

## 16.1 Environmental Setting/Affected Environment

This section discusses the socioeconomics study area (the area in which impacts may occur), which comprises Sacramento, San Joaquin, Yolo, Solano, and Contra Costa Counties, collectively referred to as the Delta region in this chapter. This area includes the entire Plan Area (the area covered by the BDCP); which is largely formed by the statutory borders of the Delta, along with areas in Suisun Marsh and the Yolo Bypass. The Delta is a maze of islands and channels at the confluence of the Sacramento and San Joaquin rivers. The Delta is located within portions of Contra Costa, Sacramento, San Joaquin, Solano, and Yolo counties and includes portions or all of the cities of Sacramento, Isleton, Elk Grove, West Sacramento, Rio Vista, Pittsburg, Antioch, Oakley, Brentwood, Stockton, Lathrop, Manteca, Tracy, and Lodi. Most of the population resides along the boundaries of the Delta. The Delta has a distinctive social, cultural, and natural heritage that reflects a long history of agricultural and recreational industries and water supply and flood control infrastructure including canals, sloughs, and pipelines conveying water from the Delta to the Central Valley, San Francisco Bay, and southern California.

Existing socioeconomic conditions in the Delta region and the effect of the proposed project, 14 action alternatives, and No Action Alternative on socioeconomic conditions are discussed in this chapter for the chapter's study area. The description is both quantitative and qualitative, and focuses on community character, social and economic characteristics, population, housing, employment, and income at regional levels, and satisfies NEPA's requirements regarding socioeconomic impacts. CEQA does not require a discussion of socioeconomic effects, except where they would result in reasonably foreseeable adverse physical changes to the environment. Under CEQA social or economic effects alone shall not be treated as significant effects (State CEQA Guidelines §§ 15064(f), 15131). DWR's *Economic Analysis Guidebook* (California Department of Water Resources 2008a) also provides guidance regarding the economic assessments that should be conducted from project formulation through implementation. These include cost effectiveness, benefit-cost, socioeconomic impacts, risk and uncertainty, and financial analyses. Additional information on individual racial/ethnic groups, low-income populations, and poverty levels is presented in Chapter 28, *Environmental Justice*, Section 28.2.

### 16.1.1 Potential Socioeconomics Effects Area

This chapter describes socioeconomics effects in the Delta region. The study area for the socioeconomics analysis comprises Sacramento, San Joaquin, Yolo, Solano, and Contra Costa Counties, collectively referred to as the Delta region. The discussion of the Delta region describes the existing socioeconomic conditions of the statutory Delta and the surrounding Delta counties. Potential effects related to changes in SWP and CVP deliveries are also described for those hydrologic regions that receive water from the Delta: San Francisco Bay, Sacramento River, San Joaquin River, Central Coast, South Coast, Tulare Lake, South Lahontan, and Colorado River. For more information on these regions, see Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.1.3, and for a map of the hydrologic regions, see Figure 6-1 in Chapter 6, *Surface Water*.

### 1 **16.1.1.1 Statutory Delta**

2 Socioeconomic conditions in the Delta region are described below for population and housing,  
3 employment and labor force trends, prominent business and industry types, government and  
4 finance, and additional discussion of the recreation and agriculture sectors based on their  
5 contributions to the regional economy.

6 The socioeconomic conditions are described for a larger area than the statutory Delta, because it is  
7 anticipated that construction and operation of BDCP conservation measures, as described in Chapter  
8 3, *Description of Alternatives*, Section 3.3.1, would potentially affect not only the statutory Delta, but  
9 also a larger area that covers parts of the Delta counties surrounding the statutory Delta.

10 Additionally, data for some conditions, such as employment-by-industry information, are available  
11 only at the county level. As a result, discussion of the Delta region covers specific characteristics of  
12 the communities in the statutory Delta and a summary of information at the county level. Figure 1-9  
13 in Chapter 1, *Introduction*, shows the counties and communities in the Delta region. The following  
14 discussion is focused on Contra Costa, Sacramento, San Joaquin, Solano, and Yolo Counties.

### 15 **Delta Community Overview**

16 Numerous communities with populations ranging from thousands (e.g., Pittsburg) to a few hundred  
17 (e.g., Locke) are located in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo Counties.

18 Surrounding these communities are farms, ranches, orchards, and vineyards, most of which have  
19 residences associated with them that are not in a delineated community, but are socially tied to a  
20 community through general proximity or public services (e.g., school district boundaries and public  
21 service delivery areas). The Delta Reform Act of 2009 designated a number of unincorporated  
22 Legacy Communities in the Delta, including Bethel Island, Clarksburg, Courtland, Freeport, Hood,  
23 Isleton, Knightsen, Rio Vista, Ryde, Locke, and Walnut Grove. These communities exemplify the  
24 Delta's unique cultural history and contribute to the sense of the Delta as a place. In addition to  
25 recognized cities and communities, the Delta also includes numerous small, recreational areas  
26 (including campgrounds, marinas, recreational vehicle parks, and vacation homes) that are popular  
27 throughout the spring and summer months.

28 Many Delta residents, whether full time or seasonal, are drawn to the area by the recreational  
29 opportunities afforded by the approximately 1,000 miles of waterways and multiple islands of the  
30 Delta. For many Delta residents, especially those arriving in more recent years, choosing to reside in  
31 the Delta is based on a desire to combine the urban lifestyles in nearby Sacramento and the Bay Area  
32 with a physical setting that provides relatively easy access to an extensive system of waterways.

33 The unique landscape, heritage, and recreational opportunities found in the Delta combine to create  
34 a distinctive environment that supports its own social and cultural character. The combination of  
35 the physical and biological environment with the social, economic, and cultural character of the  
36 Delta communities creates a unique regional framework.

37 Beyond the physical boundaries of the Delta, there are people who are connected to the Delta  
38 because of their business needs, their recreation interests, and social activities. For the people who  
39 reside outside the Delta, there is a sense of being part of the community because of the social  
40 interaction, common ties, and common appreciation of the Delta environment shared among  
41 residents and visitors. Different user groups may have a sense of being part of the larger Delta  
42 community because of shared values that are linked to the Delta landscape and resources.

## 1 **Geographic Distribution and Characterization of Population in the Delta**

2 The demographic composition of the Delta varies greatly. It can be characterized by small towns and  
3 dispersed rural residences in the interior of the Delta, and large urban areas on the periphery. In  
4 general, the population density of the inner Delta is very low. Most of the population resides in or  
5 near the peripheral urban areas. The highest concentration of people is in the urban centers of  
6 Sacramento to the north, Antioch and Pittsburg to the west, and Stockton and Tracy to the southeast.  
7 The small rural communities of Freeport, Isleton, and Thornton also are in the interior of the Delta.

8 The population in the interior of the Delta is centered around several rural communities, including  
9 Clarksburg, Courtland, Hood, Isleton, and Walnut Grove/Locke/Ryde (Delta Protection Commission  
10 2012). These communities have experienced land use restrictions that inhibit urban development  
11 within the Primary Zone of the Delta, an area generally representing the inner Delta, defined by the  
12 Delta Protection Commission for the purposes of land use planning (see Figure 13-1 in Chapter 13,  
13 *Land Use*, for a map of the Primary Zone of the Delta and the Secondary Zone, another area identified  
14 for land use planning purposes, which lies outside of the Primary Zone). As a result of passage of the  
15 Delta Protection Act of 1992 and implementation of the Delta Protection Commission's *Land Use and*  
16 *Resource Management Plan for the Primary Zone of the Delta* in 1995, expansion of urban  
17 development in these communities is generally not allowed unless proponents can demonstrate that  
18 implementing their projects would not result in loss of wetlands or riparian habitat, will not degrade  
19 water quality, will not interfere with migratory birds or public access, will not harm agricultural  
20 operations, and will not degrade levees or expose the public to increased flood hazards (Delta  
21 Protection Commission 2005). The Delta Protection Act requires the Delta Protection Commission to  
22 prepare, adopt, review, and maintain a comprehensive long-term resource management plan for  
23 land uses within the Primary Zone. The most recent *Land Use and Resource Management Plan* (Delta  
24 Protection Commission 2011) was adopted in 2011.

25 In addition to more densely populated Delta communities in the Primary Zone, numerous residences  
26 are scattered throughout the Delta islands and are either associated with agricultural parcels or are  
27 more estate-style residences used as vacation or leisure residences. Among the Delta islands in the  
28 interior of the Delta, Brannan-Andrus Island, Bethel Island, Byron Tract, New Hope Tract, and  
29 Sargent Barnhart Tract historically have had the highest populations (California Department of  
30 Water Resources 1995), although determining the populations of these individual islands is difficult  
31 because of seasonal changes in the recreation-associated residency and the presence of temporary  
32 agricultural workers on some islands, which can skew census tabulations. Some islands in the Delta  
33 are dedicated solely to agriculture or natural habitat, including McCormack-Williamson Tract,  
34 Kimball Island, and Coney Island.

35 The population of the Delta is relatively diverse as a result of its unique cultural history, the  
36 presence of seasonal farm workers, and increasing development within the larger Delta  
37 communities. There are high proportions of minority residents in both urban and rural areas.  
38 Historically, many of the agricultural areas in the interior of the Delta exhibit high proportions of  
39 minority residents, including Hispanics, Asians, and African-Americans because of a combination of  
40 historical and recent settlement trends. Chapter 28, *Environmental Justice*, Sections 28.2.1 and  
41 28.2.2, further discusses the demographics of minority populations in the Delta. Population  
42 estimates and growth trends for counties and communities located in the Delta are provided in  
43 Section 16.1.1.2, *Population of the Delta*. Photographs included in Appendix 16B, *Community*  
44 *Characterization Photographs*, also provide context for the character of Delta communities.

## 1 **Economy**

2 The economy of the interior of the Delta generally revolves around agriculture and tourism. This  
3 contrasts with the economies of the more urban and suburban communities on the periphery of the  
4 Delta that are generally tied to the more urban, diversified economies of Sacramento and the San  
5 Francisco Bay Area and are less dependent on tourism and agriculture.

6 The economy of the Delta is rooted in agriculture. For decades, the agricultural fields grew some of  
7 California's most well-known crops, including asparagus and pears. Agriculture became the primary  
8 economic driver in the Delta because of the rich soil, ample water supply, and proximity of urban  
9 markets; and agriculture fostered a diverse population in terms of race and ethnicity. The  
10 waterways of the Delta have been used to transport agricultural products to urban centers, such as  
11 Stockton or Sacramento for processing, packing, and shipment.

12 Today, the agricultural sector is still important in the Delta, but changes in mechanization and  
13 processing have resulted in a much smaller proportion of residents participating in agriculture than  
14 during the early part of the 20th century. Viniculture is growing in economic importance for some  
15 Delta communities. Concentrated around Clarksburg, 11 different appellation vintners have either  
16 lands or wineries in the Delta.

17 Tourism and recreation are the next most important economic drivers in the Delta. The Delta is a  
18 recreation destination for boating, fishing, waterskiing, and windsurfing. Because the communities  
19 in the interior of the Delta were established primarily for their easy access to the water, Delta  
20 communities are easily reached destinations for boaters and recreationists traveling through the  
21 area. As some areas have become key destinations for recreational users, the tourist activity  
22 supports additional services and businesses. Some of the recreationally-oriented communities have  
23 restaurants, cafes, retail shops, and service providers near the local dock or marina.

## 24 **County Profiles**

25 Key socioeconomic characteristics of each county and the main communities in the Delta region are  
26 described based on available data, as presented in Section 16.1.1.2 through Section 16.1.1.7.

### 27 **Contra Costa County**

28 The southwestern portion of the Delta lies in Contra Costa County, which extends from the Delta on  
29 its eastern and northeastern boundary to San Francisco Bay and San Pablo Bay on the west.  
30 Identified communities in Contra Costa County that are in the statutory Delta are Bay Point,  
31 Discovery Bay, and Knightsen. Communities in Contra Costa County that are partially in the  
32 statutory Delta include Antioch, Bethel Island, Brentwood, Byron, Oakley, and Pittsburg.

33 In 2010, more than 290,000 people, almost 28% of the county's population, resided in communities  
34 located partially or completely in the Delta. Of these, Antioch has the largest population, at 102,372  
35 residents, and Byron has the smallest, at 1,277 residents.

36 As shown in Table 16-3, approximately 60% of the county's population is between the ages of 20  
37 and 64. The county as a whole is 52% minority,<sup>1</sup> with communities that are partially located in the

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<sup>1</sup> The Council on Environmental Quality (CEQ) defines the term "minority" as persons from any of the following U.S. Census Bureau categories for race: Black/African American, Asian, Native Hawaiian and Other Pacific Islander, and American Indian or Alaska Native. Additionally, for the purposes of this analysis, "minority" also includes all other nonwhite racial categories, such as "some other race" and "two or more races." The CEQ also concluded that

1 Delta ranging from 20 to 80% minority composition (U.S. Census Bureau 2011). The minority  
2 population in these communities ranges from 20% in Bethel Island to a high of 80% in Pittsburg.

3 More than 20% of residents in the communities of Antioch, Bay Point, Brentwood, Knightsen,  
4 Oakley, and Pittsburg were in the age range of 5 to 19 years, with larger proportions between the  
5 ages of 20 and 64. In contrast, Bethel Island, an age-restricted community, was the only one of these  
6 communities with more than 20% in the age range of 65 years and above. Most residents in these  
7 communities live in owner-occupied housing (U.S. Census Bureau 2011).

8 The 2006-2010 average per capita income in Contra Costa County was \$37,818, and the median  
9 household income was \$78,385, with 9% of the population living below the poverty level.<sup>2</sup> The  
10 communities that are partially located in the Delta are similar in income profile to the county as a  
11 whole, and have from 3 to 22% of the population living below the poverty line. Both the per capita  
12 income and median household income of the county were higher than the state as a whole, and the  
13 percentage of persons living below the poverty level was lower than that of the state (U.S. Census  
14 Bureau 2012a).

15 From 2000 through 2012, the county's labor force grew at a rate of 0.5%, with 525,400 residents in  
16 the labor force as of 2012. Of these, 474,900 are employed, resulting in a current unemployment  
17 rate of 9.6%, lower than the statewide unemployment rate (California Employment Development  
18 Department 2012a). Contra Costa County is home to a wide range of businesses. Various major  
19 corporations have their headquarters in the county, including Chevron, The PMI Group Inc., and Bio-  
20 Rad. The county has a substantial heavy industrial and manufacturing sector. Business, professional,  
21 and financial services are another large portion of the economy (California Employment  
22 Development Department 2008).

### 23 **Sacramento County**

24 Sacramento County extends from the low Delta lands between the Sacramento and San Joaquin  
25 Rivers north to about 10 miles beyond the State Capitol and east to the foothills of the Sierra Nevada.  
26 The Sacramento, Mokelumne, and San Joaquin Rivers form the southern border of Sacramento  
27 County in the Delta.

28 The Delta lies in the southwestern region of the county. Sacramento County communities completely  
29 within the Delta include Courtland, Freepoint, Hood, Isleton, Locke, and Walnut Grove. Additionally,  
30 small portions of the cities of Sacramento and Elk Grove lie partially within the Delta. In 2010,  
31 469,498 people, or 33% of Sacramento County's population, resided in communities lying at least  
32 partially within the Delta. Most of the county population resides in Sacramento and its suburbs  
33 outside the statutory Delta. Of Sacramento County's eight communities in the Delta, Sacramento has  
34 the largest population, with 466,488 residents; however, most of the population does not live within  
35 the Delta. Freepoint and Hood have the smallest populations, each with fewer than 1,000 residents.

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persons identified by the U.S. Census Bureau as ethnically Hispanic, regardless of race, should be included in minority counts (CEQ 1997).

<sup>2</sup> The U.S. Census Bureau defines the term "poverty level" by using the Office of Management and Budget's Statistical Policy Directive 14. Income thresholds are used to determine who is in poverty. If a family's total income is less than a specified threshold, the family is considered in poverty. Poverty levels do not vary geographically (U.S. Census Bureau 2010b).

1 As shown in Table 16-3, approximately 60% of the county's population is between the ages of 20  
 2 and 64. The total minority population in the county is about 52%; however, in the communities that  
 3 are totally located in the Delta, the percentage of the population identified as minority ranges from  
 4 21% (Freeport) to 66% (Hood).

5 More than 20% of residents in the communities of Courtland, Hood, Isleton, Sacramento, and Walnut  
 6 Grove were in the age range of 5 to 19 years, with larger proportions between the ages of 20 and 64.  
 7 In contrast, the community of Freeport was the only one of these communities with more than 20%  
 8 in the age range of 65 years and above. In Courtland, Freeport, Sacramento, and Walnut Grove, fewer  
 9 than half of residents live in owner-occupied housing units. In Hood and Isleton, a majority of  
 10 residents live in owner-occupied units (U.S. Census Bureau 2011).

11 The 2006-2010 per capita income in Sacramento County was \$26,953, and the median household  
 12 income was \$56,439, with 14% of the population living below the poverty line (U.S. Census Bureau  
 13 2012a). While the income averages are lower than those of the state, the level of poverty roughly  
 14 matches the state average percentage of persons living below the poverty limit. The communities in  
 15 the Delta have a range in percentages of persons living below the poverty line, ranging from 10% to  
 16 about 17%.

17 From 2000 to 2012, the Sacramento County labor force annual growth rate was 0.9%, with  
 18 667,800 residents in the labor force as of 2012 with an unemployment rate of 11.2%, slightly lower  
 19 than the state unemployment rate of 11.3% (California Employment Development Department  
 20 2012a, 2012b). In addition to the State of California, major employers include school districts,  
 21 healthcare facilities, and the agricultural industry (County of Sacramento 2009a).

## 22 **San Joaquin County**

23 Communities in San Joaquin County that are located in the Delta include French Camp, Terminous,  
 24 Thornton, and the cities of Lathrop, Stockton, and Tracy. In 2010, the San Joaquin County population  
 25 living in communities lying at least partially within the Delta was more than 393,000, about 57% of  
 26 the county's population. Of San Joaquin County's communities partially or entirely located in the  
 27 Delta, Stockton has the largest population at 291,707, followed by Tracy with 82,922 residents.  
 28 Terminous is smallest, with a population of 381.

29 As shown in Table 16-3, approximately 57% of the county's population is between the ages of 20  
 30 and 64. The total minority population of the county is about 64%. In communities that lie at least  
 31 partially within the Delta, the minority population ranges from 18% in Terminous to 77% in  
 32 Stockton.

33 More than 25% of residents in the communities of Lathrop, Stockton, and Tracy were in the age  
 34 range of 5 to 19 years, with larger proportions between the ages of 20 and 64. In contrast, the  
 35 community of Terminous was the only one of these communities with more than 20% in the age  
 36 range of 65 years and above. In all of these communities, more than half of residents live in owner-  
 37 occupied housing units (U.S. Census Bureau 2011).

38 The 2006-2010 per capita income in San Joaquin County was \$22,851, and the median household  
 39 income was \$54,341, with 14% of the population living below poverty level (U.S. Census  
 40 Bureau 2012a). These income figures are lower than the California average and this poverty rate is  
 41 higher than the state's as a whole. Of the communities that are located in the Delta, the percentage of  
 42 persons living in poverty ranged from 8% in Lathrop to about 20% in Stockton.

1 In 2012, there were 299,400 residents in the county's labor force. Of these, 249,900 persons were  
2 employed, resulting in an unemployment rate of 16.5%. This was far greater than the state's  
3 unemployment rate of 11.3% (California Employment Development Department 2012a and 2012b).  
4 Major employment sectors in the county include agriculture, manufacturing, and wholesale and  
5 retail trade (County of San Joaquin 2009a; California Employment Development Department 2009).

## 6 **Solano County**

7 Located approximately 45 miles northeast of San Francisco and 45 miles southwest of Sacramento,  
8 Solano County supports a mix of agricultural and suburban areas. It covers 909 square miles,  
9 including 84 square miles of open water and 675 square miles of rural land (County of Solano  
10 2009a). The southeastern part of Solano County lies in the Delta. Rio Vista is the only community in  
11 Solano County identified in this analysis as lying partially or completely within the Delta and  
12 representing only about 2% of the county's population. As shown in Table 16-3, approximately 61%  
13 of the county's population is between the ages of 20 and 64. The total minority population of the  
14 county is about 59% while minorities comprise 26% of the population of Rio Vista. In communities  
15 that lie at least partially within the Delta, the minority population ranges from 18% in Terminous to  
16 77% in Stockton.

17 Fewer than 15% of residents in Rio Vista were in the age range of 5 to 19 years, with 50% between  
18 the ages of 20 and 64 and more than 32% aged 65 or older. More than 75% of residents of Rio Vista  
19 live in owner-occupied housing units (U.S. Census Bureau 2011).

20 The county's 2006–2010 per capita income was \$28,649, and the median household income was  
21 \$68,409. The percentage of persons living below the poverty level was 10% (U.S. Census  
22 Bureau 2012a). While the per capita income of Solano County is lower than the state average, the  
23 median household income surpasses that of the state and the poverty rate is lower than the  
24 statewide rate. The community of Rio Vista had 10% of residents living below the poverty line.

25 In 2012, Solano County reported 217,900 residents in the labor force. Of these, 194,300 persons  
26 were employed, resulting in an unemployment rate of 10.8%, lower than the state unemployment  
27 rate of 11.3% (California Employment Development Department 2012a). Solano County restricts  
28 urban residential and commercial development outside cities, thus preserving approximately 80%  
29 of the land for open space or agricultural use. In addition to agriculture, the Solano County is home  
30 to biotechnology and other growth industries.

## 31 **Yolo County**

32 The southeast portion of Yolo County lies in the Delta. The communities in Yolo County that are in  
33 the Delta include Clarksburg and West Sacramento. In 2010, the population of these communities  
34 was more than 49,000, accounting for about 24% of the county population. Of Yolo County's two  
35 communities in the Delta, West Sacramento has the larger population, with 48,744 residents, while  
36 Clarksburg supports 418 residents.

37 As shown in Table 16-3, approximately 62% of the county's population is between the ages of 20  
38 and 64. The total minority population of the county is about 50%. In communities that lie at least  
39 partially within the Delta, the minority population ranges from 33% in Clarksburg to 53% in West  
40 Sacramento.

41 About 20% of residents in the communities of Clarksburg and West Sacramento were in the age  
42 range of 5 to 19 years, with larger proportions between the ages of 20 and 64. In both of these

1 communities, more than half of residents live in owner-occupied housing units (U.S. Census  
2 Bureau 2011).

3 The 2006–2010 per capita income in Yolo County was \$27,420, and the median household income  
4 was \$57,077 (U.S. Census Bureau 2012a). The percentage of persons living below the poverty level  
5 was 17%, compared with the state average of 14% (U.S. Census Bureau 2012a). Additionally, the per  
6 capita income and median household income for Yolo County are lower than the state averages.  
7 West Sacramento had a similar percentage of residents living below the poverty line, at 17%.

8 In 2012, Yolo County had 99,300 persons in the labor force, and an unemployment rate of 13.9%,  
9 more than two percentage points higher than the unemployment rate of the state (California  
10 Employment Development Department 2012a). Yolo County is home to the Port of Sacramento,  
11 which ships out 1.3 million tons of the county’s agricultural products, such as rice, wheat, and  
12 safflower seed, to worldwide markets (County of Yolo 2009a). Agriculture, education, health care,  
13 and services are leading sources of employment.

## 14 16.1.1.2 Population of the Delta

### 15 Population and Growth Trends

16 The Delta Protection Commission’s *Economic Sustainability Plan for the Sacramento-San Joaquin*  
17 *Delta* reported a growth rate of about 54% within the statutory Delta between 1990 and 2010, as  
18 compared with a 25% growth rate statewide during the same period (Delta Protection Commission  
19 2012). The report also indicated that population growth had occurred in the Secondary Zone of the  
20 Delta but not in the Primary Zone (see Figure 13-1 for a map of the Primary and Secondary Zones of  
21 the Delta, as defined by the DPC), and that population in the central and south Delta areas had  
22 decreased since 2000.

23 Table 16-1 illustrates past, current, and projected population trends for the five counties in the  
24 Delta. As of 2010, the combined population of the Delta counties was approximately 3.8 million.  
25 Sacramento County contributed 37.7% of the population of the Delta counties, and Contra Costa  
26 County contributed 27.8%. Yolo County had the smallest population (200,849 or 5.3%) of all the  
27 Delta counties.

28 **Table 16-1. Delta Counties and California Population, 2000–2050**

Area	2000 Population (millions)	2010 Population (millions)	2020 Projected Population (millions)	2025 Projected Population (millions)	2050 Projected Population (millions)
Contra Costa County	0.95	1.05	1.16	1.21	1.50
Sacramento County	1.23	1.42	1.56	1.64	2.09
San Joaquin County	0.57	0.69	0.80	0.86	1.29
Solano County	0.40	0.41	0.45	0.47	0.57
Yolo County	0.17	0.20	0.22	0.24	0.30
Delta Counties	3.32	3.77	4.18	4.42	5.75
California	34.00	37.31	40.82	42.72	51.01

Sources: California Department of Finance 2012a.

29

1 For the 10-year period between 2000 and 2010, the population of the Delta counties increased at an  
2 average annual rate of 1.37% (13.7% in total), with the greatest rate of population growth occurring  
3 in San Joaquin County. Population growth in Solano County during this 10-year period was the  
4 slowest (0.43% per year). The state showed about a 1% annual growth rate in population during  
5 this period, slower than that of the Delta counties combined.

6 Growth projections through 2050 indicate that all counties overlapping the Delta are projected to  
7 grow at a faster rate than the state as a whole. Total population in the Delta counties is projected to  
8 grow at an average annual rate of 1.2% through 2030 (California Department of Finance 2012a).

9 Table 16-2 presents more detailed information on populations of individual communities in the  
10 Delta. Growth rates from 2000 to 2010 were generally higher in the smaller communities than in  
11 larger cities such as Antioch and Sacramento. This is likely a result of these communities having  
12 lower property and housing prices, and their growth being less constrained by geography and  
13 adjacent communities.

14 Population density varies widely across the Delta region. Analysis done for the Delta Risk  
15 Management Strategy (California Department of Water Resources 2008c) indicated several Delta  
16 islands with fewer than 20 residents. In contrast, some cities are wholly or partly within the  
17 statutory Delta (e.g., Sacramento and Stockton) and have densities exceeding 3,000 residents per  
18 square mile. Smaller communities in the Delta, such as Walnut Grove, have population densities as  
19 low as 200 residents per square mile (U.S. Census Bureau 2000).

## 20 **Age Distribution**

21 The *Economic Sustainability Plan for the Sacramento-San Joaquin Delta* described a relatively young  
22 age class throughout the Delta with a slightly older population within the Primary Zone (Delta  
23 Protection Commission 2012). The report also indicated that there were a higher percentage of  
24 households with two or fewer residents in the Primary Zone than in the rest of the Delta or  
25 statewide.

26 Age distribution in the Delta is shown in Table 16-3. The age composition of people residing in the  
27 Delta was generally similar to that of the state. The median ages in the five Delta counties ranged  
28 from 30 to 38, consistent with the state's median age of 34.5.

1 **Table 16-2. Delta Communities Population, 2000 and 2010**

Community	2000	2010	Average Annual Growth Rate 2000–2010
<b>Contra Costa County</b>			
Incorporated Cities and Towns			
Antioch	90,532	102,372	1.3%
Brentwood	23,302	51,481	12.1%
Oakley	25,619	35,432	3.8%
Pittsburg	56,769	63,264	1.1%
Small or Unincorporated Communities			
Bay Point	21,415	21,349	-0.0%
Bethel Island	2,252	2,137	-0.5%
Byron	884	1,277	4.5%
Discovery Bay	8,847	13,352	5.1%
Knightsen	861	1,568	8.2%
<b>Sacramento County</b>			
Incorporated Cities and Towns			
Isleton	828	804	-0.3%
Sacramento	407,018	466,488	1.5%
Small or Unincorporated Communities			
Courtland	632	355	-4.4%
Freeport and Hood	467	309 <sup>a</sup>	-3.4%
Locke	1,003	Not available	—
Walnut Grove	646	1,542	13.9%
<b>San Joaquin County</b>			
Incorporated Cities and Towns			
Lathrop	10,445	18,023	7.3%
Stockton	243,771	291,707	2.0%
Tracy	56,929	82,922	4.6%
Small or Unincorporated Communities			
Terminous	1,576	381	-7.6%
<b>Solano County</b>			
Incorporated Cities and Towns			
Rio Vista	4,571	7,360	6.1%
<b>Yolo County</b>			
Incorporated Cities and Towns			
West Sacramento	31,615	48,744	5.4%
Small or Unincorporated Communities			
Clarksburg	681	418	-3.9%

Sources: U.S. Census Bureau 2000; U.S. Census Bureau 2011.

<sup>a</sup> Freeport had a population of 38; Hood had a population of 271.

1 **Table 16-3. Delta Counties and California Age Distribution, 2010**

Population Segment	Contra Costa County	Sacramento County	San Joaquin County	Solano County	Yolo County	Delta Counties	California
Total Population	1,049,025	1,418,788	685,306	413,344	200,849	3,767,312	37,253,956
<5 years <sup>a</sup>	67,018 6.4%	101,063 7.1%	54,228 7.9%	26,852 6.5%	12,577 6.3%	261,738 6.9%	2,531,333 6.8%
5–19 years <sup>a</sup>	220,495 21.0%	303,612 21.4%	169,357 24.7%	86,370 20.9%	44,246 22.0%	824,080 21.9%	7,920,709 21.3%
20–64 years <sup>a</sup>	631,074 60.2%	855,562 60.3%	390,540 57.0%	253,275 61.3%	124,255 61.9%	2,254,706 59.8%	22,555,400 60.5%
65+ years <sup>a</sup>	130,438 12.4%	158,551 11.2%	71,181 10.4%	46,847 11.3%	19,771 9.8%	426,788 11.3%	4,246,514 11.4%
Median Age	38.5	34.8	32.7	36.9	30.4	35.4	35.2

Source: U.S. Census Bureau 2011.

<sup>a</sup> Percentages are of the total population.

2  
3 Most communities in the Delta had an age distribution consistent with that of the counties and state  
4 as a whole. However, a few communities, such as Bethel Island, Terminous, and Rio Vista, had a  
5 greater percentage of the population at or near retirement age (U.S. Census Bureau 2012a).

### 6 **16.1.1.3 Housing in the Delta**

#### 7 **Housing Unit Trends**

8 Table 16-4 illustrates the distribution of housing units in the Delta as a whole, in each of the five  
9 counties, and in California. It also provides information on housing units for incorporated Delta  
10 communities. As of 2010, there were 1.4 million housing units within Delta counties, representing  
11 10.4% of the housing units in the state. Sacramento County, with the largest population in the five-  
12 county Delta region, also contained the most housing units in the region in 2010. Yolo County, with  
13 the smallest population in the Delta region, also had the fewest housing units. Recent growth in the  
14 number of housing units has been greatest in San Joaquin County. Contra Costa County registered  
15 the lowest increase in housing units. These patterns are consistent with the population growth  
16 discussed previously.

17 From 2000 to 2010, the Delta counties experienced a 1.6% average annual growth in the total  
18 number of housing units. This is higher than the state growth rate of 1.1%. During this 10-year  
19 period, San Joaquin County had the greatest increase in the number of housing units in the Delta  
20 region, with an additional 40,667 units being built (a 21% increase, or 2.15% average annual  
21 growth). However, over the past several years, Delta region counties, along with many other areas,  
22 have experienced a general decline in housing demand.

23 Housing density varies greatly across the Delta region, corresponding to the variation in population  
24 density. Some Delta islands contain fewer than five housing units. As a result, substantial areas in  
25 the statutory Delta contain fewer than 20 housing units per square mile (California Department of

1 Water Resources 2008c). In contrast, cities that are wholly or partly within the statutory Delta, such  
 2 as Sacramento and Stockton, contain more than 1,000 housing units per square mile. The housing  
 3 density of small communities in the Delta generally falls in between these extremes; Walnut Grove,  
 4 for example, contains about 90 housing units per square mile (U.S. Census Bureau 2000).

5 **Table 16-4. Housing Units in Delta Counties, Delta Communities, and California, 2000 and 2010**

Area	2000	2010	Average Annual Growth Rate 2000–2010
<b>Contra Costa County</b>	<b>354,577</b>	<b>400,268</b>	<b>1.3%</b>
Antioch	30,116	34,146	1.3%
Brentwood	7,788	17,715	12.7%
Oakley	7,946	11,104	4.0%
Pittsburg	18,300	21,056	1.5%
<b>Sacramento County</b>	<b>474,814</b>	<b>556,208</b>	<b>1.7%</b>
Isleton	384	378	-0.2%
Sacramento	163,957	195,446	1.9%
<b>San Joaquin County</b>	<b>189,160</b>	<b>229,827</b>	<b>2.1%</b>
Lathrop	2,991	5,061	6.9%
Stockton	82,042	97,085	1.8%
Tracy	18,087	25,596	4.2%
<b>Solano County</b>	<b>134,513</b>	<b>153,280</b>	<b>1.4%</b>
Rio Vista	1,974	3,771	9.1%
<b>Yolo County</b>	<b>61,587</b>	<b>74,224</b>	<b>2.1%</b>
West Sacramento	12,133	18,677	5.4%
<b>Delta Counties</b>	<b>1,214,651</b>	<b>1,413,807</b>	<b>1.6%</b>
<b>California</b>	<b>12,214,550</b>	<b>13,591,866</b>	<b>1.7%</b>

Source: California Department of Finance 2012b.

Note: Data available for incorporated communities only.

6

## 7 Housing Type Trends

8 Housing type trends among the five counties and selected communities in the Delta are given in  
 9 Table 16-5. Of the Delta counties, Sacramento County had the highest number of single-family and  
 10 multifamily homes. In 2010, Sacramento County had 391,958 single-family and 148,453 multifamily  
 11 homes. Yolo County had the fewest single-family and multifamily homes during the period, with  
 12 48,012 single-family units and 22,484 multifamily units in 2010. Of the Delta counties, San Joaquin  
 13 County displayed the greatest annual growth rate in single-family homes over the period (2.7%) and  
 14 the lowest annual growth rate in multifamily housing (0.6%). Yolo County had the second highest  
 15 growth rate in single-family housing and the highest growth rate in multifamily housing of the Delta  
 16 counties.

1 **Table 16-5. Housing Type Trends, by County and Incorporated Communities, 2000–2010**

Area	2000		2010		Average Annual Growth Rate 2000–2010	
	Single-Family	Multifamily	Single-Family	Multifamily	Single-Family	Multifamily
<b>Contra Costa County</b>	<b>261,990</b>	<b>85,008</b>	<b>298,145</b>	<b>94,488</b>	<b>1.4%</b>	<b>1.1%</b>
Antioch	24,283	5,564	28,016	5,861	1.5%	0.5%
Brentwood	6,768	672	16,122	1,242	13.8%	8.5%
Oakley	7,363	164	10,123	560	3.7%	24.1%
Pittsburg	13,240	4,390	15,805	4,570	1.9%	0.4%
<b>Sacramento County</b>	<b>329,308</b>	<b>130,022</b>	<b>391,958</b>	<b>148,453</b>	<b>1.9%</b>	<b>1.4%</b>
Isleton	224	113	223	108	0.0%	-0.4%
Sacramento	107,257	53,029	127,660	64,100	1.9%	2.1%
<b>San Joaquin County</b>	<b>140,524</b>	<b>39,445</b>	<b>178,172</b>	<b>41,852</b>	<b>2.7%</b>	<b>0.6%</b>
Lathrop	2,536	104	4,604	106	8.2%	0.2%
Stockton	55,680	25,074	69,778	26,019	2.5%	0.4%
Tracy	15,076	2,536	22,027	3,093	4.6%	2.2%
<b>Solano County</b>	<b>101,974</b>	<b>27,913</b>	<b>116,866</b>	<b>31,723</b>	<b>1.5%</b>	<b>1.4%</b>
Rio Vista	1,590	274	3,386	274	11.3%	0.0%
<b>Yolo County</b>	<b>38,868</b>	<b>19,110</b>	<b>48,012</b>	<b>22,484</b>	<b>2.4%</b>	<b>1.8%</b>
West Sacramento	7,585	3,017	12,787	4,311	6.9%	4.3%
<b>Delta Counties</b>	<b>872,664</b>	<b>301,498</b>	<b>1,033,153</b>	<b>339,000</b>	<b>1.8%</b>	<b>1.2%</b>
<b>California</b>	<b>7,815,035</b>	<b>3,829,827</b>	<b>8,747,293</b>	<b>4,247,635</b>	<b>1.1%</b>	<b>0.9%</b>

Source: California Department of Finance 2012b.

Note: Excludes mobile homes.

2

3 **Housing Vacancy Rates**

4 Housing vacancy rates among the five counties and selected communities in the Delta are given in  
5 Table 16-6. Of the Delta counties, Sacramento County had the highest vacancy rate. In 2010,  
6 Sacramento County had a vacancy rate of 4.44%. Contra Costa County had the lowest vacancy rate  
7 during the period, with 2.98% in 2010. Of the Delta counties, Solano County displayed the greatest  
8 change in vacancy rate between 2000 and 2010 (0.97%).

1 **Table 16-6. Housing Vacancy Rates, by County and Incorporated Communities, 2000–2010**

Area	Vacancy Rate 2000	Vacancy Rate 2010
<b>Contra Costa County</b>	<b>2.95%</b>	<b>2.98%</b>
Antioch	2.58%	2.58%
Brentwood	3.74%	3.67%
Oakley	1.43%	1.54%
Pittsburg	3.05%	3.04%
<b>Sacramento County</b>	<b>4.47%</b>	<b>4.44%</b>
Isleton	10.68%	10.58%
Sacramento	5.72%	5.72%
<b>San Joaquin County</b>	<b>3.98%</b>	<b>3.94%</b>
Lathrop	2.77%	3.18%
Stockton	4.25%	4.25%
Tracy	2.58%	2.58%
<b>Solano County</b>	<b>3.06%</b>	<b>4.03%</b>
Rio Vista	4.71%	4.30%
<b>Yolo County</b>	<b>3.59%</b>	<b>3.52%</b>
West Sacramento	2.83%	6.01%
<b>California</b>	<b>5.83%</b>	<b>5.90%</b>

Source: California Department of Finance 2012b.

Note: Excludes mobile homes.

2

### 3 **16.1.1.4 Employment, Labor Force, and Industry in the Delta**

4 Employment, labor force, and industry indicators provide useful insight into an area's economy. The  
5 following discussion describes recent employment trends, unemployment rates, labor force, and  
6 industry data. This section describes the employment and labor force characteristics in the Delta  
7 area based on data obtained largely from the California Employment Development Department  
8 (EDD) Labor Market Information Division (2009, 2012a, 2012b). Employment and labor force data  
9 are only available at the county level; thus, a community-level discussion is not included.

10 Employment, labor, and industry trends are discussed at a broad level for the five counties that  
11 make up the Delta. In 2012, the EDD reported a labor force of 1,809,800 people for the Delta  
12 counties. This is compared with 18,365,000 people in California's labor force; thus, Delta counties  
13 make up about 10% of the state's total labor force. Table 16-7 provides a breakdown of the labor  
14 force in each county in the Delta. Sacramento County is the largest contributor, with a labor force of  
15 667,800. This is followed by Contra Costa County (525,400) and San Joaquin County (299,400). In  
16 2012, Solano County registered 217,900 people in the labor force. Yolo County registered a labor  
17 force of 99,300. All counties' labor force numbers have grown since 2000.

18 Table 16-8 displays information on Delta employment by industry, distribution of employment, and  
19 annual growth rates. The top three industries in the Delta counties in 2011, based on the number of  
20 employees, were services, government, and retail trade. The only industry that experienced positive  
21 growth over the 2006-2011 period was agriculture, with an average annual growth rate of 1.1%.

1 Due to the national economic recession that occurred during this period, all other industrial sectors  
 2 had negative annual growth rates, ranging from -0.2% for the services sector to -8.2% for the  
 3 manufacturing and construction sector.

4 Table 16-9 shows per capita personal income, median household income, and poverty status for the  
 5 Delta counties. The per capita personal incomes (in 2010 inflation-adjusted dollars) for the five  
 6 counties ranged from a high of \$37,818 in Contra Costa County (30% higher than the state per capita  
 7 income of \$29,188) to a low of \$22,851 in San Joaquin County. Contra Costa County also had the  
 8 highest median household income in 2010 inflation-adjusted dollars (\$78,385), while San Joaquin  
 9 County had the lowest median household income (\$54,341) (U.S. Department of Labor 2009).

10 **Table 16-7. Delta Counties and California Employment Trends, 2000–2012**

Area	2000	2012	Average Annual Growth Rate (2000–2012)
<b>Contra Costa County</b>			
Labor force	495,300	525,400	0.5%
Employed	476,400	474,900	-0.0%
Unemployment rate	3.8%	9.6%	N/A
<b>Sacramento County</b>			
Labor force	602,100	667,800	0.9%
Employed	574,200	592,900	0.3%
Unemployment rate	4.6%	11.2%	N/A
<b>San Joaquin County</b>			
Labor force	251,600	299,400	1.6%
Employed	231,600	249,900	0.7%
Unemployment rate	8.0%	16.5%	N/A
<b>Solano County</b>			
Labor force	191,100	217,900	1.2%
Employed	180,700	194,300	0.6%
Unemployment rate	5.5%	10.8%	N/A
<b>Yolo County</b>			
Labor force	86,200	99,300	1.3%
Employed	80,700	85,500	0.5%
Unemployment rate	6.4%	13.9%	N/A
<b>All Delta Counties</b>			
Labor force	1,626,300	1,809,800	0.9%
Employed	1,543,600	1,597,500	0.3%
Unemployment rate	5.1%	11.7%	N/A
<b>California</b>			
Labor force	16,658,900	18,365,000	0.9%
Employed	15,762,200	16,284,000	0.3%
Unemployment rate	5.4%	11.3%	N/A

Sources: California Employment Development Department 2012a, 2012b.

Note: Unemployment rates are cyclical, so annual growth rates do not apply. Employment data are from January 2000 and 2012.

11  
 12 The number of people living in poverty in the Delta counties is largely consistent with the income  
 13 data. Contra Costa County had the lowest percentage of the population living below the poverty  
 14 level, at 9%. Yolo County, with a slightly higher per capita income and median household income

1 than San Joaquin County, still registered the highest percentage of the population living below the  
 2 poverty level, at 17%. San Joaquin County closely followed at 16%. These percentages are higher  
 3 than those of the state, which had 14% of the population living below the poverty level.

4 Chapter 28, *Environmental Justice*, Section 28.2.3, provides greater detail regarding the distribution  
 5 of low-income populations within the Delta counties.

6 **Table 16-8. Delta Counties Annual Employment and Shares by Industry, 2006–2011**

Industry	2006	2007	2008	2009	2010	2011	Annual Growth Rate <sup>b</sup>
Agriculture	23,500 (1.7%)	24,000 (1.7%)	24,600 (1.8%)	25,200 (1.9%)	25,300 (2.0%)	25,100 (2.0%)	1.1%
Manufacturing and construction <sup>a</sup>	192,600 (13.6%)	184,100 (13.0%)	167,200 (12.0%)	141,600 (10.7%)	130,800 (10.2%)	129,100 (10.1%)	-8.2%
Transportation, utilities, and warehousing	47,200 (3.3%)	49,200 (3.5%)	49,700 (3.6%)	47,200 (3.6%)	45,000 (3.5%)	45,300 (3.6%)	-0.7%
Trade	209,900 (14.8%)	208,000 (14.6%)	199,800 (14.4%)	185,300 (14.1%)	183,800 (14.4%)	186,100 (14.6%)	-2.1%
Information	33,900 (2.4%)	33,800 (2.4%)	31,800 (2.3%)	29,100 (2.2%)	27,200 (2.1%)	26,000 (2.0%)	-5.1%
Financial, insurance, and real estate services	98,000 (6.9%)	91,700 (6.5%)	84,500 (6.1%)	79,200 (6.0%)	73,400 (5.7%)	70,300 (5.5%)	-6.6%
Services	495,300 (35.0%)	504,700 (35.5%)	503,100 (36.2%)	488,000 (37.0%)	481,600 (37.6%)	489,700 (38.4%)	-0.2%
Government	313,100 (22.2%)	324,400 (22.8%)	328,100 (23.6%)	322,900 (24.5%)	312,800 (24.4%)	303,800 (23.8%)	-0.5%
<b>Total for all Industries</b>	<b>1,413,500</b>	<b>1,419,900</b>	<b>1,388,800</b>	<b>1,318,500</b>	<b>1,279,900</b>	<b>1,275,400</b>	<b>-1.8%</b>

Source: California Employment Development Department 2013.

<sup>a</sup> Includes natural resources and mining.

<sup>b</sup> Calculated as the total % growth from 2006 to 2011, divided by 6.

Note: Numbers in parentheses indicate the share as a percentage of the total employment. Percentages may not add to 100% due to independent rounding.

7

1 **Table 16-9. Delta Counties and California Income and Poverty Levels, 2006-2010**

Area	Per Capita Income <sup>a</sup> (dollars)	Median Household Income <sup>a</sup> (dollars)	Persons Living Below Poverty Level	Percentage of Population Living Below Poverty Level
Contra Costa County	37,818	78,385	94,412	9.0%
Sacramento County	26,953	56,439	197,212	13.9%
San Joaquin County	22,851	54,341	109,649	16.0%
Solano County	28,649	68,409	42,988	10.4%
Yolo County	27,420	57,077	34,345	17.1%
Delta Counties (total or population- weighted average)	29,443	63,516	478,606	12.7%
California	29,188	60,883	5,103,792	13.7%

Source: U.S. Census Bureau 2012a.

<sup>a</sup> 2010 inflation-adjusted dollars, using Consumer Price Index.

2

3 **16.1.1.5 Government and Finance in the Delta**

4 This section provides background information on local government finance in the Delta region,  
5 including counties, cities, and special districts. Public revenues and expenditures are described in  
6 more detail for the Delta focuses of Contra Costa, Sacramento, San Joaquin, Solano, and Yolo  
7 counties.

8 Total revenues and expenditures vary substantially among the five Delta counties because of their  
9 size, population, level of commercial and industrial development, land uses, and the level and types  
10 of services provided. Revenue sources include tax receipts (primarily property taxes), rents, license  
11 and permit fees, expenditures of state and federal government funds, charges for services (e.g.,  
12 water and sewer), and other sources. Revenue ranges from approximately \$253 million in Yolo  
13 County for fiscal year (FY) 2010–2011 to more than \$2.1 billion in Sacramento County (California  
14 State Controller’s Office 2012). Table 16-10 presents the revenues in the Delta counties during FY  
15 2010–2011.

1 **Table 16-10. Revenues and Expenditures by Delta Counties during Fiscal Years 2010-2011**

Type of Revenue or Expenditure	Contra Costa County	Sacramento County	San Joaquin County	Solano County	Yolo County
<b>Revenues (all values in millions of dollars)</b>					
Property taxes	282.3	326.3	177.3	108.6	40.3
Other taxes	19.7	106.4	19.7	7.1	4.0
Licenses, permits, fines, forfeitures, etc.	51.9	95.0	16.1	28.1	16.7
Federal, State, other	693.8	1,327.4	506.1	314.3	165.2
Miscellaneous revenue	17.9	51.2	10.4	6.2	4.0
Other financing sources	265.0	241.5	94.4	89.5	22.9
<b>Total revenue</b>	<b>1,330.7</b>	<b>2,147.7</b>	<b>823.9</b>	<b>553.8</b>	<b>253.0</b>
<b>Expenditures (all values in millions of dollars)</b>					
Legislative, administrative, finance, counsel, and general expenditures	107.6	131.5	43.0	50.5	28.5
Police protection, corrections, fire, public protection, etc.	360.3	642.1	261.2	171.2	73.6
Transportation	89.7	99.8	38.6	14.5	10.0
Public health, medical care, etc.	224.7	549.4	106.6	104.9	42.1
Welfare, social services, and other public assistance	390.9	632.1	342.2	157.1	71.6
Education and library services	23.0	10.1	5.7	17.1	5.9
Recreation facilities	0.0	14.3	5.6	1.5	1.7
Principal and interest on long-term debt	67.9	132.1	9.3	29.0	2.6
Other expenditures	42.3	N/A	18.5	N/A	1.4
<b>Total expenditures</b>	<b>1,306.3</b>	<b>2,211.4</b>	<b>830.6</b>	<b>545.7</b>	<b>237.3</b>

Source: California State Controller's Office 2012.

Note: Numbers may not sum due to rounding.

- 2
- 3 The revenue generated varies by county depending on state and federal allocations, tax rates,  
4 property values, special assessments, and other special taxes. Revenue is generated from real  
5 property based on the assessed value of the property (allocated according to formulas set by state  
6 law) and by other taxes and assessments. Local agencies in each county are permitted to levy  
7 additional ad valorem tax rates for repayment of debt that is approved by voters, such as financing  
8 for facilities and services like hospitals and schools. As a result of the levy of additional voter-  
9 approved debt, tax rates may vary from area to area within any county, depending on the number  
10 and amount of debt. A city, county, or other public entity also can form a special assessment district  
11 and levy an assessment on real property to finance public improvements or services, infrastructure,  
12 or community services. The special district can finance those public improvements that confer a  
13 special, measurable, direct benefit to each parcel of the real property in the district.
- 14 Special assessment or service districts include benefit assessment districts (e.g., flood control,  
15 sewer, and water); abatement districts (e.g., mosquito and vector control); Mello-Roos community

1 facilities districts<sup>3</sup>; maintenance districts (e.g., levee, open space, park, and playground);  
 2 reclamation districts; and community service districts (e.g., fire, police, lighting, and garbage).  
 3 Special assessment districts may collect revenues on a one-time basis or on a continuous (usually  
 4 annual) schedule, depending on the service. Special assessments are not based on property value.  
 5 Instead, each assessment district includes a benefit formula and each parcel in the service area is  
 6 assessed according to the specific benefit it receives from the services and improvements. All Delta  
 7 counties provide some government services, but rely on the special districts to provide other  
 8 services.

9 Expenditures by county governments range from approximately \$237 million in Yolo County for  
 10 FY 2010-2011 to approximately \$2.2 billion per year in Sacramento County (California State  
 11 Controller's Office 2012). Table 16-10 presents the expenditures in Delta counties during FY 2010-  
 12 2011. Expenditures include payments made by jurisdictions to buy goods, pay employees, and  
 13 provide services to residents. Many of the differences in the county-level expenditure per capita and  
 14 the pattern of expenditures result from the counties' demographic composition. Also, the services  
 15 provided by county-level governments versus city governments or special districts vary from county  
 16 to county. Note that education is a relatively small part of the counties' budgets. Most local education  
 17 spending is handled by school districts, not by the counties.

### 18 **Contra Costa County**

19 In FY 2010-2011, Contra Costa County received more than \$1.33 billion in total revenue. The largest  
 20 source of revenue was federal and state funding, which provided more than \$693 million. Property  
 21 taxes represented more than \$282 million in revenues. Revenues generated by Contra Costa County  
 22 are used for a range of governmental activities.

23 Expenditures in FY 2010-2011 totaled more than \$1.30 billion. Table 16-10 displays the total  
 24 expenditures for Contra Costa County in several categories. Welfare, social services, and other public  
 25 assistance consistently have been the largest expenditures for Contra Costa County (more than  
 26 \$391 million in FY 2010-2011). Police and fire protection and other public safety activities  
 27 represented the second largest expenditure category.

### 28 **Sacramento County**

29 Sacramento County's total revenues exceeded \$2.1 billion in FY 2010-2011. Federal and state  
 30 funding sources made up the largest revenue source, with more than \$1.32 billion directed to  
 31 Sacramento County. Property taxes provided the second largest revenue source (more than  
 32 \$326 million in FY 2010-2011).

33 As shown in Table 16-10, Sacramento County's budget expenditures were similar in pattern to those  
 34 of Contra Costa County. The top two expenditures in Sacramento County in FY 2010-2011 were for  
 35 public safety programs (\$642 million) and social service programs (\$632 million). A substantial  
 36 portion of its budget also funded public health and medical services (\$549 million).

---

<sup>3</sup> The Mello-Roos Act of 1982 provides a mechanism for certain public entities, such as cities, counties, schools, local districts, and joint power authorities, to finance public infrastructure and certain governmental services. The public entity forms a community facilities district and may levy a special tax on the real property within its boundaries. The district can apply the special tax revenues, or proceeds from bonds secured by special taxes, to finance general benefit facilities and services or special benefit improvements.

## 1 **San Joaquin County**

2 San Joaquin County received more than \$823 million in total revenues in FY 2010–2011. The largest  
3 source of revenue was federal and state funding of more than \$506 million. Property taxes  
4 represented the second largest revenue source for San Joaquin County at more than \$177 million.

5 Expenditures in FY 2010–2011 totaled more than \$830 million. Welfare, social services, and other  
6 public assistance were the largest expenditure at more than \$342 million. Public safety activities  
7 represented the second largest expenditure category, with more than \$261 million spent in FY  
8 2010–2011.

## 9 **Solano County**

10 Many of the observations previously discussed for other counties also apply to Solano County.  
11 Federal and state funding made up more than half of Solano County’s revenue, totaling more than  
12 \$314 million in FY 2010–2011. Property taxes provided another 20% of its revenue at more than  
13 \$108 million in FY 2010–2011.

14 Expenditure patterns in Solano County are generally consistent with trends observed in other  
15 counties. The top two expenditure categories in Solano County in FY 2010–2011 were social service  
16 programs (\$157 million) and public safety programs (\$171 million).

## 17 **Yolo County**

18 Yolo County revenues were more than \$253 million in FY 2010–2011. The largest source of revenue  
19 was federal and state funding, which contributed more than \$165 million. Property taxes  
20 represented the second largest revenue source for Yolo County in FY 2010–2011 (more than  
21 \$40 million dollars).

22 Expenditures in FY 2010–2011 totaled more than \$237 million. Police protection functions  
23 represented the largest expenditures for Yolo County (more than \$73 million in FY 2010–2011).  
24 Public assistance activities represented the second largest expenditure category, costing more than  
25 \$71 million in FY 2010–2011.

### 26 **16.1.1.6 Economic Character of Recreation in the Delta**

27 The recreation industry in the Delta is composed primarily of boating, fishing, hunting, camping, and  
28 agritourism activities. Specific businesses directly support recreation in the Delta, including  
29 marinas, boat rentals, guide services, and wineries. Other businesses, such as hotels, restaurants,  
30 specialty stores, and sporting goods retailers, provide general recreation and tourism goods and  
31 services to users in the Delta region, including Delta recreationists among others.

32 The recreation-oriented focus of the Delta leads to an interdependent relationship between the  
33 different businesses. Fishing guides and boaters depend on the marinas for supplies and fuel.  
34 Marinas without food services rely on local food markets or restaurants to serve visitors.  
35 Restaurants and wineries depend on hotels to provide accommodations for overnight or extended  
36 visits. All the businesses depend on visitors and tourists spending time and money in the Delta.

## 1 **Source of Contributions to the Delta Economy**

2 Attendance at special events in the Delta typically ranges from several hundred to several thousand  
 3 people. In 2010, the Stockton Asparagus Festival, one of the region's largest events, had an  
 4 estimated 85,000 people in attendance over the 3-day event. For some events in the Delta, attendees  
 5 travel by boat. A portion of the economic activity generated during these events is captured in the  
 6 agritourism and the boating-related economic estimates described below.

7 Heritage tourism involves traveling to experience an area's historic, cultural, and natural resources  
 8 (National Trust for Historic Preservation 2010). Examples include visits to historic sites, national  
 9 and state parks, museums, festivals, and other cultural events (D. K. Shiflett and Associates 2000).  
 10 Heritage tourism in the Delta occurs in small historic towns along the Sacramento River that  
 11 developed as steamboat landings during the Gold Rush. Freeport, Clarksburg, Hood, Courtland,  
 12 Locke, Walnut Grove, Ryde, Isleton, and Rio Vista are all considered legacy towns.

13 There are 98 hotels in the Delta with a total of 5,036 rooms. In the five-county region, there are 406  
 14 hotel properties with a total of 33,402 rooms. Slightly less than a quarter of all hotels and roughly  
 15 15% of all rooms within the five-county region are in the Delta. There are 2,955 restaurants (Eating  
 16 and Drinking Places) within the five-county region. These restaurants employ an estimated 44,073  
 17 people, and are concentrated in Sacramento County, primarily in the City of Sacramento (AECOM  
 18 2011).

19 The Delta provides approximately 7.4 million visitor-days of recreational use (Plater and Wade  
 20 2002). Projections indicate that visitation will reach more than 8.0 million visitor-days by 2020  
 21 (Plater and Wade 2002). Based on state population growth trends, it was estimated that Delta  
 22 visitation could reach 11.8 million visitor-days by 2060.

23 A total of 86 marinas are located in the Delta. These marinas are concentrated in Contra Costa,  
 24 Sacramento, and San Joaquin counties, with a few located in Solano and Yolo counties. Contra Costa  
 25 County has the most marinas (34) and Solano County has the fewest (2) within the Delta. However,  
 26 marinas in San Joaquin County are typically larger and have more berths on average (155) than  
 27 marinas in other counties, and marinas in Contra Costa County have fewer (111). In addition to  
 28 providing boat launching, berthing, fuel, and boat rentals, many marinas also provide ancillary  
 29 amenities and services, such as picnic areas, trails, and camping facilities.

## 30 **Recreation-Related Industry Employment and Sales**

31 Table 16-11 summarizes the employment and economic activity for recreation-related industries,  
 32 and identifies the proportion of the recreation-related industries in the total Delta region economy.  
 33 Employment estimates for 2009 were obtained from a private demographic and economic data  
 34 provider (Claritas MarketPlace), which aggregates and apportions economic census data from the  
 35 U.S. Census Bureau (AECOM 2011). The following categories of businesses are listed in Table 16-11:  
 36 Food Stores; Eating and Drinking Places; Hotels and Other Lodging Places; Amusement and  
 37 Recreational Services; and Museums, Art Galleries, Zoos.

1 **Table 16-11. Employment Conditions for Delta Region Recreation-Related Industries (2007)**

SIC Code	Business Description	Total Establishments	Total Employees	Sales (in Millions of Dollars)
54	Food Stores	1,045	16,871	\$2,443
58	Eating and Drinking Places	2,955	44,073	\$1,950
70	Hotels and Other Lodging Places	287	5,631	\$217
79	Amusement and Recreational Services (e.g., Movies)	953	11,940	\$960
84	Museums, Art Galleries, Zoos	48	854	\$23
	<b>Total Recreation-Related Industries</b>	<b>5,288</b>	<b>79,369</b>	<b>\$5,594</b>
<b>Total</b>	<b>All Industries</b>	<b>50,415</b>	<b>635,262</b>	<b>\$61,944</b>
	<b>Recreation-Related Industries as a percent of Total</b>	<b>10.5%</b>	<b>12.5%</b>	<b>9.0%</b>

Source: AECOM 2011

Note: Values are presented in 2007 dollars.

SIC = Standard Industrial Classification

2  
3 In the Delta region's economy, the 5,288 recreation-related establishments make up approximately  
4 10.5% of total establishments and support about 79,369 employees, or approximately 12.5% of total  
5 employees. The Delta recreation-related industries contribute about \$5.8 billion in annual revenues,  
6 or about 9% of revenues for all industries (approximately \$65 million).

7 The estimates in Table 16-11 include economic activity not related to recreation, so the totals  
8 overstate the contribution of recreational activities in the Delta. For example, most establishments  
9 in the Food Stores and Eating and Drinking Places categories receive only a portion of their sales  
10 from recreation-related visits in the Delta; local residents and other business employees often  
11 generate a substantial share.

## 12 **Direct Economic Contributions from Recreation in the Delta Region**

13 Direct economic contributions from recreation in the Delta were projected based on visitation and  
14 visitor-related spending in the Delta, recreation-related spending attributable to activities in Suisun  
15 Marsh and Yolo Bypass, marina leasing revenue, and agritourism in the Delta. Visitor-related  
16 spending in the Delta was estimated using per-day expenditure profiles developed based on the  
17 average expenditures reported by boaters, anglers, and day use/other recreationists participating in  
18 wildlife- or water-associated activities. Delta visitation estimates for 1997–2020 by recreational  
19 activity, as presented in Plater and Wade (2002), were used in the analysis. Visitation projections  
20 between 2020 and 2060 were based on the California Department of Finance (DOF) forecast rate of  
21 population growth in the five-county region from 2020 to 2050. A linear trend analysis was used to  
22 project population changes and associated visitation from 2050 to 2060 (AECOM 2011).

23 Recreation-oriented activities in the Delta were estimated to contribute approximately \$236.3  
24 million in direct expenditures in 2010. These direct expenditures are expected to grow to  
25 approximately \$256 million by 2020, \$269.9 million by 2025, and \$375.4 million by 2060.

26 As shown in Table 16-12, boating activity accounts for the largest share of total recreation-related  
27 economic contributions in the Delta.

1 **Table 16-12. Projected Direct Economic Contributions from Recreation in the Delta**

Recreation Activity	2010	2020	2025	2060
<b>Water-Based Recreation</b>				
Boating	\$157,837,000	\$170,277,000	\$180,248,000	\$246,006,000
Angling/Fishing	\$25,490,000	\$27,674,000	\$29,294,000	\$39,981,000
Day Use	\$20,528,000	\$22,240,000	\$23,542,000	\$32,131,000
Marina Lease Revenue	\$25,610,000	\$28,623,000	29,412,000	\$40,812,000
<b>Non-Water-Based Recreation</b>				
Suisun Marsh and Yolo Bypass Revenue	\$4,287,000	\$4,287,000	\$4,287,000	\$4,287,000
Agritourism	\$2,500,000	\$2,900,000	\$3,100,000	\$4,800,000
Total Estimated Recreation Economic Contribution	\$236,252,000	\$256,001,000	\$269,883,000	\$375,455,000

Source: AECOM 2011.

Note: Values are presented in 2007 dollars and rounded to the nearest \$1,000.

2

3 **16.1.1.7 Economics of Agriculture in the Delta**

4 Agriculture is one of the more important sectors of the Delta economy. Related information on  
5 agricultural land use, soils, and production practices is provided in Chapter 14, *Agricultural*  
6 *Resources*, Sections 14.1.1.3 through 14.1.1.6, which summarizes agricultural land uses and  
7 production practices using information from county, state, and federal sources. The aggregate  
8 employment data presented earlier in this section (see Table 16-8) suggest that agriculture is a  
9 fairly small employment sector relative to other sectors at the county level, such as government and  
10 retail trade. Part of the explanation for this is that the counties include cities such as Sacramento,  
11 Stockton, and Antioch. By their nature, cities are concentrations of non-rural economic activity.  
12 County-level data summaries that include the cities tend to diminish the important role of  
13 agriculture in more rural areas of the counties, such as the statutory Delta. Commercial agriculture  
14 and the associated agricultural services, packing, processing, marketing, insuring, and  
15 transportation activities are critical components of the Delta region's economic and social character.  
16 The economic production of Delta agriculture is multiplied through the regional economy through  
17 these activities.

18 **Irrigated Land**

19 Crop acreages in the statutory Delta and Restoration Opportunity Areas (ROAs) are described in  
20 Chapter 14, *Agricultural Resources*, Table 14-2. The major crops, ranked by acreage, are corn, alfalfa,  
21 grain, safflower, irrigated pasture, tomatoes, asparagus, and grapes.

22 Nearly 70,000 acres are planted with perennial crops such as fruit trees and grapevines, which have  
23 a large fixed investment in growing stock with an economic life of 20 years or more; and asparagus,  
24 which has a lower initial investment and produces for up to 10 years. More than one third (38%) of  
25 the Plan Area's irrigated acreage is in San Joaquin County; Solano County has the second largest  
26 share (21%), with the remainder split among Sacramento, Contra Costa, and Yolo Counties (see  
27 Chapter 14, *Agricultural Resources*, Section 14.1.4, for further descriptions).

## 1       **Yields, Prices, and Value of Production**

2       Annual crop reports generated by the county agricultural commissioners were gathered from the  
3       five Delta counties (California Department of Food and Agriculture 2010). The counties report  
4       average crop yields and prices for the entire county, not specifically for the statutory Delta.  
5       However, crop markets are regional rather than specific to a subregion of a county, so the county-  
6       wide averages for crop prices are representative. Average yields, prices, and value of production per  
7       acre for 2005 to 2007 are shown in Table 16-13.

8       Most of the crop categories listed in Table 16-13 are dominated by one crop, such as alfalfa hay.  
9       Some categories include more than one crop, so either a dominant crop or a crop that is considered  
10      representative within that category is used as a proxy crop. For example, pumpkins make up the  
11      largest acreage of crops in the cucurbit category, so they are used for displaying yield per acre, price  
12      per unit, and production value per acre.

13     Total value of production is summarized in Table 16-14, with crop categories further aggregated  
14     into small grains (including rice); field crops; forage (alfalfa and pasture); all vegetable, truck, and  
15     other specialty crops (including turf); and all orchards and vineyards. Percentage shares by acreage  
16     and by value of production are shown below the totals. The value of production is based on the  
17     reported acreage and the per-acre value shown in Table 16-13. Therefore, the values are farm  
18     revenues expressed in the 2007 equivalent price level, but using average prices and yields for 2005  
19     through 2007.

20     The total value of irrigated crop production in the Delta is more than \$600 million per year. Two  
21     categories—vegetable, truck, and specialty crops and orchards and vineyards—account for more  
22     than \$400 million per year, and these crops are produced on a little over one-quarter of the crop  
23     acreage.

24     Livestock production in the Delta includes feed lots, dairies, and poultry farms. The California  
25     Department of Water Resources' (DWR's) *Delta Risk Management Strategy Phase 1 Report*  
26     (California Department of Water Resources 2008b) estimated that livestock production in the Delta  
27     represented 13% of the total value of agricultural production over the period from 1998 to 2004.  
28     Assuming that this percentage is still reasonably accurate, livestock would provide an additional  
29     \$90.6 million per year, for an annual total of \$697 million in crop and livestock value.

