resources Code sections 21060.1 and 21095)</b>		
Prime Farmland	2,104,400	7
Farmland of Statewide Importance	775,500	3
Unique Farmland	742,000	3
<i>Subtotal</i>	<i>3,622,000</i>	<i>13</i>
<b>Other Farmland and Developed Land</b>		
Farmland of Local Importance	1,003,400	4
Grazing Land	6,707,800	24
Urban and Built-Up Land	716,700	3
Other Land	3,155,700	11
Water	191,400	1
Not Mapped	12,975,800	46
<i>Subtotal</i>	<i>24,750,800</i>	<i>87</i>
<b>Total*</b>	<b>28,372,800</b>	<b>100</b>

Source: DOC 2009

\* Totals may vary from total area of Delta watershed because of rounding and mapping discrepancies.

#### 16 7.3.3.1.1 Agricultural Land Use

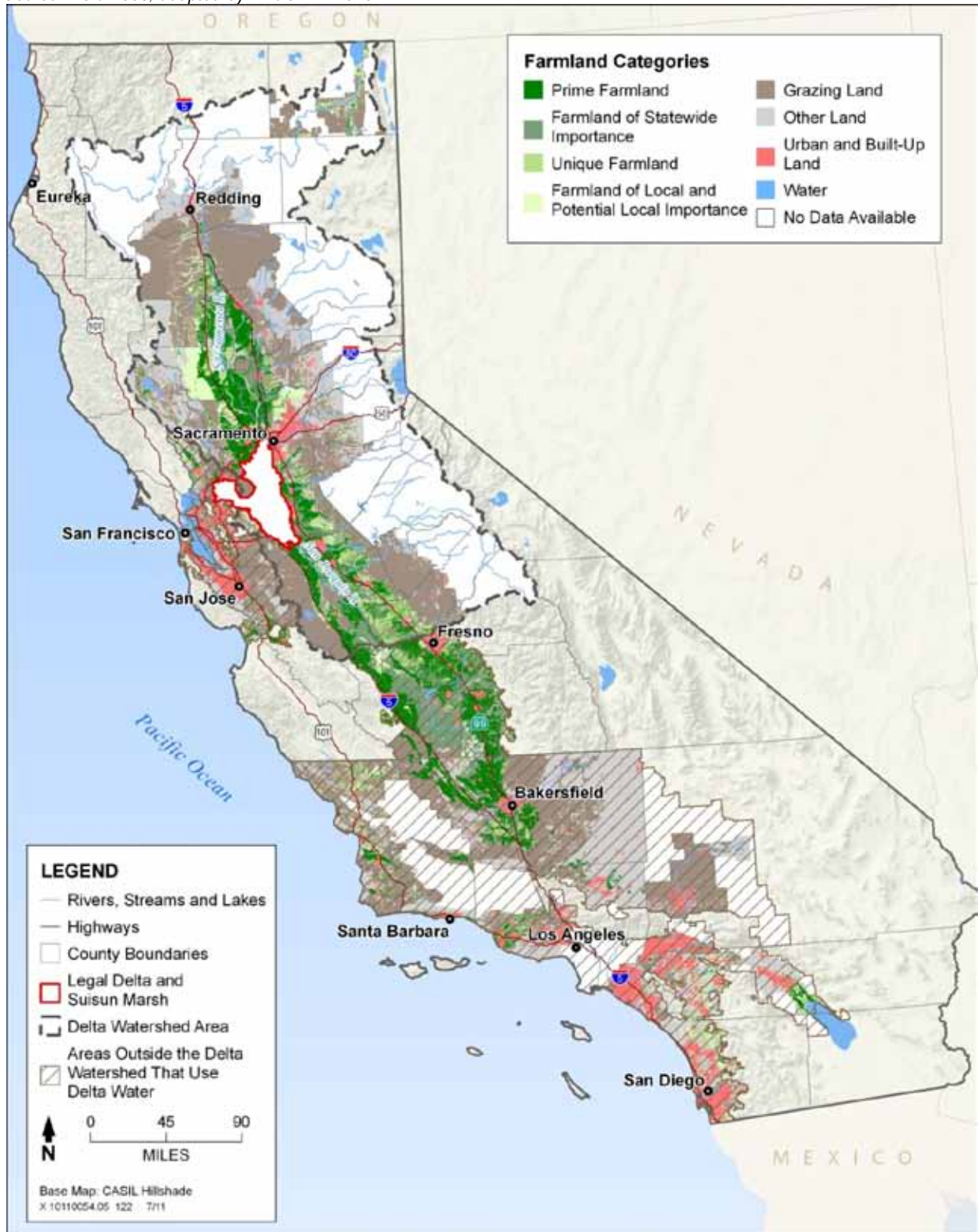
##### 17 *Farmland Categories and Acreage*

18 FMMP data are not available for several counties in the Delta watershed (i.e., Alpine, Humboldt, Lassen,  
19 Plumas, Sierra, Trinity, and Tuolumne), which results in data for only 54 percent of the Delta watershed  
20 area. However, general patterns of farmland distribution can be drawn from the available data.

21



1 **Figure 7-4**  
 2 **Farmland in the Delta Watershed and Areas Outside the Delta That Use Delta Water**  
 3 *Source: DOC 2008; adapted by AECOM in 2010*



4  
 5



1 Acreage in the Delta watershed area based on 2008 FMMP data is presented in Table 7-4. Approximately  
 2 16 percent of the Delta watershed area is made up of land with physical and chemical characteristics  
 3 favorable to agriculture. Figure 7-4 shows the farmland in the Delta watershed and areas outside the Delta  
 4 that use Delta water.

5 *Williamson Act*

6 About one-fifth of the farmlands in the Delta watershed are enrolled in the Williamson Act Program.  
 7 Williamson Act and FSZ lands are shown in Figure 7-5 and described in Table 7-5.

**Table 7-5**  
 Williamson Act Land in the Delta Watershed in 2009

<b>Category</b>	<b>Acres</b>	<b>Percent</b>
Williamson Act Land	5,374,200	19
Land in nonrenewal	182,000	1
Farmland Security Zone	265,900	1
<b>Total</b>	<b>5,822,000</b>	<b>21</b>

Source: DOC 2009; adapted by AECOM in 2010

8 **7.3.3.1.2 Agricultural Production**

9 Agricultural land uses in the Delta watershed include farmlands that support a variety of crops. Based on  
 10 gross value, export value, and gross acreage, some of the top crops and agricultural use in the Delta are  
 11 asparagus, tomatoes, corn, wine and table grapes, alfalfa, grains, safflower, pastureland, dairy products  
 12 and nuts. Agricultural industrial uses, agricultural commercial uses, and farm-based tourism  
 13 (e.g., hunting, fishing, wildlife study, educational experiences, festivals, tours, wine-tasting rooms, inns,  
 14 and “pick-your-own” operations) also represent substantial land uses in the Delta.

15 *Crop Types*

16 Common crop types include corn, alfalfa, grain and hay, rice, tomatoes, asparagus, grapes, sugar beets,  
 17 pears, walnuts, almonds, apples, apricots, sunflowers, cherries, peaches, and nectarines. Livestock  
 18 production in the Delta watershed includes feed lots, dairies, and poultry farms.

19 **7.3.3.2 Forest Resources**

20 **7.3.3.2.1 Forestland and Timber Resources**

21 Forest vegetation types, including mixed conifer forest, montane hardwood, and oak woodland, cover  
 22 about 14.8 million acres of the Delta watershed, about 52 percent of the total land coverage in this area  
 23 (CAL FIRE 2006).

24 **7.3.3.2.2 Timber Production Zones**

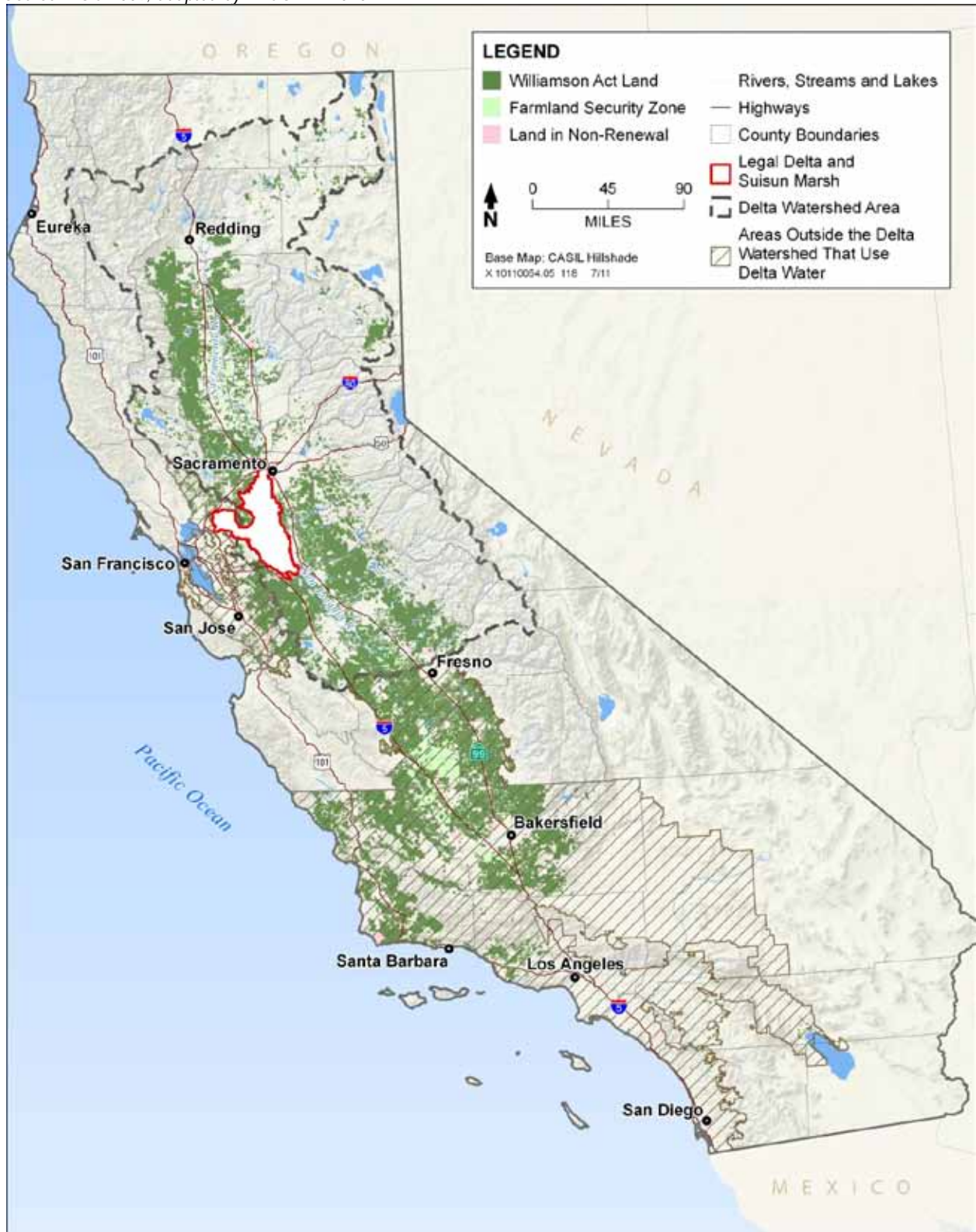
25 California has 5.4 million acres of land in TPZs. With the exception of about 146,000 acres in Del Norte  
 26 County, all of this TPZ land is found in counties located either in the Delta watershed or in areas that use  
 27 Delta water.

28 **7.3.4 Areas Outside the Delta That Use Delta Water**

29 The following discussion describes major agriculture and forestry resources in the areas outside the Delta  
 30 that receive Delta water.

31

1 **Figure 7-5**  
2 **Williamson Act Land in the Delta Watershed and Areas Outside the Delta That Use Delta Water**  
3 *Source: DOC 2009; adapted by AECOM in 2010*



4

1 Figure 6-11 shows the patterns of land cover for agriculture, developed areas, natural habitat or open  
 2 space, and water in the areas outside the Delta that use Delta water. This description of land cover is  
 3 based on an analysis of satellite imagery verified by field data and, although similar, is not the same as  
 4 existing land use. As shown, agricultural lands account for approximately 21 percent of the areas outside  
 5 the Delta that use Delta water.

6 **7.3.4.1 Agriculture**

7 As shown in Table 7-6, there are more than 2 million acres of Prime Farmland in the areas outside the  
 8 Delta that use Delta water. These lands are part of the Central Valley, which includes lands in 19 counties  
 9 and stretches for 450 miles. Agriculture in the Central Valley produces 57 percent of California’s  
 10 agricultural products (Great Valley Center 2011) and, as shown in Figure 7-4, comprises a contiguous  
 11 stretch of farmland in the core of the state. Outside of the Central Valley, land is mostly urban, built up, or  
 12 not suitable for farming.

**Table 7-6**  
 Farmland in Areas Outside the Delta That Use Delta Water

<b>Category</b>	<b>Acres</b>	<b>Percent</b>
<b>Agricultural Land (California Public Resources Code sections 21060.1 and 21095)</b>		
Prime Farmland	2,125,100	9
Farmland of Statewide Importance	1,377,600	6
Unique Farmland	438,300	2
<i>Subtotal</i>	<i>3,941,100</i>	<i>16</i>
<b>Other Farmland and Developed Land</b>		
Farmland of Local Importance	544,300	2
Grazing Land	5,690,400	24
Urban and Built-Up Land	2,580,600	11
Other Land	5,791,500	24
Water	156,900	1
Not Mapped	5,416,200	22
<i>Subtotal</i>	<i>20,179,900</i>	<i>84</i>
<b>Total*</b>	<b>24,121,000</b>	<b>100</b>

Source: DOC 2009

\*Totals may vary from total area of Delta watershed because of rounding and mapping discrepancies.

13 **7.3.4.1.1 Agricultural Land Use**

14 *Farmland Categories and Acreage*

15 FMMP data are not available for several counties in the areas outside the Delta that use Delta water  
 16 (i.e., San Francisco County), which results in data for only 67 percent of the areas outside the Delta that  
 17 use Delta water. However, general patterns of farmland distribution can be drawn from the available data.

18 Acreage in the areas outside the Delta that use Delta water based on 2008 FMMP data is presented in  
 19 Table 7-6. Approximately 16 percent of the Delta watershed area is made up of land with physical and  
 20 chemical characteristics favorable to agriculture. Figure 7-4 shows the farmland in the Delta watershed  
 21 and areas outside the Delta that use Delta water.

1 *Williamson Act*

2 About one-quarter of the farmlands in the areas outside the Delta that use Delta water are enrolled in the  
3 Williamson Act program. Williamson Act and FSZ lands are shown in Figure 7-5 and described in  
4 Table 7-7.

Table 7-7  
Williamson Act Land Outside the Delta That Used Delta Water in 2009

Category	Acres	Percent
Williamson Act Land	5,205,800	22
Land in nonrenewal	241,400	1
Farmland Security Zone	494,600	2
<b>Total</b>	<b>5,941,800</b>	<b>25</b>

Source: DOC 2009; adapted by AECOM in 2010

5 **7.3.4.1.2 Agricultural Production**

6 The broad range of agricultural production in the Delta is also reflected in the range of agricultural land  
7 uses and products in the areas outside the Delta. Within the Delta watershed, lands that rely on Delta  
8 water include farmlands that support a variety of crops, including grains, fruits, field crops, nuts, seeds,  
9 alfalfa, and vegetables. Other agricultural uses include dairies, livestock grazing, agricultural industrial  
10 uses, agricultural commercial uses, and farm-based tourism (e.g., hunting, fishing, wildlife study,  
11 educational experiences, festivals, tours, wine-tasting rooms, inns, and “pick-your-own” operations).

12 *Crop Types*

13 Common crop types include corn, alfalfa, grain and hay, rice, tomatoes, asparagus, grapes, sugar beets,  
14 pears, walnuts, almonds, apples, apricots, sunflowers, cherries, peaches, and nectarines. Livestock  
15 production in the Delta watershed includes feed lots, dairies, and poultry farms.

16 **7.3.4.2 Forest Resources**17 **7.3.4.2.1 Forestland and Timber Resources**

18 Forest vegetation types, including mixed conifer forest, montane hardwood, and oak woodland, cover  
19 about 2.6 million acres of in areas outside the Delta that use Delta water, about 11 percent of the total land  
20 cover in these areas (CAL FIRE 2006).

21 **7.3.4.2.2 Timber Production Zones**

22 California has 5.4 million acres of land in TPZs. With the exception of about 146,000 acres in Del Norte  
23 County, all of this TPZ land is found in counties that are located either in the Delta watershed or in areas  
24 that use Delta water.

## 7.4 Impacts Analysis of Project and Alternatives

### 7.4.1 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 agriculture or forestry impacts.

The Proposed Project and alternatives could result in implementation of actions or development of projects, such as facilities or infrastructure, as described in Section 2A, Proposed Project and Alternatives. Examples of potential actions include land use changes, conversion of agricultural lands, or land fallowing. Projects may include 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 agriculture or forestry impacts.

The precise magnitude and extent of project-specific impacts would depend on the type of action or project being evaluated, its specific location, its total size, and a variety of project- and site-specific factors that are undefined at the time of preparation of this program-level EIR. Project-specific impacts would be addressed in project-specific environmental studies conducted by the lead agency at the time the projects are proposed for approval.

At this program-level of analysis, mitigation measures have been identified for consideration by lead agencies at the time the projects are proposed for implementation. Depending upon the site-specific characteristics of the project and the environment, the mitigation measures and mitigation measures identified by the lead agencies may not be adequate to mitigate impacts to a less-than-significant level.

In this EIR, Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are collectively termed “Farmland” (California Public Resources Code sections 21060.1 and 21095), as described in Appendix D. For areas of the state where lands have not been surveyed for the classifications specified above, the term “agricultural land” is used in this EIR to mean land that meets the requirements of “prime agricultural land” as defined in paragraph (1), (2), (3), or (4) of subdivision (c) of section 51201 of the Government Code.

The environmental analysis in this section is based on a review of FMMP maps. As part of the analysis, this EIR examines the FMMP classifications to determine the agricultural significance of lands.

### 7.4.2 Thresholds of Significance

Based on Appendix G of the State California Environmental Quality Act (CEQA) Guidelines, an impact related to agriculture and forestry is considered significant if the Proposed Project would do any of the following:

- “ Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use.
- “ Conflict with existing zoning for agricultural use, or a Williamson Act contract.
- “ Conflict with existing zoning for, or cause rezoning of, forestland (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timber land zoned Timberland Production (as defined by Government Code section 51104(g)).



- 1       "    Result in the loss of forestland or conversion of forestland to nonforest use.
- 2       "    Involve other changes in the existing environment which, due to their location or nature, could
- 3       result in conversion of Farmland, to nonagricultural use or conversion of forestland to
- 4       nonforest use.

5   The threshold of significance listed above refers to other changes in the existing environment resulting  
6   from implementing the Proposed Project or alternatives that could indirectly result in conversion of  
7   Farmland or forestland. These indirect impacts are considered in the context of potential conversion of  
8   Farmland, potential conflicts with Williamson Act contracts that could lead to agricultural land  
9   conversion, and potential conversion of forestland for the Proposed Project or alternatives presented in the  
10  following subsections.

11  As individual projects are proposed, these individual projects will need to be evaluated in site-specific  
12  environmental documents prepared by the appropriate lead agencies.

### 13  **7.4.3   Proposed Project**

#### 14  **7.4.3.1   Reliable Water Supply**

15  As described in Sections 2A and 2B, the Delta Plan does not direct the construction of specific projects,  
16  nor would projects be implemented under the direct authority of the Delta Stewardship Council. However,  
17  the Delta Plan seeks to improve water supply reliability by encouraging various actions that, if taken,  
18  could lead to completion, construction, and/or operation of projects that could provide a more reliable  
19  water supply. Such projects and their features could include the following:

- 20       "    Surface water projects (water intakes, treatment and conveyance facilities, reservoirs,
- 21       hydroelectric generation)
- 22       "    Groundwater projects (wells, wellhead treatment, conveyance facilities)
- 23       "    Ocean desalination projects (water intakes, brine outfalls, treatment and conveyance facilities)
- 24       "    Recycled wastewater and stormwater projects (treatment and conveyance facilities)
- 25       "    Water transfers
- 26       "    Water use efficiency and conservation program implementation

27  The number and location of all potential projects that would be implemented are not known at this time.  
28  Three possible projects, however, are known to some degree and are named in the Delta Plan: the North  
29  of Delta Offstream Storage Investigation (aka Sites Reservoir), Los Vaqueros Reservoir Project (Phase 2),  
30  and Upper San Joaquin River Basin Storage Investigation Plan (aka Temperance Flat). DWR  
31  Bulletin 118, which is also named in the Delta Plan, presents a list of 10 recommendations for the  
32  management of groundwater but would not result in a specific project the construction or operation of  
33  which could affect agriculture or forestry resources; therefore, Bulletin 118 is not discussed further in this  
34  section.

#### 35  **7.4.3.1.1   Impact 7-1a: Conversion of Farmland to Nonagricultural Use**

##### 36  *Effects of Project Construction*

37  The Delta Plan encourages projects that would include the construction and operation of surface water  
38  and groundwater storage facilities, water intakes, conveyance facilities (canals, pipelines, tunnels,  
39  siphons, and pumping plants), groundwater wells, water transfers, and hydroelectric generation.  
40  Temporary effects from construction would include removal of vegetation and disturbance of soil in

1 facilities footprints and borrow/spoils areas. These temporary effects could become permanent where  
2 agricultural areas are cleared for buildings, facilities, paved roads and storage / staging, and other project  
3 features. These construction activities have the potential to cause permanent ground surface disturbance  
4 and affect ongoing agricultural activities. Construction of water supply projects could occur in the Delta,  
5 the Delta watershed, or areas outside the Delta that use Delta water, as described in Section 2A, Proposed  
6 Project and Alternatives.

7 Construction of projects encouraged by the Delta Plan could also cause permanent landscape-scale  
8 changes at the location of new intake facilities, the forebay, borrow and spoil sites, and tunnel muck  
9 disposal areas. Construction-related activities at construction sites for surface water and groundwater  
10 storage facilities, conveyance facilities (canals, pipelines, tunnels, siphons, and pumping plants),  
11 groundwater and could require the use of heavy equipment, such as excavators, graders, scrapers,  
12 bulldozers, backhoes, and concrete mixing and pumping trucks. Haul trucks would be used to move  
13 borrow and/or spoils and other materials. Each of these activities could potentially convert agricultural  
14 land to nonagricultural use if it occurs on or near agricultural land.

15 Treatment plants, surface water and groundwater storage facilities, conveyance facilities  
16 (canals, pipelines, tunnels, siphons, and pumping plants), and groundwater wells could be constructed  
17 throughout the Delta watershed and areas outside the Delta that use Delta water. Each of these activities  
18 could potentially convert agricultural land to nonagricultural use if it occurs on or near agricultural land.

19 In the Delta, potential conversion of agricultural land could occur in or near the cities of Sacramento,  
20 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
21 Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
22 San Joaquin, and Contra Costa counties. Applicable agricultural land protection, conversion, and  
23 mitigation requirements in the Delta would include those of these cities and counties. In the Delta  
24 watershed and areas outside the Delta that use Delta water, other local agricultural protection and  
25 mitigation requirements could also apply.