1 **Table 16-13. Crop Yields, Prices, and Value per Acre in the Delta Counties, 2005–2007**

Crop	Acreage	Yield (tons per acre)	Price (\$ per ton)	Value per Acre (\$)
Corn	114,108	4.62	128	591
Alfalfa	69,868	6.51	139	907
Grain and hay <sup>a</sup>	51,343	2.29	129	297
Safflower	50,157	1.18	281	333
Pasture	42,863	N/A	N/A	113
Tomatoes	37,850	37.39	57	2,121
Asparagus	24,064	1.41	2,480	3,501
Grapes	22,095	5.34	544	2,903
Dry Beans	10,140	1.00	723	724
Sugar Beets	7,770	32.50	39	1,257
Pears	7,621	18.34	221	4,060
Rice <sup>b</sup>	7,298	3.76	268	1,008
Miscellaneous truck crops <sup>c</sup>	7,199	80.54	65	5,255
Cucurbits <sup>d</sup>	6,424	14.76	247	3,641
Walnuts	5,170	1.58	1,722	2,713
Sudan	4,753	1.26	528	666
Almonds	2,472	0.80	4,600	3,689
Apples	2,435	13.98	615	8,597
Miscellaneous field crops <sup>e</sup>	2,326	2.16	106	228
Apricots	2,041	7.82	387	3,025
Sunflowers	1,850	0.21	3,252	690
Turf <sup>f</sup>	1,630	N/A	N/A	15,151
Miscellaneous deciduous <sup>g</sup>	1,060	2.11	2,320	4,902
Cherries	739	2.10	3,980	8,354
Peaches and Nectarines	309	20.32	259	5,263
Subtropical trees <sup>h</sup>	81	13.75	683	9,388
<b>Total Irrigated Crops</b>	<b>483,666</b>			

Sources: Acreages are from California Department of Water Resources 2007; prices, yields, and values are from California Department of Food and Agriculture 2010.

Note: All dollar values are escalated to the 2007 equivalent price level using the Gross Domestic Product Implicit Price Deflator (U.S. Department of Commerce 2010).

<sup>a</sup> Wheat is used as the example crop in this category.

<sup>b</sup> Medium grain rice is used as the example crop in this category.

<sup>c</sup> Bell peppers are used as the example crop in this category.

<sup>d</sup> Pumpkins are used as the example crop in this category.

<sup>e</sup> Grain sorghum is used as the example crop in this category.

<sup>f</sup> Turf prices and values are not reported for Delta counties. The statewide average for all counties reporting both acreage and value is used.

<sup>g</sup> Plums are used as the example crop in this category.

<sup>h</sup> Citrus price and yield from the San Joaquin Valley are used.

2

3

1 **Table 16-14. Total Value of Production for Crops in the Delta**

Crop Category	Acreage (Percentage of Total)	Value of Production in Million \$ per Year (Percentage of Total)
Grains	58,641 (12.1%)	22.6 (3.7%)
Field crops	191,104 (39.5%)	106.2 (17.5%)
Forage crops	112,731 (23.3%)	68.2 (11.2%)
Vegetable, truck, and specialty crops	77,167 (16.0%)	250.4 (41.3%)
Orchards and vineyards	44,023 (9.1%)	159.1 (26.2%)
<b>Total</b>	<b>483,666</b>	<b>606.5</b>

Sources: California Department of Water Resources 2007; California Department of Food and Agriculture 2010.

Note: Value of production is based on prices received by farmers, in 2007 dollars (U.S. Department of Commerce 2010).

2

3 **Costs of Production and Labor Use for Selected Crops**

4 Costs of irrigated crop production include labor, purchased inputs (e.g., seed, fertilizer, chemicals),  
5 custom services, investment in growing stock, other capital (including machinery and structures),  
6 and other overhead costs.

7 Croplands that may be affected by BDCP alternative activities have benefited from substantial  
8 investments in land, structures, and growing stock of perennial crops. Perennial crops such as  
9 orchards and vineyards may have useful lives of 25 years or more, and asparagus and multiyear  
10 forage crops also have years of production value. Investment in growing stock may be expressed as  
11 the accumulated costs incurred during the period when the crop is planted and brought to bearing  
12 age, called the establishment period. Establishment costs for perennial crops can range up to  
13 \$20,000 per acre (cash outlays plus noncash and allocated overhead costs). Table 16-15 provides  
14 typical establishment costs for some major perennial crops grown in the Delta.

1 **Table 16-15. Typical Establishment Costs for Example Perennial Crops in the Delta**

Example Crop	Establishment Period (years)	Assumed Life of Stand (years)	Accumulated Total Cost during Establishment (\$ per acre)	University of California Cooperative Extension Cost of Production Study
Alfalfa hay	1	4	421	Sacramento Valley, 2008
Almonds	3	25	7,418	San Joaquin Valley North, 2006
Asparagus	2	10	2,442	San Joaquin County, 2007
Bartlett pears	5	30	20,015	Sacramento County, 2003
Irrigated pasture	1	20	380	Sacramento Valley, 2003
Walnuts	4	25	10,450	San Joaquin Valley North, 2007
Wine grapes	3	25	12,802	Cabernet Sauvignon, San Joaquin Valley North, Delta Crush District 11, 2008

Source: University of California Cooperative Extension 2003a, 2003b, 2006, 2007a, 2007b, 2008a, 2008b.

Notes: Costs are converted to 2007 dollar equivalent values using the Gross Domestic Product Implicit Price Deflator (U.S. Department of Commerce 2010). Assumed stand life is the financial life used for the cost and budget analysis. Individual growers may decide to keep stands in production longer or to remove them sooner.

2

3 Farm expenditures are largely spent in the surrounding community in the form of input purchases,  
4 hired labor, rents paid to landlords, and custom services. Total labor in the agricultural production  
5 sector and associated input and processing sectors have been summarized, but crops vary  
6 substantially in the amount of labor hours and input purchases required, as shown in Table 16-16.

1 **Table 16-16. Land Rent, Labor Hours<sup>a</sup>, and Custom Services for Example Crops in the Delta**

Example Crop	Typical Annual Land Costs (\$ per acre)	Typical Annual Labor (hours per acre)	Custom Services Purchased (\$ per acre)	University of California Cooperative Extension Cost of Production Study
Alfalfa hay	288	2.0	301	Sacramento Valley, 2008
Almonds	812	28.9	720	San Joaquin Valley North, 2006
Asparagus	300	119.5	1,915	San Joaquin County, 2007
Bartlett pears	605	103.0	6,009	Sacramento County, 2003
Corn, Grain	180	11.0	9	Sacramento Valley, 2008
Dry beans	181	12.0	213	Sacramento Valley, 2008
Irrigated pasture	59	2.8	148	Sacramento Valley, 2003
Safflower	61	2.5	0	Sacramento Valley, 2005
Walnuts	916	12.3	986	San Joaquin Valley North, 2007
Tomatoes, processing	265	53.0	22	Sacramento Valley, 2007
Wheat	90	3.3	7	Sacramento Valley, 2004
Wine grapes	872	93.0	417	Cabernet Sauvignon, San Joaquin Valley North, Delta Crush District 11, 2008

Source: University of California Cooperative Extension 2003a, 2003b, 2004, 2005, 2006, 2007a, 2007b, 2007c, 2008a, 2008b, 2008c.

Note: Costs are converted to 2007 dollar equivalent values using the Gross Domestic Product Implicit Price Deflator (U.S. Department of Commerce 2010). Some labor hours may also be included in custom services payments.

<sup>a</sup> Significant labor hours are usually included in custom service payments

2

3 In general, fruit, nut, and vegetable crops require the greatest amount of labor per acre, largely  
4 related to cultivation, harvest, and pruning efforts. Land rents may involve an actual cash payment  
5 or crop share payment, or they may be the imputed rental value of owned land. Custom services  
6 include hired services for pest control, land leveling, harvesting, and field packing. The typical labor  
7 hours shown are only those that have been itemized in the University of California Cooperative  
8 Extension cost of production studies. Additional labor is associated with the custom services  
9 provided.

10 All costs displayed in the tables are representative of well-run farming operations. Substantial  
11 variation exists among farming operations.

## 12 **Farm Size, Revenue, and Government Payments**

13 The U.S. Census of Agriculture is conducted every five years and collects information on farm  
14 numbers, sizes, costs and revenues, government payments, and owner characteristics. Average farm  
15 sizes and revenues for the five Delta counties are shown in Table 16-17. A small increase in average  
16 farm size during recent years has occurred in most of the Delta counties, with an expected average  
17 value of production per farm increasing.

18 The values for San Joaquin and Contra Costa Counties are likely to be more representative of Delta  
19 farms because greater proportions of those two counties' total farmland lie in the Delta. Government

1 payments include payments for federally-supported commodities, cost-sharing payments for soil  
 2 and water conservation investments, and payments for participating in programs such as the  
 3 Conservation Reserve. A portion of the commodity payments may be reflected directly or indirectly  
 4 in market prices for government program commodities, as shown in Table 16-13. Important  
 5 federally supported commodities in California include cotton, rice, small grains, corn, and oilseeds.  
 6 On average, less than ten percent of the value produced per farm in 2007 is attributable to  
 7 government payments, as shown in Table 16-17.

8 **Table 16-17. Average Farm Sizes and Revenues in Delta Counties, 2002 and 2007**

County	Year	Average Farm Size <sup>a</sup> (acres)	Average Value of Production per Farm (\$)	Average Value of Government Payments per Farm (\$)
Contra Costa	2007	232	111,687	10,079
	2002	213	175,690	7,892
Sacramento	2007	236	248,485	23,579
	2002	208	182,328	24,797
San Joaquin	2007	204	431,665	14,343
	2002	202	350,083	24,646
Solano	2007	403	274,489	14,769
	2002	384	240,468	20,383
Yolo	2007	488	390,864	28,157
	2002	519	343,124	31,199

Source: U.S. Department of Agriculture 2002, 2007.

Note: All values are converted to 2007 dollars using the Gross Domestic Product Implicit Price Deflator (U.S. Department of Commerce 2010).

<sup>a</sup> Farm size in the Census definition includes all land, including farmsteads, rangeland, and idle land.

9

## 10 **16.2 Regulatory Setting**

11 This section provides the regulatory setting for socioeconomic conditions of communities, including  
 12 potentially relevant federal, state, and local requirements applicable to the BDCP. Generally,  
 13 economic resources are protected and regulated by federal and state legislation, and local policies  
 14 and ordinances at the county and city level regulate population growth, housing development, and  
 15 industry creation. Planning efforts at local and regional levels can also influence socioeconomic  
 16 forces through land use controls and other policies.

### 17 **16.2.1 Federal Plans, Policies, and Regulations**

18 Federal policies and regulations that affect socioeconomic conditions and are applicable to  
 19 implementation of BDCP alternatives address protection of property, property acquisition by  
 20 agencies, agricultural economic protections, and county and city general plans that protect housing  
 21 opportunities. Federal and state water contracts and agreements with communities and agricultural  
 22 users also affect socioeconomic conditions, and are described in Chapter 5, *Water Supply*, Section  
 23 5.1.2.5. State and local agencies' programs to protect agriculture, including the Delta Protection

1 Commission *Land Use and Resource Management Plan* (Delta Protection Commission 2011), also  
2 affect socioeconomics, and are described in Chapter 13, *Land Use*, Sections 13.2.2 and 13.2.3.

### 3 **16.2.1.1 Constitution of the United States: Fifth Amendment Takings** 4 **Clause**

5 The takings clause of the Fifth Amendment provides that “[n]o person shall be deprived of life,  
6 liberty, or property, without due process of law; nor shall private property be taken for public use,  
7 without just compensation.” The takings clause does not prohibit government from taking private  
8 property; it requires that property owners be compensated for the value of the property taken.  
9 According to the U.S. Supreme Court, the takings clause “was designed to bar Government from  
10 forcing some people alone to bear public burdens which, in all fairness and justice, should be borne  
11 by the public as a whole” (*Armstrong v. United States* [1960] 364 U.S. 40, 49). The taking of private  
12 property by the government can occur in a number of ways: by direct appropriation, by occupation  
13 or invasion, or by regulation (regulatory taking).

14 Government exactions may be considered unconstitutional takings if they do not meet the  
15 “reasonable relationship nexus” test, as set out in *Dolan v. City of Tigard* (1994) 512 U.S. 374 and  
16 *Nollan v. California Coastal Commission* (1987) 483 U.S. 825. In order for an exaction to be valid: (1)  
17 the legislation must serve a legitimate governmental purpose; and (2) the means used to achieve the  
18 objective must substantially advance the intended purpose.

### 19 **16.2.1.2 Uniform Relocation Assistance and Real Property Acquisition** 20 **Policies Act of 1970**

21 Title II, Uniform Relocation Assistance, Section 201 (b), establishes a uniform policy for the fair and  
22 equitable treatment of persons displaced as a direct result of programs or projects undertaken by a  
23 federal agency or with federal financial assistance. The primary purpose of this title is to ensure that  
24 such persons shall not suffer disproportionate injuries as a result of programs and projects designed  
25 for the benefit of the public as a whole and to minimize the hardship of displacement on such  
26 persons.

27 Title III, Uniform Real Property Acquisition Policy, Section 301, was developed “In order to  
28 encourage and expedite the acquisition of real property by agreements with owners, to avoid  
29 litigation and relieve congestion in the courts, to assure consistent treatment for owners in the many  
30 federal programs, and to promote public confidence in federal land acquisition practices.”

### 31 **16.2.1.3 Housing and Community Development Act of 1974**

32 Under Section 104(d) of the Housing and Community Development Act of 1974, as amended (Public  
33 Law 93-383, 42 USC 5301 et seq.) and the implementing regulations at 24 Code of Federal  
34 Regulations Part 42, a residential anti-displacement and relocation assistance plan is required and  
35 must provide for: (1) one-for-one replacement of occupied and vacant occupiable low- and  
36 moderate-income dwelling units demolished or converted to another use in connection with a  
37 development project assisted under Parts 570 and 92; and (2) provide relocation assistance for all  
38 low- and moderate-income persons who occupied housing that is demolished or converted to a use  
39 other than low- or moderate-income housing.

#### 1 **16.2.1.4 U.S. Department of Agriculture**

2 The U.S. Department of Agriculture administers and implements several programs that can influence  
3 both how the agricultural sector may react to changes in water supply availability or agricultural  
4 lands, and how large the direct economic effects on agriculture might be. These programs include  
5 the direct and countercyclical payments program, commonly referred to as the farm commodity  
6 programs (U.S. Department of Agriculture 2008a), and the Conservation Reserve Program and  
7 similar programs. This section briefly describes important parts of the farm program.

8 The current farm commodity programs are defined in the Food, Conservation, and Energy Act  
9 of 2008, passed by Congress and signed into law in 2008. This law, commonly referred to as the  
10 Farm Bill, authorizes the programs for the next 5 years. At any time, Congress may, with the  
11 President's approval, extend, modify, restructure, or eliminate one or more programs.

12 The current Farm Bill (U.S. Department of Agriculture 2008b) contains 15 titles that describe and  
13 authorize one or more specific programs. Key programs include the following.

- 14 1. Commodity Programs. Certain agricultural commodities receive price supports and/or direct  
15 payments under the 2008 Farm Bill. These include corn, cotton, rice, small grains, grain  
16 sorghum, oilseeds, dry peas/lentils, and sugar crops (other crops also are included but are not  
17 grown in California). Under these crop programs, benefits are paid to producers with eligible  
18 historical acreage (called Base Acres) of covered commodities. Some of these payments are  
19 available even if the program commodity is no longer grown on that base acreage; however,  
20 conversion of the land to nonagricultural uses generally eliminates all commodity program  
21 payments.
- 22 2. Conservation Reserve and Wetland Reserve Programs. These programs provide annual  
23 payments to farmers willing to enter long-term contracts to maintain vegetative cover on  
24 eligible lands or to restore wetlands on previously agricultural land. They also provide cost-  
25 sharing and other financial assistance for soil conservation, water conservation, and wildlife  
26 conservation activities.
- 27 3. Marketing and Credit Assistance. Numerous programs are designed to provide direct assistance,  
28 credit guarantees, and loans to support agriculture.
- 29 4. Crop Insurance and Disaster Assistance. These programs provide subsidized crop insurance to  
30 farmers and provide disaster assistance payments to crop and livestock producers in declared  
31 disaster counties.

### 32 **16.2.2 State Plans, Policies, and Regulations**

#### 33 **16.2.2.1 California Constitution: Article 1 Declaration of Rights,** 34 **Section 19**

35 Under the California Constitution and other statutes, public agencies may use eminent domain  
36 power to: (1) acquire private property (real, business, personal, tangible, or intangible property); or  
37 (2) reduce the economic value of property for a public purpose (these are referred to as "damages")  
38 if they pay "just compensation" to the owner. Just compensation includes: (1) the fair market value  
39 of the real property and its improvements; and (2) any diminution in value of the remaining  
40 property when property taken is part of a larger parcel.

### 1 **16.2.2.2 Williamson Act**

2 The California Land Conservation Act (Williamson Act) is an agricultural land protection program  
 3 enacted by the California Legislature in 1965 to maintain the agricultural economy of the state by  
 4 preserving its agricultural land. The act discourages premature and unnecessary conversion of  
 5 agricultural land to urban uses. Cities and Counties implement the legislation by creating  
 6 agricultural preserves, which are generally comprised of at least 100 acres of farmland. Once a  
 7 preserve has been established, an individual landowner can enter into a contract with the county,  
 8 which binds the land to remain in agricultural uses for at least ten years. Counties have continuing  
 9 roles in administering the act with respect to compatibility guidelines and nonrenewal or  
 10 cancellation of contracts.

11 Most California counties, including all Delta and San Joaquin Valley counties, allow owners of  
 12 agricultural land to sign rolling, 10-year agreements with the county that restrict the land to  
 13 agricultural and open space uses. In return, the landowner receives a lower property tax assessment  
 14 that reflects the value of the land in agricultural use. According to the California Department of  
 15 Conservation, the annual property tax savings can range from 20 to 75%. The county must approve  
 16 the cancellation of an existing contract, and the landowner must pay a cancellation fee equal to  
 17 12.5% of the current fair market value of the property. If land in a Williamson Act contract is  
 18 acquired by a public agency for a defined public purpose, the act provides a process for cancellation  
 19 of the contract (California Department of Conservation 2006). Additional detail, including a  
 20 summary of recent legislation, is provided in Chapter 14, *Agricultural Resources*, Section 14.2.2.5.

### 21 **16.2.2.3 Economic Sustainability Plan for the Sacramento-San Joaquin** 22 **Delta (Draft)**

23 In November 2009, the California Legislature enacted SB 1 X7, also known as the Sacramento–San  
 24 Joaquin Delta Reform Act (Delta Reform Act). The bill required the Delta Protection Commission to  
 25 adopt an Economic Sustainability Plan (ESP) containing public safety recommendations; economic  
 26 goals, policies, and objectives in local general plans and other local economic efforts; comments and  
 27 recommendations to DWR concerning its update of the Delta flood management plan; and  
 28 identification of ways to encourage recreational investment along key river corridors. The plan  
 29 covers the Legal Delta. The Delta Reform Act required the Delta Protection Commission to submit  
 30 the completed ESP to the Delta Stewardship Council (DSC), which was required to consider the  
 31 recommendations included therein and to adopt any recommendations that the DSC, in its  
 32 discretion, determines to be feasible and consistent with the objectives of DSC’s Delta Plan and the  
 33 purposes of the Delta Reform Act.

34 As completed by the Delta Protection Commission, ESP provides background information and data  
 35 about the economics and demographics of the Delta, along with information about existing policies  
 36 and the state of Delta levees. The report also analyzes of key industry sectors in the Delta, including  
 37 industry trends and an assessment of the effects of various policy proposals. The final section of the  
 38 plan provides a summary of integrative issues, identifying key issues and strategies for the Legacy  
 39 Communities. Finally, the plan identifies a number of recommendations for supporting economic  
 40 sustainability in the Delta. These are organized into 8 categories: Levee and Public Safety, General  
 41 Recommendations for Economic Sustainability, Recommendations for Economic Sustainability of  
 42 Agriculture, Recommendations for Economic Sustainability of Recreation and Tourism,  
 43 Recommendations for Infrastructure, Recommendations for Habitat and Ecosystem Improvements,

1 Recommendations for Water Supply Reliability, and Recommendations for Research and Monitoring  
2 (Delta Protection Commission 2012).

3 While the ESP prepared by the Delta Protection Commission and this chapter evaluate similar  
4 mechanisms for effects on socioeconomics within the Delta (and surrounding areas), the ESP  
5 sometimes used assumptions and data different than those applied for the analysis in this chapter.  
6 For example, the two respective efforts reviewed varying baseline conditions, study areas, and  
7 information about proposed water conveyance and habitat restoration activities to be undertaken.

#### 8 **16.2.2.4 Transitions for the Delta Economy (Public Policy Institute of** 9 **California)**

10 In January 2012 the Public Policy Institute of California (PPIC) completed a report that evaluated the  
11 potential economic effects of permanent island flooding, changes in water salinity, expansion of  
12 seasonal floodplain and tidal marsh habitat, and growth in recreation. This study examined the  
13 potential economic effects of changes in the Delta land and waterscape as a result of management  
14 activities and natural forces and suggested planning priorities to support transitions in the Delta  
15 economy. The report reviewed recent patterns and trends in Delta land use and employment, and  
16 drew on a range of data and modeling tools to assess the effects of the following types of physical  
17 changes on economic activity in the Delta: (i) the permanent flooding of roughly 75,000 acres of land  
18 on subsided Delta islands that may not offer sufficient economic justification for repair after  
19 flooding; (ii) increases in irrigation water salinity from the introduction of dual conveyance, sea  
20 level rise, and the flooding of islands that restrict salinity intrusion from the Delta's western edge;  
21 and (iii) reductions in cropland from the expansion of seasonal floodplain and tidal marsh habitat.

22 While the report prepared by the PPIC and this chapter are based on similar impact mechanisms  
23 and a similar geographic scope for potential effects on socioeconomics within the Delta (and  
24 surrounding areas), *Transitions for the Delta Economy* and the analysis presented in this chapter  
25 vary in their treatment of future conditions in the Delta and the potential response to levee failure.  
26 There are important distinctions between the analyses conducted in the PPIC report and the  
27 analyses found in this chapter. The PPIC report projected out future Delta economic conditions by  
28 estimating losses resulting from sea level rise, inundation of central Delta islands, and consideration  
29 for future economic benefits resulting from increased recreation opportunities. This EIR/EIS, in  
30 contrast, has focused on quantifying economic benefits and costs resulting from constructing and  
31 operating water conveyance facilities and analyzed the economic consequences of implementing a  
32 long-term habitat restoration and preservation program.

#### 33 **16.2.2.5 DWR Economic Analysis Guidebook**

34 DWR's *Economic Analysis Guidebook* (California Department of Water Resources 2008a) provides  
35 guidance regarding the economic assessments that should be conducted from project formulation  
36 through implementation. These include cost effectiveness, benefit-cost, socioeconomic impacts, risk  
37 and uncertainty, and financial analyses. This chapter of the EIR/EIS reports the estimated  
38 socioeconomic impacts that would occur under each of the project alternatives. The socioeconomic  
39 impacts are measured as changes in employment and income, property tax revenues, and  
40 community character attributable to each project alternative. The socioeconomic impact analysis  
41 follows the DWR guidelines by quantifying the direct, indirect, and induced employment and income  
42 effects of constructing and operating CM1. These impacts were quantified through the use of  
43 IMPLAN. The socioeconomic impacts of implementing Conservation Measures 2–22 were also

1 estimated, but not quantified because the information required as input to the IMPLAN model was  
 2 not available. The socioeconomic assessment also extended beyond the study area and included CVP  
 3 and SWP export areas.

4 The other economic analyses outlined in the DWR guidebook were not conducted as part of the  
 5 NEPA/CEQA compliance documentation. However, the BDCP also includes an assessment of project  
 6 implementation costs and potential funding mechanisms.

### 7 **16.2.2.6 Proposed Final Delta Plan**

8 In November 2009, the California Legislature enacted SB 1 X7, also known as the Sacramento–San  
 9 Joaquin Delta Reform Act. The Delta bill created a new Delta Stewardship Council (DSC) and gave  
 10 this body broad oversight of Delta planning and resource management. The DSC is tasked with  
 11 developing, adopting, and commencing implementation of a long-term plan (the “Delta Plan”) which  
 12 will be a legally enforceable, comprehensive management plan which emphasizes the coequal goals  
 13 of “providing a more reliable water supply for California and protecting, restoring, and enhancing  
 14 the Delta ecosystem” (Water Code Section 85300(a)) as foundation for state decisions as to Delta  
 15 management.

16 The Delta Plan generally covers five topic areas and goals: increased water supply reliability,  
 17 restoration of the Delta ecosystem, improved water quality, reduced risks of flooding in the Delta,  
 18 and protection and enhancement of the Delta. The Delta Stewardship Council does not propose  
 19 constructing, owning, or operating any facilities related to these five topic areas. Rather, the Delta  
 20 Plan sets forth regulatory policies and recommendations that seek to influence the actions,  
 21 activities, and projects of cities and counties and state, federal, regional, and local agencies toward  
 22 meeting the goals in the five topic areas.

23 The DSC is in the process of approving the Delta Plan. The DSC adopted the Proposed Final Delta  
 24 Plan, as well as the Final Delta Plan Program EIR and the Final Rulemaking Package, at its May 16,  
 25 2013 meeting. Once the State Office of Administrative Law and California Secretary of State approve  
 26 the plan, the proposed policies in the Delta Plan will become enforceable regulations. The Proposed  
 27 Final Delta Plan consists of 14 policies and 73 regulations (Delta Stewardship Council 2013). Policies  
 28 included in the Delta Plan are summarized in Chapter 13, *Land Use*, Section 13.2.2.2. While none of  
 29 these policies are directly focused on socioeconomic effects, many are indirectly related in that they  
 30 would protect infrastructure and water supply critical to economic activities. Additionally, Chapter  
 31 5, *Protect and Enhance the Unique Cultural, Recreational, Natural Resources, and Agricultural Values*  
 32 *of the California Delta as an Evolving Place*, introduces 19 recommendations focused on protecting  
 33 the Delta’s communities and supporting the agricultural, recreation, and tourism economy in the  
 34 Delta.

## 35 **16.2.3 Regional and Local Plans, Policies, and Regulations**

### 36 **16.2.3.1 Contra Costa County General Plan**

37 The following are excerpts from the *Contra Costa County General Plan* (County of Contra Costa  
 38 2009).

## 1 Housing Element

- 2 1. **Goal 1:** Maintain and improve the quality of the existing housing stock and residential
- 3 neighborhoods in Contra Costa County.
- 4 2. **Goal 2:** Preserve the existing affordable housing stock in Contra Costa County.

## 5 Land Use Element

- 6 1. **Goal 3-D:** To provide for a range and distribution of land uses that serve all social and economic
- 7 segments of the County and its subregions.
- 8 2. **Goal 3-G:** To discourage development on vacant rural lands outside planned urban areas which
- 9 is not related to agriculture, mineral extraction, wind energy, or other appropriate rural uses.
- 10 3. **Goal 3-K:** To develop a balance between job availability and housing availability with
- 11 consideration to wage levels, commute distance, and housing affordability.

### 12 16.2.3.2 Sacramento County General Plan

13 The *Sacramento County General Plan* update was adopted on November 9, 2011. The plan seeks to  
14 provide a sustainable growth management program for the unincorporated territory through 2030.

15 The portion of Sacramento County potentially affected by the action alternatives is largely  
16 agricultural. The small, unincorporated communities of Courtland, Hood, Locke and Walnut Grove  
17 are located in the vicinity of some action alternatives.

18 An economic development element was added as part of the 2011 update. This element introduced  
19 goals, objectives, policies, and implementation measures under the following strategic objectives.

- 20 • Create a balanced land use policy providing for adequate commercial, office, industrial, and
- 21 residential land
- 22 • Identify new growth areas
- 23 • Promote and support commercial corridor redevelopment
- 24 • Attract key regional sales tax generators
- 25 • Promote agriculture and agritourism
- 26 • Continue redevelopment of Mather Airfield and McClellan Park
- 27 • Support County airport systems
- 28 • Develop regional and local partnerships and programs
- 29 • Intensify business retention, attraction, development and business recruitment
- 30 • Develop international trade
- 31 • Increase sports, tourism and the arts in the region
- 32 • Attract institutions of higher education

33 The following are excerpts from the *Sacramento County General Plan* (County of Sacramento  
34 2009b).

## 1 Plan Administration Element

- 2 1. Promote a relationship between job and housing availability with consideration given to age  
3 levels, housing affordability, and commute distance.
- 4 2. Limited development in rural areas which does not compromise valuable open space and prime  
5 agricultural lands, and does not contaminate or overdraft groundwater aquifers. Promote a  
6 diversity of residential living options while ensuring community compatibility and quality  
7 residential development.
- 8 3. Assistance in the development of adequate housing to meet the needs of low-income and  
9 moderate-income households.
- 10 4. Promotion of housing opportunities for all persons regardless of race, religion, sex, marital  
11 status, and economic status. This includes promotion of housing opportunities for members of  
12 special needs groups, including female heads-of-household, senior citizens, persons with  
13 disabilities, farm workers, homeless people, and large families.
- 14 5. Preservation of assisted housing development for lower income households.

### 15 16.2.3.3 San Joaquin County General Plan

16 The following are excerpts from the *San Joaquin County General Plan* (County of San Joaquin 2009b).

#### 17 Economic Development Goal

- 18 1. Provide a well-balanced, diversified economy with employment opportunities for all economic  
19 segments of the County.
- 20 2. Policy: Conservation of Affordable Rental Housing.
- 21 3. (v) Conservation of Subsidized Rental Housing.
- 22 4. Within the unincorporated County area, there are two subsidized rental housing projects owned  
23 and operated by the Housing Authority that provide affordable housing for 96 migrant farm  
24 worker households and 31 families. While neither of these projects is at-risk of converting to  
25 market rate housing, the County will provide assistance to the Housing Authority in obtaining  
26 state or federal funding, if needed, to ensure that these two projects are maintained and  
27 continued to provide affordable rental housing.
- 28 5. (w) Preservation of Mobile Home Parks.
- 29 6. The County will seek to preserve mobile home parks as a means of conserving the affordable  
30 housing stock. The County will undertake the following actions:
  - 31 a. Identify mobile home parks that are not located in residential zones and determine whether  
32 their long-term preservation could be facilitated by a rezoning to residential area. The  
33 County will contract the owner(s) of such park to obtain their consent for rezoning.
  - 34 b. Conduct a survey of mobile home parks to determine infrastructure improvement and  
35 housing rehabilitation needs. Based on the results of the survey, create a priority list of  
36 parks and improvements that can be assisted using state and federal funds.
  - 37 c. Provide assistance, in collaboration with an experienced nonprofit organization, to mobile  
38 home park residents who desire to acquire and manage their parks. Assistance will include  
39 coordination of meetings between interested residents and park owners to identify the most

1 appropriate parks for conversion to resident ownership, application assistance for state  
 2 and/or federal funds, and identification of a nonprofit organization with experience in  
 3 assisting the conversion of mobile home parks to resident ownership and management. If  
 4 necessary to pursue funding, the County's Grant Management Unit will apply directly to the  
 5 appropriate state or federal agency.

- 6 1. (x) Conservation of Non-Subsidized Low-Cost Rental Housing.
- 7 2. Through its housing rehabilitation program (See program 'b'), San Joaquin County will target  
 8 privately owned rental housing that is feasible to rehabilitate. The County will maintain the  
 9 affordability of such rental housing by offering financial assistance to property owners in  
 10 exchange for long-term affordability and occupancy restrictions to lower income households.

#### 11 **16.2.3.4 Solano County General Plan**

12 The following are excerpts from the *Solano County General Plan* (County of Solano 2009b).

- 13 • **GOAL.** It is the county's goal to promote and ensure adequate housing in a satisfying  
 14 environment for all residents of Solano County.

#### 15 **Housing Conservation and Rehabilitation**

- 16 • An important aspect of ensuring adequate housing in a satisfying environment in Solano County  
 17 is the conservation and rehabilitation of the existing housing supply. Conserving and improving  
 18 the County's housing supply not only requires the rehabilitation of substandard structures, but  
 19 also the continued maintenance and upkeep of existing structures in fair to sound condition.

#### 20 **Economic Development Goal 3**

- 21 • Develop and maintain a favorable business environment in Solano County through recruitment,  
 22 expansion, and retention of businesses to promote a closer match between local jobs and labor  
 23 force skills.

#### 24 **16.2.3.5 Yolo County General Plan**

25 The following are excerpts from the *Yolo County General Plan* (County of Yolo 2009b).

- 26 1. **Policy CC-2.4.** Emphasize the unincorporated communities as retail, service, and employment  
 27 centers for local residents, as well as residents of surrounding rural (agricultural) areas. Where  
 28 appropriate, include economic development in the unincorporated communities that serves  
 29 intra-county and regional tourism.
- 30 2. **Policy CC-2.7.** Provide for higher density housing and mixed-use development in the downtown  
 31 areas of the unincorporated communities to support commercial uses, create more pedestrian  
 32 travel, extend activity into the evening, increase the variety of housing opportunities to include  
 33 affordable and special needs housing, enhance safety, reduce traffic and support regular,  
 34 frequent fixed-route transit service.

#### 35 **Yolo County Housing Element**

36 The following are excerpts from the *Yolo County Housing Element* (County of Yolo 2009b).

- 1 1. The purpose of the Yolo County Housing Plan (Implementation Program) is to identify specific  
 2 actions the County intends to take to implement the goals and policies of the Housing Element.  
 3 The Housing Plan is designed to accomplish the following:
- 4 a. Identify and provide adequate sites to achieve a variety and diversity of housing
  - 5 b. Facilitate the development of affordable housing
  - 6 c. Address and if necessary remove government constraints
  - 7 d. Conserve and improve existing affordable housing stock
  - 8 e. Promote equal housing opportunity
- 9 Additional goals and policies of the Housing Element include:
- 10 1. Strengthen Neighborhoods. Support safe, well-maintained, and well-designed housing as a way  
 11 of strengthening existing and new neighborhoods.
  - 12 2. Strengthen neighborhoods through the maintenance and rehabilitation of existing housing  
 13 stock.
  - 14 3. Promote and encourage community-wide infrastructure (e.g., curbs, gutters, sidewalks, street  
 15 lighting, etc.) and complete streets.

## 16 16.3 Environmental Consequences

17 This section describes the potential effects of the alternatives on socioeconomic conditions within  
 18 the Delta region. Effects are identified and, where appropriate, mitigation measures are identified.  
 19 This section describes potential direct and indirect effects on socioeconomics that would result with  
 20 implementation of each alternative. The assessment within the Delta included potential effects on  
 21 community character and cohesion, population, housing, employment, and income. In addition,  
 22 particular focus was placed on fiscal effects on local governments and on economic effects of  
 23 potential changes in agricultural production and recreational activity. BDCP alternatives are not  
 24 anticipated to cause changes in water deliveries in areas upstream of the Delta. Therefore,  
 25 discussion focuses on effects occurring in the Delta region.

26 This analysis separates effects relating to socioeconomic conditions in the Delta into two categories:  
 27 one related to the construction and operation of water conveyance facilities (CM1), which are  
 28 project-level features, and one related to implementation of other conservation measures (CM2–  
 29 CM22), which are program-level features. Under each alternative, the analysis further separates  
 30 effects from the water conveyance facilities into those stemming from construction of the structural  
 31 features and those resulting from related operational and maintenance activities following  
 32 construction. Nine of the proposed conservation measures related to supporting covered species  
 33 and reducing effects from environmental stressors (listed below and described in detail in Chapter  
 34 3, *Description of Alternatives*, Section 3.6.3), which would be implemented under all action  
 35 alternatives, are not anticipated to result in any meaningful effects on socioeconomic conditions in  
 36 the Delta region because the actions implemented under these conservation measures are not, for  
 37 the most part, land-based or land-focused activities, nor would they be expected to result in any  
 38 direct or indirect effects on population, housing, or employment in the study area. Accordingly,  
 39 these measures will not be addressed further in this analysis:

- 40 • Methylmercury Management (CM12)

- 1 • Nonnative Aquatic Vegetation Control (CM13)
- 2 • Stockton Deep Water Ship Channel Dissolved Oxygen Levels (CM14)
- 3 • Nonphysical Fish Barriers (CM16)
- 4 • Illegal Harvest Reduction (CM17)
- 5 • Conservation Hatcheries (CM18)
- 6 • Urban Stormwater Treatment (CM19)
- 7 • Recreational Users Invasive Species Program (CM20)
- 8 • Nonproject Diversions (CM21)

9 Several analytical methods and models were used to assess environmental consequences. Section  
 10 16.3.1, *Methods for Analysis*, is organized according to the region and topic addressed by these  
 11 methods and models. Each method and model is described, and the region and economic effect to  
 12 which it was applied are identified.

### 13 **16.3.1 Methods for Analysis**

14 Part of the socioeconomic analysis is based upon results of hydrologic and water quality analytical  
 15 model simulations of the Existing Conditions, the No Action Alternative, and action alternatives. For  
 16 the BDCP EIR/EIS, operations of Alternative 1A through Alternative 9 were analyzed for future  
 17 conditions at the year 2060. Under 2060 conditions, it is anticipated that sea level rise will occur and  
 18 hydrology in the Delta watershed will change because climate change modeling indicates that there  
 19 will be less snow and more rain as compared to Existing Conditions, as described in Chapter 5,  
 20 *Water Supply*, Section 5.3. This analysis compares conditions under implementation of the  
 21 alternatives with Existing Conditions (without sea level rise and climate change) and No Action  
 22 Alternative (with sea level rise and climate change).

23 The *Cumulative Analysis* (Section 16.3.4) in this chapter presents the results of the comparison of  
 24 socioeconomic conditions with operations of Alternative 1A through Alternative 9 at 2060 with  
 25 conditions under No Action Alternative at 2060.

26 For the purposes of socioeconomic analysis, effects of BDCP action alternatives are divided into  
 27 discussion of effects that could occur during and/or as a result of construction activities associated  
 28 with one or more of the BDCP conservation measures (“temporary effects”) and effects that could  
 29 occur during and/or as a result of operation and maintenance activities associated with one or more  
 30 of the BDCP conservation measures (“permanent effects”). Note that construction activities are  
 31 anticipated to occur over an eight-year period, and that the construction period assumed for this  
 32 chapter may differ slightly from the periods assumed for other chapters. This is due to the  
 33 refinement of the estimated length of the construction period for purposes of providing cost data  
 34 used to model socioeconomic effects.

#### 35 **16.3.1.1 Delta Community Effects**

##### 36 **Analytical Approach**

37 Analysis of the Delta community specifically addressed population, housing, and social and  
 38 community effects. Potential effects on housing and population include displacement of existing

1 residences and changes in employment. Estimated construction and operation expenditures were  
 2 used as an input to the Impact Analysis for Planning (IMPLAN) model, which applies multipliers to  
 3 generate estimates of employment and income change for the five-county Delta region. The five-  
 4 county Delta region IMPLAN model is described in Section 16.3.1.2, *Delta Regional Employment and*  
 5 *Income*.

6 Social and community impacts were qualitatively evaluated with consideration of effects on  
 7 established communities whose character could be most directly influenced by BDCP activities  
 8 based on total population, economic composition, proximity to proposed BDCP features, and the  
 9 nature of BDCP activities. This assessment focused on communities in the statutory Delta, where the  
 10 direct effects of the BDCP would occur and where social and community effects would be greatest.  
 11 Social and community effects elsewhere in the larger five-county Delta region are anticipated to be  
 12 minor because they would be spread over a large, heavily populated area and among many  
 13 communities.

## 14 **Population and Housing Impacts**

15 Estimates of housing demand, for the construction phase and the operation phase of each  
 16 alternative, were calculated based on changes in employment. The employment impact data were  
 17 drawn from the analysis of Delta regional employment and income (see Section 16.3.1.2 for a  
 18 description of that methodology). A BDCP alternative is expected to draw from the entire workforce  
 19 in the five-county region, not merely those workers who are available in the immediate area of  
 20 construction or operation activity. It is expected that some portion of the construction workforce  
 21 would consist of workers in the five-county Delta region who would not demand new housing.  
 22 However, the conveyance construction would require specialty occupations, such as tunnel boring  
 23 machine operators, that require skills not likely available in the local workforce. Thus, out-of-region  
 24 contractors may bring their crews to the area. These workers may arrive from outside the five-  
 25 county Delta region and demand additional housing. Because of the likelihood that specialized  
 26 occupations and out-of-region contractors would enter the region, this analysis assumed that some  
 27 of the new construction and operation workers would demand housing in the five-county region.  
 28 The proportion of construction crews coming from within the Delta region was determined through  
 29 consultations with the engineering staff that developed project cost estimates.

30 Changes in housing demand were assessed for the short-term construction phase and for the longer-  
 31 term operation phase. Available permanent housing was determined by estimating the number of  
 32 vacant housing units using the total housing units and vacancy rates for each of the five counties.  
 33 Available temporary housing for the construction crews, e.g., recreational vehicle [RV] parks, was  
 34 evaluated through internet searches of RV parks in each of the five counties.

35 Total estimated changes in population as a result of implementing a BDCP alternative were  
 36 calculated by multiplying the average number of persons per household, according to the DOF  
 37 (California Department of Finance 2008), and the change in number of workers anticipated under  
 38 each phase (by alternative) using the results of the five-county Delta region IMPLAN analysis (see  
 39 Section 16.3.1.2). Population changes were assessed for the short-term construction phase and for  
 40 the longer-term operation phase. The changes in population resulting from construction and  
 41 operation of a BDCP alternative were then compared to the projected population. In instances where  
 42 population changes are anticipated to deviate from the historical annual average for the five-county  
 43 Delta region (2000 to 2008), an impact is identified and discussed.

## 1 **Social and Community Impacts**

2 The assessment of social and community impacts was based on comparing social and community-  
3 level impacts of each alternative to the Existing Conditions or No Action Alternative. The  
4 methodology specifically identified the physical and socioeconomic changes to the environment,  
5 including systematic changes to the entire region, such as regional economic changes that may affect  
6 the day-to-day ways that people live, work, or play.

7 As used in this analysis, community character describes the physical and social structure of a  
8 community that makes up its unique or distinctive attributes. Examples of Delta community  
9 characteristics include location, small town feeling or rural setting, proximity to recreational  
10 opportunities, and cultural and natural heritage, all of which contribute to a sense of place.  
11 Community cohesion describes a shared sense of belonging and “common ground” among members  
12 of a community. Cohesion is supported by mobility and the ability to build and maintain  
13 relationships within a community, and is often enhanced by the activities of community  
14 organizations or community gathering places (such as schools, libraries, places of worship, and  
15 recreational facilities).

16 The physical and economic effects of the alternatives, as addressed in other sections of this  
17 document, were reviewed to determine what extent and degree of change to the environment could  
18 affect individual communities and populations, and how they would potentially affect community  
19 character. Construction activities related to water conveyance facilities would occur over a  
20 multiyear period and could create sources of noise, pollution, traffic, and other conditions that could  
21 be considered to affect the characteristics of Delta communities. These activities, along with the  
22 long-term placement of the conveyance facilities, could also alter the character of these areas by  
23 reducing the extent of undeveloped land in proximity to communities and by changing the viability  
24 or desirability of leading economic and social pursuits, including agricultural activities and water-  
25 based recreation. A list of businesses and institutions within 0.5 miles of the water conveyance  
26 facility construction footprint for each conveyance alignment was also reviewed to identify  
27 community gathering places that could be directly or indirectly affected by construction activities.

28 Implementation of habitat restoration could have some similar effects during the construction  
29 period by introducing conditions that would alter and potentially detract from the rural  
30 characteristics of Delta communities. These BDCP activities could also introduce sources of noise, air  
31 pollution, and traffic during earthwork and site preparation of habitat areas. In the long term, these  
32 activities could also affect communities by converting agricultural land to other uses, which could  
33 change economic and social conditions within communities. These areas could also change the  
34 extent or nature of recreation in the Delta, which could also alter the character of communities.

35 Aside from direct conflicts with existing structures requiring relocation (which are described in  
36 Chapter 13, *Land Use*, Impact LU-2), changes in regional economics, including employment and  
37 income (discussed under Impacts ECON-1, ECON-7, and ECON-13), and changes to population and  
38 housing in the study area (discussed under Impacts ECON-2, ECON-8, and ECON-14), BDCP activities  
39 may also result in indirect effects on the demographic composition of communities. For example,  
40 lower rates of unemployment could contribute to spillover benefits like reduced numbers of vacant  
41 buildings, lower poverty and crime rates, and lessened need for social services. The BDCP's effects  
42 on community character are anticipated to be substantially influenced by changes in the size and  
43 composition of a population as well as changes in employment and, more generally, in the economic  
44 welfare of a particular community. Thus, the demographic effects of regional economic changes

1 inform anticipated changes to a community’s character and stability. Considerable decreases or  
 2 increases in population size or substantial demographic changes resulting from the construction of  
 3 water conveyance facilities or from implementation of other conservation measures would be  
 4 anticipated to alter community character and could create effects on the quality of the human  
 5 environment, particularly in those communities closest to BDCP activities.

## 6 **Data Sources**

7 Existing Conditions estimates and No Action Alternative projections for population and housing  
 8 were obtained from the DOF, California Department of Housing and Community Development, and  
 9 the U.S. Census Bureau, and are described in Section 16.1, *Environmental Setting/Affected*  
 10 *Environment*. The availability of housing was assessed using vacancy rate and number of dwellings  
 11 by type from DOF (California Department of Finance 2012b). Additionally, DWR’s geodatabase of  
 12 businesses and institutions in the Delta was used to identify potential community gathering places  
 13 in the vicinity of water conveyance construction activities.

## 14 **Links to Other Impact Analysis Sections**

15 Impacts on population and housing relied directly on the output from the economic and  
 16 employment analyses and are addressed in Section 16.3.1.2, *Delta Regional Employment and Income*.

17 Potential social impacts and impacts on community character may result from changes in  
 18 employment, income, and changes in recreational uses and opportunities. These impacts are  
 19 discussed in the relevant sections, and their conclusions were used to assess impacts on community  
 20 character.

## 21 **Analysis Metrics**

22 The analyses of effects on Delta communities’ population, housing, and character are presented  
 23 quantitatively or qualitatively.

- 24 • Quantitative estimates of changes in population.
- 25 • Quantitative estimates of changes in housing supply and quantity demanded.
- 26 • Qualitative description of potential changes in community character.

### 27 **16.3.1.2 Delta Regional Employment and Income**

#### 28 **Analytical Approach**

29 Regional economic effects include changes in characteristics like regional employment and income.  
 30 [Note that for the purposes of the environmental consequences section of this chapter, “income”  
 31 refers to “labor income”. As defined by the IMPLAN model, labor income consists of “all forms of  
 32 employment income, including Employee Compensation (wages and benefits) and Proprietor  
 33 Income”.] The magnitudes of the economic effects within the five-county Delta region depend on the  
 34 initial changes in economic activity within the region (such as construction expenditure or loss of  
 35 production from existing economic activities), the interactions within the regional economy, and the  
 36 “leakage” of economic activity from this regional economy to the larger, surrounding economy.  
 37 Economic linkages create multiplier effects in a regional economy as money is circulated by trade.  
 38 These linkages are often modeled using a large mathematical model called an input-output model.

1 IMPLAN is a computer database and modeling system used to create input-output models for any  
2 combination of United States counties. IMPLAN is the most widely used input-output model system  
3 in the United States. It provides users with the ability to define industries, economic relationships,  
4 and projects to be analyzed. It can be customized for any county, region, or state, and used to assess  
5 the “ripple effects” or “multiplier effects” caused by increasing or decreasing spending in various  
6 parts of the economy. The model describes the flows from producers to intermediate and final  
7 consumers using a series of economic multipliers. The model of county-level economic interactions  
8 is used to project, using the input-output multipliers, total regional economic activity based on a  
9 change in expenditures. The IMPLAN output used in the assessment includes the direct, indirect, and  
10 induced changes in employment and income.

11 IMPLAN includes (1) estimates of county-level final demands and final payments developed from  
12 government data; (2) a national average matrix of technical coefficients; (3) mathematical tools that  
13 help the user formulate a regional model; and (4) tools that allow the user to change data, conduct  
14 analyses, and generate reports.

15 Economic effects on the five-county Delta region economy can result from construction and  
16 operation of facilities, changes in recreational uses, changes in agricultural production, changes in  
17 operations and maintenance of existing natural gas wells, changes in water quality to municipal and  
18 industrial users, and changes in other affected businesses. The direct effects of quantified changes  
19 (e.g., construction and operation spending or change in agricultural production or recreation  
20 expenditures) are input to IMPLAN regional economic models. Based on input from the DHCCP cost  
21 estimators, local and non-local components of labor and non-labor (i.e., equipment and other  
22 materials) expenditures associated with construction and operation of the BDCP facilities were  
23 identified. These expenditures were used as input to IMPLAN to determine the regional employment  
24 and income changes associated with the construction and operation of BDCP facilities under each of  
25 the alternatives. The resulting output (employment and income) for each alternative model run is  
26 the change from the base model run (Existing Conditions and the No Action Alternative are the same  
27 “base” IMPLAN model).

28 A separate regional IMPLAN model was used to estimate the employment and income changes  
29 associated with changes in agricultural production in the five-county Delta region. Changes in  
30 employment and income associated with changes in recreation expenditures were not estimated  
31 using a regional IMPLAN model because direct changes in recreational expenditures have not been  
32 quantified. Similarly, changes in employment and income associated with potential abandonment of  
33 existing natural gas wells in the study area were not estimated using a regional IMPLAN model  
34 because employment effects are anticipated to be very small. The direct effects of the  
35 implementation of the other conservation measures (CM2–CM22) were not quantified, so their  
36 effects on the regional economy are described in Section 16.3.3, but were not analyzed using  
37 IMPLAN.

38 An IMPLAN model of the five-county Delta region identified in Section 16.1, *Environmental*  
39 *Setting/Affected Environment*, was used to estimate total changes in employment and income in the  
40 region. The model follows county lines and incorporates, to the extent allowed by available data, the  
41 employment and income characteristics of the economic sectors in the region modeled.  
42 Construction-related changes were modeled based on the expected year of expenditure. All other  
43 changes were assumed to be average annual changes. Estimates of direct employment during  
44 construction and operation of each alternative were derived from the total payroll estimate. With  
45 the exception of employment, all direct effects were expressed in dollar terms for all affected

1 sectors. For example, agricultural effects were incorporated into the input-output models in dollar  
2 terms as changes in gross revenues or costs.

3 Figure 16-1 provides an overview of the steps that were followed to quantify the potential  
4 socioeconomic impacts as a result of constructing and operating the water conveyance facilities  
5 (CM1). Both the beneficial and adverse socioeconomic impacts resulting from implementing the  
6 restoration activities were qualitatively discussed. Quantification of socioeconomic impacts was  
7 measured as changes in employment and income. These changes in employment and income were  
8 estimated for three primary activities; temporary and permanent loss of agricultural production,  
9 construction expenditures, and operation and maintenance expenditures.

## 10 **Assumptions and Limitations**

11 An IMPLAN model is formulated as a single-region model. The model does not explicitly recognize  
12 interregional dependencies among sectors, except for the model's data related to imports<sup>4</sup>, exports,  
13 and regional purchases. For this reason, single-county models would require very careful  
14 interpretation and qualification; more of the secondary effects of changes are apt to occur in other  
15 counties and thus be excluded from single-county models. The model used is a grouping of the five  
16 Delta counties, which includes a broader and more self-sufficient range of economic activities than  
17 each individual county. This region is sufficiently large to capture most of the important secondary  
18 effects of direct changes in economic activity. However, a portion of direct BDCP expenditures is  
19 estimated to occur outside of the Delta region, and a portion of the secondary effects of within-Delta  
20 expenditures would occur outside the Delta. These effects are not included in results for the five-  
21 county Delta region.

22 IMPLAN does not allow for substitution among production inputs, and no economies of scale are  
23 possible. It also does not include price effects that might be important to a region. The model also  
24 assumes that workers who become unemployed or employed due to a change in final demand have  
25 no alternative employment.

26 Finally, the IMPLAN database is very large, incorporating up to 440 sectors. IMPLAN is periodically  
27 updated as more and better data become available, but it is not possible to check every number for  
28 accuracy. However, some of the coefficients for key affected sectors, such as agriculture, were  
29 validated or revised to provide a better representation of secondary effects within the analysis.

## 30 **Data Sources**

31 IMPLAN uses a system of national accounts for the United States based on data collected by the  
32 U.S. Department of Commerce's Bureau of Economic Analysis, the U.S. Department of Labor's Bureau  
33 of Labor Statistics, and other federal and state government agencies. Data are collected for 440  
34 distinct sectors of the national economy, corresponding to the North American Industry  
35 Classification System. Industry sectors are classified on the basis of the primary commodity or  
36 service produced. Corresponding data sets are produced for each county in the United States,  
37 allowing analysis of individual counties, clusters of contiguous counties, individual states, or groups  
38 of states.

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<sup>4</sup> Imports are goods and services brought into the region being analyzed by the IMPLAN model from other parts of the state, nation, or world. Exports are goods and services produced in the region being analyzed by the IMPLAN model which are shipped outside this region to other parts of the state, nation, or the world.

1 The model estimated regional economic changes arising from the increased expenditures during  
 2 construction and operation of the water conveyance facilities. The changes in agricultural output  
 3 resulting from the changes in acreages and production were used as input into the five-county Delta  
 4 region IMPLAN model to estimate the secondary regional employment and income changes.

5 Potential effects on employment and income from implementation of the other conservation  
 6 measures (CM2–CM22) were not evaluated using IMPLAN because the specific locations, sizes, and  
 7 costs are not known at this time.

## 8 **Links to Other Analysis Sections**

9 The agricultural economics analysis provides the data needed to evaluate the regional economic  
 10 effects associated with changes in agricultural production in the Delta. These data include changes in  
 11 value of production and costs associated with changes in crop production. These changes were  
 12 translated into changes in final demands as input into the five-county Delta region IMPLAN model to  
 13 estimate indirect and induced changes.

14 Regional economic effects associated with Conservation Measures 2–22 are described qualitatively,  
 15 focusing on activities during implementation of these measures and on economic activities  
 16 potentially displaced within areas affected by these measures.

## 17 **Analysis Metrics**

18 The analysis of regional economic effects is presented quantitatively or qualitatively.

- 19 • Quantitative estimates of changes in annual regional employment.
- 20 • Quantitative estimates of changes in annual regional labor<sup>5</sup> income.
- 21 • Qualitative description of changes in employment and income that may result from  
 22 implementation of Conservation Measures 2–22.

### 23 **16.3.1.3 Fiscal Effects on Local Delta Governments**

24 Fiscal effects on local Delta governments would occur from changes to property tax, sales tax, or  
 25 assessment revenue resulting from implementation of a BDCP alternative. The analysis estimated  
 26 the loss of property tax revenue resulting from potential acquisition of existing privately-held land  
 27 as a result of a BDCP alternative. The analysis also discusses potential changes in sales tax revenue  
 28 as a direct result of the estimated construction and operation expenditures, and from changes in  
 29 agricultural sales and recreational expenditures.

30 A BDCP alternative may result in changes to existing land ownership and use that, in turn, would  
 31 affect the property taxes on affected parcels. As part of the economic assessment in Chapter 8 of the  
 32 BDCP, *Implementation Costs and Funding Sources*, estimates of foregone property tax revenues, in  
 33 undiscounted 2012 dollars, were developed for the effects of land acquisitions for constructing and  
 34 operating water conveyance facilities (Conservation Measure 1) and for implementing habitat  
 35 restoration measures (Conservation Measures 2–22). (The conveyance configuration analyzed in  
 36 BDCP Chapter 8 is the same as the Alternative 4 configuration.) The estimates of foregone property

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<sup>5</sup> IMPLAN's labor income includes "all forms of employment income, including Employee Compensation (wages and benefits) and Proprietor Income".

1 tax revenues were developed based on the following data and assumptions, which are described  
2 more fully in BDCP Chapter 8, *Property Tax and Assessment Revenue Replacement*, Section 8.2.3.23 :

- 3 • Acquisition of fee-title interest in private land was assumed to result in loss of local property tax  
4 and assessment revenues. Surface and subsurface easement acquisition is not expected to have a  
5 significant impact of local property tax and assessment revenue and therefore was excluded  
6 from the analysis.
- 7 • An assessment rate of 1.5% per dollar of assessed value was used to estimate property tax and  
8 assessment revenue impacts.
- 9 • Because assessed property value is generally lower than market value, the assessment rate  
10 could not be directly applied to estimated fee-title acquisition costs. The rate was therefore re-  
11 expressed in terms of fee-title value by calculating the ratio of assessed value to estimated  
12 market value for the parcels and then multiplying the 1.5% average assessment rate by this  
13 ratio. This resulted in an average assessment ratio of 1.0% per dollar of market value. The  
14 assessment rate as a percent of market value was then applied to the fee-title land acquisition  
15 cost estimates for each conservation measure.

16 For additional assumptions regarding the market value of land acquired for conveyance facilities  
17 and habitat restoration, please see BDCP Chapter 8, *Land Value Assumptions*, Section 8.2.2.4.2.<sup>6</sup>

18 To account for anticipated variation in forgone property tax revenue for alternatives whose  
19 conveyance footprint acreages or habitat target acreages differ from those analyzed for the BDCP,  
20 scaling factors were developed based on the difference in the total land area affected by different  
21 alternatives, as a percentage of that affected under Alternative 4. The foregone revenue estimates  
22 for Alternative 4 provide the basis for the development of estimates for alternatives with varying  
23 levels of land acquisition. Potential effects of tax revenue changes on local governments are  
24 described in Section 16.4, *Environmental Consequences*.

#### 25 **16.3.1.4 Delta Agricultural Economics**

26 The analysis of the economic effect of changes in Delta agricultural production used results from  
27 Chapter 14, *Agricultural Resources* and Appendix 14A, *Individual Crop Effects as a Result of BDCP*  
28 *Water Conveyance Facility Construction*, which include changes in acreage resulting from facilities  
29 construction and operation and potential, but unquantified changes in crop production from water  
30 conveyance operations, and changes related to implementation of Conservation Measures 2–22.

31 Quantitative estimates were made of the change in the value of agricultural production. Estimates  
32 were based on the acreage changes and, if appropriate, yield changes, estimated in Appendix 14A,  
33 *Individual Crop Effects as a Result of BDCP Water Conveyance Facility Construction*, and the prices and  
34 per-acre crop revenue information summarized in Section 16.1. Quantitative estimates are  
35 presented for the Delta region as a whole, but areas within the Delta that may be disproportionately  
36 affected are described in Section 16.3.3, *Effects and Mitigation Approaches*.

37 The location, size, and operation of CM2–CM22 are conceptual, so potential effects on the value of  
38 agricultural production are discussed qualitatively. Other potential effects on agricultural

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<sup>6</sup> As described in Chapter 1, *Introduction*, Section 1.1, the full Draft EIR/EIS should be understood to include not only the EIR/EIS itself and its appendices but also the proposed BDCP documentation including all appendices.

1 production and costs that may be caused by the disruption of transportation and other  
2 infrastructure are described qualitatively.

3 In summary, the following quantitative and qualitative comparisons are provided.

- 4 • Quantitative estimates of changes in value of agricultural production.
- 5 • Qualitative estimates of changes in production costs.
- 6 • Qualitative estimates of changes in value of agricultural facilities and investment.

7 The potential effects of BDCP facilities and operations on farm employment and related economic  
8 sectors were also evaluated and are described as part of the regional economic analysis in Section  
9 16.3.3.

### 10 **16.3.1.5 Delta Recreational Economics**

11 The analysis of the economic effect of changes in Delta recreation used results from Chapter 15,  
12 *Recreation*, Sections 15.3.3.2 through 15.3.3.16, which included potential changes in recreational  
13 opportunities and quality resulting from facilities construction and operation, as well as potential  
14 changes resulting from the implementation of CM2–CM22.

15 These changes, along with their anticipated economic effects, are discussed qualitatively in Section  
16 16.3.3 and are based on the discussion and analysis included in Chapter 15, *Recreation*, Sections  
17 15.3.3.2 through 15.3.3.16. While these discussions estimate recreational effects on the study area as  
18 a whole, it is possible that recreational opportunities and quality in specific areas within the Delta  
19 would be disproportionately affected by BDCP activities. It is also possible that these activities  
20 would create beneficial effects in specific places based on the relocation of existing activities  
21 accomplished as part of an environmental commitment (see Appendix 3B, *Environmental*  
22 *Commitments*) or through the creation of new or higher-quality recreational opportunities related to  
23 mitigation measures, as described in Chapter 15, *Recreation*, Sections 15.3.3.2 through 15.3.3.16.  
24 The potential for these economic effects is discussed, where appropriate.

### 25 **16.3.1.6 Commercial Fishing Effects**

26 Commercial salmon fishing effects are not addressed for individual alternatives in this chapter  
27 because, while speculative, these effects are anticipated to be positive overall and would be spread  
28 among coastal regions where commercial landings occur. The economic impacts of potential  
29 changes in commercial salmon fisheries related to implementation of the BDCP have been  
30 qualitatively assessed in *Draft Bay Delta Conservation Plan Statewide Economic Impact Analysis*,  
31 Section 3.5, Commercial Fisheries. As discussed in this report, fall-run Chinook salmon are the only  
32 major commercial fish species in the Delta.

33 As discussed in the *Statewide Economic Impact Analysis*, the overall impacts of the implementation of  
34 the BDCP are expected to be positive for both the populations and commercial landings of fall-run  
35 chinook salmon. Due to the exogenous oceanic conditions and other factors inside and outside the  
36 Delta, however, there is a high level of uncertainty involved in forecasting salmon populations over  
37 time. Thus, the statewide economic impact analysis was not able to quantify and monetize the  
38 impact of the BDCP related to commercial fisheries. The overall effects, however, are anticipated to  
39 be positive.

## 1 16.3.2 Determination of Effects

2 For NEPA purposes, effects on socioeconomic conditions were considered changed if  
3 implementation of an alternative would result in one of the following conditions.

- 4 • Changes related to regional economics. For the purposes of this analysis, a reduction in  
5 employment or labor income associated with BDCP activities would be considered an adverse  
6 socioeconomic effect, while an increase in employment or labor income associated with BDCP  
7 activities would be considered a beneficial socioeconomic effect.
- 8 • Changes related to population and housing. For the purposes of this analysis, a concentrated,  
9 substantial increase in population or new housing associated with BDCP activities would  
10 constitute an adverse socioeconomic effect.
- 11 • Changes related to community character. For the purposes of this analysis, BDCP activities that  
12 would substantially disrupt social and economic patterns within established communities would  
13 be deemed to represent an adverse socioeconomic effect. BDCP activities that would support  
14 social and economic patterns within established communities would be considered a beneficial  
15 socioeconomic effect.
- 16 • Changes related to recreational economics. For the purposes of this analysis, an adverse  
17 socioeconomic effect would occur when construction or operations and maintenance activities  
18 result in loss of public access to or public use of well-established recreation facilities or activities  
19 lasting for more than 2 years.
- 20 • Changes related to agricultural economics. For the purposes of this analysis, an adverse  
21 socioeconomic effect would be characterized by a reduction in crop acres or a reduction in  
22 agricultural production value as a result of BDCP activities.
- 23 • Changes related to local government fiscal conditions. For the purposes of this analysis, an  
24 adverse socioeconomic effect would result if a BDCP activity led to a reduction in local  
25 government revenue. A beneficial socioeconomic effect would result if a BDCP activity led to an  
26 increase in local government revenue.

27 Where applicable, effects are described as beneficial or adverse and are identified as substantial or  
28 not substantial relative to the geographical context of the Delta Region. Socioeconomic effects are  
29 described at a project level for construction and operation of the conveyance facilities (CM1). Effects  
30 that would result from implementation of other conservation measures are described at a  
31 programmatic level.

32 Economic effects are potentially significant if they lead to reasonably foreseeable physical or social  
33 impacts. As noted, under CEQA, economic effects are not significant impacts, but an EIR should  
34 consider their potential to lead to reasonably foreseeable physical changes in the environment.  
35 Several impact topics discussed in this chapter could lead to such physical or social effects, including  
36 those related to housing, population, and community character. Economic impacts may also be used  
37 to assess the significance of other environmental changes that caused them, such as changes in  
38 water supply or water quality. The significance of those associated environmental impacts is  
39 discussed in other chapters.

### 1 16.3.2.1 Compatibility with Plans and Policies

2 Constructing the proposed water conveyance facility (CM1) and implementing CM2–CM22 could  
3 potentially result in incompatibilities with plans and policies related to socioeconomics. Section  
4 16.2, *Regulatory Setting*, provides an overview of federal, state, regional and agency-specific plans  
5 and policies related to socioeconomics. This section summarizes ways in which BDCP is compatible  
6 or incompatible with those plans and policies. Potential incompatibilities with local plans or policies,  
7 or with those not binding on the state or federal governments, do not necessarily translate into  
8 adverse environmental effects under NEPA or CEQA. Even where an incompatibility “on paper”  
9 exists, it does not by itself constitute an adverse physical effect on the environment, but rather may  
10 indicate the potential for a proposed activity to have a physical effect on the environment. The  
11 relationship between plans, policies, and regulations and impacts on the physical environment is  
12 discussed in Chapter 13, *Land Use*, Section 13.2.3.

13 Government Code Section 65302(c) requires a housing element in all city and county general plans.  
14 The detailed requirements of such elements are set forth in Government Code section 65580 et seq.  
15 The effect of these requirements is to assure that cities and counties recognize their responsibilities  
16 in contributing to the attainment of the state housing goal. The basic objective is to ensure that  
17 decent housing and a suitable living environment can be made available for every Californian.  
18 Related goals found in general plans within the Delta region include maintaining and improving the  
19 quality of existing housing stock, preserving the existing affordable housing stock, conserving and  
20 rehabilitating existing housing supply, facilitating the development of affordable housing, promoting  
21 equal housing opportunity, and strengthening neighborhoods. Implementing a BDCP action  
22 alternative could require increased demand for housing or require the removal of existing  
23 structures, including residential structures. Such effects are described under Impacts ECON-2,  
24 ECON-8, and ECON-14. As discussed under these sections, changes in population and housing are  
25 anticipated to be minor relative to the five-county Delta region and the effects would be anticipated  
26 to be dispersed throughout the region.

27 Delta region county general plans also include goals specific to economic development and general  
28 economic goals. These generally emphasize strategies to support the maintenance and development  
29 of local economic activities including identification of key resources, infrastructure, or sectors to  
30 pursue. The potential effects of implementation of BDCP alternatives on regional economics are  
31 described in Impacts ECON-1, ECON-7, and ECON-13. In particular, this discussion focuses on the  
32 direct and indirect effects on employment and labor income associated with BDCP activities.

33 General plans also include other goals or policies related to socioeconomic conditions in specific  
34 elements dedicated to economic development or are included in other elements, such as land use,  
35 recreation, or plan administration. Examples include policies protecting land uses that are  
36 supportive of economic activities, including agricultural lands or open space areas dedicated to  
37 recreational uses. Additionally, the Economic Sustainability Plan identifies a range of  
38 recommendations related to BDCP activities, as summarized in Section 16.2.2.3. These include  
39 recommendations that the economic impacts of habitat creation and development of facilities for  
40 export water supply be fully mitigated, that the loss of highly productive farmland be minimized to  
41 the greatest practical extent, that Delta water quality be protected for agricultural uses. In addition  
42 the impact discussions referenced above, socioeconomic effects related to land use changes  
43 associated with the BDCP are considered under Impacts ECON-5, ECON-6, ECON-11, ECON-12,  
44 ECON-17, and ECON-18. Additional physical effects related to these issues are described in Chapter  
45 8, *Water Quality*, Chapter 14, *Agricultural Resources*, and Chapter 15, *Recreation*.

## 1 16.3.3 Effects and Mitigation Approaches

### 2 16.3.3.1 No Action Alternative

3 Under the No Action Alternative, socioeconomic conditions would continue largely as under Existing  
4 Conditions. This alternative includes continued SWP/CVP operations, maintenance, enforcement,  
5 and protection programs by federal, state, and local agencies, as well as projects that are permitted  
6 or under construction. A complete list and description of programs and plans considered under the  
7 No Action Alternative is provided in Appendix 3D, *Defining Existing Conditions, No Action Alternative,*  
8 *No Project Alternative, and Cumulative Impact Conditions*. Over the long-term, Delta communities and  
9 socioeconomic conditions in the Delta would be subject to risks associated with climate change,  
10 seismic activity, and other phenomena, as discussed in Appendix 3E, *Potential Seismic and Climate*  
11 *Change Risks to SWP/CVP Water Supplies*.

#### 12 Regional Economics

13 Under the No Action Alternative, the regional economy of the Delta region is expected to be similar  
14 in structure to that described in Section 16.1, *Environmental Setting/Affected Environment*. Potential  
15 changes in expenditures related to recreation and municipal and industrial water uses as well as  
16 potential changes in the value of agricultural production could result in changes to regional  
17 employment and income in the Delta region under the No Action Alternative. The scale of the  
18 economy would change with population growth; however, the structure of the economy would not.  
19 Therefore, for the purposes of this analysis, no regional economic impact evaluation is undertaken  
20 as the economy is assumed to be similar to that characterized by the baseline five-county Delta  
21 region IMPLAN model.

#### 22 Population and Housing

23 Under the No Action Alternative, it is anticipated that the population would follow the projections  
24 described in Section 16.1, *Environmental Setting/Affected Environment*. Trends in housing demand  
25 and supply would correspond to population trends. It is assumed that the growth in housing would  
26 match the growth in population, as described in Section 16.1, *Environmental Setting/Affected*  
27 *Environment*.

#### 28 Community Character

29 Under the No Action Alternative, community character, including community cohesion and the  
30 functionality of community gathering places, within the five-county Delta region would be similar to  
31 that described under Section 16.1, *Environmental Setting/Affected Environment*. Projects and  
32 programs implemented under this alternative would not be anticipated to create adverse effects on  
33 the character of Delta communities.

34 **CEQA Conclusion:** The ongoing programs and plans under the No Action Alternative would not be  
35 anticipated to alter the character of Delta communities when compared with Existing Conditions  
36 and therefore would not be anticipated to result in a physical change to the environment.

#### 37 Local Government Fiscal Conditions

38 In consideration of the programs and plans adopted included in the No Action Alternative, local  
39 government fiscal conditions in Delta region would be anticipated to be similar to those conditions

1 described under Section 16.1, *Affected Environment/Environmental Setting*. Programs resulting in  
2 public acquisition of privately-held land, in addition to the population and economic changes  
3 described above, could affect property and sales tax revenue; however, the overall effects of this  
4 alternative are not anticipated to be adverse.

5 **CEQA Conclusion:** The ongoing programs and plans under the No Action Alternative, along with  
6 anticipated population growth, would be anticipated to result in local government fiscal conditions  
7 similar to those described under Existing Conditions and would therefore not be anticipated to  
8 result in a physical change to the environment.

### 9 **Recreational Economics**

10 Recreational economics within the five-county Delta region would be anticipated to be similar to  
11 that described under Section 16.1, *Affected Environment/Environmental Setting*. Projects to enhance  
12 and manage recreational resources, along with population growth in the Region, would be expected  
13 to increase economic activity associated with recreation in the Delta. While outside factors including  
14 changes to fisheries could alter the quality of recreational resources, based on consideration of  
15 ongoing measures to support recreation, adverse effects would not be anticipated.

16 **CEQA Conclusion:** The ongoing programs and plans under the No Action Alternative, along with  
17 anticipated population growth, would result in economic contributions similar to or higher than  
18 those described under Existing Conditions and therefore would not be anticipated to result in a  
19 physical change to the environment.

### 20 **Agricultural Economics in the Delta Region**

21 Conditions described below under the No Action Alternative are based on summary crop acreages  
22 and value of production information presented in the Section 16.1, *Environmental Setting/Affected*  
23 *Environment*. Irrigated crop acreage and value of agricultural production in the Delta region under  
24 the No Action Alternative are summarized in Table 16-18. On average, \$650 million in crop value  
25 would be generated on about 480 thousand irrigated acres. Field and forage crops are the two  
26 largest categories in acreage, and account for over 60% of the total irrigated acreage. Over 65% of  
27 the annual value of crop production is accounted for by two other crop categories: vegetable, truck,  
28 and specialty, and orchards and vineyards. Production costs and investments are similar to those  
29 described in Section 16.1, *Environmental Setting/Affected Environment*. It is possible that some of the  
30 projects, programs, and plans considered part of the No Action Alternative would reduce the total  
31 acreage and value of agricultural production in the Delta region. For example, under the 2008 and  
32 2009 NMFS and USFWS BiOps, up to 8,000 acres of agricultural land could be converted to tidal  
33 habitat. Similarly, agricultural land uses in the Yolo Bypass or Suisun Marsh could be periodically or  
34 permanently disrupted by other habitat restoration efforts.

1 **Table 16-18. Crop Acreage and Value of Agricultural Production in the Delta Region under the No**  
 2 **Action Alternative**

Analysis Metric	Total Crop Acreage (thousand acres)	Total Value of Production (million \$)
Grains	58.6	24.2
Field crops	191.1	113.8
Forage crops	112.7	73.1
Vegetable, truck, and specialty crops	77.2	268.4
Orchards and vineyards	44.0	170.5
<b>Total</b>	<b>483.7</b>	<b>650.0</b>

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

3  
 4 Salinity of irrigation water is described in Chapter 8, *Water Quality*, Section 8.1.3.7. The relationship  
 5 between soil and irrigation water salinity and crop production and the response of growers to these  
 6 changes is described in Chapter 14, *Agricultural Resources*, Section 14.1.1.6.

7 Because the agricultural economy of the Delta is expected to be similar in structure to that described  
 8 in Section 16.1, *Environmental Setting/Affected Environment*, no quantitative impact evaluation was  
 9 conducted.

10 **CEQA Conclusion:** In total, the ongoing programs and plans under the No Action Alternative would  
 11 result in crop acreages and crop values similar to those under Existing Conditions and therefore  
 12 would not be anticipated to result in a physical change in the environment.

### 13 **Effects in South-of-Delta Hydrologic Regions**

14 Under the No Action Alternative, several assumptions would create a deviation from Existing  
 15 Conditions. First, an increase in M&I water rights demands is assumed north of the Delta, increasing  
 16 overall system demands and reducing the availability of CVP water for export south of the Delta.  
 17 Secondly, the No Action Alternative includes the effects of implementation of the Fall X2 standard,  
 18 which requires additional water releases through the Delta and would therefore reduce the  
 19 availability of water for export to SWP and CVP facilities. The No Action Alternative also includes  
 20 effects of sea level rise and climate change, factors that would also reduce the amount of water  
 21 available for SWP and CVP supplies. These factors result in a decrease in deliveries under the No  
 22 Action Alternative, when compared to Existing Conditions. A detailed explanation of factors  
 23 influencing deliveries under the No Action Alternative is provided in Chapter 5, *Water Supply*,  
 24 Section 5.3.3.1.

25 As described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.3, overall  
 26 deliveries would decrease, though SWP deliveries to the San Francisco Bay, South Coast, and  
 27 Colorado River hydrologic regions would increase to meet projected increases in demand in those  
 28 areas. Where there are reduced deliveries to agricultural contractors, it is reasonable to expect that  
 29 agricultural production in affected areas would also decline. This decline could result from a shift to  
 30 lower value crops or an increase in the acreage of land fallowed as a result of reduced deliveries or  
 31 reduced reliability of deliveries. Under this scenario, it would also be anticipated that employment  
 32 directly and indirectly associated with agriculture would decline in areas affected by reduced water  
 33 deliveries. The location and magnitude of effects would depend largely on local factors and  
 34 individual decisions. However, hydrologic regions where SWP and CVP deliveries represent a higher

1 share of total water supply and where agriculture comprises a larger proportion of applied water  
2 use could be most susceptible to reductions in deliveries under the No Action Alternative. This  
3 includes the Tulare and San Joaquin River regions.

4 Increased SWP deliveries to M&I contractors in the San Francisco Bay, South Coast, and Colorado  
5 River hydrologic regions would be anticipated to meet demand associated with population growth  
6 in those regions. In other areas, M&I deliveries would generally decrease under the No Action  
7 Alternative. As discussed in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section  
8 30.3.2.5, long-term water supply reliability is an important component in enabling long-term  
9 population increases. However, other factors—including natural growth, employment opportunities,  
10 local policy, and quality of life—are more likely to determine population growth. Nonetheless,  
11 population growth could stimulate economic activity resulting from increased demand for goods  
12 and services. This increased demand could create broad economic benefits for regions whose  
13 growth is supported by increased deliveries under BDCP. As with estimating changes in agricultural  
14 production, the location and extent of population growth would depend largely on local factors.  
15 Where M&I deliveries under the No Action Alternative would be reduced compared to Existing  
16 Conditions to the extent that they would, in the long run, constrain population growth, their  
17 implementation could reinforce a socioeconomic status quo or limit potential economic and  
18 employment growth in hydrologic regions. Such a result could have the largest socioeconomic effect  
19 on regions with high dependence on SWP and CVP deliveries and where urban uses represent a high  
20 share of applied water use, including the South Lahontan region and the San Francisco Bay region  
21 (in consideration of a reduction in CVP deliveries). A detailed discussion of these potential effects is  
22 found in Appendix 5B, *Responses to Reduced South of Delta Water Supplies*.

23 Changes to SWP and CVP deliveries to the hydrologic regions under the No Action Alternative could  
24 affect community character. Where agricultural deliveries decline, resultant decreases in  
25 employment and production could destabilize economic and social patterns and institutions in  
26 communities where agriculture is a predominant economic activity. Decreases in M&I deliveries as a  
27 result of the No Action Alternative, were they to constrain long-term population growth, could  
28 reinforce a socioeconomic status quo or limit potential economic and employment growth in  
29 hydrologic regions. Changes in agricultural production and population growth could also affect local  
30 government fiscal conditions. Declining employment and production linked to a reduction in  
31 agricultural water deliveries could lead to a reduction in property and sales tax revenue. Similarly,  
32 population growth or employment growth limited by reduced M&I deliveries could result in  
33 foregone revenue. However, such growth could also require additional public sector expenditures  
34 for public services and utilities. Again, the location and intensity of these effects would depend on  
35 factors unique to local conditions and decisions, but as noted above, those regions most dependent  
36 on SWP and CVP deliveries would generally be anticipated to be most directly affected by reduced  
37 deliveries under this alternative.

### 38 **Climate Change and Catastrophic Seismic Risks**

39 Agriculture and recreation are primary economic activities in the Delta region. The potential for  
40 major seismic events, along with the potential effects of climate change, could affect ongoing  
41 agricultural and recreational uses if they resulted in the failure of levees or in climatic conditions  
42 less favorable for productive agricultural uses. Such events could also result in changes in the  
43 character of Delta communities and effects on individual homes and businesses, potentially  
44 requiring construction of new buildings. Catastrophic events resulting in levee failure could also  
45 place additional financial burdens on local governments in the Delta region. In hydrologic regions,

1 disruptions to Delta water deliveries could alter agricultural and industrial activities, along with  
 2 general effects on water supply in hydrologic regions (See Appendix 3E, *Potential Seismic and*  
 3 *Climate Change Risks to SWP/CVP Water Supplies* and Appendix 5B, *Responses to Reduced South of*  
 4 *Delta Water Supplies*, for more detailed discussion of seismic and climate change risks and potential  
 5 responses to reduced supplies).

6 Overall, the No Action Alternative would result in reduced deliveries to hydrologic regions, which  
 7 could create adverse socioeconomic effects related to reduced agricultural production, employment,  
 8 and the character of agricultural communities. Reductions in water deliveries could occur in areas  
 9 where a large proportion of economic activity and employment is dependent on agricultural  
 10 production. Reducing exports to the San Joaquin Valley and Tulare Basin would result in reduced  
 11 deliveries to agricultural users and associated reduction in employment opportunities. Any  
 12 reduction in water deliveries would result in an adverse effect to these affected workers'  
 13 employment and income levels. Water deliveries to southern California are made to a broad range of  
 14 municipal and industrial users. To the extent that reductions in deliveries to these areas would  
 15 constrain population or industrial growth, such reductions would also be expected to result in an  
 16 adverse effect on employment and income. Further discussion of these potential effects is included  
 17 in Chapter 28, *Environmental Justice*, Section 28.5.3.1, and in Chapter 30, *Growth Inducement and*  
 18 *Other Indirect Effects*, Section 30.3.4.

19 **CEQA Conclusion:** Operation of water conveyance facilities under the No Action Alternative could  
 20 affect socioeconomic conditions in the hydrologic regions receiving water from the SWP and CVP.  
 21 However, because these impacts are social and economic in nature, rather than physical, they are  
 22 not considered environmental impacts under CEQA. To the extent that changes in socioeconomic  
 23 conditions in the hydrologic regions would lead to physical impacts, such impacts are described in  
 24 Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.

### 25 **16.3.3.2 Alternative 1A—Dual Conveyance with Pipeline/Tunnel and** 26 **Intakes 1–5 (15,000 cfs; Operational Scenario A)**

27 Alternative 1A would result in temporary effects (construction period) on lands and communities  
 28 associated with construction of five intakes and intake pumping plants, and other associated  
 29 facilities; two forebays; conveyance pipelines; and tunnels. Nearby areas would be altered as work  
 30 or staging areas, concrete batch plants, fuel stations, or be used for spoils storage areas.  
 31 Transmission lines, access roads, and other incidental facilities would also be needed for operations,  
 32 and construction of these structures would also have effects on lands and communities.

33 The following impact analysis is divided into four subsections: effects of construction of facilities  
 34 under CM1 in the Delta region, effects of operations of facilities under CM1 in the Delta region,  
 35 effects of implementation of other conservation measures, and effects in hydrologic regions outside  
 36 of the Delta as a result of changes in water deliveries.

#### 37 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 38 **Region during Construction of the Proposed Water Conveyance Facilities**

39 The regional economic effects on employment and labor income during construction in the Delta  
 40 region were evaluated. Changes are shown relative to Existing Conditions and the No Action  
 41 Alternative in Table 16-19. The table shows the direct and total (direct, indirect, and induced  
 42 effects) changes that would result from conveyance-related spending. Spending on conveyance

1 construction would result in substantial local economic activity in the region. As shown, direct  
 2 construction employment is anticipated to vary over the 8-year construction period, with an  
 3 estimated 2,433 FTE in the first year and 165 FTE in the final year of the construction period.  
 4 Construction employment is estimated to peak at 4,390 FTE in year 4. Total employment (direct,  
 5 indirect, and induced) would peak in year 3, at 12,716 FTE.

6 **Table 16-19. Regional Economic Effects on Employment and Labor Income during Construction**  
 7 **(Alternative 1A)Regional Economic Impact<sup>a</sup>**

	Year								Total
	1	2	3	4	5	6	7	8	
<b>Employment Full Time Equivalent (FTE)</b>									
Direct	2,433	2,714	4,004	4,390	3,658	3,636	676	165	21,675
Total <sup>b</sup>	12,348	10,582	12,716	11,935	8,915	7,389	1,136	235	65,256
<b>Labor Income (million \$)</b>									
Direct	327.7	249.0	262.6	215.1	142.1	88.1	7.8	0.4	1,292.9
Total <sup>b</sup>	596.7	465.3	509.6	435.9	300.4	208.8	24.4	3.4	2,544.5

Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Conditions or the No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects; numbers may not sum to the total due to rounding. Detailed estimates are presented in Appendix 16A, *Regional Economic Impacts of Water Conveyance Facility Construction*.

8

9 The footprint of conveyance and related facilities such as roads and utilities would remove some  
 10 existing agricultural land from production, so the effects on such removals on agricultural  
 11 employment and income would be negative. The regional economic effects on employment and  
 12 income in the Delta region from the change in agricultural production are reported in Table 16-20.  
 13 As shown, direct agricultural employment would be reduced by an estimated 27 FTE, while total  
 14 employment (direct, indirect, and induced) associated with agricultural employment would fall by  
 15 100 FTE. Mapbook Figures M14-1 and M14-2 display areas of Important Farmland and lands under  
 16 Williamson Act contracts that could be converted to other uses due to the construction of water  
 17 conveyance facilities for the Pipeline/Tunnel alignment. Note that not all of these structures would  
 18 be constructed under this alternative.

19 **Table 16-20. Regional Economic Effects on Agricultural Employment and Labor Income during**  
 20 **Construction (Alternative 1A)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-27
Total <sup>b</sup>	-100
<b>Labor Income (million \$)</b>	
Direct	-3.3
Total <sup>b</sup>	-6.4

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Conditions or the No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects.

21

1 Additionally, the Alternative 1A construction footprint would result in the abandonment of an  
2 estimated six producing natural gas wells in the study area, as described in Chapter 26, *Mineral*  
3 *Resources*, Section 26.3.3.2, Impact MIN-1. This could result in the loss of employment and labor  
4 income associated with monitoring and maintaining these wells. Generally, small crews perform  
5 ongoing monitoring and maintenance of several wells at a time. As shown in Chapter 26, *Mineral*  
6 *Resources*, Table 26-3, 516 active producer wells are located in the study area. Even if all six  
7 producing wells in the Alternative 1A construction footprint were abandoned and not replaced with  
8 new wells installed outside the construction footprint, the percentage reduction in the number of  
9 natural gas wells would be very small. As a result, the employment and labor income effects  
10 associated with well abandonment, while negative, would be minimal.

11 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
12 construction-related employment and labor income, this would be considered a beneficial effect.  
13 However, these activities would also be anticipated to result in a decrease in agricultural-related  
14 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
15 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
16 available to reduce these effects by preserving agricultural productivity and compensating off-site.

17 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
18 employment and income in the Delta region, temporarily (during the construction period). The  
19 increase in employment and income that would result from expenditures on construction would be  
20 greater than the reduction in employment and income attributable to losses in agricultural  
21 production. Changes in recreational expenditures and natural gas well operations could also affect  
22 regional employment and income, but these have not been quantified. The total change in  
23 employment and income is not, in itself, considered an environmental impact. Significant  
24 environmental impacts would only result if the changes in regional economics cause physical  
25 impacts. Such physical impacts are discussed in other chapters throughout this EIR/EIS. Costs are  
26 addressed in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of  
27 agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
28 14.3.3.2, Impacts AG-1 and AG-2; changes in recreation related activities are addressed in Chapter  
29 15, *Recreation*, Section 15.3.3.2, REC-1 through REC-4; abandonment of natural gas wells is  
30 addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, MIN-1. When required, the BDCP  
31 proponents would provide compensation to property owners for economic losses due to  
32 implementation of the alternative. While the compensation to property owners would reduce the  
33 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
34 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
35 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
36 Develop an Agricultural Lands Stewardship Plan (ALSP) to preserve agricultural productivity and  
37 mitigate for loss of Important Farmland and land subject to Williamson Act contracts or in Farmland  
38 Security Zones.

## 39 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 40 **the Proposed Water Conveyance Facilities**

### 41 **Population**

42 Construction of conveyance facilities would require an estimated peak of 4,390 workers in year 4 of  
43 the construction period. It is anticipated that many of these new jobs would be filled from within the  
44 existing five-county labor force. However, construction of the tunnels may require workers with

1 specialized skills not readily available in the local labor pool. As a result, it is anticipated that some  
 2 specialized workers may be recruited from outside the Delta region. As discussed in Chapter 30,  
 3 *Growth Inducement and Other Indirect Effects*, Section 30.3.2.1, Direct Growth Inducement, an  
 4 estimated 1,300 workers could come from outside of the Delta region at the peak of the construction  
 5 period.

6 It is anticipated that non-local workers would temporarily relocate to the Delta region, thus adding  
 7 to the local population. However, this additional population would constitute a minor increase in the  
 8 total 2020 projected regional population of 4.6 million and be distributed throughout the region.  
 9 Changes in demand for public services resulting from any increase in population are addressed in  
 10 Chapter 20, *Public Services and Utilities*, Section 20.3.3.2, Impact UT-1 through UT-6.

### 11 **Housing**

12 Changes in housing demand are based on changes in supply resulting from displacement during  
 13 facilities construction and changes in housing demand resulting from employment associated with  
 14 construction of conveyance facilities. As described in Chapter 13, *Land Use*, Section 13.3.3.2, Impact  
 15 LU-2, construction of water conveyance facilities under Alternative 1A would conflict with  
 16 approximately 59 residential structures.

17 The construction workforce would most likely commute daily to the work sites from within the  
 18 Delta region; however, if needed, there are about 53,000 housing units available to accommodate  
 19 workers who may choose to commute on a workweek basis or who may choose to temporarily  
 20 relocate to the region for the duration of the construction period, including the estimated 1,300  
 21 workers who may temporarily relocate to the Delta region from outside of the region. In addition to  
 22 the available housing units, there are recreational vehicle and mobile home parks and numerous  
 23 hotels and motels within the five-county region to accommodate any construction workers. As a  
 24 result, and as discussed in more detail in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
 25 Section 30.3.2.1, Direct Growth Inducement, construction of the proposed conveyance facilities is  
 26 not expected to substantially increase the demand for housing within the five-county region.

27 **NEPA Effects:** Within specific local communities, there could be localized effects on housing.  
 28 However, given the availability of housing within the five-county region, predicting where this  
 29 impact might fall would be speculative. In addition, new residents would likely be dispersed across  
 30 the region, thereby not creating a burden on any one community.

31 Because these activities would not result in permanent concentrated, substantial increases in  
 32 population or new housing, they would not be considered to have an adverse effect.

33 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
 34 temporary population increases in the Delta region, which has an adequate housing supply to  
 35 accommodate the change in population. Therefore, physical environmental impacts resulting from  
 36 the minor increase in population are not anticipated.

### 37 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 38 **Water Conveyance Facilities**

39 **NEPA Effects:** Throughout the five-county Delta region, population and employment would expand  
 40 as a result of the construction of water conveyance facilities, as discussed under Impacts ECON-1  
 41 and ECON-2. Agricultural contributions to the character and culture of the Delta would be likely to  
 42 decline commensurate with the projected decline in agricultural-related acreage, employment, and

1 production. This could result in the closure of agriculture-dependent businesses or those catering to  
2 agricultural workers, particularly in areas where conversion of agricultural land would be most  
3 concentrated, including near the intake pumping plants and forebays in the vicinity of Clarksburg  
4 and Hood. Similar effects on community character could result from anticipated changes to  
5 recreation in the study area. However, social influences associated with the construction industry  
6 would grow during the multi-year construction period for water conveyance structures under  
7 Alternative 1A. To the extent that this anticipated economic shift away from agriculture and towards  
8 construction results in demographic changes in population, employment level, income, age, gender,  
9 or ethnic origin, the study area would be expected to see changes to its character, particularly in  
10 those Delta communities most substantially affected by demographic changes based on their size,  
11 ability to accommodate growth, or proximity to BDCP activities. In comparing the existing  
12 demographic composition of agricultural workers and construction laborers within the five-county  
13 Delta Region, men make up a large proportion of both occupations: 84 percent of agricultural  
14 workers were male, compared with 98 percent of construction laborers. Approximately 92 percent  
15 of agricultural workers made less than \$35,000, while 60 percent of construction laborers made less  
16 than \$35,000. Additionally, 87 percent of agricultural workers within the study area report Hispanic  
17 origin, while 54 percent of construction laborers claim Hispanic origin within the five-county area  
18 (U.S. Census Bureau 2012b).

19 Legacy communities in the Delta, which are those identified as containing distinct historical and  
20 cultural character, include Locke, Bethel Island, Clarksburg, Courtland, Freeport, Hood, Isleton,  
21 Knightsen, Rio Vista, Ryde, and Walnut Grove. These communities provide support services and  
22 limited workforce housing for the area's agricultural industry. Some housing is also provided to  
23 retirees and workers commuting to nearby urban areas including Sacramento. Construction  
24 activities associated with BDCP water conveyance facilities would be anticipated to result in changes  
25 to the rural qualities of these communities during the construction period (characterized by  
26 predominantly agricultural land uses, relatively low population densities, and low levels of  
27 associated noise and vehicular traffic), particularly for those communities in proximity to water  
28 conveyance structures, including Clarksburg, Hood, Courtland and Walnut Grove. Effects associated  
29 with construction activities could also result in changes to community cohesion if they were to  
30 restrict mobility, reduce opportunities for maintaining face-to-face relationships, or disrupt the  
31 functions of community organizations or community gathering places (such as schools, libraries,  
32 places of worship, and recreational facilities). Under Alternative 1A, several gathering places that lie  
33 in the vicinity of construction areas could be indirectly affected by noise and traffic associated with  
34 construction activities, including Delta High School, the Clarksburg Library, Clarksburg Community  
35 Church, Equipping Christian Center, and several marinas or other recreational facilities (see Chapter  
36 15, *Recreation*, Table 15-11). Additionally, as described in Chapter 20, *Public Services and Utilities*, a  
37 fire station in the community of Hood would be directly affected by construction of a conveyance  
38 pipeline under this alternative and accordingly, its function as a workplace and as a community  
39 gathering place may be relocated.

40 In addition to potential changes in the demographic composition of communities in the study area,  
41 construction of water conveyance facilities under Alternative 1A could also affect the size of the  
42 communities, as suggested above. Based upon the projections developed under Impacts ECON-1 and  
43 ECON-2, the total population and employment base of the study area would expand during water  
44 facility construction. This expansion could provide economic opportunities during this period, which  
45 could support community stability by increasing investment in Delta communities. However, as

1 noted under the discussion of housing above, predicting the specific location of such investments  
2 within the study area would be speculative.

3 Under Alternative 1A, additional regional employment and income could create net positive effects  
4 on the character of Delta communities. In addition to potential demographic effects associated with  
5 changes in employment, however, property values may decline in areas that become less desirable  
6 in which to live, work, shop, or participate in recreational activities. For instance, negative visual- or  
7 noise-related effects on residential property could lead to localized abandonment of buildings. While  
8 water conveyance construction could result in beneficial effects relating to the economic welfare of a  
9 community, adverse social effects could also arise as a result of declining economic stability in  
10 communities closest to construction effects and in those most heavily influenced by agricultural and  
11 recreational activities. Implementation of mitigation measures and environmental commitments  
12 related to noise, visual effects, transportation, agriculture, and recreation, would reduce adverse  
13 effects (see Appendix 3B, *Environmental Commitments*). Specifically, these commitments include  
14 Develop and Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous  
15 Materials Management Plans, Notification of Construction and Maintenance Activities in Waterways,  
16 Noise Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
17 Management Plans.

18 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 1A could affect  
19 community character in the Delta region during the construction work period. However, because  
20 these impacts are social in nature, rather than physical, they are not considered impacts under  
21 CEQA. To the extent that changes to community character would lead to physical impacts involving  
22 population growth, such impacts are described under Impact ECON-2 and in Chapter 30, *Growth*  
23 *Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population  
24 or employment, even if limited to specific areas, sectors, or the vacancy of individual buildings, could  
25 result in alteration of community character stemming from a lack of maintenance, upkeep, and  
26 general investment. However, implementation of mitigation measures and environmental  
27 commitments related to noise, visual effects, transportation, agriculture, and recreation, would  
28 reduce the extent of these effects (see Appendix 3B, *Environmental Commitments*). Specifically, these  
29 commitments include Develop and Implement Erosion and Sediment Control Plans, Develop and  
30 Implement Hazardous Materials Management Plans, Notification of Construction and Maintenance  
31 Activities in Waterways, Noise Abatement Plan, Fire Prevention and Control Plan, and Coordinate  
32 with Mosquito Vector Control Districts and Prepare and Implement Mosquito Management Plans.

#### 33 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 34 **the Proposed Water Conveyance Facilities**

35 **NEPA Effects:** Under Alternative 1A, publicly-owned water conveyance facilities would be  
36 constructed on land of which some is currently held by private owners. Property tax and assessment  
37 revenue forgone as a result of water conveyance facilities is estimated at \$8.3 million over the  
38 construction period with an estimated annual range effect of \$1.0 million. These decreases in  
39 revenue could potentially result in the loss of a substantial share of some agencies' tax bases,  
40 particularly for smaller districts affected by the BDCP, such as reclamation districts where  
41 conveyance facilities and associated work areas are proposed. This economic effect would be  
42 considered adverse; however, the BDCP proponents would make arrangements to compensate local  
43 governments for the loss of property tax or assessment revenue for land used for constructing,

1 locating, operating, or mitigating for new Delta water conveyance facilities.<sup>7</sup> Additionally, as  
 2 discussed under Impact ECON-1, construction of the water conveyance facilities would be  
 3 anticipated to result in a net temporary increase of income and employment in the Delta region. This  
 4 would also create an indirect beneficial effect through increased sales tax revenue for local  
 5 government entities that rely on sales taxes.

6 **CEQA Conclusion:** Under Alternative 1A, construction of water conveyance facilities would result in  
 7 the removal of a portion of the property tax base for various local government entities in the Delta  
 8 region. Over the construction period, property tax and assessment revenue forgone is estimated at  
 9 \$8.3 million. However, the Sacramento–San Joaquin Delta Reform Act commits the entities receiving  
 10 water from the State Water Project and federal Central Valley Project to mitigate for lost property  
 11 tax and assessment revenue associated with land needed for the construction of new conveyance  
 12 facilities (Water Code Section 85089). Additionally, any losses could be offset, at least in part, by an  
 13 anticipated increase in sales tax revenue. CEQA does not require a discussion of socioeconomic  
 14 effects except where they would result in reasonably foreseeable physical changes. If an alternative  
 15 is not anticipated to result in a physical change to the environment, it would not be considered to  
 16 have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any  
 17 physical consequences resulting from fiscal impacts are too speculative to ascertain.

#### 18 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 19 **Water Conveyance Facilities**

20 **NEPA Effects:** While facility construction would not physically displace any recreational facilities,  
 21 substantial disruption of recreational activities considered temporary and permanent would occur  
 22 in certain areas during the construction period, as described and defined in Chapter 15, *Recreation*,  
 23 Section 15.3.3.2, Impacts REC-1 through REC-4. The quality of recreational activities including  
 24 boating, fishing, waterfowl hunting, and hiking in the Delta could be affected by noise, lighting,  
 25 traffic, and visual degradation in proximity to water conveyance construction. For example, in-water  
 26 construction activities associated with the intakes or temporary barge areas could restrict  
 27 navigation and create noise and vibration that could lead to lower fishing success rates. Were it to  
 28 occur, a decline in visits to Delta recreational sites as a result of facility construction would be  
 29 expected to reduce recreation-related spending, creating an adverse effect throughout the Delta  
 30 region. Additionally, if construction activities shift the relative popularity of different recreational  
 31 sites, the BDCP may carry localized beneficial or adverse effects.

32 Access would be maintained to all existing recreational facilities, including marinas, throughout  
 33 construction. As part of Mitigation Measure REC-2, BDCP proponents would enhance nearby fishing  
 34 access sites and would incorporate public recreational access into design of the intakes along the  
 35 Sacramento River. Implementation of this measure along with separate, non-environmental  
 36 commitments as set forth in Appendix 3B, *Environmental Commitments*, relating to the enhancement  
 37 of recreational access and control of aquatic weeds in the Delta would reduce these effects.  
 38 Environmental commitments would also be implemented to reduce some of the effects of  
 39 construction activities upon the recreational experience. These include providing notification of

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<sup>7</sup> Under the Sacramento-San Joaquin Delta Reform Act of 2009 (85089), construction of a new conveyance facility cannot begin until “the persons or entities that contract to receive water from the State Water Project and the federal Central Valley Project or a joint powers authority representing those entities have made arrangements or entered into contracts to pay for... (b) Full mitigation of property tax or assessments levied by local governments or special districts for land used in the construction, location, mitigation, or operation of new Delta conveyance facilities.”

1 maintenance activities in waterways and developing and implementing a noise abatement plan, as  
 2 described in Appendix 3B, *Environmental Commitments*. Similarly, mitigation measures proposed  
 3 throughout other chapters of this document, and listed under Impact REC-2 in Chapter 15,  
 4 *Recreation*, would also contribute to reducing construction effects on recreational experiences in the  
 5 study area. These include Chapter 12, *Terrestrial Biological Resources*, Chapter 17, *Aesthetics and*  
 6 *Visual Resources*, Chapter 19, *Transportation*, and Chapter 23, *Noise*.

7 Construction of water conveyance structures would be anticipated to result in a lower-quality  
 8 recreational experience in a number of localized areas throughout the Delta, despite the  
 9 implementation of environmental commitments. With a decrease in recreational quality,  
 10 particularly for boating and fishing (two of the most popular activities in the Delta), the number of  
 11 visits would be anticipated to decline, at least in areas close to construction activities. Under this  
 12 alternative, seven recreational sites or areas would experience periods of construction-related  
 13 effects, including noise, access, visual disturbances, or a combination of these effects. These include  
 14 Clarksburg Boat Launch (fishing access), Stone Lakes National Wildlife Refuge, Georgiana Slough  
 15 Fishing Access, Cosumnes River Preserve, Bullfrog Landing Marina, Whiskey Slough Harbor Marina,  
 16 and Clifton Court Forebay. Fewer visits to these sites or areas would lead to less spending, creating  
 17 an adverse effect. While visitors can adjust their recreational patterns to avoid areas substantially  
 18 affected by construction activities (by boating or fishing elsewhere in the Delta, for instance),  
 19 recreation-dependent businesses including marinas and recreational supply retailers may not be  
 20 able to economically weather the effects of multiyear construction activities and may be forced to  
 21 close as a result, even while businesses in areas that become more popular could benefit. Overall,  
 22 the multi-year schedule and geographic scale of construction activities and the anticipated decline in  
 23 recreational spending would be considered an adverse effect. The commitments and mitigation  
 24 measures cited above would contribute to the reduction of this effect.

25 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 1A  
 26 would impact recreational revenue in the Delta region where construction activities result in fewer  
 27 visits to an area. Fewer visits would be anticipated to result in decreased economic activity related  
 28 to recreational activities. This section considers only the economic effects of recreational changes  
 29 brought about by construction of the proposed water conveyance facilities. Potential physical  
 30 changes to the environment relating to recreational resources are described and evaluated in  
 31 Chapter 15, *Recreation*, Section 15.3.3.2, REC-1 through REC-4.

### 32 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 33 **the Proposed Water Conveyance Facilities**

34 Construction of conveyance facilities would convert land from existing agricultural uses to uses that  
 35 include direct facility footprints, construction staging areas, borrow/spoils areas, reusable tunnel  
 36 material (RTM) storage, temporary and permanent roads, and utilities. Agricultural land could also  
 37 be affected by changes in water quality and other conditions that would affect crop productivity.  
 38 These direct effects on agricultural land are described in Chapter 14, *Agricultural Resources*, Section  
 39 14.3.3.2, Impacts AG-1 and AG-2.

40 Changes in crop acreage were used to describe the associated changes in economic values. Unit  
 41 prices, yields, and crop production and investment costs were presented in Section 16.1,  
 42 *Environmental Setting/Affected Environment*. Table 16-21 summarizes the changes in acreage and  
 43 value of agricultural production that would result in the Delta region as a result of Alternative 1A  
 44 construction. Changes are shown relative to the Existing Conditions and the No Action Alternative

1 by aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
 2 Alternative were assumed to be the same). The table also includes a summary of changes in crop  
 3 acreages that are reported in greater detail in Appendix 14A, *Individual Crop Effects as a Result of*  
 4 *BDCP Water Conveyance Facility Construction*.

5 **Table 16-21. Crop Acres and Value of Agricultural Production in the Delta during Construction**  
 6 **(Alternative 1A)**

Analysis Metric	Alternative 1A	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	478.1	-5.6
Grains	58.1	-0.6
Field crops	189.4	-1.7
Forage crops	111.4	-1.4
Vegetable, truck, and specialty crops	76.6	-0.5
Orchards and vineyards	42.6	-1.4
Total Value of Production (million \$)	641.1	-8.9
Grains	24.0	-0.2
Field crops	112.8	-1.0
Forage crops	72.0	-1.1
Vegetable, truck, and specialty crops	266.5	-1.8
Orchards and vineyards	165.7	-4.9

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

7  
 8 Total value of irrigated crop production in the Delta would decline on average by \$8.9 million per  
 9 year during the construction period, with total irrigated crop acreage declining by about 5,600 acres.  
 10 These estimates are not dependent on water year type.

11 Alternative 1A may also affect production costs on lands even if gross revenues are largely  
 12 unaffected. Costs could be increased by operational constraints and longer travel times due to  
 13 facilities construction. Construction designs and costs have provided for such costs in two ways. In  
 14 most cases, affected lands fall within the facilities footprint, and are included in the agricultural  
 15 acreage and value of production described elsewhere in this chapter and in Chapter 14, *Agricultural*  
 16 *Resources*, Section 14.3.3.2. For potentially affected lands not included in the facilities footprint,  
 17 conveyance construction costs include temporary and permanent roads, bridges, and other facilities  
 18 as needed to service agricultural lands (California Department of Water Resources 2010a, 2010b).  
 19 There could be some additional travel time and other costs associated with using these facilities, but  
 20 such costs are not environmental impacts requiring mitigation.

21 Loss of investments in production facilities and standing orchards and vineyards would occur as a  
 22 result of facilities construction. The value of structures and equipment potentially affected would  
 23 vary widely across parcels. Much of the equipment is portable (e.g., machinery, tools, portable  
 24 sprinkler pipe), and could be sold or used on other lands. Shop and storage buildings and permanent  
 25 irrigation and drainage equipment plus orchards and vineyards may have little or no salvage value.  
 26 The negotiated purchase of lands for the conveyance and associated facilities would compensate for  
 27 some, but perhaps not all of that value. According to Cooperative Extension cost of production  
 28 studies (University of California Cooperative Extension 2003a, 2003b, 2004, 2005, 2006a, 2006b,

1 2007a, 2007b, 2008a, 2008b, 2008c, 2008d), permanent structures, irrigation systems, and drainage  
 2 systems can represent a wide range of investment, from less than \$100 per acre for field and  
 3 vegetable crops up to over \$3,000 per acre for some orchards. Most such investments would not be  
 4 new, so their depreciated values would be substantially lower.

5 Investment in standing orchards and vineyards would also be considered during negotiations for  
 6 land purchases. Typical investments required to bring permanent crops into production are shown  
 7 in Section 16.1, *Environmental Setting/Affected Environment*. For example, the establishment of wine  
 8 grapes requires an investment of over \$15,000 per acre and Bartlett pears require over \$20,000 per  
 9 acre. Forage crops such as irrigated pasture and alfalfa may require an establishment cost of about  
 10 \$400 per acre. The depreciated values of the growing stock could be substantially below these  
 11 establishment costs, depending on the ages of the stands that would be affected.

12 Only minor changes in salinity of agricultural water supply are expected during construction.  
 13 Consequently, costs related to salinity changes would also be minor. Further discussion of effects  
 14 from changes in salinity is presented in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 15 AG-2.

16 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
 17 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
 18 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 19 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 20 agricultural productivity and compensating off-site.

21 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
 22 value of agricultural production in the Delta region. The removal of agricultural land from  
 23 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impacts AG-1 and  
 24 AG-2. The reduction in the value of agricultural production is not considered an environmental  
 25 impact. Significant environmental impacts would only result if the changes in regional economics  
 26 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 27 required, DWR would provide compensation to property owners for economic losses due to  
 28 implementation of the alternative. While the compensation to property owners would reduce the  
 29 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 30 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 31 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 32 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 33 and land subject to Williamson Act contracts or in Farmland Security Zones.

### 34 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 35 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

36 In the Delta region, ongoing operation and maintenance of BDCP facilities would result in increased  
 37 expenditures relative to the Existing Conditions and the No Action Alternative (regional economic  
 38 conditions do not differ across Existing Conditions and No Action Alternative). The increased project  
 39 operation and maintenance expenditures are expected to result in a permanent increase in regional  
 40 employment and income (Table 16-22) relative to the Existing Conditions and the No Action  
 41 Alternative, including an estimated 187 direct and 269 total (direct, indirect, and induced) FTE.  
 42 Potential changes in the value of agricultural production result in changes to regional employment  
 43 and income in the Delta region under the Alternative 1A relative to the Existing Conditions and the  
 44 No Action Alternative.

**Table 16-22. Regional Economic Effects on Employment and Labor Income in the Delta Region during Operations and Maintenance (Alternative 1A)**

Regional Economic Impact <sup>a</sup>	Impacts from Operations and Maintenance
<b>Employment (FTE)</b>	
Direct	187
Total <sup>b</sup>	269
<b>Labor Income (million \$)</b>	
Direct	11.4
Total <sup>b</sup>	15.3

Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).  
<sup>a</sup> IMPLAN results are changes relative to Existing Conditions or the No Action Alternative.  
<sup>b</sup> Includes direct, indirect & induced effects.

The operation and maintenance of conveyance and related facilities such as roads and utilities would result in the permanent removal of agricultural land from production following construction, and the effects on employment and income would be negative, including the loss of an estimated 31 agricultural and 86 total (direct, indirect, and induced) FTE jobs. The regional economic effects on employment and income in the Delta region from the change in agricultural production are reported in Table 16-23. Mapbook Figures M14-1 and M14-2 display areas of Important Farmland and lands under Williamson Act contracts that could be converted to other uses due to the construction of water conveyance facilities for the Pipeline/Tunnel alignment. Note that not all of these structures would be constructed under this alternative.

**Table 16-23. Regional Economic Effects on Agricultural Employment and Labor Income during Operations and Maintenance (Alternative 1A)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-31
Total <sup>b</sup>	-86
<b>Labor Income (million \$)</b>	
Direct	-2.5
Total <sup>b</sup>	-4.8

Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).  
<sup>a</sup> IMPLAN results are changes relative to Existing Conditions or the No Action Alternative.  
<sup>b</sup> Includes direct, indirect & induced effects.

**NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would result in an increase in operations-related employment and labor income, this would be considered a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in agricultural-related employment and labor income, which would be considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural productivity and compensating off-site.

1 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 2 increase total employment and income in the Delta region. The net change would result from  
 3 expenditures on operation and maintenance and from changes in agricultural production. The total  
 4 change in income and employment is not, in itself, considered an environmental impact. Significant  
 5 environmental impacts would only result if the changes in regional economics cause physical  
 6 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 7 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 8 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impacts AG-1  
 9 and AG-2; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
 10 15.3.3.2, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
 11 landowners as a result of acquiring lands for the proposed conveyance facilities. While the  
 12 compensation to property owners would reduce the severity of economic effects related to the loss  
 13 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
 14 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 15 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
 16 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
 17 contracts or in Farmland Security Zones.

## 18 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 19 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

### 20 **Population**

21 Operations and maintenance of conveyance facilities would require approximately 190 permanent  
 22 new workers. Given the nature of those operation and maintenance jobs, the existing water  
 23 conveyance facilities already in the five-county region, the large workforce in the region, and the  
 24 large water agencies with headquarters in that region, it is anticipated that most of these new jobs  
 25 would be filled from within the existing five-county labor force. However, operation and  
 26 maintenance may require specialized worker skills not readily available in the local labor pool. As a  
 27 result, it is anticipated that workers with specialized skills may be recruited from outside the five-  
 28 county region.

29 It is anticipated that non-local workers would relocate to the five-county region, thus adding to the  
 30 local population. However, this additional population would constitute a minor increase in the total  
 31 2020 projected regional population of 4.6 million and be distributed throughout the region. Changes  
 32 in demand for public services resulting from any increase in population are addressed in Chapter 20,  
 33 *Public Services and Utilities*, Section 20.3.3.2, Impact UT-7.

### 34 **Housing**

35 It is anticipated that most of the operational workforce would be drawn from within the five-county  
 36 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.  
 37 There are about 53,000 housing units available to accommodate any nonlocal workers who relocate  
 38 to the five-county region. In addition, new residents would likely be dispersed across the region,  
 39 thereby not creating a burden on any one community. As a result, operation and maintenance of the  
 40 proposed conveyance facilities is not expected to increase the demand for housing.

41 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 42 population or new housing, they would not be considered to have an adverse effect.

1 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 2 result in minor population increases in the Delta region with adequate housing supply to  
 3 accommodate the change in population and therefore adverse changes in the physical environment  
 4 are not anticipated.

### 5 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 6 **Proposed Water Conveyance Facilities**

7 **NEPA Effects:** Throughout the five-county Delta region, population and employment could slightly  
 8 expand as a result of continued operation and maintenance of the water conveyance facilities.  
 9 Agricultural contributions to the character and culture of the Delta would be likely to decline  
 10 commensurate with the projected decline in agricultural-related employment and production. This  
 11 could result in the closure of agriculture-dependent businesses or those catering to agricultural  
 12 employees, particularly in areas where conversion of agricultural land would be most concentrated.  
 13 Similar effects could accrue to areas disproportionately dependent upon existing recreational  
 14 activities. However, influences associated with those hired to operate, repair, and maintain water  
 15 conveyance facilities would grow. To the extent that this anticipated economic shift away from  
 16 agriculture results in demographic changes in population, employment level, income, age, gender, or  
 17 race, the study area would be expected to see changes to its character, particularly in those Delta  
 18 communities most substantially affected by demographic changes based on their size or proximity  
 19 to BDCP facilities.

20 While some of the rural qualities of Delta communities, including relatively low noise and traffic  
 21 levels, could return to near pre-construction conditions during the operational phase, other effects  
 22 would be lasting. For instance, the visual appearance of intakes and other permanent features would  
 23 compromise the predominantly undeveloped and agricultural nature of communities like  
 24 Clarksburg, Courtland, and Hood, which would be located closest to the permanent water  
 25 conveyance features. Lasting effects on areas made less desirable in which to live, work, shop, or  
 26 participate in recreational activities as a result of BDCP operations could lead to localized  
 27 abandonment of buildings. Such lasting effects could also result in changes to community cohesion if  
 28 they were to restrict mobility, reduce opportunities for maintaining face-to-face relationships, or  
 29 disrupt the functions of community organizations or community gathering places (such as schools,  
 30 libraries, places of worship, and recreational facilities). While ongoing operations could result in  
 31 beneficial effects relating to the economic welfare of a community, adverse social effects could linger  
 32 in communities closest to character-changing effects and in those most heavily influenced by  
 33 agricultural and recreational activities. Implementation of mitigation measures and environmental  
 34 commitments related to noise, visual effects, transportation, agriculture, and recreation would  
 35 reduce adverse effects (see Appendix 3B, *Environmental Commitments*). Specifically, these  
 36 commitments include Notification of Construction and Maintenance Activities in Waterways, Noise  
 37 Abatement Plan, and Prepare and Implement Mosquito Management Plans.

38 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 1A  
 39 could affect community character in the Delta region. However, because these impacts are social in  
 40 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 41 changes to community character would lead to physical impacts involving population growth, these  
 42 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 43 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
 44 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
 45 community character stemming from a lack of maintenance, upkeep, and general investment.

1 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and**  
 2 **Maintenance of the Proposed Water Conveyance Facilities**

3 **NEPA Effects:** Under Alternative 1A, publicly-owned water conveyance facilities would be located,  
 4 operated, and maintained on land of which some is currently held by private owners. Property tax  
 5 and assessment revenue forgone as a result of water conveyance facilities is estimated at \$50.0  
 6 million over the BDCP's 50-year permit period. These decreases in revenue could potentially result  
 7 in the loss of a substantial share of some agencies' tax bases, particularly for smaller districts  
 8 affected by the BDCP. This economic effect would be considered adverse; however, the BDCP  
 9 proponents would make arrangements to compensate local governments for the loss of property tax  
 10 or assessment revenue for land used for constructing, locating, operating, or mitigating for new  
 11 Delta water conveyance facilities. Additionally, as discussed under Impact ECON-7, operation and  
 12 maintenance of the water conveyance facilities would be anticipated to result in a net increase of  
 13 income and employment in the Delta region. This would also create an indirect beneficial effect  
 14 through increased sales tax revenue for local government entities that rely on sales taxes.

15 **CEQA Conclusion:** Under Alternative 1A, the ongoing operation and maintenance of water  
 16 conveyance facilities would restrict property tax revenue levels for various local government  
 17 entities in the Delta region. Over the 50-year permit period, property tax and assessment revenue  
 18 forgone is estimated at \$50.0 million. However, the Sacramento-San Joaquin Delta Reform Act  
 19 commits the entities receiving water from the State Water Project and federal Central Valley Project  
 20 to mitigate for lost property tax and assessment revenue associated with land needed for the  
 21 construction of new conveyance facilities (Water Code Section 85089). Additionally, any losses  
 22 could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
 23 require a discussion of socioeconomic effects except where they would result in reasonably  
 24 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
 25 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
 26 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
 27 speculative to ascertain.

28 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the**  
 29 **Proposed Water Conveyance Facilities**

30 **NEPA Effects:** As discussed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-5 through REC-  
 31 8, operation and maintenance activities associated with the proposed water conveyance facilities  
 32 under Alternative 1A are anticipated to create minor effects on recreational resources. Maintenance  
 33 of conveyance facilities, including intakes, would result in periodic temporary but not substantial  
 34 adverse effects on boat passage and water-based recreational activities. As discussed in Impact REC-  
 35 7, most intake maintenance, such as painting, cleaning, and repairs, would be done with barges and  
 36 divers, and could cause a temporary impediment to boat movement in the Sacramento River in the  
 37 immediate vicinity of the affected intake structure and reduce opportunities for waterskiing,  
 38 wakeboarding, or tubing in the immediate vicinity of the intake structures. However, boat passage  
 39 and navigation on the river would still be possible around any barges or other maintenance  
 40 equipment and these effects would be expected to be short-term (2 years or less). Although water-  
 41 based recreation (i.e. boating, waterskiing, wakeboarding, etc.) may be restricted at and in the  
 42 vicinity of intakes, many miles of the Sacramento River would still be usable for these activities  
 43 during periodic maintenance events. Additionally, implementation of the environmental  
 44 commitment to provide notification of construction and maintenance activities in waterways  
 45 (Appendix 3B, *Environmental Commitments*) would reduce these effects. Because effects of facility

1 maintenance would be short-term and intermittent, substantial economic effects are not anticipated  
2 to result from operation and maintenance of the facilities.

3 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
4 conveyance facilities under Alternative 1A are anticipated to create minor effects on recreational  
5 resources and therefore, are not expected to substantially reduce economic activity related to  
6 recreational activities. This section considers only the economic effects of recreational changes.  
7 Potential physical changes to the environment relating to recreational resources are described and  
8 evaluated in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-5 through REC-8.

9 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during**  
10 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

11 During operation and maintenance of conveyance facilities, existing agricultural land would be in  
12 uses that include direct facility footprints and associated permanent roads and utilities. Agricultural  
13 land could also be affected by changes in water quality and other conditions that would affect crop  
14 productivity. These direct effects on agricultural land are described in Chapter 14, *Agricultural*  
15 *Resources*, Section 14.3.3.2, Impacts AG-1 and AG-2.

16 Changes in crop acreage were used to estimate the associated changes in economic values. Unit  
17 prices, yields, and crop production and investment costs were presented in Section 16.1,  
18 *Environmental Setting/Affected Environment*. Table 16-24 summarizes the changes in acreage and  
19 value of agricultural production that would result in the Delta region from operation of Alternative  
20 1A. Changes are shown relative to the Existing Conditions and the No Action Alternative by  
21 aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
22 Alternative were assumed to be the same). The changes in crop acreages are reported in greater  
23 detail in Appendix 14A, *Individual Crop Effects as a Result of BDCP Water Conveyance Facility*  
24 *Construction*.

25 Total value of irrigated crop production in the Delta region would decline on average by \$7.4 million  
26 per year during operation and maintenance, with total irrigated crop acreage declining by about  
27 4,400 acres. These estimates are not dependent on water year type.

1 **Table 16-24. Crop Acres and Value of Agricultural Production in the Delta during Operations and**  
 2 **Maintenance (Alternative 1A)**

Analysis Metric	Alternative 1A	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	479.2	-4.4
Grains	58.3	-0.4
Field crops	189.8	-1.3
Forage crops	111.6	-1.2
Vegetable, truck, and specialty crops	76.7	-0.4
Orchards and vineyards	42.8	-1.2
Total Value of Production (million \$)	642.7	-7.4
Grains	24.1	-0.1
Field crops	113.1	-0.8
Forage crops	72.1	-1.0
Vegetable, truck, and specialty crops	266.9	-1.5
Orchards and vineyards	166.5	-4.0

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

3  
 4 Alternative 1A may also affect production costs on lands even if gross revenues are largely  
 5 unaffected. Increased costs could be associated with operational constraints and longer travel times  
 6 due to permanent facilities. In most cases, affected lands fall within the facilities footprint, and are  
 7 included in the agricultural acreage and value of production described elsewhere in this chapter and  
 8 in Chapter 14, *Agricultural Resources*, Section 14.3.3.2.

9 Crop yields and crop selection on lands in the Delta affected by changes in salinity of agricultural  
 10 water supply during operation and maintenance activities are described in Chapter 14, *Agricultural*  
 11 *Resources*, Section 14.3.3.2, Impact AG-2.

12 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
 13 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
 14 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
 15 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
 16 productivity and compensating off-site.

17 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities,  
 18 the value of agricultural production in the Delta region would be reduced. The permanent removal  
 19 of agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 20 14.3.3.2, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 21 considered an environmental impact. Significant environmental impacts would only result if the  
 22 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 23 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 24 economic losses due to implementation of the alternative. While the compensation to property  
 25 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 26 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
 27 are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 28 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for

1 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
2 Zones.

### 3 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 4 **Implementation of the Proposed Conservation Measures 2–22**

5 In the Delta region, spending on Conservation Measures 2–22 would include construction, operation  
6 and maintenance activities that would convert or disturb existing land use. The effects on the  
7 economy of the Delta region would be similar in kind, though not in magnitude, to those estimated  
8 for conveyance features and facilities. In general, the changes in regional economic activity  
9 (employment and income) would include increases from the construction and operation and  
10 maintenance-related activity, declines resulting from agricultural or other land uses converted or  
11 impaired, changes in recreation spending that could be positive or negative depending on the  
12 specific restoration action, and declines from abandonment of natural gas wells.

13 The *Yolo Bypass Flood Date and Flow Volume Agricultural Impact Analysis*, a report created for Yolo  
14 County, evaluates the expected losses of agricultural employment that could result from  
15 implementing CM2 (Howitt et al. 2012) (see Chapter 3, *Description of Alternatives*, Section 3.6.2, for a  
16 description of conservation measures). CM2 would lower a portion of the Fremont Weir to allow  
17 Sacramento River water to flow into the Yolo Bypass to reduce migratory delays for fish and  
18 enhance fish rearing habitat. However, it may also translate into financial losses for farmers and the  
19 regional economy. Annual reductions in agricultural employment under the CM2 scenario are  
20 expected to range from 9 FTE at 3,000 cfs to 21 FTE at 6,000 cfs.

21 As discussed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5, operations of natural  
22 gas wells in the Delta region would be affected where wells are located in restoration areas to be  
23 inundated under Conservation Measures 4, 5, and 10. In areas that would be permanently inundated  
24 under these conservation measures, producing natural gas wells may be abandoned. There are  
25 approximately 233 active wells in these areas (Table 26-5 in Chapter 26, *Mineral Resources*); an  
26 unknown number of these wells would likely be abandoned. (Specific inundation areas have not  
27 been identified for Conservation Measures 2-22 at this time, and there is potential for some of these  
28 wells to be modified and to remain in production.) In permanently flooded areas, the active wells  
29 could be relocated and replaced using conventional or directional drilling techniques at a location  
30 outside of inundation zones to maintain production. However, if a large number of wells had to be  
31 abandoned and could not be redrilled, there could be an adverse effect related to the permanent  
32 elimination of employment and income generated by well monitoring and maintenance activities.  
33 Generally, small crews perform ongoing monitoring and maintenance of several wells at a time.  
34 Assuming none of the wells in inundation areas are redrilled, the abandonment of 233 natural gas  
35 wells would represent 37 percent of the 629 producing wells in the Delta region (see active  
36 producer, dual, and new wells in Table 26-2 in Chapter 26, *Mineral Resources*). According to 2011  
37 data available through the U.S. Census Bureau's *2011 County Business Patterns* report (2013), an  
38 estimated 255-310 jobs are supported by the two sectors of the Delta region economy that could be  
39 affected by well abandonment: crude petroleum and natural gas extraction, and support activities  
40 for oil and gas operations. (Note that these jobs include non-natural gas production jobs and non-  
41 operations and maintenance jobs, so the number of jobs solely related to operations and  
42 maintenance of natural gas wells would be smaller.) Assuming a worst-case scenario in which the  
43 loss of 37 percent of the Delta region's natural gas wells would result in the loss of a similar  
44 percentage of the region's employment in these two sectors, an estimated 95-115 jobs would be lost  
45 as the result of implementing Conservation Measures 4, 5, and 10. However, considering that this

1 estimate is high and that some wells would be relocated, the actual job losses probably would be  
2 somewhat lower.

3 **NEPA Effects:** Because implementation of Conservation Measures 2–22 would be anticipated to  
4 result in an increase in construction and operation and maintenance-related employment and labor  
5 income, this would be considered a beneficial effect. However, implementation of these components  
6 would also be anticipated to result in a decrease in agricultural-related and natural gas production-  
7 related employment and labor income, which would be considered an adverse effect. Mitigation  
8 Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would  
9 be available to reduce these effects by preserving agricultural productivity and compensating off-  
10 site. Additionally, measures to reduce impacts on natural gas wells are discussed in Chapter 26,  
11 *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

12 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would affect total  
13 employment and income in the Delta region. The change in total employment and income in the  
14 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
15 Measures 2–22 and any resulting changes in agricultural production, recreation, and natural gas  
16 production. The total change in employment and income is not, in itself, considered an  
17 environmental impact. Significant environmental impacts would only result if the changes in  
18 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
19 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
20 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
21 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
22 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.  
23 When required, the BDCP proponents would provide compensation to property owners for  
24 economic losses due to implementation of the alternative. While the compensation to property  
25 owners would reduce the severity of economic effects related to the loss of agricultural land and  
26 abandonment of natural gas wells, it would not constitute mitigation for any related physical impact.  
27 Measures to reduce these impacts and impacts on natural gas wells are discussed in Chapter 14,  
28 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and Chapter 26, *Mineral Resources*, Section  
29 26.3.3.2, Impact MIN-5.

### 30 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 31 **Implementing the Proposed Conservation Measures 2–22**

32 **NEPA Effects:** In the Delta region, implementation of Conservation Measures 2–22 would increase  
33 employment and convert land from existing uses, including possible displacement of residential  
34 housing and business establishments. The effects on population and housing in the Delta region  
35 would be similar in kind, though not in magnitude, to those estimated for conveyance features and  
36 facilities. In general, the changes in population and housing would include increases in population  
37 from the construction and operation and maintenance-related activity and declines in residential  
38 housing and business establishments as a result of lands converted or impaired. Because these  
39 activities would not result in concentrated, substantial increases in population or new housing, they  
40 would not be considered to have an adverse effect.

41 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
42 population and housing in the Delta region. The change in total population and housing in the Delta  
43 region is based on employment resulting from implementation of the proposed Conservation  
44 Measures 2–22. The change in population and housing is expected to be minor relative to the five-

1 county Delta region, and dispersed throughout the region. Therefore, significant changes in the  
2 physical environment are not anticipated to result.

### 3 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 4 **Conservation Measures 2–22**

5 **NEPA Effects:** As noted under Impacts ECON-13, and ECON-14, conservation measures designed to  
6 restore, conserve, or enhance natural habitat would be anticipated to create economic effects similar  
7 in kind, if not in magnitude, to those described for the water conveyance facilities, including  
8 increases to employment and changes in land use that could trigger the disruption of agricultural  
9 and recreational economies. They could also affect the possible displacement of residences and  
10 businesses. The effects these activities would create with regard to community character would  
11 depend on the nature of each measure along with its specific location, size, and other factors that are  
12 not yet defined.

13 Under Alternative 1A, temporary construction associated with implementation of these measures  
14 could lead to demographic changes and resulting effects on the composition and size of Delta  
15 communities. Earthwork and site preparation associated with conservation measures could also  
16 detract from the rural qualities of the Delta region; however, their implementation would take place  
17 in phases over the 50-year permit period, which would limit the extent of effects taking place at any  
18 one point in time.

19 Implementation of these measures could also alter community character over the long term.  
20 Conversion of agricultural land to restored habitat would result in the erosion of some economic and  
21 social contributions stemming from agriculture in Delta communities. However, in the context of the  
22 Delta region, a substantial proportion of land would not be converted. Additionally, restored habitat  
23 could support some rural qualities, particularly in terms of visual resources and recreational  
24 opportunities. These effects could attract more residents to some areas of the Delta, and could  
25 replace some agricultural economic activities with those related to recreation and tourism. To the  
26 extent that agricultural facilities and supportive businesses were affected and led to vacancy,  
27 alteration of community character could result from these activities. However, the cultivated lands  
28 natural community strategy of CM3 would ensure the continuation of agricultural production on  
29 thousands of acres in the Delta (see Chapter 3, *Description of Alternatives*, Section 3.6.2, for a  
30 description of conservation measures).

31 While implementation of Conservation Measures 2–22 could result in beneficial effects relating to  
32 the economic welfare of a community, adverse social effects could also arise in those communities  
33 closest to character-changing effects and those most heavily influenced by agricultural activities.  
34 Noise, visual effects, air pollution, and traffic associated with earthwork and site preparation for the  
35 restoration, enhancement, protection, and management of various natural community types could  
36 alter the rural characteristics of Delta communities, where they occur in close proximity to these  
37 communities. Additionally, changes in the extent and nature of regional agricultural and recreational  
38 activities could also be anticipated to alter the character of communities in the Delta and result in  
39 changes to community cohesion. If necessary, implementation of mitigation measures and  
40 environmental commitments related to transportation, agriculture, and recreation would be  
41 anticipated to reduce these adverse effects (see Appendix 3B, *Environmental Commitments*).  
42 Specifically, these commitments include the Develop and Implement Erosion and Sediment Control  
43 Plans, Develop and Implement Hazardous Materials Management Plans, Notification of Construction  
44 and Maintenance Activities in Waterways, Noise Abatement Plan, Fire Prevention and Control Plan,

1 and Coordinate with Mosquito Vector Control Districts and Prepare and Implement Mosquito  
2 Management Plans.

3 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 1A could  
4 affect community character within the Delta region. However, because these impacts are social in  
5 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
6 changes to community character are related to physical impacts involving population growth, these  
7 impacts are described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.  
8 Furthermore, notable decreases in population or employment, even if limited to certain areas,  
9 sectors, or the vacancy of individual buildings, could result in alteration of community character  
10 stemming from a lack of maintenance, upkeep, and general investment.

### 11 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing** 12 **the Proposed Conservation Measures 2–22**

13 As discussed in relation to construction of water conveyance facilities, habitat restoration and  
14 implementation of Conservation Measures 2–22 under Alternative 1A would also take place, in part,  
15 on land held by private owners and from which local governments derive revenue through property  
16 taxes and assessments. In particular, conservation measures related to protection of natural  
17 communities (CM3) and restoration of tidal habitat (CM4), seasonally inundated floodplain (CM5),  
18 grassland communities (CM8), vernal pool complex (CM9), and nontidal marsh (CM10) would  
19 require the acquisition of multiple parcels of land (see Chapter 3, *Description of Alternatives*, Section  
20 3.6.2, for a description of conservation measures).

21 The *Yolo Bypass Flood Date and Flow Volume Agricultural Impact Analysis*, as described under Impact  
22 ECON-13, evaluates the expected losses of total Yolo County revenue and state tax revenue for  
23 implementing CM2 (Howitt et al. 2012) (see Chapter 3, *Description of Alternatives*, Section 3.6.2, for a  
24 description of conservation measures). The total expected annual losses in state and local tax  
25 revenues under the CM2 proposed inundation scenarios can range from \$.057 million under the  
26 3,000 cfs flow scenario to \$.13 million under the 6,000 cfs flow scenario that extends flooding as late  
27 as May 15.

28 The loss of a substantial portion of an entity's tax base would represent an adverse effect on an  
29 agency, resulting in a decrease in local government's ability to provide public goods and services.  
30 Under Alternative 1A, property tax and assessment revenue forgone as a result of conservation  
31 measure implementation is estimated to reach \$176.7 million over the BDCP's 50-year permit  
32 period (in 2012 undiscounted dollars; see BDCP Chapter 8, *Implementation Costs and Funding*  
33 *Sources*, Table 8-28 for further detail). Decreases in revenue could potentially represent a  
34 substantial share of individual agency tax bases, particularly for smaller districts affected by large,  
35 contiguous areas identified for habitat restoration.

36 Additionally, other conservation measures related to control of invasive species, expansion of fish  
37 hatchery facilities, installation of non-physical fish barriers, modification of water diversions, or  
38 treatment of urban stormwater may also require that land currently on property tax rolls be  
39 acquired and eventually removed from the tax base. The fiscal effects stemming from these  
40 conservation measures are, however, anticipated to be minor based upon the relatively small areas  
41 of land necessary for their implementation.