### 26 *Effects of Project Operation*

27 Projects encouraged by the Delta Plan could involve constructing storage facilities in the Delta watershed  
28 and in areas outside the Delta that use Delta water. Construction of these facilities (such as those  
29 considered under DWR's Surface Water Storage Investigation) could potentially cause a substantial  
30 conversion of agricultural land. For example, new reservoirs could permanently flood areas that currently  
31 have natural or agricultural land cover. The extent of impact would be influenced by the size of the  
32 facility footprint. Surface water storage projects in mountainous areas in the Delta watershed are less  
33 likely to significantly convert agricultural lands, but could adversely affect forestlands.  
34 (see Section 7.4.3.1.3 [Impact 7-3a] below).

35 Small storage reservoirs and flood control facilities, modification of existing reservoirs, regulating  
36 reservoirs, and groundwater percolation basins that might be constructed to improve water supply  
37 reliability throughout the study area would convert less agricultural land than larger facilities but could  
38 still adversely impact agricultural land locally, particularly if local these lands have specific soil  
39 conditions (such as peat soils in the Delta) that support high-value crops that cannot be readily grown  
40 elsewhere in the Delta watershed. The extent of impact would also be influenced by the size of the  
41 facility footprint.

42 The number and location of all potential projects that could be implemented are not known at this time.  
43 Four possible projects, however are known to some degree and are named in the Delta Plan: the North of  
44 Delta Offstream Storage Investigation (aka Sites Reservoir), Los Vaqueros Reservoir Project (Phase 2),  
45 and Upper San Joaquin River Basin Storage Investigation Plan (aka Temperance Flat). Of these named  
46 projects, the Los Vaqueros Reservoir Project has undergone project-specific environmental review  
47 (Los Vaqueros Reservoir Expansion EIS/EIR) (Reclamation et al. 2009).

1 The Los Vaqueros EIS/EIR provides analogous information about the impacts expected from construction  
2 of projects similar to the Los Vaqueros Project. In addition, the project-specific EIR for another surface  
3 storage project (not named in the Delta Plan)—the Calaveras Dam Replacement Project (SFPUC 2011)—  
4 provides analogous information.

5 Although not named in the Delta Plan, two additional projects are illustrative of the types of agriculture  
6 and forest resources impacts associated with water supply reliability projects: the Davis-Woodland Water  
7 Supply Project (City of Davis 2007), which includes a water intake in the Sacramento River, pumping  
8 plants, and conveyance and water treatment facilities, and the Lower Yuba River Accord (DWR et al.  
9 2007), which addresses water management, including water transfers.

10 It is unclear at this time how implementation of the Proposed Project would result in specific activities,  
11 including the location, number, capacity, methods, and duration of construction activities and the types of  
12 facilities that would be operated. However, the Delta Plan encourages implementation of the North of  
13 Delta Offstream Storage Investigation, Los Vaqueros Reservoir Project, and Upper San Joaquin River  
14 Basin Storage Investigation Plan.

15 Review of these past projects provides analogous information to understand how Delta Plan–encouraged  
16 projects, for which there are no project-specific details or associated reviews, might affect agricultural  
17 resources. As these EIRs and EISs show, water reliability projects may temporarily and permanently  
18 convert farmland to nonagricultural use when the footprint of disturbance of the projects includes existing  
19 farmland. The EIRs and EISs for these projects found that the agricultural impacts associated with surface  
20 facilities were either less than significant with mitigation, because construction activities (project lay  
21 down areas, staging areas, detention ponds, borrow sites) could be restored to pre-project conditions or  
22 certain optional project elements did not require implementation to achieve the purpose of the project or  
23 significant and unavoidable because of the lack of feasible mitigation (i.e., the permanent conversion of  
24 farmland could not be replaced.

25 Based on these examples, it is likely that the agricultural resources impacts of projects of a similar nature  
26 encouraged by the Delta Plan could be mitigated to a less-than-significant level for short-term  
27 construction impacts, but not for more permanent conversions of farmland. For other named projects  
28 where an environmental impact analysis has not been prepared, it is expected that this impact analysis  
29 provides a reasonable analysis of potential effects that would occur if the projects of a similar nature and  
30 similar setting were implemented.

### 31 *Conclusion*

32 A detailed description of these projects is not available; however, it is possible that significant and  
33 unmitigable impacts on agricultural resources could occur for other types of projects in different settings  
34 than the projects cited above for which EIRs were prepared. Project-level impacts would be addressed in  
35 future site-specific environmental analysis conducted at the time such projects are proposed by lead  
36 agencies. However, because named projects and projects encouraged by the Delta Plan could result in  
37 conversion of agricultural land to nonagricultural use, this potential impact is considered **significant**.

#### 38 7.4.3.1.2 Impact 7-2a: Conflict with Existing Zoning for Agricultural Use or a Williamson 39 Act Contract

##### 40 *Effects of Project Construction*

41 The Delta Plan encourages projects that would include the construction and operation of surface water  
42 and groundwater storage facilities, water intakes, conveyance facilities (canals, pipelines, tunnels,  
43 siphons, and pumping plants), groundwater wells, water transfers, and hydroelectric generation  
44 Temporary effects from construction would include removal of vegetation and disturbance of soil in

45

1 facilities footprints and borrow/spoils. These temporary effects could become permanent if agricultural  
2 areas are cleared for buildings, facilities, paved roads and storage / staging, and other project features.  
3 Water supply facilities could be located in the Delta, the Delta watershed, or areas outside the Delta that  
4 use Delta water, as described in Section 2A, Proposed Project and Alternatives.

5 Construction of projects encouraged by the Delta Plan could also cause permanent landscape-scale  
6 changes at the location of new intake facilities, the forebay, borrow and spoil sites, and tunnel muck  
7 disposal areas and could require the use of heavy equipment, such as excavators, graders, scrapers,  
8 bulldozers, backhoes, and concrete mixing and pumping trucks. Haul trucks would be used to move  
9 borrow and/or spoils and other materials. Each of these activities could potentially be in conflict with  
10 agricultural zoning or Williamson Act contracts if water supply projects are not permitted uses under such  
11 contracts or in agricultural zones, and would remove lands from agricultural use, leading to physical  
12 impacts similar to those described in Section 7.4.3.1.1 (Impact 7-1a).

13 Treatment plants, surface water and groundwater storage facilities, conveyance facilities  
14 (canals, pipelines, tunnels, siphons, and pumping plants), and groundwater wells could be constructed  
15 throughout the Delta watershed and areas outside the Delta that use Delta water. Each of these activities  
16 could potentially conflict with Williamson Act contracts or existing zoning for agricultural use if water  
17 supply projects are not permitted uses under such contracts or in agricultural zones.

18 In the Delta, potential conflicts with agricultural zoning could occur near the cities of Sacramento,  
19 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
20 Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
21 San Joaquin, and Contra Costa counties. Applicable agricultural zoning in the Delta would include zoning  
22 adopted and enforced by these cities and counties. In the Delta watershed and areas outside the Delta that  
23 use Delta water, other local agricultural zoning regulations could also apply.

#### 24 *Effects of Project Operation*

25 Projects encouraged by the Delta Plan could involve new or expanded storage facilities in the Delta  
26 watershed and in areas outside the Delta that use Delta water. Construction of these facilities (such as  
27 those considered under DWR's Surface Water Storage Investigation) could potentially conflict with  
28 agricultural zoning or Williamson Act contracts. For example, new reservoirs could permanently flood  
29 areas that currently are zoned for agricultural use or are under Williamson Act contracts, converting this  
30 land from agricultural use. Surface water storage projects in mountainous areas in the Delta watershed are  
31 less likely to significantly affect agricultural zoning but could adversely affect lands zoned for forest use  
32 or TPZ. (See Section 7.4.3.1.3 [Impact 7-3a] below.)

33 Small storage reservoirs and flood control facilities, modification of existing reservoirs, regulating  
34 reservoirs, and groundwater percolation basins that might be constructed to improve water supply  
35 reliability throughout the study area would have a smaller conflict with agricultural zoning or Williamson  
36 Act contracts than larger facilities because the facilities would take a smaller amount of agricultural land  
37 out of production. The extent of impact would be based on the size of the facility footprint.

38 The number and location of all potential projects that could be implemented are not known at this time.  
39 Four possible projects, however, are known to some degree and are named in the Delta Plan: the North of  
40 Delta Offstream Storage Investigation (aka Sites Reservoir), Los Vaqueros Reservoir Project (Phase 2),  
41 and Upper San Joaquin River Basin Storage Investigation Plan (aka Temperance Flat). Of these named  
42 projects, the Los Vaqueros Reservoir Project has undergone project-specific environmental review  
43 (Los Vaqueros Reservoir Expansion EIS/EIR) (Reclamation et al. 2009).

1 The Los Vaqueros EIS/EIR provides analogous information about the impacts expected from construction  
2 of projects similar to the Los Vaqueros Project. In addition, the project-specific EIR for another surface  
3 storage project (not named in the Delta Plan)—the Calaveras Dam Replacement Project (SFPUC 2011)—  
4 also provides analogous information.

5 Although not named in the Delta Plan, two additional projects are illustrative of the types of agriculture  
6 and forest resources impacts associated with water supply reliability projects: the Davis-Woodland Water  
7 Supply Project (City of Davis 2007), which includes a water intake in the Sacramento River, pumping  
8 plants, and conveyance and water treatment facilities, and the Lower Yuba River Accord (DWR et al.  
9 2007), which addresses water management, including water transfers.

10 It is unclear at this time how implementation of the Proposed Project would result in specific activities,  
11 including the location, number, capacity, methods, and duration of construction activities and the types of  
12 facilities that would be operated. However, the Delta Plan encourages implementation of the North of  
13 Delta Offstream Storage Investigation, Los Vaqueros Reservoir Project, and Upper San Joaquin River  
14 Basin Storage Investigation Plan.

15 Review of these past projects provides analogous information to understand how Delta Plan–encouraged  
16 projects, for which there are no project-specific details or associated reviews, might affect agricultural  
17 resources. The EIRs and EISs for these projects did not specifically discuss agricultural zoning or  
18 Williamson Act contracts, but did find that the agricultural impacts associated with surface facilities were  
19 either less than significant with mitigation or significant and unavoidable as described above in  
20 Section 7.4.3.1.1 (mitigation can include restoring temporary impact areas to preconstruction conditions  
21 or modifying the project to avoid footprint impacts, there are circumstances that farmland could be  
22 converted permanently for no mitigation would be feasible).

23 Based on these examples, it is likely that the agricultural resources impacts of projects of a similar nature  
24 encouraged by the Delta Plan could be mitigated to a less-than-significant level for short-term  
25 construction impacts, but not for more permanent conversions of farmland. For other named projects  
26 where an environmental impact analysis has not been prepared, it is expected that this impact analysis  
27 provides a reasonable analysis of potential effects that would occur if the projects of a similar nature and  
28 similar setting were implemented.

### 29 *Conclusion*

30 A detailed description of these projects is not available; however, it is possible that significant and  
31 unmitigable impacts on agricultural resources could occur. Project-level impacts would be addressed in  
32 future site-specific environmental analysis conducted at the time such projects are proposed by lead  
33 agencies. However, because named projects and projects encouraged by the Delta Plan could result in  
34 conflict with existing agricultural zoning or Williamson Act contracts, this potential impact is  
35 considered **significant**.

#### 36 7.4.3.1.3 Impact 7-3a: Conflict with Existing Zoning for, or Cause Rezoning of, Forestland, 37 Timberland, or Timberland Zoned for Timberland Production

##### 38 *Effects of Project Construction*

39 Forestland, timberland and lands zoned for timberland production are protected by State and federal laws.  
40 These laws generally are not compatible with the water supply reliability activities and projects  
41 encouraged by the Delta Plan.

42 The Delta Plan encourages projects that would include the construction and operation of surface water  
43 and groundwater storage facilities, water intakes, conveyance facilities (canals, pipelines, tunnels,  
44 siphons, and pumping plants), groundwater wells, water transfers, and hydroelectric generation.  
45 Temporary effects from construction would include removal of vegetation and disturbance of soil in



1 facilities footprints and borrow/spoils. These temporary effects could become permanent where areas are  
2 cleared for buildings, facilities, paved roads and storage / staging, and other project features. The facilities  
3 could be located in the Delta, the Delta watershed, or areas outside the Delta that use Delta water, as  
4 described in Section 2A, Proposed Project and Alternatives.

5 Construction of projects encouraged by the Delta Plan could also cause permanent landscape-scale  
6 changes at the location of new intake facilities, the forebay, borrow and spoil sites, and tunnel muck  
7 disposal areas and could require the use of heavy equipment, such as excavators, graders, scrapers,  
8 bulldozers, backhoes, and concrete mixing and pumping trucks. Haul trucks would be used to move  
9 borrow and/or spoils and other materials. Each of these activities could potentially conflict with zoning  
10 for forest or timberland or TPZ and lead to the removal of land from timber or forest use, causing physical  
11 impacts similar to those described in Section 7.4.3.1.4 (Impact 7-4a).

12 In the Delta, potential conflicts with forestland zoning and TPZ could occur near the cities of Sacramento,  
13 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
14 Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
15 San Joaquin, and Contra Costa counties. Applicable forestland and timberland zoning in the Delta would  
16 include those adopted and enforced by these cities and counties. In the Delta watershed and areas outside  
17 the Delta that use Delta water, other local forest or TPZ zoning could also apply.

#### 18 *Effects of Project Operations*

19 Treatment plants, surface water and groundwater storage facilities, conveyance facilities  
20 (canals, pipelines, tunnels, siphons, and pumping plants), and groundwater wells could be constructed  
21 throughout the Delta watershed and areas outside the Delta that use Delta water. These activities could  
22 potentially conflict with existing zoning for forestland and timberland or TPZ if they occur in these zones.  
23 The extent of impact would also be influenced by the size of the facility footprint.

24 It is unclear at this time how implementation of the Proposed Project would result in specific activities,  
25 including the location, number, capacity, methods, and duration of construction activities and the types of  
26 facilities that would be operated. However, the Delta Plan encourages implementation of the North of  
27 Delta Offstream Storage Investigation, Los Vaqueros Reservoir Project, and the Upper San Joaquin River  
28 Basin Storage Investigation Plan.

29 Review of these past projects provides analogous information to understand how Delta Plan–encouraged  
30 projects, for which there are no project-specific details or associated reviews, might affect timberland  
31 resources or TPZ. The EIRs and EISs for these projects did not specifically find consider conflict with  
32 zoning for forestland, timberland, or TPZ to be an issue of concern.

#### 33 *Conclusion*

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 named projects and projects  
36 encouraged by the Delta Plan could result in conflict with existing timber or forest zoning or TPZ, this  
37 potential impact is considered **significant**.

#### 38 **7.4.3.1.4 Impact 7-4a: Loss of Forestland or Conversion of Forestland to Nonforest Use**

##### 39 *Effects of Project Construction*

40 The USFS estimates indicate that approximately 44,530 acres of private timberland, half of which is  
41 composed of western oaks, are located in the five Delta counties. Timberland represents about one-quarter  
42 of forestland in the five Delta counties. Western oaks make up approximately 75 percent of  
43 nontimberland forest resources, making them the most abundant forest type in the five Delta counties.

1 It is unclear how much, if any, of this forestland is located in the Delta, although the Fire and Resource  
2 Assessment Program estimates that 3,288 acres of hardwood habitats are located in the Delta.  
3 As described in greater detail in Section 4, Biological Resources, 8,980 acres of riparian forest habitat are  
4 in the Delta. These areas typically are found as long, linear patches separating other terrestrial biological  
5 communities from agricultural or urban land or as low-lying, flood-prone patches near river bends, canals,  
6 or breached levees. They can be located along major waterways, drainage channels, pond margins, and  
7 oxbows and in abandoned, low-lying fields.

8 Forestlands in the Delta watershed and areas outside the Delta that receive Delta water and that are most  
9 likely to be located near future construction sites would include woodlands in the foothills near surface  
10 water storage projects, wooded riparian habitat, and along streams, and along major waterways, drainage  
11 channels, pond margins, and oxbows and in abandoned, low-lying fields.

12 Construction-related activities at construction sites for surface water and groundwater storage facilities,  
13 conveyance facilities (canals, pipelines, tunnels, siphons, and pumping plants), groundwater and wells  
14 could require the use of heavy equipment, such as excavators, graders, scrapers, bulldozers, backhoes, and  
15 concrete mixing and pumping trucks. Haul trucks would be used to move borrow and/or spoils and other  
16 materials. Treatment plants, surface water and groundwater storage facilities, conveyance facilities  
17 (canals, pipelines, tunnels, siphons, and pumping plants), and groundwater wells could be constructed  
18 throughout the Delta, Delta watershed, and areas outside the Delta that use Delta water, as described in  
19 Section 2A, Proposed Project and Alternatives. Each of these activities could potentially result in loss of  
20 forestland or convert forestland to nonforest use if it occurs on or near forestland, including oak woodland  
21 riparian forests.

## 22 *Effects of Project Operation*

23 Projects encouraged by the Delta Plan could involve constructing storage facilities in the Delta watershed  
24 and in areas outside the Delta that use Delta water. Construction of these facilities (such as those  
25 considered under DWR's Surface Water Storage Investigation) could potentially cause a substantial  
26 conversion of forestland. For example, new reservoirs could permanently flood areas that currently have  
27 riparian forest cover in the Delta or other forest cover in the Delta watershed. Surface water storage  
28 projects in forested mountain areas in the Delta watershed, in particular, could significantly convert  
29 agricultural lands but could adversely affect forestlands.

30 Small storage reservoirs and other water supply facilities, modification of existing reservoirs, regulating  
31 reservoirs, and groundwater percolation basins that might be constructed to improve water supply  
32 reliability throughout the study area would convert less forestland than larger facilities but could still  
33 adversely impact forest or timberland locally. The extent of impact would also be influenced by the size  
34 of the facility footprint.

35 It is unclear at this time how implementation of the Proposed Project would result in specific activities,  
36 including the location, number, capacity, methods, and duration of construction activities and the types of  
37 facilities that would be operated. However, the Delta Plan encourages implementation of the North of  
38 Delta Offstream Storage Investigation, Los Vaqueros Reservoir Project, and the Upper San Joaquin River  
39 Basin Storage Investigation Plan.

40 Review of these past projects provides analogous information to understand how Delta Plan–encouraged  
41 projects, for which there are no project-specific details or associated reviews, might affect timberland  
42 resources or TPZ. The EIRs and EISs for these projects did not specifically find conversion of forestland,  
43 timberland, or TPZ to be an issue of concern, but construction and operations-related impacts on these  
44 resources associated with surface facilities would be similar to the impacts, mitigation measures, and  
45 findings as the more general farmland conversion impacts described in Section 7.4.3.1.1 because the  
46 impact mechanisms would be the same types of footprint impacts.

1 *Conclusion*

2 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
3 time such projects are proposed by lead agencies. However, because named projects and projects  
4 encouraged by the Delta Plan could result in conversion of forestlands to nonforest use; this potential  
5 impact is considered **significant**.

6 **7.4.3.1.5 Impact 7-5a: Involve Other Changes in the Existing Environment That, Because of Their**  
7 **Location or Nature, Could Result in Conversion of Farmland to Nonagricultural Use or**  
8 **Conversion of Forestland to Nonforest Use**

9 *Effects of Project Construction*

10 The Delta Plan encourages projects that would include the construction and operation of surface water  
11 and groundwater storage facilities, water intakes, conveyance facilities (canals, pipelines, tunnels,  
12 siphons, and pumping plants), groundwater wells, water transfers, and hydroelectric generation  
13 Temporary effects from construction would include removal of vegetation and disturbance of soil in  
14 facilities footprints and borrow/spoils. These temporary effects could become permanent where areas are  
15 cleared for buildings, facilities, paved roads and storage / staging, and other project features. The facilities  
16 could be located in the Delta or in areas outside the Delta that use Delta water, as described in Section 2A,  
17 Proposed Project and Alternatives.

18 Construction of projects encouraged by the Delta Plan could also cause permanent landscape-scale  
19 changes at the location of new intake facilities, the forebay, borrow and spoil sites, and tunnel muck  
20 disposal areas and could require the use of heavy equipment, such as excavators, graders, scrapers,  
21 bulldozers, backhoes, and concrete mixing and pumping trucks. Haul trucks would be used to move  
22 borrow and/or spoils and other materials. The facilities could be located in the Delta or in areas outside  
23 the Delta that use Delta water, as described in Section 2A, Proposed Project and Alternatives. Each of  
24 these activities could potentially convert agricultural land to nonagricultural use if it occurs on forest or  
25 timberland.

26 In addition to direct impacts described in Sections 7.4.3.1.1 (Impact 7-1a), 7.4.3.1.2 (Impact 7-2a),  
27 7.4.3.1.3 (Impact 7-3a), and 7.4.3.1.4 (Impact 7-4a), construction activities related to reliable water  
28 supply projects could affect nearby forest or agricultural lands because of noise, access constraints, dust,  
29 or other mechanisms that would indirectly result in conversion of these lands to other uses. These effects  
30 are discussed in other resource sections of this EIR, including Section 9, Air Quality; Section 15, Noise;  
31 and Section 19, Transportation, Traffic, and Circulation. Furthermore, disturbance and removal of  
32 existing vegetation as a part of construction activities could result in the spread of invasive species to new  
33 areas, negatively affecting the health or viability of surrounding agricultural or forest uses.

34 *Effects of Project Operations*

35 Treatment plants, surface water and groundwater storage facilities, conveyance facilities  
36 (canals, pipelines, tunnels, siphons, and pumping plants), and groundwater wells could be constructed  
37 throughout the Delta watershed and areas outside the Delta that use Delta water. These activities could  
38 potentially conflict with forest or agricultural uses if they occur on or near areas in agricultural or  
39 forest use.

40 In addition to direct impacts described in Sections 7.4.3.1.1 (Impact 7-1a), 7.4.3.1.2 (Impact 7-2a),  
41 7.4.3.1.3 (Impact 7-3a), and 7.4.3.1.4 (Impact 7-4a), operation of water quality project facilities could  
42 affect nearby forest or agricultural lands because of noise, access constraints, dust, or other effects that  
43 would indirectly result in conversion of these lands to other uses. These effects are discussed in other  
44 resource sections of this EIR, including Section 9, Air Quality; Section 15, Noise; and Section 19,  
45 Transportation, Traffic, and Circulation.

1 Projects that are encouraged by the Delta Plan, or named in the Delta Plan, could result in reduced water  
2 deliveries to areas outside the Delta that receive Delta water. During some drier hydrologic conditions,  
3 deliveries to agricultural lands may be reduced. These reduced deliveries could increase fallowing of  
4 irrigated lands. Continuous longer term fallowing and changes in agricultural practices resulting from  
5 reduced water deliveries could eventually result in the physical conversion of agricultural land to a  
6 nonagricultural use.

7 The number and location of all potential projects that could be implemented are not known at this time.  
8 Four possible projects, however are known to some degree and are named in the Delta Plan: the North of  
9 Delta Offstream Storage Investigation (aka Sites Reservoir), Los Vaqueros Reservoir Project (Phase 2),  
10 Upper San Joaquin River Basin Storage Investigation Plan (aka Temperance Flat), and DWR  
11 Bulletin 118. Of these named projects, the Los Vaqueros Reservoir Project has undergone project-specific  
12 environmental review (Los Vaqueros Reservoir Expansion EIS/EIR) (Reclamation et al. 2009). DWR  
13 Bulletin 118 presents a list of 10 recommendations for the management of groundwater but does not  
14 result in a specific project the construction or operation of which could affect agriculture or  
15 forestry resources.

16 The Los Vaqueros EIS/EIR provides analogous information about the impacts expected from construction  
17 of projects similar to the Los Vaqueros Project. In addition, the project-specific EIR for another surface  
18 storage project (not named in the Delta Plan)—the Calaveras Dam Replacement Project (SFPUC 2011)—  
19 also provides analogous information.