42 **NEPA Effects:** Overall, Conservation Measures 2–22 would remove many acres of private land from  
43 local property tax and assessment rolls. This economic effect would be considered adverse;

1 however, the BDCP proponents would offset forgone property tax and assessments levied by local  
2 governments and special districts on private lands converted to habitat. As described under Impact  
3 ECON-13, regional economic effects from the implementation of Conservation Measures 2–22 would  
4 be mixed. While activities associated with construction and establishment of habitat areas could  
5 boost regional expenditures and sales tax revenue, reduced agricultural activities may offset these  
6 gains. Changes in recreation spending and related sales tax revenue could be positive or negative,  
7 depending on the implementation of the measures.

8 **CEQA Conclusion:** Under Alternative 1A, implementation of Conservation Measures 2–22 would  
9 result in the removal of a portion of the property tax base for various local government entities in  
10 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
11 estimated to reach \$173 million, compared with annual property tax revenue of more than \$934  
12 million in the Delta counties (California State Controller’s Office 2012). Projected over the 50-year  
13 period, these removals would likely represent less than 1% of these counties’ property tax revenue.  
14 However, the BDCP proponents would compensate local governments and special districts for this  
15 forgone revenue. CEQA does not require a discussion of socioeconomic effects except where they  
16 would result in physical changes. If an alternative is not anticipated to result in a physical change to  
17 the environment, it would not be considered to have a significant impact under CEQA (CEQA  
18 Guidelines Sections 15064(f) and 15131).

#### 19 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the** 20 **Proposed Conservation Measures 2–22**

21 **NEPA Effects:** Implementation of the Conservation Measures 2–22 under this alternative would be  
22 anticipated to create an adverse effect on recreational resources by limiting access to facilities,  
23 restricting boat navigation and disturbing fish habitat while restoration activities are taking place.  
24 These measures may also permanently reduce the extent of upland recreation sites. However, over  
25 the 50-year permit period, these components could also create beneficial effects by enhancing  
26 aquatic habitat and fish abundance, expanding the extent of navigable waterways available to  
27 boaters, and improving the quality of existing upland recreation opportunities. Therefore, the  
28 potential exists for the creation of adverse and beneficial effects related to recreational economics.  
29 Adverse effects would be anticipated to be primarily limited to areas close to restoration areas and  
30 during site preparation and earthwork phases. These effects could result in a decline in visits to the  
31 Delta and reduction in recreation-related spending, creating an adverse economic effect throughout  
32 the Delta. Beneficial recreational effects would generally result during later stages of the BDCP  
33 permit period as Conservation Measures 2–22 are implemented and environmental conditions  
34 supporting recreational activities are enhanced. These effects could improve the quality of  
35 recreational experiences, leading to increased economic activities related to recreation, particularly  
36 in areas where conservation measure implementation would create new recreational opportunities.

37 **CEQA Conclusion:** Site preparation and earthwork activities associated with a number of  
38 conservation measures would limit opportunities for recreational activities where they occur in or  
39 near existing recreational areas. Noise, odors, and visual effects of construction activities would also  
40 temporarily compromise the quality of recreation in and around these areas, leading to potential  
41 economic impacts. However, over time, implementation could improve the quality of existing  
42 recreational opportunities, leading to increased economic activity. This section considers only the  
43 economic effects of recreational changes brought about by conservation measure implementation.  
44 CEQA does not require a discussion of socioeconomic effects except where they would result in  
45 reasonably foreseeable physical changes. Potential physical changes to the environment relating to

1 recreational resources are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.2,  
2 Impacts REC-9 through REC-11.

### 3 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of** 4 **Implementing the Proposed Conservation Measures 2–22**

5 Conservation Measures 2–22 would convert land from existing agricultural uses. These direct effects  
6 on agricultural land are described qualitatively in Chapter 14, *Agricultural Resources*, Section  
7 14.3.3.2, Impacts AG-3 and AG-4. Effects on agricultural economics would include effects on crop  
8 production and agricultural investments resulting from restoration actions on agricultural lands.  
9 The effects would be similar in kind to those described for lands converted due to construction and  
10 operation of the conveyance features and facilities. The total acreage and crop mix of agricultural  
11 land potentially affected is not specified at this time, but when required, the BDCP proponents  
12 would provide compensation to property owners for losses due to implementation of the  
13 alternative.

14 The *Yolo Bypass Flood Date and Flow Volume Agricultural Impact Analysis*, as described in Impact  
15 ECON-13, also evaluates the expected losses in gross farm revenue that could result from  
16 implementing CM2 (Howitt et al. 2012) (see Chapter 3, *Description of Alternatives*, Section 3.6.2, for a  
17 description of conservation measures). Direct gross farm revenue losses are expected to be less than  
18 \$1.5 million per year. Total output value (gross farm revenue) expected losses for the CM2 scenario,  
19 which corresponds to supplemental releases only in years where natural flooding occurs, range  
20 from \$1.2 to \$2.8 million per year. Expected losses are zero in years when there is no natural  
21 flooding and substantial in years when there is late natural flooding. Expected loss estimates are  
22 sensitive to changes in area inundated, yield loss and crop prices. It assumed that the costs of  
23 production in the Bypass remain constant even with late flooding; however, if production costs go  
24 up, for example, due to overtime labor or increased preparation costs, loss estimates would increase.

25 The report also evaluates the loss to total value added, or the net value of agricultural production in  
26 the Yolo Bypass to the Yolo County economy. Recognizing that many inputs/outputs are produced  
27 or consumed outside of Yolo County, those factors are not considered in the analysis. For example,  
28 total value added does include compensation for employees, income to business and landowners,  
29 and other business specific to Yolo County, but does not include food production that is exported out  
30 of the county. A proportion of Yolo Bypass production and crop consumption occurs within Yolo  
31 County; therefore, the expected annual losses to value added for Yolo County is expected to range  
32 from \$0.63 to \$1.5 million per year.

33 **NEPA Effects:** Because implementation of Conservation Measures 2–22 would be anticipated to lead  
34 to reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
35 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
36 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
37 agricultural productivity and compensating off-site.

38 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
39 agricultural production in the Delta region. The permanent removal of agricultural land from  
40 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impacts AG-3 and  
41 AG-4. The reduction in the value of agricultural production is not considered an environmental  
42 impact. Significant environmental impacts would only result if the changes in regional economics  
43 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
44 required, the BDCP proponents would provide compensation to property owners for economic

1 losses due to implementation of the alternative. While the compensation to property owners would  
 2 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 3 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 4 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 5 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 6 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 7 Zones.

### 8 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

9 As described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2, the  
 10 operational components of BDCP Conservation Measure 1 could result in a number of effects in  
 11 areas receiving SWP and CVP water deliveries outside of the Delta.

12 Changes in the amount, cost, or reliability of water deliveries could create socioeconomic effects in  
 13 the hydrologic regions. To the extent that unreliable or insufficient water supplies currently  
 14 represent obstacles to agricultural production, Alternative 1A may support more stable agricultural  
 15 activities by enabling broader crop selection or by reducing risk associated with uncertain water  
 16 deliveries. As a result of an increase in water supply and supply reliability, farmers may choose to  
 17 leave fewer acres fallow and/or plant higher-value crops. While the locations and extent of any  
 18 increases in production would depend on local factors and individual economic decisions, a general  
 19 increase in production would be anticipated to support growth in seasonal and permanent on-farm  
 20 employment, along with the potential expansion of employment in industries closely associated  
 21 with agricultural production. These include food processing, agricultural inputs, and transportation.  
 22 Generally, these effects would be most concentrated in hydrologic regions where agriculture is a  
 23 primary industry and where agricultural operations depend most heavily on SWP and CVP  
 24 deliveries.

### 25 **Changes in SWP Deliveries Compared to No Action Alternative**

26 Compared to No Action Alternative (2060), Alternative 1A would increase deliveries to all  
 27 hydrologic regions except for the San Joaquin River Region, which would experience no change in  
 28 deliveries. Compared to the No Action Alternative (2060), South Coast would receive the largest net  
 29 increase (up to 308 TAF of Table A plus Article 21 deliveries) among the regions, which represents  
 30 68% of the net increase in Table A plus Article 21 M&I deliveries under Alternative 1A (refer to  
 31 Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-16, for more information).

### 32 **Changes in CVP Deliveries Compared to No Action Alternative**

33 Alternative 1A would not change M&I deliveries for the Sacramento River, South Coast, South  
 34 Lahontan and Colorado River Regions because there are no affected CVP contractors located in these  
 35 regions. Compared to the No Action Alternative (2060), Alternative 1A would result in increased  
 36 deliveries to the other hydrologic regions. Compared to the No Action Alternative (2060) San  
 37 Francisco Bay is projected to receive the largest potential increase (5 TAF) among the hydrologic  
 38 regions (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-17 for more  
 39 information).

40 **NEPA Effects:** Increases in average annual water deliveries to service areas could induce population  
 41 growth and new housing to accommodate growth. Such deliveries could also provide support for  
 42 water-intensive industries. As discussed in Chapter 30, *Growth Inducement and Other Indirect*

1 *Effects*, Section 30.3.2.5, long-term water supply reliability is an important component in enabling  
2 long-term population increases. However, other factors—including natural growth, employment  
3 opportunities, local policy, and quality of life—are more likely to determine population growth.  
4 Nonetheless, population growth could stimulate economic activity resulting from increased demand  
5 for goods and services. This increased demand could create broad economic benefits for regions  
6 whose growth is supported by increased deliveries under BDCP.

7 Social changes, including changes in community character, could also result from an expansion in  
8 population or economic activity linked to changes in water deliveries. For example, more stable  
9 agricultural production and associated economic activities in areas where agriculture is a  
10 predominant industry could strengthen and reinforce existing economic and social patterns and  
11 institutions. Increased production could also intensify existing socioeconomic challenges, including  
12 seasonal cycles in employment, housing demand, and provision of social services. In areas where  
13 population growth would be enabled by increased water supplies or reliability, changes to  
14 community character could result from an increased population, including the potential for changes  
15 in urban form, environmental factors such as traffic or noise, demographic composition, or the rise  
16 of new or broader economic or social opportunities. Again, the nature and extent of such changes  
17 would be predominantly influenced by prevailing socioeconomic forces, rather than any specific  
18 change associated with implementation of the BDCP.

19 Changes in agricultural production and population growth could also affect local government fiscal  
20 conditions. Population growth would be anticipated to result in higher property and sales tax  
21 revenue while increased agricultural activity could result in higher sales tax receipts for a local  
22 jurisdiction. However, growth would also require expanded public services to meet the needs of a  
23 larger population and a larger economic base. Expansion could require additional spending on  
24 education, police and fire protection, medical services, and transportation and utility infrastructure.  
25 Whether such growth would result in a long-term net benefit or cost would depend on a number of  
26 factors including prevailing local service levels and tax rates, as well as the characteristics of the  
27 growth.

28 Changes in water deliveries associated with operation of Alternative 1A could result in beneficial or  
29 adverse socioeconomic effects in areas receiving water from the SWP and CVP. In hydrologic regions  
30 where water deliveries are predicted to increase when compared with the No Action Alternative,  
31 more stable agricultural activities could support employment and economic production associated  
32 with agriculture. Where M&I deliveries increase, population growth could lead to general economic  
33 growth and support water-intensive industries. Such changes could also lead to shifts in the  
34 character of communities in the hydrologic regions with resultant beneficial or adverse effects.  
35 Likewise, growth associated with deliveries could require additional expenditures for local  
36 governments while also supporting increases in revenue.

37 ***CEQA Conclusion:*** As described above, the operational components of BDCP Conservation Measure  
38 1 could result in a number of effects in areas receiving SWP and CVP water deliveries outside of the  
39 Delta.

#### 40 **Changes in SWP Deliveries Compared to Existing Conditions**

41 Compared to Existing Conditions, Alternative 1A would increase deliveries to all hydrologic regions  
42 except for the San Joaquin River Region, which would experience no change in deliveries. South  
43 Coast would receive the largest net increase (up to 239 TAF of Table A plus Article 21 deliveries)  
44 among the regions, which represents 70% of the net increase in Table A plus Article 21 M&I

1 deliveries under Alternative 1A (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*,  
2 Table 30-16 for more information).

### 3 **Changes in CVP Deliveries Compared to Existing Conditions**

4 Alternative 1A would not change M&I deliveries for the Sacramento River, South Coast, South  
5 Lahontan, and Colorado River Regions because there are no affected CVP contractors located in  
6 these regions. Compared to Existing Conditions, Alternative 1A would result in decreased deliveries  
7 to the other hydrologic regions. Compared to Existing Conditions, San Francisco Bay is projected to  
8 receive the largest decrease (2 TAF) among the hydrologic regions (refer to Chapter 30, *Growth*  
9 *Inducement and Other Indirect Effects*, Table 30-17 for more information).

### 10 **Summary**

11 Operation of water conveyance facilities under Alternative 1A could affect socioeconomic conditions  
12 in the hydrologic regions receiving water from the SWP and CVP. However, because these impacts  
13 are social and economic in nature, rather than physical, they are not considered environmental  
14 impacts under CEQA. To the extent that changes in socioeconomic conditions in the hydrologic  
15 regions would lead to physical impacts, such impacts are described in Chapter 30, *Growth*  
16 *Inducement and Other Indirect Effects*, Section 30.3.2.

### 17 **16.3.3.3 Alternative 1B—Dual Conveyance with East Alignment and** 18 **Intakes 1–5 (15,000 cfs; Operational Scenario A)**

19 Alternative 1B would result in temporary effects on land and communities in the study area  
20 associated with construction of five intakes and intake pumping plants, one forebay, pipelines,  
21 canals, tunnel siphons, culvert siphons, and an intermediate pumping plant; alter nearby areas for  
22 retrieval of borrowed soils and spoils and RTM storage; and require development of transmission  
23 lines, access roads, and other incidental structures. This alternative would differ from Alternative 1A  
24 primarily in that it would use a series of canals generally along the east section of the Delta to  
25 convey water from north to south, rather than long segments of deep tunnel through the central part  
26 of the Delta.

### 27 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 28 **Region during Construction of the Proposed Water Conveyance Facilities**

29 The regional economic effects on employment and income in the Delta region during  
30 construction were evaluated, both for the unlined and lined canal options. Changes are shown  
31 relative to the Existing Conditions and the No Action Alternative (regional economic conditions  
32 do not differ between Existing Conditions and No Action Alternative). The effects on  
33 employment and income for the unlined option are displayed in Table 16-25. The table shows  
34 the direct and total change that would result from conveyance-related spending. As evident in  
35 Table 16-25, spending on conveyance construction results in substantial, though temporary,  
36 local economic activity in the region. As shown, direct construction employment is anticipated to  
37 vary over the 8-year construction period, with an estimated 2,599 FTE jobs in the first year and 245  
38 FTE jobs in the final year of the construction period. Construction employment is estimated to peak  
39 at 6,279 FTE jobs in year 4. Total employment (direct, indirect, and induced) would also peak in year  
40 4, at 11,045 FTE jobs.

1 **Table 16-25. Regional Economic Effects on Employment and Labor Income during Construction**  
 2 **(Alternative 1B)**

Regional Economic Impact <sup>a</sup>	Year								Total
	1	2	3	4	5	6	7	8	
<b>Employment (FTE)</b>									
Direct	2,599	3,011	5,735	6,279	5,512	4,702	1,543	245	29,627
Total <sup>b</sup>	7,208	7,673	12,484	12,985	11,045	8,499	3,028	370	63,292
<b>Labor Income (million \$)</b>									
Direct	132.6	129.3	169.2	160.2	127.9	75.8	33.5	1.3	829.8
Total <sup>b</sup>	266.9	268.0	380.3	374.3	307.0	205.6	82.0	6.3	1,890.4

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Conditions or the No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects; numbers may not sum to the total due to rounding. Detailed estimates are presented in Appendix 16A, *Regional Economic Impacts of Water Conveyance Facility Construction*.

3  
 4 The employment and income effects under the lined option would be higher than for the unlined  
 5 option. Direct and total employment estimates over the 8-year construction period for the lined  
 6 option would be 29,852 and 63,847, respectively. Direct and total income effects would be also  
 7 higher under the lined option, with direct and total income over the construction period of \$838.8  
 8 million and \$1,909.3 million, respectively.

9 The footprint of conveyance and related facilities such as roads and utilities would remove some  
 10 existing agricultural land from production, so the effects on employment and income from such  
 11 removals would be negative. The regional economic effects on employment and income in the Delta  
 12 region from the change in agricultural production are reported in Table 16-26. As shown, direct  
 13 agricultural employment would be reduced by an estimated 90 FTE jobs, while total employment  
 14 (direct, indirect, and induced) associated with agricultural employment would fall by 340 FTE jobs.  
 15 Mapbook Figures M14-3 and M14-4 display areas of Important Farmland and lands under  
 16 Williamson Act contracts that could be converted to other uses due to the construction of water  
 17 conveyance facilities for the East alignment. Note that not all of these structures would be  
 18 constructed under this alternative.

1 **Table 16-26. Regional Economic Effects on Agricultural Employment and Labor Income during**  
 2 **Construction (Alternative 1B)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-90
Total <sup>b</sup>	-340
<b>Labor Income (million \$)</b>	
Direct	-11.4
Total <sup>b</sup>	-21.9

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).  
<sup>a</sup> IMPLAN results are changes relative to Existing Conditions or the No Action Alternative.  
<sup>b</sup> Includes direct, indirect, and induced effects.

3  
 4 Additionally, the Alternative 1B construction footprint would result in the abandonment of an  
 5 estimated two producing natural gas wells in the study area, as described in Chapter 26, *Mineral*  
 6 *Resources*, Section 26.3.3.3, Impact MIN-1. This could result in the loss of employment and labor  
 7 income associated with monitoring and maintaining these wells. Generally, small crews perform  
 8 ongoing monitoring and maintenance of several wells at a time. As shown in Chapter 26, *Mineral*  
 9 *Resources*, Table 26-3, 516 active producer wells are located in the study area. Even if both  
 10 producing wells in the Alternative 1B construction footprint were abandoned and not replaced with  
 11 new wells installed outside the construction footprint, the percentage reduction in the number of  
 12 natural gas wells would be very small. As a result, the employment and labor income effects  
 13 associated with well abandonment, while negative, would be minimal.

14 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
 15 construction-related employment and labor income, this would be considered a beneficial effect.  
 16 However, these activities would also be anticipated to result in a decrease in agricultural-related  
 17 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
 18 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
 19 available to reduce these effects by preserving agricultural productivity and compensating off-site.

20 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
 21 employment and income in the Delta region. The change would result from expenditures on BDCP  
 22 construction and from a modest decrease in agricultural production. Changes in recreational  
 23 expenditures and natural gas well operations could also affect regional employment and income, but  
 24 these have not been quantified. The total change in employment and income is not, in itself,  
 25 considered an environmental impact. Significant environmental impacts would only result if the  
 26 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 27 throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation Costs and*  
 28 *Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
 29 *Agricultural Resources*, Section 14.3.3.3, Impacts AG-1 and AG-2; changes in recreation related  
 30 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.3, REC-1 through REC-4;  
 31 abandonment of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.3,  
 32 Impact MIN-1. When required, DWR would provide compensation to property owners for economic  
 33 losses due to implementation of the alternative. While the compensation to property owners would  
 34 reduce the severity of economic effects related to the loss of agricultural land, it would not

1 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 2 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 3 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 4 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 5 Zones.

## 6 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 7 **the Proposed Water Conveyance Facilities**

### 8 **Population**

9 Construction of conveyance facilities would require an estimated peak of 6,280 workers in year 4 of  
 10 the assumed 8-year construction period. It is anticipated that many of these new jobs would be filled  
 11 from within the existing five-county labor force.

12 Considering the multi-year duration of conveyance facility construction, it is anticipated that non-  
 13 local workers would temporarily relocate to the five-county region, thus adding to the local  
 14 population. As discussed in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section  
 15 30.3.2.1, Direct Growth Inducement, an estimated 30 percent of workers could come from out of the  
 16 Delta region, suggesting that approximately 1,900 workers could relocate to the Delta region at the  
 17 peak of the construction period. However, this additional population would constitute a minor  
 18 increase in the total 2020 projected regional population of 4.6 million and be distributed throughout  
 19 the region. Changes in demand for public services resulting from any increase in population are  
 20 addressed in Chapter 20, *Public Services and Utilities*, Section 20.3.3.3, Impact UT-1 through UT-6.

### 21 **Housing**

22 Changes in housing demand are based on changes in supply resulting from displacement during  
 23 facilities construction and changes in housing demand resulting from employment associated with  
 24 construction of conveyance facilities. As described in Chapter 13, *Land Use*, Section 13.3.3.3, Impact  
 25 LU-2, construction of water conveyance facilities under Alternative 1B would conflict with  
 26 approximately 109 residential structures.

27 The construction workforce would most likely commute daily to the work sites from within the five-  
 28 county region; however, if needed, there are about 53,000 housing units available to accommodate  
 29 workers who may choose to commute on a workweek basis or who may choose to temporarily  
 30 relocate to the region for the duration of the construction period, including the estimated 1,900  
 31 workers who may temporarily relocate to the Delta region from out of the region. In addition to the  
 32 available housing units, there are recreational vehicle parks and hotels and motels within the five-  
 33 county region to accommodate any construction workers. As a result, and as discussed in more  
 34 detail in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.1, Direct Growth  
 35 Inducement, construction of the proposed conveyance facilities is not expected to substantially  
 36 increase the demand for housing within the five-county region.

37 **NEPA Effects:** Within specific local communities, there could be localized effects on housing.  
 38 However, given the availability of housing within the five-county region, predicting where this  
 39 impact might fall would be speculative. In addition, new residents would likely be dispersed across  
 40 the region, thereby not creating a burden on any one community.

1 Because these activities would not result in permanent concentrated, substantial increases in  
2 population or new housing, they would not be considered to have an adverse effect.

3 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
4 population increases in the Delta region with adequate housing supply to accommodate the change  
5 in population. Therefore, adverse physical changes resulting from the minor increase in population  
6 are not anticipated.

### 7 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 8 **Water Conveyance Facilities**

9 **NEPA Effects:** Under Alternative 1B, effects on community character would be similar in nature, but  
10 not location or magnitude, to those described under Alternative 1A, Impact ECON-3. Under this  
11 alternative, regional population and employment would increase to levels described above under  
12 Impact ECON-1 and ECON-2. The geographic extent of these effects would also vary from that  
13 described for Alternative 1A, as the intensity of effects would be somewhat greater or lesser based  
14 on communities' ability to accommodate growth and proximity to features constructed for the water  
15 conveyance alignment under this alternative. Under this alternative, areas near the intake pumping  
16 plants in the vicinity of Clarksburg, Hood, and Courtland could experience the greatest changes in  
17 character, along with communities near the canal alignment like Thornton. Effects associated with  
18 construction activities could also result in changes to community cohesion if they were to restrict  
19 mobility, reduce opportunities for maintaining face-to-face relationships, or disrupt the functions of  
20 community organizations or community gathering places (such as schools, libraries, places of  
21 worship, and recreational facilities). Under Alternative 1B, several gathering places that lie in the  
22 vicinity of construction areas could be indirectly affected by noise and traffic associated with  
23 construction activities, including the Clarksburg Library, Clarksburg Fire Department, Delta High  
24 School, Holt Union Elementary School, Clarksburg Community Church, Community Baptist Church,  
25 and several marinas or other recreational facilities (see Chapter 15, *Recreation*, Table 15-13).  
26 Additionally, as described in Chapter 20, *Public Services and Utilities*, a fire station in the community  
27 of Hood would be directly affected by construction of a canal segment under this alternative and  
28 accordingly, its function as a workplace and as a community gathering place may be relocated.

29 Like Alternative 1A, the anticipated economic shift away from agriculture and towards construction  
30 could result in demographic changes. In comparing the existing demographic composition of  
31 agricultural workers and construction laborers within the five-county Delta Region, men make up a  
32 large proportion of both occupations: 84 percent of agricultural workers were male, compared with  
33 98 percent of construction laborers. Approximately 92 percent of agricultural workers made less  
34 than \$35,000, while 60 percent of construction laborers made less than \$35,000. Additionally, 87  
35 percent of agricultural workers within the study area report Hispanic origin, while 54 percent of  
36 construction laborers claim Hispanic origin within the five-county area (U.S. Census Bureau 2012b).

37 Construction activities could be expected to bring about a decline in the rural qualities currently  
38 exhibited by Delta communities, while expansion of employment and population in the region could  
39 provide economic opportunities supportive of community stability. While water conveyance  
40 construction could result in beneficial effects relating to the economic welfare of a community,  
41 adverse social effects could also arise as a result of declining economic stability in communities  
42 closest to construction effects and in those most heavily influenced by agricultural and recreational  
43 activities. These effects would be greatest during the eight-year construction period.  
44 Implementation of mitigation measures and environmental commitments related to noise, visual

1 effects, transportation, agriculture, and recreation, would reduce adverse effects (see Appendix 3B,  
2 *Environmental Commitments*). These actions are summarized under Alternative 1A, Impact ECON-3.

3 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 1B could affect  
4 community character in the Delta region. However, because these impacts are social in nature,  
5 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
6 community character would lead to physical impacts involving population growth, such impacts are  
7 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
8 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
9 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
10 character stemming from a lack of maintenance, upkeep, and general investment. However,  
11 implementation of mitigation measures and environmental commitments related to noise, visual  
12 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
13 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
14 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
15 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
16 Abatement Plan, Fire Prevention and Control Plan, and Coordinate with Mosquito Vector Control  
17 Districts and Prepare and Implement Mosquito Management Plans.

#### 18 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 19 **the Proposed Water Conveyance Facilities**

20 **NEPA Effects:** Under Alternative 1B, publicly-owned water conveyance facilities would be  
21 constructed on land of which some is currently held by private owners. Property tax and assessment  
22 revenue forgone as a result of water conveyance facilities is estimated at \$25.6 million over the  
23 construction period. These decreases in revenue could potentially result in the loss of a substantial  
24 share of some agencies' tax bases, particularly for smaller districts affected by the BDCP, such as  
25 reclamation districts where conveyance facilities and associated work areas are proposed. This  
26 economic effect would be considered adverse; however, the BDCP proponents would make  
27 arrangements to compensate local governments for the loss of property tax or assessment revenue  
28 for land used for constructing, locating, operating, or mitigating for new Delta water conveyance  
29 facilities. Additionally, as discussed under Impact ECON-1, construction of the water conveyance  
30 facilities would be anticipated to result in a net increase of income and employment in the Delta  
31 region. This would also create an indirect beneficial effect through increased sales tax revenue for  
32 local government entities that rely on sales taxes.

33 **CEQA Conclusion:** Under Alternative 1B, construction of water conveyance facilities would result in  
34 the removal of a portion of the property tax base for various local government entities in the Delta  
35 region. Over the construction period, property tax and assessment revenue forgone is estimated at  
36 \$25.6 million. However, the Sacramento-San Joaquin Delta Reform Act commits the entities  
37 receiving water from the State Water Project and federal Central Valley Project to mitigate for lost  
38 property tax and assessment revenue associated with land needed for the construction of new  
39 conveyance facilities (Water Code Section 85089). Additionally, any losses could be offset, at least in  
40 part, by an anticipated increase in sales tax revenue. CEQA does not require a discussion of  
41 socioeconomic effects except where they would result in reasonably foreseeable physical changes. If  
42 an alternative is not anticipated to result in a physical change to the environment, it would not be  
43 considered to have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and  
44 15131). Here, any physical consequences resulting from fiscal impacts are too speculative to  
45 ascertain.

1 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed**  
 2 **Water Conveyance Facilities**

3 **NEPA Effects:** Under Alternative 1B, disruption of recreational activities during the construction  
 4 period would be similar in character to that described under Alternative 1A, Impact ECON-5.  
 5 However, as described in Chapter 15, *Recreation*, Section 15.3.3.3, Impacts REC-1 through REC-4, the  
 6 geographic incidence and extent of these effects would be different based on the construction of a  
 7 different conveyance alignment composed of different features. Access to recreational facilities may  
 8 be restricted throughout the construction period. Additionally, the quality of recreational activities  
 9 including boating, fishing, waterfowl hunting, and hiking in the Delta could be indirectly affected by  
 10 noise, lighting, traffic, and visual degradation in proximity to water conveyance construction. Under  
 11 this alternative, 18 recreational sites or recreational areas would experience periods of  
 12 construction-related effects, including noise, access, visual disturbances, or a combination of these  
 13 effects. These include Clarksburg Marina, Clarksburg Boat Launch (fishing access), Stone Lakes  
 14 National Wildlife Refuge, Cosumnes River Preserve, White Slough Wildlife Area – Pond 6,  
 15 Woodbridge Ecological Reserve, The Reserve at Spanos Park Golf Course, Paradise Point Marina,  
 16 Weber Point Yacht Club, Windmill Cove Resort & Marina, Buckley Cove (Marina West Yacht Club,  
 17 Buckley Cove Boat Launch, River Point Landing Marina Resort, Ladd’s Marina, Stockton Sailing Club,  
 18 and Buckley Cove Park), and Clifton Court Forebay. Construction activities associated with this  
 19 alternative would affect more established recreational sites than under Alternative 1A.

20 Construction of water conveyance structures under this alternative would be anticipated to  
 21 temporarily result in a lower-quality recreational experience in a number of localized areas  
 22 throughout the Delta, despite the implementation of mitigation measures, including enhancement of  
 23 fishing access sites and incorporation of recreational access into project design, and environmental  
 24 and non-environmental commitments, including providing funding to implement recreational  
 25 improvements and control aquatic weeds, providing notification of maintenance activities in  
 26 waterways, and developing and implementing a noise abatement plan, as described in Appendix 3B,  
 27 *Environmental Commitments*. With a decrease in recreational quality, the number of visits would be  
 28 anticipated to decline, at least in areas closest to construction activities. The multi-year schedule and  
 29 geographic scale of construction activities and the anticipated decline in recreational spending  
 30 would be considered an adverse effect. The commitments and mitigation measure cited above  
 31 would contribute to the reduction of this effect.

32 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 1B  
 33 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
 34 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
 35 recreational activities. This section considers only the economic effects of recreational changes  
 36 brought about by construction of the proposed water conveyance facilities. Potential physical  
 37 changes to the environment relating to recreational resources are described and evaluated in  
 38 Chapter 15, *Recreation*, Section 15.3.3.3, REC-1 through REC-4.

39 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of**  
 40 **the Proposed Water Conveyance Facilities**

41 Construction of conveyance facilities would convert land from existing agricultural uses to uses that  
 42 include direct facility footprints, construction staging areas, borrow/spoils areas, RTM storage,  
 43 temporary and permanent roads, and utilities. Agricultural land could also be affected by changes in  
 44 water quality and other conditions that would affect crop productivity. These direct effects on

1 agricultural land are described in Chapter 14, *Agricultural Resources*, Section 14.3.3.3, Impacts AG-1  
2 and AG-2.

3 Changes in crop acreage were used to describe the associated changes in economic values. Unit  
4 prices, yields, and crop production and investment costs were presented in Section 16.1,  
5 *Environmental Setting/Affected Environment*. Table 16-27 summarizes the changes in acreage and  
6 value of agricultural production that would occur in the Delta region as a result of Alternative 1B  
7 construction. Changes are shown relative to the Existing Conditions and the No Action Alternative  
8 by aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
9 Alternative were assumed to be the same). The table also includes a summary of changes in crop  
10 acreages that are reported in Appendix 14A, *Individual Crop Effects as a Result of BDCP Water*  
11 *Conveyance Facility Construction*.

12 Total value of irrigated crop production in the Delta would decline on average by \$32.8 million per  
13 year during the construction period, with total irrigated crop acreage declining by about 19,460  
14 acres. These estimates are not dependent on water year type.

15 **Table 16-27. Crop Acres and Value of Agricultural Production in the Delta during Construction**  
16 **(Alternative 1B)**

Analysis Metric	Alternative 1B	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	464.1	-19.6
Grains	56.8	-1.8
Field crops	186.2	-4.9
Forage crops	106.2	-6.5
Vegetable, truck, and specialty crops	74.0	-3.2
Orchards and vineyards	41.0	-3.1
Total Value of Production (million \$)	617.2	-32.8
Grains	23.6	-0.7
Field crops	110.9	-3.0
Forage crops	67.7	-5.4
Vegetable, truck, and specialty crops	257.5	-10.9
Orchards and vineyards	157.7	-12.8

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

17  
18 Alternative 1B may also affect production costs, investments in production facilities and standing  
19 orchards and vineyards, and salinity of agricultural water supply. Effects would be similar to those  
20 qualitatively described under Alternative 1A, Impact ECON-6. See Chapter 14, *Agricultural*  
21 *Resources*, Section 14.3.3.3, Impacts AG-1 and AG-2, for further discussion of indirect effects on  
22 agricultural resources.

23 **NEPA Effects.** Because construction of the proposed water conveyance facilities would lead to  
24 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
25 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
26 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
27 agricultural productivity and compensating off-site.

1 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
 2 value of agricultural production in the Delta region. The removal of agricultural land from  
 3 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.3, Impacts AG-1 and  
 4 AG-2. The reduction in the value of agricultural production is not considered an environmental  
 5 impact. Significant environmental impacts would only result if the changes in regional economics  
 6 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 7 required, DWR would provide compensation to property owners for economic losses due to  
 8 implementation of the alternative. While the compensation to property owners would reduce the  
 9 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 10 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 11 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 12 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 13 and land subject to Williamson Act contracts or in Farmland Security Zones.

14 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region**  
 15 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

16 In the Delta region, ongoing operation and maintenance of BDCP facilities would result in increased  
 17 expenditures relative to the Existing Conditions and the No Action Alternative (regional economic  
 18 conditions do not differ across Existing Conditions and No Action Alternative). The increased  
 19 expenditures are expected to result in a permanent increase in regional employment and income,  
 20 including an estimated 204 direct and 294 total (direct, indirect, and induced) FTE jobs (Table 16-  
 21 28). Since operation and maintenance expenditures for the unlined and lined options were not  
 22 differentiated, the results summarized in this section are assumed to apply to both the unlined and  
 23 lined options. Potential changes in the value of agricultural production result in changes to regional  
 24 employment and income in the Delta region under Alternative 1B relative to the Existing Conditions  
 25 and the No Action Alternative.

26 **Table 16-28. Regional Economic Effects on Employment and Labor Income during Operations and**  
 27 **Maintenance (Alternative 1B)**

Regional Economic Impact <sup>a</sup>	Impacts from Operations and Maintenance
<b>Employment (FTE)</b>	
Direct	204
Total <sup>b</sup>	294
<b>Labor Income (million \$)</b>	
Direct	12.6
Total <sup>b</sup>	16.8

Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Conditions or the No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects.

28  
 29 The operation and maintenance of conveyance and related facilities such as roads and utilities  
 30 would result in the permanent removal of agricultural land from production following construction,  
 31 and the effects on employment and income would be negative, including the loss of an estimated  
 32 117 agricultural and 321 total (direct, indirect, and induced) FTE jobs. The regional economic effects  
 33 on employment and income in the Delta region from the change in agricultural production are

1 reported in Table 16-29. Mapbook Figures M14-3 and M14-4 display areas of Important Farmland  
 2 and lands under Williamson Act contracts that could be converted to other uses due to the  
 3 construction of water conveyance facilities for the East alignment. Note that not all of these  
 4 structures would be constructed under this alternative.

5 **Table 16-29. Regional Economic Effects on Agricultural Employment and Labor Income during**  
 6 **Operations and Maintenance (Alternative 1B)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-117
Total <sup>b</sup>	-321
<b>Labor Income (million \$)</b>	
Direct	-9.3
Total <sup>b</sup>	-17.9

Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Conditions or the No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects.

7  
 8 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
 9 result in an increase in operations-related employment and labor income, this would be considered  
 10 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
 11 agricultural-related employment and labor income, which would be considered an adverse effect.  
 12 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 13 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 14 compensating off-site.

15 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 16 decrease total employment and income in the Delta region. The change would result from  
 17 expenditures on BDCP operation and maintenance, increasing employment, and from changes in  
 18 agricultural production, decreasing employment. The total change in income and employment is not,  
 19 in itself, considered an environmental impact. Significant environmental impacts would only result if  
 20 the changes in regional economics cause physical impacts. Such effects are discussed in other  
 21 chapters throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation*  
 22 *Costs and Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
 23 *Agricultural Resources*, Section 14.3.3.3, Impacts AG-3 and AG-4; changes in recreation related  
 24 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.3, Impacts REC-5 through REC-8.  
 25 When required, DWR would provide compensation to property owners for economic losses due to  
 26 implementation of the alternative. While the compensation to property owners would reduce the  
 27 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 28 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 29 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 30 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 31 and land subject to Williamson Act contracts or in Farmland Security Zones.

## 1 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 2 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

### 3 **Population**

4 Operations and maintenance of conveyance facilities would require approximately 200 permanent  
5 new workers. Given the nature of those operation and maintenance jobs, the existing water  
6 conveyance facilities already in the five-county region, the large workforce in the region, and the  
7 large water agencies with headquarters in that region, it is anticipated that most of these new jobs  
8 would be filled from within the existing five-county labor force. However, operation and  
9 maintenance may require specialized worker skills not readily available in the local labor pool. As a  
10 result, it is anticipated that some specialized workers may be recruited from outside the five-county  
11 region.

12 It is anticipated that non-local workers would relocate to the five-county region, thus adding to the  
13 local population. However, this additional population would constitute a minor increase in the total  
14 2020 projected regional population of 4.6 million and be distributed throughout the region. Changes  
15 in demand for public services resulting from any increase in population are addressed in Chapter 20,  
16 *Public Services and Utilities*, Section 20.3.3.3, Impact UT-7.

### 17 **Housing**

18 It is anticipated that most of the operational workforce would be drawn from within the five-county  
19 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.  
20 There are about 53,000 housing units available to accommodate any nonlocal workers who relocate  
21 to the five-county region. In addition, new residents would likely be dispersed across the region,  
22 thereby not creating a burden on any one community. As a result, operation and maintenance of the  
23 proposed conveyance facilities is not expected to increase the demand for housing.

24 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
25 population or new housing, they would not be considered to have an adverse effect.

26 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
27 result in minor population increases in the Delta region with adequate housing supply to  
28 accommodate the change in population. Therefore, the minor increase in population is not  
29 anticipated to result in any adverse changes to the physical environment.

## 30 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 31 **Proposed Water Conveyance Facilities**

32 **NEPA Effects:** Throughout the five-county Delta region, population and employment could slightly  
33 contract as a result of continued operation and maintenance of the water conveyance facilities under  
34 Alternative 1B. Agricultural contributions to the character and culture of the Delta would be likely to  
35 decline commensurate with the projected decline in agricultural-related employment and  
36 production, as discussed under Impact ECON-7. This could result in the closure of agriculture-  
37 dependent businesses or those catering to agricultural employees, particularly in areas where  
38 conversion of agricultural land would be most concentrated. Similar effects could accrue to areas  
39 disproportionately dependent upon existing recreational activities. However, influences associated  
40 with those hired to operate, repair, and maintain water conveyance structures would grow. To the  
41 extent that this anticipated economic shift away from agriculture results in demographic changes in

1 population, employment level, income, age, gender, or race, the study area would be expected to see  
 2 changes to its character, particularly in those Delta communities most substantially affected by  
 3 demographic changes based on their size or proximity to BDCP facilities.

4 While some of the rural qualities of Delta communities, including relatively low noise and traffic  
 5 levels, could return to near pre-construction conditions during the operational phase, other effects  
 6 would be lasting. For instance, the visual appearance of intakes and other permanent features would  
 7 compromise the predominantly undeveloped and agricultural nature of communities like  
 8 Clarksburg, Courtland, Hood, and Thornton, which are located closest to the proposed water  
 9 conveyance features. Where BDCP operations make areas less desirable in which to live, work, shop,  
 10 or participate in recreational activities, localized abandonment of buildings could result. Such lasting  
 11 effects could also result in changes to community cohesion if they were to restrict mobility, reduce  
 12 opportunities for maintaining face-to-face relationships, or disrupt the functions of community  
 13 organizations or community gathering places (such as schools, libraries, places of worship, and  
 14 recreational facilities).

15 Under Alternative 1B, adverse social effects could occur in communities closest to character-  
 16 changing effects and in those most heavily influenced by agricultural and recreational activities.  
 17 Implementation of mitigation measures and environmental commitments related to noise, visual  
 18 effects, transportation, agriculture, and recreation would reduce adverse effects (see Appendix 3B,  
 19 *Environmental Commitments*). These actions are summarized under Alternative 1A, Impact ECON-9.

20 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 1B  
 21 could adversely affect community character in the Delta region. However, because these impacts are  
 22 social in nature, rather than physical, they are not considered impacts under CEQA. To the extent  
 23 that changes to community character would lead to physical impacts involving population growth,  
 24 these impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 25 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment could  
 26 result in alteration of community character stemming from a lack of maintenance, upkeep, and  
 27 general investment.

## 28 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and** 29 **Maintenance of the Proposed Water Conveyance Facilities**

30 **NEPA Effects:** Under Alternative 1B, publicly-owned water conveyance facilities would be located,  
 31 operated, and maintained on land of which some is currently held by private owners. Property tax  
 32 and assessment revenue forgone as a result of water conveyance facilities is estimated at \$153.8  
 33 million over the BDCP's 50-year permit period, or an average of \$3.2 million annually. As described  
 34 above, the annual property tax revenue of the Delta counties is more than \$934 million (California  
 35 State Controller's Office 2012). Projected over the 50-year period, these removals would likely  
 36 represent less than 1% of these counties' property tax revenue. These decreases in revenue could  
 37 potentially result in the loss of a substantial share of some agencies' tax bases, particularly for  
 38 smaller districts affected by the BDCP. Additionally, as discussed under Impact ECON-7, operation  
 39 and maintenance of the water conveyance facilities would be anticipated to result in a net decrease  
 40 of income and employment in the Delta region. This would also create an indirect effect through  
 41 reduced sales tax revenue for local government entities. These economic effects would be  
 42 considered adverse; however, the BDCP proponents would make arrangements to compensate local  
 43 governments for the loss of property tax or assessment revenue for land used for constructing,  
 44 locating, operating, or mitigating for new Delta water conveyance facilities.

1 **CEQA Conclusion:** Under Alternative 1B, the ongoing operation and maintenance of water  
 2 conveyance facilities would restrict potential property tax revenue for various local government  
 3 entities in the Delta region. Over the 50-year permit period, property tax and assessment revenue  
 4 forgone is estimated at \$153.8 million. Additionally, an anticipated decrease in sales tax revenue  
 5 could also lead to revenue declines. However, new Delta conveyance facilities are required under the  
 6 California Water Code to offset impacts on property taxes or assessments levied by local  
 7 governments or special districts (Water Code 85089). CEQA does not require a discussion of  
 8 socioeconomic effects except where they would result in reasonably foreseeable physical changes. If  
 9 an alternative is not anticipated to result in a physical change to the environment, it would not be  
 10 considered to have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and  
 11 15131). Here, any physical consequences resulting from fiscal impacts are too speculative to  
 12 ascertain.

### 13 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the** 14 **Proposed Water Conveyance Facilities**

15 **NEPA Effects:** As discussed in Chapter 15, *Recreation*, Section 15.3.3.3, Impacts REC-5 through REC-  
 16 8, operation and maintenance activities associated with the proposed water conveyance facilities  
 17 under Alternative 1B are anticipated to create minor effects on recreational resources. Maintenance  
 18 of conveyance facilities, including intakes, would result in periodic temporary but not substantial  
 19 adverse effects on boat passage and water-based recreational activities. As discussed in Impact REC-  
 20 7, most intake maintenance, such as painting, cleaning, and repairs, would be done with barges and  
 21 divers, and could cause a temporary impediment to boat movement in the Sacramento River in the  
 22 immediate vicinity of the affected intake structure and reduce opportunities for waterskiing,  
 23 wakeboarding, or tubing in the immediate vicinity of the intake structures. However, boat passage  
 24 and navigation on the river would still be possible around any barges or other maintenance  
 25 equipment and these effects would be expected to be short-term (2 years or less). Although water-  
 26 based recreation (i.e. boating, waterskiing, wakeboarding, etc.) may be restricted at and in the  
 27 vicinity of intakes, many miles of the Sacramento River would still be usable for these activities  
 28 during periodic maintenance events. Additionally, implementation of the environmental  
 29 commitment to provide notification of construction and maintenance activities in waterways  
 30 (Appendix 3B, *Environmental Commitments*) would reduce these effects. Because effects of facility  
 31 maintenance would be short-term and intermittent, substantial economic effects are not anticipated  
 32 to result from operation and maintenance of the facilities.

33 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
 34 conveyance facilities under Alternative 1B are anticipated to create minor effects on recreational  
 35 resources and therefore, are not expected to significantly reduce economic activity related to  
 36 recreational activities. This section considers only the economic effects of recreational changes.  
 37 Potential physical changes to the environment relating to recreational resources are described and  
 38 evaluated in Chapter 15, *Recreation*, Section 15.3.3.3, Impacts REC-5 through REC-8.

### 39 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during** 40 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

41 During operation and maintenance of conveyance facilities existing agricultural land would be in  
 42 uses that include direct facility footprints and associated permanent roads and utilities. Agricultural  
 43 land could also be affected by changes in water quality and other conditions that would affect crop

1 productivity and crop choices. These direct effects on agricultural land are described in Chapter 14,  
2 *Agricultural Resources*, Section 14.3.3.3, Impacts AG-1 and AG-2.

3 Changes in crop acreage were used to estimate the associated changes in economic values. Unit  
4 prices, yields, and crop production and investment costs were presented in Section 16.1,  
5 *Environmental Setting/Affected Environment*. Table 16-30 summarizes the changes in acreage and  
6 value of agricultural production that would result in the Delta region from operation of Alternative  
7 1B. Changes are shown relative to the Existing Conditions and the No Action Alternative by  
8 aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
9 Alternative were assumed to be the same). The changes in crop acreages are reported in Appendix  
10 14A, *Individual Crop Effects as a Result of BDCP Water Conveyance Facility Construction*.

11 Total value of irrigated crop production in the Delta region would decline on average by \$29.2  
12 million per year during operation and maintenance, with total irrigated crop acreage declining by  
13 about 17,700 acres. These estimates are not dependent on water year type.

14 **Table 16-30. Crop Acres and Value of Agricultural Production in the Delta during Operations and**  
15 **Maintenance (Alternative 1B)**

Analysis Metric	Alternative 1B	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	466.0	-17.7
Grains	57.0	-1.6
Field crops	186.7	-4.4
Forage crops	106.7	-6.0
Vegetable, truck, and specialty crops	74.3	-2.9
Orchards and vineyards	41.3	-2.7
Total Value of Production (million \$)	620.8	-29.2
Grains	23.6	-0.6
Field crops	111.1	-2.7
Forage crops	68.1	-5.0
Vegetable, truck, and specialty crops	258.6	-9.8
Orchards and vineyards	159.4	-11.1

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

16  
17 Alternative 1B may also affect production costs on lands even if gross revenues are largely  
18 unaffected. Increased costs could be associated with operational constraints and longer travel times  
19 due to permanent facilities. In most cases, affected lands fall within the facilities footprint, and are  
20 included in the agricultural acreage and value of production described elsewhere in this chapter and  
21 in Chapter 14, *Agricultural Resources*, Section 14.3.3.3.

22 Crop yields and crop selection on lands in the Delta could be affected by changes in salinity of  
23 agricultural water supply during operation and maintenance activities. If operation of the proposed  
24 conveyance facilities increases salinity in part of the Delta, crops that are more sensitive to salinity  
25 could shift to other lands in the five-county Delta region. See Chapter 14, *Agricultural Resources*,  
26 Section 14.3.3.3, Impact AG-2, for further discussion of effects from changes in salinity.

1 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
 2 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
 3 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
 4 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
 5 productivity and compensating off-site.

6 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities  
 7 the value of agricultural production in the in the Delta region would be reduced. The permanent  
 8 removal of agricultural land from production is addressed in Chapter 14, *Agricultural Resources*,  
 9 Section 14.3.3.3, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 10 considered an environmental impact. Significant environmental impacts would only result if the  
 11 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 12 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 13 economic losses due to implementation of the alternative. While the compensation to property  
 14 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 15 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
 16 are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 17 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 18 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 19 Zones.

#### 20 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 21 **Implementation of the Proposed Conservation Measures 2–22**

22 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2–  
 23 22 would be similar to those described under Alternative 1A, Impact ECON-13 because the  
 24 measures are similar. In the Delta region, spending on Conservation Measures 2–22 would include  
 25 construction, operation and maintenance activities that would convert or disturb existing land use.  
 26 Because implementation of Conservation Measures 2–22 would be anticipated to result in an  
 27 increase in construction and operation and maintenance-related employment and labor income, this  
 28 would be considered a beneficial effect. However, implementation of these components would also  
 29 be anticipated to result in a decrease in agricultural-related employment and labor income, which  
 30 would be considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14,  
 31 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by  
 32 preserving agricultural productivity and compensating off-site. Additionally, implementation of  
 33 these components are anticipated to result in the abandonment of natural gas wells, causing a  
 34 decrease in employment and labor income associated with monitoring and maintaining wells, which  
 35 would be considered an adverse effect. Mitigation Measure MIN-5, described in Chapter 26, *Mineral*  
 36 *Resources*, Section 26.3.3.2, Impact MIN-5, would be available to reduce these effects by minimizing,  
 37 to the extent feasible, the need for well abandonment or relocation.

38 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would affect total  
 39 employment and income in the Delta region. The change in total employment and income in the  
 40 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 41 Measures 2–22 and any resulting changes in agricultural production, recreation, and natural gas  
 42 production activities. The total change in employment and income is not, in itself, considered an  
 43 environmental impact. Significant environmental impacts would only result if the changes in  
 44 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 45 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*

1 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
2 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
3 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

#### 4 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 5 **Implementing the Proposed Conservation Measures 2-22**

6 **NEPA Effects:** Effects on population and housing as a result of the proposed Conservation Measures  
7 2-22 would be similar to those described under Alternative 1A, Impact ECON-14 because the  
8 measures are similar. In general, the changes in population and housing would include increases in  
9 population from the construction and operation and maintenance-related activity and declines in  
10 residential housing and business establishments as a result of lands converted or impaired. Because  
11 these activities would not result in concentrated, substantial increases in population or new  
12 housing, they would not be considered to have an adverse effect.

13 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would impact total  
14 population and housing in the Delta region. The change in total population and housing in the Delta  
15 region is based on employment resulting from implementation of the proposed Conservation  
16 Measures 2-22. The change in population and housing is expected to be minor relative to the five-  
17 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
18 physical environment are not anticipated to result.

#### 19 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 20 **Conservation Measures 2-22**

21 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2-  
22 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
23 conservation measures are similar. While implementation of Conservation Measures 2-22 could  
24 result in beneficial effects relating to the economic welfare of a community, adverse social effects,  
25 including effects on community cohesion, could also arise in those communities closest to character-  
26 changing effects and those most heavily influenced by agricultural activities. Implementation of  
27 mitigation measures and environmental commitments related to noise, visual effects,  
28 transportation, agriculture, and recreation would reduce adverse effects (see Appendix 3B,  
29 *Environmental Commitments*). These actions are summarized under Alternative 1A, Impact ECON-  
30 15.

31 **CEQA Conclusion:** Implementation of Conservation Measures 2-22 under Alternative 1B could  
32 affect community character within the Delta region. These activities could have adverse or beneficial  
33 effects with respect to community character. Because these impacts are social in nature, rather than  
34 physical, they are not considered impacts under CEQA. To the extent that changes to community  
35 character are related to physical impacts involving population growth, these impacts are described  
36 in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore, notable  
37 decreases in population or employment, even if limited to certain areas, sectors, or the vacancy of  
38 individual buildings, could result in alteration of community character stemming from a lack of  
39 maintenance, upkeep, and general investment.

1 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing**  
 2 **the Proposed Conservation Measures 2–22**

3 **NEPA Effects:** Under Alternative 1B, effects on local government fiscal conditions as a result of  
 4 conservation measure implementation would be similar to those described under Alternative 1A,  
 5 Impact ECON-16. Conservation Measures 2–22 would remove some private land from local property  
 6 tax and assessment rolls. This economic effect would be considered adverse; however, the BDCP  
 7 proponents would offset forgone property tax and assessments levied by local governments and  
 8 special districts on private lands converted to habitat.

9 **CEQA Conclusion:** Under Alternative 1B, implementation of Conservation Measures 2–22 would  
 10 result in the removal of a portion of the property tax base for various local government entities in  
 11 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
 12 estimated at \$176.7 million, compared with annual property tax revenue of more than \$934 million  
 13 in the Delta counties (California State Controller’s Office 2012). Projected over the 50-year period,  
 14 these removals would likely represent less than 1% of these counties’ property tax revenue.  
 15 However, the BDCP proponents would compensate local governments and special districts for  
 16 forgone revenue. CEQA does not require a discussion of socioeconomic effects except where they  
 17 would result in physical changes. If an alternative is not anticipated to result in a physical change to  
 18 the environment, it would not be considered to have a significant impact under CEQA (CEQA  
 19 Guidelines Sections 15064(f) and 15131).

20 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the**  
 21 **Proposed Conservation Measures 2–22**

22 **NEPA Effects:** Effects related to implementation of the Conservation Measures 2–22 under this  
 23 alternative would be similar to those described under Alternative 1A, Impact ECON-17. These  
 24 measures may result in adverse and beneficial effects on recreational resources in the Delta region,  
 25 resulting in the potential for decreased or increased economic activities related to recreation.

26 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
 27 recreation and compromise the quality of activities, leading to potential economic impacts.  
 28 However, implementation could also improve the quality of existing recreational opportunities,  
 29 creating increased economic value with respect to recreation. This section considers only the  
 30 economic effects of recreational changes brought about by conservation measure implementation.  
 31 Potential physical changes to the environment relating to recreational resources are described and  
 32 evaluated in Chapter 15, *Recreation*, Section 15.3.3.3, Impacts REC-9 through REC-11.

33 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
 34 **Implementing the Proposed Conservation Measures 2–22**

35 Effects on agricultural economics as a result of the proposed Conservation Measures 2–22 would be  
 36 similar to those described under Alternative 1A, Impact ECON-18 because the measures are similar.  
 37 Conservation Measures 2–22 would convert land from existing agricultural uses. These direct effects  
 38 on agricultural land are described qualitatively in Chapter 14, *Agricultural Resources*, Section  
 39 14.3.3.3, Impacts AG-3 and AG-4. Effects on agricultural economics would include effects on crop  
 40 production and agricultural investments resulting from restoration actions on agricultural lands.  
 41 The effects would be similar in kind to those described for lands converted due to construction and  
 42 operation of the conveyance features and facilities. The total acreage and crop mix of agricultural  
 43 land potentially affected is not specified at this time, but when required, the BDCP proponents

1 would provide compensation to property owners for losses due to implementation of the  
2 alternative.

3 **NEPA Effects:** Because implementation of Conservation Measures 2–22 would be anticipated to lead  
4 to reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
5 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
6 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
7 agricultural productivity and compensating off-site.

8 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
9 agricultural production in the Delta region. The permanent removal of agricultural land from  
10 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.3, Impacts AG-3 and  
11 AG-4. The reduction in the value of agricultural production is not considered an environmental  
12 impact. Significant environmental impacts would only result if the changes in regional economics  
13 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
14 required, the BDCP proponents would provide compensation to property owners for economic  
15 losses due to implementation of the alternative. While the compensation to property owners would  
16 reduce the severity of economic effects related to the loss of agricultural land, it would not  
17 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
18 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

#### 19 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

20 **NEPA Effects:** The socioeconomic effects associated with operation of Alternative 1B would be the  
21 same as those described under Alternative 1A, Impact ECON-19, because deliveries would be based  
22 on the same operational guidelines. Changes in deliveries to hydrologic regions could result in  
23 beneficial or adverse socioeconomic effects in these areas. In hydrologic regions where water  
24 deliveries are predicted to increase when compared with the No Action Alternative, more stable  
25 agricultural activities could support employment and economic production associated with  
26 agriculture. Where M&I deliveries increase, population growth could lead to general economic  
27 growth and support water-intensive industries. Such changes could also lead to shifts in the  
28 character of communities in the hydrologic regions with resultant beneficial or adverse effects.  
29 Likewise, growth associated with deliveries could require additional expenditures for local  
30 governments while also supporting increases in revenue.

31 **CEQA Conclusion:** Operation of water conveyance facilities under Alternative 1B could affect  
32 socioeconomic conditions in the hydrologic regions receiving water from the SWP and CVP.  
33 However, because these impacts are social and economic in nature, rather than physical, they are  
34 not considered environmental impacts under CEQA. To the extent that changes in socioeconomic  
35 conditions in the hydrologic regions would lead to physical impacts, such impacts are described in  
36 Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.

#### 37 **16.3.3.4 Alternative 1C—Dual Conveyance with West Alignment and** 38 **Intakes W1–W5 (15,000 cfs; Operational Scenario A)**

39 Alternative 1C would result in effects on lands and communities in the study area associated with  
40 construction of five intakes and intake pumping plants, one forebay, conveyance pipelines, canals, a  
41 tunnel, culvert siphons, and an intermediate pumping plant. Nearby areas would be altered for the  
42 deposition of spoils. Transmission lines, access roads, and other incidental facilities would also be

1 needed for operation of the Alternative 1C facilities and construction of these structures would have  
 2 effects on lands and communities. This alternative would differ from Alternative 1A primarily in that  
 3 water would be carried south in a series of canals along the western side of the Delta to an  
 4 intermediate pumping plant and then pumped through a tunnel to a continuing canal to the  
 5 proposed Byron Tract Forebay, rather than long segments of deep pipeline and tunnel through the  
 6 central part of the Delta.

### 7 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 8 **Region during Construction of the Proposed Water Conveyance Facilities**

9 The regional economic effects on employment and income in the Delta region during  
 10 construction were evaluated for both the unlined and lined canal options. Changes are shown  
 11 relative to the Existing Conditions and the No Action Alternative (regional economic conditions  
 12 do not differ between Existing Conditions and No Action Alternative). The effects on  
 13 employment and income for the unlined option are displayed in Table 16-31. Table 16-31  
 14 shows the direct and total change that would result from conveyance-related spending. As  
 15 evident in Table 16-31, spending on conveyance construction results in substantial local  
 16 economic activity in the region. As shown, direct construction employment is anticipated to vary  
 17 over the 8-year construction period, with an estimated 2,747 FTE jobs in the first year and 236 FTE  
 18 jobs in the final year of the construction period. Construction employment is estimated to peak at  
 19 5,300 FTE jobs in year 4. Total employment (direct, indirect, and induced) would also peak in year 4,  
 20 at 11,559 FTE jobs.

21 **Table 16-31. Regional Economic Effects on Employment and Labor Income during Construction**  
 22 **(Alternative 1C)**

Regional Economic Impact <sup>a</sup>	Year								Total
	1	2	3	4	5	6	7	8	
<b>Employment (FTE)</b>									
Direct	2,747	3,016	4,915	5,300	4,794	4,194	1,128	236	26,329
Total <sup>b</sup>	9,209	8,411	11,698	11,559	9,867	7,767	2,126	352	60,989
<b>Labor Income (million \$)</b>									
Direct	197.6	155.8	181.1	156.9	120.7	74.3	21.3	1.1	908.8
Total <sup>b</sup>	379.1	312.7	386.9	352.5	283.0	194.8	54.6	5.8	1,969.4

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects; numbers may not sum to the total due to rounding. Detailed estimates are presented in Appendix 16A, *Regional Economic Impacts of Water Conveyance Facility Construction*.

23  
 24 The employment and income effects under the lined option are higher than for the unlined option.  
 25 Direct and total employment estimates over the 8-year construction period for the lined option are  
 26 29,019 and 62,693, respectively. Direct and total income effects are also higher under the lined  
 27 option, with direct and total income over the construction period of \$936.3 million and \$2,027.3  
 28 million, respectively.

29 The footprint of conveyance and related facilities such as roads and utilities would remove some  
 30 existing agricultural land from production, so the effects on employment and income from those

1 removals would be negative. The regional economic effects on employment and income in the Delta  
 2 region from the change in agricultural production are reported in Table 16-32. As shown, direct  
 3 agricultural employment would be reduced by an estimated 64 FTE jobs, while total employment  
 4 (direct, indirect, and induced) associated with agricultural employment would fall by 240 FTE jobs.  
 5 Mapbook Figures M14-5 and M14-6 display areas of Important Farmland and lands under  
 6 Williamson Act contracts that could be converted to other uses due to the construction of water  
 7 conveyance facilities for the West alignment. Note that not all of these structures would be  
 8 constructed under this alternative.

9 **Table 16-32. Regional Economic Effects on Agricultural Employment and Labor Income, during**  
 10 **Construction (Alternative 1C)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-64
Total <sup>b</sup>	-240
<b>Labor Income (million \$)</b>	
Direct	-8.1
Total <sup>b</sup>	-15.5

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).  
<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.  
<sup>b</sup> Includes direct, indirect, and induced effects.

11  
 12 Additionally, the Alternative 1C construction footprint would result in the abandonment of an  
 13 estimated four producing natural gas wells in the study area, as described in Chapter 26, *Mineral*  
 14 *Resources*, Section 26.3.3.4, Impact MIN-1. This could result in the loss of employment and labor  
 15 income associated with monitoring and maintaining these wells. Generally, small crews perform  
 16 ongoing monitoring and maintenance of several wells at a time. As shown in Chapter 26, *Mineral*  
 17 *Resources*, Table 26-3, 516 active producer wells are located in the study area. Even if all four  
 18 producing wells in the Alternative 1C construction footprint were abandoned and not replaced with  
 19 new wells installed outside the construction footprint, the percentage reduction in the number of  
 20 natural gas wells would be very small. As a result, the employment and labor income effects  
 21 associated with well abandonment, while negative, would be minimal.

22 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
 23 construction-related employment and labor income, this would be considered a beneficial effect.  
 24 However, these activities would also be anticipated to result in a decrease in agricultural-related  
 25 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
 26 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
 27 available to reduce these effects by preserving agricultural productivity and compensating off-site.

28 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
 29 employment and income in the Delta region. The change would result from expenditures on  
 30 construction, increasing employment, and from changes in agricultural production, decreasing  
 31 employment. Changes in recreational expenditures and natural gas well operations could also affect  
 32 regional employment and income, but these have not been quantified. The total change in  
 33 employment and income is not, in itself, considered an environmental impact. Significant  
 34 environmental impacts would only result if the changes in regional economics cause physical

1 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 2 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 3 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.4, Impacts AG-1  
 4 and AG-2; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
 5 15.3.3.4, REC-1 through REC-4; abandonment of natural gas wells is addressed in Chapter 26,  
 6 *Mineral Resources*, Section 26.3.3.4, Impact MIN-1. When required, DWR would provide  
 7 compensation to property owners for economic losses due to implementation of the alternative.  
 8 While the compensation to property owners would reduce the severity of economic effects related  
 9 to the loss of agricultural land, it would not constitute mitigation for any related physical impact.  
 10 Measures to reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section  
 11 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve  
 12 agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson  
 13 Act contracts or in Farmland Security Zones.

## 14 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 15 **the Proposed Water Conveyance Facilities**

### 16 **Population**

17 Construction of conveyance facilities would require an estimated peak of 5,300 workers in year 4 of  
 18 the assumed 8-year construction period. It is anticipated that many of these new jobs would be filled  
 19 from within the existing five-county labor force.

20 Considering the multi-year duration of conveyance facility construction, it is anticipated that non-  
 21 local workers would temporarily relocate to the five-county region, thus adding to the local  
 22 population. As discussed in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section  
 23 30.3.2.1, Direct Growth Inducement, an estimated 30 percent of workers could come from out of the  
 24 Delta region, suggesting that approximately 1,300 workers could relocate to the Delta region at the  
 25 peak of the construction period. However, this additional population would constitute a minor  
 26 increase in the total 2020 projected regional population of 4.6 million and be distributed throughout  
 27 the region. Changes in demand for public services resulting from any increase in population are  
 28 addressed in Chapter 20, *Public Services and Utilities*, Section 20.3.3.4, Impact UT-1 through UT-6.

### 29 **Housing**

30 Changes in housing demand are based on changes in supply resulting from displacement during  
 31 facilities construction and changes in housing demand resulting from employment associated with  
 32 construction of conveyance facilities. As described in Chapter 13, *Land Use*, Section 13.3.3.4, Impact  
 33 LU-2, construction of water conveyance facilities under Alternative 1C would conflict with  
 34 approximately 194 residential structures.

35 The construction workforce would most likely commute daily to the work sites from within the five-  
 36 county region; however, if needed, there are about 53,000 housing units available to accommodate  
 37 workers who may choose to commute on a workweek basis or who may choose to temporarily  
 38 relocate to the region for the duration of the construction period, including the estimated 1,300  
 39 workers who may temporarily relocate to the Delta region from out of the region. In addition to the  
 40 available housing units, there are recreational vehicle parks within the five-county region to  
 41 accommodate any construction workers. As a result, and as discussed in more detail in Chapter 30,  
 42 *Growth Inducement and Other Indirect Effects*, Section 30.3.2.1, Direct Growth Inducement,

1 construction of the proposed conveyance facilities is not expected to substantially increase the  
2 demand for housing within the five-county region.

3 **NEPA Effects:** Within specific local communities, there could be localized effects on housing.  
4 However, given the availability of housing within the five-county region, predicting where this  
5 impact might fall would be speculative. In addition, new residents would likely be dispersed across  
6 the region, thereby not creating a burden on any one community.

7 Because these activities would not result in permanent concentrated, substantial increases in  
8 population or new housing, they would not be considered to have an adverse effect.

9 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
10 population increases in the Delta region with adequate housing supply to accommodate the change  
11 in population. Therefore adverse changes in the physical environment are not anticipated.