20 Although not named in the Delta Plan, two additional projects are illustrative of the types of agriculture  
21 and forest resources impacts associated with water supply reliability projects: the Davis-Woodland Water  
22 Supply Project (City of Davis 2007), which includes a water intake in the Sacramento River, pumping  
23 plants, and conveyance and water treatment facilities, and the Lower Yuba River Accord (DWR et al.  
24 2007), which addresses water management, including water transfers.

25 It is unclear at this time how implementation of the Proposed Project would result in specific activities,  
26 including the location, number, capacity, methods, and duration of construction activities and the types of  
27 facilities that would be operated. However, the Delta Plan encourages implementation of the North of  
28 Delta Offstream Storage Investigation, Los Vaqueros Reservoir Project, and the Upper San Joaquin River  
29 Basin Storage Investigation Plan.

30 Review of these past projects provides analogous information to understand how Delta Plan–encouraged  
31 projects, for which there are no project-specific details or associated reviews, might affect agricultural or  
32 forestry resources. The EIRs and EISs for these projects found that the agricultural impacts associated  
33 with surface facilities (project grading could change drainage patterns that reduce the amount water  
34 available to a dry land farm) could be mitigated to a less-than-significant level by restoring the land  
35 surface to pre-project conditions.

36 Based on these examples, it is likely that the agricultural resources impacts of projects of a similar nature  
37 encouraged by the Delta Plan could also be mitigated to a less-than-significant level. For other named  
38 projects where an environmental impact analysis has not been prepared, it is expected that this impact  
39 analysis provides a reasonable analysis of potential effects that would occur if the projects of a similar  
40 nature and similar setting were implemented.

#### 41 *Conclusion*

42 A detailed description of these projects is not available; however, it is possible that significant and  
43 unmitigable impacts on agricultural resources could occur. Project-level impacts would be addressed in  
44 future site-specific environmental analysis conducted at the time such projects are proposed by lead  
45 agencies. However, because named projects and projects encouraged by the Delta Plan could indirectly  
46 result in conversion of forest or agricultural lands, this potential impact is considered **significant**.

### 1 **7.4.3.2 Delta Ecosystem Restoration**

2 There are certain synergies between agriculture and wildlife habitat that provide valuable ecological  
3 services in the Delta. Several types of agriculture, including alfalfa, pasture, and rice provide especially  
4 valuable wildlife habitat. Irrigated pastures, row crops and silage field provide habitat for small mammals;  
5 these species in turn attract predators. Some State-listed and federally listed species use agricultural  
6 wetlands (such as rice fields) and agricultural irrigation and drainage canals for foraging habitat and  
7 dispersal, in addition to its remaining natural habitats. Many growers leave areas of their fields in wetland  
8 or riparian habitat for benefit of wildlife (Trott 2007).Crop types that are not tilled or disturbed are  
9 preferable as wildlife habitat. Alfalfa can be particularly important as foraging habitat for raptor species.  
10 The drawback to active agricultural fields is that whole colonies are susceptible to destruction when crops  
11 are harvested (Solano County 2008).

12 Flood-irrigated crops such as rice can support a range of wildlife. Rice is usually grown in areas that  
13 previously supported natural wetlands, and many wetland-associated wildlife species use rice fields,  
14 especially waterfowl and shorebirds. Waste grain also provides food for species such as ring-necked  
15 pheasant and greater sandhill crane. Other wildlife species that use rice fields include giant garter snake,  
16 and wading birds that forage on aquatic invertebrates and small vertebrates. In particular, the practice of  
17 flooding rice fields in winter to allow rice stubble to rot, instead of burning rice stubble in fall, provides a  
18 wide variety of ducks and geese opportunities to loaf or forage in rice fields in winter.

19 Grain and seed crops, such as corn, wheat, and barley are annual grasses that are grown in dense stands  
20 that make it difficult for wildlife to move through these fields; most wildlife benefits are derived early in  
21 the growing period, and especially following the harvest, when waste grain is accessible to waterfowl and  
22 other birds such as sandhill cranes.

23 Even intensively farmed croplands can provide important habitat for numerous bird species, including  
24 tricolored blackbirds, burrowing owls and Swainson's hawks, and sandhill cranes. Tricolored blackbirds,  
25 a California species of special concern, are frequently found in open habitats, such as croplands and  
26 grassy fields, during the nonbreeding season and have been known to nest in certain silage and other grain  
27 fields such as sorghum.

28 Examples of integrated management of agriculture and wildlife habitat in the Delta are becoming more  
29 common. These management techniques include crop rotations that include soil-building crops or  
30 fallowing; integrated pest management to reduce pesticides; cover crops; the strategic use of permanent  
31 crops, such as pasture, to reduce soil disturbance and oxidation; and a form of conservation tillage for  
32 field and row crops that reduces energy inputs, lessens soil disturbance and oxidation, and minimizes soil  
33 compaction by reducing farm machinery passes (Trott 2007).

34 In analyzing the impacts of ecosystem restoration projects, it is important to consider the synergies,  
35 benefits, and potential for coexistence of ecosystems and agriculture.

36 As described in Sections 2A and 2B, the Delta Plan does not direct the construction of specific projects,  
37 nor would projects be implemented under the direct authority of the Delta Stewardship Council. However,  
38 the Delta Plan seeks to improve the Delta ecosystem by encouraging various actions and projects that, if  
39 taken, could lead to completion, construction, and/or operation of projects that could improve the  
40 Delta ecosystem.

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

- 43 " Floodplain restoration
- 44 " Riparian restoration

- 1       "   Tidal marsh restoration
- 2       "   Ecosystem stressor management (e.g., continuation of ongoing programs managing pesticide
- 3       runoff, water quality, water flows)
- 4       "   Invasive species management (including removal of invasive vegetation)

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

- 8       "   Cosumnes River-Mokelumne River Confluence: North Delta Flood Control and Ecosystem
- 9       Restoration Project
- 10      "   Suisun Marsh Habitat Management, Preservation, and Restoration Plan (includes Hill Slough
- 11      Restoration Project)
- 12      "   Cache Slough Complex (includes Prospect Island Restoration Project)
- 13      "   Yolo Bypass
- 14      "   Lower San Joaquin River Bypass Proposal
- 15      "   Water Quality Control Plan Update for the San Francisco Bay/Sacramento-San Joaquin
- 16      Delta Estuary
- 17      "   Delta Conservancy Strategic Plan
- 18      "   Variance for U.S. Army Corps of Engineers (USACE) Vegetation Policy
- 19      "   DFG's Stage Two Actions for Nonnative Invasive Species

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

24   The Proposed Project encourages the State Water Resources Control Board (SWRCB) to update the  
25   Water Quality Control Plan Update for the San Francisco Bay/Sacramento-San Joaquin Delta Estuary and  
26   develop, implement, and enforce updated flow requirements for the Delta and high-priority tributaries in  
27   the Delta watershed that are necessary to achieve coequal goals. As described in Section 2A, Proposed  
28   Project and Alternatives, these actions would likely result in a more natural flow regime in the Delta and  
29   Delta tributaries and reduced export of water from the Delta. Water users in the areas outside the Delta  
30   that use Delta water would likely respond to reduced supplies by constructing facilities to improve water  
31   supply reliability and improve water quality. The impacts on agriculture and forestry resources associated  
32   with these actions would be the same as those described in Section 7.4.3.1 (Reliable Water Supply) and  
33   Section 7.4.3.3 (Water Quality Improvement) below.

34   The Delta Conservancy Strategic Plan is anticipated to provide a framework that would facilitate  
35   ecosystem restoration in the Delta. The general impacts associated with the ecosystem restoration that  
36   could result from that planning process are described below.

37   The impacts associated with obtaining a variance to the USACE Vegetation Policy are described in  
38   Section 7.4.3.4 (Flood Risk Reduction).

1 DFG's Stage Two Actions for Nonnative Invasive Species (DFG 2011) identifies six actions for  
2 preventing the establishment of additional nonnative invasive species and reduce their economic and  
3 ecological impacts. These actions focus on monitoring, study, and coordination, and encouragement of  
4 the continuation of these actions would not physically change existing conditions.

#### 5 7.4.3.2.1 Impact 7-1b: Conversion of Farmland to Nonagricultural Use

##### 6 *Effects of Project Construction*

7 Projects encouraged by the Delta Plan including the projects identified in Section 7.4.3.2, would include  
8 the construction of ecosystem restoration areas, including floodplain, riparian, and wetland restoration  
9 areas, along with management of stressors and invasive species, and modification of levees and  
10 associated infrastructure.

11 Temporary effects from construction would include removal of existing vegetation and disturbance of soil  
12 in restoration area footprints and borrow/spoils areas. These temporary effects could become permanent  
13 where areas are cleared for replanting or restoration of nonagricultural habitats, such as tidal marsh,  
14 riparian corridors, and grassland. Ecosystem restoration projects would primarily be located in the Delta  
15 but could be located in the Delta watershed.

16 Construction could require the use of heavy equipment, such as excavators, graders, scrapers, bulldozers,  
17 and backhoes. Haul trucks would be used to move borrow and/or spoils and other materials. Each of these  
18 activities could potentially convert agricultural land to nonagricultural use if it occurs on or near  
19 agricultural land.

##### 20 *Effects of Project Operation*

21 Restoration would result in permanent landscape-scale changes in the Delta by introducing habitat types  
22 such as tidal marsh, riparian corridors, and grassland to areas that are currently dominated by agricultural  
23 fields. These potential changes would remove farmland from agricultural use. The extent of impact would  
24 also be influenced by the size of the footprint for individual projects.

25 The Delta Plan encourages implementation of several ecosystem restoration projects, including the  
26 Cosumnes River-Mokelumne River Confluence: North Delta Flood Control and Ecosystem Restoration  
27 Project, Suisun Marsh Habitat Management, Preservation, and Restoration Plan, Cache Slough Complex  
28 Project, Yolo Bypass Project, and the Lower San Joaquin River Bypass Proposal. It is not known at this  
29 time what specific activities would occur that could affect agricultural resources. Two of the named  
30 projects have undergone project-level environmental reviews.

31 Documents reviewed for potential impacts included the North Delta Flood Control and Ecosystem  
32 Restoration Project EIR (DWR 2010), which analyzes proposed flood management and ecosystem  
33 restoration projects in the Delta, and the Suisun Marsh Habitat Management, Preservation, and  
34 Restoration Plan (Reclamation et al. 2010), which addressed ecosystem restoration in the Suisun Marsh.  
35 These documents found that the agricultural impacts were either less than significant or could be  
36 mitigated to a less-than-significant level by modifying optional elements of the project to avoid farmland  
37 conversion while still achieving the project's objective. However, very little of the land affected by the  
38 North Delta project or Suisun Marsh plan is in agricultural use, and the findings of these EIRs might not  
39 reflect impacts of projects in other areas of the Delta and the Delta watershed that are in agricultural use.

40 It is likely that the agricultural resources impacts of projects encouraged by the Delta Plan could be  
41 mitigated to a less-than-significant level for short-term construction impacts, but not for more permanent  
42 conversions of farmland; for example when a project cannot be redesigned to avoid farmland conversion.  
43 For other named projects where an environmental impact analysis has not been prepared, it is expected  
44 that this impact analysis provides a reasonable analysis of potential effects that would occur if the projects  
45 of a similar nature and similar setting were implemented.



## 1 *Conclusion*

2 A detailed description of these projects is not available; however, it is possible that significant and  
3 unmitigable impacts on agricultural resources could occur. Project-level impacts would be addressed in  
4 future site-specific environmental analysis conducted at the time such projects are proposed by lead  
5 agencies. However, because temporary construction-related impacts could occur, and because substantial  
6 permanent changes to the landscapes could convert farmland, the potential impacts of named projects and  
7 projects encouraged by the Delta Plan are considered **significant**.

### 8 7.4.3.2.2 Impact 7-2b: Conflict with Existing Zoning for Agricultural Use or a Williamson 9 Act Contract

#### 10 *Effects of Project Construction*

11 The Delta Plan encourages projects, including the projects identified in Section 7.4.3.2, that would  
12 include the construction and operation of ecological restoration areas. Temporary effects from  
13 construction would include removal of vegetation and disturbance of soil in project footprints and  
14 borrow/spoils. These temporary effects could become permanent where areas are cleared for replanting or  
15 restoration of nonagricultural habitats, such as tidal marsh, riparian corridors, and grassland. Construction  
16 of projects encouraged by the Delta Plan could require the use of heavy equipment, such as excavators,  
17 graders, scrapers, bulldozers, and backhoes. Haul trucks would be used to move borrow and/or spoils and  
18 other materials. The restoration areas could be located in the Delta, or in the Delta watershed. Each of  
19 these activities could conflict with agricultural zoning or Williamson Act contracts if restoration projects  
20 are not permitted uses under such contracts or in agricultural zones, and these conflicts could lead to the  
21 conversion of lands from agricultural use indirectly causing physical impacts similar to those described in  
22 Section 7.4.3.2.1 (Impact 7-1b).

23 In the Delta, potential conflicts with agricultural zoning could occur near the cities of Sacramento,  
24 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
25 Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
26 San Joaquin, and Contra Costa counties. Applicable agricultural zoning in the Delta would include zoning  
27 adopted and enforced by these cities and counties. In the Delta watershed, other local agricultural zoning  
28 regulations could also apply.

#### 29 *Effects of Project Operation*

30 Ongoing operation of restoration projects could conflict with agricultural zoning or Williamson Act  
31 contracts if restoration projects are not permitted uses under such contracts or in agricultural zones, and  
32 these conflicts could lead to the conversion of lands from agricultural use. The extent of impact would be  
33 influenced by the size of the footprint for individual projects.

34 The Delta Plan encourages implementation of several ecosystem restoration projects, including the  
35 Cosumnes River-Mokelumne River Confluence: North Delta Flood Control and Ecosystem Restoration  
36 Project; Suisun Marsh Habitat Management, Preservation, and Restoration Plan; Cache Slough Complex  
37 Project; Yolo Bypass Project; and Lower San Joaquin River Bypass Proposal. It is not known at this time  
38 what specific activities would occur that could affect agricultural resources.

39 Documents reviewed for potential impacts included the North Delta Flood Control and Ecosystem  
40 Restoration Project EIR (DWR 2010), which analyzes proposed flood management and ecosystem  
41 restoration projects in the Delta, and the Suisun Marsh Habitat Management, Preservation, and  
42 Restoration Plan (Reclamation et al. 2010), which addressed ecosystem restoration in the Suisun Marsh.  
43 The EIRs and EISs for these projects did not specifically discuss agricultural zoning or Williamson Act  
44 contracts, but did find that the agricultural impacts associated with restoration were either less than

45

1 significant or less than significant with mitigation as described above in Section 7.4.3.2.1 (modifying the  
2 project to avoid footprint impacts). However, very little of the land affected by the North Delta project or  
3 Suisun Marsh plan is in agricultural use, and the findings of these EIRs might not reflect impacts of  
4 projects in other areas of the Delta and the Delta watershed that are in agricultural use.

#### 5 *Conclusion*

6 A detailed description of these projects is not available; however, it is possible that significant and  
7 unavoidable impacts on agricultural resources could occur for other types of projects in different settings  
8 than the project described above for which EIRs were prepared. Project-level impacts would be addressed  
9 in future site-specific environmental analysis conducted at the time such projects are proposed by lead  
10 agencies. However, because temporary construction-related impacts could occur, and because substantial  
11 changes to the landscapes could conflict with agricultural zoning or Williamson Act contracts, the  
12 potential impacts of projects encouraged by the Delta Plan are considered **significant**.

#### 13 7.4.3.2.3 Impact 7-3b: Conflict with Existing Zoning for, or Cause Rezoning of, Forestland, 14 Timberland, or Timberland Zoned for Timberland Production

##### 15 *Effects of Project Construction*

16 Forestland, timberland or timberland zoned for timberland production are protected by State and federal  
17 laws which may be compatible with ecological restoration objectives.

18 The Delta Plan encourages projects, including the projects identified in Section 7.4.3.2, that would  
19 include the construction and operation of ecological restoration areas. Temporary effects from  
20 construction would include removal of vegetation and disturbance of soil in restoration area footprints and  
21 borrow/spoils sites. These temporary effects could become permanent where areas are cleared for  
22 replanting or restoration of nonagricultural habitats, such as tidal marsh, riparian corridors, and grassland.  
23 Construction of projects encouraged by the Delta Plan could require the use of heavy equipment, such as  
24 excavators, graders, scrapers, bulldozers, and backhoes. Haul trucks would be used to move borrow  
25 and/or spoils and other materials. Restoration projects could be located in the Delta or in the Delta  
26 watershed. If these activities occurred on lands zoned for forest or timberland use, they could conflict  
27 with zoning requirements and potentially lead to conversion of land to nonforest use, causing physical  
28 impacts similar to those described in Section 7.4.3.2.4 (Impact 7-4b).

29 In the Delta, potential conflicts with forest or timber zoning could occur near the cities of Sacramento,  
30 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
31 Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
32 San Joaquin, and Contra Costa counties. Applicable forest and timberland zoning in the Delta would  
33 include those adopted and enforced by these cities and counties. In the Delta watershed, other local forest  
34 zoning or TPZ regulations could also apply.

##### 35 *Effects of Project Operations*

36 Ongoing operation of restoration projects could conflict with forest or timberland zoning if restoration  
37 projects create nonforest habitats or other uses that are not permitted in these zones. The physical effect of  
38 this conflict would be the conversion of forestlands. The extent of impact would be influenced by the size  
39 of the restoration area footprint.

40 The Delta Plan encourages implementation of several ecosystem restoration projects, including the  
41 Cosumnes River-Mokelumne River Confluence: North Delta Flood Control and Ecosystem Restoration  
42 Project; Suisun Marsh Habitat Management, Preservation, and Restoration Plan; Cache Slough Complex  
43 Project; Yolo Bypass Project; and the Lower San Joaquin River Bypass Proposal. It is not known at this  
44 time what specific activities would occur that could affect agricultural and forestry resources.

1 Review of these past projects provides analogous information to understand how Delta Plan–encouraged  
2 projects, for which there are no project-specific details or associated reviews, might affect timberland  
3 resources or TPZ. The EIRs and EISs for these projects did not specifically find conflict with zoning for  
4 forestland, timberland, or TPZ to be an issue of concern.

#### 5 *Conclusion*

6 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
7 time such projects are proposed by lead agencies. However, because temporary construction-related  
8 impacts could occur, and because substantial changes to the landscapes could conflict with forest zoning  
9 or TPZ, the potential impacts of projects encouraged by the Delta Plan are considered **significant**.

### 10 7.4.3.2.4 Impact 7-4b: Loss of Forestland or Conversion of Forestland to Nonforest Use

#### 11 *Effects of Project Construction*

12 The USFS estimates indicate that approximately 44,530 acres of private timberland, half of which is  
13 composed of western oaks, are located in the five Delta counties. Timberland represents about one-quarter  
14 of forestland in the five Delta counties. Western oaks make up approximately 75 percent of  
15 nontimberland forest resources, making them the most abundant forest type in the five Delta counties. It is  
16 unclear how much, if any, of this forestland is located in the Delta, although the Fire and Resource  
17 Assessment Program estimates that 3,288 acres of hardwood habitats are located in the Delta.  
18 As described in greater detail in Section 4, Biological Resources, 8,980 acres of riparian forest habitat are  
19 in the Delta. These areas typically are found as long, linear patches separating other terrestrial biological  
20 communities from agricultural or urban land or as low-lying, flood-prone patches near river bends, canals,  
21 or breached levees. They can be located along major waterways, drainage channels, pond margins, and  
22 oxbows and in abandoned, low-lying fields.

23 The Delta Plan encourages projects, including the projects identified in Section 7.4.3.2, that would  
24 include the construction and operation of ecological restoration areas. Temporary effects from  
25 construction would include removal of vegetation and disturbance of soil in restoration area footprints and  
26 borrow/spoils sites. These temporary effects could become permanent where areas are cleared for  
27 replanting or restoration of nonagricultural habitats, such as tidal marsh, riparian corridors, and grassland.  
28 Construction of projects encouraged by the Delta Plan could require the use of heavy equipment, such as  
29 excavators, graders, scrapers, bulldozers, and backhoes. Haul trucks would be used to move borrow  
30 and/or spoils and other materials. Restoration projects could be located in the Delta, or in the Delta  
31 watershed. If these activities occurred on forest or timberland, they could convert these lands to  
32 nonforest use.

#### 33 *Effects of Project Operation*

34 Ongoing operation of restoration projects in areas that are currently in forest or timber cover could cause  
35 conversion of forest or timberlands to other uses. The extent of impact would be influenced by the size of  
36 the footprint for individual restoration projects.

37 The Delta Plan encourages implementation of several ecosystem restoration projects, including the  
38 Cosumnes River-Mokelumne River Confluence: North Delta Flood Control and Ecosystem Restoration  
39 Project; Suisun Marsh Habitat Management, Preservation, and Restoration Plan; Cache Slough Complex  
40 Project; Yolo Bypass Project; and the Lower San Joaquin River Bypass Proposal. It is not known at this  
41 time what specific activities would occur that could affect agricultural and forestry resources.

1 Review of these past projects provides analogous information to understand how Delta Plan–encouraged  
2 projects, for which there are no project-specific details or associated reviews, might affect timberland  
3 resources or TPZ. The EIRs and EISs for these projects did not specifically find conversion of forestland,  
4 timberland, or TPZ to be an issue of concern, but construction and operations-related impacts on these  
5 resources associated with surface facilities would be similar to the impacts, mitigation measures, and  
6 findings as the more general farmland conversion impacts described in Section 7.4.3.2.1 because the  
7 impact mechanisms would be the same types of footprint impacts.

### 8 *Conclusion*

9 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
10 time such projects are proposed by lead agencies. However, because substantial permanent changes to the  
11 landscapes could convert forestland to nonforest use, the potential impacts of projects encouraged by the  
12 Delta Plan are considered **significant**.

### 13 7.4.3.2.5 Impact 7-5b: Involve Other Changes in the Existing Environment That, Because of Their 14 Location or Nature, Could Result in Conversion of Farmland to Nonagricultural Use or 15 Conversion of Forestland to Nonforest Use

#### 16 *Effects of Project Construction*

17 The Delta Plan encourages projects, including the projects identified in Section 7.4.3.2, that would  
18 include the construction and operation of ecological restoration areas. Temporary effects from  
19 construction would include removal of vegetation and disturbance of soil in restoration area footprints and  
20 borrow/spoils sites. These temporary effects could become permanent where areas are cleared for  
21 replanting or restoration of nonagricultural habitats, such as tidal marsh, riparian corridors, and grassland.  
22 Construction of projects encouraged by the Delta Plan could require the use of heavy equipment, such as  
23 excavators, graders, scrapers, bulldozers, and backhoes. Haul trucks would be used to move borrow  
24 and/or spoils and other materials.

25 In addition to direct impacts described in Sections 7.4.3.2.1 (Impact 7-1b), 7.4.3.2.2 (Impact 7-2b),  
26 7.4.3.2.3 (Impact 7-3b), and 7.4.3.2.4 (Impact 7-4b), construction activities related to Delta ecosystem  
27 restoration projects could affect nearby forest or agricultural lands because of noise, access constraints,  
28 dust, or other effects that would indirectly result in conversion of these lands to other uses. These effects  
29 are discussed in other resource sections of this EIR, including Section 9, Air Quality; Section 15, Noise;  
30 and Section 19, Transportation, Traffic, and Circulation. Furthermore, disturbance and removal of  
31 existing vegetation as a part of construction activities could result in the spread of invasive species to new  
32 areas, negatively affecting the health or viability of surrounding agricultural or forest uses.