### 12 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 13 **Water Conveyance Facilities**

14 **NEPA Effects:** Under Alternative 1C, effects on community character would be similar in nature, but  
15 not location or magnitude, to those described under Alternative 1A, Impact ECON-3. Under this  
16 alternative, regional population and employment would increase to levels described above under  
17 Impact ECON-1 and ECON-2. The geographic extent of these effects would also vary from that  
18 described for Alternative 1A, as the intensity of effects would be somewhat greater or lesser based  
19 on communities' ability to accommodate growth and proximity to features constructed for the water  
20 conveyance alignment under this alternative. Under this alternative, areas near the intake pumping  
21 plants in the vicinity of Clarksburg, Hood, and Courtland could experience the greatest changes in  
22 character, along with communities near the canal alignment like Knightsen, Discovery Bay, Bethel  
23 Island, and Byron. Effects associated with construction activities could also result in changes to  
24 community cohesion if they were to restrict mobility, reduce opportunities for maintaining face-to-  
25 face relationships, or disrupt the functions of community organizations or community gathering  
26 places (such as schools, libraries, places of worship, and recreational facilities). Under Alternative  
27 1C, several gathering places that lie in the vicinity of construction areas could be indirectly affected  
28 by noise and traffic associated with construction activities, including the Clarksburg Library, Delta  
29 High School, Excelsior School, Knightsen Elementary School, Timber Point School, YMCA Childcare at  
30 Timber Point, Byron Brentwood Cemetery, Bethel Island Baptist Church, Clarksburg Community  
31 Church, Resurrection Life Community Church, Son Rise Family Fellowship, Citizen Land Alliance,  
32 Bethel Island Chamber of Commerce, Discovery Bay Chamber of Commerce, Clarksburg Fire  
33 Department, Courtland Fire Department, Knightsen Fire Department, and several marinas or other  
34 recreational facilities (see Chapter 15, *Recreation*, Table 15-14).

35 Like Alternative 1A, the anticipated economic shift away from agriculture and towards construction  
36 could result in demographic changes. In comparing the existing demographic composition of  
37 agricultural workers and construction laborers within the five-county Delta Region, men make up a  
38 large proportion of both occupations: 84 percent of agricultural workers were male, compared with  
39 98 percent of construction laborers. Approximately 92 percent of agricultural workers made less  
40 than \$35,000, while 60 percent of construction laborers made less than \$35,000. Additionally, 87  
41 percent of agricultural workers within the study area report Hispanic origin, while 54 percent of  
42 construction laborers claim Hispanic origin within the five-county area (U.S. Census Bureau 2012b).

1 Construction activities could be expected to bring about a decline in the rural qualities currently  
 2 exhibited by Delta communities, while expansion of employment and population in the region could  
 3 provide economic opportunities supportive of community stability. While water conveyance  
 4 construction could result in beneficial effects relating to the economic welfare of a community,  
 5 adverse social effects could also arise as a result of declining economic stability in communities  
 6 closest to construction effects and in those most heavily influenced by agricultural and recreational  
 7 activities. Implementation of mitigation measures and environmental commitments related to noise,  
 8 visual effects, transportation, agriculture, and recreation would reduce adverse effects (see  
 9 Appendix 3B, *Environmental Commitments*). These actions are summarized under Alternative 1A,  
 10 Impact ECON-3.

11 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 1C could affect  
 12 community character in the Delta region. However, because these impacts are social in nature,  
 13 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
 14 community character would lead to physical impacts involving population growth, such impacts are  
 15 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
 16 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
 17 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
 18 character stemming from a lack of maintenance, upkeep, and general investment. However,  
 19 implementation of mitigation measures and environmental commitments related to noise, visual  
 20 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
 21 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
 22 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
 23 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
 24 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
 25 Management Plans.

26 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing**  
 27 **the Proposed Water Conveyance Facilities**

28 **NEPA Effects:** Under Alternative 1C, publicly-owned water conveyance facilities would be  
 29 constructed on land of which some is currently held by private owners. Property tax and assessment  
 30 revenue forgone as a result of water conveyance facilities is estimated at \$20.2 million over the  
 31 construction period. These decreases in revenue could potentially result in the loss of a substantial  
 32 share of some agencies' tax bases, particularly for smaller districts affected by the BDCP, such as  
 33 reclamation districts where conveyance facilities and associated work areas are proposed. This  
 34 economic effect would be considered adverse; however, the BDCP proponents would make  
 35 arrangements to compensate local governments for the loss of property tax or assessment revenue  
 36 for land used for constructing, locating, operating, or mitigating for new Delta water conveyance  
 37 facilities. Additionally, as discussed under Impact ECON-1, construction of the water conveyance  
 38 facilities would be anticipated to result in a net increase of income and employment in the Delta  
 39 region. This would also create an indirect beneficial effect through increased sales tax revenue for  
 40 local government entities that rely on sales taxes.

41 **CEQA Conclusion:** Under Alternative 1C, construction of water conveyance facilities would result in  
 42 the removal of a portion of the property tax base for various local government entities in the Delta  
 43 region. Over the construction period, property tax and assessment revenue forgone is estimated at  
 44 \$20.2 million, compared with annual property tax revenue of more than \$934 million in the Delta  
 45 counties (California State Controller's Office 2012). Projected over the 50-year period, these

1 removals would likely represent less than 0.1% of these counties' property tax revenue. However,  
 2 the Sacramento-San Joaquin Delta Reform Act commits the entities receiving water from the State  
 3 Water Project and federal Central Valley Project to mitigate for lost property tax and assessment  
 4 revenue associated with land needed for the construction of new conveyance facilities (Water Code  
 5 Section 85089). Additionally, any losses could be offset, at least in part, by an anticipated increase in  
 6 sales tax revenue. CEQA does not require a discussion of socioeconomic effects except where they  
 7 would result in reasonably foreseeable physical changes. If an alternative is not anticipated to result  
 8 in a physical change to the environment, it would not be considered to have a significant impact  
 9 under CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any physical consequences  
 10 resulting from fiscal impacts are too speculative to ascertain.

### 11 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 12 **Water Conveyance Facilities**

13 **NEPA Effects:** Under Alternative 1C, disruption of recreational activities during the construction  
 14 period would be similar in character to that described under Alternative 1A, Impact ECON-5.  
 15 However, as described in Chapter 15, *Recreation*, Section 15.3.3.4, Impacts REC-1 through REC-4, the  
 16 geographic incidence and extent of these effects would be different based on the construction of a  
 17 different conveyance alignment composed of different features. Access to recreational facilities may  
 18 be restricted throughout the construction period. Additionally, the quality of recreational activities  
 19 including boating, fishing, waterfowl hunting, and hiking in the Delta could be indirectly affected by  
 20 noise, lighting, traffic, and visual degradation in proximity to water conveyance construction. Under  
 21 this alternative, 11 recreational sites or recreational areas would experience periods of  
 22 construction-related effects, including noise, access, visual disturbances, or a combination of these  
 23 effects. These include Clarksburg Boat Launch (fishing access), Arrowhead Harbor Marina, Miner  
 24 Slough Wildlife Area, Hidden Harbor Marina, Delta Protection lands, Twitchell Island, Franks Tract  
 25 State Recreation Area, Sycamore Drive Park and Lakewood Drive Community Parks, Clifton Court  
 26 Forebay, and Lazy M Marina. Construction activities associated with this alternative would affect  
 27 fewer established recreational sites than under Alternative 1B but more than under Alternative 1A.

28 Construction of water conveyance structures under this alternative would be anticipated to result in  
 29 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
 30 the implementation of mitigation measures, including enhancement of fishing access sites and  
 31 incorporation of recreational access into project design, and environmental and non-environmental  
 32 commitments, including providing funding to implement recreational improvements and control  
 33 aquatic weeds, providing notification of maintenance activities in waterways, and developing and  
 34 implementing a noise abatement plan, as described in Appendix 3B, *Environmental Commitments*.  
 35 With a decrease in recreational quality, the number of visits would be anticipated to decline, at least  
 36 in areas closest to construction activities. The multi-year schedule and geographic scale of  
 37 construction activities and the anticipated decline in recreational spending would be considered an  
 38 adverse effect. The commitments and mitigation measure cited above would contribute to the  
 39 reduction of this effect.

40 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 1C  
 41 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
 42 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
 43 recreational activities. This section considers only the economic effects of recreational changes  
 44 brought about by construction of the proposed water conveyance facilities. Potential physical

1 changes to the environment relating to recreational resources are described and evaluated in  
2 Chapter 15, *Recreation*, Section 15.3.3.4, REC-1 through REC-4.

### 3 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 4 **the Proposed Water Conveyance Facilities**

5 Construction of conveyance facilities would convert land from existing agricultural uses to uses that  
6 include direct facility footprints, construction staging areas, borrow/spoils areas, RTM storage,  
7 temporary and permanent roads, and utilities. Agricultural land could also be affected by changes in  
8 water quality and other conditions that would affect crop productivity. These direct effects on  
9 agricultural land are described in Chapter 14, *Agricultural Resources*, Section 14.3.3.4, Impacts AG-1  
10 and AG-2.

11 Changes in crop acreage were used to describe the associated changes in economic values. Unit  
12 prices, yields, and crop production and investment costs were presented in Section 16.1,  
13 *Environmental Setting/Affected Environment*. Table 16-33 summarizes the changes in acreage and  
14 value of agricultural production that would result in the Delta region as a result of Alternative 1C  
15 construction. Changes are shown relative to the Existing Conditions and the No Action Alternative  
16 by aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
17 Alternative were assumed to be the same). The table also includes a summary of changes in crop  
18 acreages that are reported in greater detail in Appendix 14A, *Individual Crop Effects as a Result of*  
19 *BDCP Water Conveyance Facility Construction*.

20 Total value of irrigated crop production in the Delta would decline on average by \$22.2 million per  
21 year during the construction period, with total irrigated crop acreage declining by about 14,300  
22 acres. These estimates are not dependent on water year type.

23 **Table 16-33. Crop Acres and Value of Agricultural Production in the Delta during Construction**  
24 **(Alternative 1C)**

Analysis Metric	Alternative 1C	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	469.4	-14.3
Grains	56.8	-1.9
Field crops	187.1	-4.0
Forage crops	108.6	-4.1
Vegetable, truck, and specialty crops	75.9	-1.3
Orchards and vineyards	41.0	-3.1
Total Value of Production (million \$)	627.8	-22.2
Grains	23.6	-0.6
Field crops	111.7	-2.1
Forage crops	70.6	-2.5
Vegetable, truck, and specialty crops	264.7	-3.7
Orchards and vineyards	157.2	-13.4

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

25

1 Alternative 1C may also affect production costs, investments in production facilities and standing  
2 orchards and vineyards, and salinity of agricultural water supply. Effects would be similar to those  
3 qualitatively described under Alternative 1A, Impact ECON-6. See Chapter 14, *Agricultural*  
4 *Resources*, Section 14.3.3.4, Impacts AG-1 and AG-2, for further discussion of indirect effects on  
5 agriculture.

6 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
7 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
8 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
9 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
10 agricultural productivity and compensating off-site.

11 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
12 value of agricultural production in the Delta region. The removal of agricultural land from  
13 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.4, Impacts AG-1 and  
14 AG-2. The reduction in the value of agricultural production is not considered an environmental  
15 impact. Significant environmental impacts would only result if the changes in regional economics  
16 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
17 required, DWR would provide compensation to property owners for economic losses due to  
18 implementation of the alternative. While the compensation to property owners would reduce the  
19 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
20 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
21 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
22 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
23 and land subject to Williamson Act contracts or in Farmland Security Zones.

#### 24 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 25 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

26 In the Delta region, ongoing operation and maintenance of BDCP facilities would result in increased  
27 expenditures relative to the Existing Conditions and the No Action Alternative (regional economic  
28 conditions do not differ across Existing Conditions and No Action Alternative). The increased  
29 expenditures are expected to result in a permanent increase in regional employment and income,  
30 including an estimated 187 direct and 269 total (direct, indirect, and induced) FTE jobs (Table 16-  
31 34). Since operation and maintenance expenditures for the unlined and lined options were not  
32 differentiated, the results summarized in this section are assumed to apply to both the unlined and  
33 lined option. Potential changes in the value of agricultural production result in changes to regional  
34 employment and income in the Delta region under the Alternative 1C relative to the Existing  
35 Conditions and the No Action Alternative.

**Table 16-34. Regional Economic Effects on Employment and Labor Income during Operations and Maintenance (Alternative 1C)**

Regional Economic Impact <sup>a</sup>	Impacts from Operations and Maintenance
<b>Employment (FTE)</b>	
Direct	187
Total <sup>b</sup>	269
<b>Labor Income (million \$)</b>	
Direct	11.4
Total <sup>b</sup>	15.3

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.  
<sup>b</sup> Includes direct, indirect, and induced effects.  
Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).

The operation and maintenance of conveyance and related facilities such as roads and utilities would result in the permanent removal of agricultural land from production following construction, and the effects on employment and income would be negative, including the loss of an estimated 75 agricultural and 216 total (direct, indirect, and induced) FTE jobs. The regional economic effects on employment and income in the Delta region from the change in agricultural production are reported in Table 16-35. Mapbook Figures M14-5 and M14-6 display areas of Important Farmland and lands under Williamson Act contracts that could be converted to other uses due to the construction of water conveyance facilities for the West alignment. Note that not all of these structures would be constructed under this alternative.

**Table 16-35. Regional Economic Effects on Agricultural Employment and Labor Income during Operations and Maintenance (Alternative 1C)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-75
Total <sup>b</sup>	-216
<b>Labor Income (million \$)</b>	
Direct	-6.5
Total <sup>b</sup>	-12.4

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.  
<sup>b</sup> Includes direct, indirect, and induced effects.  
Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).

**NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would result in an increase in operations-related employment and labor income, this would be considered a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in agricultural-related employment and labor income, which would be considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural productivity and compensating off-site.

1 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 2 increase total employment and income in the Delta region. The change would result from  
 3 expenditures on operation and maintenance and from changes in agricultural production. The total  
 4 change in income and employment is not, in itself, considered an environmental impact. Significant  
 5 environmental impacts would only result if the changes in regional economics cause physical  
 6 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 7 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 8 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.4, Impacts AG-3  
 9 and AG-4; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
 10 15.3.3.4, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
 11 property owners for economic losses due to implementation of the alternative. While the  
 12 compensation to property owners would reduce the severity of economic effects related to the loss  
 13 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
 14 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 15 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
 16 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
 17 contracts or in Farmland Security Zones.

## 18 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 19 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

### 20 **Population**

21 Operations and maintenance of conveyance facilities would require approximately 190 permanent  
 22 new workers. Given the nature of those operation and maintenance jobs, the existing water  
 23 conveyance facilities already in the five-county region, the large workforce in the region, and the  
 24 large water agencies with headquarters in that region, it is anticipated that most of these new jobs  
 25 would be filled from within the existing five-county labor force. However, operation and  
 26 maintenance may require specialized worker skills not readily available in the local labor pool. As a  
 27 result, it is anticipated that some specialized workers may be recruited from outside the five-county  
 28 region.

29 It is anticipated that non-local workers would relocate to the five-county region, thus adding to the  
 30 local population. However, this additional population would constitute a minor increase in the total  
 31 2020 projected regional population of 4.6 million and be distributed throughout the region. Changes  
 32 in demand for public services resulting from any increase in population are addressed in Chapter 20,  
 33 *Public Services and Utilities*, Section 20.3.3.4, Impact UT-7.

### 34 **Housing**

35 It is anticipated that most of the operational workforce would be drawn from within the five-county  
 36 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.  
 37 There are about 53,000 housing units available to accommodate any nonlocal workers who relocate  
 38 to the five-county region. In addition, new residents would likely be dispersed across the region,  
 39 thereby not creating a burden on any one community. As a result, operation and maintenance of the  
 40 proposed conveyance facilities is not expected to increase the demand for housing.

41 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 42 population or new housing, they would not be considered to have an adverse effect.

1 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 2 result in minor population increases in the Delta region with adequate housing supply to  
 3 accommodate the change in population. The minor increase in population is not anticipated to result  
 4 in any adverse changes to the physical environment.

5 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the**  
 6 **Proposed Water Conveyance Facilities**

7 **NEPA Effects:** Throughout the five-county Delta region, population and employment could slightly  
 8 expand due to continued operation and maintenance of the water conveyance facilities under  
 9 Alternative 1C. Agricultural contributions to the character and culture of the Delta would be likely to  
 10 decline commensurate with the projected decline in agricultural-related employment and  
 11 production, as discussed under Impact ECON-7. This could result in the closure of agriculture-  
 12 dependent businesses or those catering to agricultural employees, particularly in areas where  
 13 conversion of agricultural land would be most concentrated. Similar effects could accrue to areas  
 14 disproportionately dependent upon existing recreational activities. However, influences associated  
 15 with those hired to operate, repair, and maintain water conveyance structures would grow. To the  
 16 extent that this anticipated economic shift away from agriculture results in demographic changes in  
 17 population, employment level, income, age, gender, or race, the study area would be expected to see  
 18 changes to its character, particularly in those Delta communities most substantially affected by  
 19 demographic changes based on their size or proximity to BDCP facilities.

20 While some of the rural qualities of Delta communities, including relatively low noise and traffic  
 21 levels, could return to near pre-construction conditions during the operational phase, other effects  
 22 would be lasting. For instance, the visual appearance of intakes and other permanent features would  
 23 compromise the predominantly undeveloped and agricultural nature of communities like  
 24 Clarksburg, Courtland, Hood, Knightsen, Discovery Bay, and Byron, which are closest to the  
 25 permanent surface water conveyance features. Where BDCP operations make areas less desirable in  
 26 which to live, work, shop, or participate in recreational activities, localized abandonment of  
 27 buildings could result. Such lasting effects could also result in changes to community cohesion if  
 28 they were to restrict mobility, reduce opportunities for maintaining face-to-face relationships, or  
 29 disrupt the functions of community organizations or community gathering places (such as schools,  
 30 libraries, places of worship, and recreational facilities).

31 While ongoing operations could result in beneficial effects relating to the economic welfare of a  
 32 community under Alternative 1C, adverse social effects could also arise, particularly in communities  
 33 closest to character-changing effects and in those most heavily influenced by agricultural and  
 34 recreational activities. Implementation of mitigation measures and environmental commitments  
 35 related to noise, visual effects, transportation, agriculture, and recreation would reduce adverse  
 36 effects (see Appendix 3B, *Environmental Commitments*). These actions are summarized under  
 37 Alternative 1A, Impact ECON-9.

38 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 1C  
 39 could affect community character in the Delta region. However, because these impacts are social in  
 40 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 41 changes to community character would lead to physical impacts involving population growth, these  
 42 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 43 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment could

1 result in alteration of community character stemming from a lack of maintenance, upkeep, and  
2 general investment.

### 3 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and** 4 **Maintenance of the Proposed Water Conveyance Facilities**

5 **NEPA Effects:** Under Alternative 1C, publicly-owned water conveyance facilities would be located,  
6 operated, and maintained on land of which some is currently held by private owners. Property tax  
7 and assessment revenue forgone as a result of water conveyance facilities is estimated at \$121.2  
8 million over the BDCP's 50-year permit period, or an average of \$2.4 million annually, compared  
9 with annual property tax revenue of more than \$934 million in the Delta counties (California State  
10 Controller's Office 2012). Projected over the 50-year period, these removals would likely represent  
11 less than 1% of these counties' property tax revenue. These decreases in revenue could potentially  
12 result in the loss of a substantial share of some agencies' tax bases, particularly for smaller districts  
13 affected by the BDCP. This economic effect would be considered adverse; however, the BDCP  
14 proponents would make arrangements to compensate local governments for the loss of property tax  
15 or assessment revenue for land used for constructing, locating, operating, or mitigating for new  
16 Delta water conveyance facilities. Additionally, as discussed under Impact ECON-7, operation and  
17 maintenance of the water conveyance facilities may result in a net increase of income and  
18 employment in the Delta region. This could also create an indirect beneficial effect through  
19 increased sales tax revenue for local government entities that rely on sales taxes.

20 **CEQA Conclusion:** Under Alternative 1C, the ongoing operation and maintenance of water  
21 conveyance facilities would restrict potential property tax revenue for various local government  
22 entities in the Delta region. Over the 50-year permit period, property tax and assessment revenue  
23 forgone is estimated at \$121.2 million. However, the Sacramento-San Joaquin Delta Reform Act  
24 commits the entities receiving water from the State Water Project and federal Central Valley Project  
25 to mitigate for lost property tax and assessment revenue associated with land needed for the  
26 construction of new conveyance facilities (Water Code Section 85089). Additionally, any losses may  
27 be offset, at least in part, by an increase in sales tax revenue. CEQA does not require a discussion of  
28 socioeconomic effects except where they would result in reasonably foreseeable physical changes. If  
29 an alternative is not anticipated to result in a physical change to the environment, it would not be  
30 considered to have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and  
31 15131). Here, any physical consequences resulting from fiscal impacts are too speculative to  
32 ascertain.

### 33 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the** 34 **Proposed Water Conveyance Facilities**

35 **NEPA Effects:** As discussed in Chapter 15, *Recreation*, Section 15.3.3.4, Impacts REC-5 through REC-  
36 8, operation and maintenance activities associated with the proposed water conveyance facilities  
37 under Alternative 1C are anticipated to create minor effects on recreational resources. Maintenance  
38 of conveyance facilities, including intakes, would result in periodic temporary but not substantial  
39 adverse effects on boat passage and water-based recreational activities. As discussed in Impact REC-  
40 7, most intake maintenance, such as painting, cleaning, and repairs, would be done with barges and  
41 divers, and could cause a temporary impediment to boat movement in the Sacramento River in the  
42 immediate vicinity of the affected intake structure and reduce opportunities for waterskiing,  
43 wakeboarding, or tubing in the immediate vicinity of the intake structures. However, boat passage  
44 and navigation on the river would still be possible around any barges or other maintenance

1 equipment and these effects would be expected to be short-term (2 years or less). Although water-  
2 based recreation (i.e. boating, waterskiing, wakeboarding, etc.) may be restricted at and in the  
3 vicinity of intakes, many miles of the Sacramento River would still be usable for these activities  
4 during periodic maintenance events. Additionally, implementation of the environmental  
5 commitment to provide notification of construction and maintenance activities in waterways  
6 (Appendix 3B, *Environmental Commitments*) would reduce these effects. Because effects of facility  
7 maintenance would be short-term and intermittent, substantial economic effects are not anticipated  
8 to result from operation and maintenance of the facilities.

9 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
10 conveyance facilities under Alternative 1C are anticipated to create minor effects on recreational  
11 resources and therefore, are not expected to substantially reduce economic activity related to  
12 recreational activities. This section considers only the economic effects of recreational changes.  
13 Potential physical changes to the environment relating to recreational resources are described and  
14 evaluated in Chapter 15, *Recreation*, Section 15.3.3.4, Impacts REC-5 through REC-8.

### 15 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during** 16 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

17 During operation and maintenance of conveyance facilities existing agricultural land would be in  
18 uses that include direct facility footprints and associated permanent roads and utilities. Agricultural  
19 land could also be affected by changes in water quality and other conditions that would affect crop  
20 productivity. These direct effects on agricultural land are described in Chapter 14, *Agricultural*  
21 *Resources*, Section 14.3.3.4, Impacts AG-1 and AG-2.

22 Changes in crop acreage were used to estimate the associated changes in economic values. Unit  
23 prices, yields, and crop production and investment costs were presented in Section 16.1,  
24 *Environmental Setting/Affected Environment*. Table 16-36 summarizes the changes in acreage and  
25 value of agricultural production that would result in the Delta region during operation of Alternative  
26 1C. Changes are shown relative to the Existing Conditions and the No Action Alternative by  
27 aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
28 Alternative were assumed to be the same). The changes in crop acreages are reported in greater  
29 detail in Appendix 14A, *Individual Crop Effects as a Result of BDCP Water Conveyance Facility*  
30 *Construction*.

31 Total value of irrigated crop production in the Delta region would decline on average by \$17.7  
32 million per year during operation and maintenance, with total irrigated crop acreage declining by  
33 about 11,700 acres. These estimates are not dependent on water year type.

1 **Table 16-36. Crop Acres and Value of Agricultural Production in the Delta during Operations and**  
 2 **Maintenance (Alternative 1C)**

Analysis Metric	Alternative 1C	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	472.0	-11.7
Grains	57.0	-1.6
Field crops	187.6	-3.5
Forage crops	109.6	-3.1
Vegetable, truck, and specialty crops	76.1	-1.0
Orchards and vineyards	41.6	-2.4
Total Value of Production (million \$)	632.4	-17.7
Grains	23.7	-0.5
Field crops	112.0	-1.9
Forage crops	71.1	-2.0
Vegetable, truck, and specialty crops	265.4	-3.0
Orchards and vineyards	160.2	-10.3

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

3  
 4 Alternative 1C may also affect production costs on lands even if gross revenues are largely  
 5 unaffected. Increased costs could be associated with operational constraints and longer travel times  
 6 due to permanent facilities. In most cases, affected lands fall within the facilities footprint, and are  
 7 included in the agricultural acreage and value of production described elsewhere in this Chapter and  
 8 in Chapter 14, *Agricultural Resources*, Section 14.3.3.4.

9 Crop yields and crop selection on lands in the Delta could be affected by changes in salinity of  
 10 agricultural water supply during operation and maintenance activities. If operation of the proposed  
 11 conveyance facilities increases salinity in part of the Delta, crops that are more sensitive to salinity  
 12 could shift to other lands in the five-county Delta region. See Chapter 14, *Agricultural Resources*,  
 13 Section 14.3.3.4, Impact AG-2, for further discussion of effects from changes in salinity.

14 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
 15 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
 16 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, on  
 17 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
 18 productivity and compensating off-site.

19 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities  
 20 the value of agricultural production in the Delta region would be reduced. The permanent removal  
 21 agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 22 14.3.3.4, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 23 considered an environmental impact. Significant environmental impacts would only result if the  
 24 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 25 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 26 economic losses due to implementation of the alternative. While the compensation to property  
 27 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 28 would not constitute mitigation for any related physical effect. Measures to reduce these impacts are

1 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
2 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
3 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
4 Zones.

### 5 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 6 **Implementation of the Proposed Conservation Measures 2-22**

7 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2-  
8 22 would be similar to those described under Alternative 1A, Impact ECON-13 because the  
9 measures are similar. In the Delta region, spending on Conservation Measures 2-22 would include  
10 construction, operation and maintenance activities that would convert or disturb existing land use.  
11 Because implementation of Conservation Measures 2-22 would be anticipated to result in an  
12 increase in construction and operation and maintenance-related employment and labor income, this  
13 would be considered a beneficial effect. However, implementation of these components would also  
14 be anticipated to result in a decrease in agricultural-related employment and labor income, which  
15 would be considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14,  
16 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by  
17 preserving agricultural productivity and compensating off-site. Additionally, implementation of  
18 these components are anticipated to result in the abandonment of natural gas wells, causing a  
19 decrease in employment and labor income associated with monitoring and maintaining wells, which  
20 would be considered an adverse effect. Mitigation Measure MIN-5, described in Chapter 26, *Mineral*  
21 *Resources*, Section 26.3.3.2, Impact MIN-5, would be available to reduce these effects by minimizing,  
22 to the extent feasible, the need for well abandonment or relocation.

23 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would affect total  
24 employment and income in the Delta region. The change in total employment and income in the  
25 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
26 Measures 2-22 and any resulting changes in agricultural production, recreation, and natural gas  
27 production activities. The total change in employment and income is not, in itself, considered an  
28 environmental impact. Significant environmental impacts would only result if the changes in  
29 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
30 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
31 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
32 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
33 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

### 34 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 35 **Implementing the Proposed Conservation Measures 2-22**

36 **NEPA Effects:** Effects on population and housing as a result of the proposed Conservation Measures  
37 2-22 would be similar to those described under Alternative 1A, Impact ECON-14 because the  
38 measures are similar. In general, the changes in population and housing would include increases in  
39 population from the construction and operation and maintenance-related activity and declines in  
40 residential housing and business establishments as a result of lands converted or impaired. Because  
41 these activities would not result in concentrated, substantial increases in population or new  
42 housing, they would not be considered to have an adverse effect.

1 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
 2 population and housing in the Delta region. The change in total population and housing in the Delta  
 3 region is based on employment resulting from implementation of the proposed Conservation  
 4 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
 5 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
 6 physical environment are not anticipated to result.

7 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed**  
 8 **Conservation Measures 2–22**

9 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
 10 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
 11 measures are similar. While implementation of Conservation Measures 2–22 could result in  
 12 beneficial effects relating to the economic welfare of a community, adverse social effects, including  
 13 effects on community cohesion, could also arise in those communities closest to character-changing  
 14 effects and those most heavily influenced by agricultural activities. Implementation of mitigation  
 15 measures and environmental commitments related to noise, visual effects, transportation,  
 16 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
 17 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

18 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 1C could affect  
 19 community character within the Delta region. However, because these impacts are social in nature,  
 20 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
 21 community character are related to physical impacts involving population growth, these impacts are  
 22 described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore,  
 23 notable decreases in population or employment, even if limited to certain areas, sectors, or the  
 24 vacancy of individual buildings, could result in alteration of community character stemming from a  
 25 lack of maintenance, upkeep, and general investment.

26 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing**  
 27 **the Proposed Conservation Measures 2–22**

28 **NEPA Effects:** Under Alternative 1C, effects on local government fiscal conditions as a result of  
 29 conservation measure implementation would be similar to those described under Alternative 1A,  
 30 Impact ECON-16. Conservation Measures 2–22 would remove some private land from local property  
 31 tax and assessment rolls. This economic effect would be considered adverse; the BDCP proponents  
 32 would offset forgone property tax and assessments levied by local governments and special districts  
 33 on private lands converted to habitat.

34 **CEQA Conclusion:** Under Alternative 1C, implementation of Conservation Measures 2–22 would  
 35 result in the removal of a portion of the property tax base for various local government entities in  
 36 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
 37 estimated at \$176.7 million, compared with annual property tax revenue of more than \$934 million  
 38 in the Delta counties (California State Controller's Office 2012). Projected over the 50-year period,  
 39 these removals would likely represent less than 1% of these counties' property tax revenue.  
 40 However, the BDCP proponents would compensate local governments and special districts for  
 41 forgone revenue. CEQA does not require a discussion of socioeconomic effects except where they  
 42 would result in physical changes. If an alternative is not anticipated to result in a physical change to

1 the environment, it would not be considered to have a significant impact under CEQA (CEQA  
2 Guidelines Sections 15064(f) and 15131)

### 3 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the** 4 **Proposed Conservation Measures 2-22**

5 **NEPA Effects:** Effects related to implementation of the Conservation Measures 2-22 under this  
6 alternative would be similar to those described under Alternative 1A, Impact ECON-17. These  
7 measures may result in adverse and beneficial effects on recreational resources in the Delta region,  
8 resulting in the potential for decreased or increased economic activities related to recreation.

9 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
10 recreation and compromise the quality of activities, leading to potential economic impacts.  
11 However, over time, implementation could also improve the quality of existing recreational  
12 opportunities, creating increased economic value with respect to recreation. This section considers  
13 only the economic effects of recreational changes brought about by conservation measure  
14 implementation. Potential physical changes to the environment relating to recreational resources  
15 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.4, Impacts REC-9 through REC-  
16 11.

### 17 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of** 18 **Implementing the Proposed Conservation Measures 2-22**

19 Effects on agricultural economics as a result of the proposed Conservation Measures 2-22 would be  
20 similar to those described under Alternative 1A, Impact ECON-18 because the measures are similar.  
21 Conservation Measures 2-22 would convert land from existing agricultural uses. These direct effects  
22 on agricultural land are described qualitatively in Chapter 14, *Agricultural Resources*, Section  
23 14.3.3.4, Impacts AG-3 and AG-4. Effects on agricultural economics would include effects on crop  
24 production and agricultural investments resulting from restoration actions on agricultural lands.  
25 The effects would be similar in kind to those described for lands converted due to construction and  
26 operation of the conveyance features and facilities. The total acreage and crop mix of agricultural  
27 land potentially affected is not specified at this time, but when required, the BDCP proponents  
28 would provide compensation to property owners for losses due to implementation of the  
29 alternative.

30 **NEPA Effects:** Because implementation of Conservation Measures 2-22 would be anticipated to lead  
31 to reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
32 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
33 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
34 agricultural productivity and compensating off-site.

35 **CEQA Conclusion:** Implementation of Conservation Measures 2-22 would reduce the total value of  
36 agricultural production in the Delta region. The permanent removal of agricultural land from  
37 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.4, Impacts AG-3 and  
38 AG-4. The reduction in the value of agricultural production is not considered an environmental  
39 impact. Significant environmental impacts would only result if the changes in regional economics  
40 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
41 required, the BDCP proponents would provide compensation to property owners for economic  
42 losses due to implementation of the alternative. While the compensation to property owners would  
43 reduce the severity of economic effects related to the loss of agricultural land, it would not

1 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
2 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

### 3 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

4 **NEPA Effects:** The socioeconomic effects associated with operation of Alternative 1C would be the  
5 same as those described under Alternative 1A, Impact ECON-19, because deliveries would be based  
6 on the same operational guidelines. Changes in deliveries to hydrologic regions could result in  
7 beneficial or adverse socioeconomic effects in these areas. In hydrologic regions where water  
8 deliveries are predicted to increase when compared with the No Action Alternative, more stable  
9 agricultural activities could support employment and economic production associated with  
10 agriculture. Where M&I deliveries increase, population growth could lead to general economic  
11 growth and support water-intensive industries. Such changes could also lead to shifts in the  
12 character of communities in the hydrologic regions with resultant beneficial or adverse effects.  
13 Likewise, growth associated with deliveries could require additional expenditures for local  
14 governments while also supporting increases in revenue.

15 **CEQA Conclusion:** Operation of water conveyance facilities under Alternative 1C could affect  
16 socioeconomic conditions in the hydrologic regions receiving water from the SWP and CVP.  
17 However, because these impacts are social and economic in nature, rather than physical, they are  
18 not considered environmental impacts under CEQA. To the extent that changes in socioeconomic  
19 conditions in the hydrologic regions would lead to physical impacts, such impacts are described in  
20 Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.

### 21 **16.3.3.5 Alternative 2A—Dual Conveyance with Pipeline/Tunnel and Five** 22 **Intakes (15,000 cfs; Operational Scenario B)**

23 Facilities construction under Alternative 2A would be almost identical to those described for  
24 Alternative 1A. Alternative 2A could involve relocation of two of the intakes to a site south of the  
25 confluence of Sutter and Steamboat Sloughs and the Sacramento River. Additionally, under  
26 Alternative 2A, an operable barrier would be constructed at the Head of Old River. Operations would  
27 be different under Alternative 2A than under Alternative 1A.

### 28 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 29 **Region during Construction of the Proposed Water Conveyance Facilities**

30 Temporary effects on regional economics during construction of the proposed water conveyance  
31 facilities would be similar to those described under Alternative 1A, Impact ECON-1. As shown in  
32 Table 16-19, over the construction period, regional effects of construction activities would result in  
33 direct employment of more than 21,000 FTE, with total employment effects in excess of 65,000 FTE.  
34 Increases in labor income associated with this employment would also be expected. Declines in  
35 agricultural production would be expected to lead to a decrease in employment of 27 FTE, with total  
36 effects leading to a decline of 100 FTE. Similarly, labor income related to these positions would  
37 decline, as shown in Table 16-20.

38 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
39 construction-related employment and labor income, this would be considered a beneficial effect.  
40 However, these activities would also be anticipated to result in a decrease in agricultural-related  
41 employment and labor income, which would be considered an adverse effect. Mitigation Measure

1 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
2 available to reduce these effects by preserving agricultural productivity and compensating off-site.

3 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
4 employment and income in the Delta region, temporarily. The increase in employment and income  
5 that would result from expenditures on construction would be greater than the reduction in  
6 employment and income attributable to losses in agricultural production. Changes in recreational  
7 expenditures and natural gas well operations could also affect regional employment and income, but  
8 these have not been quantified. The total change in employment and income is not, in itself,  
9 considered an environmental impact. Significant environmental impacts would only result if the  
10 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
11 throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation Costs and*  
12 *Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
13 *Agricultural Resources*, Section 14.3.3.5, Impacts AG-1 and AG-2; changes in recreation related  
14 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.5, REC-1 through REC-4;  
15 abandonment of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.5,  
16 Impact MIN-1. When required, DWR would provide compensation to property owners for economic  
17 losses due to implementation of the alternative. While the compensation to property owners would  
18 reduce the severity of economic effects related to the loss of agricultural land, it would not  
19 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
20 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
21 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
22 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
23 Zones.

#### 24 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 25 **the Proposed Water Conveyance Facilities**

26 Effects on population and housing during construction of the proposed water conveyance facilities  
27 would be similar to those described under Alternative 1A, Impact ECON-2. It is anticipated that non-  
28 local workers would temporarily relocate to the Delta region, thus adding to the local population.  
29 However, this additional population would constitute a minor increase in the total 2020 projected  
30 regional population of 4.6 million and be distributed throughout the region. Within specific local  
31 communities, there could be localized effects on housing. However, given the availability of housing  
32 within the five-county region, predicting where this impact might fall would be speculative. In  
33 addition, new residents would likely be dispersed across the region, thereby not creating a burden  
34 on any one community.

35 **NEPA Effects:** Because these activities would not result in permanent concentrated, substantial  
36 increases in population or new housing, they would not be considered to have an adverse effect.

37 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
38 temporary population increases in the Delta region, which has an adequate housing supply to  
39 accommodate the change in population. Therefore, adverse physical changes resulting from the  
40 minor increase in population are not anticipated.

1 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed**  
2 **Water Conveyance Facilities**

3 **NEPA Effects:** Under Alternative 2A, effects on community character would be similar in nature,  
4 location, and magnitude to those described under Alternative 1A, Impact ECON-3. Variations in the  
5 location of effects would result from the potential construction of Intakes 6 and 7 rather than  
6 Intakes 4 and 5 and the construction of an operable barrier at the Head of Old River. While water  
7 conveyance construction could result in beneficial effects relating to the economic welfare of a  
8 community, adverse social effects could also arise as a result of declining economic stability or  
9 changes in community cohesion in communities closest to construction effects and in those most  
10 heavily influenced by agricultural and recreational activities. Implementation of mitigation  
11 measures and environmental commitments related to noise, visual effects, transportation,  
12 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
13 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-3.

14 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 2C could affect  
15 community character in the Delta region. However, because these impacts are social in nature,  
16 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
17 community character would lead to physical impacts involving population growth, such impacts are  
18 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
19 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
20 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
21 character stemming from a lack of maintenance, upkeep, and general investment. However,  
22 implementation of mitigation measures and environmental commitments related to noise, visual  
23 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
24 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
25 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
26 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
27 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
28 Management Plans.

29 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing**  
30 **the Proposed Water Conveyance Facilities**

31 **NEPA Effects:** Effects on tax revenue as a result of water conveyance construction under Alternative  
32 2A would be similar to those described under Alternative 1A, Impact ECON-4. While this economic  
33 effect would be considered adverse, BDCP proponents would compensate local governments for the  
34 loss of property tax or assessment revenue associated with construction of water conveyance  
35 facilities. Additionally, local entities could benefit from an increase in sales tax revenue.

36 **CEQA Conclusion:** Construction of water conveyance facilities for Alternative 2A would result in the  
37 removal of a portion of the property tax base for various local government entities in the Delta  
38 region. However, entities receiving water from the State Water Project and federal Central Valley  
39 Project would mitigate for lost property tax and assessment revenue associated with land needed  
40 for the construction of new conveyance facilities (Water Code Section 85089). Additionally, any  
41 losses could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
42 require a discussion of socioeconomic effects except where they would result in reasonably  
43 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
44 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines

1 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
2 speculative to ascertain.

### 3 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 4 **Water Conveyance Facilities**

5 **NEPA Effects:** Under Alternative 2A, disruption of recreational activities during the construction  
6 period would be similar in character and magnitude to that described under Alternative 1A, Impact  
7 ECON-5. While access to recreational facilities would be maintained throughout construction, the  
8 quality of recreational activities including boating, fishing, waterfowl hunting, and hiking in the  
9 Delta could be indirectly affected by noise, lighting, traffic, and visual degradation in proximity to  
10 water conveyance construction.

11 Construction of water conveyance structures under this alternative would be anticipated to result in  
12 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
13 the implementation of mitigation measures, including enhancement of fishing access sites and  
14 incorporation of recreational access into project design, and environmental and non-environmental  
15 commitments, including providing funding to implement recreational improvements and control  
16 aquatic weeds, providing notification of maintenance activities in waterways, and developing and  
17 implementing a noise abatement plan, as described in Appendix 3B, *Environmental Commitments*.  
18 With a decrease in recreational quality, the number of visits would be anticipated to decline, at least  
19 in areas close to construction activities. The multi-year schedule and geographic scale of  
20 construction activities and the anticipated decline in recreational spending would be considered an  
21 adverse effect. The commitments and mitigation measure cited above would contribute to the  
22 reduction of this effect.

23 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 2A  
24 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
25 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
26 recreational activities. This section considers only the economic effects of recreational changes  
27 brought about by construction of the proposed water conveyance facilities. Potential physical  
28 changes to the environment relating to recreational resources are described and evaluated in  
29 Chapter 15, *Recreation*, Section 15.3.3.5, Impacts REC-1 through REC-4.

### 30 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 31 **the Proposed Water Conveyance Facilities**

32 Effects on agricultural economics during construction of the proposed water conveyance facilities  
33 would be similar to those described under Alternative 1A, Impact ECON-6. Total value of irrigated  
34 crop production in the Delta would decline on average by \$8.9 million per year during the 8 year  
35 construction period, with total irrigated crop acreage declining by about 5,600 acres. Alternative 2A  
36 may also affect production costs on lands even if gross revenues are largely unaffected. Costs could  
37 be increased by operational constraints and longer travel times due to facilities construction.  
38 Additionally, loss of investments in production facilities and standing orchards and vineyards would  
39 occur as a result of facilities construction.

40 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
41 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
42 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*

1 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
2 agricultural productivity and compensating off-site.

3 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
4 value of agricultural production in the Delta region. The removal of agricultural land from  
5 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.5, Impacts AG-1 and  
6 AG-2. The reduction in the value of agricultural production is not considered an environmental  
7 impact. Significant environmental impacts would only result if the changes in regional economics  
8 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
9 required, DWR would provide compensation to property owners for economic losses due to  
10 implementation of the alternative. While the compensation to property owners would reduce the  
11 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
12 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
13 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
14 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
15 and land subject to Williamson Act contracts or in Farmland Security Zones.

### 16 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 17 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

18 Permanent effects on regional economics during operation and maintenance of the proposed water  
19 conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-7.  
20 Increased expenditures related to operation and maintenance of water conveyance facilities would  
21 be expected to result in a permanent increase in regional employment and income, as presented in  
22 Table 16-22. The permanent removal of agricultural land following construction would have lasting  
23 negative effects on agricultural employment and income, as shown in Table 16-23.

24 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
25 result in an increase in operations-related employment and labor income, this would be considered  
26 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
27 agricultural-related employment and labor income, which would be considered an adverse effect.  
28 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
29 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
30 compensating off-site.

31 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
32 increase total employment and income in the Delta region. The net change would result from  
33 expenditures on operation and maintenance and from changes in agricultural production. The total  
34 change in income and employment is not, in itself, considered an environmental impact. Significant  
35 environmental impacts would only result if the changes in regional economics cause physical  
36 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
37 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
38 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.5, Impacts AG-3  
39 and AG-4; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
40 15.3.3.5, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
41 landowners as a result of acquiring lands for the proposed conveyance facilities. While the  
42 compensation to property owners would reduce the severity of economic effects related to the loss  
43 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
44 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact

1 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
2 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
3 contracts or in Farmland Security Zones.

#### 4 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 5 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

6 Permanent effects on population and housing during operation and maintenance of the proposed  
7 water conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-  
8 8. It is anticipated that non-local workers would relocate to the five-county region, thus adding to  
9 the local population. However, this additional population would constitute a minor increase in the  
10 total 2020 projected regional population of 4.6 million and be distributed throughout the region. It  
11 is anticipated that most of the operational workforce would be drawn from within the five-county  
12 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

13 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
14 population or new housing, they would not be considered to have an adverse effect.

15 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
16 result in minor population increases in the Delta region with adequate housing supply to  
17 accommodate the change in population and therefore adverse changes in the physical environment  
18 are not anticipated.

#### 19 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 20 **Proposed Water Conveyance Facilities**

21 **NEPA Effects:** Under Alternative 2A, effects on community character would be similar in nature,  
22 location, and magnitude to those described under Alternative 1A, Impact ECON-9. Variations in the  
23 location of effects would result from the potential operation and maintenance of Intakes 6 and 7  
24 rather than Intakes 4 and 5 and the operation of an operable barrier at the Head of Old River. While  
25 water conveyance operation and maintenance could result in beneficial effects relating to the  
26 economic welfare of a community, lasting adverse social effects, including effects on community  
27 cohesion, could also arise in communities closest to physical features and in those most heavily  
28 influenced by agricultural and recreational activities. Implementation of mitigation measures and  
29 environmental commitments related to noise, visual effects, transportation, agriculture, and  
30 recreation would reduce adverse effects (see Appendix 3B, *Environmental Commitments*). These  
31 actions are summarized under Alternative 1A, Impact ECON-9.

32 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 2A  
33 could affect community character in the Delta region. However, because these impacts are social in  
34 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
35 changes to community character would lead to physical impacts involving population growth, such  
36 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
37 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
38 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
39 community character stemming from a lack of maintenance, upkeep, and general investment.

1 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and**  
 2 **Maintenance of the Proposed Water Conveyance Facilities**

3 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operation and  
 4 maintenance under Alternative 2A would be similar to those described under Alternative 1A, Impact  
 5 ECON-10. While this economic effect would be considered adverse, BDCP proponents would  
 6 compensate local governments for the loss of property tax or assessment revenue associated with  
 7 construction of water conveyance facilities. Additionally, local entities could benefit from an  
 8 increase in sales tax revenue.

9 **CEQA Conclusion:** Continued operation and maintenance of water conveyance facilities for  
 10 Alternative 2A would result in the removal of a portion of the property tax base for various local  
 11 government entities in the Delta region. However, entities receiving water from the State Water  
 12 Project and federal Central Valley Project would mitigate for lost property tax and assessment  
 13 revenue associated with land needed for the siting of conveyance facilities (Water Code Section  
 14 85089). Additionally, any losses could be offset, at least in part, by an anticipated increase in sales  
 15 tax revenue. CEQA does not require a discussion of socioeconomic effects except where they would  
 16 result in reasonably foreseeable physical changes. If an alternative is not anticipated to result in a  
 17 physical change to the environment, it would not be considered to have a significant impact under  
 18 CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any physical consequences resulting  
 19 from fiscal impacts are too speculative to ascertain.

20 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the**  
 21 **Proposed Water Conveyance Facilities**

22 **NEPA Effects:** Effects on recreation economics during operation and maintenance of the proposed  
 23 water conveyance facilities under Alternative 2A would be similar to those described under  
 24 Alternative 1A, Impact ECON-11. Maintenance of conveyance facilities, including intakes, would  
 25 result in periodic temporary but not substantial adverse effects on boat passage and water-based  
 26 recreational activities. Because effects of facility maintenance would be short-term and intermittent,  
 27 substantial economic effects are not anticipated to result from operation and maintenance of the  
 28 facilities.

29 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
 30 conveyance facilities under Alternative 2A are anticipated to create minor effects on recreational  
 31 resources and therefore, are not expected to substantially reduce economic activity related to  
 32 recreational activities. This section considers only the economic effects of recreational changes.  
 33 Potential physical changes to the environment relating to recreational resources are described and  
 34 evaluated in Chapter 15, *Recreation*, Section 15.3.3.5, Impacts REC-5 through REC-8.

35 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during**  
 36 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

37 Permanent effects on agricultural economics during operation and maintenance of the proposed  
 38 water conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-  
 39 12. Total value of irrigated crop production in the Delta would decline on average by \$7.4 million  
 40 per year during operation and maintenance, with total irrigated crop acreage declining by about  
 41 4,400 acres. Alternative 2A may also affect production costs on lands even if gross revenues are  
 42 largely unaffected. Costs could be increased by operational constraints, changes in water quality,  
 43 and longer travel times due to the permanent footprint of facilities. Additionally, loss of investments

1 in production facilities and standing orchards and vineyards would occur as a result of facilities  
2 construction.

3 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
4 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
5 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
6 14.3.3.2, Impact AG-2, would be available to reduce these effects by preserving agricultural  
7 productivity and compensating off-site.

8 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities,  
9 the value of agricultural production in the Delta region would be reduced. The permanent removal  
10 of agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
11 14.3.3.5, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
12 considered an environmental impact. Significant environmental impacts would only result if the  
13 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
14 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
15 economic losses due to implementation of the alternative. While the compensation to property  
16 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
17 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
18 are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-2, and particularly  
19 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
20 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
21 Zones.

## 22 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 23 **Implementation of the Proposed Conservation Measures 2-22**

24 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2-  
25 22 would be similar to those described under Alternative 1A, Impact ECON-13. In the Delta region,  
26 spending on Conservation Measures 2-22 would include construction, operation and maintenance  
27 activities that would convert or disturb existing land use. Because implementation of Conservation  
28 Measures 2-22 would be anticipated to result in an increase in construction and operation and  
29 maintenance-related employment and labor income, this would be considered a beneficial effect.  
30 However, implementation of these components would also be anticipated to result in a decrease in  
31 agricultural-related employment and labor income, which would be considered an adverse effect.  
32 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
33 AG-2, would be available to reduce these effects by preserving agricultural productivity and  
34 compensating off-site. Additionally, implementation of these components are anticipated to result in  
35 the abandonment of natural gas wells, causing a decrease in employment and labor income  
36 associated with monitoring and maintaining wells, which would be considered an adverse effect.  
37 Mitigation Measure MIN-5, described in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-  
38 5, would be available to reduce these effects by minimizing, to the extent feasible, the need for well  
39 abandonment or relocation.

40 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would affect total  
41 employment and income in the Delta region. The change in total employment and income in the  
42 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
43 Measures 2-22 and any resulting changes in agricultural production, recreation, and natural gas  
44 production activities. The total change in employment and income is not, in itself, considered an

1 environmental impact. Significant environmental impacts would only result if the changes in  
2 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
3 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
4 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
5 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
6 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

#### 7 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 8 **Implementing the Proposed Conservation Measures 2–22**

9 Effects on population and housing as a result of the proposed Conservation Measures 2–22 would be  
10 similar to those described under Alternative 1A, Impact ECON-14. In general, the changes in  
11 population and housing would include increases in population from the construction and operation  
12 and maintenance-related activity and declines in residential housing and business establishments as  
13 a result of lands converted or impaired.

14 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
15 population or new housing, they would not be considered to have an adverse effect.

16 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
17 population and housing in the Delta region. The change in total population and housing in the Delta  
18 region is based on employment resulting from implementation of the proposed Conservation  
19 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
20 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
21 physical environment are not anticipated to result.

#### 22 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 23 **Conservation Measures 2–22**

24 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
25 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
26 measures are similar. While implementation of Conservation Measures 2–22 could result in  
27 beneficial effects relating to the economic welfare of a community, adverse social effects, including  
28 effects on community cohesion, could also arise in those communities closest to character-changing  
29 effects and those most heavily influenced by agricultural activities. Implementation of mitigation  
30 measures and environmental commitments related to noise, visual effects, transportation,  
31 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
32 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

33 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 2A could  
34 affect community character within the Delta region. However, because these impacts are social in  
35 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
36 changes to community character are related to physical impacts involving population growth, these  
37 impacts are described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.  
38 Furthermore, notable decreases in population or employment, even if limited to certain areas,  
39 sectors, or the vacancy of individual buildings, could result in alteration of community character  
40 stemming from a lack of maintenance, upkeep, and general investment.

1 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing**  
 2 **the Proposed Conservation Measures 2-22**

3 **NEPA Effects:** Under Alternative 2A, effects on local government fiscal conditions as a result of  
 4 conservation measure implementation would be similar to those described under Alternative 1A,  
 5 Impact ECON-16. Conservation Measures 2-22 would remove some private land from local property  
 6 tax and assessment rolls. This economic effect would be considered adverse; however, the BDCP  
 7 proponents would offset forgone property tax and assessments levied by local governments and  
 8 special districts on private lands converted to habitat.

9 **CEQA Conclusion:** Under Alternative 2A, implementation of Conservation Measures 2-22 would  
 10 result in the removal of a portion of the property tax base for various local government entities in  
 11 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
 12 estimated to reach \$176.7 million. However, the BDCP proponents would compensate local  
 13 governments and special districts for forgone revenue. CEQA does not require a discussion of  
 14 socioeconomic effects except where they would result in physical changes. If an alternative is not  
 15 anticipated to result in a physical change to the environment, it would not be considered to have a  
 16 significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131).

17 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the**  
 18 **Proposed Conservation Measures 2-22**

19 **NEPA Effects:** Effects related to implementation of the Conservation Measures 2-22 under this  
 20 alternative would be similar to those described under Alternative 1A, Impact ECON-17. These  
 21 measures may result in adverse and beneficial effects on recreational resources in the Delta region,  
 22 resulting in the potential for decreased or increased economic activities related to recreation.

23 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
 24 recreation and compromise the quality of activities, leading to potential economic impacts.  
 25 However, over time, implementation could also improve the quality of existing recreational  
 26 opportunities, creating increased economic value with respect to recreation. This section considers  
 27 only the economic effects of recreational changes brought about by conservation measure  
 28 implementation. Potential physical changes to the environment relating to recreational resources  
 29 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.5, Impacts REC-9 through REC-  
 30 11.

31 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
 32 **Implementing the Proposed Conservation Measures 2-22**

33 Effects on agricultural economics as a result of the proposed Conservation Measures 2-22 would be  
 34 similar to those described under Alternative 1A, Impact ECON-18. Conservation Measures 2-22  
 35 would convert land from existing agricultural uses. These direct effects on agricultural land are  
 36 described qualitatively in Chapter 14, *Agricultural Resources*, Section 14.3.3.5, Impacts AG-3 and AG-  
 37 4. Effects on agricultural economics would include effects on crop production and agricultural  
 38 investments resulting from restoration actions on agricultural lands. The effects would be similar in  
 39 kind to those described for lands converted due to construction and operation of the conveyance  
 40 features and facilities. The total acreage and crop mix of agricultural land potentially affected is not  
 41 specified at this time, but when required, the BDCP proponents would provide compensation to  
 42 property owners for losses due to implementation of the alternative.

1 **NEPA Effects:** Because implementation of the Conservation Measures 2–22 would be anticipated to  
 2 lead to reductions in crop acreage and in the value of agricultural production in the Delta region, this  
 3 is considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 4 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 5 agricultural productivity and compensating off-site.

6 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
 7 agricultural production in the Delta region. The permanent removal of agricultural land from  
 8 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.5, Impacts AG-3 and  
 9 AG-4. The reduction in the value of agricultural production is not considered an environmental  
 10 impact. Significant environmental impacts would only result if the changes in regional economics  
 11 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 12 required, the BDCP proponents would provide compensation to property owners for economic  
 13 losses due to implementation of the alternative. While the compensation to property owners would  
 14 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 15 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 16 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

### 17 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

18 The socioeconomic effects associated with operation of Alternative 2A would be similar to those  
 19 described under Alternative 1A, Impact ECON-19; however, the magnitude of the effects would be  
 20 different based on different operational guidelines leading to different deliveries to hydrologic  
 21 regions. Changes in deliveries to hydrologic regions could result in beneficial or adverse  
 22 socioeconomic effects in these areas. In hydrologic regions where water deliveries are predicted to  
 23 increase when compared with the No Action Alternative, more stable agricultural activities could  
 24 support employment and economic production associated with agriculture.

### 25 **Changes in SWP Deliveries Compared to No Action Alternative**

26 Compared to No Action Alternative (2060), Alternative 2A would increase deliveries to all  
 27 hydrologic regions except for the San Joaquin River Region, which would experience no change in  
 28 deliveries. Compared to the No Action Alternative (2060), South Coast would receive the largest net  
 29 increase (up to 183 TAF of Table A plus Article 21 deliveries) among the regions, which represents  
 30 65% of the net increase in M&I deliveries under Alternative 2A (refer to Chapter 30, *Growth*  
 31 *Inducement and Other Indirect Effects*, Table 30-16, for more information).

### 32 **Changes in CVP Deliveries Compared to No Action Alternative**

33 Alternative 2A would not change M&I deliveries for the Sacramento River, South Coast, South  
 34 Lahontan and Colorado River Regions because there are no affected CVP contractors located in these  
 35 regions. Compared to the No Action Alternative (2060), Alternative 2A would result in increased  
 36 deliveries to the other hydrologic regions. Compared to the No Action Alternative (2060), San  
 37 Francisco Bay is projected to receive the largest potential increase (2 TAF) among the hydrologic  
 38 regions (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-17 for more  
 39 information).

40 **NEPA Effects:** Where M&I deliveries increase, population growth could lead to general economic  
 41 growth and support water-intensive industries. Changes to agricultural production and population  
 42 growth with its associated economic activity could also lead to shifts in the character of

1 communities in the hydrologic regions with resultant beneficial or adverse effects. Likewise, growth  
 2 associated with deliveries could require additional expenditures for local governments while also  
 3 supporting increases in revenue.

4 **CEQA Conclusion:** As described above, the operational components of BDCP Conservation Measure  
 5 1 could result in a number of effects in areas receiving SWP and CVP water deliveries outside of the  
 6 Delta.

#### 7 **Changes in SWP Deliveries Compared to Existing Conditions**

8 Compared to Existing Conditions, Alternative 2A would increase deliveries to all hydrologic regions  
 9 except for the San Joaquin River Region, which would experience no change in deliveries. South  
 10 Coast would receive the largest net increase (up to 118 TAF of Table A) among the regions, which  
 11 represents 63% of the net increase in M&I deliveries under Alternative 2A (refer to Chapter 30,  
 12 *Growth Inducement and Other Indirect Effects*, Table 30-16 for more information).

#### 13 **Changes in CVP Deliveries Compared to Existing Conditions**

14 Alternative 2A would not change M&I deliveries for the Sacramento River, South Coast, South  
 15 Lahontan, and Colorado River Regions because there are no affected CVP contractors located in  
 16 these regions. Compared to Existing Conditions, Alternative 2A would result in decreased deliveries  
 17 to the other hydrologic regions. Compared to Existing Conditions, San Francisco Bay is projected to  
 18 receive the largest decrease (5 TAF) among the hydrologic regions (refer to Chapter 30, *Growth*  
 19 *Inducement and Other Indirect Effects*, Table 30-17 for more information).

#### 20 **Summary**

21 Operation of water conveyance facilities under Alternative 2A could affect socioeconomic conditions  
 22 in the hydrologic regions receiving water from the SWP and CVP. However, because these impacts  
 23 are social and economic in nature, rather than physical, they are not considered environmental  
 24 impacts under CEQA. To the extent that changes in socioeconomic conditions in the hydrologic  
 25 regions would lead to physical impacts, such impacts are described in Chapter 30, *Growth*  
 26 *Inducement and Other Indirect Effects*.

### 27 **16.3.3.6 Alternative 2B—Dual Conveyance with East Alignment and Five** 28 **Intakes (15,000 cfs; Operational Scenario B)**

29 Facilities constructed under Alternative 2B would be almost identical to those described for  
 30 Alternative 1B. Alternative 2B could involve relocation of two of the intakes to a site south of the  
 31 confluence of Sutter and Steamboat Sloughs and the Sacramento River (Intakes 6 and 7). Under this  
 32 alternative, an operable barrier would also be constructed at the Head of Old River. Operations  
 33 would be different under Alternative 2B than under Alternative 1B.

#### 34 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 35 **Region during Construction of the Proposed Water Conveyance Facilities**

36 Temporary effects on regional economics during construction of the proposed water conveyance  
 37 facilities would be similar to those described under Alternative 1B, Impact ECON-1. As shown in  
 38 Table 16-25, over the construction period, regional effects of construction activities would result in  
 39 direct employment of more than 29,000 FTE, with total employment effects in excess of 63,000 FTE.  
 40 Increases in labor income associated with this employment would also be expected. Declines in

1 agricultural production would be expected to lead to a decrease in employment of 90 FTE, with total  
2 effects leading to a decline of 340 FTE. Similarly, labor income related to these positions would  
3 decline, as shown in Table 16-26.

4 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
5 construction-related employment and labor income, this would be considered a beneficial effect.  
6 However, these activities would also be anticipated to result in a decrease in agricultural-related  
7 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
8 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
9 available to reduce these effects by preserving agricultural productivity and compensating off-site.

10 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
11 employment and income in the Delta region, temporarily. The increase in employment and income  
12 that would result from expenditures on construction would be greater than the reduction in  
13 employment and income attributable to losses in agricultural production. Changes in recreational  
14 expenditures and natural gas well operations could also affect regional employment and income, but  
15 these have not been quantified. The total change in employment and income is not, in itself,  
16 considered an environmental impact. Significant environmental impacts would only result if the  
17 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
18 throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation Costs and*  
19 *Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
20 *Agricultural Resources*, Section 14.3.3.6, Impacts AG-1 and AG-2; changes in recreation related  
21 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.6, REC-1 through REC-4;  
22 abandonment of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.6,  
23 Impact MIN-1. When required, DWR would provide compensation to property owners for economic  
24 losses due to implementation of the alternative. While the compensation to property owners would  
25 reduce the severity of economic effects related to the loss of agricultural land, it would not  
26 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
27 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
28 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
29 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
30 Zones.

### 31 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 32 **the Proposed Water Conveyance Facilities**

33 Effects on population and housing during construction of the proposed water conveyance facilities  
34 would be similar to those described under Alternative 1B, Impact ECON-2. It is anticipated that non-  
35 local workers would temporarily relocate to the Delta region, thus adding to the local population.  
36 However, this additional population would constitute a minor increase in the total 2020 projected  
37 regional population of 4.6 million and be distributed throughout the region. Within specific local  
38 communities, there could be localized effects on housing. However, given the availability of housing  
39 within the five-county region, predicting where this impact might fall would be speculative. In  
40 addition, new residents would likely be dispersed across the region, thereby not creating a burden  
41 on any one community.

42 **NEPA Effects:** Because these activities would not result in permanent concentrated, substantial  
43 increases in population or new housing, they would not be considered to have an adverse effect.

1 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
2 temporary population increases in the Delta region, which has an adequate housing supply to  
3 accommodate the change in population. Therefore, adverse physical changes resulting from the  
4 minor increase in population are not anticipated.

### 5 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 6 **Water Conveyance Facilities**

7 **NEPA Effects:** Under Alternative 2B, effects on community character would be similar in nature,  
8 location, and magnitude to those described under Alternative 1B, Impact ECON-3. Variations in the  
9 location of effects would result from the potential construction of Intakes 6 and 7 rather than  
10 Intakes 4 and 5 and the construction of an operable barrier at the Head of Old River. While water  
11 conveyance construction could result in beneficial effects relating to the economic welfare of a  
12 community, adverse social effects could also arise as a result of declining economic stability or  
13 changes in community cohesion in communities closest to construction effects and in those most  
14 heavily influenced by agricultural and recreational activities. Implementation of mitigation  
15 measures and environmental commitments related to noise, visual effects, transportation,  
16 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
17 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-3.

18 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 2B could affect  
19 community character in the Delta region. However, because these impacts are social in nature,  
20 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
21 community character would lead to physical impacts involving population growth, such impacts are  
22 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
23 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
24 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
25 character stemming from a lack of maintenance, upkeep, and general investment. However,  
26 implementation of mitigation measures and environmental commitments related to noise, visual  
27 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
28 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
29 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
30 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
31 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
32 Management Plans.

### 33 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 34 **the Proposed Water Conveyance Facilities**

35 **NEPA Effects:** Effects on tax revenue as a result of water conveyance construction under Alternative  
36 2B would be similar to those described under Alternative 1B, Impact ECON-4. While this economic  
37 effect would be considered adverse, BDCP proponents would compensate local governments for the  
38 loss of property tax or assessment revenue associated with construction of water conveyance  
39 facilities. Additionally, local entities could benefit from an increase in sales tax revenue.

40 **CEQA Conclusion:** Construction of water conveyance facilities for Alternative 2B would result in the  
41 removal of a portion of the property tax base for various local government entities in the Delta  
42 region. However, entities receiving water from the State Water Project and federal Central Valley  
43 Project would mitigate for lost property tax and assessment revenue associated with land needed

1 for the construction of new conveyance facilities (Water Code Section 85089). Additionally, any  
 2 losses could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
 3 require a discussion of socioeconomic effects except where they would result in reasonably  
 4 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
 5 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
 6 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
 7 speculative to ascertain.

#### 8 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 9 **Water Conveyance Facilities**

10 **NEPA Effects:** Under Alternative 2B, disruption of recreational activities during the construction  
 11 period would be similar in character and magnitude to that described under Alternative 1B, Impact  
 12 ECON-5. Access to recreational facilities may be restricted throughout the construction period.  
 13 Additionally, the quality of recreational activities including boating, fishing, waterfowl hunting, and  
 14 hiking in the Delta could be indirectly affected by noise, lighting, traffic, and visual degradation in  
 15 proximity to water conveyance construction.

16 Construction of water conveyance structures under this alternative would be anticipated to result in  
 17 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
 18 the implementation of mitigation measures, including enhancement of fishing access sites and  
 19 incorporation of recreational access into project design, and environmental and non-environmental  
 20 commitments, including providing funding to implement recreational improvements and control  
 21 aquatic weeds, providing notification of maintenance activities in waterways, and developing and  
 22 implementing a noise abatement plan, as described in Appendix 3B, *Environmental Commitments*.  
 23 With a decrease in recreational quality, the number of visits would be anticipated to decline, at least  
 24 in areas closest to construction activities. The multi-year schedule and geographic scale of  
 25 construction activities and the anticipated decline in recreational spending would be considered an  
 26 adverse effect. The commitments and mitigation measure cited above would contribute to the  
 27 reduction of this effect.

28 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 2B  
 29 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
 30 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
 31 recreational activities. This section considers only the economic effects of recreational changes  
 32 brought about by construction of the proposed water conveyance facilities. Potential physical  
 33 changes to the environment relating to recreational resources are described and evaluated in  
 34 Chapter 15, *Recreation*, Section 15.3.3.6, Impacts REC-1 through REC-4.

#### 35 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 36 **the Proposed Water Conveyance Facilities**

37 Effects on agricultural economics during construction of the proposed water conveyance facilities  
 38 would be similar to those described under Alternative 1B, Impact ECON-6. Total value of irrigated  
 39 crop production in the Delta would decline on average by \$32.8 million per year during the  
 40 construction period, with total irrigated crop acreage declining by about 19,460 acres. Alternative  
 41 2B may also affect production costs on lands even if gross revenues are largely unaffected. Costs  
 42 could be increased by operational constraints and longer travel times due to facilities construction.

1 Additionally, loss of investments in production facilities and standing orchards and vineyards would  
2 occur as a result of facilities construction.

3 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
4 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
5 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
6 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
7 agricultural productivity and compensating off-site.