#### 33 *Effects of Project Operations*

34 In addition to direct impacts described in Sections 7.4.3.2.1 (Impact 7-1b), 7.4.3.2.2 (Impact 7-2b),  
35 7.4.3.2.3 (Impact 7-3b), and 7.4.3.2.4 (Impact 7-4b), ongoing operational activities related to Delta  
36 ecosystem restoration projects could affect nearby forest or agricultural lands because of noise, access  
37 constraints, dust, or other effects that would indirectly result in conversion of these lands to other uses.  
38 These effects are discussed in other resource sections of this EIR, including Section 9, Air Quality;  
39 Section 15, Noise; and Section 19, Transportation, Traffic, and Circulation. The extent of impact would  
40 be influenced by the size of the footprint for individual projects.

41 The Delta Plan encourages implementation of several ecosystem restoration projects, including the  
42 Cosumnes River-Mokelumne River Confluence: North Delta Flood Control and Ecosystem Restoration  
43 Project; Suisun Marsh Habitat Management, Preservation, and Restoration Plan; Cache Slough Complex  
44 Project; Yolo Bypass Project; and Lower San Joaquin River Bypass Proposal. It is not known at this time  
45 what specific activities would occur that could affect agricultural and forestry resources.

1 Documents reviewed for potential impacts included the North Delta Flood Control and Ecosystem  
2 Restoration Project EIR (DWR 2010), which analyzes proposed flood management and ecosystem  
3 restoration projects in the Delta, and the Suisun Marsh Habitat Management, Preservation, and  
4 Restoration Plan (Reclamation et al. 2010), did not evaluate possible effects that the projects would have  
5 on offsite agricultural or timberland uses, but did address ecosystem restoration in the Suisun Marsh.  
6 These documents found that the on-site agricultural impacts were either less than significant or could be  
7 mitigated to a less-than-significant level.

8 Based on these examples, it is likely that the agricultural resources impacts of projects encouraged by the  
9 Delta Plan could be mitigated to a less-than-significant level. For other named projects where an  
10 environmental impact analysis has not been prepared, it is expected that this impact analysis provides a  
11 reasonable analysis of potential effects that would occur if the projects of a similar nature and similar  
12 setting were implemented.

### 13 *Conclusion*

14 A detailed description of these projects is not available; however, it is possible that significant and  
15 unmitigable impacts on agricultural resources could occur. Project-level impacts would be addressed in  
16 future site-specific environmental analysis conducted at the time such projects are proposed by lead  
17 agencies. However, because temporary construction-related impacts could occur, and because substantial  
18 changes to the landscapes could indirectly result in conversion of agricultural land or forestland, the  
19 potential impacts of projects encouraged by the Delta Plan are considered **significant**.

### 20 **7.4.3.3 Water Quality Improvement**

21 As described in Sections 2A and 2B, the Delta Plan does not direct the construction of specific projects,  
22 nor would projects be implemented under the direct authority of the Delta Stewardship Council. However,  
23 the Delta Plan seeks to improve water quality by encouraging various actions and projects that, if taken,  
24 could lead to completion, construction, and/or operation of projects that could improve water quality.

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

- 27 " Water treatment plants
- 28 " Conveyance facilities (pipelines, pumping plants)
- 29 " Wastewater treatment and recycle facilities
- 30 " Municipal stormwater treatment facilities
- 31 " Agricultural runoff treatment (eliminate, capture and treat/reuse)
- 32 " Wellhead treatment facilities
- 33 " Wells (withdrawal, recharge, and monitoring)

34 The number and location of all potential actions and projects that would be implemented are not known at  
35 this time. Various projects, however, are known to some degree and are named in the Delta Plan:

- 36 " North Bay Aqueduct Alternative Intake Project
- 37 " Central Valley Drinking Water Policy
- 38 " Central Valley Pesticide Total Maximum Daily Load and Basin Plan Amendment for diazinon  
39 and chlorpyrifos (regulatory processes, research, and monitoring)
- 40 " Central Valley Pesticide Total Maximum Daily Load and Basin Plan Amendment for pyrethroids  
41 (regulatory processes, research, and monitoring)

- 1       "    Total Maximum Daily Load and Basin Plan Amendments for selenium and methylmercury
- 2       ( regulatory processes, research, and monitoring)
- 3       "    Water Quality Control Plan Update for the San Francisco Bay/ Sacramento-San Joaquin Delta
- 4       Estuary (water flow objectives update)
- 5       "    SWRCB/Central Valley Regional Water Quality Control Board Strategic Workplan
- 6       "    Central Valley Salinity Alternatives for Long-Term Sustainability (CV-SALTS)

7   Of these named projects/actions, only the North Bay Aqueduct Project would involve construction and/or  
8   operation of facilities that could have agriculture or forestry resources impacts. The remaining seven are  
9   programs, policies, or studies that would not result in a specific project the construction or operation of  
10  which could have agriculture or forestry resources impacts; therefore, these programs, policies, and  
11  studies are not discussed further in this section.

#### 12  7.4.3.3.1   Impact 7-1c: Conversion of Farmland to Nonagricultural Use

##### 13  *Effects of Project Construction*

14  Construction-related activities at construction sites for water quality improvement projects, including  
15  projects identified in Section 7.4.3.3 and water treatment plants, pipelines, wastewater treatment plants,  
16  stormwater treatment facilities, and agricultural runoff treatment could require the use of heavy  
17  equipment, such as excavators, graders, scrapers, bulldozers, backhoes, and concrete mixing and pumping  
18  trucks. The facilities would be located in the Delta, the Delta watershed, and areas outside the Delta that  
19  use Delta water, as described in Section 2A, Proposed Project and Alternatives. Each of these activities  
20  could potentially convert agricultural land to nonagricultural use if it occurs on or near agricultural land.

21  In the Delta, potential conversion of agricultural land could occur in or near the cities of Sacramento,  
22  Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
23  Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
24  San Joaquin, and Contra Costa counties. Applicable agricultural land protection, conversion, and  
25  mitigation requirements in the Delta would include those of these cities and counties. In the Delta  
26  watershed, and areas outside the Delta that use Delta water, other local agricultural protection and  
27  mitigation requirements could also apply.

##### 28  *Effects of Project Operation*

29  Projects encouraged by the Delta Plan could include water treatment plants, pipelines, wastewater  
30  treatment plants, stormwater treatment facilities, and agricultural runoff treatment. The facilities would be  
31  located in the Delta, the Delta watershed, and areas outside the Delta that use Delta water, as described in  
32  Section 2A, Proposed Project and Alternatives. Operation of these facilities could result in the permanent  
33  conversion of agricultural land. The extent of impact would be influenced by the size of the footprint for  
34  individual projects and facilities.

35  It is unclear at this time how implementation of the Proposed Project would result in specific activities,  
36  including the location, number, methods, and duration of construction activities and the type of facilities  
37  that would be operated. The Delta Plan encourages implementation of the North Bay Aqueduct  
38  Alternative Intake Project. The new alternative intake structure would be located on the Sacramento River  
39  in a rural area of Sacramento or Yolo County and the new pipeline would extend from the new intake  
40  structure to the existing North Bay Regional Water Treatment Plant. The diversion/intake structure and  
41  water conveyance pipeline are similar to the Davis-Woodland Water Supply Project.



1 Documents reviewed for potential impacts included EIRs and EISs for the Davis-Woodland Water Supply  
2 Project (City of Davis 2007), which includes a water intake in the Sacramento River, pumping plants,  
3 conveyance, and water treatment facilities; and the Grasslands Bypass project (Reclamation and San Luis  
4 & Delta-Mendota Water Authority 2008). The Davis-Woodland Water Supply Project identified a  
5 significant and unavoidable impact related to conversion of agricultural land.

6 Review of these past projects provides analogous information to understand how Delta Plan–encouraged  
7 projects, for which there are no project-specific details or associated reviews, might affect agricultural  
8 resources. As these EIRs and EISs show, water quality improvement projects may temporarily and  
9 permanently convert farmland to nonagricultural use when the footprint of disturbance of the projects  
10 includes farmland. The EIRs and EISs for these projects found that the agricultural impacts associated  
11 with water quality facilities were either less than significant with mitigation, because water conveyance  
12 could be installed below the root zone or significant and unavoidable because of the lack of feasible  
13 mitigation (i.e., the permanent conversion of farmland could not be replaced).

14 For other named projects where an environmental impact analysis has not been prepared, it is expected  
15 that this impact analysis provides a reasonable analysis of potential effects that would occur if the projects  
16 of a similar nature and similar setting were implemented.

### 17 *Conclusion*

18 A detailed description of named projects and projects encouraged by the Delta Plan is not available, and it  
19 is possible that significant impacts on agriculture or forestry resources might be encountered that cannot  
20 be mitigated. Project-level impacts would be addressed in future site-specific environmental analysis  
21 conducted at the time such projects are proposed by lead agencies. However, because named projects and  
22 projects encouraged by the Delta Plan could result in conversion of agricultural land to nonagricultural  
23 use, this potential impact is considered **significant**.

### 24 7.4.3.3.2 Impact 7-2c: Conflict with Existing Zoning for Agricultural Use or a Williamson 25 Act Contract

#### 26 *Effects of Project Construction*

27 Construction-related activities at construction sites for water quality improvement projects, including  
28 projects identified in Section 7.4.3.3 and water treatment plants, pipelines, wastewater treatment plants,  
29 stormwater treatment facilities, and agricultural runoff treatment could require the use of heavy  
30 equipment, such as excavators, graders, scrapers, bulldozers, backhoes, and concrete mixing and pumping  
31 trucks. The facilities would be located in the Delta, the Delta watershed, and areas outside the Delta that  
32 use Delta water, as described in Section 2A, Proposed Project and Alternatives. Each of these activities  
33 could potentially conflict with agricultural zoning or Williamson Act contract terms and lead to the  
34 conversion of land from agricultural use, causing physical impacts similar to those described in  
35 Section 7.4.3.3.1 (Impact 7-1c).

36 In the Delta, potential conflicts with agricultural zoning could occur near the cities of Sacramento,  
37 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
38 Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
39 San Joaquin, and Contra Costa counties. Applicable agricultural zoning in the Delta would include zoning  
40 adopted and enforced by these cities and counties. In the Delta watershed, and areas outside the Delta that  
41 use Delta water, other local agricultural zoning requirements could also apply.

1 *Effects of Project Operation*

2 Projects encouraged by the Delta Plan could include water treatment plants, pipelines, wastewater  
3 treatment plants, stormwater treatment facilities, and agricultural runoff treatment. The facilities would be  
4 located in the Delta, the Delta watershed, and areas outside the Delta that use Delta water, as described in  
5 Section 2A, Proposed Project and Alternatives. Operation of these facilities could conflict with  
6 agricultural zoning or Williamson Act contracts and lead to the conversion of land from agricultural use.  
7 The extent of impact would be influenced by the size of the footprint for individual projects and facilities.

8 It is unclear at this time how implementation of the Proposed Project would result in specific activities,  
9 including the location, number, methods, and duration of construction activities and the type of facilities  
10 that would be operated. The Delta Plan encourages implementation of the North Bay Aqueduct  
11 Alternative Intake Project. The new alternative intake structure would be located on the Sacramento River  
12 in a rural area of Sacramento or Yolo County and the new pipeline would extend from the new intake  
13 structure to the existing North Bay Regional Water Treatment Plant. The diversion/intake structure and  
14 water conveyance pipeline are similar to the Davis-Woodland Water Supply Project.

15 Documents reviewed for potential impacts included EIRs and EISs for the Davis-Woodland Water Supply  
16 Project (City of Davis 2007), which includes a water intake in the Sacramento River, pumping plants,  
17 conveyance, and water treatment facilities; and the Grasslands Bypass project (Reclamation and San Luis  
18 & Delta-Mendota Water Authority 2008). The Davis-Woodland Water Supply Project identified a  
19 significant and unavoidable impact related to conversion of agricultural land. The EIRs and EISs for these  
20 projects did not specifically discuss agricultural zoning or Williamson Act contracts, but did find that the  
21 agricultural impacts associated with surface facilities were either less than significant with mitigation or  
22 significant and unavoidable as described above in Section 7.4.3.3.1 (mitigation can include modifying the  
23 project to avoid the root zone or no mitigation would be feasible).

24 For other named projects where an environmental impact analysis has not been prepared, it is expected  
25 that this impact analysis provides a reasonable analysis of potential effects that would occur if the projects  
26 of a similar nature and similar setting were implemented.

27 *Conclusion*

28 A detailed description of named projects and projects encouraged by the Delta Plan is not available, and it  
29 is possible that significant impacts on agriculture or forestry resources might be encountered that cannot  
30 be mitigated. Project-level impacts would be addressed in future site-specific environmental analysis  
31 conducted at the time such projects are proposed by lead agencies. However, because named projects and  
32 projects encouraged by the Delta Plan could result in conflict with existing agricultural zoning or  
33 Williamson Act contracts, this potential impact is considered **significant**.

34 **7.4.3.3.3 Impact 7-3c: Conflict with Existing Zoning for, or Cause Rezoning of, Forestland,**  
35 **Timberland, or Timberland Zoned for Timberland Production**

36 *Effects of Project Construction*

37 It is unclear at this time how implementation of the Proposed Project would result in specific activities,  
38 including the location, number, methods, and duration of construction activities and the type of facilities  
39 that would be operated. The Delta Plan encourages implementation of the North Bay Aqueduct  
40 Alternative Intake Project. The new alternative intake structure would be located on the Sacramento River  
41 in a rural area of Sacramento or Yolo County and the new pipeline would extend from the new intake  
42 structure to the existing North Bay Regional Water Treatment Plant.

1 Construction-related activities at construction sites for water quality improvement projects, including  
2 projects identified in Section 7.4.3.3 and water treatment plants, pipelines, wastewater treatment plants,  
3 stormwater treatment facilities, and agricultural runoff treatment could require the use of heavy  
4 equipment, such as excavators, graders, scrapers, bulldozers, backhoes, and concrete mixing and pumping  
5 trucks. Temporary effects from construction would include removal of vegetation and disturbance of soil  
6 in facilities footprints and borrow/spoils. These temporary effects could become permanent where areas  
7 are cleared for buildings, facilities, paved roads and storage / staging, and other project features. The  
8 facilities could be located in the Delta, in the Delta watershed, or in areas outside the Delta that use Delta  
9 water, as described in Section 2A, Proposed Project and Alternatives.

10 In the Delta, potential conflicts with forestland zoning could occur near the cities of Sacramento,  
11 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
12 Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
13 San Joaquin, and Contra Costa counties. Applicable forestland and timberland zoning in the Delta would  
14 include those adopted and enforced by these cities and counties. In the Delta watershed, and areas outside  
15 the Delta that use Delta water, other local forest zoning or TPZ requirements could also apply.

#### 16 *Effects of Project Operations*

17 Projects encouraged by the Delta Plan could include water treatment plants, pipelines, wastewater  
18 treatment plants, stormwater treatment facilities, and agricultural runoff treatment. The facilities would be  
19 located in the Delta, the Delta watershed, and areas outside the Delta that use Delta water, as described in  
20 Section 2A, Proposed Project and Alternatives. Operation of each of these facility types could potentially  
21 conflict with existing zoning for forestland and timberland or TPZ if they occur in these zones, and lead  
22 to the conversion of these lands from forest use, causing physical impacts similar to those described in  
23 Section 7.4.3.3.4 (Impact 7-4c). The extent of impact would be influenced by the size of the footprint for  
24 individual projects and facilities.

#### 25 *Conclusion*

26 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
27 time such projects are proposed by lead agencies. However, because named projects and projects  
28 encouraged by the Delta Plan could result in conflict with existing timber or forest zoning or TPZ, this  
29 potential impact is considered **significant**.

#### 30 **7.4.3.3.4 Impact 7-4c: Loss of Forestland or Conversion of Forestland to Nonforest Use**

##### 31 *Effects of Project Construction*

32 It is unclear at this time how implementation of the Proposed Project, including those projects identified  
33 in Section 7.4.3.3, would result in specific activities, including the location, number, methods, and  
34 duration of construction activities and the type of facilities that would be operated. The Delta Plan  
35 encourages implementation of the North Bay Aqueduct Alternative Intake Project. The new alternative  
36 intake structure would be located on the Sacramento River in a rural area of Sacramento or Yolo County  
37 and the new pipeline would extend from the new intake structure to the existing North Bay Regional  
38 Water Treatment Plant.

39 The USFS estimates indicate that approximately 44,530 acres of private timberland, half of which is  
40 composed of western oaks, are located in the five Delta counties. Timberland represents about one quarter  
41 of forestland in the five Delta counties. Western oaks make up approximately 75 percent of  
42 nontimberland forest resources, making them the most abundant forest type in the five Delta counties. It is  
43 unclear how much, if any, of this forestland is located in the Delta, although the Fire and Resource  
44 Assessment Program estimates that 3,288 acres of hardwood habitats are located in the Delta.

1 As described in greater detail in Section 4, Biological Resources, there are 8,980 acres of riparian forest  
2 habitat in the Delta. These areas typically are found as long, linear patches separating other terrestrial  
3 biological communities from agricultural or urban land or as low-lying, flood-prone patches near river  
4 bends, canals, or breached levees. They can be located along major waterways, drainage channels, pond  
5 margins, and oxbows and in abandoned, low-lying fields. Forestlands in the Delta watershed and areas  
6 outside the Delta that receive Delta water and that are most likely to be located near future construction  
7 sites would include woodlands in the foothills, and wooded riparian habitat along streams and major  
8 waterways, drainage channels, pond margins, and oxbows and in abandoned, low-lying fields.

9 Construction-related activities at construction sites for water quality improvement projects, including  
10 water treatment plants, desalination plants, pipelines, wastewater treatment plants, stormwater treatment  
11 facilities, and agricultural runoff treatment could require the use of heavy equipment, such as excavators,  
12 graders, scrapers, bulldozers, backhoes, and concrete mixing and pumping trucks. Temporary effects from  
13 construction would include removal of vegetation and disturbance of soil in facilities footprints and  
14 borrow/spoils. These temporary effects could become permanent where areas are cleared for buildings,  
15 facilities, paved roads and storage/staging, and other project features. The facilities could be located in the  
16 Delta, in the Delta watershed, or in areas outside the Delta that use Delta water, as described in  
17 Section 2A, Proposed Project and Alternatives.

#### 18 *Effects of Project Operation*

19 Projects encouraged by the Delta Plan could include water treatment plants, pipelines, wastewater  
20 treatment plants, stormwater treatment facilities, and agricultural runoff treatment. The facilities would be  
21 located in the Delta, the Delta watershed, and areas outside the Delta that use Delta water, as described in  
22 Section 2A, Proposed Project and Alternatives. Operation of these facilities could permanently remove  
23 lands from forest or timberland use. The extent of impact would be influenced by the size of the footprint  
24 for individual projects and facilities.

#### 25 *Conclusion*

26 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
27 time such projects are proposed by lead agencies. However, because named projects and projects  
28 encouraged by the Delta Plan could result in conversion of forestlands to nonforest use, this potential  
29 impact is considered **significant**.

#### 30 **7.4.3.3.5 Impact 7-5c: Involve Other Changes in the Existing Environment That, Because of Their** 31 **Location or Nature, Could Result in Conversion of Farmland to Nonagricultural Use or** 32 **Conversion of Forestland to Nonforest Use**

#### 33 *Effects of Project Construction*

34 Construction-related activities at construction sites for water quality improvement projects, including  
35 those identified in Section 7.4.3.3 and water treatment plants, pipelines, wastewater treatment plants,  
36 stormwater treatment facilities, and agricultural runoff treatment could require the use of heavy  
37 equipment, such as excavators, graders, scrapers, bulldozers, backhoes, and concrete mixing and pumping  
38 trucks. Temporary effects from construction would include removal of vegetation and disturbance of soil  
39 in facilities footprints and borrow/spoils. These temporary effects could become permanent where areas  
40 are cleared for buildings, facilities, paved roads and storage / staging, and other project features. The  
41 facilities could be located in the Delta, in the Delta watershed, or in areas outside the Delta that use Delta  
42 water, as described in Section 2A, Proposed Project and Alternatives.

43 In addition to direct impacts described in Sections 7.4.3.3.1 (Impact 7-1c), 7.4.3.3.2 (Impact 7-2c),  
44 7.4.3.3.3 (Impact 7-3c), and 7.4.3.3.4 (Impact 7-4c), construction activities related to water quality  
45 projects could affect nearby forest or agricultural lands because of noise, access constraints, dust, or other  
46 effects that would indirectly result in conversion of these lands to other uses. These effects are discussed

1 in other resource sections of this EIR, including Section 9, Air Quality; Section 15, Noise; and Section 19,  
2 Transportation, Traffic, and Circulation. Furthermore, disturbance and removal of existing vegetation as a  
3 part of construction activities could result in the spread of invasive species to new areas, negatively  
4 affecting the health or viability of surrounding agricultural or forest uses.

#### 5 *Effects of Project Operations*

6 Projects encouraged by the Delta Plan could include water treatment plants, pipelines, wastewater  
7 treatment plants, stormwater treatment facilities, and agricultural runoff treatment. The facilities would be  
8 located in the Delta, the Delta watershed, and areas outside the Delta that use Delta water, as described in  
9 Section 2A, Proposed Project and Alternatives.

10 In addition to direct impacts described in Sections 7.4.3.3.1 (Impact 7-1c), 7.4.3.3.2 (Impact 7-2c),  
11 7.4.3.3.3 (Impact 7-3c), and 7.4.3.3.4 (Impact 7-4c), operation of water quality project facilities could  
12 affect nearby forest or agricultural lands because of noise, access constraints, dust, or other effects that  
13 would indirectly result in conversion of these lands to other uses. These effects are discussed in other  
14 resource sections of this EIR, including Section 9, Air Quality; Section 15, Noise; and Section 19,  
15 Transportation, Traffic, and Circulation. The extent of impact would be influenced by the size of the  
16 footprint for individual projects and facilities.

17 It is unclear at this time how implementation of the Proposed Project would result in specific activities,  
18 including the location, number, methods, and duration of construction activities and the type of facilities  
19 that would be operated. The Delta Plan encourages implementation of the North Bay Aqueduct  
20 Alternative Intake Project. The new alternative intake structure would be located on the Sacramento River  
21 in a rural area of Sacramento or Yolo County and the new pipeline would extend from the new intake  
22 structure to the existing North Bay Regional Water Treatment Plant. The diversion/intake structure and  
23 water conveyance pipeline are similar to the Davis-Woodland Water Supply Project.

24 Documents reviewed for potential impacts included EIRs and EISs for the Davis-Woodland Water Supply  
25 Project (City of Davis 2007), which includes a water intake in the Sacramento River, pumping plants,  
26 conveyance, and water treatment facilities; and the Grasslands Bypass Project (Reclamation and San Luis  
27 & Delta-Mendota Water Authority 2008). These EIRs did not evaluate possible effects that the projects  
28 would have on offsite agricultural or timberland uses, but did address water quality improvement impacts  
29 on on-site agricultural resources. The Davis-Woodland Water Supply Project identified a significant and  
30 unavoidable impact related to conversion of agricultural land.

31 For other named projects where an environmental impact analysis has not been prepared, it is expected  
32 that this impact analysis provides a reasonable analysis of potential effects that would occur if the projects  
33 of a similar nature and similar setting were implemented.

#### 34 *Conclusion*

35 Detailed descriptions of named projects and projects encouraged by the Delta Plan are not currently  
36 available; however, it is possible that significant impacts on agriculture or forestry resources might be  
37 encountered that cannot be mitigated. Project-level impacts would be addressed in future site-specific  
38 environmental analysis conducted at the time such projects are proposed by lead agencies. However,  
39 because named projects and projects encouraged by the Delta Plan could indirectly result in conversion of  
40 forest or agricultural lands, this potential impact is considered **significant**.

#### 1 **7.4.3.4 Flood Risk Reduction**

2 As described in Sections 2A and 2B, the Delta Plan does not direct the construction of specific projects,  
3 nor would projects be implemented under the direct authority of the Delta Stewardship Council. However,  
4 the Delta Plan seeks to reduce the risk of floods in the Delta by encouraging various actions that, if taken,  
5 could lead to completion, construction, and/or operation of projects that could reduce flood risks in the  
6 Delta. Such projects and their features could include the following:

- 7     " Setback levees
- 8     " Floodplain expansion
- 9     " Levee maintenance
- 10    " Levee modification
- 11    " Dredging
- 12    " Stockpiling of rock for flood emergencies
- 13    " Subsidence reversal
- 14    " Reservoir reoperation

15 The number and location of all potential projects that would be implemented are not known at this time.  
16 One possible project, however, is known to some degree and is named in the Delta Plan: the Sacramento  
17 Deep Water Ship Channel and Stockton Deep Water Ship Channel Dredging (the United States Army  
18 Corps of Engineer's *Delta Dredged Sediment Long-Term Management Strategy* included in Appendix C,  
19 Attachment C-7 of this EIR). The Proposed Project also names DWR's A Framework for Department of  
20 Water Resources Investments in Delta Integrated Flood Management, which could, upon completion,  
21 provide guidance on the prioritization flood protection investments. The DWR framework is a program,  
22 not an activity that would result in agriculture or forestry resources impacts; therefore, it is not discussed  
23 further in this section.

##### 24 **7.4.3.4.1 Impact 7-1d: Conversion of Farmland to Nonagricultural Use**

###### 25 *Effects of Project Construction*

26 Construction-related activities at construction sites for flood risk reduction projects, including expansion  
27 and modification of levees, construction of setback levees, dredging (including land-based staging and  
28 placement of dredged material), and operable barriers along the levees, could require the use of heavy  
29 equipment, such as excavators, graders, scrapers, bulldozers, backhoes, and concrete mixing and pumping  
30 trucks. The facilities would be located in the Delta and the Delta watershed. Each of these activities could  
31 potentially convert agricultural land to nonagricultural use if it occurs on or near agricultural land.

32 In the Delta, potential conversion of agricultural land could occur in or near the cities of Sacramento,  
33 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
34 Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
35 San Joaquin, and Contra Costa counties. Applicable agricultural land protection, conversion, and  
36 mitigation requirements in the Delta would include those of these cities and counties. In the Delta  
37 watershed, other local agricultural protection requirements could also apply.

###### 38 *Effects of Project Operation*

39 Implementing the Proposed Project could increase investments in levee improvements in the Delta. The  
40 improvements could primarily be to existing levees and typically would not alter their basic shape and  
41 configuration, except for the use of setback levees. Setback levees could extend the levee footprint and  
42 width into the landside of an area and increase riparian habitat on the waterside of the levee. Operation of  
43 these facilities could convert agricultural land. The extent of impact would be influenced by the size of  
44 the facility footprint.



1 It is not known at this time what specific flood risk reduction projects would occur. A variety of levee  
2 improvements, modification, and maintenance, including construction of setback levees, could be part of  
3 projects encouraged by the Delta Plan.

4 Documents reviewed for potential impacts from flood control projects included the North Delta Flood  
5 Control and Ecosystem Restoration Project EIR (DWR 2010), which analyzes proposed flood  
6 management and ecosystem restoration projects in the Delta. This EIR found that agricultural resources  
7 impacts were either less than significant or less than significant with mitigation, as described in  
8 Section 7.4.3.1.1 (mitigation measures could include modifying the project to eliminate optional project  
9 elements to avoid the permanent conversion of farmland).

10 Based on this example, it is likely that some agricultural resources impacts of named projects and projects  
11 encouraged by the Delta Plan could be mitigated to a less-than-significant level, for example when flood  
12 risk reduction actions include the construction of setback levees in the agricultural areas of the Delta and  
13 they would be located on farmland. For other named projects where an environmental impact analysis has  
14 not been prepared, it is expected that this impact analysis provides a reasonable analysis of potential  
15 effects that would occur if the projects of a similar nature and similar setting were implemented.

#### 16 *Conclusion*

17 Detailed descriptions of named projects and projects encouraged by the Delta Plan are not currently  
18 available; however, it is possible that significant impacts on agricultural resources might be encountered  
19 that cannot be mitigated. Project-level impacts would be addressed in future site-specific environmental  
20 analysis conducted at the time such projects are proposed by lead agencies. However, because named  
21 projects and projects encouraged by the Delta Plan could result in conversion of agricultural land to  
22 nonagricultural use, this potential impact is considered **significant**.

#### 23 7.4.3.4.2 Impact 7-2d: Conflict with Existing Zoning for Agricultural Use or a Williamson 24 Act Contract

##### 25 *Effects of Project Construction*

26 Construction-related activities at construction sites for flood risk reduction projects, including expansion  
27 and modification of levees, construction of setback levees, dredging (including land-based staging and  
28 placement of dredged material), and operable barriers along the levees, could require the use of heavy  
29 equipment, such as excavators, graders, scrapers, bulldozers, backhoes, and concrete mixing and pumping  
30 trucks. The facilities would be located in the Delta and the Delta watershed. Each of these activities could  
31 potentially convert agricultural land under Williamson Act contracts to nonagricultural use (causing  
32 physical impacts similar to those described in Section 7.4.3.4.1 [Impact 7-1d]) or conflict with existing  
33 zoning for agricultural use if water supply projects are not permitted uses under such contracts or in  
34 agricultural zones.

35 In the Delta, potential conflicts with agricultural zoning could occur near the cities of Sacramento,  
36 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
37 Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
38 San Joaquin, and Contra Costa counties. Applicable agricultural zoning in the Delta would include zoning  
39 adopted and enforced by these cities and counties. In the Delta watershed, other local agricultural zoning  
40 requirements could also apply.

1 *Effects of Project Operation*

2 Implementing the Proposed Project could increase investments in levee improvements in the Delta. The  
3 improvements could primarily be to existing levees and typically would not alter their basic shape and  
4 configuration, except for the use of setback levees. Setback levees could extend the levee footprint and  
5 width into the landside of an area and increase riparian habitat on the waterside of the levee. Operation of  
6 these facilities could preclude agricultural land uses and conflict with agricultural zoning requirements or  
7 Williamson Act contracts. The extent of impact would be influenced by the size of the facility footprint.

8 It is not known at this time what specific flood risk reduction projects would occur. A variety of levee  
9 improvements, modification, and maintenance, including construction of setback levees, could be part of  
10 projects encouraged by the Delta Plan.

11 Documents reviewed for potential impacts from flood control projects included the North Delta Flood  
12 Control and Ecosystem Restoration Project EIR (DWR 2010), which analyzes proposed flood  
13 management and ecosystem restoration projects in the Delta. The EIR did not specifically discuss  
14 agricultural zoning or Williamson Act contracts, but did find that the agricultural impacts associated with  
15 restoration was less than significant with the implementation of mitigation as described above in  
16 Section 7.4.3.1.1 (modifying the project to avoid footprint impacts). Based on this example, it is likely  
17 that some agricultural resources impacts of named projects and projects encouraged by the Delta Plan  
18 could be mitigated to a less-than-significant level. For other named projects where an environmental  
19 impact analysis has not been prepared, it is expected that this impact analysis provides a reasonable  
20 analysis of potential effects that would occur if the project is of a similar nature and similar setting  
21 were implemented.

22 *Conclusion*

23 Detailed descriptions of named projects and projects encouraged by the Delta Plan are not currently  
24 available; however, it is possible that significant impacts on agricultural resources might be encountered  
25 that cannot be mitigated. Project-level impacts would be addressed in future site-specific environmental  
26 analysis conducted at the time such projects are proposed by lead agencies. However, because named  
27 projects and projects encouraged by the Delta Plan could result in conflict with existing agricultural  
28 zoning or Williamson Act contracts, this potential impact is considered **significant**.

29 **7.4.3.4.3 Impact 7-3d: Conflict with Existing Zoning for, or Cause Rezoning of, Forestland,**  
30 **Timberland, or Timberland Zoned for Timberland Production**

31 *Effects of Project Construction*

32 Forestland, timberland or timberland zoned for timberland production are protected by State and federal  
33 laws. These laws generally are not compatible with the flood risk reduction activities and projects  
34 encouraged by the Delta Plan.

35 Construction-related activities at construction sites for flood risk reduction projects, including expansion  
36 and modification of levees, construction of setback levees, dredging (including land-based staging and  
37 placement of dredged material), and operable barriers along the levees, could require the use of heavy  
38 equipment, such as excavators, graders, scrapers, bulldozers, backhoes, and concrete mixing and pumping  
39 trucks. The facilities would be located in the Delta and the Delta watershed. Each of these activities could  
40 potentially conflict with zoning for forest or timberland or TPZ and result in the conversion of land from  
41 forest use, causing physical impacts similar to those described in Section 7.4.3.4.4 (Impact 7-4d).

1 In the Delta, potential conflicts with forestland zoning and TPZ could occur near the cities of Sacramento,  
2 Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield, Benicia, Suisun City, Stockton, Lathrop,  
3 Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley and in Sacramento, Yolo, Solano,  
4 San Joaquin, and Contra Costa counties. Applicable forestland and timberland zoning in the Delta would  
5 include those adopted and enforced by these cities and counties. In the Delta watershed, other local forest  
6 zoning or TPZ requirements could also apply.

#### 7 *Effects of Project Operations*

8 Implementing the Proposed Project could increase investments in levee improvements in the Delta. The  
9 improvements could primarily be to existing levees and typically would not alter their basic shape and  
10 configuration, except for the use of setback levees. Setback levees could extend the levee footprint and  
11 width into the landside of an area and increase riparian habitat on the waterside of the levee. Operation of  
12 these facilities could potentially conflict with existing zoning for forestland and timberland or TPZ if they  
13 occur in these zones and lead to the conversion of land from forest use. The extent of impact would be  
14 influenced by the size of the facility footprint.

15 It is likely that some forestland and timberland resources or TPZ conversion impacts of named projects  
16 and projects encouraged by the Delta Plan could be mitigated to a less-than-significant level. This could  
17 be achieved by modifying a project to avoid land zoned for forestland or timberland production. For  
18 situations that are ecosystem restoration projects or have the opportunity to include ecosystem restoration  
19 as an element of a project (e.g. levee degradation for floodplain expansion), an ecological restoration plan  
20 could be prepared that is consistent with the existing forestland or timberlands zoning provisions. The  
21 details of many of the aspects of these projects, however, are not currently known, and it is possible that  
22 significant impacts on forestland and timberland resources or TPZ conversion might be encountered that  
23 cannot be mitigated.

24 It is not known at this time what specific flood risk reduction projects would occur. A variety of levee  
25 improvements, modification, and maintenance, including construction of setback levees, could be part of  
26 projects encouraged by the Delta Plan.

#### 27 *Conclusion*

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 named projects and projects  
30 encouraged by the Delta Plan could result in conflict with existing timber or forest zoning or TPZ, this  
31 potential impact is considered **significant**.

#### 32 7.4.3.4.4 Impact 7-4d: Loss of Forestland or Conversion of Forestland to Nonforest Use

##### 33 *Effects of Project Construction*

34 The USFS estimates indicate that approximately 44,530 acres of private timberland, half of which is  
35 composed of western oaks, are located in the five Delta counties. Timberland represents about one quarter  
36 of forestland in the five Delta counties. Western oaks make up approximately 75 percent of  
37 nontimberland forest resources, making them the most abundant forest type in the five Delta counties. It is  
38 unclear how much, if any, of this forestland is located in the Delta, although the Fire and Resource  
39 Assessment Program estimates that 3,288 acres of hardwood habitats are located in the Delta.

40 As described in greater detail in Section 4, Biological Resources, 8,980 acres of riparian forest habitat are  
41 in the Delta. These areas typically are found as long, linear patches separating other terrestrial biological  
42 communities from agricultural or urban land or as low-lying, flood-prone patches near river bends, canals,  
43 or breached levees. They can be located along major waterways, drainage channels, pond margins, and  
44

1 oxbows and in abandoned, low-lying fields. Forestlands in the Delta watershed that are most likely to be  
2 located near future construction sites would include woodlands in the foothills, wooded riparian habitat,  
3 and along streams, and along major waterways, drainage channels, pond margins, and oxbows and in  
4 abandoned, low-lying fields.

5 Construction-related activities at construction sites for flood risk reduction projects, including expansion  
6 and modification of levees, construction of setback levees, dredging (including land-based staging and  
7 placement of dredged material), and operable barriers along the levees, could require the use of heavy  
8 equipment, such as excavators, graders, scrapers, bulldozers, backhoes, and concrete mixing and pumping  
9 trucks. The facilities would be located in the Delta and the Delta watershed. Each of these activities could  
10 potentially result in loss of forestland or convert forestland to nonforest use if it occurs on or near  
11 forestland, including oak woodland riparian forests.

#### 12 *Effects of Project Operation*

13 Implementing the Proposed Project could increase investments in levee improvements in the Delta. The  
14 improvements could primarily be to existing levees and typically would not alter their basic shape and  
15 configuration, except for the use of setback levees. Setback levees could extend the levee footprint and  
16 width into the landside of an area and increase riparian habitat on the waterside of the levee. Operation of  
17 these facilities could convert forestland or timberland to nonforest use. The extent of impact would be  
18 influenced by the size of the facility footprint.

19 It is likely that some forestland or timberland resources impacts of named projects and projects  
20 encouraged by the Delta Plan could be mitigated to a less-than-significant level. As described above in  
21 Section 7.4.3.4.3, these mitigation measures could include avoidance through redesign or the inclusion of  
22 an ecological restoration plan that is consistent with the provisions of the existing forestland or timberland  
23 code. The details of many of the aspects of these projects, however, are not currently known, and it is  
24 possible that significant impacts on forestland or timberland resources might be encountered that cannot  
25 be mitigated.

26 It is not known at this time what specific flood risk reduction projects would occur. A variety of levee  
27 improvements, modification, and maintenance, including construction of setback levees, could be part of  
28 projects encouraged by the Delta Plan.

#### 29 *Conclusion*

30 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
31 time such projects are proposed by lead agencies. However, because named projects and projects  
32 encouraged by the Delta Plan could result in conversion of forestlands to nonforest use, this potential  
33 impact is considered **significant**.

#### 34 7.4.3.4.5 Impact 7-5d: Involve Other Changes in the Existing Environment That, Because of Their 35 Location or Nature, Could Result in Conversion of Farmland to Nonagricultural Use or 36 Conversion of Forestland to Nonforest Use

#### 37 *Effects of Project Construction*

38 Construction-related activities at construction sites for flood risk reduction projects, including expansion  
39 and modification of levees, construction of setback levees, dredging (including land-based staging and  
40 placement of dredged material), and operable barriers along the levees, could require the use of heavy  
41 equipment, such as excavators, graders, scrapers, bulldozers, backhoes, and concrete mixing and pumping  
42 trucks. The facilities would be located in the Delta and the Delta watershed.

1 In addition to direct impacts described in Sections 7.4.3.4.1 (Impact 7-1d), 7.4.3.4.2 (Impact 7-2d),  
2 7.4.3.4.3 (Impact 7-3d), and 7.4.3.4.4 (Impact 7-4d), construction activities related to flood risk reduction  
3 projects could affect nearby forest or agricultural lands because of noise, access constraints, dust, or other  
4 effects that would indirectly result in conversion of these lands to other uses. These effects are discussed  
5 in other resource sections of this EIR, including Section 9, Air Quality; Section 15, Noise; and Section 19,  
6 Transportation, Traffic, and Circulation. Furthermore, disturbance and removal of existing vegetation as a  
7 part of construction activities could result in the spread of invasive species to new areas, negatively  
8 affecting the health or viability of surrounding agricultural or forest uses.

### 9 *Effects of Project Operations*

10 Implementing the Proposed Project could increase investments in levee improvements in the Delta. The  
11 improvements could primarily be to existing levees and typically would not alter their basic shape and  
12 configuration, except for the use of setback levees. Setback levees could extend the levee footprint and  
13 width into the landside of an area and increase riparian habitat on the waterside of the levee.

14 In addition to direct impacts described in Sections 7.4.3.4.1 (Impact 7-1d), 7.4.3.4.2 (Impact 7-2d),  
15 7.4.3.4.3 (Impact 7-3d), and 7.4.3.4.4 (Impact 7-4d), operation of water quality project facilities could  
16 affect nearby forest or agricultural lands because of noise, access constraints, dust, or other effects that  
17 would indirectly result in conversion of these lands to other uses. These effects are discussed in other  
18 resource sections of this EIR, including Section 9, Air Quality; Section 15, Noise; and Section 19,  
19 Transportation, Traffic, and Circulation. The extent of impact would be influenced by the size of the  
20 facility footprint.

21 It is not known at this time what specific flood risk reduction projects would occur. However, the Delta  
22 Plan encourages implementation of the Sacramento Deep Water Ship Channel and Stockton Deep Water  
23 Ship Channel Dredging Project, which has not undergone project-specific environmental review. An  
24 analogous project that involves hydraulic dredging similar to this ship channel project is the North Delta  
25 Flood Control and Ecosystem Restoration Project. In addition to dredging projects, a variety of levee  
26 improvements, modification, and maintenance, including construction of setback levees, could be part of  
27 projects encouraged by the Delta Plan.

28 Documents reviewed for potential impacts from flood control projects included the North Delta Flood  
29 Control and Ecosystem Restoration Project EIR (DWR 2010), which analyzes proposed flood  
30 management and ecosystem restoration projects in the Delta. These EIRs did not evaluate possible effects  
31 that the projects would have on offsite agricultural or timberland uses, but did address water quality  
32 improvement impacts on on-site agricultural resources. This EIR found that agricultural resources impacts  
33 were less than significant with mitigation (avoided by eliminating optional elements of the project that  
34 could impact farmland).

35 Based on this example, it is likely that some agricultural resources impacts of named projects and projects  
36 encouraged by the Delta Plan could be mitigated to a less-than-significant level.

37 For other named projects where an environmental impact analysis has not been prepared, it is expected  
38 that this impact analysis provides a reasonable analysis of potential effects that would occur if the projects  
39 of a similar nature and similar setting were implemented.

1 *Conclusion*

2 Detailed descriptions of named projects and projects encouraged by the Delta Plan are not currently  
3 available; however, it is possible that significant impacts on agricultural resources might be encountered  
4 that cannot be mitigated. Project-level impacts would be addressed in future site-specific environmental  
5 analysis conducted at the time such projects are proposed by lead agencies. However, because named  
6 projects and projects encouraged by the Delta Plan could indirectly result in conversion of forest or  
7 agricultural lands, this potential impact is considered **significant**.

8 **7.4.3.5 Protection and Enhancement of Delta as an Evolving Place**

9 As described in Sections 2A and 2B, the Delta Plan does not direct the construction of specific projects,  
10 nor would projects be implemented under the direct authority of the Delta Stewardship Council. However,  
11 the Delta Plan seeks to protect and enhance the Delta as an evolving place by encouraging various actions  
12 and projects that, if taken, could lead to completion, construction, and/or operation of associated projects.  
13 Features of such actions and could include the following:

- 14 " Gateways, bike lanes, parks, trails, and marinas and facilities to support wildlife viewing, angling,  
15 and hunting opportunities
- 16 " Additional retail and restaurants in legacy towns to support tourism

17 The number and location of all potential projects that would be implemented is not currently known.  
18 However, four possible projects are known to some degree and are named in the Delta Plan: new State  
19 parks at Barker Slough, at Elkhorn Basin, and in the southern Delta and the Economic Stability Plan. The  
20 Economic Stability Plan is not an activity that would generate agriculture or forestry resources impacts;  
21 therefore, it is not discussed further in this section.

22 **7.4.3.5.1 Impact 7-1e: Conversion of Farmland to Nonagricultural Use**

23 *Effects of Project Construction*

24 Construction-related activities at construction sites for Delta enhancement projects, including those  
25 identified in Section 7.4.3.5, could require the use of heavy equipment, such as excavators, graders,  
26 scrapers, bulldozers, backhoes, and concrete mixing and pumping trucks. The facilities would be located  
27 in the Delta and the Delta watershed. Each of these activities could potentially convert agricultural land to  
28 nonagricultural use if it occurs on or near agricultural land.

29 The potential for conversion of agricultural land could occur throughout the Delta and in or near cities  
30 bordering the Delta, such as of Sacramento, Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield,  
31 Benicia, Suisun City, Stockton, Lathrop, Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley.

32 *Effects of Project Operation*

33 Gateways, bike lanes, trails, parks, marinas, and other facilities could be established in the Delta to  
34 protect and enhance it as an evolving place. These facilities could adversely impact agricultural land  
35 locally, particularly if these lands have specific soil conditions (such as peat soils in the Delta) that  
36 support high-value crops that cannot be readily grown elsewhere in the Delta watershed by converting  
37 such land to nonagricultural use. The extent of impact would also be influenced by the size of the  
38 facility footprint.

39 It is not known at this time what types or where construction of specific Delta as evolving place type  
40 projects that could expose sensitive receptors to excessive construction noise would occur. However, the  
41 Delta Plan encourages implementation of State parks at Barker Slough, at Elkhorn Basin, and in the  
42 southern Delta. Documents reviewed for potential impacts included EIRs for the Bidwell–Sacramento  
43 River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project (The Nature

1 Conservancy and California Department of Parks and Recreation 2008) and the Draft Programmatic EIR  
2 for the San Luis Rey River Park Master Plan (San Diego County Department of Parks and  
3 Recreation 2008), which are illustrative of some of the types of impacts associated with park and  
4 environmental enhancement projects. Although the Bidwell-Sacramento River project found impacts to  
5 be less than significant, the San Luis Rey River Park project found significant and unavoidable impacts  
6 related to conversion of farmland to nonagricultural use, because the park itself was sited on farmland.  
7 An alternate site was evaluated, but the lead agency selected the San Luis Rey River Park site based on  
8 the merits of the project.

9 For other named projects where an environmental impact analysis has not been prepared, it is expected  
10 that this impact analysis provides a reasonable analysis of potential effects that would occur if the projects  
11 of a similar nature and similar setting were implemented.

### 12 *Conclusion*

13 Detailed descriptions of named projects and projects encouraged by the Delta Plan are not currently  
14 available; however, it is possible that significant impacts on agricultural resources might be encountered  
15 that cannot be mitigated. Project-level impacts would be addressed in future site-specific environmental  
16 analysis conducted at the time such projects are proposed by lead agencies. However, because named  
17 projects and projects encouraged by the Delta Plan could result in conversion of agricultural land to  
18 nonagricultural use, this potential impact is considered **significant**.

#### 19 7.4.3.5.2 Impact 7-2e: Conflict with Existing Zoning for Agricultural Use or a Williamson 20 Act Contract

##### 21 *Effects of Project Construction*

22 Construction-related activities at construction sites for Delta enhancement projects, including those  
23 identified in Section 7.4.3.5, could require the use of heavy equipment, such as excavators, graders,  
24 scrapers, bulldozers, backhoes, and concrete mixing and pumping trucks. The facilities would be located  
25 in the Delta and the Delta watershed. Each of these activities could potentially be in conflict with  
26 agricultural zoning or Williamson Act contracts if water supply projects are not permitted uses under such  
27 contracts or in agricultural zones. This conflict could result in conversion of agricultural land, causing  
28 physical impacts similar to those described in Section 7.4.3.5.1 (Impact 7-1e).