8 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
9 value of agricultural production in the Delta region. The removal of agricultural land from  
10 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.6, Impacts AG-1 and  
11 AG-2. The reduction in the value of agricultural production is not considered an environmental  
12 impact. Significant environmental impacts would only result if the changes in regional economics  
13 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
14 required, DWR would provide compensation to property owners for economic losses due to  
15 implementation of the alternative. While the compensation to property owners would reduce the  
16 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
17 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
18 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
19 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
20 and land subject to Williamson Act contracts or in Farmland Security Zones.

### 21 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 22 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

23 Permanent effects on regional economics during operation and maintenance of the proposed water  
24 conveyance facilities would be similar to those described under Alternative 1B, Impact ECON-7.  
25 Increased expenditures related to operation and maintenance of water conveyance facilities would  
26 be expected to result in a permanent increase in regional employment and income, as presented in  
27 Table 16-28. The permanent removal of agricultural land following construction would have lasting  
28 negative effects on agricultural employment and income, as shown in Table 16-29.

29 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
30 result in an increase in operations-related employment and labor income, this would be considered  
31 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
32 agricultural-related employment and labor income, which would be considered an adverse effect.  
33 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
34 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
35 compensating off-site.

36 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
37 decrease total employment and income in the Delta region. The change would result from  
38 expenditures on operation and maintenance, increasing employment, and from changes in  
39 agricultural production, decreasing employment. The total change in income and employment is not,  
40 in itself, considered an environmental impact. Significant environmental impacts would only result if  
41 the changes in regional economics cause physical impacts. Such effects are discussed in other  
42 chapters throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation*  
43 *Costs and Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
44 *Agricultural Resources*, Section 14.3.3.6, Impacts AG-3 and AG-4; changes in recreation related

1 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.6, Impacts REC-5 through REC-8.  
 2 When required, DWR would provide compensation to landowners as a result of acquiring lands for  
 3 the proposed conveyance facilities. While the compensation to property owners would reduce the  
 4 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 5 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 6 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 7 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 8 and land subject to Williamson Act contracts or in Farmland Security Zones.

### 9 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 10 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

11 Permanent effects on population and housing during operation and maintenance of the proposed  
 12 water conveyance facilities would be similar to those described under Alternative 1B, Impact ECON-  
 13 8. It is anticipated that non-local workers would relocate to the five-county region, thus adding to  
 14 the local population. However, this additional population would constitute a minor increase in the  
 15 total 2020 projected regional population of 4.6 million and be distributed throughout the region. It  
 16 is anticipated that most of the operational workforce would be drawn from within the five-county  
 17 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

18 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 19 population or new housing, they would not be considered to have an adverse effect.

20 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 21 result in minor population increases in the Delta region with adequate housing supply to  
 22 accommodate the change in population and therefore adverse changes in the physical environment  
 23 are not anticipated.

### 24 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 25 **Proposed Water Conveyance Facilities**

26 **NEPA Effects:** Under Alternative 2B, effects on community character would be similar in nature,  
 27 location, and magnitude to those described under Alternative 1B, Impact ECON-9. Variations in the  
 28 location of effects would result from the potential operation and maintenance of Intakes 6 and 7  
 29 rather than Intakes 4 and 5 and the operation of an operable barrier at the Head of Old River. While  
 30 water conveyance operation and maintenance could result in beneficial effects relating to the  
 31 economic welfare of a community, lasting adverse social effects, including effects on community  
 32 cohesion, could also arise in communities closest to physical features and in those most heavily  
 33 influenced by agricultural and recreational activities. Implementation of mitigation measures and  
 34 environmental related to noise, visual effects, transportation, agriculture, and recreation would  
 35 reduce adverse effects. These actions are summarized under Alternative 1A, Impact ECON-9.

36 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 2B  
 37 could affect community character in the Delta region. However, because these impacts are social in  
 38 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 39 changes to community character would lead to physical impacts involving population growth, such  
 40 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 41 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
 42 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
 43 community character stemming from a lack of maintenance, upkeep, and general investment.

1 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and**  
 2 **Maintenance of the Proposed Water Conveyance Facilities**

3 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operation and  
 4 maintenance under Alternative 2B would be similar to those described under Alternative 1B, Impact  
 5 ECON-10. While this economic effect would be considered adverse, BDCP proponents would  
 6 compensate local governments for the loss of property tax or assessment revenue associated with  
 7 construction of water conveyance facilities.

8 **CEQA Conclusion:** Continued operation and maintenance of water conveyance facilities for  
 9 Alternative 2B would result in the removal of a portion of the property tax base for various local  
 10 government entities in the Delta region. However, entities receiving water from the State Water  
 11 Project and federal Central Valley Project would mitigate for lost property tax and assessment  
 12 revenue associated with land needed for the siting of conveyance facilities (Water Code Section  
 13 85089). CEQA does not require a discussion of socioeconomic effects except where they would  
 14 result in reasonably foreseeable physical changes. If an alternative is not anticipated to result in a  
 15 physical change to the environment, it would not be considered to have a significant impact under  
 16 CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any physical consequences resulting  
 17 from fiscal impacts are too speculative to ascertain.

18 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the**  
 19 **Proposed Water Conveyance Facilities**

20 **NEPA Effects:** Effects on recreation economics during operation and maintenance of the proposed  
 21 water conveyance facilities under Alternative 2B would be similar to those described under  
 22 Alternative 1A, Impact ECON-11. Maintenance of conveyance facilities, including intakes, would  
 23 result in periodic temporary but not substantial adverse effects on boat passage and water-based  
 24 recreational activities. Because effects of facility maintenance would be short-term and intermittent,  
 25 substantial economic effects are not anticipated to result from operation and maintenance of the  
 26 facilities.

27 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
 28 conveyance facilities under Alternative 2B are anticipated to create minor effects on recreational  
 29 resources and therefore, are not expected to substantially reduce economic activity related to  
 30 recreational activities. This section considers only the economic effects of recreational changes.  
 31 Potential physical changes to the environment relating to recreational resources are described and  
 32 evaluated in Chapter 15, *Recreation, Recreation*, Section 15.3.3.6, Impacts REC-5 through REC-8.

33 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during**  
 34 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

35 Permanent effects on agricultural economics during operation and maintenance of the proposed  
 36 water conveyance facilities would be similar to those described under Alternative 1B, Impact ECON-  
 37 12. Total value of irrigated crop production in the Delta would decline on average by \$29.2 million  
 38 per year during operation and maintenance, with total irrigated crop acreage declining by about  
 39 17,700 acres. Alternative 2B may also affect production costs on lands even if gross revenues are  
 40 largely unaffected. Costs could be increased by operational constraints, changes in water quality,  
 41 and longer travel times due to the permanent footprint of facilities. Additionally, loss of investments  
 42 in production facilities and standing orchards and vineyards would occur as a result of facilities  
 43 construction.

1 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
 2 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
 3 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
 4 14.3.3.2, Impact AG-2, would be available to reduce these effects by preserving agricultural  
 5 productivity and compensating off-site.

6 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities,  
 7 the value of agricultural production in the Delta region would be reduced. The permanent removal  
 8 of agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 9 14.3.3.6, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 10 considered an environmental impact. Significant environmental impacts would only result if the  
 11 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 12 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 13 economic losses due to implementation of the alternative. While the compensation to property  
 14 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 15 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
 16 are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-2, and particularly  
 17 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 18 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 19 Zones.

## 20 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 21 **Implementation of the Proposed Conservation Measures 2–22**

22 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2–  
 23 22 would be similar to those described under Alternative 1A, Impact ECON-13. In the Delta region,  
 24 spending on Conservation Measures 2–22 would include construction, operation and maintenance  
 25 activities that would convert or disturb existing land use. Because implementation of Conservation  
 26 Measures 2–22 would be anticipated to result in an increase in construction and operation and  
 27 maintenance-related employment and labor income, this would be considered a beneficial effect.  
 28 However, implementation of these components would also be anticipated to result in a decrease in  
 29 agricultural-related employment and labor income, which would be considered an adverse effect.  
 30 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 31 AG-2, would be available to reduce these effects by preserving agricultural productivity and  
 32 compensating off-site. Additionally, implementation of these components are anticipated to result in  
 33 the abandonment of natural gas wells, causing a decrease in employment and labor income  
 34 associated with monitoring and maintaining wells, which would be considered an adverse effect.  
 35 Mitigation Measure MIN-5, described in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-  
 36 5, would be available to reduce these effects by minimizing, to the extent feasible, the need for well  
 37 abandonment or relocation.

38 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would affect total  
 39 employment and income in the Delta region. The change in total employment and income in the  
 40 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 41 Measures 2–22 and any resulting changes in agricultural production, recreation, and natural gas  
 42 production activities. The total change in employment and income is not, in itself, considered an  
 43 environmental impact. Significant environmental impacts would only result if the changes in  
 44 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 45 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*

1 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
2 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
3 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

#### 4 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 5 **Implementing the Proposed Conservation Measures 2–22**

6 Effects on population and housing as a result of the proposed Conservation Measures 2–22 would be  
7 similar to those described under Alternative 1A, Impact ECON-14. In general, the changes in  
8 population and housing would include increases in population from the construction and operation  
9 and maintenance-related activity and declines in residential housing and business establishments as  
10 a result of lands converted or impaired.

11 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
12 population or new housing, they would not be considered to have an adverse effect.

13 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
14 population and housing in the Delta region. The change in total population and housing in the Delta  
15 region is based on employment resulting from implementation of the proposed Conservation  
16 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
17 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
18 physical environment are not anticipated to result.

#### 19 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 20 **Conservation Measures 2–22**

21 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
22 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
23 measures are similar. While implementation of Conservation Measures 2–22 could result in  
24 beneficial effects relating to the economic welfare of a community, adverse social effects, including  
25 effects on community cohesion, could also arise in those communities closest to character-changing  
26 effects and those most heavily influenced by agricultural activities. Implementation of mitigation  
27 measures and environmental commitments related to noise, visual effects, transportation,  
28 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
29 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

30 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 2B could  
31 affect community character within the Delta region. However, because these impacts are social in  
32 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
33 changes to community character are related to physical impacts involving population growth, these  
34 impacts are described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.  
35 Furthermore, notable decreases in population or employment, even if limited to certain areas,  
36 sectors, or the vacancy of individual buildings, could result in alteration of community character  
37 stemming from a lack of maintenance, upkeep, and general investment.

#### 38 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing** 39 **the Proposed Conservation Measures 2–22**

40 **NEPA Effects:** Under Alternative 2B, effects on local government fiscal conditions as a result of  
41 conservation measure implementation would be similar to those described under Alternative 1A,

1 Impact ECON-16. Conservation Measures 2–22 would remove some private land from local property  
 2 tax and assessment rolls. This economic effect would be considered adverse; however, the BDCP  
 3 proponents would offset forgone property tax and assessments levied by local governments and  
 4 special districts on private lands converted to habitat.

5 **CEQA Conclusion:** Under Alternative 2B, implementation of Conservation Measures 2–22 would  
 6 result in the removal of a portion of the property tax base for various local government entities in  
 7 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
 8 estimated to reach \$176.7 million. However, the BDCP proponents would compensate local  
 9 governments and special districts for forgone revenue. CEQA does not require a discussion of  
 10 socioeconomic effects except where they would result in physical changes. If an alternative is not  
 11 anticipated to result in a physical change to the environment, it would not be considered to have a  
 12 significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131).

### 13 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the** 14 **Proposed Conservation Measures 2–22**

15 **NEPA Effects:** Effects related to implementation of the Conservation Measures 2–22 under this  
 16 alternative would be similar to those described under Alternative 1B, Impact ECON-17. These  
 17 measures may result in adverse and beneficial effects on recreational resources in the Delta region,  
 18 resulting in the potential for decreased or increased economic activities related to recreation.

19 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
 20 recreation and compromise the quality of activities, leading to potential economic impacts.  
 21 However, over time, implementation could also improve the quality of existing recreational  
 22 opportunities, creating increased economic value with respect to recreation. This section considers  
 23 only the economic effects of recreational changes brought about by conservation measure  
 24 implementation. Potential physical changes to the environment relating to recreational resources  
 25 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.6, Impacts REC-9 through REC-  
 26 11.

### 27 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of** 28 **Implementing the Proposed Conservation Measures 2–22**

29 Effects on agricultural economics as a result of the proposed Conservation Measures 2–22 would be  
 30 similar to those described under Alternative 1A, Impact ECON-18, because the measures are similar.  
 31 Conservation Measures 2–22 would convert land from existing agricultural uses. These direct effects  
 32 on agricultural land are described qualitatively in Chapter 14, *Agricultural Resources*, Section  
 33 14.3.3.6, Impacts AG-3 and AG-4. Effects on agricultural economics would include effects on crop  
 34 production and agricultural investments resulting from restoration actions on agricultural lands.  
 35 The effects would be similar in kind to those described for lands converted due to construction and  
 36 operation of the conveyance features and facilities. The total acreage and crop mix of agricultural  
 37 land potentially affected is not specified at this time, but when required, the BDCP proponents  
 38 would provide compensation to property owners for losses due to implementation of the  
 39 alternative.

40 **NEPA Effects:** Because implementation of the Conservation Measures 2–22 would be anticipated to  
 41 lead to reductions in crop acreage and in the value of agricultural production in the Delta region, this  
 42 is considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*

1 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
2 agricultural productivity and compensating off-site.

3 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
4 agricultural production in the Delta region. The permanent removal of agricultural land from  
5 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.6, Impacts AG-3 and  
6 AG-4. The reduction in the value of agricultural production is not considered an environmental  
7 impact. Significant environmental impacts would only result if the changes in regional economics  
8 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
9 required, the BDCP proponents would provide compensation to property owners for economic  
10 losses due to implementation of the alternative. While the compensation to property owners would  
11 reduce the severity of economic effects related to the loss of agricultural land, it would not  
12 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
13 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

#### 14 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

15 **NEPA Effects:** The socioeconomic effects associated with operation of Alternative 2B would be the  
16 same as those described under Alternative 2A, Impact ECON-19, because deliveries would be based  
17 on the same operational guidelines. Changes in deliveries to hydrologic regions could result in  
18 beneficial or adverse socioeconomic effects in these areas. In hydrologic regions where water  
19 deliveries are predicted to increase when compared with the No Action Alternative, more stable  
20 agricultural activities could support employment and economic production associated with  
21 agriculture. Where M&I deliveries increase, population growth could lead to general economic  
22 growth and support water-intensive industries. Such changes could also lead to shifts in the  
23 character of communities in the hydrologic regions with resultant beneficial or adverse effects.  
24 Likewise, growth associated with deliveries could require additional expenditures for local  
25 governments while also supporting increases in revenue.

26 **CEQA Conclusion:** Operation of water conveyance facilities under Alternative 2B could affect  
27 socioeconomic conditions in the hydrologic regions receiving water from the SWP and CVP.  
28 However, because these impacts are social and economic in nature, rather than physical, they are  
29 not considered environmental impacts under CEQA. To the extent that changes in socioeconomic  
30 conditions in the hydrologic regions would lead to physical impacts, such impacts are described in  
31 Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.

### 32 **16.3.3.7 Alternative 2C—Dual Conveyance with West Alignment and Five** 33 **Intakes (15,000 cfs; Operational Scenario B)**

34 Facilities construction under Alternative 2C would be almost identical to those described for  
35 Alternative 1C. However, an operable barrier would be constructed at the Head of Old River, which  
36 could lead to minor variations in effects from this alternative. Operations would be different under  
37 Alternative 2C than under Alternative 1C.

#### 38 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 39 **Region during Construction of the Proposed Water Conveyance Facilities**

40 Temporary effects on regional economics during construction of the proposed water conveyance  
41 facilities would be similar to those described under Alternative 1C, Impact ECON-1. As shown in  
42 Table 16-31, over the construction period, regional effects of construction activities would result in

1 direct employment of more than 26,000 FTE, with total employment effects of nearly 61,000 FTE.  
 2 Increases in labor income associated with this employment would also be expected. Declines in  
 3 agricultural production would be expected to lead to a decrease in employment of 64 FTE, with total  
 4 effects leading to a decline of 240 FTE. Similarly, labor income related to these positions would  
 5 decline, as shown in Table 16-32.

6 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
 7 construction-related employment and labor income, this would be considered a beneficial effect.  
 8 However, these activities would also be anticipated to result in a decrease in agricultural-related  
 9 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
 10 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
 11 available to reduce these effects by preserving agricultural productivity and compensating off-site.

12 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
 13 employment and income in the Delta region, temporarily. The increase in employment and income  
 14 that would result from expenditures on construction would be greater than the reduction in  
 15 employment and income attributable to losses in agricultural production. Changes in recreational  
 16 expenditures and natural gas well operations could also affect regional employment and income, but  
 17 these have not been quantified. The total change in employment and income is not, in itself,  
 18 considered an environmental impact. Significant environmental impacts would only result if the  
 19 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 20 throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation Costs and*  
 21 *Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
 22 *Agricultural Resources*, Section 14.3.3.7, Impacts AG-1 and AG-2; changes in recreation related  
 23 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.7, REC-1 through REC-4;  
 24 abandonment of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.7,  
 25 Impact MIN-1. When required, DWR would provide compensation to property owners for economic  
 26 losses due to implementation of the alternative. While the compensation to property owners would  
 27 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 28 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 29 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 30 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 31 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 32 Zones.

### 33 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 34 **the Proposed Water Conveyance Facilities**

35 Effects on population and housing during construction of the proposed water conveyance facilities  
 36 would be similar to those described under Alternative 1C, Impact ECON-2. It is anticipated that non-  
 37 local workers would temporarily relocate to the Delta region, thus adding to the local population.  
 38 However, this additional population would constitute a minor increase in the total 2020 projected  
 39 regional population of 4.6 million and be distributed throughout the region. Within specific local  
 40 communities, there could be localized effects on housing. However, given the availability of housing  
 41 within the five-county region, predicting where this impact might fall would be speculative. In  
 42 addition, new residents would likely be dispersed across the region, thereby not creating a burden  
 43 on any one community.

1 **NEPA Effects:** Because these activities would not result in permanent concentrated, substantial  
2 increases in population or new housing, they would not be considered to have an adverse effect.

3 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
4 temporary population increases in the Delta region, which has an adequate housing supply to  
5 accommodate the change in population. Therefore, adverse physical changes resulting from the  
6 minor increase in population are not anticipated.

### 7 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 8 **Water Conveyance Facilities**

9 **NEPA Effects:** Under Alternative 2C, effects on community character would be similar in nature,  
10 location, and magnitude to those described under Alternative 1C, Impact ECON-3. Variation in the  
11 location of effects would result from the construction of an operable barrier at the Head of Old River.  
12 While water conveyance construction could result in beneficial effects relating to the economic  
13 welfare of a community, adverse social effects could also arise as a result of declining economic  
14 stability or changes in community cohesion in communities closest to construction effects and in  
15 those most heavily influenced by agricultural and recreational activities. Implementation of  
16 mitigation measures and environmental commitments related to noise, visual effects,  
17 transportation, agriculture, and recreation would reduce adverse effects (see Appendix 3B,  
18 *Environmental Commitments*). These actions are summarized under Alternative 1A, Impact ECON-3.

19 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 2A could affect  
20 community character in the Delta region. However, because these impacts are social in nature,  
21 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
22 community character would lead to physical impacts involving population growth, such impacts are  
23 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
24 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
25 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
26 character stemming from a lack of maintenance, upkeep, and general investment. However,  
27 implementation of mitigation measures and environmental commitments related to noise, visual  
28 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
29 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
30 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
31 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
32 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
33 Management Plans.

### 34 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 35 **the Proposed Water Conveyance Facilities**

36 **NEPA Effects:** Effects on tax revenue as a result of water conveyance construction under Alternative  
37 2C would be similar to those described under Alternative 1C, Impact ECON-4. While this economic  
38 effect would be considered adverse, BDCP proponents would compensate local governments for the  
39 loss of property tax or assessment revenue associated with construction of water conveyance  
40 facilities. Additionally, local entities could benefit from an increase in sales tax revenue.

41 **CEQA Conclusion:** Construction of water conveyance facilities for Alternative 2C would result in the  
42 removal of a portion of the property tax base for various local government entities in the Delta  
43 region. However, entities receiving water from the State Water Project and federal Central Valley

1 Project would mitigate for lost property tax and assessment revenue associated with land needed  
 2 for the construction of new conveyance facilities (Water Code Section 85089). Additionally, any  
 3 losses could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
 4 require a discussion of socioeconomic effects except where they would result in reasonably  
 5 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
 6 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
 7 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
 8 speculative to ascertain.

#### 9 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 10 **Water Conveyance Facilities**

11 **NEPA Effects:** Under Alternative 2C, disruption of recreational activities during the construction  
 12 period would be similar in character and magnitude to that described under Alternative 1C, Impact  
 13 ECON-5. Access to recreational facilities may be restricted throughout the construction period.  
 14 Additionally, the quality of recreational activities including boating, fishing, waterfowl hunting, and  
 15 hiking in the Delta could be indirectly affected by noise, lighting, traffic, and visual degradation in  
 16 proximity to water conveyance construction.

17 Construction of water conveyance structures under this alternative would be anticipated to result in  
 18 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
 19 the implementation of mitigation measures, including enhancement of fishing access sites and  
 20 incorporation of recreational access into project design, and environmental and non-environmental  
 21 commitments, including providing funding to implement recreational improvements and control  
 22 aquatic weeds, providing notification of maintenance activities in waterways, and developing and  
 23 implementing a noise abatement plan, as described in Appendix 3B, *Environmental Commitments*.  
 24 With a decrease in recreational quality, the number of visits would be anticipated to decline, at least  
 25 in areas closest to construction activities. The multi-year schedule and geographic scale of  
 26 construction activities and the anticipated decline in recreational spending would be considered an  
 27 adverse effect. The commitments and mitigation measure cited above would contribute to the  
 28 reduction of this effect.

29 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 2C  
 30 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
 31 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
 32 recreational activities. This section considers only the economic effects of recreational changes  
 33 brought about by construction of the proposed water conveyance facilities. Potential physical  
 34 changes to the environment relating to recreational resources are described and evaluated in  
 35 Chapter 15, *Recreation*, Section 15.3.3.7, Impacts REC-1 through REC-4.

#### 36 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 37 **the Proposed Water Conveyance Facilities**

38 Effects on agricultural economics during construction of the proposed water conveyance facilities  
 39 would be similar to those described under Alternative 1C, Impact ECON-6. Total value of irrigated  
 40 crop production in the Delta would decline on average by \$22.2 million per year during the  
 41 construction period, with total irrigated crop acreage declining by about 14,300 acres. Alternative  
 42 2C may also affect production costs on lands even if gross revenues are largely unaffected. Costs  
 43 could be increased by operational constraints and longer travel times due to facilities construction.

1 Additionally, loss of investments in production facilities and standing orchards and vineyards would  
2 occur as a result of facilities construction.

3 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
4 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
5 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
6 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
7 agricultural productivity and compensating off-site.

8 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
9 value of agricultural production in the Delta region. The removal of agricultural land from  
10 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.7, Impacts AG-1 and  
11 AG-2. The reduction in the value of agricultural production is not considered an environmental  
12 impact. Significant environmental impacts would only result if the changes in regional economics  
13 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
14 required, DWR would provide compensation to property owners for economic losses due to  
15 implementation of the alternative. While the compensation to property owners would reduce the  
16 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
17 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
18 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
19 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
20 and land subject to Williamson Act contracts or in Farmland Security Zones.

### 21 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 22 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

23 Permanent effects on regional economics during operation and maintenance of the proposed water  
24 conveyance facilities would be similar to those described under Alternative 1C, Impact ECON-7.  
25 Increased expenditures related to operation and maintenance of water conveyance facilities would  
26 be expected to result in a permanent increase in regional employment and income, as presented in  
27 Table 16-34. The permanent removal of agricultural land following construction would have lasting  
28 negative effects on agricultural employment and income, as shown in Table 16-35.

29 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
30 result in an increase in operations-related employment and labor income, this would be considered  
31 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
32 agricultural-related employment and labor income, which would be considered an adverse effect.  
33 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
34 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
35 compensating off-site.

36 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
37 increase total employment and income in the Delta region. The net change would result from  
38 expenditures on operation and maintenance and from changes in agricultural production. The total  
39 change in income and employment is not, in itself, considered an environmental impact. Significant  
40 environmental impacts would only result if the changes in regional economics cause physical  
41 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
42 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
43 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.7, Impacts AG-3  
44 and AG-4; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section

1 15.3.3.7, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
 2 landowners as a result of acquiring lands for the proposed conveyance facilities. While the  
 3 compensation to property owners would reduce the severity of economic effects related to the loss  
 4 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
 5 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 6 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
 7 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
 8 contracts or in Farmland Security Zones.

### 9 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 10 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

11 Permanent effects on population and housing during operation and maintenance of the proposed  
 12 water conveyance facilities would be similar to those described under Alternative 1C, Impact ECON-  
 13 8. It is anticipated that non-local workers would relocate to the five-county region, thus adding to  
 14 the local population. However, this additional population would constitute a minor increase in the  
 15 total 2020 projected regional population of 4.6 million and be distributed throughout the region. It  
 16 is anticipated that most of the operational workforce would be drawn from within the five-county  
 17 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

18 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 19 population or new housing, they would not be considered to have an adverse effect.

20 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 21 result in minor population increases in the Delta region with adequate housing supply to  
 22 accommodate the change in population and therefore adverse changes in the physical environment  
 23 are not anticipated.

### 24 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 25 **Proposed Water Conveyance Facilities**

26 **NEPA Effects:** Under Alternative 2C, effects on community character would be similar in nature,  
 27 location, and magnitude to those described under Alternative 1C, Impact ECON-9. Variations in the  
 28 location of effects would result from the operation and maintenance of an operable barrier at the  
 29 Head of Old River. While water conveyance operation and maintenance could result in beneficial  
 30 effects relating to the economic welfare of a community, lasting adverse social effects, including  
 31 effects on community cohesion, could also arise in communities closest to physical features and in  
 32 those most heavily influenced by agricultural and recreational activities. Implementation of  
 33 mitigation measures and environmental commitments related to noise, visual effects,  
 34 transportation, agriculture, and recreation would reduce adverse effects (see Appendix 3B,  
 35 *Environmental Commitments*). These actions are summarized under Alternative 1A, Impact ECON-9.

36 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 2C  
 37 could affect community character in the Delta region. However, because these impacts are social in  
 38 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 39 changes to community character would lead to physical impacts involving population growth, such  
 40 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 41 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
 42 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
 43 community character stemming from a lack of maintenance, upkeep, and general investment.

1 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and**  
 2 **Maintenance of the Proposed Water Conveyance Facilities**

3 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operation and  
 4 maintenance under Alternative 2C would be similar to those described under Alternative 1C, Impact  
 5 ECON-10. While this economic effect would be considered adverse, BDCP proponents would  
 6 compensate local governments for the loss of property tax or assessment revenue associated with  
 7 construction of water conveyance facilities. Additionally, local entities may benefit from an increase  
 8 in sales tax revenue.

9 **CEQA Conclusion:** Continued operation and maintenance of water conveyance facilities for  
 10 Alternative 2C would result in the removal of a portion of the property tax base for various local  
 11 government entities in the Delta region. However, entities receiving water from the State Water  
 12 Project and federal Central Valley Project would mitigate for lost property tax and assessment  
 13 revenue associated with land needed for the siting of conveyance facilities (Water Code Section  
 14 85089). Additionally, any losses may be offset, at least in part, by an increase in sales tax revenue.  
 15 CEQA does not require a discussion of socioeconomic effects except where they would result in  
 16 reasonably foreseeable physical changes. If an alternative is not anticipated to result in a physical  
 17 change to the environment, it would not be considered to have a significant impact under CEQA  
 18 (CEQA Guidelines Sections 15064(f) and 15131). Here, any physical consequences resulting from  
 19 fiscal impacts are too speculative to ascertain.

20 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the**  
 21 **Proposed Water Conveyance Facilities**

22 **NEPA Effects:** Effects on recreation economics during operation and maintenance of the proposed  
 23 water conveyance facilities under Alternative 2C would be similar to those described under  
 24 Alternative 1A, Impact ECON-11. Maintenance of conveyance facilities, including intakes, would  
 25 result in periodic temporary but not substantial adverse effects on boat passage and water-based  
 26 recreational activities. Because effects of facility maintenance would be short-term and intermittent,  
 27 substantial economic effects are not anticipated to result from operation and maintenance of the  
 28 facilities.

29 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
 30 conveyance facilities under Alternative 2C are anticipated to create minor effects on recreational  
 31 resources and therefore, are not expected to substantially reduce economic activity related to  
 32 recreational activities. This section considers only the economic effects of recreational changes.  
 33 Potential physical changes to the environment relating to recreational resources are described and  
 34 evaluated in Chapter 15, *Recreation*, Section 15.3.3.7, Impacts REC-5 through REC-8.

35 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during**  
 36 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

37 Permanent effects on agricultural economics during operation and maintenance of the proposed  
 38 water conveyance facilities would be similar to those described under Alternative 1C, Impact ECON-  
 39 12. Total value of irrigated crop production in the Delta would decline on average by \$17.7 million  
 40 per year during operation and maintenance, with total irrigated crop acreage declining by about  
 41 11,700 acres. Alternative 2C may also affect production costs on lands even if gross revenues are  
 42 largely unaffected. Costs could be increased by operational constraints, changes in water quality,  
 43 and longer travel times due to the permanent footprint of facilities. Additionally, loss of investments

1 in production facilities and standing orchards and vineyards would occur as a result of facilities  
2 construction.

3 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
4 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
5 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
6 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
7 productivity and compensating off-site.

8 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities,  
9 the value of agricultural production in the Delta region would be reduced. The permanent removal  
10 of agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
11 14.3.3.7, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
12 considered an environmental impact. Significant environmental impacts would only result if the  
13 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
14 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
15 economic losses due to implementation of the alternative. While the compensation to property  
16 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
17 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
18 are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
19 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
20 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
21 Zones.

## 22 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 23 **Implementation of the Proposed Conservation Measures 2-22**

24 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2-  
25 22 would be similar to those described under Alternative 1A, Impact ECON-13 because the  
26 measures are similar. In the Delta region, spending on Conservation Measures 2-22 would include  
27 construction, operation and maintenance activities that would convert or disturb existing land use.  
28 Because implementation of Conservation Measures 2-22 would be anticipated to result in an  
29 increase in construction and operation and maintenance-related employment and labor income, this  
30 would be considered a beneficial effect. However, implementation of these components would also  
31 be anticipated to result in a decrease in agricultural-related employment and labor income, which  
32 would be considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14,  
33 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by  
34 preserving agricultural productivity and compensating off-site. Additionally, implementation of  
35 these components are anticipated to result in the abandonment of natural gas wells, causing a  
36 decrease in employment and labor income associated with monitoring and maintaining wells, which  
37 would be considered an adverse effect. Mitigation Measure MIN-5, described in Chapter 26, *Mineral*  
38 *Resources*, Section 26.3.3.2, Impact MIN-5, would be available to reduce these effects by minimizing,  
39 to the extent feasible, the need for well abandonment or relocation.

40 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would affect total  
41 employment and income in the Delta region. The change in total employment and income in the  
42 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
43 Measures 2-22 and any resulting changes in agricultural production, recreation, and natural gas  
44 production activities. The total change in employment and income is not, in itself, considered an

1 environmental impact. Significant environmental impacts would only result if the changes in  
 2 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 3 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
 4 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
 5 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
 6 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

7 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of**  
 8 **Implementing the Proposed Conservation Measures 2–22**

9 Effects on population and housing as a result of the proposed Conservation Measures 2–22 would be  
 10 similar to those described under Alternative 1A, Impact ECON-14 because the measures are similar.  
 11 In general, the changes in population and housing would include increases in population from the  
 12 construction and operation and maintenance-related activity and declines in residential housing and  
 13 business establishments as a result of lands converted or impaired.

14 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 15 population or new housing, they would not be considered to have an adverse effect.

16 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
 17 population and housing in the Delta region. The change in total population and housing in the Delta  
 18 region is based on employment resulting from implementation of the proposed Conservation  
 19 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
 20 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
 21 physical environment are not anticipated to result.

22 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed**  
 23 **Conservation Measures 2–22**

24 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
 25 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
 26 measures are similar. While implementation of Conservation Measures 2–22 could result in  
 27 beneficial effects relating to the economic welfare of a community, adverse social effects, including  
 28 effects on community cohesion, could also arise in those communities closest to character-changing  
 29 effects and those most heavily influenced by agricultural activities. Implementation of mitigation  
 30 measures and environmental commitments related to noise, visual effects, transportation,  
 31 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
 32 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

33 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 2C could affect  
 34 community character within the Delta region. However, because these impacts are social in nature,  
 35 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
 36 community character are related to physical impacts involving population growth, these impacts are  
 37 described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore,  
 38 notable decreases in population or employment, even if limited to certain areas, sectors, or the  
 39 vacancy of individual buildings, could result in alteration of community character stemming from a  
 40 lack of maintenance, upkeep, and general investment.

1 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing**  
 2 **the Proposed Conservation Measures 2–22**

3 **NEPA Effects:** Under Alternative 2C, effects on local government fiscal conditions as a result of  
 4 conservation measure implementation would be similar to those described under Alternative 1A,  
 5 Impact ECON-16 because the measures are similar. Conservation Measures 2–22 would remove  
 6 some private land from local property tax and assessment rolls. This economic effect would be  
 7 considered adverse; however, the BDCP proponents would offset forgone property tax and  
 8 assessments levied by local governments and special districts on private lands converted to habitat.

9 **CEQA Conclusion:** Under Alternative 2C, implementation of Conservation Measures 2–22 would  
 10 result in the removal of a portion of the property tax base for various local government entities in  
 11 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
 12 estimated to reach \$176.7 million. However, the BDCP proponents would compensate local  
 13 governments and special districts for forgone revenue. CEQA does not require a discussion of  
 14 socioeconomic effects except where they would result in physical changes. If an alternative is not  
 15 anticipated to result in a physical change to the environment, it would not be considered to have a  
 16 significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131).

17 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the**  
 18 **Proposed Conservation Measures 2–22**

19 **NEPA Effects:** Effects related to implementation of Conservation Measures 2–22 under this  
 20 alternative would be similar to those described under Alternative 1A, Impact ECON-17 because the  
 21 measures are similar. These measures may result in adverse and beneficial effects on recreational  
 22 resources in the Delta region, resulting in the potential for decreased or increased economic  
 23 activities related to recreation.

24 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
 25 recreation and compromise the quality of activities, leading to potential economic impacts.  
 26 However, over time, implementation could also improve the quality of existing recreational  
 27 opportunities, creating increased economic value with respect to recreation. This section considers  
 28 only the economic effects of recreational changes brought about by conservation measure  
 29 implementation. Potential physical changes to the environment relating to recreational resources  
 30 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.7, Impacts REC-9 through REC-  
 31 11.

32 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
 33 **Implementing the Proposed Conservation Measures 2–22**

34 Effects on agricultural economics as a result of the proposed Conservation Measures 2–22 would be  
 35 similar to those described under Alternative 1A, Impact ECON-18 because the measures are similar.  
 36 Conservation Measures 2–22 would convert land from existing agricultural uses. These direct effects  
 37 on agricultural land are described qualitatively in Chapter 14, *Agricultural Resources*, Section  
 38 14.3.3.7, Impacts AG-3 and AG-4. Effects on agricultural economics would include effects on crop  
 39 production and agricultural investments resulting from restoration actions on agricultural lands.  
 40 The effects would be similar in kind to those described for lands converted due to construction and  
 41 operation of the conveyance features and facilities. The total acreage and crop mix of agricultural  
 42 land potentially affected is not specified at this time, but when required, the BDCP proponents

1 would provide compensation to property owners for losses due to implementation of the  
2 alternative.

3 **NEPA Effects:** Because implementation of the Conservation Measures 2–22 would be anticipated to  
4 lead to reductions in crop acreage and in the value of agricultural production in the Delta region, this  
5 is considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
6 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
7 agricultural productivity and compensating off-site.

8 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
9 agricultural production in the Delta region. The permanent removal of agricultural land from  
10 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.7, Impacts AG-3 and  
11 AG-4. The reduction in the value of agricultural production is not considered an environmental  
12 impact. Significant environmental impacts would only result if the changes in regional economics  
13 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
14 required, the BDCP proponents would provide compensation to property owners for economic  
15 losses due to implementation of the alternative. While the compensation to property owners would  
16 reduce the severity of economic effects related to the loss of agricultural land, it would not  
17 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
18 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

### 19 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

20 **NEPA Effects:** The socioeconomic effects associated with operation of Alternative 2C would be the  
21 same as those described under Alternative 2A, Impact ECON-19, because deliveries would be based  
22 on the same operational guidelines. Changes in deliveries to hydrologic regions could result in  
23 beneficial or adverse socioeconomic effects in these areas. In hydrologic regions where water  
24 deliveries are predicted to increase when compared with the No Action Alternative, more stable  
25 agricultural activities could support employment and economic production associated with  
26 agriculture. Where M&I deliveries increase, population growth could lead to general economic  
27 growth and support water-intensive industries. Such changes could also lead to shifts in the  
28 character of communities in the hydrologic regions with resultant beneficial or adverse effects.  
29 Likewise, growth associated with deliveries could require additional expenditures for local  
30 governments while also supporting increases in revenue.

31 **CEQA Conclusion:** Operation of water conveyance facilities under Alternative 2C could affect  
32 socioeconomic conditions in the hydrologic regions receiving water from the SWP and CVP.  
33 However, because these impacts are social and economic in nature, rather than physical, they are  
34 not considered environmental impacts under CEQA. To the extent that changes in socioeconomic  
35 conditions in the hydrologic regions would lead to physical impacts, such impacts are described in  
36 Chapter 30, *Growth Inducement and Other Indirect Effects*.

### 37 **16.3.3.8 Alternative 3—Dual Conveyance with Pipeline/Tunnel and** 38 **Intakes 1 and 2 (6,000 cfs; Operational Scenario A)**

39 Facilities construction under Alternative 3 would be similar to those described for Alternative 1A  
40 but with only two intakes as opposed to five. Operations would be different under Alternative 3 than  
41 under Alternative 1A.

1 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta**  
 2 **Region during Construction of the Proposed Water Conveyance Facilities**

3 The regional economic effects on employment and income in the Delta region during construction  
 4 were evaluated. Changes are shown relative to the Existing Conditions and the No Action Alternative  
 5 (regional economic conditions do not differ between Existing Conditions and No Action Alternative).  
 6 The effects on employment and income are displayed in Table 16-37. The table shows the direct and  
 7 total change that would result from conveyance-related spending. As evident in Table 16-37,  
 8 spending on conveyance construction results in substantial local economic activity in the region. As  
 9 shown, direct construction employment is anticipated to vary over the 8-year construction period,  
 10 with an estimated 1,818 FTE jobs in the first year and 111 FTE jobs in the final year of the  
 11 construction period. Construction employment is estimated to peak at 2,849 FTE jobs in year 4.  
 12 Total employment (direct, indirect, and induced) would also peak in year 4, at 6,787 FTE jobs.

13 **Table 16-37. Regional Economic Effects on Employment and Labor Income during Construction**  
 14 **(Alternative 3)**

Regional Economic Impact <sup>a</sup>	Year								Total
	1	2	3	4	5	6	7	8	
<b>Employment (FTE)</b>									
Direct	1,818	2,034	2,713	2,849	2,578	2,320	482	111	14,904
Total <sup>b</sup>	10,297	8,515	9,634	8,656	6,787	5,013	813	157	49,872
<b>Labor Income (million \$)</b>									
Direct	282.5	207.7	214.8	172.5	118.3	67.0	5.7	0.2	1,068.8
Total <sup>b</sup>	507.2	384.4	407.4	338.5	242.4	151.5	17.6	2.2	2,051.2

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects; numbers may not sum to the total due to rounding. Detailed estimates are presented in Appendix 16A, *Regional Economic Impacts of Water Conveyance Facility Construction*.

15  
 16 The footprint of conveyance and related facilities such as roads and utilities would remove some  
 17 existing agricultural land from production, so the effects on employment and income would be  
 18 negative. The regional economic effects on employment and income in the Delta region from the  
 19 change in agricultural production are reported in Table 16-38. As shown, direct agricultural  
 20 employment would be reduced by an estimated 22 FTE jobs, while total employment (direct,  
 21 indirect, and induced) associated with agricultural employment would fall by 88 FTE jobs. Mapbook  
 22 Figures M14-1 and M14-2 display areas of Important Farmland and lands under Williamson Act  
 23 contracts that could be converted to other uses due to the construction of water conveyance  
 24 facilities for the Pipeline/Tunnel alignment. Note that not all of these structures would be  
 25 constructed under this alternative.

1 **Table 16-38. Regional Economic Effects on Agricultural Employment and Labor Income during**  
 2 **Construction (Alternative 3)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-23
Total <sup>b</sup>	-88
<b>Labor Income (million \$)</b>	
Direct	-2.9
Total <sup>b</sup>	-5.6

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).  
<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.  
<sup>b</sup> Includes direct, indirect, and induced effects.

3  
 4 Additionally, the Alternative 3 construction footprint would result in the abandonment of an  
 5 estimated six producing natural gas wells in the study area, as described in Chapter 26, *Mineral*  
 6 *Resources*, Section 26.3.3.8, Impact MIN-1. This could result in the loss of employment and labor  
 7 income associated with monitoring and maintaining these wells. Generally, small crews perform  
 8 ongoing monitoring and maintenance of several wells at a time. As shown in Chapter 26, *Mineral*  
 9 *Resources*, Table 26-3, 516 active producer wells are located in the study area. Even if all six  
 10 producing wells in the Alternative 3 construction footprint were abandoned and not replaced with  
 11 new wells installed outside the construction footprint, the percentage reduction in the number of  
 12 natural gas wells would be very small. As a result, the employment and labor income effects  
 13 associated with well abandonment, while negative, would be minimal.

14 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
 15 construction-related employment and labor income, this would be considered a beneficial effect.  
 16 However, these activities would also be anticipated to result in a decrease in agricultural-related  
 17 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
 18 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
 19 available to reduce these effects by preserving agricultural productivity and compensating off-site.

20 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
 21 employment and income in the Delta region during the construction period. The change would  
 22 result from expenditures on construction, increasing employment, and from changes in agricultural  
 23 production, decreasing employment. Changes in recreational expenditures and natural gas well  
 24 operations could also affect regional employment and income, but these have not been quantified.  
 25 The total change in employment and income is not, in itself, considered an environmental impact.  
 26 Significant environmental impacts would only result if the changes in regional economics cause  
 27 physical impacts. Such effects are discussed in other chapters throughout the EIR/EIS. Costs are  
 28 addressed in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of  
 29 agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 30 14.3.3.8, Impacts AG-1 and AG-2; changes in recreation related activities are addressed in Chapter  
 31 15, *Recreation*, Section 15.3.3.8, REC-1 through REC-4; abandonment of natural gas wells is  
 32 addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.8, Impact MIN-1. When required, DWR  
 33 would provide compensation to property owners for economic losses due to implementation of the  
 34 alternative. While the compensation to property owners would reduce the severity of economic  
 35 effects related to the loss of agricultural land, it would not constitute mitigation for any related

1 physical impact. Measures to reduce these impacts are discussed in Chapter 14, *Agricultural*  
 2 *Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP  
 3 to preserve agricultural productivity and mitigate for loss of Important Farmland and land subject to  
 4 Williamson Act contracts or in Farmland Security Zones.

## 5 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 6 **the Proposed Water Conveyance Facilities**

### 7 **Population**

8 Construction of conveyance facilities would require an estimated peak of 2,850 workers in year 4 of  
 9 the assumed 8-year construction period. It is anticipated that many of these new jobs would be filled  
 10 from within the existing five-county labor force. However, construction of the tunnels may require  
 11 specialized worker skills not readily available in the local labor pool. As a result, it is anticipated that  
 12 some specialized workers may be recruited from outside the five-county region. Considering the  
 13 multi-year duration of conveyance facility construction, it is anticipated that non-local workers  
 14 would temporarily relocate to the five-county region, thus adding to the local population. As  
 15 discussed in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.1, Direct  
 16 Growth Inducement, an estimated 30 percent of workers could come from out of the Delta region,  
 17 suggesting that approximately 900 workers could relocate to the Delta region at the peak of the  
 18 construction period. However, this additional population would constitute a minor increase in the  
 19 total 2020 projected regional population of 4.6 million and be distributed throughout the region.  
 20 Changes in demand for public services resulting from any increase in population are addressed in  
 21 Chapter 20, *Public Services and Utilities*, Section 20.3.3.8, Impact UT-1 through UT-6.

### 22 **Housing**

23 Changes in housing demand are based on changes in supply resulting from displacement during  
 24 facilities construction and changes in housing demand resulting from employment associated with  
 25 construction of conveyance facilities. As described in Chapter 13, *Land Use*, Section 13.3.3.8, Impact  
 26 LU-2, construction of water conveyance facilities under Alternative 3 would conflict with  
 27 approximately 37 residential structures.

28 The construction workforce would most likely commute daily to the work site from within the five-  
 29 county region; however, if needed, there are about 53,000 housing units available to accommodate  
 30 workers who may choose to commute on a workweek basis or who may choose to temporarily  
 31 relocate to the region for the duration of the construction period, including the estimated 900  
 32 workers who may temporarily relocate to the Delta region from out of the region. In addition to the  
 33 available housing units, there are recreational vehicle parks and hotels and motels within the five-  
 34 county region to accommodate any construction workers. As a result, and as discussed in more  
 35 detail in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.1, Direct Growth  
 36 Inducement, construction of the proposed conveyance facilities is not expected to substantially  
 37 increase the demand for housing within the five-county region.

38 **NEPA Effects:** Within specific local communities, there could be localized effects on housing.  
 39 However, given the availability of housing within the five-county region, predicting where this  
 40 impact might fall would be speculative. In addition, new residents would likely be dispersed across  
 41 the region, thereby not creating a burden on any one community.

1 Because these activities would not result in permanent concentrated, substantial increases in  
2 population or new housing, they would not be considered to have an adverse effect.

3 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
4 population increases in the Delta region with adequate housing supply to accommodate the change  
5 in population. Therefore, the minor increase in population is not anticipated to result in any adverse  
6 changes to the physical environment.

### 7 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 8 **Water Conveyance Facilities**

9 **NEPA Effects:** Under Alternative 3, effects on community character would be similar in nature and  
10 location to those described under Alternative 1A, Impact ECON-3. However, the intensity of these  
11 effects would be reduced due to the construction of only two intake facilities. As such, regional  
12 population and employment would increase to levels described above under Impact ECON-1 and  
13 ECON-2. While water conveyance construction could result in beneficial effects relating to the  
14 economic welfare of a community, adverse social effects could also arise as a result of declining  
15 economic stability or changes in community cohesion in communities closest to construction effects  
16 and in those most heavily influenced by agricultural and recreational activities. Implementation of  
17 mitigation measures and environmental commitments related to noise, visual effects,  
18 transportation, agriculture, and recreation would reduce adverse effects (see Appendix 3B,  
19 *Environmental Commitments*). These actions are summarized under Alternative 1A, Impact ECON-3.

20 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 3 could affect  
21 community character in the Delta region. However, because these impacts are social in nature,  
22 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
23 community character would lead to physical impacts involving population growth, such impacts are  
24 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
25 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
26 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
27 character stemming from a lack of maintenance, upkeep, and general investment. However,  
28 implementation of mitigation measures and environmental commitments related to noise, visual  
29 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
30 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
31 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
32 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
33 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
34 Management Plans.

### 35 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 36 **the Proposed Water Conveyance Facilities**

37 **NEPA Effects:** Effects on tax revenue as a result of water conveyance construction under Alternative  
38 3 would be similar to those described under Alternative 1A, Impact ECON-4. However, due to the  
39 construction of fewer intake facilities, forgone revenue is estimated at \$7.6 million over the  
40 construction period. These decreases in revenue could potentially result in the loss of a substantial  
41 share of some agencies' tax bases, particularly for smaller districts affected by the BDCP. This  
42 economic effect would be adverse; however, the BDCP proponents would make arrangements to  
43 compensate local governments for the loss of property tax or assessment revenue for land used for

1 constructing, locating, operating, or mitigating for new Delta water conveyance facilities.  
2 Additionally, as discussed under Impact ECON-2, construction of the water conveyance facilities  
3 would be anticipated to result in a net increase of income and employment in the Delta region. This  
4 would also create an indirect beneficial effect through increased sales tax revenue for local  
5 government entities that rely on sales taxes.

6 **CEQA Conclusion:** Under Alternative 3, construction of water conveyance facilities would result in  
7 the removal of a portion of the property tax base for various local government entities in the Delta  
8 region. Over the construction period, property tax and assessment revenue forgone is estimated at  
9 \$7.6 million. However, the Sacramento-San Joaquin Delta Reform Act commits the entities receiving  
10 water from the State Water Project and federal Central Valley Project to mitigate for lost property  
11 tax and assessment revenue associated with land needed for the construction of new conveyance  
12 facilities (Water Code Section 85089). Additionally, any losses could be offset, at least in part, by an  
13 anticipated increase in sales tax revenue. CEQA does not require a discussion of socioeconomic  
14 effects except where they would result in reasonably foreseeable physical changes. If an alternative  
15 is not anticipated to result in a physical change to the environment, it would not be considered to  
16 have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any  
17 physical consequences resulting from fiscal impacts are too speculative to ascertain.

#### 18 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 19 **Water Conveyance Facilities**

20 **NEPA Effects:** Under Alternative 3, disruption of recreational activities during the construction  
21 period would be similar in character to that described under Alternative 1A, Impact ECON-5.  
22 However, only Intakes 1 and 2 would be constructed under this alternative. While access to  
23 recreational facilities would be maintained throughout construction, the quality of recreational  
24 activities including boating, fishing, waterfowl hunting, and hiking in the Delta could be indirectly  
25 affected by noise, lighting, traffic, and visual degradation in proximity to water conveyance  
26 construction. Relative to Alternative 1A, however, two fewer established recreational sites or areas  
27 would be affected by this alternative.

28 Construction of water conveyance structures under this alternative would be anticipated to result in  
29 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
30 the implementation of mitigation measures, including enhancement of fishing access sites and  
31 incorporation of recreational access into project design, and environmental and non-  
32 environmental commitments, including providing funding to implement recreational  
33 improvements and control aquatic weeds, providing notification of maintenance activities in  
34 waterways, and developing and implementing a noise abatement plan, as described in Appendix  
35 3B, *Environmental Commitments*. With a decrease in recreational quality, the number of visits would  
36 be anticipated to decline, at least in areas closest to construction activities. The multi-year schedule  
37 and geographic scale of construction activities and the anticipated decline in recreational spending  
38 would be considered an adverse effect. The commitments and mitigation measure cited above  
39 would contribute to the reduction of this effect.

40 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 3  
41 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
42 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
43 recreational activities. This section considers only the economic effects of recreational changes  
44 brought about by construction of the proposed water conveyance facilities. Potential physical

1 changes to the environment relating to recreational resources are described and evaluated in  
2 Chapter 15, *Recreation*, Section 15.3.3.8, Impacts REC-1 through REC-4.

3 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of**  
4 **the Proposed Water Conveyance Facilities**

5 Construction of conveyance facilities would convert land from existing agricultural uses to uses that  
6 include direct facility footprints, construction staging areas, borrow/spoils areas, RTM storage,  
7 temporary and permanent roads, and utilities. Agricultural land could also be affected by changes in  
8 water quality and other conditions that would affect crop productivity. These direct effects on  
9 agricultural land are described in Chapter 14, *Agricultural Resources*, Section 14.3.3.8, Impacts AG-1  
10 and AG-2.

11 Changes in crop acreage were used to describe the associated changes in economic values. Unit  
12 prices, yields, and crop production and investment costs were presented in Section 16.1,  
13 *Environmental Setting/Affected Environment*. Table 16-39 summarizes the changes in acreage and  
14 value of agricultural production that would result in the Delta region as a result of Alternative 3  
15 construction. Changes are shown relative to the Existing Conditions and the No Action Alternative,  
16 by aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
17 Alternative were assumed to be the same). The table also includes a summary of changes in crop  
18 acreages that are reported in greater detail in Appendix 14A, *Individual Crop Effects as a Result of*  
19 *BDCP Water Conveyance Facility Construction*.

20 Total value of irrigated crop production in the Delta would decline on average by \$8.3 million per  
21 year during the construction period, with total irrigated crop acreage declining by about 5,100 acres,  
22 These estimates are not dependent on water year type.

23 Alternative 3 may also affect production costs, investments in production facilities and standing  
24 orchards and vineyards, and salinity of agricultural water supply. Effects would be similar to those  
25 qualitatively described under Alternative 1A, Impact ECON-6. Chapter 14, *Agricultural Resources*,  
26 Section 14.3.3.8, Impacts AG-1 and AG-2, provides discussion of indirect effects on agricultural  
27 resources.

1 **Table 16-39. Crop Acres and Value of Agricultural Production in the Delta during Construction**  
 2 **(Alternative 3)**

Analysis Metric	Alternative 3	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	478.5	-5.1
Grains	58.2	-0.5
Field crops	189.5	-1.6
Forage crops	111.5	-1.2
Vegetable, truck, and specialty crops	76.6	-0.5
Orchards and vineyards	42.7	-1.3
Total Value of Production (million \$)	641.8	-8.3
Grains	24.1	-0.1
Field crops	112.8	-1.0
Forage crops	72.1	-1.0
Vegetable, truck, and specialty crops	266.5	-1.8
Orchards and vineyards	166.2	-4.3

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

3  
 4 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
 5 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
 6 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 7 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 8 agricultural productivity and compensating off-site.

9 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
 10 value of agricultural production in the Delta region. The removal of agricultural land from  
 11 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.8, Impacts AG-1 and  
 12 AG-2. The reduction in the value of agricultural production is not considered an environmental  
 13 impact. Significant environmental impacts would only result if the changes in regional economics  
 14 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 15 required, DWR would provide compensation to property owners for economic losses due to  
 16 implementation of the alternative. While the compensation to property owners would reduce the  
 17 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 18 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 19 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 20 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 21 and land subject to Williamson Act contracts or in Farmland Security Zones.

22 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region**  
 23 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

24 Permanent effects on regional economics during operation and maintenance of the proposed water  
 25 conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-7.  
 26 Increased expenditures related to operation and maintenance of water conveyance facilities would  
 27 be expected to result in a permanent increase in regional employment and income, as presented in

1 Table 16-22. The permanent removal of agricultural land following construction would have lasting  
2 negative effects on agricultural employment and income, as shown in Table 16-23.

3 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
4 result in an increase in operations-related employment and labor income, this would be considered  
5 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
6 agricultural-related employment and labor income, which would be considered an adverse effect.  
7 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
8 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
9 compensating off-site.

10 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
11 increase total employment and income in the Delta region. The net change would result from  
12 expenditures on operation and maintenance and from changes in agricultural production. The total  
13 change in income and employment is not, in itself, considered an environmental impact. Significant  
14 environmental impacts would only result if the changes in regional economics cause physical  
15 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
16 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
17 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.8, Impacts AG-3  
18 and AG-4; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
19 15.3.3.8, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
20 landowners as a result of acquiring lands for the proposed conveyance facilities. While the  
21 compensation to property owners would reduce the severity of economic effects related to the loss  
22 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
23 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
24 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
25 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
26 contracts or in Farmland Security Zones.

### 27 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 28 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

29 Permanent effects on population and housing during operation and maintenance of the proposed  
30 water conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-  
31 8. It is anticipated that non-local workers would relocate to the five-county region, thus adding to  
32 the local population. However, this additional population would constitute a minor increase in the  
33 total 2020 projected regional population of 4.6 million and be distributed throughout the region. It  
34 is anticipated that most of the operational workforce would be drawn from within the five-county  
35 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

36 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
37 population or new housing, they would not be considered to have an adverse effect.

38 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
39 result in minor population increases in the Delta region with adequate housing supply to  
40 accommodate the change in population and therefore adverse changes in the physical environment  
41 are not anticipated.

1 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the**  
 2 **Proposed Water Conveyance Facilities**

3 **NEPA Effects:** Under Alternative 3, effects on community character would be similar in nature and  
 4 location to those described under Alternative 1A, Impact ECON-9. However, the intensity of these  
 5 effects would be reduced based on the operation and maintenance of two intake facilities. While  
 6 water conveyance operation and maintenance could result in beneficial effects relating to the  
 7 economic welfare of a community, lasting adverse social effects, including effects on community  
 8 cohesion, could also arise in communities closest to physical features and in those most heavily  
 9 influenced by agricultural and recreational activities. Implementation of mitigation measures and  
 10 environmental commitments related to noise, visual effects, transportation, agriculture, and  
 11 recreation would reduce adverse effects (see Appendix 3B, *Environmental Commitments*). These  
 12 actions are summarized under Alternative 1A, Impact ECON-9.

13 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 3  
 14 could affect community character in the Delta region. However, because these impacts are social in  
 15 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 16 changes to community character would lead to physical impacts involving population growth, such  
 17 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 18 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
 19 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
 20 community character stemming from a lack of maintenance, upkeep, and general investment.

21 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and**  
 22 **Maintenance of the Proposed Water Conveyance Facilities**

23 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operations under  
 24 Alternative 3 would be similar to those described under Alternative 1A, Impact ECON-10. However,  
 25 with the construction of fewer intake facilities, forgone revenue is estimated at \$45.8 million over  
 26 the 50-year permit period, a smaller reduction than in Alternative 1A. These decreases in revenue  
 27 could potentially result in the loss of a significant share of some agencies' tax bases, particularly for  
 28 smaller districts affected by the BDCP. This economic effect would be adverse; however, the BDCP  
 29 proponents would make arrangements to compensate local governments for the loss of property tax  
 30 or assessment revenue for land used for constructing, locating, operating, or mitigating for new  
 31 Delta water conveyance facilities. Additionally, as discussed under Impact ECON-7, continued  
 32 operation and maintenance of the water conveyance facilities would be anticipated to result in a net  
 33 increase of income and employment in the Delta region. This could also create an indirect beneficial  
 34 effect through increased sales tax revenue for local government entities that rely on sales taxes.

35 **CEQA Conclusion:** Under Alternative 3, the ongoing operation and maintenance of water  
 36 conveyance facilities would reduce property tax revenues for various local government entities in  
 37 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
 38 estimated at \$45.8 million, compared with annual property tax revenue of more than \$934 million in  
 39 the Delta counties (California State Controller's Office 2012). Projected over the 50-year period,  
 40 these removals would likely represent less than 1% of these counties' property tax revenue.  
 41 However, the Sacramento-San Joaquin Delta Reform Act commits the entities receiving water from  
 42 the State Water Project and federal Central Valley Project to mitigate for lost property tax and  
 43 assessment revenue associated with land needed for the construction of new conveyance facilities  
 44 (Water Code Section 85089). Additionally, any losses could be offset, at least in part, by an

1 anticipated increase in sales tax revenue. CEQA does not require a discussion of socioeconomic  
 2 effects except where they would result in reasonably foreseeable physical changes. If an alternative  
 3 is not anticipated to result in a physical change to the environment, it would not be considered to  
 4 have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any  
 5 physical consequences resulting from fiscal impacts are too speculative to ascertain.

#### 6 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the** 7 **Proposed Water Conveyance Facilities**

8 Effects on recreation economics during operation and maintenance of the proposed water  
 9 conveyance facilities under Alternative 3 would be similar to those described under Alternative 1A,  
 10 Impact ECON-11.

11 **NEPA Effects:** Maintenance of conveyance facilities, including intakes, would result in periodic  
 12 temporary but not substantial adverse effects on boat passage and water-based recreational  
 13 activities. Because effects of facility maintenance would be short-term and intermittent, significant  
 14 economic effects are not anticipated to result from operation and maintenance of the facilities.

15 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
 16 conveyance facilities under Alternative 3 are anticipated to create minor effects on recreational  
 17 resources and therefore, are not expected to significantly reduce economic activity related to  
 18 recreational activities. This section considers only the economic effects of recreational changes.  
 19 Potential physical changes to the environment relating to recreational resources are described and  
 20 evaluated in Chapter 15, *Recreation*, Section 15.3.3.8, Impacts REC-5 through REC-8.

#### 21 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during** 22 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

23 During operation and maintenance of conveyance facilities existing agricultural land would be in  
 24 uses that include direct facility footprints and associated permanent roads and utilities. Agricultural  
 25 land could also be affected by changes in water quality and other conditions that would affect crop  
 26 productivity. These direct effects on agricultural land are described in Chapter 14, *Agricultural*  
 27 *Resources*, Section 14.3.3.8, Impacts AG-1 and AG-2.

28 Changes in crop acreage were used to estimate the associated changes in economic values. Unit  
 29 prices, yields, and crop production and investment costs were presented in Section 16.1,  
 30 *Environmental Setting/Affected Environment*. Table 16-40 summarizes the changes in acreage and  
 31 value of agricultural production that would result in the Delta region during operation of Alternative  
 32 3. Changes are shown relative to the Existing Conditions and the No Action Alternative by aggregate  
 33 crop category (agricultural resources under Existing Conditions and in the No Action Alternative  
 34 were assumed to be the same). The changes in crop acreages are reported in greater detail in  
 35 Appendix 14A, *Individual Crop Effects as a Result of BDCP Water Conveyance Facility Construction*.

36 Total value of irrigated crop production in the Delta region would decline on average by \$7.1 million  
 37 per year during operation and maintenance, with total irrigated crop acreage declining by about  
 38 4,300 acres. These estimates are not dependent on water year type.

1 **Table 16-40. Crop Acres and Value of Agricultural Production in the Delta during Operations and**  
 2 **Maintenance (Alternative 3)**

Analysis Metric	Alternative 3	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	479.3	-4.3
Grains	58.3	-0.3
Field crops	189.8	-1.3
Forage crops	111.6	-1.1
Vegetable, truck, and specialty crops	76.7	-0.4
Orchards and vineyards	42.8	-1.2
Total Value of Production (million \$)	642.9	-7.1
Grains	24.1	-0.1
Field crops	113.1	-0.8
Forage crops	72.2	-0.9
Vegetable, truck, and specialty crops	266.9	-1.5
Orchards and vineyards	166.7	-3.8

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

3  
 4 Alternative 3 may also affect production costs on lands even if gross revenues are largely unaffected.  
 5 Costs could be associated with operational constraints and longer travel times due to permanent  
 6 facilities. In most cases, affected lands fall within the facilities footprint, and are included in the  
 7 agricultural acreage and value of production described elsewhere in this chapter and in Chapter 14,  
 8 *Agricultural Resources*, Section 14.3.3.8.

9 Crop yields and crop selection on lands in the Delta could be affected by changes in salinity of  
 10 agricultural water supply during operation and maintenance activities. If operation of the proposed  
 11 conveyance facilities increases salinity in part of the Delta, crops that are more sensitive to salinity  
 12 could shift to other lands in the five-county Delta region. See Chapter 14, *Agricultural Resources*,  
 13 Section 14.3.3.8, Impact AG-2, for further discussion of effects from changes in salinity.

14 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
 15 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
 16 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
 17 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
 18 productivity and compensating off-site.

19 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities  
 20 the value of agricultural production in the Delta region would be reduced. The permanent removal  
 21 agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 22 14.3.3.8, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 23 considered an environmental impact. Significant environmental impacts would only result if the  
 24 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 25 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 26 economic losses due to implementation of the alternative. While the compensation to property  
 27 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 28 would not constitute mitigation for any related physical effect. Measures to reduce these impacts are  
 29 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly

1 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 2 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 3 Zones.

4 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the**  
 5 **Implementation of the Proposed Conservation Measures 2-22**

6 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2-  
 7 22 would be similar to those described under Alternative 1A, Impact ECON-13 because the  
 8 measures are similar. In the Delta region, spending on Conservation Measures 2-22 would include  
 9 construction, operation and maintenance activities that would convert or disturb existing land use.  
 10 Because implementation of Conservation Measures 2-22 would be anticipated to result in an  
 11 increase in construction and operation and maintenance-related employment and labor income, this  
 12 would be considered a beneficial effect. However, implementation of these components would also  
 13 be anticipated to result in a decrease in agricultural-related employment and labor income, which  
 14 would be considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14,  
 15 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by  
 16 preserving agricultural productivity and compensating off-site. Additionally, implementation of  
 17 these components are anticipated to result in the abandonment of natural gas wells, causing a  
 18 decrease in employment and labor income associated with monitoring and maintaining wells, which  
 19 would be considered an adverse effect. Mitigation Measure MIN-5, described in Chapter 26, *Mineral*  
 20 *Resources*, Section 26.3.3.2, Impact MIN-5, would be available to reduce these effects by minimizing,  
 21 to the extent feasible, the need for well abandonment or relocation.

22 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would affect total  
 23 employment and income in the Delta region. The change in total employment and income in the  
 24 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 25 Measures 2-22 and any resulting changes in agricultural production, recreation, and natural gas  
 26 production activities. The total change in employment and income is not, in itself, considered an  
 27 environmental impact. Significant environmental impacts would only result if the changes in  
 28 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 29 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
 30 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
 31 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
 32 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

33 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of**  
 34 **Implementing the Proposed Conservation Measures 2-22**

35 Effects on population and housing as a result of the proposed Conservation Measures 2-22 would be  
 36 similar to those described under Alternative 1A, Impact ECON-14 because the measures are similar.  
 37 In general, the changes in population and housing would include increases in population from the  
 38 construction and operation and maintenance-related activity and declines in residential housing and  
 39 business establishments as a result of lands converted or impaired.

40 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 41 population or new housing, they would not be considered to have an adverse effect.

42 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would impact total  
 43 population and housing in the Delta region. The change in total population and housing in the Delta

1 region is based on employment resulting from implementation of the proposed Conservation  
2 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
3 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
4 physical environment are not anticipated to result.

### 5 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 6 **Conservation Measures 2–22**

7 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
8 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
9 measures are similar. While implementation of Conservation Measures 2–22 could result in  
10 beneficial effects relating to the economic welfare of a community, adverse social effects, including  
11 effects on community cohesion, could also arise in those communities closest to character-changing  
12 effects and those most heavily influenced by agricultural activities. Implementation of mitigation  
13 measures and environmental commitments related to noise, visual effects, transportation,  
14 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
15 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

16 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 3 could affect  
17 community character within the Delta region. However, because these impacts are social in nature,  
18 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
19 community character are related to physical impacts involving population growth, these impacts are  
20 described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore,  
21 notable decreases in population or employment, even if limited to certain areas, sectors, or the  
22 vacancy of individual buildings, could result in alteration of community character stemming from a  
23 lack of maintenance, upkeep, and general investment.