29 The potential for conversion of agricultural land could occur throughout the Delta and in or near cities  
30 bordering the Delta, such as of Sacramento, Elk Grove, Isleton, West Sacramento, Rio Vista, Fairfield,  
31 Benicia, Suisun City, Stockton, Lathrop, Manteca, Tracy, Pittsburg, Antioch, Brentwood, and Oakley.

##### 32 *Effects of Project Operation*

33 Gateways, bike lanes, trails, parks, marinas, and other facilities could be established in the Delta to  
34 protect and enhance it as an evolving place. These facilities could conflict with agricultural zoning or  
35 Williamson Act contracts and lead to the conversion of land from agricultural use. The extent of impact  
36 would be influenced by the size of the facility footprint.

37 It is not known at this time what types or where construction of specific Delta as evolving place type  
38 projects that could expose sensitive receptors to excessive construction noise would occur. However, the  
39 Delta Plan encourages implementation of State parks at Barker Slough, at Elkhorn Basin, and in the  
40 southern Delta. Documents reviewed for potential impacts included EIRs for the Bidwell–Sacramento  
41 River State Park Habitat Restoration and Outdoor Recreation Facilities Development Project (The Nature  
42 Conservancy and California Department of Parks and Recreation 2008) and the Draft Programmatic EIR  
43 for the San Luis Rey River Park Master Plan (San Diego County Department of Parks and  
44 Recreation 2008), which are illustrative of some of the types of impacts associated with park and  
45 environmental enhancement projects.



1 While the specific impacts of named projects and projects encouraged by the Delta Plan, if they go  
2 forward, are yet to be determined, projects recently evaluated under CEQA with characteristics similar to  
3 those described provide perspective on the significance of these types on agriculture resources impacts  
4 and the likelihood that they can be mitigated. EIRs prepared for several of the enumerated projects and  
5 other, similar projects illustrate many of the likely impacts. These documents found impacts related to  
6 Williamson Act conflict to be less than significant and did not require mitigation. Based on these  
7 examples, it is likely that the agriculture resources impacts of named projects and projects encouraged by  
8 the Delta Plan could be mitigated to a less-than-significant level, by avoiding sites that are zoned for  
9 agriculture or are preserved in a Williamson Act contract. The San Luis Rey River EIR did find that the  
10 agricultural impacts associated with the new park was significant and unavoidable as described above in  
11 Section 7.4.3.5.1.

12 For other named projects where an environmental impact analysis has not been prepared, it is expected  
13 that this impact analysis provides a reasonable analysis of potential effects that would occur if the projects  
14 of a similar nature and similar setting were implemented.

### 15 *Conclusion*

16 Detailed descriptions of named projects and projects encouraged by the Delta Plan are not currently  
17 available; however, it is possible that significant impacts on agricultural resources might be encountered  
18 that cannot be mitigated. Project-level impacts would be addressed in future site-specific environmental  
19 analysis conducted at the time such projects are proposed by lead agencies. However, because named  
20 projects and projects encouraged by the Delta Plan could result in conflict with existing agricultural  
21 zoning or Williamson Act contracts, this potential impact is considered **significant**.

#### 22 7.4.3.5.3 Impact 7-3e: Conflict with Existing Zoning for, or Cause Rezoning of, Forestland, 23 Timberland, or Timberland Zoned for Timberland Production

24 Gateways, bike lanes, trails, parks, marinas, and other facilities could be established in the Delta to  
25 protect and enhance it as an evolving place. Operation of these facilities could potentially lead to the  
26 conversion of land to nonforest use. However, as of 2001, none of the five Delta counties had land zoned  
27 TPZ, so there would be no conflict with forest or timber zoning.

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 there is no existing timber or forest  
30 zoning or TPZ in the Delta counties in which activities enhancing the Delta as an evolving place would  
31 occur, there would be **no impact** at the program level. Future project-specific analyses may develop  
32 adequate information to arrive at a different conclusion; however, for purposes of this program-level  
33 analysis, there is no available information to indicate that another finding is warranted or supported by  
34 substantial evidence.

#### 35 7.4.3.5.4 Impact 7-4e: Loss of Forestland or Conversion of Forestland to Nonforest Use

##### 36 *Effects of Project Construction*

37 The USFS estimates indicate that approximately 44,530 acres of private timberland, half of which is  
38 composed of western oaks, are located in the five Delta counties. Timberland represents about one quarter  
39 of forestland in the five Delta counties. Western oaks make up approximately 75 percent of  
40 nontimberland forest resources, making them the most abundant forest type in the five Delta counties. It is  
41 unclear how much, if any, of this forestland is located in the Delta, although the Fire and Resource  
42 Assessment Program estimates that 3,288 acres of hardwood habitats are located in the Delta.

43 As described in greater detail in Section 4, Biological Resources, 8,980 acres of riparian forest habitat are  
44 in the Delta. These areas typically occur in long, linear patches separating other terrestrial biological  
45 communities from agricultural or urban land or as low-lying, flood-prone patches near river bends, canals,

1 or breached levees. They can be located along major waterways, drainage channels, pond margins, and  
2 oxbows and in abandoned, low-lying fields. Forestlands in the Delta watershed that are most likely to be  
3 located near future construction sites would include woodlands in the foothills, and wooded riparian  
4 habitat along streams, along major waterways, drainage channels, pond margins, and oxbows and in  
5 abandoned, low-lying fields.

6 Construction-related activities at construction sites for Delta enhancement projects, including those  
7 identified in Section 7.4.3.5, could require the use of heavy equipment, such as excavators, graders,  
8 scrapers, bulldozers, backhoes, and concrete mixing and pumping trucks. The facilities would be located  
9 in the Delta and the Delta watershed. Each of these activities could potentially result in loss of forestland  
10 or convert forestland to nonforest use if it occurs on or near forestland, including oak woodland  
11 riparian forests.

### 12 *Effects of Project Operation*

13 Gateways, bike lanes, trails, parks, marinas, and other facilities could be established in the Delta to  
14 protect and enhance it as an evolving place. Depending on their location, operation of these facilities  
15 could convert forestland to nonforest use. The extent of impact would be influenced by the size of the  
16 facility footprint.

17 It is not known at this time what types or where specific Delta as evolving place type projects that could  
18 convert forestland to nonforest use would occur. However, the Delta Plan encourages implementation of  
19 State parks at Barker Slough, at Elkhorn Basin, and in the southern Delta. Some wooded or riparian forest  
20 areas could be affected by these projects, depending on the location of new roads, buildings, and other  
21 developed recreational facilities associated with these parks.

### 22 *Conclusion*

23 Project-level impacts would be addressed in future site-specific environmental analysis conducted at the  
24 time such projects are proposed by lead agencies. However, because named projects and projects  
25 encouraged by the Delta Plan could result in conversion of forestlands to nonforest use, this potential  
26 impact is considered **significant**.

### 27 7.4.3.5.5 Impact 7-5e: Involve Other Changes in the Existing Environment That, Because of Their 28 Location or Nature, Could Result in Conversion of Farmland to Nonagricultural Use or 29 Conversion of Forestland to Nonforest Use

#### 30 *Effects of Project Construction*

31 Construction-related activities at construction sites for Delta enhancement projects, including those  
32 identified in Section 7.4.3.5, could require the use of heavy equipment, such as excavators, graders,  
33 scrapers, bulldozers, backhoes, and concrete mixing and pumping trucks. The facilities would be located  
34 in the Delta and the Delta watershed.

35 In addition to direct impacts described in Sections 7.4.3.5.1 (Impact 7-1e), 7.4.3.5.2 (Impact 7-2e),  
36 7.4.3.5.3 (Impact 7-3e), and 7.4.3.5.4 (Impact 7-4e), construction activities related to projects that protect  
37 and enhance the Delta as an evolving place could affect nearby forest or agricultural lands because of  
38 noise, access constraints, dust, or other effects that would indirectly result in conversion of these lands to  
39 other uses. These effects are discussed in other resource sections of this EIR, including Section 9, Air  
40 Quality; Section 15, Noise; and Section 19, Transportation, Traffic, and Circulation. Furthermore,  
41 disturbance and removal of existing vegetation as a part of construction activities could result in the  
42 spread of invasive species to new areas, negatively affecting the health or viability of surrounding  
43 agricultural or forest uses.

1 *Effects of Project Operations*

2 Gateways, bike lanes, trails, parks, marinas, and other facilities could be established in the Delta to  
3 protect and enhance it as an evolving place. Depending on their location, operation of these facilities  
4 could lead to the conversion of agricultural land to nonagricultural use or forestland to nonforest use. The  
5 extent of impact would be influenced by the size of the facility footprint and any additional development  
6 induced by these facilities.

7 In addition to direct impacts described in Sections 7.4.3.5.1 (Impact 7-1e), 7.4.3.5.2 (Impact 7-2e),  
8 7.4.3.5.3 (Impact 7-3e), and 7.4.3.5.4 (Impact 7-4e), operation of Delta enhancement projects could affect  
9 nearby forest or agricultural lands because of noise, access constraints, dust, introduction of invasive  
10 species, or other effects that would indirectly result in conversion of these lands to other uses. These  
11 effects are discussed in other resource sections of this EIR, including Section 9, Air Quality; Section 15,  
12 Noise; and Section 19, Transportation, Traffic, and Circulation. The extent of impact would be influenced  
13 by the size of the facility footprint.

14 It is not known at this time what types or where specific Delta as evolving place type projects that could  
15 convert agricultural lands to other uses would occur. However, the Delta Plan encourages implementation  
16 of State parks at Barker Slough, at Elkhorn Basin, and in the southern Delta. Documents reviewed for  
17 potential impacts included EIRs for the Bidwell–Sacramento River State Park Habitat Restoration and  
18 Outdoor Recreation Facilities Development Project (The Nature Conservancy and California Department  
19 of Parks and Recreation 2008) and the Draft Programmatic EIR for the San Luis Rey River Park Master  
20 Plan (San Diego County Department of Parks and Recreation 2008), which are illustrative of some of the  
21 types of impacts associated with park and environmental enhancement projects. Although the  
22 Bidwell-Sacramento River project found impacts to be less than significant, the San Luis Rey River Park  
23 project found significant and unavoidable impacts related to conversion of farmland to  
24 nonagricultural use.

25 For other named projects where an environmental impact analysis has not been prepared, it is expected  
26 that this impact analysis provides a reasonable analysis of potential effects that would occur if the projects  
27 of a similar nature and similar setting were implemented.

28 *Conclusion*

29 A detailed description of these projects is not available; however, it is possible that significant impacts on  
30 agricultural resources might be encountered that cannot be mitigated. Project-level impacts would be  
31 addressed in future site-specific environmental analysis conducted at the time such projects are proposed  
32 by lead agencies. However, because named projects and projects encouraged by the Delta Plan could  
33 indirectly result in conversion of forest or agricultural lands, this potential impact is  
34 considered **significant**.

35 **7.4.3.6 Mitigation Measures**

36 Any covered action that would have one or more of the significant environmental impacts listed above  
37 shall incorporate the following features and/or requirements related to such impacts (e.g., preserving  
38 Farmland in perpetuity to reduce impacts related to conversion of Farmland to nonagricultural uses).

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

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

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

#### 9 7.4.3.6.1 Mitigation Measure 7-1

10 The following mitigation measures would reduce the effects of Impact 7-1a through e, Conversion of  
11 Farmland to Nonagricultural Uses, and Impact 7-5a through e, Involve Other Changes in the Existing  
12 Environment That, Because of Their Location or Nature, Could Result in Conversion of Farmland to  
13 Nonagricultural Use or Conversion of Forestland to Nonforest Use:

- 14     " Design proposed projects to minimize, to the greatest extent feasible, the loss of the highest  
15     valued agricultural land.
- 16     " Preserve in perpetuity other Farmland through acquisition of an agricultural conservation  
17     easement, or contributing funds to a land trust or other entity qualified to preserve Farmland in  
18     perpetuity (at a ratio of 1:1 to compensate for permanent loss).
- 19     " Redesign project features to minimize fragmenting or isolating Farmland. Where a project  
20     involves acquiring land or easements, ensure that the remaining nonproject area is of a size  
21     sufficient to allow economically viable farming operations. The project proponents shall be  
22     responsible for acquiring easements, making lot line adjustments, and merging affected land  
23     parcels into units suitable for continued commercial agricultural management.
- 24     " Reconnect utilities or infrastructure that serve agricultural uses if these are disturbed by project  
25     construction. If a project temporarily or permanently cuts off roadway access or removes utility  
26     lines, irrigation features, or other infrastructure, the project proponents shall be responsible for  
27     restoring access as necessary to ensure that economically viable farming operations are  
28     not interrupted.
- 29     " Manage project operations to minimize the introduction of invasive species or weeds that may  
30     affect agricultural production on adjacent agricultural land. Where a project has the potential to  
31     introduce sensitive species or habitats or have other spill-over effects on nearby agricultural  
32     lands, the project proponents shall be responsible for acquiring easements on nearby agricultural  
33     land and/or financially compensating for indirect effects on nearby agricultural land. Easements  
34     (e.g., flowage easements) shall be required for temporary or intermittent interruption in farming  
35     activities (e.g., because of seasonal flooding or groundwater seepage). Acquisition or  
36     compensation would be required for permanent or significant loss of economically  
37     viable operations.

1       "   Establish buffer areas between projects and adjacent agricultural land that are sufficient to protect  
2       and maintain land capability and agricultural operation flexibility. Design buffers to protect the  
3       feasibility of ongoing agricultural operations and reduce the effects of construction- or  
4       operation-related activities on adjacent or nearby properties. The buffer shall also serve to protect  
5       ecological restoration areas from noise, dust, and the application of agricultural chemicals. The  
6       width of the buffer shall be determined on a project-by-project basis to account for variations in  
7       prevailing winds, crop types, agricultural practices, ecological restoration, or infrastructure.  
8       Buffers can function as drainage swales, trails, roads, linear parkways, or other uses compatible  
9       with ongoing agricultural operations.

10      These mitigation measures are commonly employed on a variety of projects. In many cases, they reduce  
11      significant agricultural resources impacts to less-than-significant levels. Implementation of these  
12      mitigation measures would reduce the significance of agricultural conversion impacts by redesigning  
13      projects to minimize fragmentation of Farmland, preserving Farmland through acquisition of easements,  
14      and using buffers and control of invasive species to protect agricultural uses. In cases where substantial  
15      areas of lands would still be converted from agricultural use, these related impacts would  
16      remain **significant**.

#### 17   7.4.3.6.2   Mitigation Measure 7-2

18      The following mitigation measures would reduce the effects of Impact 7-2a through e, Conflict with  
19      Existing Zoning for Agricultural Use or a Williamson Act Contract:

20      "   Select a site or redesign a project to avoid land protected by agricultural zoning or a Williamson  
21      Act contract. Where feasible, project proponents should take into account agricultural value when  
22      selecting a project site, preferring nonprotected sites to protected sites and lower value sites  
23      (as quantified by the LESA model) to higher value and Williamson Act–protected lands.

24      "   Limit ecological restoration activities to those activities consistent with Williamson Act contracts.  
25      A broad range of agriculture and open space activities are allowed on Williamson Act–protected  
26      land. Project proponents should evaluate compatibility of an action with the restrictions of the  
27      Williamson Act. If feasible, proponents would design projects to ensure that proposed ecological  
28      restoration activities are consistent with Williamson Act provisions.

29      These mitigation measures are commonly employed on a variety of projects. In many cases, they reduce  
30      significant agricultural resources impacts to less-than-significant levels. Implementation of these  
31      mitigation measures would reduce the significance of agricultural conversion impacts related to zoning or  
32      Williamson Act incompatibility by redesigning projects to minimize fragmentation of agricultural and  
33      limiting restoration activities to those that are consistent with zoning or Williamson Act contracts. In  
34      cases where substantial areas of incompatibility would exist, and lands would still be converted from  
35      agricultural use, these related impacts would remain **significant**.

#### 36   7.4.3.6.3   Mitigation Measure 7-3

37      The following mitigation measures would reduce the effects of Impact 7-3a through e, Conflict with  
38      Existing Zoning for, or Cause Rezoning of, Forestland, Timberland, or Timberland Zoned for  
39      Timberland Production:

40      "   Avoid land protected as forestland and timberland through site selection and/or project design.  
41      Where feasible, project proponents should take into account the value of the forest, not only in  
42      terms of direct products such as wood but also as part of the watershed ecosystem, when selecting  
43      a project site. Wherever possible, nonprotected sites should be preferred and selected instead of  
44      protected sites.

1       "    Limit ecological restoration activities to those activities consistent with existing forestland and  
2       timberland zoning. If feasible, proponents should design projects to ensure that proposed  
3       ecological restoration activities are consistent with existing forestland or timberlands  
4       zoning provisions.

5       These mitigation measures are commonly employed on a variety of projects. In many cases, they reduce  
6       significant forest resources impacts to less-than-significant levels. Implementation of these mitigation  
7       measures would reduce the significance of forestland conversion impacts related to zoning or TPZ  
8       incompatibility by redesigning projects to avoid high-value forest areas and limiting restoration activities  
9       to those that are consistent with zoning or TPZ requirements. In cases where substantial areas of  
10      incompatibility would exist, and lands would still be converted from forest use, these related impacts  
11      would remain **significant**.

#### 12   7.4.3.6.4   Mitigation Measure 7-4

13      The following mitigation measures would reduce the effects of Impact 7-4a through e, Loss of Forestland  
14      or Conversion of Forestland to Nonforest Use, and Impact 7-5a through e, Involve Other Changes in the  
15      Existing Environment That, Because of Their Location or Nature, Could Result in Conversion of  
16      Farmland to Nonagricultural Use or Conversion of Forestland to Nonforest Use:

17      "    Preserve in perpetuity other forestland through a conservation easement or by acquiring lands  
18      or contributing funds to a land trust or other agency (at a ratio of 1:1 to compensate for  
19      permanent loss).

20      "    Avoid land protected as forestland and timberland through site selection and/or project design.  
21      Where feasible, project proponents should take into account the value of the forest, not only in  
22      terms of direct products such as wood, but also as part of the watershed ecosystem, when  
23      selecting a project site. When possible, unprotected sites should be preferred and selected instead  
24      of protected sites.

25      "    Limit ecological restoration activities to those activities consistent with existing forestland and  
26      timberland zoning. If feasible, proponents should design projects to ensure that proposed  
27      ecological restoration activities are consistent with existing forestland or timberlands  
28      zoning provisions.

29      "    When removal of existing forestland or timberlands is required as part of an action, proponents  
30      must acquire the property at fair market value.

31      These mitigation measures are commonly employed on a variety of projects. In many cases, they reduce  
32      significant agricultural and forestry resources impacts to less-than-significant levels. Implementation of  
33      these mitigation measures would reduce the significance of agricultural and forestland conversion impacts  
34      by redesigning projects to avoid and minimize fragmentation of Farmland and forestland, preserving  
35      Farmland and forestland through acquisition of easements, and limiting restoration activities to those  
36      consistent with existing zoning. In cases where substantial areas of lands would still be converted from  
37      agricultural or forest use, these related impacts would remain **significant**.

### 38   7.4.4    No Project Alternative

39      As described in Section 2A, Proposed Project and Alternatives, the No Project Alternative is based on the  
40      continuation of existing plans and policies and the continued operation of existing facilities into the future  
41      and permitted and funded projects. Seven ongoing projects have been identified as part of the No Project  
42      Alternative. The list of projects included in the No Project Alternative is presented in Table 2-2.

1 The significance of agriculture and forestry resources impacts is associated with the effects of  
2 construction on agricultural land and forestland, including conversion of these lands to nonagricultural or  
3 nonforest use. These effects can occur through direct conversion or through indirect conversion  
4 (for example, adjacent or nearby uses increasing the land value or causing conflicts that lead to  
5 conversion of agricultural land or forestland to other uses. With the No Project Alternative, project  
6 construction at the seven specific project sites is expected to be completed within the next 2–5 years.

7 To the extent that the specific projects would occur in areas of agricultural soils, areas zoned for  
8 agriculture or under Williamson Act contracts, TPZ areas, or areas zoned for forest use, conversion of the  
9 project footprint during construction of these facilities could have significant impacts. After construction  
10 is completed, operation of nonagricultural or nonforest uses could make this conversion permanent.

11 With the No Project Alternative, the Delta Plan would not be in place to encourage various other projects  
12 to move forward. To the extent that the absence of the Delta Plan prevents those projects from moving  
13 forward, there could be fewer construction-related impacts in the near and long term. Because agriculture  
14 and forestry resources impacts are related to the location of construction in areas of agricultural or forest  
15 use, the No Project Alternative could result in significant construction-related agriculture or forestry  
16 resources impacts like those of the Proposed Project.

17 The No Project Alternative is expected to have fewer agriculture and forestry resources impacts than the  
18 Proposed Project in the near term because there would be less construction and fewer changes in land use  
19 and therefore the reduced possibility of temporary or permanent conversion of agricultural land or  
20 forestland. Therefore, the No Project Alternative would have **fewer** occurrences of agriculture and  
21 forestry resources impacts when compared to the Proposed Project; however these occurrences may be  
22 **significant** depending on site-specific conditions.

## 23 7.4.5 Alternative 1A

24 Under Alternative 1A, the construction and operation of surface water projects (water intakes, treatment  
25 and conveyance facilities, and reservoirs) would be the same as under the Proposed Project. As described  
26 in Section 2A, Proposed Project and Alternatives, there would be fewer groundwater projects (wells,  
27 wellhead treatment, conveyance facilities), ocean desalination projects, recycled wastewater and  
28 stormwater projects (treatment and conveyance facilities), and water transfers compared with the  
29 Proposed Project. Water use efficiency and conservation programs also would be reduced compared to  
30 the Proposed Project.

31 Projects to restore the Delta ecosystem would be reduced in comparison to the Proposed Project.  
32 Implementation of flow objectives would not affect agricultural or forestry resources. Ecosystem stressor  
33 management activities and invasive species management (including removal of invasive vegetation)  
34 would be the same as described for the Proposed Project.

35 Projects and actions to improve water quality would be the same as under the Proposed Project. Flood  
36 risk reduction projects also would be the same as under the Proposed Project, except that there would be  
37 less emphasis on levee maintenance and modification of levees that protect agricultural land and more  
38 emphasis on levees that protect water supply corridors, which could result in an overall reduction in these  
39 activities. Projects to protect and enhance the Delta as an evolving place would be the same as for the  
40 Proposed Project.

### 41 7.4.5.1.1 Impact 7-1: Conversion of Farmland to Nonagricultural Use

42 The same type of agricultural land conversion impacts would occur under Alternative 1A as described  
43 under the Proposed Project.

1 Under this alternative, there would be fewer of the projects described in Sections 7.4.3.1 (Reliable Water  
2 Supply), 7.4.3.2 (Delta Ecosystem Restoration), and 7.4.3.4 (Flood Risk Reduction). Because fewer water  
3 supply, Delta ecosystem restoration, and flood risk reduction projects would occur under this alternative  
4 compared to the Proposed Project, there would be a smaller area of potential physical effect and,  
5 therefore, a reduced likelihood of farmland conversion under Alternative 1A.

6 Alternative 1A would have the same number and type of projects described for the Proposed Project in  
7 Sections 7.4.3.3 (Water Quality Improvement) and 7.4.3.5 (Protection and Enhancement of Delta as an  
8 Evolving Place). Therefore, there would be a similar area of potential physical effect and therefore a  
9 similar likelihood of farmland conversion under Alternative 1A for these types of projects.

10 Overall, significant impacts related to conversion of farmland under Alternative 1A would be **less than**  
11 under the Proposed Project.

12 As compared to existing conditions, the impacts related to conversion of farmland under Alternative 1A  
13 would be **significant**.

#### 14 7.4.5.1.2 Impact 7-2: Conflict with Existing Zoning for Agricultural Use or a Williamson 15 Act Contract

16 The same type of potential conflicts with existing agricultural zoning or Williamson Act contracts would  
17 occur under Alternative 1A as described under the Proposed Project.

18 Under this alternative, there would be fewer of the projects described in Sections 7.4.3.1 (Reliable Water  
19 Supply), 7.4.3.2 (Delta Ecosystem Restoration), and 7.4.3.4 (Flood Risk Reduction). Because fewer water  
20 supply, Delta ecosystem restoration, and flood risk reduction projects would occur under this alternative  
21 compared to the Proposed Project, there would be a smaller area of potential physical effect and,  
22 therefore, a reduced likelihood of conflict with agricultural zoning or Williamson Act contracts under  
23 Alternative 1A.

24 Alternative 1A would have the same number and type of projects described for the Proposed Project in  
25 Sections 7.4.3.3 (Water Quality Improvement) and 7.4.3.5 (Protection and Enhancement of Delta as an  
26 Evolving Place). Therefore, there would be a similar area of potential physical effect and therefore a  
27 similar likelihood of conflict with agricultural zoning or Williamson Act contracts under Alternative 1A  
28 for these types of projects.

29 Overall, significant impacts related to conflicts with existing agricultural zoning or Williamson Act  
30 contracts under Alternative 1A would be **less than** under the Proposed Project.

31 As compared to existing conditions, the impacts related to conflicts with existing agricultural zoning or  
32 Williamson Act contracts under Alternative 1A would be **significant**.

#### 33 7.4.5.1.3 Impact 7-3: Loss of Forestland or Conversion of Forestland to Nonforest Uses

34 The same type of forestland conversion impacts would occur under Alternative 1A as described under the  
35 Proposed Project.

36 Under this alternative, there would be fewer of the projects described in Sections 7.4.3.1 (Reliable Water  
37 Supply), 7.4.3.2 (Delta Ecosystem Restoration), and 7.4.3.4 (Flood Risk Reduction). Because fewer water  
38 supply, Delta ecosystem restoration, and flood risk reduction projects would occur under this alternative  
39 compared to the Proposed Project, there would be a smaller area of potential physical effect and,  
40 therefore, a reduced likelihood of loss or conversion of forestland under Alternative 1A.



1 Alternative 1A would have the same number and type of projects described for the Proposed Project in  
2 Sections 7.4.3.3 (Water Quality Improvement) and 7.4.3.5 (Protection and Enhancement of Delta as an  
3 Evolving Place). Therefore there would be a similar area of potential physical effect and therefore a  
4 similar likelihood of loss or conversion of forestland under Alternative 1A for these types of projects.

5 Overall, significant impacts related to loss of forestland or conversion of forestland to nonforest uses  
6 under Alternative 1A would be **less than** under the Proposed Project.

7 As compared to existing conditions, the impacts related to loss of forestland or conversion of forestland to  
8 nonforest uses under Alternative 1A would be **significant**.

9 **7.4.5.1.4 Impact 7-4: Conflict with Existing Zoning for, or Cause Rezoning of, Forestland,**  
10 **Timberland, or Timberland Zoned for Timberland Production**

11 The same type of potential conflicts with existing forestland and timberland zoning would occur under  
12 Alternative 1A as described under the Proposed Project.

13 Under this alternative, there would be fewer of the projects described in Sections 7.4.3.1 (Reliable Water  
14 Supply), 7.4.3.2 (Delta Ecosystem Restoration), and 7.4.3.4 (Flood Risk Reduction). Because fewer water  
15 supply, Delta ecosystem restoration, and flood risk reduction projects would occur under this alternative  
16 compared to the Proposed Project, there would be a smaller area of potential physical effect and,  
17 therefore, a reduced likelihood of conflict with timber or forest zoning under Alternative 1A.

18 Alternative 1A would have the same number and type of projects described for the Proposed Project in  
19 Sections 7.4.3.3 (Water Quality Improvement) and 7.4.3.5 (Protection and Enhancement of Delta as an  
20 Evolving Place). Therefore, would be a similar area of potential physical effect and therefore a similar  
21 likelihood of conflict with timber or forest zoning under Alternative 1A for these types of projects.

22 Overall, significant impacts related to conflicts with existing forestland and timberland zoning under  
23 Alternative 1A would be **less than** under the Proposed Project.

24 As compared to existing conditions, the impacts related to conflicts with existing forestland and  
25 timberland zoning under Alternative 1A would be **significant**.

26 **7.4.5.1.5 Impact 7-5: Involve Other Changes in the Existing Environment That, Because of Their**  
27 **Location or Nature, Could Result in Conversion of Farmland to Nonagricultural Use or**  
28 **Conversion of Forestland to Nonforest Use**

29 The same type of indirect agricultural land and forestland conversion impacts would occur under  
30 Alternative 1A as described under the Proposed Project.

31 Under this alternative, there would be fewer of the projects described in Sections 7.4.3.1 (Reliable Water  
32 Supply), 7.4.3.2 (Delta Ecosystem Restoration), and 7.4.3.4 (Flood Risk Reduction). Because fewer water  
33 supply, Delta ecosystem restoration, and flood risk reduction projects would occur under this alternative  
34 compared to the Proposed Project, there would be a smaller area of potential physical effect and,  
35 therefore, a reduced likelihood of indirect agricultural land or timberland conversion under  
36 Alternative 1A.

37 Alternative 1A would have the same number and type of projects described for the Proposed Project in  
38 Sections 7.4.3.3 (Water Quality Improvement) and 7.4.3.5 (Protection and Enhancement of Delta as an  
39 Evolving Place). Therefore, there would be a similar area of potential physical effect and therefore a  
40 similar likelihood of indirect agricultural land or timberland conversion under Alternative 1A for these  
41 types of projects.

42 Overall, significant impacts related to indirect conversion of agricultural land and forestland under  
43 Alternative 1A would be **less than** under the Proposed Project.

1 As compared to existing conditions, the impacts related to indirect conversion of agricultural land and  
2 forestland under Alternative 1A would be **significant**.

### 3 **7.4.5.2 Mitigation Measures**

4 Mitigation measures for Alternative 1A would be the same as those described in Sections 7.4.3.6.1  
5 (Mitigation Measure 7-1), 7.4.3.6.2 (Mitigation Measure 7-2), 7.4.3.6.3 (Mitigation Measure 7-3), and  
6 7.4.3.6.4 (Mitigation Measure 7-4) for the Proposed Project. Because it is not known whether the  
7 mitigation measures listed above would reduce Impacts 7-1, 7-2, 7-3, 7-4, and 7-5 to a  
8 less-than-significant level for Alternative 1A, these potential impacts are considered **significant**  
9 **and unavoidable**.

## 10 **7.4.6 Alternative 1B**

11 Under Alternative 1B, the construction and operation of surface water projects (water intakes, treatment  
12 and conveyance facilities, and reservoirs) would be the same as under the Proposed Project. As described  
13 in Section 2A, Proposed Project and Alternatives, there would be fewer groundwater projects (wells,  
14 wellhead treatment, conveyance facilities), recycled wastewater and stormwater projects (treatment and  
15 conveyance facilities), and water transfers compared with the Proposed Project. Water use efficiency and  
16 conservation programs also would be reduced relative to the Proposed Project. There would be no ocean  
17 desalination projects.

18 Projects to restore the Delta ecosystem would be reduced in extent relative to the Proposed Project and  
19 would not emphasize restoration of floodplains in the lower San Joaquin River. Implementation of flow  
20 objectives would not be accelerated or include public trust considerations. Ecosystem stressor  
21 management activities and invasive species management (including removal of invasive vegetation)  
22 would be increased relative to the Proposed Project, but a variance to the USACE Levee Vegetation  
23 Policy would not be pursued. In addition, Alternative 1B would not require conformance with the habitat  
24 types and elevation maps presented in the Conservation Strategy for Restoration of the Sacramento-San  
25 Joaquin Delta Ecological Management Zone and the Sacramento and San Joaquin Valley Regions  
26 (DFG 2011).

27 Water quality improvement projects, including water treatment plants, conveyance facilities, and wells  
28 and wellhead treatment facilities, would be less emphasized relative to the Proposed Project, and greater  
29 emphasis would be placed on the construction and operation of wastewater treatment and recycle facilities  
30 and municipal stormwater treatment facilities.

31 Flood risk reduction would place greater emphasis on levee modification/maintenance and dredging than  
32 under the Proposed Project, but there would be no setback levees or subsidence reversal projects.  
33 Floodplain expansion projects would be fewer or less extensive, and use of reservoir reoperation would be  
34 reduced. Actions to protect and enhance the Delta as an evolving place would be consistent with the  
35 Economic Sustainability Plan, but the locations for new parks, as encouraged by the Proposed Project,  
36 would not be emphasized.

### 37 **7.4.6.1.1 Impact 7-1: Conversion of Farmland to Nonagricultural Use**

38 The same type of agricultural land conversion impacts would occur under Alternative 1B as described  
39 under the Proposed Project.

40 This alternative would have fewer reliable water supply projects (as described in Section 7.4.3.1),  
41 ecosystem restoration projects (as described in Section 7.4.3.2), and Delta enhancement projects  
42 (as described in Section 7.4.3.5). Because this alternative would have fewer of these types of projects  
43 compared to the Proposed Project, there would be a smaller geographic area affected by new facilities and  
44 uses and, therefore, a reduced likelihood of farmland conversion.

1 Although some types of water quality projects (as described in Section 7.4.3.3) would be more likely  
2 under this alternative, there would be less emphasis on water treatment plants and conveyance facilities.  
3 Hence, it is uncertain how these changes in emphasis would affect the overall footprint in comparison to  
4 the Proposed Project.

5 Similarly, although there would be more of some types of flood risk reduction projects (as described in  
6 Section 7.4.3.4), Alternative 1B would have fewer setback levees and floodplain expansion projects  
7 Hence, it is uncertain how these changes in emphasis would affect the overall footprint in comparison to  
8 the Proposed Project.

9 Overall, significant impacts related to conversion of farmland under Alternative 1B would be **less than**  
10 under the Proposed Project.

11 As compared to existing conditions, the impacts related to conversion of farmland under Alternative 1B  
12 would be **significant**.

#### 13 7.4.6.1.2 Impact 7-2: Conflict with Existing Zoning for Agricultural Use or a Williamson 14 Act Contract

15 The same type of potential conflicts with existing agricultural zoning or Williamson Act contracts would  
16 occur under Alternative 1B as described under the Proposed Project.

17 This alternative would have fewer reliable water supply projects (as described in Section 7.4.3.1),  
18 ecosystem restoration projects (as described in Section 7.4.3.2), and Delta enhancement projects  
19 (as described in Section 7.4.3.5). Because this alternative would have fewer of these types of projects  
20 compared to the Proposed Project, there would be a smaller geographic area affected by new facilities and  
21 uses and, therefore, a reduced likelihood of conflict with agricultural zoning or Williamson Act contracts.

22 Although some types of water quality projects (as described in Section 7.4.3.3) would be more likely  
23 under this alternative, there would be less emphasis on water treatment plants and conveyance facilities.  
24 Hence, it is uncertain how these changes in emphasis would affect the overall footprint in comparison to  
25 the Proposed Project.

26 Similarly, although there would be more of some types of flood risk reduction projects (as described in  
27 Section 7.4.3.4), Alternative 1B would have fewer setback levees and floodplain expansion projects.  
28 Hence, it is uncertain how these changes in emphasis would affect the overall footprint in comparison to  
29 the Proposed Project.

30 Overall, significant impacts related to conflicts with existing agricultural zoning or Williamson Act  
31 contracts under Alternative 1B would be **less than** under the Proposed Project.

32 As compared to existing conditions, the impacts related to conflicts with existing agricultural zoning or  
33 Williamson Act contracts under Alternative 1B would be **significant**.

#### 34 7.4.6.1.3 Impact 7-3: Loss of Forestland or Conversion of Forestland to Nonforest Uses

35 The same type of forestland conversion impacts would occur under Alternative 1B as described under the  
36 Proposed Project.

37 This alternative would have fewer reliable water supply projects (as described in Section 7.4.3.1),  
38 ecosystem restoration projects (as described in Section 7.4.3.2), and Delta enhancement projects  
39 (as described in Section 7.4.3.5). Because this alternative would have fewer of these types of projects  
40 compared to the Proposed Project, there would be a smaller geographic area affected by new facilities and  
41 uses and, therefore, a reduced likelihood of loss or conversion of forestland.

1 Although some types of water quality projects (as described in Section 7.4.3.3) would be more likely  
2 under this alternative, there would be less emphasis on water treatment plants and conveyance facilities.  
3 Hence, it is uncertain how these changes in emphasis would affect the overall footprint in comparison to  
4 the Proposed Project.

5 Similarly, although there would be more of some types of flood risk reduction projects (as described in  
6 Section 7.4.3.4), Alternative 1B would have fewer setback levees and floodplain expansion projects.  
7 Hence, it is uncertain how these changes in emphasis would affect the overall footprint in comparison to  
8 the Proposed Project.

9 Overall, significant impacts related to loss of forestland or conversion of forestland to nonforest uses  
10 under Alternative 1B would be **less than** under the Proposed Project.

11 As compared to existing conditions, the impacts related to loss of forestland or conversion of forestland to  
12 nonforest uses under Alternative 1B would be **significant**.

#### 13 7.4.6.1.4 Impact 7-4: Conflict with Existing Zoning for, or Cause Rezoning of, Forestland, 14 Timberland, or Timberland Zoned for Timberland Production

15 The same type of potential conflicts with existing forestland and timberland zoning impacts would occur  
16 under Alternative 1B as described under the Proposed Project.

17 This alternative would have fewer reliable water supply projects (as described in Section 7.4.3.1),  
18 ecosystem restoration projects (as described in Section 7.4.3.2), and Delta enhancement projects  
19 (as described in Section 7.4.3.5). Because this alternative would have fewer of these types of projects  
20 compared to the Proposed Project, there would be a smaller geographic area affected by new facilities and  
21 uses and, therefore, a reduced likelihood of conflict with timber or forest zoning.

22 Although some types of water quality projects (as described in Section 7.4.3.3) would be more likely  
23 under this alternative, there would be less emphasis on water treatment plants and conveyance facilities.  
24 Hence, it is uncertain how these changes in emphasis would affect the overall footprint in comparison to  
25 the Proposed Project.

26 Similarly, although there would be more of some types of flood risk reduction projects (as described in  
27 Section 7.4.3.4), Alternative 1B would have fewer setback levees and floodplain expansion projects.  
28 Hence, it is uncertain how these changes in emphasis would affect the overall footprint in comparison to  
29 the Proposed Project.

30 Overall, significant impacts related to conflicts with existing forestland and timberland zoning under  
31 Alternative 1B would be **less than** under the Proposed Project.

32 As compared to existing conditions, the impacts related to conflicts with existing forestland and  
33 timberland zoning under Alternative 1B would be **significant**.

#### 34 7.4.6.1.5 Impact 7-5: Involve Other Changes in the Existing Environment That, Because of Their 35 Location or Nature, Could Result in Conversion of Farmland to Nonagricultural Use or 36 Conversion of Forestland to Nonforest Use

37 The same type of indirect agricultural land and forestland conversion impacts would occur under  
38 Alternative 1B as described under the Proposed Project.

39 This alternative would have fewer reliable water supply projects (as described in Section 7.4.3.1),  
40 ecosystem restoration projects (as described in Section 7.4.3.2), and Delta enhancement projects  
41 (as described in Section 7.4.3.5). Because this alternative would have fewer of these types of projects  
42 compared to the Proposed Project, there would be a smaller geographic area affected by new facilities and  
43 uses and therefore, a reduced likelihood of indirect agricultural or forest conversion.

1 Although some types of water quality projects (as described in Section 7.4.3.3) would be more likely  
2 under this alternative, there would be less emphasis on water treatment plants and conveyance facilities.  
3 Hence, it is uncertain how these changes in emphasis would affect the overall footprint in comparison to  
4 the Proposed Project.

5 Similarly, although there would be more of some types of flood risk reduction projects (as described in  
6 Section 7.4.3.4), Alternative 1B would have fewer setback levees and floodplain expansion projects.  
7 Hence, it is uncertain how these changes in emphasis would affect the overall footprint in comparison to  
8 the Proposed Project.

9 Overall, significant impacts related to indirect conversion of agricultural land and forestland under  
10 Alternative 1B would be **less than** under the Proposed Project.

11 As compared to existing conditions, the impacts related to indirect conversion of agricultural land and  
12 forestland under Alternative 1B would be **significant**.

### 13 **7.4.6.2 Mitigation Measures**

14 Mitigation measures for Alternative 1B would be the same as those described in Sections 7.4.3.6.1  
15 (Mitigation Measure 7-1), 7.4.3.6.2 (Mitigation Measure 7-2), 7.4.3.6.3 (Mitigation Measure 7-3),  
16 and 7.4.3.6.4 (Mitigation Measure 7-4) for the Proposed Project. Because it is not known whether the  
17 mitigation measures listed above would reduce Impacts 7-1, 7-2, 7-3, 7-4, and 7-5 to a  
18 less-than-significant level for Alternative 1B, these potential impacts are considered **significant**  
19 **and unavoidable**.

## 20 **7.4.7 Alternative 2**

21 As described in Section 2A, Proposed Project and Alternatives, Alternative 2 would place greater  
22 emphasis on groundwater, ocean desalination, water transfers, water use efficiency and conservation, and  
23 recycled water projects, and less emphasis on surface water projects. The surface storage reservoirs  
24 considered under the DWR Surface Water Storage Investigation would not be encouraged; instead,  
25 surface storage in the Tulare Basin would be emphasized. Ecosystem restoration projects similar to but  
26 less extensive than those encouraged by the Proposed Project would be emphasized without the  
27 requirement to conform to the Ecosystem Restoration Program (ERP) habitat types and elevation map.  
28 Alternative 2 would emphasize the development of flow objectives that take into consideration updated  
29 flow criteria that support a more natural flow regime, water rights, and greater protection of public trust  
30 resources.

31 Actions to improve water quality would be similar to or greater than those under the Proposed Project,  
32 especially the treatment of wastewater and agricultural runoff. Actions to reduce flood risk under  
33 Alternative 2 would emphasize floodplain expansion and reservoir reoperation rather than levee  
34 construction and modification. The stockpiling of rock and encouragement of subsidence reversal projects  
35 would be the same as under the Proposed Project, as would actions to protect and enhance the Delta as an  
36 evolving place.

### 37 **7.4.7.1.1 Impact 7-1: Conversion of Farmland to Nonagricultural Use**

38 The same type of agricultural land conversion impacts would occur under Alternative 2 as described  
39 under the Proposed Project, although some types of water supply projects described in Section 7.4.3.1  
40 (including desalination projects, water transfers, and water efficiency and conservation projects) would be  
41 more likely under this alternative. Alternative 2 would have no major water storage facilities, with the  
42 Tulare Lake Basin emphasized instead of facilities associated with the Surface Water Storage  
43 Investigation. The development of surface storage in the Tulare Lake Basin could result in the inundation  
44 of up to about 320,000 acres of agricultural land considered Farmland of Statewide Importance. In

1 addition, Alternative 2 would encourage the retirement or fallowing of about 380,000 acres of agricultural  
2 land within the San Luis Drainage Area, and possible periodic fallowing of additional agricultural land as  
3 a result of restrictions on the total amount of water to be exported from the Delta.

4 This alternative would influence about the same amount of habitat restoration (described in  
5 Section 7.4.3.2), although there would be greater emphasis on floodplain restoration. Thus, the level of  
6 farmland conversion resulting from ecosystem would be about the same as the Proposed Project.

7 Alternative 2 would have more water quality projects (as described in Section 7.4.3.3), resulting in a  
8 larger area potentially affected by new facilities and therefore a greater likelihood of farmland conversion.

9 Although some types of flood risk reduction projects (described in Section 7.4.3.4), including floodplain  
10 expansion projects, would be more likely under Alternative 2, there would be fewer levee improvements  
11 compared to the Proposed Project, and it is uncertain how these changes in emphasis would affect the  
12 overall footprint of improvements in Alternative 2 in comparison to the Proposed Project.

13 This alternative would have the same number and type of Delta enhancement projects as described for the  
14 Proposed Project in Section 7.4.3.5 (Protection and Enhancement of Delta as an Evolving Place). There  
15 would be a similar area of potential physical effect and therefore a similar likelihood of farmland  
16 conversion for this topic area.

17 Overall, significant impacts related to conversion of farmland under Alternative 2 would be **greater than**  
18 under the Proposed Project because of the conversion of farmland primarily in the San Joaquin Valley.

19 As compared to existing conditions, the impacts related to conversion of farmland under Alternative 2  
20 would be **significant**.

#### 21 7.4.7.1.2 Impact 7-2: Conflict with Existing Zoning for Agricultural Use or a Williamson 22 Act Contract

23 The same type of potential conflicts with existing agricultural zoning or Williamson Act contracts from  
24 construction and operations would occur under Alternative 2 as described under the Proposed Project.

25 Although some types of water supply projects described in Section 7.4.3.1 (including desalination  
26 projects, water transfers, and water efficiency and conservation projects) would be more likely under this  
27 alternative, Alternative 2 would have no major water storage facilities, with the Tulare Basin emphasized  
28 instead of facilities associated with the Surface Water Storage Investigation. Because there would be  
29 fewer surface water projects, the overall footprint of possible disturbance areas would be smaller than for  
30 the Proposed Project, resulting in a lower likelihood of conflict with agricultural zoning or Williamson  
31 Act contracts.

32 This alternative would have less extensive ecosystem restoration projects (described in Section 7.4.3.2),  
33 resulting in a smaller footprint and therefore a reduced likelihood of conflict with agricultural zoning or  
34 Williamson Act contracts.

35 Alternative 2 would have more water quality projects (as described in Section 7.4.3.3), resulting in a  
36 larger area potentially affected by new facilities and therefore a greater likelihood of conflict with  
37 agricultural zoning or Williamson Act contracts.

38 Although some types of flood risk reduction projects (described in Section 7.4.3.4), including floodplain  
39 expansion projects, would be more likely under Alternative 2, there would be fewer levee improvements  
40 compared to the Proposed Project, and it is uncertain how these changes in emphasis would affect the  
41 overall footprint of improvements in Alternative 2 in comparison to the Proposed Project.

1 This alternative would have the same number and type of Delta enhancement projects as described for the  
2 Proposed Project in Section 7.4.3.5 (Protection and Enhancement of Delta as an Evolving Place). There  
3 would be a similar area of potential physical effect and therefore a similar likelihood of conflict with  
4 agricultural zoning or Williamson Act contracts for this topic area.

5 Overall, significant impacts related to conflicts with existing agricultural zoning or Williamson Act  
6 contracts under Alternative 2 would be **less than** under the Proposed Project.

7 As compared to existing conditions, the impacts related to conflicts with existing agricultural zoning or  
8 Williamson Act contracts under Alternative 2 would be **significant**.

#### 9 7.4.7.1.3 Impact 7-3: Loss of Forestland or Conversion of Forestland to Nonforest Uses

10 The same type of forestland conversion impacts from construction and operations would occur under  
11 Alternative 2 as described under the Proposed Project.