### 24 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing** 25 **the Proposed Conservation Measures 2–22**

26 **NEPA Effects:** Under Alternative 3, effects on local government fiscal conditions as a result of  
27 conservation measure implementation would be similar to those described under Alternative 1A,  
28 Impact ECON-16. Conservation Measures 2–22 would remove some private land from local property  
29 tax and assessment rolls. This economic effect could be considered substantial and adverse;  
30 however, the magnitude of this effect would depend on the footprints of restoration areas. The BDCP  
31 proponents would arrange to offset forgone property tax and assessments levied by local  
32 governments and special districts on private lands converted to habitat.

33 **CEQA Conclusion:** Under Alternative 3, implementation of Conservation Measures 2–22 would  
34 result in the removal of a portion of the property tax base for various local government entities in  
35 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
36 estimated to reach \$176.7 million. However, the BDCP proponents would compensate local  
37 governments and special districts for forgone revenue. CEQA does not require a discussion of  
38 socioeconomic effects except where they would result in physical changes. If an alternative is not  
39 anticipated to result in a physical change to the environment, it would not be considered to have a  
40 significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131).

1 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the**  
 2 **Proposed Conservation Measures 2–22**

3 **NEPA Effects:** Effects related to implementation of Conservation Measures 2–22 under this  
 4 alternative would be similar to those described under Alternative 1A, Impact ECON-17. These  
 5 measures may result in adverse and beneficial effects on recreational resources in the Delta region,  
 6 resulting in the potential for decreased or increased economic activities related to recreation.

7 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
 8 recreation and compromise the quality of activities, leading to potential economic impacts.  
 9 However, over time, implementation could also improve the quality of existing recreational  
 10 opportunities, creating increased economic value with respect to recreation. This section considers  
 11 only the economic effects of recreational changes brought about by conservation measure  
 12 implementation. Potential physical changes to the environment relating to recreational resources  
 13 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.8, Impacts REC-9 through REC-  
 14 11.

15 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
 16 **Implementing the Proposed Conservation Measures 2–22**

17 Effects on agricultural economics as a result of the proposed Conservation Measures 2–22 would be  
 18 similar to those described under Alternative 1A, Impact ECON-18 because the measures are similar.  
 19 Conservation Measures 2–22 would convert land from existing agricultural uses. These direct effects  
 20 on agricultural land are described qualitatively in Chapter 14, *Agricultural Resources*, Section  
 21 14.3.3.8, Impacts AG-3 and AG-4. Effects on agricultural economics would include effects on crop  
 22 production and agricultural investments resulting from restoration actions on agricultural lands.  
 23 The effects would be similar in kind to those described for lands converted due to construction and  
 24 operation of the conveyance features and facilities. The total acreage and crop mix of agricultural  
 25 land potentially affected is not specified at this time, but when required, the BDCP proponents  
 26 would provide compensation to property owners for losses due to implementation of the  
 27 alternative.

28 **NEPA Effects:** Because implementation of Conservation Measures 2–22 would be anticipated to lead  
 29 to reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
 30 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 31 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 32 agricultural productivity and compensating off-site.

33 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
 34 agricultural production in the Delta region. The permanent removal of agricultural land from  
 35 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.8, Impacts AG-3 and  
 36 AG-4. The reduction in the value of agricultural production is not considered an environmental  
 37 impact. Significant environmental impacts would only result if the changes in regional economics  
 38 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 39 required, the BDCP proponents would provide compensation to property owners for economic  
 40 losses due to implementation of the alternative. While the compensation to property owners would  
 41 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 42 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 43 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

## 1 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

2 The socioeconomic effects associated with operation of Alternative 3 would be similar to those  
 3 described under Alternative 1A, Impact ECON-19; however, the magnitude of the effects would be  
 4 different based the construction of two intakes and different operational guidelines leading to  
 5 different deliveries to hydrologic regions. Changes in deliveries to hydrologic regions could result in  
 6 beneficial or adverse socioeconomic effects in these areas. In hydrologic regions where water  
 7 deliveries are predicted to increase when compared with the No Action Alternative, more stable  
 8 agricultural activities could support employment and economic production associated with  
 9 agriculture.

### 10 **Changes in SWP Deliveries Compared to No Action Alternative**

11 Compared to No Action Alternative (2060), Alternative 3 would increase deliveries to all hydrologic  
 12 regions except for the San Joaquin River Region, which would experience no change in deliveries.  
 13 Compared to the No Action Alternative (2060), South Coast would receive the largest net increase  
 14 (up to 280 TAF of Table A plus Article 21 deliveries) among the regions, which represents 68% of  
 15 the net increase in Table A plus Article 21 M&I deliveries under Alternative 3 (refer to Chapter 30,  
 16 *Growth Inducement and Other Indirect Effects*, Table 30-16, for more information).

### 17 **Changes in CVP Deliveries Compared to No Action Alternative**

18 Alternative 3 would not change M&I deliveries for the Sacramento River, South Coast, South  
 19 Lahontan and Colorado River Regions because there are no affected CVP contractors located in these  
 20 regions. Compared to the No Action Alternative (2060), Alternative 3 would result in increased  
 21 deliveries to the other hydrologic regions. Compared to the No Action Alternative (2060) San  
 22 Francisco Bay is projected to receive the largest potential increase (6 TAF) among the hydrologic  
 23 regions (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-17 for more  
 24 information).

25 **NEPA Effects:** Where M&I deliveries increase, population growth could lead to general economic  
 26 growth and support water-intensive industries. Changes to agricultural production and population  
 27 growth with its associated economic activity could also lead to shifts in the character of  
 28 communities in the hydrologic regions with resultant beneficial or adverse effects. Likewise, growth  
 29 associated with deliveries could require additional expenditures for local governments while also  
 30 supporting increases in revenue.

31 **CEQA Conclusion:** As described above, the operational components of BDCP Conservation Measure  
 32 1 could result in a number of effects in areas receiving SWP and CVP water deliveries outside of the  
 33 Delta.

### 34 **Changes in SWP Deliveries Compared to Existing Conditions**

35 Compared to Existing Conditions, Alternative 3 would increase deliveries to all hydrologic regions  
 36 except for the San Joaquin River Region, which would experience no change in deliveries. South  
 37 Coast would receive the largest net increase (up to 210 TAF of Table A plus Article 21 deliveries)  
 38 among the regions, which represents 70% of the net increase in M&I deliveries (refer to Chapter 30,  
 39 *Growth Inducement and Other Indirect Effects*, Table 30-16 for more information).

## 1 **Changes in CVP Deliveries Compared to Existing Conditions**

2 Alternative 3 would not change M&I deliveries for the Sacramento River, South Coast, South  
3 Lahontan, and Colorado River Regions because there are no affected CVP contractors located in  
4 these regions. Compared to Existing Conditions, Alternative 3 would result in decreased deliveries  
5 to the other hydrologic regions. Compared to Existing Conditions, San Francisco Bay is projected to  
6 receive the largest decrease (2 TAF) among the hydrologic regions (refer to Chapter 30, *Growth*  
7 *Inducement and Other Indirect Effects*, Table 30-17 for more information).

## 8 **Summary**

9 Operation of water conveyance facilities under Alternative 3 could affect socioeconomic conditions  
10 in the hydrologic regions receiving water from the SWP and CVP. However, because these impacts  
11 are social and economic in nature, rather than physical, they are not considered environmental  
12 impacts under CEQA. To the extent that changes in socioeconomic conditions in the hydrologic  
13 regions would lead to physical impacts, such impacts are described in Chapter 30, *Growth*  
14 *Inducement and Other Indirect Effects*.

### 15 **16.3.3.9 Alternative 4—Dual Conveyance with Modified Pipeline/Tunnel** 16 **and Intakes 2, 3, and 5 (9,000 cfs; Operational Scenario H)**

17 Alternative 4 would result in temporary effects on lands and communities associated with  
18 construction of three intakes and intake pumping plants, and other associated facilities; an  
19 intermediate forebay; conveyance pipelines; tunnels; an operable barrier at the head of Old River,  
20 and a new 600 acre Byron Tract Forebay, adjacent to and south of Clifton Court Forebay. Nearby  
21 areas would be altered as work or staging areas, concrete batch plants, fuel stations, or be used for  
22 spoils storage areas. Transmission lines, access roads, and other incidental facilities would also be  
23 needed for operations, and construction of these structures would also have effects on lands and  
24 communities.

25 The following impact analysis is divided into four subsections: effects of construction of facilities  
26 under CM1 in the Delta region, effects of operations of facilities under CM1 in the Delta region,  
27 effects of implementation of other conservation measures, and effects in hydrologic regions outside  
28 of the Delta as a result of changes in water deliveries.

#### 29 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 30 **Region during Construction of the Proposed Water Conveyance Facilities**

31 The regional economic effects on employment and income in the Delta region during construction  
32 were evaluated. Changes are shown relative to the Existing Conditions and the No Action Alternative  
33 (regional economic conditions do not differ between Existing Conditions and No Action Alternative).  
34 The effects on employment and income are displayed in Table 16-41. The table shows the direct and  
35 total changes that would result from conveyance-related spending. As evident in Table 16-41,  
36 spending on conveyance construction would result in substantial economic activity in the region. As  
37 shown, direct construction employment is anticipated to vary over the 8-year construction period,  
38 with an estimated 2,437 FTE jobs in the first year and 132 FTE jobs in the final year of the  
39 construction period. Construction employment is estimated to peak at 3,937 FTE jobs in year 3.  
40 Total employment (direct, indirect, and induced) would peak in year 1, at 16,029 FTE jobs.

1 **Table 16-41. Regional Economic Effects on Employment and Labor Income during Construction**  
 2 **(Alternative 4)**

Regional Economic Impact <sup>a</sup>	Year								Total
	1	2	3	4	5	6	7	8	
<b>Employment (FTE)</b>									
Direct	2,437	2,944	3,937	3,825	3,533	2,682	769	132	20,259
Total <sup>b</sup>	16,029	13,707	15,254	13,086	10,240	6,351	1,295	186	76,147
<b>Labor Income (million \$)</b>									
Direct	459.0	350.4	357.4	284.4	196.0	97.5	8.9	0.2	1,753.7
Total <sup>b</sup>	815.6	640.5	668.7	543.7	389.5	209.0	27.8	2.5	3,297.2

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects; numbers may not sum to the total due to rounding. Detailed estimates are presented in Appendix 16A, *Regional Economic Impacts of Water Conveyance Facility Construction*.

3  
 4 The footprint of conveyance and related facilities such as roads and utilities would remove some  
 5 existing agricultural land from production, so the effects on employment and income would be  
 6 negative. The regional economic effects on employment and income in the Delta region from the  
 7 change in agricultural production are reported in Table 16-42. As shown, direct agricultural  
 8 employment would be reduced by an estimated 16 FTE jobs, while total employment (direct,  
 9 indirect, and induced) associated with agricultural employment would fall by 57 FTE jobs. Mapbook  
 10 Figures M14-7 and M14-8 display areas of Important Farmland and lands under Williamson Act  
 11 contracts that could be converted to other uses due to the construction of water conveyance  
 12 facilities for the Modified Pipeline/Tunnel alignment. Note that not all of these structures would be  
 13 constructed under this alternative.

14 **Table 16-42. Regional Economic Effects on Agricultural Employment and Labor Income during**  
 15 **Construction (Alternative 4)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-16
Total <sup>b</sup>	-57
<b>Labor Income (million \$)</b>	
Direct	-1.8
Total <sup>b</sup>	-3.5

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects.

16  
 17 Additionally, the Alternative 4 construction footprint would result in the abandonment of an  
 18 estimated six producing natural gas wells in the study area, as described in Chapter 26, *Mineral*  
 19 *Resources*, Section 26.3.3.9, Impact MIN-1. This could result in the loss of employment and labor

1 income associated with monitoring and maintaining these wells. Generally, small crews perform  
2 ongoing monitoring and maintenance of several wells at a time. As shown in Chapter 26, *Mineral*  
3 *Resources*, Table 26-3, 516 active producer wells are located in the study area. Even if all six  
4 producing wells in the Alternative 4 construction footprint were abandoned and not replaced with  
5 new wells installed outside the construction footprint, the percentage reduction in the number of  
6 natural gas wells would be very small. As a result, the employment and labor income effects  
7 associated with well abandonment, while negative, would be minimal.

8 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
9 construction-related employment and labor income, this would be considered a beneficial effect.  
10 However, these activities would also be anticipated to result in a decrease in agricultural-related  
11 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
12 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
13 available to reduce these effects by preserving agricultural productivity and compensating off-site.

14 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would temporarily  
15 increase total employment and income in the Delta region. The change would result from  
16 expenditures on construction, increasing employment, and from changes in agricultural production,  
17 decreasing employment. Changes in recreational expenditures and natural gas well operations could  
18 also affect regional employment and income, but these have not been quantified. The total change in  
19 employment and income is not, in itself, considered an environmental impact. Significant  
20 environmental impacts would only result if the changes in regional economics cause physical  
21 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
22 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
23 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.9, Impacts AG-1  
24 and AG-2; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
25 15.3.3.9, REC-1 through REC-4; abandonment of natural gas wells is addressed in Chapter 26,  
26 *Mineral Resources*, Section 26.3.3.9, Impact MIN-1. When required, DWR would provide  
27 compensation to property owners for economic losses due to implementation of the alternative.  
28 While the compensation to property owners would reduce the severity of economic effects related  
29 to the loss of agricultural land, it would not constitute mitigation for any related physical impact.  
30 Measures to reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section  
31 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve  
32 agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson  
33 Act contracts or in Farmland Security Zones.

## 34 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 35 **the Proposed Water Conveyance Facilities**

### 36 **Population**

37 Construction of conveyance facilities would require an estimated peak of 3,937 workers in year 3 of  
38 the assumed 8-year construction period. It is anticipated that many of these new jobs would be filled  
39 from within the existing five-county labor force. However, construction of the tunnels may require  
40 specialized worker skills not readily available in the local labor pool. As a result, it is anticipated that  
41 some specialized workers may be recruited from outside the five-county region.

42 Considering the multi-year duration of conveyance facility construction, it is anticipated that non-  
43 local workers would temporarily relocate to the five-county region, thus adding to the local

1 population. As discussed in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section  
 2 30.3.2.1, Direct Growth Inducement, an estimated 30 percent of workers could come from out of the  
 3 Delta region, suggesting that approximately 1,180 workers could relocate to the Delta region at the  
 4 peak of the construction period. However, this additional population would constitute a minor  
 5 increase in the total 2020 projected regional population of 4.6 million and be distributed throughout  
 6 the region. Changes in demand for public services resulting from any increase in population are  
 7 addressed in Chapter 20, *Public Services and Utilities*, Section 20.3.3.9, Impact UT-1 through UT-6.

## 8 **Housing**

9 Changes in housing demand are based on changes in supply resulting from displacement during  
 10 facilities construction and changes in housing demand resulting from employment associated with  
 11 construction of conveyance facilities. As described in Chapter 13, *Land Use*, Section 13.3.3.9, Impact  
 12 LU-2, construction of water conveyance facilities under Alternative 4 would conflict with  
 13 approximately 19 residential structures.

14 The construction workforce would most likely commute daily to the work sites from within the five-  
 15 county region; however, if needed, there are about 53,000 housing units available to accommodate  
 16 workers who may choose to commute to on a workweek basis or who may choose to temporarily  
 17 relocate to the region for the duration of the construction period, including the estimated 1,180  
 18 workers who may temporarily relocate to the Delta region from out of the region. In addition to the  
 19 available housing units, there are recreational vehicle parks and hotels and motels within the five-  
 20 county region to accommodate any construction workers. As a result, and as discussed in more  
 21 detail in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.1, Direct Growth  
 22 Inducement, construction of the proposed conveyance facilities is not expected to substantially  
 23 increase the demand for housing within the five-county region.

24 **NEPA Effects:** Within specific local communities, there could be localized effects on housing.  
 25 However, given the availability of housing within the five-county region, predicting where this  
 26 impact might fall would be speculative. In addition, new residents would likely be dispersed across  
 27 the region, thereby not creating a burden on any one community.

28 Because these activities would not result in permanent concentrated, substantial increases in  
 29 population or new housing, they would not be considered to have an adverse effect.

30 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
 31 population increases in the Delta region with adequate housing supply to accommodate the change  
 32 in population. Therefore, the minor increase in housing is not anticipated to lead to adverse physical  
 33 changes to the environment.

## 34 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 35 **Water Conveyance Facilities**

36 **NEPA Effects:** Throughout the five-county Delta region, population and employment would expand  
 37 as a result of the construction of water conveyance facilities, as discussed under Impacts ECON-1  
 38 and ECON-2. Agricultural contributions to the character and culture of the Delta would be likely to  
 39 decline commensurate with the projected decline in agricultural-related acreage, employment, and  
 40 production. This could result in the closure of agriculture-dependent businesses or those catering to  
 41 agricultural workers, particularly in areas where conversion of agricultural land would be most  
 42 concentrated, including near the intake pumping plants in the vicinity of Clarksburg and Hood and

1 the expanded Clifton Court Forebay east of Byron. Similar effects on community character could  
2 result from anticipated changes to recreation in the study area. However, social influences  
3 associated with the construction industry would grow during the multi-year construction period for  
4 water conveyance structures under Alternative 4. To the extent that this anticipated economic shift  
5 away from agriculture and towards construction results in demographic changes in population,  
6 employment level, income, age, gender, or race, the study area would be expected to see changes to  
7 its character, particularly in those Delta communities most substantially affected by demographic  
8 changes based on their size, ability to accommodate growth, or proximity to BDCP activities. In  
9 comparing the existing demographic composition of agricultural workers and construction laborers  
10 within the five-county Delta Region, men make up a large proportion of both occupations: 84  
11 percent of agricultural workers were male, compared with 98 percent of construction laborers.  
12 Approximately 92 percent of agricultural workers made less than \$35,000, while 60 percent of  
13 construction laborers made less than \$35,000. Additionally, 87 percent of agricultural workers  
14 within the study area report Hispanic origin, while 54 percent of construction laborers claim  
15 Hispanic origin within the five-county area (U.S. Census Bureau 2012b).

16 Legacy communities in the Delta, which are those identified as containing distinct historical and  
17 cultural character, include Locke, Bethel Island, Clarksburg, Courtland, Freeport, Hood, Isleton,  
18 Knightsen, Rio Vista, Ryde, and Walnut Grove. These communities provide support services and  
19 limited workforce housing for the area's agricultural industry. Some housing is also provided to  
20 retirees and workers commuting to nearby urban areas including Sacramento. Construction  
21 activities associated with BDCP water conveyance facilities would be anticipated to result in changes  
22 to the rural qualities of these communities during the construction period (characterized by  
23 predominantly agricultural land uses, relatively low population densities, and low levels of  
24 associated noise and vehicular traffic), particularly for those communities in proximity to water  
25 conveyance structures, including Clarksburg, Hood, and Walnut Grove. Effects associated with  
26 construction activities could also result in changes to community cohesion if they were to restrict  
27 mobility, reduce opportunities for maintaining face-to-face relationships, or disrupt the functions of  
28 community organizations or community gathering places (such as schools, libraries, places of  
29 worship, and recreational facilities). Under Alternative 4, several gathering places that lie in the  
30 vicinity of construction areas could be indirectly affected by noise and traffic associated with  
31 construction activities, including Delta High School, the Clarksburg Library, Clarksburg Community  
32 Church, Resurrection Life Community Church, Citizen Land Alliance, Discovery Bay Chamber of  
33 Commerce, Courtland Fire Department, and several marinas or other recreational facilities (see  
34 Chapter 15, *Recreation*, Table 15-15).

35 In addition to potential changes in the demographic composition of communities in the study area,  
36 construction of water conveyance facilities under Alternative 4 could also affect the size of the  
37 communities, as suggested above. Based upon the projections developed under Impacts ECON-1 and  
38 ECON-2, the total population and employment base of the study area would expand during water  
39 facility construction. This expansion could provide economic opportunities during this period, which  
40 could support community stability by increasing investment in Delta communities. However, as  
41 noted under the discussion of housing above, predicting the specific location of such investments  
42 within the study area would be speculative.

43 Under Alternative 4, additional regional employment and income could create net positive effects on  
44 the character of Delta communities. In addition to potential demographic effects associated with  
45 changes in employment, however, property values may decline in areas that become less desirable  
46 in which to live, work, shop, or participate in recreational activities. For instance, negative visual- or

1 noise-related effects on residential property could lead to localized abandonment of buildings. While  
 2 water conveyance construction could result in beneficial effects relating to the economic welfare of a  
 3 community, adverse social effects could also arise as a result of declining economic stability in  
 4 communities closest to construction effects and in those most heavily influenced by agricultural and  
 5 recreational activities. Implementation of mitigation measures and environmental commitments  
 6 related to noise, visual effects, transportation, agriculture, and recreation, would reduce adverse  
 7 effects (see Appendix 3B, *Environmental Commitments*). Specifically, these commitments include  
 8 Develop and Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous  
 9 Materials Management Plans, Notification of Construction and Maintenance Activities in Waterways,  
 10 Noise Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
 11 Management Plans.

12 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 4 could affect  
 13 community character in the Delta region. However, because these impacts are social in nature,  
 14 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
 15 community character would lead to physical impacts involving population growth, such impacts are  
 16 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
 17 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
 18 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
 19 character stemming from a lack of maintenance, upkeep, and general investment. However,  
 20 implementation of mitigation measures and environmental commitments related to noise, visual  
 21 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
 22 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
 23 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
 24 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
 25 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
 26 Management Plans.

#### 27 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 28 **the Proposed Water Conveyance Facilities**

29 **NEPA Effects:** Under Alternative 4, publicly-owned water conveyance facilities would be constructed  
 30 on land of which some is currently held by private owners. Property tax and assessment revenue  
 31 forgone as a result of water conveyance facilities is estimated at \$8.2 million over the construction  
 32 period. These decreases in revenue could potentially result in the loss of a substantial share of some  
 33 agencies' tax bases, particularly for smaller districts affected by the BDCP, such as reclamation  
 34 districts where conveyance facilities and associated work areas are proposed. This economic effect  
 35 would be considered adverse; however, the BDCP proponents would make arrangements to  
 36 compensate local governments for the loss of property tax or assessment revenue for land used for  
 37 constructing, locating, operating, or mitigating for new Delta water conveyance facilities.<sup>8</sup>  
 38 Additionally, as discussed under Impact ECON-1, construction of the water conveyance facilities  
 39 would be anticipated to result in a net temporary increase of income and employment in the Delta

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<sup>8</sup> Under the Sacramento-San Joaquin Delta Reform Act of 2009 (85089), construction of a new conveyance facility cannot begin until "the persons or entities that contract to receive water from the State Water Project and the federal Central Valley Project or a joint powers authority representing those entities have made arrangements or entered into contracts to pay for... (b) Full mitigation of property tax or assessments levied by local governments or special districts for land used in the construction, location, mitigation, or operation of new Delta conveyance facilities."

1 region. This would also create an indirect beneficial effect through increased sales tax revenue for  
2 local government entities that rely on sales taxes.

3 **CEQA Conclusion:** Under Alternative 4, construction of water conveyance facilities would result in  
4 the removal of a portion of the property tax base for various local government entities in the Delta  
5 region. Over the construction period, property tax and assessment revenue forgone is estimated at  
6 \$8.2 million. However, the Sacramento-San Joaquin Delta Reform Act commits the entities receiving  
7 water from the State Water Project and federal Central Valley Project to mitigate for lost property  
8 tax and assessment revenue associated with land needed for the construction of new conveyance  
9 facilities (Water Code Section 85089). Additionally, any losses could be offset, at least in part, by an  
10 anticipated increase in sales tax revenue. CEQA does not require a discussion of socioeconomic  
11 effects except where they would result in reasonably foreseeable physical changes. If an alternative  
12 is not anticipated to result in a physical change to the environment, it would not be considered to  
13 have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any  
14 physical consequences resulting from fiscal impacts are too speculative to ascertain.

### 15 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 16 **Water Conveyance Facilities**

17 **NEPA Effects:** As described and defined in Chapter 15, *Recreation*, 15.3.3.9, Impacts REC-1 through  
18 REC-4, construction of water conveyance facilities under Alternative 4 would include elements that  
19 would be permanently located in two existing recreation areas. Additionally, substantial disruption  
20 of other recreational activities considered temporary and permanent would occur in certain areas  
21 during the construction period. The quality of recreational activities including boating, fishing,  
22 waterfowl hunting, and hiking in the Delta could be affected by noise, lighting, traffic, and visual  
23 degradation in proximity to water conveyance construction. For example, in-water construction  
24 activities associated with the intakes or temporary barge areas could restrict navigation and create  
25 noise and vibration that could lead to lower fishing success rates. Were it to occur, a decline in visits  
26 to Delta recreational sites as a result of facility construction would be expected to reduce recreation-  
27 related spending, creating an adverse effect throughout the Delta region. Additionally, if  
28 construction activities shift the relative popularity of different recreational sites, the BDCP may  
29 carry localized beneficial or adverse effects.

30 Access would be maintained to all existing recreational facilities, including marinas, throughout  
31 construction. As part of Mitigation Measure REC-2, BDCP proponents would enhance nearby fishing  
32 access sites and would incorporate public recreational access into design of the intakes along the  
33 Sacramento River. Implementation of this measure along with separate, non-environmental  
34 commitments as set forth in Appendix 3B, *Environmental Commitments*, relating to the enhancement  
35 of recreational access and control of aquatic weeds in the Delta would reduce these effects.  
36 Environmental commitments would also be implemented to reduce some of the effects of  
37 construction activities upon the recreational experience. These include providing notification of  
38 maintenance activities in waterways and developing and implementing a noise abatement plan, as  
39 described in Appendix 3B, *Environmental Commitments*. Similarly, mitigation measures proposed  
40 throughout other chapters of this document, and listed under Impact REC-2 in Chapter 15,  
41 *Recreation*, would also contribute to reducing construction effects on recreational experiences in the  
42 study area. These include Chapter 12, *Terrestrial Biological Resources*, Chapter 17, *Aesthetics and*  
43 *Visual Resources*, Chapter 19, *Transportation*, and Chapter 23, *Noise*.

1 Construction of water conveyance structures would be anticipated to result in a lower-quality  
 2 recreational experience in a number of localized areas throughout the Delta, despite the  
 3 implementation of environmental commitments. With a decrease in recreational quality,  
 4 particularly for boating and fishing (two of the most popular activities in the Delta), the number of  
 5 visits would be anticipated to decline, at least in areas close to construction activities. Under this  
 6 alternative, areas of the Cosumnes River Preserve on Staten Island would be affected by the  
 7 construction of tunnels and associated activities, including processing and storage of RTM. While  
 8 RTM areas are considered permanent surface impacts for the purposes of impact analysis, it is  
 9 anticipated that the RTM would be removed from these areas and reused, as appropriate, as bulking  
 10 material for levee maintenance, as fill material for habitat restoration projects, or other beneficial  
 11 means of reuse identified for the material, as described in Appendix 3B, *Environmental*  
 12 *Commitments*. In the Clifton Court Forebay, permanent siphons, canals, forebay embankment areas,  
 13 a control structure, and a forebay overflow structure would be built. There are no formal recreation  
 14 facilities at Clifton Court Forebay, although well-established recreation, mostly fishing and hunting,  
 15 takes place at the southern end of the forebay along the embankment. This access would be lost  
 16 during construction, but once new embankments are built, recreation could again occur. Six other  
 17 recreational sites or areas would experience periods of construction-related effects, including noise,  
 18 access, visual disturbances, or a combination of these effects. As described in Chapter 15, *Recreation*,  
 19 15.3.3.9, Impact REC-2, these include Clarksburg Boat Launch (fishing access), Stone Lakes National  
 20 Wildlife Refuge, Wimpy's Marina, Westgate Landing Park, Delta Meadows River Park, and Bullfrog  
 21 Landing Marina. Fewer visits to these sites or areas would lead to less spending, creating an adverse  
 22 effect. While visitors can adjust their recreational patterns to avoid areas substantially affected by  
 23 construction activities (by boating or fishing elsewhere in the Delta, for instance), recreation-  
 24 dependent businesses including marinas and recreational supply retailers may not be able to  
 25 economically weather the effects of multiyear construction activities and may be forced to close as a  
 26 result, even while businesses in areas that become more popular could benefit. Overall, the multi-  
 27 year schedule and geographic scale of construction activities and the anticipated decline in  
 28 recreational spending would be considered an adverse effect. The commitments and mitigation  
 29 measures cited above would contribute to the reduction of this effect.

30 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 4  
 31 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
 32 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
 33 recreational activities. This section considers only the economic effects of recreational changes  
 34 brought about by construction of the proposed water conveyance facilities. Potential physical  
 35 changes to the environment relating to recreational resources are described and evaluated in  
 36 Chapter 15, *Recreation*, Section 15.3.3.9, Impacts REC-1 through REC-4.

### 37 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 38 **the Proposed Water Conveyance Facilities**

39 Construction of conveyance facilities would convert land from existing agricultural uses to uses that  
 40 include direct facility footprints, construction staging areas, borrow/spoils areas, RTM storage,  
 41 temporary and permanent roads, and utilities. Agricultural land could also be affected by changes in  
 42 water quality and other conditions that would affect crop productivity. These direct effects on  
 43 agricultural land are described in Chapter 14, *Agricultural Resources*, Section 14.3.3.9, Impacts AG-1  
 44 and AG-2.

1 Changes in crop acreage were used to describe the associated changes in economic values. Unit  
 2 prices, yields, and crop production and investment costs were presented in Section 16.1,  
 3 *Environmental Setting/Affected Environment*. Table 16-43 summarizes the changes in acreage and  
 4 value of agricultural production that would result in the Delta region as a result of Alternative 4  
 5 construction. Changes are shown relative to the Existing Conditions and the No Action Alternative  
 6 by aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
 7 Alternative were assumed to be the same). The table also includes a summary of changes in crop  
 8 acreages that are reported in greater detail in Appendix 14A, *Individual Crop Effects as a Result of*  
 9 *BDCP Water Conveyance Facility Construction*.

10 Total value of irrigated crop production in the Delta would decline on average by \$5.2 million per  
 11 year during the construction period, with total irrigated crop acreage declining by about 5,600 acres,  
 12 These estimates are not dependent on water year type.

13 **Table 16-43. Crop Acres and Value of Agricultural Production in the Delta during Construction**  
 14 **(Alternative 4)**

Analysis Metric	Alternative 4	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	478.1	-5.6
Grains	58.1	-0.6
Field crops	188.4	-2.7
Forage crops	111.2	-1.6
Vegetable, truck, and specialty crops	76.8	-0.4
Orchards and vineyards	43.7	-0.3
Total Value of Production (million \$)	644.8	-5.2
Grains	24.0	-0.2
Field crops	112.2	-1.7
Forage crops	72.0	-1.1
Vegetable, truck, and specialty crops	267.3	-1.0
Orchards and vineyards	169.2	-1.3

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

15  
 16 Alternative 4 may also affect production costs on lands even if gross revenues are largely unaffected.  
 17 Costs could be increased by operational constraints and longer travel times due to facilities  
 18 construction. Construction designs and costs have provided for such costs in two ways. In most  
 19 cases, affected lands fall within the facilities footprint, and are included in the agricultural acreage  
 20 and value of production described elsewhere in this chapter and in Chapter 14, *Agricultural*  
 21 *Resources*, Section 14.3.3.9, Impacts AG-1 and AG-2. For potentially affected lands not included in the  
 22 facilities footprint, conveyance construction costs include temporary and permanent roads, bridges,  
 23 and other facilities as needed to service agricultural lands (California Department of Water  
 24 Resources 2010a, 2010b). There could be some additional travel time and other costs associated  
 25 with using these facilities, but such costs are not environmental impacts requiring mitigation.

26 Loss of investments in production facilities and standing orchards and vineyards would occur as a  
 27 result of facilities construction. The value of structures and equipment potentially affected would

1 vary widely across parcels. Much of the equipment is portable (e.g., machinery, tools, portable  
 2 sprinkler pipe), and could be sold or used on other lands. Shop and storage buildings and permanent  
 3 irrigation and drainage equipment plus orchards and vineyards may have little or no salvage value.  
 4 The negotiated purchase of lands for the conveyance and associated facilities would compensate for  
 5 some, but perhaps not all of that value. According to Cooperative Extension cost of production  
 6 studies (University of California Cooperative Extension 2003a, 2003b, 2004, 2005, 2006a, 2006b,  
 7 2007a, 2007b, 2008a, 2008b, 2008c, 2008d), permanent structures, irrigation systems, and drainage  
 8 systems can represent a wide range of investment, from less than \$100 per acre for field and  
 9 vegetable crops up to over \$3,000 per acre for some orchards. Most such investments would not be  
 10 new, so their depreciated values would be substantially lower.

11 Investment in standing orchards and vineyards would also be considered during negotiations for  
 12 land purchases. Typical investments required to bring permanent crops into production are shown  
 13 in Section 16.1, *Environmental Setting/Affected Environment*. For example, the establishment of wine  
 14 grapes requires an investment of over \$15,000 per acre and Bartlett pears require over \$20,000 per  
 15 acre. Forage crops such as irrigated pasture and alfalfa may require an establishment cost of about  
 16 \$400 per acre. The depreciated values of the growing stock could be substantially below these  
 17 establishment costs, depending on the ages of the stands that would be affected.

18 Only minor changes in salinity of agricultural water supply are expected during construction.  
 19 Consequently, costs related to salinity changes would also be minor. Further discussion of effects  
 20 from changes in salinity is presented in Chapter 14, *Agricultural Resources*, Section 14.3.3.9, Impacts  
 21 AG-1 and AG-2.

22 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
 23 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
 24 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 25 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 26 agricultural productivity and compensating off-site.

27 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
 28 value of agricultural production in the Delta region. The removal of agricultural land from  
 29 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.8, Impacts AG-1 and  
 30 AG-2. The reduction in the value of agricultural production is not considered an environmental  
 31 impact. Significant environmental impacts would only result if the changes in regional economics  
 32 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 33 required, DWR would provide compensation to property owners for economic losses due to  
 34 implementation of the alternative. While the compensation to property owners would reduce the  
 35 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 36 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 37 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 38 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 39 and land subject to Williamson Act contracts or in Farmland Security Zones.

#### 40 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 41 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

42 In the Delta region, ongoing operation and maintenance of BDCP facilities would result in increased  
 43 expenditures relative to the Existing Conditions and the No Action Alternative (regional economic  
 44 conditions do not differ across Existing Conditions and No Action Alternative). The increased project

1 operation and maintenance expenditures are expected to result in a permanent increase in regional  
 2 employment and income, including an estimated 129 direct and 183 total (direct, indirect, and  
 3 induced) FTE jobs (Table 16-44), relative to the Existing Conditions and the No Action Alternative.  
 4 Potential changes in the value of agricultural production result in changes to regional employment  
 5 and income in the Delta region under the Alternative 4 relative to the Existing Conditions and the No  
 6 Action Alternative.

7 **Table 16-44. Regional Economic Effects on Employment and Labor Income in the Delta Region**  
 8 **during Operations and Maintenance (Alternative 4)**

Regional Economic Impact <sup>a</sup>	Impacts from Operations and Maintenance
<b>Employment (FTE)</b>	
Direct	129
Total <sup>b</sup>	183
<b>Labor Income (million \$)</b>	
Direct	7.8
Total <sup>b</sup>	10.3

Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).  
<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.  
<sup>b</sup> Includes direct, indirect & induced effects.

9  
 10 The operation and maintenance of conveyance and related facilities such as roads and utilities  
 11 would result in the permanent removal of agricultural land from production following construction,  
 12 and the effects on employment and income would be negative, including the loss of an estimated 12  
 13 agricultural and 41 total (direct, indirect, and induced) FTE jobs. The regional economic effects on  
 14 employment and income in the Delta region from the change in agricultural production are reported  
 15 in Table 16-45. Mapbook Figures M14-7 and M14-8 display areas of Important Farmland and lands  
 16 under Williamson Act contracts that could be converted to other uses due to the construction of  
 17 water conveyance facilities for the Modified Pipeline/Tunnel alignment. Note that not all of these  
 18 structures would be constructed under this alternative.

19 **Table 16-45. Regional Economic Effects on Agricultural Employment and Labor Income during**  
 20 **Operations and Maintenance (Alternative 4)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-12
Total <sup>b</sup>	-41
<b>Labor Income (million \$)</b>	
Direct	-1.2
Total <sup>b</sup>	-2.4

Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).  
<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.  
<sup>b</sup> Includes direct, indirect & induced effects.

21

1 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
 2 result in an increase in operations-related employment and labor income, this would be considered  
 3 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
 4 agricultural-related employment and labor income, which would be considered an adverse effect.  
 5 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 6 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 7 compensating off-site.

8 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 9 increase total employment and income in the Delta region. The net change would result from  
 10 expenditures on operation and maintenance and from changes in agricultural production. The total  
 11 change in income and employment is not, in itself, considered an environmental impact. Significant  
 12 environmental impacts would only result if the changes in regional economics cause physical  
 13 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 14 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 15 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.9, Impacts AG-3  
 16 and AG-4; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
 17 15.3.3.9, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
 18 landowners as a result of acquiring lands for the proposed conveyance facilities. While the  
 19 compensation to property owners would reduce the severity of economic effects related to the loss  
 20 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
 21 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 22 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
 23 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
 24 contracts or in Farmland Security Zones.

## 25 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 26 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

### 27 **Population**

28 Operations and maintenance of conveyance facilities would require approximately 130 permanent  
 29 new workers. Given the nature of those operation and maintenance jobs, the existing water  
 30 conveyance facilities already in the five-county region, the large workforce in the region, and the  
 31 large water agencies with headquarters in that region, it is anticipated that most of these new jobs  
 32 would be filled from within the existing five-county labor force. However, operation and  
 33 maintenance may require specialized worker skills not readily available in the local labor pool. As a  
 34 result, it is anticipated that workers with specialized skills may be recruited from outside the five-  
 35 county region.

36 It is anticipated that non-local workers would relocate to the five-county region, thus adding to the  
 37 local population. However, this additional population would constitute a minor increase in the total  
 38 2020 projected regional population of 4.6 million and be distributed throughout the region. Changes  
 39 in demand for public services resulting from any increase in population are addressed in Chapter 20,  
 40 *Public Services and Utilities*, Section 20.3.3.9, Impact UT-7.

### 41 **Housing**

42 It is anticipated that most of the operational workforce would be drawn from within the five-county  
 43 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

1 There are about 53,000 housing units available to accommodate any nonlocal workers who relocate  
2 to the five-county region. In addition, new residents would likely be dispersed across the region,  
3 thereby not creating a burden on any one community. As a result, operation and maintenance of the  
4 proposed conveyance facilities is not expected to increase the demand for housing.

5 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
6 population or new housing, they would not be considered to have an adverse effect.

7 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
8 result in minor population increases in the Delta region with adequate housing supply to  
9 accommodate the change in population and therefore significant changes in the physical  
10 environment are not anticipated.

### 11 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 12 **Proposed Water Conveyance Facilities**

13 **NEPA Effects:** Throughout the five-county Delta region, population and employment could slightly  
14 expand as a result of continued operation and maintenance of the water conveyance facilities.  
15 Agricultural contributions to the character and culture of the Delta would be likely to decline  
16 commensurate with the projected decline in agricultural-related employment and production. This  
17 could result in the closure of agriculture-dependent businesses or those catering to agricultural  
18 employees, particularly in areas where conversion of agricultural land would be most concentrated,  
19 including near the intake pumping plants and forebays in the vicinity of Clarksburg and Hood.  
20 Similar effects could accrue to areas disproportionately dependent upon existing recreational  
21 activities. However, influences associated with those hired to operate, repair, and maintain water  
22 conveyance facilities would grow. To the extent that this anticipated economic shift away from  
23 agriculture results in demographic changes in population, employment level, income, age, gender, or  
24 race, the study area would be expected to see changes to its character, particularly in those Delta  
25 communities most substantially affected by demographic changes based on their size or proximity  
26 to BDCP facilities.

27 While some of the rural qualities of Delta communities, including relatively low noise and traffic  
28 levels, could return to near pre-construction conditions during the operational phase, other effects  
29 would be lasting. For instance, the visual appearance of intakes and other permanent features would  
30 compromise the predominantly undeveloped and agricultural nature of communities like  
31 Clarksburg, Courtland, and Hood, which would be located closest to the permanent water  
32 conveyance features. Lasting effects on areas made less desirable in which to live, work, shop, or  
33 participate in recreational activities as a result of BDCP operations could lead to localized  
34 abandonment of buildings. Such lasting effects could also result in changes to community cohesion if  
35 they were to restrict mobility, reduce opportunities for maintaining face-to-face relationships, or  
36 disrupt the functions of community organizations or community gathering places (such as schools,  
37 libraries, places of worship, and recreational facilities). While ongoing operations could result in  
38 beneficial effects relating to the economic welfare of a community, adverse social effects could linger  
39 in communities closest to character-changing effects and in those most heavily influenced by  
40 agricultural and recreational activities. Implementation of mitigation measures and environmental  
41 commitments related to noise, visual effects, transportation, agriculture, and recreation would  
42 reduce adverse effects (see Appendix 3B, *Environmental Commitments*). Specifically, these  
43 commitments include Notification of Construction and Maintenance Activities in Waterways, Noise  
44 Abatement Plan, and Prepare and Implement Mosquito Management Plans.

1 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 4  
 2 could affect community character in the Delta region. However, because these impacts are social in  
 3 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 4 changes to community character would lead to physical impacts involving population growth, such  
 5 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 6 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
 7 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
 8 community character stemming from a lack of maintenance, upkeep, and general investment.

9 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and**  
 10 **Maintenance of the Proposed Water Conveyance Facilities**

11 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operations under  
 12 Alternative 4 would be similar to those described under Alternative 1A, Impact ECON-10. However,  
 13 with the construction of fewer intake facilities and a modified alignment, forgone revenue is  
 14 estimated at \$49.3 million over the 50-year permit period. These decreases in revenue could  
 15 potentially result in the loss of a substantial share of some agencies' tax bases, particularly for  
 16 smaller districts affected by the BDCP. This economic effect would be adverse; however, the BDCP  
 17 proponents would make arrangements to compensate local governments for the loss of property tax  
 18 or assessment revenue for land used for constructing, locating, operating, or mitigating for new  
 19 Delta water conveyance facilities. Additionally, as discussed under Impact ECON-7, continued  
 20 operation and maintenance of the water conveyance facilities would be anticipated to result in a net  
 21 increase of income and employment in the Delta region. This could also create an indirect beneficial  
 22 effect through increased sales tax revenue for local government entities that rely on sales taxes.

23 **CEQA Conclusion:** Under Alternative 4, the ongoing operation and maintenance of water  
 24 conveyance facilities would restrict property tax revenue levels for various local government  
 25 entities in the Delta region. Over the 50-year permit period, property tax and assessment revenue  
 26 forgone is estimated at \$49.3 million. However, the Sacramento-San Joaquin Delta Reform Act  
 27 commits the entities receiving water from the State Water Project and federal Central Valley Project  
 28 to mitigate for lost property tax and assessment revenue associated with land needed for the  
 29 construction of new conveyance facilities (Water Code Section 85089). Additionally, any losses  
 30 could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
 31 require a discussion of socioeconomic effects except where they would result in reasonably  
 32 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
 33 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
 34 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
 35 speculative to ascertain.

36 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the**  
 37 **Proposed Water Conveyance Facilities**

38 **NEPA Effects:** As discussed in Chapter 15, *Recreation*, Section 15.3.3.9, Impacts REC-5 through REC-  
 39 8, operation and maintenance activities associated with the proposed water conveyance facilities  
 40 under Alternative 4 are anticipated to create minor effects on recreational resources. Maintenance  
 41 of conveyance facilities, including intakes, would result in periodic temporary but not substantial  
 42 adverse effects on boat passage and water-based recreational activities. As discussed in Impact REC-  
 43 7, most intake maintenance, such as painting, cleaning, and repairs, would be done with barges and  
 44 divers, and could cause a temporary impediment to boat movement in the Sacramento River in the

1 immediate vicinity of the affected intake structure and reduce opportunities for waterskiing,  
2 wakeboarding, or tubing in the immediate vicinity of the intake structures. However, boat passage  
3 and navigation on the river would still be possible around any barges or other maintenance  
4 equipment and these effects would be expected to be short-term (2 years or less). Although water-  
5 based recreation (i.e. boating, waterskiing, wakeboarding, etc.) may be restricted at and in the  
6 vicinity of intakes, many miles of the Sacramento River would still be usable for these activities  
7 during periodic maintenance events. Additionally, implementation of the environmental  
8 commitment to provide notification of construction and maintenance activities in waterways  
9 (Appendix 3B, *Environmental Commitments*) would reduce these effects. Because effects of facility  
10 maintenance would be short-term and intermittent, substantial economic effects are not anticipated  
11 to result from operation and maintenance of the facilities.

12 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
13 conveyance facilities under Alternative 4 are anticipated to create minor effects on recreational  
14 resources and therefore, are not expected to substantially reduce economic activity related to  
15 recreational activities. This section considers only the economic effects of recreational changes.  
16 Potential physical changes to the environment relating to recreational resources are described and  
17 evaluated in Chapter 15, *Recreation*, Section 15.3.3.9, Impacts REC-5 through REC-8.

#### 18 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during** 19 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

20 During operation and maintenance of conveyance facilities existing agricultural land would be in  
21 uses that include direct facility footprints and associated permanent roads and utilities. Agricultural  
22 land could also be affected by changes in water quality and other conditions that would affect crop  
23 productivity. These direct effects on agricultural land are described in Chapter 14, *Agricultural*  
24 *Resources*, Section 14.3.3.9, Impacts AG-1 and AG-2.

25 Changes in crop acreage were used to estimate the associated changes in economic values. Unit  
26 prices, yields, and crop production and investment costs were presented in Section 16.1,  
27 *Environmental Setting/Affected Environment*. Table 16-46 summarizes the changes in acreage and  
28 value of agricultural production that would result in the Delta region during operation of Alternative  
29 4. Changes are shown relative to the Existing Conditions and the No Action Alternative by aggregate  
30 crop category (agricultural resources under Existing Conditions and in the No Action Alternative  
31 were assumed to be the same). The changes in crop acreages are reported in greater detail in  
32 Appendix 14A, *Individual Crop Effects as a Result of BDCP Water Conveyance Facility Construction*.

33 Total value of irrigated crop production in the Delta region would decline on average by \$3.8 million  
34 per year during operation and maintenance, with total irrigated crop acreage declining by about  
35 4,500 acres. These estimates are not dependent on water year type.

1 **Table 16-46. Crop Acres and Value of Agricultural Production in the Delta during Operations and**  
 2 **Maintenance (Alternative 4)**

Analysis Metric	Alternative 4	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	479.2	-4.5
Grains	58.2	-0.4
Field crops	188.7	-2.4
Forage crops	111.4	-1.3
Vegetable, truck, and specialty crops	76.9	-0.2
Orchards and vineyards	43.8	-0.2
Total Value of Production (million \$)	646.3	-3.8
Grains	24.1	-0.1
Field crops	112.4	-1.5
Forage crops	72.2	-0.9
Vegetable, truck, and specialty crops	267.8	-0.6
Orchards and vineyards	169.8	-0.7

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

3  
 4 Alternative 4 may also affect production costs on lands even if gross revenues are largely unaffected.  
 5 Costs could be associated with operational constraints and longer travel times due to permanent  
 6 facilities. In most cases, affected lands fall within the facilities footprint, and are included in the  
 7 agricultural acreage and value of production described elsewhere in this Chapter and in Chapter 14,  
 8 *Agricultural Resources*, Section 14.3.3.9.

9 Crop yields and crop selection on lands in the Delta could be affected by changes in salinity of  
 10 agricultural water supply during operation and maintenance activities. If operation of the proposed  
 11 conveyance facilities increases salinity in part of the Delta, crops that are more sensitive to salinity  
 12 could shift to other lands in the five-county Delta region. See Chapter 14, *Agricultural Resources*,  
 13 Section 14.3.3.9, Impact AG-2, for further discussion of effects from changes in salinity.

14 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
 15 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
 16 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
 17 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
 18 productivity and compensating off-site.

19 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities  
 20 the value of agricultural production in the Delta region would be reduced. The permanent removal  
 21 agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 22 14.3.3.9, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 23 considered an environmental impact. Significant environmental impacts would only result if the  
 24 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 25 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 26 economic losses due to implementation of the alternative. While the compensation to property  
 27 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 28 would not constitute mitigation for any related physical effect. Measures to reduce these impacts are

1 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
2 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
3 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
4 Zones.

### 5 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 6 **Implementation of the Proposed Conservation Measures 2-22**

7 In the Delta region, spending on Conservation Measures 2-22 would include construction, operation  
8 and maintenance activities that would convert or disturb existing land use. The effects on the  
9 economy of the Delta region would be similar in kind, though not in magnitude, to those estimated  
10 for conveyance features and facilities. In general, the changes in regional economic activity  
11 (employment and income) would include increases from the construction and operation and  
12 maintenance-related activity, declines resulting from agricultural or other land uses converted or  
13 impaired, changes in recreation spending that could be positive or negative depending on the  
14 specific restoration action, and declines from abandonment of natural gas wells.

15 The *Yolo Bypass Flood Date and Flow Volume Agricultural Impact Analysis*, a report created for Yolo  
16 County, evaluates the expected losses of agricultural employment that could result from  
17 implementing CM2 (Howitt et al. 2012) (see Chapter 3, *Description of Alternatives*, Section 3.6.2, for a  
18 description of conservation measures). CM2 would lower a portion of the Fremont Weir to allow  
19 Sacramento River water to flow into the Yolo Bypass to reduce migratory delays for fish and  
20 enhance fish rearing habitat. However, it may also translate into financial losses for farmers and the  
21 regional economy. Annual reductions in agricultural employment under the CM2 scenario are  
22 expected to range from 9 FTE at 3,000 cfs to 21 FTE at 6,000 cfs.

23 As discussed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5, operations of natural  
24 gas wells in the Delta region would be affected where wells are located in restoration areas to be  
25 inundated under Conservation Measures 4, 5, and 10. In areas that would be permanently inundated  
26 under these conservation measures, producing natural gas wells may be abandoned. There are  
27 approximately 233 active wells in these areas (Table 26-5 in Chapter 26, *Mineral Resources*); an  
28 unknown number of these wells would likely be abandoned. (Specific inundation areas have not  
29 been identified for Conservation Measures 2-22 at this time, and there is potential for some of these  
30 wells to be modified and to remain in production.) In permanently flooded areas, the active wells  
31 could be relocated and replaced using conventional or directional drilling techniques at a location  
32 outside of inundation zones to maintain production. However, if a large number of wells had to be  
33 abandoned and could not be redrilled, there could be an adverse effect related to the permanent  
34 elimination of employment and income generated by well monitoring and maintenance activities.  
35 Generally, small crews perform ongoing monitoring and maintenance of several wells at a time.  
36 Assuming none of the wells in inundation areas are redrilled, the abandonment of 233 natural gas  
37 wells would represent 37 percent of the 629 producing wells in the Delta region (see active  
38 producer, dual, and new wells in Table 26-2 in Chapter 26, *Mineral Resources*). According to 2011  
39 data available through the U.S. Census Bureau's *2011 County Business Patterns* report (2013), an  
40 estimated 255-310 jobs are supported by the two sectors of the Delta region economy that could be  
41 affected by well abandonment: crude petroleum and natural gas extraction, and support activities  
42 for oil and gas operations. (Note that these jobs include non-natural gas production jobs and non-  
43 operations and maintenance jobs, so the number of jobs solely related to operations and  
44 maintenance of natural gas wells would be smaller.) Assuming a worst-case scenario in which the  
45 loss of 37 percent of the Delta region's natural gas wells would result in the loss of a similar

1 percentage of the region's employment in these two sectors, an estimated 95-115 jobs would be lost  
 2 as the result of implementing Conservation Measures 4, 5, and 10. However, considering that this  
 3 estimate is high and that some wells would be relocated, the actual job losses probably would be  
 4 somewhat lower.

5 **NEPA Effects:** Because implementation of Conservation Measures 2–22 would be anticipated to  
 6 result in an increase in construction and operation and maintenance-related employment and labor  
 7 income, this would be considered a beneficial effect. However, implementation of these components  
 8 would also be anticipated to result in a decrease in agricultural-related and natural gas production-  
 9 related employment and labor income, which would be considered an adverse effect. Mitigation  
 10 Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would  
 11 be available to reduce these effects by preserving agricultural productivity and compensating off-  
 12 site. Additionally, measures to reduce impacts on natural gas wells are discussed in Chapter 26,  
 13 *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

14 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would affect total  
 15 employment and income in the Delta region. The change in total employment and income in the  
 16 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 17 Measures 2–22 and any resulting changes in agricultural production, recreation, and natural gas  
 18 production. The total change in employment and income is not, in itself, considered an  
 19 environmental impact. Significant environmental impacts would only result if the changes in  
 20 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 21 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
 22 *Resources*, Section 14.3.3.9, Impacts AG-3 and AG-4; changes in recreation-related activities are  
 23 addressed in Chapter 15, *Recreation*, Section 15.3.3.9, Impacts REC-9 through REC-11; abandonment  
 24 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.9, Impact MIN-5.  
 25 When required, the BDCP proponents would provide compensation to property owners for  
 26 economic losses due to implementation of the alternative. While the compensation to property  
 27 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 28 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
 29 and impacts on natural gas wells are discussed in Chapter 14, *Agricultural Resources*, Section  
 30 14.3.3.2, Impact AG-1, and Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

### 31 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 32 **Implementing the Proposed Conservation Measures 2–22**

33 **NEPA Effects:** In the Delta region, implementation of Conservation Measures 2–22 would increase  
 34 employment and convert land from existing uses, including possible displacement of residential  
 35 housing and business establishments. The effects on population and housing in the Delta region  
 36 would be similar in kind, though not in magnitude, to those estimated for conveyance features and  
 37 facilities. In general, the changes in population and housing would include increases in population  
 38 from the construction and operation and maintenance-related activity and declines in residential  
 39 housing and business establishments as a result of lands converted or impaired. Because these  
 40 activities would not result in concentrated, substantial increases in population or new housing, they  
 41 would not be considered to have an adverse effect.

42 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
 43 population and housing in the Delta region. The change in total population and housing in the Delta  
 44 region is based on employment resulting from implementation of the proposed Conservation

1 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
2 county Delta region, and dispersed throughout the region. Therefore, significant changes in the  
3 physical environment are not anticipated to result.

#### 4 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 5 **Conservation Measures 2–22**

6 **NEPA Effects:** As noted under Impacts ECON-13, and ECON-14, conservation measures designed to  
7 restore, conserve, or enhance natural habitat would be anticipated to create economic effects similar  
8 in kind, if not in magnitude, to those described for the water conveyance facilities, including  
9 increases to employment and changes in land use that could trigger the disruption of agricultural  
10 and recreational economies. They could also affect the possible displacement of residences and  
11 businesses. The effects these activities would create with regard to community character would  
12 depend on the nature of each measure along with its specific location, size, and other factors that are  
13 not yet defined.

14 Under Alternative 4, temporary construction associated with implementation of these measures  
15 could lead to demographic changes and resulting effects on the composition and size of Delta  
16 communities. Earthwork and site preparation associated with conservation measures could also  
17 detract from the rural qualities of the Delta region; however, their implementation would take place  
18 in phases over the 50-year permit period, which would limit the extent of effects taking place at any  
19 one point in time.

20 Implementation of these measures could also alter community character over the long term.  
21 Conversion of agricultural land to restored habitat would result in the erosion of some economic and  
22 social contributions stemming from agriculture in Delta communities. However, in the context of the  
23 Delta region, a substantial proportion of land would not be converted. Additionally, restored habitat  
24 could support some rural qualities, particularly in terms of visual resources and recreational  
25 opportunities. These effects could attract more residents to some areas of the Delta, and could  
26 replace some agricultural economic activities with those related to recreation and tourism. To the  
27 extent that agricultural facilities and supportive businesses were affected and led to vacancy,  
28 alteration of community character could result from these activities. However, the cultivated lands  
29 natural community strategy of CM3 would ensure the continuation of agricultural production on  
30 thousands of acres in the Delta (see Chapter 3, *Description of Alternatives*, Section 3.6.2, for a  
31 description of conservation measures).

32 While implementation of Conservation Measures 2–22 could result in beneficial effects relating to  
33 the economic welfare of a community, adverse social effects could also arise in those communities  
34 closest to character-changing effects and those most heavily influenced by agricultural activities.  
35 Noise, visual effects, air pollution, and traffic associated with earthwork and site preparation for the  
36 restoration, enhancement, protection, and management of various natural community types could  
37 alter the rural characteristics of Delta communities, where they occur in close proximity to these  
38 communities. Additionally, changes in the extent and nature of regional agricultural and recreational  
39 activities could also be anticipated to alter the character of communities in the Delta and result in  
40 changes to community cohesion. If necessary, implementation of mitigation measures and  
41 environmental commitments related to transportation, agriculture, and recreation would be  
42 anticipated to reduce these adverse effects (see Appendix 3B, *Environmental Commitments*).  
43 Specifically, these commitments Develop and Implement Erosion and Sediment Control Plans,  
44 Develop and Implement Hazardous Materials Management Plans, Notification of Construction and

1 Maintenance Activities in Waterways, Noise Abatement Plan, Fire Prevention and Control Plan, and  
2 Prepare and Implement Mosquito Management Plans.

3 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 4 could affect  
4 community character within the Delta region. However, because these impacts are social in nature,  
5 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
6 community character are related to physical impacts involving population growth, these impacts are  
7 described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore,  
8 notable decreases in population or employment, even if limited to certain areas, sectors, or the  
9 vacancy of individual buildings, could result in decay and blight stemming from a lack of  
10 maintenance, upkeep, and general investment.

### 11 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing** 12 **the Proposed Conservation Measures 2–22**

13 As discussed in relation to construction of water conveyance facilities, habitat restoration and  
14 implementation of Conservation Measures 2–22 under Alternative 4 would also take place, in part,  
15 on land held by private owners and from which local governments derive revenue through property  
16 taxes and assessments. In particular, conservation measures related to protection of natural  
17 communities (CM3) and restoration of tidal habitat (CM4), seasonally inundated floodplain (CM5),  
18 grassland communities (CM8), vernal pool complex (CM9), and nontidal marsh (CM10) would  
19 require the acquisition of multiple parcels of land (see Chapter 3, *Description of Alternatives*, Section  
20 3.6.2, for a description of conservation measures).

21 The *Yolo Bypass Flood Date and Flow Volume Agricultural Impact Analysis*, as described under Impact  
22 ECON-13, evaluates the expected losses of total Yolo County revenue and state tax revenue for  
23 implementing CM2 (Howitt et al. 2012) (see Chapter 3, *Description of Alternatives*, Section 3.6.2, for a  
24 description of conservation measures). The total expected annual losses in state and local tax  
25 revenues under the CM2 proposed inundation scenarios can range from \$.057 million under the  
26 3,000 cfs flow scenario to \$.13 million under the 6,000 cfs flow scenario that extends flooding as late  
27 as May 15.

28 The loss of a substantial portion of an entity's tax base would represent an adverse effect on an  
29 agency, resulting in a decrease in local government's ability to provide public goods and services.  
30 Under Alternative 4, property tax and assessment revenue forgone as a result of conservation  
31 measure implementation is estimated to reach \$176.7 million over the BDCP's 50-year permit  
32 period (in 2012 undiscounted dollars; see BDCP Chapter 8, *Implementation Costs and Funding*  
33 *Sources*, Table 8-28 for further detail). Decreases in revenue could potentially represent a  
34 substantial share of individual agency tax bases, particularly for smaller districts affected by large,  
35 contiguous areas identified for habitat restoration.

36 Additionally, other conservation measures related to control of invasive species, expansion of fish  
37 hatchery facilities, installation of non-physical fish barriers, modification of water diversions, or  
38 treatment of urban stormwater may also require that land currently on property tax rolls be  
39 acquired and eventually removed from the tax base. The fiscal effects stemming from these  
40 conservation measures are, however, anticipated to be minor based upon the relatively small areas  
41 of land necessary for their implementation.

42 **NEPA Effects:** Overall, Conservation Measures 2–22 would remove many acres of private land from  
43 local property tax and assessment rolls. This economic effect would be considered adverse;

1 however, the BDCP proponents would offset forgone property tax and assessments levied by local  
2 governments and special districts on private lands converted to habitat. As described under Impact  
3 ECON-13, regional economic effects from the implementation of Conservation Measures 2–22 would  
4 be mixed. While activities associated with construction and establishment of habitat areas could  
5 boost regional expenditures and sales tax revenue, reduced agricultural activities may offset these  
6 gains. Changes in recreation spending and related sales tax revenue could be positive or negative,  
7 depending on the implementation of the measures.

8 **CEQA Conclusion:** Under Alternative 4, implementation of Conservation Measures 2–22 would  
9 result in the removal of a portion of the property tax base for various local government entities in  
10 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
11 estimated to reach \$176.7 million, compared with annual property tax revenue of more than \$934  
12 million in the Delta counties (California State Controller’s Office 2012). Projected over the 50-year  
13 period, these removals would likely represent less than 1% of these counties’ property tax revenue.  
14 However, the BDCP proponents would compensate local governments and special districts for  
15 forgone revenue. CEQA does not require a discussion of socioeconomic effects except where they  
16 would result in physical changes. If an alternative is not anticipated to result in a physical change to  
17 the environment, it would not be considered to have a significant impact under CEQA (CEQA  
18 Guidelines Sections 15064(f) and 15131).

#### 19 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the** 20 **Proposed Conservation Measures 2–22**

21 **NEPA Effects:** Implementation of the Conservation Measures 2–22 under this alternative would be  
22 anticipated to create an adverse effect on recreational resources by limiting access to facilities,  
23 restricting boat navigation and disturbing fish habitat while restoration activities are taking place.  
24 These measures may also permanently reduce the extent of upland recreation sites. However, over  
25 the 50-year permit period, these components could also create beneficial effects by enhancing  
26 aquatic habitat and fish abundance, expanding the extent of navigable waterways available to  
27 boaters, and improving the quality of existing upland recreation opportunities. Therefore, the  
28 potential exists for the creation of adverse and beneficial effects related to recreational economics.  
29 Adverse effects would be anticipated to be primarily limited to areas close to restoration areas and  
30 during site preparation and earthwork phases. These effects could result in a decline in visits to the  
31 Delta and reduction in recreation-related spending, creating an adverse economic effect throughout  
32 the Delta. Beneficial recreational effects would generally result during later stages of the BDCP  
33 permit period as Conservation Measures 2–22 are implemented and environmental conditions  
34 supporting recreational activities are enhanced. These effects could improve the quality of  
35 recreational experiences, leading to increased economic activities related to recreation, particularly  
36 in areas where conservation measure implementation would create new recreational opportunities.

37 **CEQA Conclusion:** Site preparation and earthwork activities associated with a number of  
38 conservation measures would limit opportunities for recreational activities where they occur in or  
39 near existing recreational areas. Noise, odors, and visual effects of construction activities would also  
40 temporarily compromise the quality of recreation in and around these areas, leading to potential  
41 economic impacts. However, over time, implementation could improve the quality of existing  
42 recreational opportunities, leading to increased economic activity. This section considers only the  
43 economic effects of recreational changes brought about by conservation measure implementation.  
44 CEQA does not require a discussion of socioeconomic effects except where they would result in  
45 reasonably foreseeable physical changes. Potential physical changes to the environment relating to

1 recreational resources are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.9,  
2 Impacts REC-9 through REC-11.

### 3 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of** 4 **Implementing the Proposed Conservation Measures 2–22**

5 **NEPA Effects:** Conservation Measures 2–22 would convert land from existing agricultural uses.  
6 These direct effects on agricultural land are described qualitatively in Chapter 14, *Agricultural*  
7 *Resources*, Section 14.3.3.9, Impacts AG-3 and AG-4. Effects on agricultural economics would include  
8 effects on crop production and agricultural investments resulting from restoration actions on  
9 agricultural lands. The effects would be similar in kind to those described for lands converted due to  
10 construction and operation of the conveyance features and facilities. The total acreage and crop mix  
11 of agricultural land potentially affected is not specified at this time, but when required, the BDCP  
12 proponents would provide compensation to property owners for losses due to implementation of  
13 the alternative. Because implementation of the Conservation Measures 2–22 would be anticipated to  
14 lead to reductions in crop acreage and in the value of agricultural production in the Delta region, this  
15 is considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
16 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
17 agricultural productivity and compensating off-site.

18 The *Yolo Bypass Flood Date and Flow Volume Agricultural Impact Analysis*, as described in Impact  
19 ECON-13, also evaluates the expected losses in gross farm revenue that could result from  
20 implementing CM2 (Howitt et al. 2012) (see Chapter 3, *Description of Alternatives*, Section 3.6.2, for a  
21 description of conservation measures). Direct gross farm revenue losses are expected to be less than  
22 \$1.5 million per year. Total output value (gross farm revenue) expected losses for the CM2 scenario,  
23 which corresponds to supplemental releases only in years where natural flooding occurs, range  
24 from \$1.2 to \$2.8 million per year. Expected losses are zero in years when there is no natural  
25 flooding and substantial in years when there is late natural flooding. Expected loss estimates are  
26 sensitive to changes in area inundated, yield loss and crop prices. It assumed that the costs of  
27 production in the Bypass remain constant even with late flooding; however, if production costs go  
28 up, for example, due to overtime labor or increased preparation costs, loss estimates would increase.

29 The report also evaluates the loss to total value added, or the net value of agricultural production in  
30 the Yolo Bypass to the Yolo County economy. Recognizing that many inputs/outputs are produced  
31 or consumed outside of Yolo County, those factors are not considered in the analysis. For example,  
32 total value added does include compensation for employees, income to business and landowners,  
33 and other business specific to Yolo County, but does not include food production that is exported out  
34 of the county. A proportion of Yolo Bypass production and crop consumption occurs within Yolo  
35 County; therefore, the expected annual losses to value added for Yolo County is expected to range  
36 from \$0.63 to \$1.5 million per year.