12 Although some types of water supply projects described in Section 7.4.3.1 (including desalination  
13 projects, water transfers, and water efficiency and conservation projects) would be more likely under this  
14 alternative, Alternative 2 would have no major water storage facilities, with the Tulare Basin emphasized  
15 instead of facilities associated with the Surface Water Storage Investigation. Because there would be  
16 fewer surface water projects, the overall footprint of possible disturbance areas would be smaller than for  
17 the Proposed Project, resulting in a lower likelihood of forestland conversion.

18 This alternative would have less extensive ecosystem restoration projects (described in Section 7.4.3.2),  
19 resulting in a smaller footprint and therefore a reduced likelihood of forestland conversion.

20 Alternative 2 would have more water quality projects (as described in Section 7.4.3.3), resulting in a  
21 larger area potentially affected by new facilities and therefore a greater likelihood of  
22 forestland conversion.

23 Although some types of flood risk reduction projects (described in Section 7.4.3.4), including floodplain  
24 expansion projects, would be more likely under Alternative 2, there would be fewer levee improvements  
25 compared to the Proposed Project, and it is uncertain how these changes in emphasis would affect the  
26 overall footprint of improvements in Alternative 2 in comparison to the Proposed Project.

27 This alternative would have the same number and type of Delta enhancement projects as described for the  
28 Proposed Project in Section 7.4.3.5 (Protection and Enhancement of Delta as an Evolving Place). There  
29 would be a similar area of potential physical effect and therefore a similar likelihood of forestland  
30 conversion for this topic area.

31 Overall, significant impacts related to loss of forestland or conversion of forestland to nonforest uses  
32 under Alternative 2 would be **less than** under the Proposed Project.

33 As compared to existing conditions, the impacts related to loss of forestland or conversion of forestland to  
34 nonforest uses under Alternative 2 would be **significant**.

#### 35 7.4.7.1.4 Impact 7-4: Conflict with Existing Zoning for, or Cause Rezoning of, Forestland, 36 Timberland, or Timberland Zoned for Timberland Production

37 The same type of potential conflicts with existing forestland and timberland zoning impacts would occur  
38 under Alternative 2 as described under the Proposed Project.

1 Although some types of water supply projects described in Section 7.4.3.1 (including desalination  
2 projects, water transfers, and water efficiency and conservation projects) would be more likely under this  
3 alternative, Alternative 2 would have no major water storage facilities, with the Tulare Basin emphasized  
4 instead of facilities associated with the Surface Water Storage Investigation. Because there would be  
5 fewer surface water projects, the overall footprint of possible disturbance areas would be smaller than for  
6 the Proposed Project, resulting in a lower likelihood of conflict with forest or timber zoning.

7 This alternative would have less extensive ecosystem restoration projects (described in Section 7.4.3.2),  
8 resulting in a smaller footprint and therefore a reduced likelihood of conflict with forest or timber zoning.

9 Alternative 2 would have more water quality projects (as described in Section 7.4.3.3), resulting in a  
10 larger area potentially affected by new facilities and therefore a greater likelihood of conflict with forest  
11 or timber zoning.

12 Although some types of flood risk reduction projects (described in Section 7.4.3.4), including floodplain  
13 expansion projects, would be more likely under Alternative 2, there would be fewer levee improvements  
14 compared to the Proposed Project, and it is uncertain how these changes in emphasis would affect the  
15 overall footprint of improvements in Alternative 2 in comparison to the Proposed Project.

16 This alternative would have the same number and type of Delta enhancement projects as described for the  
17 Proposed Project in Section 7.4.3.5 (Protection and Enhancement of Delta as an Evolving Place). There  
18 would be no impacts on TPZ because none occurs in the Delta.

19 Overall, significant impacts related to conflicts with existing forestland and timberland zoning under  
20 Alternative 2 would be **less than** under the Proposed Project.

21 As compared to existing conditions, the impacts related to conflicts with existing forestland and  
22 timberland zoning under Alternative 2 would be **significant**.

#### 23 7.4.7.1.5 Impact 7-5: Involve Other Changes in the Existing Environment That, Because of Their 24 Location or Nature, Could Result in Conversion of Farmland to Nonagricultural Use or 25 Conversion of Forestland to Nonforest Use

26 The same type of indirect agricultural land and forestland conversion impacts would occur under  
27 Alternative 2 as described under the Proposed Project.

28 Although some types of water supply projects described in Section 7.4.3.1 (including desalination  
29 projects, water transfers, and water efficiency and conservation projects) would be more likely under this  
30 alternative, Alternative 2 would have no major water storage facilities, with the Tulare Basin emphasized  
31 instead of facilities associated with the Surface Water Storage Investigation. Because there would be  
32 fewer surface water projects, the overall footprint of possible disturbance areas would be smaller than for  
33 the Proposed Project, resulting in a lower likelihood of indirect agricultural land or forestland conversion.

34 This alternative would have less extensive ecosystem restoration projects (described in Section 7.4.3.2),  
35 resulting in a smaller footprint and therefore a reduced likelihood of indirect agricultural land or  
36 forestland conversion.

37 Alternative 2 would have more water quality projects (as described in Section 7.4.3.3), resulting in a  
38 larger area potentially affected by new facilities and therefore a greater likelihood of indirect agricultural  
39 land or forestland conversion.

40 Although some types of flood risk reduction projects (described in Section 7.4.3.4), including floodplain  
41 expansion projects, would be more likely under Alternative 2, there would be fewer levee improvements  
42 compared to the Proposed Project, and it is uncertain how these changes in emphasis would affect the  
43 overall footprint of improvements in Alternative 2 in comparison to the Proposed Project.



1 This alternative would have the same number and type of Delta enhancement projects as described for the  
2 Proposed Project in Section 7.4.3.5 (Protection and Enhancement of Delta as an Evolving Place). There  
3 would be a similar area of potential physical effect and therefore a similar likelihood of indirect  
4 agricultural land or forestland conversion for this topic area.

5 Overall, significant impacts related to indirect conversion of agricultural land and forestland under  
6 Alternative 2 would be **less than** under the Proposed Project.

7 As compared to existing conditions, the impacts related to indirect conversion of agricultural land and  
8 forestland under Alternative 2 would be **significant**.

### 9 **7.4.7.2 Mitigation Measures**

10 Mitigation measures for Alternative 2 would be the same as those described in Sections 7.4.3.6.1  
11 (Mitigation Measure 7-1), 7.4.3.6.2 (Mitigation Measure 7-2), 7.4.3.6.3 (Mitigation Measure 7-3),  
12 and 7.4.3.6.4 (Mitigation Measure 7-4) for the Proposed Project. Because it is not known whether the  
13 mitigation measures listed above would reduce Impacts 7-1, 7-2, 7-3, 7-4, and 7-5 to a  
14 less-than-significant level for Alternative 2, these potential impacts are considered **significant**  
15 **and unavoidable**.

## 16 **7.4.8 Alternative 3**

17 As described in Section 2A, Proposed Project and Alternatives, the water supply reliability projects and  
18 actions under Alternative 3 would be similar to those of the Proposed Project, although there would be  
19 less emphasis on surface water projects. Ecosystem restoration (floodplain restoration, riparian  
20 restoration, tidal marsh restoration, and floodplain expansion) would be reduced compared to the  
21 Proposed Project, and restoration on publicly owned lands, especially in Suisun Marsh and the Yolo  
22 Bypass, would be emphasized. There would be more ecosystem stressor management actions  
23 (e.g., programs for water quality, water flows) and more management for nonnative invasive species.  
24 Water quality improvements would be the same as for the Proposed Project.

25 Actions under Alternative 3 to reduce flood risk would not include setback levees or subsidence reversal,  
26 but would result in greater levee modification/maintenance and dredging compared to the Proposed  
27 Project. Reservoir reoperation and rock stockpiling would be the same as for the Proposed Project, as  
28 would activities to protect and enhance the Delta as an evolving place.

### 29 **7.4.8.1.1 Impact 7-1: Conversion of Farmland to Nonagricultural Use**

30 The same type of agricultural land conversion impacts would occur under Alternative 3 as described  
31 under the Proposed Project.

32 This alternative would have less extensive ecosystem restoration projects (described in Section 7.4.3.2),  
33 resulting in a smaller affected-area footprint and, therefore, a reduced likelihood of farmland conversion.

34 Although some types of flood risk reduction projects (described in Section 7.4.3.4), including  
35 modification of levees, would be more likely under Alternative 3, there would be no setback levees or  
36 subsidence reversal. Hence, it is uncertain how these changes in emphasis would affect the overall  
37 footprint (and thus impact) in comparison to the Proposed Project.

38 This alternative would have the same number and type of projects as described for the Proposed Project in  
39 Sections 7.4.3.1 (Reliable Water Supply), 7.4.3.3 (Water Quality Improvement), and 7.4.3.5 (Protection  
40 and Enhancement of Delta as an Evolving Place). There would be a similar area of potential physical  
41 effect and, therefore, a similar likelihood of farmland conversion for these types of projects.

1 Overall, significant impacts related to conversion of farmland under Alternative 3 would be **less than**  
2 under the Proposed Project.

3 As compared to existing conditions, the impacts related to conversion of farmland under Alternative 3  
4 would be **significant**.

#### 5 7.4.8.1.2 Impact 7-2: Conflict with Existing Zoning for Agricultural Use or a Williamson 6 Act Contract

7 The same type of potential conflicts with existing agricultural zoning or Williamson Act contracts from  
8 construction and operations would occur under Alternative 3 as described under the Proposed Project.

9 This alternative would have less extensive ecosystem restoration projects (described in Section 7.4.3.2),  
10 resulting in a smaller affected-area footprint and, therefore, a reduced likelihood of conflict with  
11 agricultural zoning or Williamson Act contracts.

12 Although some types of flood risk reduction projects (described in Section 7.4.3.4), including  
13 modification of levees, would be more likely under Alternative 3, there would be no setback levees or  
14 subsidence reversal. Hence, it is uncertain how these changes in emphasis would affect the overall  
15 footprint (and thus impact) in comparison to the Proposed Project.

16 This alternative would have the same number and type of projects described for the Proposed Project in  
17 Sections 7.4.3.1 (Reliable Water Supply), 7.4.3.3 (Water Quality Improvement), and 7.4.3.5 (Protection  
18 and Enhancement of Delta as an Evolving Place). There would be a similar area of potential physical  
19 effect and, therefore, a similar likelihood of conflict with agricultural zoning or Williamson Act contracts  
20 for these types of projects.

21 Overall, significant impacts related to conflicts with existing agricultural zoning or Williamson Act  
22 contracts under Alternative 3 would be **less than** under the Proposed Project.

23 As compared to existing conditions, the impacts related to conflicts with existing agricultural zoning or  
24 Williamson Act contracts under Alternative 3 would be **significant**.

#### 25 7.4.8.1.3 Impact 7-3: Loss of Forestland or Conversion of Forestland to Nonforest Uses

26 The same type of forestland conversion impacts from construction and operations would occur under  
27 Alternative 3 as described under the Proposed Project.

28 This alternative would have less extensive ecosystem restoration projects (described in Section 7.4.3.2),  
29 resulting in a smaller affected-area footprint and, therefore, a reduced likelihood of loss or conversion  
30 of forestland.

31 Although some types of flood risk reduction projects (described in Section 7.4.3.4), including  
32 modification of levees, would be more likely under Alternative 3, there would be no setback levees or  
33 subsidence reversal. Hence, it is uncertain how these changes in emphasis would affect the overall  
34 footprint (and thus impact) in comparison to the Proposed Project.

35 This alternative would have the same number and type of projects described for the Proposed Project in  
36 Sections 7.4.3.1 (Reliable Water Supply), 7.4.3.3 (Water Quality Improvement), and 7.4.3.5 (Protection  
37 and Enhancement of Delta as an Evolving Place). There would be a similar area of potential physical  
38 effect and, therefore, a similar likelihood of loss or conversion of forestland for these types of projects.

39 Overall, significant impacts related to loss of forestland or conversion of forestland to nonforest uses  
40 under Alternative 3 would be **less than** under the Proposed Project.

41 As compared to existing conditions, the impacts related to loss of forestland or conversion of forestland to  
42 nonforest uses under Alternative 3 would be **significant**.

1 7.4.8.1.4 Impact 7-4: Conflict with Existing Zoning for, or Cause Rezoning of, Forestland,  
2 Timberland, or Timberland Zoned for Timberland Production

3 The same type of potential conflicts with existing forestland and timberland zoning impacts would occur  
4 under Alternative 3 as described under the Proposed Project.

5 This alternative would have less extensive ecosystem restoration projects (described in Section 7.4.3.2),  
6 resulting in a smaller affected-area footprint and, therefore, a reduced likelihood of conflict with forest or  
7 timber zoning.

8 Although some types of flood risk reduction projects (described in Section 7.4.3.4), including  
9 modification of levees, would be more likely under Alternative 3, there would be no setback levees or  
10 subsidence reversal. Hence, it is uncertain how these changes in emphasis would affect the overall  
11 footprint (and thus impact) in comparison to the Proposed Project.

12 This alternative would have the same number and type of projects described for the Proposed Project in  
13 Sections 7.4.3.1 (Reliable Water Supply), 7.4.3.3 (Water Quality Improvement), and 7.4.3.5 (Protection  
14 and Enhancement of Delta as an Evolving Place). There would be a similar area of potential physical  
15 effect and, therefore, a similar likelihood of conflict with forest or timber zoning for these types of  
16 project.

17 Overall, significant impacts related to conflicts with existing forestland and timberland zoning under  
18 Alternative 3 would be **less than** under the Proposed Project.

19 As compared to existing conditions, the impacts related to conflicts with existing forestland and  
20 timberland zoning under Alternative 3 would be **significant**.

21 7.4.8.1.5 Impact 7-5: Involve Other Changes in the Existing Environment That, Because of Their  
22 Location or Nature, Could Result in Conversion of Farmland to Nonagricultural Use or  
23 Conversion of Forestland to Nonforest Use

24 The same type of indirect agricultural land and forestland conversion impacts would occur under  
25 Alternative 3 as described under the Proposed Project.

26 This alternative would have less extensive ecosystem restoration projects (described in Section 7.4.3.2),  
27 resulting in a smaller affected-area footprint and, therefore, a reduced likelihood of indirect agricultural  
28 land or forestland conversion.

29 Although some types of flood risk reduction projects (described in Section 7.4.3.4), including  
30 modification of levees, would be more likely under Alternative 3, there would be no setback levees or  
31 subsidence reversal. Hence, it is uncertain how these changes in emphasis would affect the overall  
32 footprint (and thus impact) in comparison to the Proposed Project.

33 This alternative would have the same number and type of projects described for the Proposed Project in  
34 Sections 7.4.3.1 (Reliable Water Supply), 7.4.3.3 (Water Quality Improvement), and 7.4.3.5 (Protection  
35 and Enhancement of Delta as an Evolving Place). There would be a similar area of potential physical  
36 effect and, therefore, a similar likelihood of indirect agricultural land or forestland conversion for these  
37 types of projects.

38 Overall, significant impacts related to indirect conversion of agricultural land and forestland under  
39 Alternative 3 would be **less than** under the Proposed Project.

40 As compared to existing conditions, the impacts related to indirect conversion of agricultural land and  
41 forestland under Alternative 3 would be **significant**.

### 1 7.4.8.2 Mitigation Measures

2 Mitigation measures for Alternative 3 would be the same as those described in Sections 7.4.3.6.1  
3 (Mitigation Measure 7-1), 7.4.3.6.2 (Mitigation Measure 7-2), 7.4.3.6.3 (Mitigation Measure 7-3), and  
4 7.4.3.6.4 (Mitigation Measure 7-4) for the Proposed Project. Because it is not known whether the  
5 mitigation measures listed above would reduce Impacts 7-1, 7-2, 7-3, 7-4, and 7-5 to a  
6 less-than-significant level for Alternative 3, these potential impacts are considered **significant**  
7 **and unavoidable**.

## 8 7.5 References

- 9 CAL FIRE (California Department of Forestry and Fire Protection). 2002. *Timberland Site Class on*  
10 *Private Lands Zoned for Timber Production*. Technical Working Paper 1-03-02. Forest and  
11 Range Assessment Program. Sacramento, CA.
- 12 CAL FIRE (California Department of Forestry and Fire Protection). 2003. *Assessment Information*  
13 *Systems*. October. Forest and Range Assessment Program.
- 14 CAL FIRE (California Department of Forestry and Fire Protection). 2006 (August). *Fire Resource*  
15 *Assessment Program (FRAP) multi-source land cover for California*. Site accessed January 6,  
16 2011. <http://frap.fire.ca.gov/>.
- 17 City of Carlsbad. 2005. *Carlsbad Precise Development Plan and Desalination Plant Project*  
18 *Environmental Impact Report*. Carlsbad, CA.
- 19 City of Davis. 2007. *Davis-Woodland Water Supply Project Draft Environmental Impact Report*. Davis,  
20 CA. In association with UC Davis and City of Woodland. April.
- 21 DFG (California Department of Fish and Game). 2011. *Conservation Strategy for Restoration of the*  
22 *Sacramento-San Joaquin Delta Ecological Management Zone and the Sacramento and San*  
23 *Joaquin Valley Regions*. Draft. July.
- 24 DOC (California Department of Conservation). 1984. *Farmland Mapping and Monitoring Program 1984*.  
25 *Important Farmland designations for Alameda, Contra Costa, Solano, and Yolo counties*. Site  
26 accessed July 22, 2010. <ftp://ftp.consrv.ca.gov/pub/dlrp/fmmp/>.
- 27 DOC (California Department of Conservation). 1988. *Farmland Mapping and Monitoring Program 1988*.  
28 *Important Farmland designations for Sacramento County*. Site accessed July 23, 2010.  
29 <ftp://ftp.consrv.ca.gov/pub/dlrp/fmmp/>.
- 30 DOC (California Department of Conservation). 1990. *Farmland Mapping and Monitoring Program 1990*.  
31 *Important Farmland designations for San Joaquin County*. Site accessed July 15, 2010.  
32 <ftp://ftp.consrv.ca.gov/pub/dlrp/fmmp/>.
- 33 DOC (California Department of Conservation). 2008. *Farmland Mapping and Monitoring Program 2008*.  
34 *Important Farmland designations for Alameda, Contra Costa, Sacramento, San Joaquin, Solano,*  
35 *and Yolo counties*. Site accessed October 8, 2009. <ftp://ftp.consrv.ca.gov/pub/dlrp/fmmp/>.
- 36 DOC (California Department of Conservation). 2009. *Williamson Act designations for California*. Site  
37 accessed August 20, 2010. [ftp://ftp.consrv.ca.gov/pub/Dlrp/WA/](ftp://ftp.consrv.ca.gov/pub/Dlrp/WA/Map%20and%20PDF/CALIFORNIA%20WILLIAMSON%20ACT/Total%20WA%20GIS%20to%202009/)  
38 [Map%20and%20PDF/CALIFORNIA%20WILLIAMSON%20ACT/Total%20WA%20GIS%20to](ftp://ftp.consrv.ca.gov/pub/Dlrp/WA/Map%20and%20PDF/CALIFORNIA%20WILLIAMSON%20ACT/Total%20WA%20GIS%20to%202009/)  
39 [%202009/](ftp://ftp.consrv.ca.gov/pub/Dlrp/WA/Map%20and%20PDF/CALIFORNIA%20WILLIAMSON%20ACT/Total%20WA%20GIS%20to%202009/).

- 1 DWR (California Department of Water Resources). 2007. *The Value of the Agricultural Output of the*  
2 *California Delta*. Revised draft paper by J. Rich, Division of Planning and Local Assistance.  
3 Revised February 22, 2007.
- 4 DWR (California Department of Water Resources). 2010. *Final Environmental Impact Report: North*  
5 *Delta Flood Control and Ecosystem Restoration Project*. Sacramento, CA. October.
- 6 DWR and CCC (California Department of Water Resources and California State Coastal Conservancy).  
7 2008. *Dutch Slough Tidal Marsh Restoration Project Draft Environmental Impact Report*.  
8 November.
- 9 DWR, Yuba County Water Agency, and U.S. Bureau of Reclamation (California Department of Water  
10 Resources, Yuba County Water Agency, and U.S. Bureau of Reclamation). 2007. *Draft*  
11 *Environmental Impact Report/Environmental Impact Statement for the Proposed Lower Yuba*  
12 *River Accord*. Prepared by HDR and Surface Water Resources, Inc. June.
- 13 Great Valley Center. 2011. In the Spotlight. Site accessed February 1, 2011. <http://www.greatvalley.org>.
- 14 Reclamation, Contra Costa Water District, and Western Area Power Administration (U.S. Bureau of  
15 Reclamation, Contra Costa Water District, and Western Area Power Administration). 2009.  
16 *Los Vaqueros Reservoir Expansion Project Draft Environmental Impact*  
17 *Statement/Environmental Impact Report*. February.
- 18 Reclamation and San Luis & Delta-Mendota Water Authority (U.S. Bureau of Reclamation and San Luis  
19 & Delta-Mendota Water Authority). 2008. *Grassland Bypass Project, 2010–2019 Environmental*  
20 *Impact Statement and Environmental Impact Report*. Prepared by ENTRIX, Concord, CA.  
21 December.
- 22 Reclamation, U.S. Fish and Wildlife Service, and California Department of Fish and Game (U.S. Bureau  
23 of Reclamation, U.S. Fish and Wildlife Service, and California Department of Fish and Game).  
24 2010. *Suisun Marsh Habitat Management, Preservation, and Restoration Plan Draft*  
25 *Environmental Impact Statement/Environmental Impact Report*. Sacramento, CA. With assistance  
26 from ICF International, Sacramento, CA. October 2010.
- 27 San Diego County Department of Parks and Recreation. 2008. *Draft Programmatic Environmental*  
28 *Impact Report: San Luis Rey River Park Master Plan*. San Diego, CA. February.
- 29 SFPUC (San Francisco Public Utilities Commission). 2011. *Final Environmental Impact Report:*  
30 *Calaveras Dam Replacement Project*. San Francisco, CA. January.
- 31 Solano County 2008. *Solano County General Plan Background Report, Biological Resources*. Fairfield,  
32 CA. Adopted August 5, 2008.
- 33 The Nature Conservancy and California Department of Parks and Recreation. 2008. *Final Environmental*  
34 *Impact Report: Bidwell–Sacramento River State Park Habitat Restoration and Outdoor*  
35 *Recreation Facilities Development Project*. Chico, CA. Prepared by EDAW/AECOM,  
36 Sacramento, CA. September 17.
- 37 Trott, Ken. 2007. *Context Memorandum: Agriculture in the Delta*. Iteration 2. August 10. Site accessed  
38 November 11, 2010. [http://deltavision.ca.gov/context\\_memos/Agriculture/](http://deltavision.ca.gov/context_memos/Agriculture/Agriculture_Iteration2.pdf)  
39 [Agriculture\\_Iteration2.pdf](http://deltavision.ca.gov/context_memos/Agriculture/Agriculture_Iteration2.pdf).

- 1 USACE (U.S. Army Corps of Engineers). 2007. Delta Dredged Sediment Long-Term Management
- 2 Strategy (Pinole Shoal Management Area). Study Work Plan. Management Committee Review
- 3 Draft. San Francisco District. May 9.
- 4 USFS (U.S. Forest Service). 2011. Forest Inventory and National Analysis Program, Forest Inventory
- 5 Data Online. Site accessed January 5, 2010. <http://fiatools.fs.fed.us/fido>.
- 6