37 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
38 agricultural production in the Delta region. The permanent removal of agricultural land from  
39 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.9, Impacts AG-3 and  
40 AG-4. The reduction in the value of agricultural production is not considered an environmental  
41 impact. Significant environmental impacts would only result if the changes in regional economics  
42 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
43 required, the BDCP proponents would provide compensation to property owners for economic  
44 losses due to implementation of the alternative. While the compensation to property owners would

1 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 2 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 3 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 4 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 5 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 6 Zones.

### 7 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

8 As described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2, the  
 9 operational components of BDCP Conservation Measure 1 could result in a number of effects in  
 10 areas receiving SWP and CVP water deliveries outside of the Delta.

11 Changes in the amount, cost, or reliability of water deliveries could create socioeconomic effects in  
 12 the hydrologic regions. To the extent that unreliable or insufficient water supplies currently  
 13 represent obstacles to agricultural production, Alternative 4 may support more stable agricultural  
 14 activities by enabling broader crop selection or by reducing risk associated with uncertain water  
 15 deliveries. As a result of an increase in water supply and supply reliability, farmers may choose to  
 16 leave fewer acres fallow and/or plant higher-value crops. While the locations and extent of any  
 17 increases in production would depend on local factors and individual economic decisions, a general  
 18 increase in production would be anticipated to support growth in seasonal and permanent on-farm  
 19 employment, along with the potential expansion of employment in industries closely associated  
 20 with agricultural production. These include food processing, agricultural inputs, and transportation.

21 In contrast, decreased water deliveries may affect socioeconomics in hydrologic regions through  
 22 mechanisms similar to those described above; however, the effects would generally be reversed. For  
 23 example, it is reasonable to expect that reduced or less reliable water deliveries would result in  
 24 decreased agricultural production and, in turn, a reduction in both direct and indirect agricultural  
 25 employment. Economic and social patterns tied to predominant agricultural industrial activities and  
 26 land uses could erode, changing the character of agricultural communities in hydrologic regions. If  
 27 operation of water conveyance facilities under Alternative 4 reduced M&I deliveries to the extent  
 28 that it would, in the long run, constrain population growth, its implementation could reinforce a  
 29 socioeconomic status quo or limit potential economic and employment growth in hydrologic  
 30 regions. A detailed discussion of these potential effects is found in Appendix 5B, *Responses to*  
 31 *Reduced South of Delta Water Supplies*. Such changes to agricultural production and population  
 32 growth with its associated economic activity could also lead to shifts in the character of  
 33 communities in the hydrologic regions with resultant beneficial or adverse effects.

34 Generally, these effects (both beneficial and adverse) would be most concentrated in hydrologic  
 35 regions where agriculture is a primary industry and where agricultural operations depend most  
 36 heavily on SWP and CVP deliveries.

### 37 **Changes in SWP Deliveries Compared to No Action Alternative**

38 Based on Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.3, compared to  
 39 the No Action Alternative (2060), implementation of operational Scenario H1 under Alternative 4  
 40 would increase SWP deliveries to all hydrologic regions except for the San Joaquin River Region,  
 41 which would experience no change in deliveries. Compared to No Action Alternative (2060), the  
 42 South Coast Region would receive the largest net increase in deliveries under Scenario H1 (up to 251  
 43 TAF of Table A plus Article 21 deliveries) among the regions, which represents 55% of the net increase

1 in M&I deliveries. Compared to No Action Alternative (2060), Scenario H4 would decrease deliveries  
 2 to all hydrologic regions except for the Tulare Lake Region, which would receive an increase and the  
 3 San Joaquin River Region, which would experience no change in deliveries. Compared to the No  
 4 Action Alternative (2060), the South Coast Region would receive the largest net decrease in deliveries  
 5 under Scenario H4 (a decrease of up to 114 TAF of Table A deliveries) among the regions while Tulare  
 6 Lake would receive the only net increase in deliveries (up to 61 TAF of Table A plus Article 21  
 7 deliveries) among the regions. The other two operational scenarios (H2 and H3) would have effects  
 8 that would fall within the range of Scenario H1 and Scenario H4 (refer to Chapter 30, *Growth*  
 9 *Inducement and Other Indirect Effects*, Table 30-16, for more information).

## 10 **Changes in CVP Deliveries Compared to No Action Alternative**

11 The operational scenarios under Alternative 4 would not change CVP M&I deliveries for the  
 12 Sacramento River, South Coast, South Lahontan and Colorado River Regions because there are no  
 13 affected CVP contractors located in these regions. Compared to the No Action Alternative (2060),  
 14 Scenario H1 would increase CVP deliveries to the other hydrologic regions. San Francisco Bay is  
 15 projected to receive the largest potential increase (5 TAF) among the affected hydrologic regions.  
 16 Compared to the No Action Alternative (2060), Scenario H4 would also increase deliveries to the  
 17 other hydrologic regions and San Francisco Bay is projected to receive the largest potential increase  
 18 (2 TAF) among the affected hydrologic regions. The other two operational scenarios (H2 and H3)  
 19 would have effects that would fall within the range of Scenario H1 and Scenario H4 (refer to Chapter  
 20 30, *Growth Inducement and Other Indirect Effects*, Table 30-17, for more information).

21 **NEPA Effects:** Increases in average annual water deliveries to service areas could induce population  
 22 growth and new housing to accommodate growth. Such deliveries could also provide support for  
 23 water-intensive industries. As discussed in Chapter 30, *Growth Inducement and Other Indirect*  
 24 *Effects*, Section 30.3.2.5, long-term water supply reliability is an important component in enabling  
 25 long-term population increases. However, other factors—including natural growth, employment  
 26 opportunities, local policy, and quality of life—are more likely to determine population growth.  
 27 Nonetheless, population growth could stimulate economic activity resulting from increased demand  
 28 for goods and services. This increased demand could create broad economic benefits for regions  
 29 whose growth is supported by increased deliveries under BDCP.

30 Social changes, including changes in community character, could also result from an expansion in  
 31 population or economic activity linked to changes in water deliveries. For example, more stable  
 32 agricultural production and associated economic activities in areas where agriculture is a  
 33 predominant industry could strengthen and reinforce existing economic and social patterns and  
 34 institutions. Increased production could also intensify existing socioeconomic challenges, including  
 35 seasonal cycles in employment, housing demand, and provision of social services. In areas where  
 36 population growth would be enabled by increased water supplies or reliability, changes to  
 37 community character could result from an increased population, including the potential for changes  
 38 in urban form, environmental factors such as traffic or noise, demographic composition, or the rise  
 39 of new or broader economic or social opportunities. Again, the nature and extent of such changes  
 40 would be predominantly influenced by prevailing socioeconomic forces, rather than any specific  
 41 change associated with implementation of the BDCP.

42 Changes in agricultural production and population growth could also affect local government fiscal  
 43 conditions. Population growth would be anticipated to result in higher property and sales tax  
 44 revenue while increased agricultural activity could result in higher sales tax receipts for a local

1 jurisdiction. However, growth would also require expanded public services to meet the needs of a  
 2 larger population and a larger economic base. Expansion could require additional spending on  
 3 education, police and fire protection, medical services, and transportation and utility infrastructure.  
 4 Whether such growth would result in a long-term net benefit or cost would depend on a number of  
 5 factors including prevailing local service levels and tax rates, as well as the characteristics of the  
 6 growth.

7 Changes in water deliveries associated with operation of Alternative 4 could result in beneficial or  
 8 adverse socioeconomic effects in areas receiving water from the SWP and CVP. In hydrologic regions  
 9 where water deliveries are predicted to increase when compared with the No Action Alternative,  
 10 more stable agricultural activities could support employment and economic production associated  
 11 with agriculture. Where M&I deliveries increase, population growth could lead to general economic  
 12 growth and support water-intensive industries. Such changes could also lead to shifts in the  
 13 character of communities in the hydrologic regions with resultant beneficial or adverse effects.  
 14 Likewise, growth associated with deliveries could require additional expenditures for local  
 15 governments while also supporting increases in revenue.

16 **CEQA Conclusion:** As described above, the operational components of BDCP Conservation Measure  
 17 1 could result in a number of effects in areas receiving SWP and CVP water deliveries outside of the  
 18 Delta.

### 19 **Changes in SWP Deliveries Compared to Existing Conditions**

20 Compared to Existing Conditions, Scenario H1 would increase deliveries to all hydrologic regions  
 21 except for the San Joaquin River Region, which would experience no change in deliveries. Compared  
 22 to Existing Conditions, under Scenario H1, South Coast would receive the largest net increase in  
 23 deliveries (up to 189 TAF of Table A deliveries) among the regions, which represents 57% of the net  
 24 increase in M&I deliveries. Compared to Existing Conditions, Scenario H4 would decrease deliveries to  
 25 all hydrologic regions except for the Tulare Lake Region, which would receive an increase and the  
 26 San Joaquin River Region, which would experience no change in deliveries. Compared to Existing  
 27 Conditions, under Scenario H4, South Coast would receive the largest net decrease in deliveries (a  
 28 decrease of up to 170 TAF of Table A deliveries) among the regions while Tulare Lake would receive  
 29 the only net increase in deliveries (up to 52 TAF of Table A plus Article 21 deliveries) among the  
 30 regions. The other two operational scenarios (H2 and H3) would have effects that would fall within the  
 31 range of Scenario H1 and Scenario H4 (refer to Chapter 30, *Growth Inducement and Other Indirect*  
 32 *Effects*, Table 30-16, for more information).

### 33 **Changes in CVP Deliveries Compared to Existing Conditions**

34 The operational scenarios under Alternative 4 would not change M&I deliveries for the Sacramento  
 35 River, South Coast, South Lahontan and Colorado River regions because there are no affected CVP  
 36 contractors located in these regions. Compared to Existing Conditions, Scenario H1 would decrease  
 37 deliveries to the other hydrologic regions. San Francisco Bay is projected to receive the largest  
 38 potential decrease (2 TAF) among the affected hydrologic regions. Compared to Existing Conditions,  
 39 Scenario H4 would also decrease deliveries to the other hydrologic regions. San Francisco Bay is  
 40 projected to receive the largest potential decrease (5 TAF) among the affected hydrologic regions. The  
 41 other two operational scenarios (H2 and H3) would have effects that would fall within the range of  
 42 Scenario H1 and Scenario H4 (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table  
 43 30-17 for more information).

1       **Summary**

2       Operation of water conveyance facilities under Alternative 4 could affect socioeconomic conditions  
3       in the hydrologic regions receiving water from the SWP and CVP. However, because these impacts  
4       are social and economic in nature, rather than physical, they are not considered environmental  
5       impacts under CEQA. To the extent that changes in socioeconomic conditions in the hydrologic  
6       regions would lead to physical impacts, such impacts are described in Chapter 30, *Growth*  
7       *Inducement and Other Indirect Effects*, Section 30.3.2.

8       **16.3.3.10       Alternative 5—Dual Conveyance with Pipeline/Tunnel and**  
9       **Intake 1 (3,000 cfs; Operational Scenario C)**

10       Facilities construction under Alternative 5 would be similar to those described for Alternative 1A  
11       but with only one intake as opposed to five. Operations would be different under Alternative 5 than  
12       under Alternative 1A.

13       **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta**  
14       **Region during Construction of the Proposed Water Conveyance Facilities**

15       The regional economic effects on employment and income in the Delta region were evaluated during  
16       construction. Changes are shown relative to the Existing Conditions and the No Action Alternative  
17       (regional economic conditions do not differ between Existing Conditions and No Action Alternative).  
18       The effects on employment and income are displayed in Table 16-47. The direct and total change is  
19       shown that would result from conveyance-related spending. As evident in Table 16-47, spending on  
20       conveyance construction results in substantial local economic activity in the region. As shown, direct  
21       construction employment is anticipated to vary over the 8-year construction period, with an  
22       estimated 886 FTE jobs in the first year and 52 FTE jobs in the final year of the construction period.  
23       Construction employment is estimated to peak at 1,372 FTE jobs in year 4. Total employment  
24       (direct, indirect, and induced) would peak in year 3, at 4,780 FTE jobs.

25       **Table 16-47. Regional Economic Effects on Employment and Labor Income during Construction**  
26       **(Alternative 5)**

Regional Economic Impact <sup>a</sup>	Year								Total
	1	2	3	4	5	6	7	8	
<b>Employment (FTE)</b>									
Direct	886	1,004	1,317	1,372	1,254	987	249	52	7,123
Total <sup>b</sup>	5,073	4,277	4,780	4,290	3,370	2,191	422	73	24,475
<b>Labor Income (million \$)</b>									
Direct	139.6	105.2	108.0	87.4	60.0	30.6	3.0	0.1	533.9
Total <sup>b</sup>	250.5	194.2	204.1	170.4	122.1	67.9	9.2	1.0	1,019.4

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects; numbers may not sum to the total due to rounding.  
Detailed estimates are presented in Appendix 16A, *Regional Economic Impacts of Water Conveyance Facility Construction*.

27

1 The footprint of conveyance and related facilities such as roads and utilities would remove some  
 2 existing agricultural land from production, so the effects on employment and income would be  
 3 negative. The regional economic effects on employment and income in the Delta region from the  
 4 change in agricultural production are reported in Table 16-48. As shown, direct agricultural  
 5 employment would be reduced by an estimated 22 FTE jobs, while total employment (direct,  
 6 indirect, and induced) associated with agricultural employment would fall by 83 FTE jobs. Mapbook  
 7 Figures M14-1 and M14-2 display areas of Important Farmland and lands under Williamson Act  
 8 contracts that could be converted to other uses due to the construction of water conveyance  
 9 facilities for the Pipeline/Tunnel alignment. Note that not all of these structures would be  
 10 constructed under this alternative.

11 **Table 16-48. Regional Economic Effects on Agricultural Employment and Labor Income during**  
 12 **Construction (Alternative 5)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-22
Total <sup>b</sup>	-83
<b>Labor Income (million \$)</b>	
Direct	-2.8
Total <sup>b</sup>	-5.3

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects.

13  
 14 Additionally, the Alternative 5 construction footprint would result in the abandonment of an  
 15 estimated six producing natural gas wells in the study area, as described in Chapter 26, *Mineral*  
 16 *Resources*, Section 26.3.3.10, Impact MIN-1. This could result in the loss of employment and labor  
 17 income associated with monitoring and maintaining these wells. Generally, small crews perform  
 18 ongoing monitoring and maintenance of several wells at a time. As shown in Chapter 26, *Mineral*  
 19 *Resources*, Table 26-3, 516 active producer wells are located in the study area. Even if all six  
 20 producing wells in the Alternative 5 construction footprint were abandoned and not replaced with  
 21 new wells installed outside the construction footprint, the percentage reduction in the number of  
 22 natural gas wells would be very small. As a result, the employment and labor income effects  
 23 associated with well abandonment, while negative, would be minimal.

24 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
 25 construction-related employment and labor income, this would be considered a beneficial effect.  
 26 However, these activities would also be anticipated to result in a decrease in agricultural-related  
 27 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
 28 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
 29 available to reduce these effects by preserving agricultural productivity and compensating off-site.

30 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
 31 employment and income in the Delta region. The change would result from expenditures on  
 32 construction, increasing employment, and from changes in agricultural production, decreasing  
 33 employment. Changes in recreational expenditures and natural gas well operations could also affect  
 34 regional employment and income, but these have not been quantified. The total change in

1 employment and income is not, in itself, considered an environmental impact. Significant  
 2 environmental impacts would only result if the changes in regional economics cause physical  
 3 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. The BDCP costs are  
 4 addressed in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of  
 5 agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 6 14.3.3.10, Impacts AG-1 and AG-2; changes in recreation related activities are addressed in Chapter  
 7 15, *Recreation*, Section 15.3.3.10, REC-1 through REC-4.; abandonment of natural gas wells is  
 8 addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.10, Impact MIN-1 When required, DWR  
 9 would provide compensation to property owners for economic losses due to implementation of the  
 10 alternative. While the compensation to property owners would reduce the severity of economic  
 11 effects related to the loss of agricultural land, it would not constitute mitigation for any related  
 12 physical impact. Measures to reduce these impacts are discussed in Chapter 14, *Agricultural*  
 13 *Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1, Develop an ALS  
 14 to preserve agricultural productivity and mitigate for loss of Important Farmland and land subject to  
 15 Williamson Act contracts or in Farmland Security Zones.

## 16 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 17 **the Proposed Water Conveyance Facilities**

### 18 **Population**

19 Construction of conveyance facilities would require an estimated peak of 1,370 workers in year 4 of  
 20 the assumed 8-year construction period. It is anticipated that many of these new jobs would be filled  
 21 from within the existing five-county labor force. However, construction of the tunnels may require  
 22 specialized worker skills not readily available in the local labor pool. As a result, it is anticipated that  
 23 some specialized workers may be recruited from outside the five-county region.

24 Considering the multi-year duration of conveyance facility construction, it is anticipated that non-  
 25 local workers would temporarily relocate to the five-county region, thus adding to the local  
 26 population. As discussed in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section  
 27 30.3.2.1, Direct Growth Inducement, an estimated 30 percent of workers could come from out of the  
 28 Delta region, suggesting that approximately 400 workers could relocate to the Delta region at the  
 29 peak of the construction period. However, this additional population would constitute a minor  
 30 increase in the total 2020 projected regional population of 4.6 million and be distributed throughout  
 31 the region. Changes in demand for public services resulting from any increase in population are  
 32 addressed in Chapter 20, *Public Services and Utilities*, Section 20.3.3.10, Impact UT-1 through UT-6.

### 33 **Housing**

34 Changes in housing demand are based on changes in supply resulting from displacement during  
 35 facilities construction and changes in housing demand resulting from employment associated with  
 36 construction of conveyance facilities. As described in Chapter 13, *Land Use*, Section 13.3.3.10, Impact  
 37 LU-2, construction of water conveyance facilities under Alternative 5 would conflict with  
 38 approximately 29 residential structures.

39 The construction workforce would most likely commute daily to the work sites from within the five-  
 40 county region; however, if needed, there are about 53,000 housing units available to accommodate  
 41 workers who may choose to commute on a workweek basis or who may choose to temporarily  
 42 relocate to the region for the duration of the construction period, including the estimated 400  
 43 workers who may temporarily relocate to the Delta region from out of the region. In addition to the

1 available housing units, there are recreational vehicle parks and hotels and motels within the five-  
2 county region to accommodate any construction workers. As a result, and as discussed in more  
3 detail in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.1, Direct Growth  
4 Inducement, construction of the proposed conveyance facilities is not expected to substantially  
5 increase the demand for housing within the five-county region.

6 **NEPA Effects:** Within specific local communities, there could be localized effects on housing.  
7 However, given the availability of housing within the five-county region, predicting where this  
8 impact might fall would be highly speculative. In addition, new residents would likely be dispersed  
9 across the region, thereby not creating a burden on any one community.

10 Because these activities would not result in permanent concentrated, substantial increases in  
11 population or new housing, they would not be considered to have an adverse effect.

12 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
13 population increases in the Delta region with adequate housing supply to accommodate the change  
14 in population. Therefore, the minor increase in population is not anticipated to lead to adverse  
15 physical changes in the environment.

### 16 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 17 **Water Conveyance Facilities**

18 **NEPA Effects:** Under Alternative 5, effects on community character would be similar in nature to  
19 those described under Alternative 1A, Impact ECON-3. However, the intensity of these effects would  
20 be reduced due to the construction of one intake facility and a single bore tunnel. As such, regional  
21 population and employment would increase to levels described above under Impact ECON-1 and  
22 ECON-2. While water conveyance construction could result in beneficial effects relating to the  
23 economic welfare of a community, adverse social effects could also arise as a result of declining  
24 economic stability or changes in community cohesion in communities closest to construction effects  
25 and in those most heavily influenced by agricultural and recreational activities. Implementation of  
26 mitigation measures and environmental commitments related to noise, visual effects,  
27 transportation, agriculture, and recreation would reduce adverse effects (see Appendix 3B,  
28 *Environmental Commitments*). These actions are summarized under Alternative 1A, Impact ECON-3.

29 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 5 could affect  
30 community character in the Delta region. However, because these impacts are social in nature,  
31 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
32 community character would lead to physical impacts involving population growth, such impacts are  
33 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
34 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
35 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
36 character stemming from a lack of maintenance, upkeep, and general investment. However,  
37 implementation of mitigation measures and environmental commitments related to noise, visual  
38 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
39 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
40 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
41 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
42 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
43 Management Plans.

1 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing**  
 2 **the Proposed Water Conveyance Facilities**

3 **NEPA Effects:** Effects on tax revenue as a result of water conveyance construction under Alternative  
 4 5 would be similar to those described under Alternative 1A, Impact ECON-4. However, due to the  
 5 construction of fewer intake facilities, forgone revenue is estimated at \$7.4 million over the  
 6 construction period. This figure may be smaller if land acquisition needs are smaller due to the  
 7 construction of a single bore tunnel between the Intermediate Forebay and Byron Tract Forebay.  
 8 These decreases in revenue could potentially result in the loss of a substantial share of some  
 9 agencies' tax bases, particularly for smaller districts affected by the BDCP. This economic effect  
 10 would be considered adverse; however, the BDCP proponents would make arrangements to  
 11 compensate local governments for the loss of property tax or assessment revenue for land used for  
 12 constructing, locating, operating, or mitigating for new Delta water conveyance facilities.  
 13 Additionally, as discussed under Impact ECON-2, construction of the water conveyance facilities  
 14 would be anticipated to result in a net increase of income and employment in the Delta region. This  
 15 would also create an indirect beneficial effect through increased sales tax revenue for local  
 16 government entities that rely on sales taxes.

17 **CEQA Conclusion:** Under Alternative 5, construction of water conveyance facilities would result in  
 18 the removal of a portion of the property tax base for various local government entities in the Delta  
 19 region. Over the construction period, property tax and assessment revenue forgone is estimated at  
 20 \$7.4 million. However, the Sacramento-San Joaquin Delta Reform Act commits the entities receiving  
 21 water from the State Water Project and federal Central Valley Project to mitigate for lost property  
 22 tax and assessment revenue associated with land needed for the construction of new conveyance  
 23 facilities (Water Code Section 85089). Additionally, any losses could be offset, at least in part, by an  
 24 anticipated increase in sales tax revenue. CEQA does not require a discussion of socioeconomic  
 25 effects except where they would result in reasonably foreseeable physical changes. If an alternative  
 26 is not anticipated to result in a physical change to the environment, it would not be considered to  
 27 have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any  
 28 physical consequences resulting from fiscal impacts are too speculative to ascertain.

29 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed**  
 30 **Water Conveyance Facilities**

31 **NEPA Effects:** Under Alternative 5, disruption of recreational activities during the construction  
 32 period would be similar in character, but smaller in extent and duration, than that described under  
 33 Alternative 1A, Impact ECON-5. This is largely because fewer intake facilities would be constructed  
 34 under this alternative. Additionally, the tunnel between the Intermediate Forebay and Byron Tract  
 35 Forebay would be constructed with a single bore. While access to recreational facilities would be  
 36 maintained throughout construction, the quality of recreational activities including boating, fishing,  
 37 waterfowl hunting, and hiking in the Delta could be indirectly affected by noise, lighting, traffic, and  
 38 visual degradation in proximity to water conveyance construction. Relative to Alternative 1A,  
 39 however, two fewer established recreational sites or areas would be affected by this alternative.

40 Construction of water conveyance structures under this alternative would be anticipated to result in  
 41 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
 42 the implementation of mitigation measures, including enhancement of fishing access sites and  
 43 incorporation of recreational access into project design, and environmental and non-environmental  
 44 commitments, including providing funding to implement recreational improvements and control

1 aquatic weeds, providing notification of maintenance activities in waterways, and developing and  
2 implementing a noise abatement plan, as described in Appendix 3B, *Environmental Commitments*.  
3 With a decrease in recreational quality, the number of visits would be anticipated to decline, at least  
4 in areas closest to construction activities. The multi-year schedule and geographic scale of  
5 construction activities and the anticipated decline in recreational spending would be considered an  
6 adverse effect. The commitments and mitigation measure cited above would contribute to the  
7 reduction of this effect.

8 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 5  
9 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
10 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
11 recreational activities. This section considers only the economic effects of recreational changes  
12 brought about by construction of the proposed water conveyance facilities. Potential physical  
13 changes to the environment relating to recreational resources are described and evaluated in  
14 Chapter 15, *Recreation*, Section 15.3.3.10, Impacts REC-1 through REC-4.

### 15 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 16 **the Proposed Water Conveyance Facilities**

17 Construction of conveyance facilities would convert land from existing agricultural uses to uses that  
18 include direct facility footprints, construction staging areas, borrow/spoils areas, RTM storage,  
19 temporary and permanent roads, and utilities. Agricultural land could also be affected by changes in  
20 water quality and other conditions that would affect crop productivity. These direct effects on  
21 agricultural land are described in Chapter 14, *Agricultural Resources*, Section 14.3.3.10, Impacts AG-  
22 1 and AG-2.

23 Changes in crop acreage were used to describe the associated changes in economic values. Unit  
24 prices, yields, and crop production and investment costs were presented in Section 16.1,  
25 *Environmental Setting/Affected Environment*. Table 16-49 summarizes the changes in acreage and  
26 value of agricultural production that would result in the Delta region as a result of Alternative 5  
27 construction. Changes are shown relative to the Existing Conditions and the No Action Alternative  
28 by aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
29 Alternative were assumed to be the same). The table also includes a summary of changes in crop  
30 acreages that are reported in greater detail in Appendix 14A, *Individual Crop Effects as a Result of*  
31 *BDCP Water Conveyance Facility Construction*.

32 Total value of irrigated crop production in the Delta would decline on average by \$7.8 million per  
33 year during the construction period, with total irrigated crop acreage declining by about 5,000 acres,  
34 These estimates are not dependent on water year type.

1 **Table 16-49. Crop Acres and Value of Agricultural Production in the Delta during Construction**  
 2 **(Alternative 5)**

Analysis Metric	Alternative 5	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	478.7	-5.0
Grains	58.2	-0.4
Field crops	189.5	-1.6
Forage crops	111.5	-1.2
Vegetable, truck, and specialty crops	76.7	-0.5
Orchards and vineyards	42.8	-1.2
Total Value of Production (million \$)	642.2	-7.8
Grains	24.1	-0.1
Field crops	112.8	-1.0
Forage crops	72.1	-1.0
Vegetable, truck, and specialty crops	266.7	-1.7
Orchards and vineyards	166.5	-4.0

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

3

4 Alternative 5 may also affect production costs, investments in production facilities and standing  
 5 orchards and vineyards, and salinity of agricultural water supply. Effects would be similar to those  
 6 qualitatively described under Alternative 1A, Impact ECON-6. See Chapter 14, *Agricultural*  
 7 *Resources*, Section 14.3.3.10, Impacts AG-1 and AG-2, for further discussion of indirect effects on  
 8 agricultural resources.

9 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
 10 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
 11 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 12 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 13 agricultural productivity and compensating off-site.

14 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
 15 value of agricultural production in the Delta region. The removal of agricultural land from  
 16 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.10, Impacts AG-1 and  
 17 AG-2. The reduction in the value of agricultural production is not considered an environmental  
 18 impact. Significant environmental impacts would only result if the changes in regional economics  
 19 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 20 required, DWR would provide compensation to property owners for economic losses due to  
 21 implementation of the alternative. While the compensation to property owners would reduce the  
 22 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 23 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 24 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 25 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 26 and land subject to Williamson Act contracts or in Farmland Security Zones.

1 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region**  
 2 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

3 Permanent effects on regional economics during operation and maintenance of the proposed water  
 4 conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-7.  
 5 Increased expenditures related to operation and maintenance of water conveyance facilities would  
 6 be expected to result in a permanent increase in regional employment and income, as presented in  
 7 Table 16-22. The permanent removal of agricultural land following construction would have lasting  
 8 negative effects on agricultural employment and income, as shown in Table 16-23.

9 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
 10 result in an increase in operations-related employment and labor income, this would be considered  
 11 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
 12 agricultural-related employment and labor income, which would be considered an adverse effect.  
 13 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 14 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 15 compensating off-site.

16 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 17 increase total employment and income in the Delta region. The net change would result from  
 18 expenditures on operation and maintenance and from changes in agricultural production. The total  
 19 change in income and employment is not, in itself, considered an environmental impact. Significant  
 20 environmental impacts would only result if the changes in regional economics cause physical  
 21 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 22 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 23 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.10, Impacts AG-3  
 24 and AG-4; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
 25 15.3.3.10, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
 26 landowners as a result of acquiring lands for the proposed conveyance facilities. While the  
 27 compensation to property owners would reduce the severity of economic effects related to the loss  
 28 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
 29 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 30 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
 31 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
 32 contracts or in Farmland Security Zones.

33 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during**  
 34 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

35 Permanent effects on population and housing during operation and maintenance of the proposed  
 36 water conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-  
 37 8. It is anticipated that non-local workers would relocate to the five-county region, thus adding to  
 38 the local population. However, this additional population would constitute a minor increase in the  
 39 total 2020 projected regional population of 4.6 million and be distributed throughout the region. It  
 40 is anticipated that most of the operational workforce would be drawn from within the five-county  
 41 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

42 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 43 population or new housing, they would not be considered to have an adverse effect.

1 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 2 result in minor population increases in the Delta region with adequate housing supply to  
 3 accommodate the change in population and therefore adverse changes in the physical environment  
 4 are not anticipated.

### 5 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 6 **Proposed Water Conveyance Facilities**

7 **NEPA Effects:** Under Alternative 5, effects on community character would be similar in nature,  
 8 location, and magnitude to those described under Alternative 1A, Impact ECON-9. Variations in the  
 9 intensity of these effects would result from the operation and maintenance of one intake facility and  
 10 a single-bore tunnel between the Intermediate Forebay and Byron Tract Forebay. While water  
 11 conveyance operation and maintenance could result in beneficial effects relating to the economic  
 12 welfare of a community, lasting adverse social effects, including effects on community cohesion,  
 13 could also arise in communities closest to physical features and in those most heavily influenced by  
 14 agricultural and recreational activities. Implementation of mitigation measures and environmental  
 15 commitments related to noise, visual effects, transportation, agriculture, and recreation would  
 16 reduce adverse effects (see Appendix 3B, *Environmental Commitments*). These actions are  
 17 summarized under Alternative 1A, Impact ECON-9.

18 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 5  
 19 could affect community character in the Delta region. However, because these impacts are social in  
 20 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 21 changes to community character would lead to physical impacts involving population growth, such  
 22 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 23 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
 24 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
 25 community character stemming from a lack of maintenance, upkeep, and general investment.

### 26 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and** 27 **Maintenance of the Proposed Water Conveyance Facilities**

28 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operations under  
 29 Alternative 5 would be similar to those described under Alternative 1A, Impact ECON-10. However,  
 30 with the construction of fewer intake facilities, forgone revenue is estimated to \$44.4 million over  
 31 the 50-year permit period. These decreases in revenue could potentially result in the loss of a  
 32 substantial share of some agencies' tax bases, particularly for smaller districts affected by the BDCP.  
 33 This economic effect would be adverse; however, the BDCP proponents would make arrangements  
 34 to compensate local governments for the loss of property tax or assessment revenue for land used  
 35 for constructing, locating, operating, or mitigating for new Delta water conveyance facilities.  
 36 Additionally, as discussed under Impact ECON-7, continued operation and maintenance of the water  
 37 conveyance facilities would be anticipated to result in a net increase of income and employment in  
 38 the Delta region. This could also create an indirect beneficial effect through increased sales tax  
 39 revenue for local government entities that rely on sales taxes.

40 **CEQA Conclusion:** Under Alternative 5, the ongoing operation and maintenance of water  
 41 conveyance facilities would restrict property tax revenue levels for various local government  
 42 entities in the Delta region. Over the 50-year permit period, property tax and assessment revenue  
 43 forgone is estimated at \$44.4 million. However, the Sacramento-San Joaquin Delta Reform Act

1 commits the entities receiving water from the State Water Project and federal Central Valley Project  
 2 to mitigate for lost property tax and assessment revenue associated with land needed for the  
 3 construction of new conveyance facilities (Water Code Section 85089). Additionally, any losses  
 4 could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
 5 require a discussion of socioeconomic effects except where they would result in reasonably  
 6 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
 7 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
 8 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
 9 speculative to ascertain.

10 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the**  
 11 **Proposed Water Conveyance Facilities**

12 Effects on recreation economics during operation and maintenance of the proposed water  
 13 conveyance facilities under Alternative 5 would be similar to those described under Alternative 1A,  
 14 Impact ECON-11.

15 **NEPA Effects:** Maintenance of conveyance facilities, including intakes, would result in periodic  
 16 temporary but not substantial adverse effects on boat passage and water-based recreational  
 17 activities. Because effects of facility maintenance would be short-term and intermittent, substantial  
 18 economic effects are not anticipated to result from operation and maintenance of the facilities.

19 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
 20 conveyance facilities under Alternative 5 are anticipated to create minor effects on recreational  
 21 resources and therefore, are not expected to substantially reduce economic activity related to  
 22 recreational activities. This section considers only the economic effects of recreational changes.  
 23 Potential physical changes to the environment relating to recreational resources are described and  
 24 evaluated in Chapter 15, *Recreation*, Section 15.3.3.10, Impacts REC-5 through REC-8.

25 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during**  
 26 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

27 During operation and maintenance of conveyance facilities existing agricultural land would be in  
 28 uses that include direct facility footprints and associated permanent roads and utilities. Agricultural  
 29 land could also be affected by changes in water quality and other conditions that would affect crop  
 30 productivity. These direct effects on agricultural land are described in Chapter 14, *Agricultural*  
 31 *Resources*, Section 14.3.3.10, Impacts AG-1 and AG-2.

32 Changes in crop acreage were used to estimate the associated changes in economic values. Unit  
 33 prices, yields, and crop production and investment costs were presented in Section 16.1,  
 34 *Environmental Setting/Affected Environment*. Table 16-50 summarizes the changes in acreage and  
 35 value of agricultural production that would result in the Delta region during operation of Alternative  
 36 5. Changes are shown relative to the Existing Conditions and the No Action Alternative by aggregate  
 37 crop category (agricultural resources under Existing Conditions and in the No Action Alternative  
 38 were assumed to be the same). The changes in crop acreages are reported in greater detail in  
 39 Appendix 14A, *Individual Crop Effects as a Result of BDCP Water Conveyance Facility Construction*.

40 Total value of irrigated crop production in the Delta region would decline on average by \$7.0 million  
 41 per year during operation and maintenance, with total irrigated crop acreage declining by about  
 42 4,300 acres. These estimates are not dependent on water year type.

1 **Table 16-50. Crop Acres and Value of Agricultural Production in the Delta Region during**  
 2 **Operations and Maintenance (Alternative 5)**

Analysis Metric	Alternative 5	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	479.4	-4.3
Grains	58.3	-0.3
Field crops	189.8	-1.3
Forage crops	111.6	-1.1
Vegetable, truck, and specialty crops	76.7	-0.4
Orchards and vineyards	42.9	-1.1
Total Value of Production (million \$)	643.1	-7.0
Grains	24.1	-0.1
Field crops	113.1	-0.8
Forage crops	72.2	-0.9
Vegetable, truck, and specialty crops	266.9	-1.5
Orchards and vineyards	166.8	-3.7

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

3  
 4 Alternative 5 may also affect production costs on lands even if gross revenues are largely unaffected.  
 5 Costs could be associated with operational constraints and longer travel times due to permanent  
 6 facilities. In most cases, affected lands fall within the facilities footprint, and are included in the  
 7 agricultural acreage and value of production described elsewhere in this Chapter and in Chapter 14,  
 8 *Agricultural Resources*, Section 14.3.3.10.

9 Crop yields and crop selection on lands in the Delta could be affected by changes in salinity of  
 10 agricultural water supply during operation and maintenance activities. If operation of the proposed  
 11 conveyance facilities increases salinity in part of the Delta, crops that are more sensitive to salinity  
 12 could shift to other lands in the five-county Delta region. See Chapter 14, *Agricultural Resources*,  
 13 Section 14.3.3.10, Impact AG-2, for further discussion of effects from changes in salinity.

14 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
 15 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
 16 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
 17 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
 18 productivity and compensating off-site.

19 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities  
 20 the value of agricultural production in the Delta region would be reduced. The permanent removal  
 21 agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 22 14.3.3.10, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 23 considered an environmental impact. Significant environmental impacts would only result if the  
 24 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 25 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 26 economic losses due to implementation of the alternative. While the compensation to property  
 27 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 28 would not constitute mitigation for any related physical effect. Measures to reduce these impacts are

1 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 2 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 3 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 4 Zones.

### 5 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 6 **Implementation of the Proposed Conservation Measures 2-22**

7 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2-  
 8 22 would be similar to those described under Alternative 1A, Impact ECON-13. However, under this  
 9 alternative, 25,000 acres would be restored under CM4, rather than 65,000 acres. In the Delta  
 10 region, spending on Conservation Measures 2-22 would include construction, operation and  
 11 maintenance activities that would convert or disturb existing land use. Because implementation of  
 12 Conservation Measures 2-22 would be anticipated to result in an increase in construction and  
 13 operation and maintenance-related employment and labor income, this would be considered a  
 14 beneficial effect. However, implementation of these components would also be anticipated to result  
 15 in a decrease in agricultural-related employment and labor income, which would be considered an  
 16 adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
 17 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
 18 productivity and compensating off-site. Additionally, implementation of these components are  
 19 anticipated to result in the abandonment of natural gas wells, causing a decrease in employment and  
 20 labor income associated with monitoring and maintaining wells, which would be considered an  
 21 adverse effect. These effects, however, would be smaller than those estimated for Alternative 1A  
 22 because, under Alternative 5, 40,000 fewer acres would be restored, displacing fewer wells.  
 23 Mitigation Measure MIN-5, described in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-  
 24 5, would be available to reduce these effects by minimizing, to the extent feasible, the need for well  
 25 abandonment or relocation.

26 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would affect total  
 27 employment and income in the Delta region. The change in total employment and income in the  
 28 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 29 Measures 2-22 and any resulting changes in agricultural production, recreation, and natural gas  
 30 production activities. The total change in employment and income is not, in itself, considered an  
 31 environmental impact. Significant environmental impacts would only result if the changes in  
 32 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 33 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
 34 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
 35 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
 36 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

### 37 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 38 **Implementing the Proposed Conservation Measures 2-22**

39 Effects on population and housing as a result of the proposed Conservation Measures 2-22 would be  
 40 similar to those described under Alternative 1A, Impact ECON-14. However, under this alternative,  
 41 25,000 acres would be restored under CM4, rather than 65,000 acres. In general, the changes in  
 42 population and housing would include increases in population from the construction and operation  
 43 and maintenance-related activity and declines in residential housing and business establishments as  
 44 a result of lands converted or impaired.

1 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
2 population or new housing, they would not be considered to have an adverse effect.

3 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
4 population and housing in the Delta region. The change in total population and housing in the Delta  
5 region is based on employment resulting from implementation of the proposed Conservation  
6 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
7 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
8 physical environment are not anticipated to result.

### 9 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 10 **Conservation Measures 2–22**

11 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
12 22 would be similar to those described under Alternative 1A, Impact ECON-15. However, under this  
13 alternative, 25,000 acres would be restored under CM4, rather than 65,000 acres. While  
14 implementation of Conservation Measures 2–22 could result in beneficial effects relating to the  
15 economic welfare of a community, adverse social effects, including effects on community cohesion,  
16 could also arise in those communities closest to character-changing effects and those most heavily  
17 influenced by agricultural activities. Implementation of mitigation measures and environmental  
18 commitments related to noise, visual effects, transportation, agriculture, and recreation would  
19 reduce adverse effects (see Appendix 3B, *Environmental Commitments*). These actions are  
20 summarized under Alternative 1A, Impact ECON-15.

21 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 5 could affect  
22 community character within the Delta region. However, because these effects are social in nature,  
23 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
24 community character are related to physical impacts involving population growth, these impacts are  
25 described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore,  
26 notable decreases in population or employment, even if limited to certain areas, sectors, or the  
27 vacancy of individual buildings, could result in alteration of community character stemming from a  
28 lack of maintenance, upkeep, and general investment.

### 29 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing** 30 **the Proposed Conservation Measures 2–22**

31 **NEPA Effects:** Under Alternative 5, effects on local government fiscal conditions as a result of  
32 conservation measure implementation would be similar to those described under Alternative 1A,  
33 Impact ECON-16. However, under this alternative, 25,000 acres would be restored under CM4,  
34 rather than 65,000 acres. Forgone revenue would be estimated to reach approximately \$109.7  
35 million. Because Conservation Measures 2–22 would remove some private land from local property  
36 tax and assessment rolls, this economic effect would still be considered adverse; however, the BDCP  
37 proponents would offset forgone property tax and assessments levied by local governments and  
38 special districts on private lands converted to habitat.

39 **CEQA Conclusion:** Under Alternative 5, implementation of Conservation Measures 2–22 would  
40 result in the removal of a portion of the property tax base for various local government entities in  
41 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
42 estimated to reach approximately \$109.7 million. However, the BDCP proponents would  
43 compensate local governments and special districts for forgone revenue. CEQA does not require a

1 discussion of socioeconomic effects except where they would result in physical changes. If an  
2 alternative is not anticipated to result in a physical change to the environment, it would not be  
3 considered to have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and  
4 15131).

### 5 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the** 6 **Proposed Conservation Measures 2–22**

7 **NEPA Effects:** Effects related to implementation of the Conservation Measures 2–22 under this  
8 alternative would be similar to those described under Alternative 1A, Impact ECON-17. However,  
9 the magnitude of effects related specifically to CM4, Tidal Habitat Restoration, would be smaller in  
10 magnitude, as this alternative would restore 25,000 acres instead of 65,000 acres. These measures  
11 may result in adverse and beneficial effects on recreational resources in the Delta region, resulting  
12 in the potential for decreased or increased economic activities related to recreation.

13 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
14 recreation and compromise the quality of activities, leading to potential economic impacts.  
15 However, over time, implementation could also improve the quality of existing recreational  
16 opportunities, creating increased economic value with respect to recreation. This section considers  
17 only the economic effects of recreational changes brought about by conservation measure  
18 implementation. Potential physical changes to the environment relating to recreational resources  
19 are described and evaluated in Chapter 15, *Recreation* Section 15.3.3.10, Impacts REC-9 through  
20 REC-11.

### 21 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of** 22 **Implementing the Proposed Conservation Measures 2–22**

23 **NEPA Effects:** Effects on agricultural economics as a result of the proposed Conservation Measures  
24 2–22 would be similar to those described under Alternative 1A, Impact ECON-18, except the  
25 magnitude would be reduced since 25,000 acres of tidal habitat would be restored under CM4  
26 instead of 65,000 acres. Conservation Measures 2–22 would convert land from existing agricultural  
27 uses. These direct effects on agricultural land are described qualitatively in Chapter 14, *Agricultural*  
28 *Resources*, Section 14.3.3.10, Impacts AG-3 and AG-4. Effects on agricultural economics would  
29 include effects on crop production and agricultural investments resulting from restoration actions  
30 on agricultural lands. The effects would be similar in kind to those described for lands converted  
31 due to construction and operation of the conveyance features and facilities. The total acreage and  
32 crop mix of agricultural land potentially affected is not specified at this time, but when required, the  
33 BDCP proponents would provide compensation to property owners for losses due to  
34 implementation of the alternative.

35 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
36 agricultural production in the Delta region. The permanent removal of agricultural land from  
37 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.10, Impacts AG-3 and  
38 AG-4. The reduction in the value of agricultural production is not considered an environmental  
39 impact. Significant environmental impacts would only result if the changes in regional economics  
40 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
41 required, the BDCP proponents would provide compensation to property owners for economic  
42 losses due to implementation of the alternative. While the compensation to property owners would  
43 reduce the severity of economic effects related to the loss of agricultural land, it would not

1 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
2 discussed in Chapter 14, Agricultural Resources, Section 14.3.3.2, Impact AG-1.

### 3 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

4 The socioeconomic effects associated with operation of Alternative 5 would be similar to those  
5 described under Alternative 1A, Impact ECON-19; however, the magnitude of the effects would be  
6 different based on the construction of one intake and different operational guidelines leading to  
7 different deliveries to hydrologic regions. Changes in deliveries to hydrologic regions could result in  
8 beneficial or adverse socioeconomic effects in these areas. In hydrologic regions where water  
9 deliveries are predicted to increase when compared with the No Action Alternative, more stable  
10 agricultural activities could support employment and economic production associated with  
11 agriculture.

#### 12 **Changes in SWP Deliveries Compared to No Action Alternative**

13 Compared to No Action Alternative (2060), Alternative 5 would increase deliveries to all hydrologic  
14 regions. Compared to the No Action Alternative (2060), South Coast would receive the largest net  
15 increase (up to 104 TAF of Table A plus Article 21 deliveries) among the regions, which represents  
16 65% of the net increase in Table A plus Article 21 M&I deliveries under Alternative 5 (refer to  
17 Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-16, for more information).

#### 18 **Changes in CVP Deliveries Compared to No Action Alternative**

19 Alternative 5 would not change M&I deliveries for the Sacramento River, South Coast, South  
20 Lahontan and Colorado River Regions because there are no affected CVP contractors located in these  
21 regions. Compared to the No Action Alternative (2060), Alternative 5 would result in increased  
22 deliveries to the other hydrologic regions. Compared to the No Action Alternative (2060), San  
23 Francisco Bay is projected to receive the largest potential increase (2 TAF) among the hydrologic  
24 regions (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-17 for more  
25 information).

26 **NEPA Effects:** Where M&I deliveries increase, population growth could lead to general economic  
27 growth and support water-intensive industries. Changes to agricultural production and population  
28 growth with its associated economic activity could also lead to shifts in the character of  
29 communities in the hydrologic regions with resultant beneficial or adverse effects. Likewise, growth  
30 associated with deliveries could require additional expenditures for local governments while also  
31 supporting increases in revenue.

32 **CEQA Conclusion:** As described above, the operational components of BDCP Conservation Measure  
33 1 could result in a number of effects in areas receiving SWP and CVP water deliveries outside of the  
34 Delta.

#### 35 **Changes in SWP Deliveries Compared to Existing Conditions**

36 Compared to Existing Conditions, Alternative 5 would increase deliveries to all hydrologic regions  
37 except for Tulare Lake and South Lahontan Regions, which would experience a decrease in  
38 deliveries, and the San Joaquin River Region, which would experience no change in deliveries. South  
39 Coast would receive the largest net increase (up to 45 TAF of Table A deliveries) among the regions,  
40 which represents 76% of the net increase in Table A M&I deliveries under Alternative 5. Table A  
41 plus Article 21 M&I deliveries to Tulare Lake and South Lahontan Regions would decrease by up to 2

1 TAF (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-16 for more  
2 information).

### 3 **Changes in CVP Deliveries Compared to Existing Conditions**

4 Alternative 5 would not change M&I deliveries for the Sacramento River, South Coast, South  
5 Lahontan, and Colorado River Regions because there are no affected CVP contractors located in  
6 these regions. Compared to Existing Conditions, Alternative 5 would result in decreased deliveries  
7 to the other hydrologic regions. Compared to Existing Conditions, San Francisco Bay is projected to  
8 receive the largest decrease (5 TAF) among the hydrologic regions (refer to Chapter 30, *Growth*  
9 *Inducement and Other Indirect Effects*, Table 30-17 for more information).

### 10 **Summary**

11 Operation of water conveyance facilities under Alternative 5 could affect socioeconomic conditions  
12 in the hydrologic regions receiving water from the SWP and CVP. However, because these impacts  
13 are social and economic in nature, rather than physical, they are not considered environmental  
14 impacts under CEQA. To the extent that changes in socioeconomic conditions in the hydrologic  
15 regions would lead to physical impacts, such impacts are described in Chapter 30, *Growth*  
16 *Inducement and Other Indirect Effects*, Section 30.3.2.

### 17 **16.3.3.11 Alternative 6A—Isolated Conveyance with Pipeline/Tunnel and** 18 **Intakes 1–5 (15,000 cfs; Operational Scenario D)**

19 Facilities construction under Alternative 6A would be similar to those described for Alternative 1A.  
20 However, this would be an isolated conveyance, no longer involving operation of the existing  
21 SWP/CVP south Delta diversion facilities for Clifton Court Forebay and the Jones Pumping Plant.  
22 Operations would be different under Alternative 6A than under Alternative 1A.

### 23 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 24 **Region during Construction of the Proposed Water Conveyance Facilities**

25 Temporary effects on regional economics during construction of the proposed water conveyance  
26 facilities would be similar to those described under Alternative 1A, Impact ECON-1. As shown in  
27 Table 16-19, over the construction period, regional effects of construction activities would result in  
28 direct employment of more than 21,000 FTE, with total employment effects in excess of 65,000 FTE.  
29 Increases in labor income associated with this employment would also be expected. Declines in  
30 agricultural production would be expected to lead to a decrease in employment of 27 FTE, with total  
31 effects leading to a decline of 100 FTE. Similarly, labor income related to these positions would  
32 decline, as shown in Table 16-20.

33 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
34 construction-related employment and labor income, this would be considered a beneficial effect.  
35 However, these activities would also be anticipated to result in a decrease in agricultural-related  
36 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
37 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
38 available to reduce these effects by preserving agricultural productivity and compensating off-site.

39 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
40 employment and income in the Delta region, temporarily. The increase in employment and income

1 that would result from expenditures on construction would be greater than the reduction in  
 2 employment and income attributable to losses in agricultural production. Changes in recreational  
 3 expenditures and natural gas well operations could also affect regional employment and income, but  
 4 these have not been quantified. The total change in employment and income is not, in itself,  
 5 considered an environmental impact. Significant environmental impacts would only result if the  
 6 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 7 throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation Costs and*  
 8 *Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
 9 *Agricultural Resources*, Section 14.3.3.11, Impacts AG-1 and AG-2; changes in recreation related  
 10 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.11, REC-1 through REC-4;  
 11 abandonment of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.11,  
 12 Impact MIN-1. When required, DWR would provide compensation to property owners for economic  
 13 losses due to implementation of the alternative. While the compensation to property owners would  
 14 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 15 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 16 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 17 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 18 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 19 Zones.

## 20 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 21 **the Proposed Water Conveyance Facilities**

22 Effects on population and housing during construction of the proposed water conveyance facilities  
 23 would be similar to those described under Alternative 1A, Impact ECON-2. It is anticipated that non-  
 24 local workers would temporarily relocate to the Delta region, thus adding to the local population.  
 25 However, this additional population would constitute a minor increase in the total 2020 projected  
 26 regional population of 4.6 million and be distributed throughout the region. Within specific local  
 27 communities, there could be localized effects on housing. However, given the availability of housing  
 28 within the five-county region, predicting where this impact might fall would be speculative. In  
 29 addition, new residents would likely be dispersed across the region, thereby not creating a  
 30 substantial burden on any one community.

31 **NEPA Effects:** Because these activities would not result in permanent concentrated, substantial  
 32 increases in population or new housing, they would not be considered to have an adverse effect.

33 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
 34 temporary population increases in the Delta region, which has an adequate housing supply to  
 35 accommodate the change in population. Therefore, adverse physical changes resulting from the  
 36 minor increase in population are not anticipated.

## 37 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 38 **Water Conveyance Facilities**

39 **NEPA Effects:** Under Alternative 6A, effects on community character would be similar to those  
 40 described under Alternative 1A, Impact ECON-3. While water conveyance construction could result  
 41 in beneficial effects relating to the economic welfare of a community, adverse social effects could  
 42 also arise as a result of declining economic stability or changes in community cohesion in  
 43 communities closest to construction effects and in those most heavily influenced by agricultural and

1 recreational activities. Implementation of mitigation measures and environmental commitments  
 2 related to noise, visual effects, transportation, agriculture, and recreation would reduce adverse  
 3 effects (see Appendix 3B, *Environmental Commitments*). These actions are summarized under  
 4 Alternative 1A, Impact ECON-3.

5 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 6A could affect  
 6 community character in the Delta region. However, because these impacts are social in nature,  
 7 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
 8 community character would lead to physical impacts involving population growth, such impacts are  
 9 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
 10 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
 11 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
 12 character stemming from a lack of maintenance, upkeep, and general investment. However,  
 13 implementation of mitigation measures and environmental commitments related to noise, visual  
 14 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
 15 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
 16 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
 17 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
 18 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
 19 Management Plans.

#### 20 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 21 **the Proposed Water Conveyance Facilities**

22 **NEPA Effects:** Effects on tax revenue as a result of water conveyance construction under Alternative  
 23 6A would be identical to those described under Alternative 1A, Impact ECON-4. While this economic  
 24 effect would be considered adverse, BDCP proponents would compensate local governments for the  
 25 loss of property tax or assessment revenue associated with construction of water conveyance  
 26 facilities. Additionally, local entities could benefit from an increase in sales tax revenue.

27 **CEQA Conclusion:** Construction of water conveyance facilities for Alternative 6A would result in the  
 28 removal of a portion of the property tax base for various local government entities in the Delta  
 29 region. However, entities receiving water from the State Water Project and federal Central Valley  
 30 Project would mitigate for lost property tax and assessment revenue associated with land needed  
 31 for the construction of new conveyance facilities (Water Code Section 85089). Additionally, any  
 32 losses could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
 33 require a discussion of socioeconomic effects except where they would result in reasonably  
 34 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
 35 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
 36 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
 37 speculative to ascertain.

#### 38 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 39 **Water Conveyance Facilities**

40 **NEPA Effects:** Under Alternative 6A, disruption of recreational activities during the construction  
 41 period would be similar that described under Alternative 1A, Impact ECON-5. The quality of  
 42 recreational activities including boating, fishing, waterfowl hunting, and hiking in the Delta could be

1 indirectly affected by noise, lighting, traffic, and visual degradation in proximity to water  
2 conveyance construction.

3 While access to recreational facilities would be maintained, construction of water conveyance  
4 structures under this alternative would be anticipated to result in a lower-quality recreational  
5 experience in a number of localized areas throughout the Delta, despite the implementation of  
6 mitigation measures, including enhancement of fishing access sites and incorporation of  
7 recreational access into project design, and environmental and non-environmental commitments,  
8 including providing funding to implement recreational improvements and control aquatic weeds,  
9 providing notification of maintenance activities in waterways, and developing and implementing a  
10 noise abatement plan, as described in Appendix 3B, *Environmental Commitments*. With a decrease in  
11 recreational quality, the number of visits would be anticipated to decline, at least in areas closest to  
12 construction activities. The multi-year schedule and geographic scale of construction activities and  
13 the anticipated decline in recreational spending would be considered an adverse effect. The  
14 commitments and mitigation measure cited above would contribute to the reduction of this effect.

15 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 6A  
16 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
17 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
18 recreational activities. This section considers only the economic effects of recreational changes  
19 brought about by construction of the proposed water conveyance facilities. Potential physical  
20 changes to the environment relating to recreational resources are described and evaluated in  
21 Chapter 15, *Recreation*, Section 15.3.3.11, Impacts REC-1 through REC-4.

## 22 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 23 **the Proposed Water Conveyance Facilities**

24 Effects on agricultural economics during construction of the proposed water conveyance facilities  
25 would be similar to those described under Alternative 1A, Impact ECON-6. Total value of irrigated  
26 crop production in the Delta would decline on average by \$8.9 million per year during the 8 year  
27 construction period, with total irrigated crop acreage declining by about 5,600 acres. Alternative 6A  
28 may also affect production costs on lands even if gross revenues are largely unaffected. Costs could  
29 be increased by operational constraints and longer travel times due to facilities construction.  
30 Additionally, loss of investments in production facilities and standing orchards and vineyards would  
31 occur as a result of facilities construction.

32 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
33 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
34 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
35 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
36 agricultural productivity and compensating off-site.

37 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
38 value of agricultural production in the Delta region. The removal of agricultural land from  
39 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.11, Impacts AG-1 and  
40 AG-2. The reduction in the value of agricultural production is not considered an environmental  
41 impact. Significant environmental impacts would only result if the changes in regional economics  
42 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
43 required, DWR would provide compensation to property owners for economic losses due to  
44 implementation of the alternative. While the compensation to property owners would reduce the

1 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 2 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 3 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 4 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 5 and land subject to Williamson Act contracts or in Farmland Security Zones.

6 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region**  
 7 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

8 Permanent effects on regional economics during operation and maintenance of the proposed water  
 9 conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-7.  
 10 Increased expenditures related to operation and maintenance of water conveyance facilities would  
 11 be expected to result in a permanent increase in regional employment and income, as presented in  
 12 Table 16-22. The permanent removal of agricultural land following construction would have lasting  
 13 negative effects on agricultural employment and income, as shown in Table 16-23.

14 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
 15 result in an increase in operations-related employment and labor income, this would be considered  
 16 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
 17 agricultural-related employment and labor income, which would be considered an adverse effect.  
 18 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 19 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 20 compensating off-site.

21 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 22 increase total employment and income in the Delta region. The net change would result from  
 23 expenditures on operation and maintenance and from changes in agricultural production. The total  
 24 change in income and employment is not, in itself, considered an environmental impact. Significant  
 25 environmental impacts would only result if the changes in regional economics cause physical  
 26 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 27 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 28 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.11, Impacts AG-3  
 29 and AG-4; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
 30 15.3.3.11, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
 31 landowners as a result of acquiring lands for the proposed conveyance facilities. While the  
 32 compensation to property owners would reduce the severity of economic effects related to the loss  
 33 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
 34 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 35 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
 36 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
 37 contracts or in Farmland Security Zones.

38 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during**  
 39 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

40 Permanent effects on population and housing during operation and maintenance of the proposed  
 41 water conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-  
 42 8. It is anticipated that non-local workers would relocate to the five-county region, thus adding to  
 43 the local population. However, this additional population would constitute a minor increase in the

1 total 2020 projected regional population of 4.6 million and be distributed throughout the region. It  
 2 is anticipated that most of the operational workforce would be drawn from within the five-county  
 3 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

4 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 5 population or new housing, they would not be considered to have an adverse effect.

6 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 7 result in minor population increases in the Delta region with adequate housing supply to  
 8 accommodate the change in population and therefore adverse changes in the physical environment  
 9 are not anticipated.

#### 10 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 11 **Proposed Water Conveyance Facilities**

12 **NEPA Effects:** Under Alternative 6A, effects on community character would be similar in nature,  
 13 location, and magnitude to those described under Alternative 1A, Impact ECON-9. While water  
 14 conveyance operation and maintenance could result in beneficial effects relating to the economic  
 15 welfare of a community, lasting adverse social effects, including effects on community cohesion,  
 16 could also arise in communities closest to physical features and in those most heavily influenced by  
 17 agricultural and recreational activities. Implementation of mitigation measures and environmental  
 18 commitments related to noise, visual effects, transportation, agriculture, and recreation would  
 19 reduce the intensity of adverse effects on the character of Delta communities (see Appendix 3B,  
 20 *Environmental Commitments*). These actions are summarized under Alternative 1A, Impact ECON-9.

21 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 6A  
 22 could affect community character in the Delta region. However, because these impacts are social in  
 23 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 24 changes to community character would lead to physical impacts involving population growth, such  
 25 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 26 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
 27 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
 28 community character stemming from a lack of maintenance, upkeep, and general investment.

#### 29 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and** 30 **Maintenance of the Proposed Water Conveyance Facilities**

31 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operation and  
 32 maintenance under Alternative 6A would be similar to those described under Alternative 1A, Impact  
 33 ECON-10. While this economic effect would be considered adverse, BDCP proponents would  
 34 compensate local governments for the loss of property tax or assessment revenue associated with  
 35 construction of water conveyance facilities. Additionally, local entities could benefit from an  
 36 increase in sales tax revenue.

37 **CEQA Conclusion:** Continued operation and maintenance of water conveyance facilities for  
 38 Alternative 6A would result in the removal of a portion of the property tax base for various local  
 39 government entities in the Delta region. However, entities receiving water from the State Water  
 40 Project and federal Central Valley Project would mitigate for lost property tax and assessment  
 41 revenue associated with land needed for the siting of conveyance facilities (Water Code Section  
 42 85089). Additionally, any losses could be offset, at least in part, by an anticipated increase in sales

1 tax revenue. CEQA does not require a discussion of socioeconomic effects except where they would  
 2 result in reasonably foreseeable physical changes. If an alternative is not anticipated to result in a  
 3 physical change to the environment, it would not be considered to have a significant impact under  
 4 CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any physical consequences resulting  
 5 from fiscal impacts are too speculative to ascertain.

6 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the**  
 7 **Proposed Water Conveyance Facilities**

8 Effects on recreation economics during operation and maintenance of the proposed water  
 9 conveyance facilities under Alternative 6A would be similar to those described under Alternative 1A,  
 10 Impact ECON-11.

11 **NEPA Effects:** Maintenance of conveyance facilities, including intakes, would result in periodic  
 12 temporary but not substantial adverse effects on boat passage and water-based recreational  
 13 activities. Because effects of facility maintenance would be short-term and intermittent, substantial  
 14 economic effects are not anticipated to result from operation and maintenance of the facilities.

15 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
 16 conveyance facilities under Alternative 6A are anticipated to create minor effects on recreational  
 17 resources and therefore, are not expected to substantially reduce economic activity related to  
 18 recreational activities. This section considers only the economic effects of recreational changes.  
 19 Potential physical changes to the environment relating to recreational resources are described and  
 20 evaluated in Chapter 15, *Recreation*, Section 15.3.3.11, Impacts REC-5 through REC-8.

21 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during**  
 22 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

23 Permanent effects on agricultural economics during operation and maintenance of the proposed  
 24 water conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-  
 25 12. Total value of irrigated crop production in the Delta would decline on average by \$7.4 million  
 26 per year during operation and maintenance, with total irrigated crop acreage declining by about  
 27 4,400 acres. Alternative 6A may also affect production costs on lands even if gross revenues are  
 28 largely unaffected. Costs could be increased by operational constraints, changes in water quality,  
 29 and longer travel times due to the permanent footprint of facilities. Additionally, loss of investments  
 30 in production facilities and standing orchards and vineyards would occur as a result of facilities  
 31 construction.

32 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
 33 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
 34 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
 35 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
 36 productivity and compensating off-site.

37 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities,  
 38 the value of agricultural production in the Delta region would be reduced. The permanent removal  
 39 of agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 40 14.3.3.11, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 41 considered an environmental impact. Significant environmental impacts would only result if the  
 42 changes in regional economics cause physical impacts. Such effects are discussed in other chapters

1 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 2 economic losses due to implementation of the alternative. While the compensation to property  
 3 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 4 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
 5 are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 6 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 7 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 8 Zones.

### 9 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 10 **Implementation of the Proposed Conservation Measures 2-22**

11 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2-  
 12 22 would be similar to those described under Alternative 1A, Impact ECON-13. In the Delta region,  
 13 spending on Conservation Measures 2-22 would include construction, operation and maintenance  
 14 activities that would convert or disturb existing land use. Because implementation of Conservation  
 15 Measures 2-22 would be anticipated to result in an increase in construction and operation and  
 16 maintenance-related employment and labor income, this would be considered a beneficial effect.  
 17 However, implementation of these components would also be anticipated to result in a decrease in  
 18 agricultural-related employment and labor income, which would be considered an adverse effect.  
 19 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 20 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 21 compensating off-site. Additionally, implementation of these components are anticipated to result in  
 22 the abandonment of natural gas wells, causing a decrease in employment and labor income  
 23 associated with monitoring and maintaining wells, which would be considered an adverse effect.  
 24 Mitigation Measure MIN-5, described in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-  
 25 5, would be available to reduce these effects by minimizing, to the extent feasible, the need for well  
 26 abandonment or relocation.

27 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would affect total  
 28 employment and income in the Delta region. The change in total employment and income in the  
 29 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 30 Measures 2-22 and any resulting changes in agricultural production, recreation, and natural gas  
 31 production activities. The total change in employment and income is not, in itself, considered an  
 32 environmental impact. Significant environmental impacts would only result if the changes in  
 33 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 34 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
 35 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
 36 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
 37 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

### 38 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 39 **Implementing the Proposed Conservation Measures 2-22**

40 Effects on population and housing as a result of the proposed Conservation Measures 2-22 would be  
 41 similar to those described under Alternative 1A, Impact ECON-14. In general, the changes in  
 42 population and housing would include increases in population from the construction and operation  
 43 and maintenance-related activity and declines in residential housing and business establishments as  
 44 a result of lands converted or impaired.

1 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
2 population or new housing, they would not be considered to have an adverse effect.

3 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
4 population and housing in the Delta region. The change in total population and housing in the Delta  
5 region is based on employment resulting from implementation of the proposed Conservation  
6 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
7 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
8 physical environment are not anticipated to result.

### 9 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 10 **Conservation Measures 2–22**

11 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
12 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
13 measures are similar. While implementation of Conservation Measures 2–22 could result in  
14 beneficial effects relating to the economic welfare of a community, adverse social effects, including  
15 effects on community cohesion, could also occur to those communities closest to character-changing  
16 effects and those most heavily influenced by agricultural activities. Implementation of mitigation  
17 measures and environmental commitments related to noise, visual effects, transportation,  
18 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
19 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

20 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 6A could  
21 affect community character within the Delta region. However, because these impacts are social in  
22 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
23 changes to community character are related to physical impacts involving population growth, these  
24 impacts are described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.  
25 Furthermore, notable decreases in population or employment, even if limited to certain areas,  
26 sectors, or the vacancy of individual buildings, could result in alteration of community character  
27 stemming from a lack of maintenance, upkeep, and general investment.

### 28 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing** 29 **the Proposed Conservation Measures 2–22**

30 **NEPA Effects:** Under Alternative 6A, effects on local government fiscal conditions as a result of  
31 conservation measure implementation would be similar to those described under Alternative 1A,  
32 Impact ECON-16. Conservation Measures 2–22 would remove some private land from local property  
33 tax and assessment rolls. This economic effect would be considered adverse; the BDCP proponents  
34 would offset forgone property tax and assessments levied by local governments and special districts  
35 on private lands converted to habitat.

36 **CEQA Conclusion:** Under Alternative 6A, implementation of Conservation Measures 2–22 would  
37 result in the removal of a portion of the property tax base for various local government entities in  
38 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
39 estimated to reach \$176.7 million. However, the BDCP proponents would compensate local  
40 governments and special districts for forgone revenue. CEQA does not require a discussion of  
41 socioeconomic effects except where they would result in physical changes. If an alternative is not  
42 anticipated to result in a physical change to the environment, it would not be considered to have a  
43 significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131).

1 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the**  
 2 **Proposed Conservation Measures 2–22**

3 **NEPA Effects:** Effects related to implementation of the Conservation Measures 2–22 under this  
 4 alternative would be similar to those described under Alternative 1A, Impact ECON-17. These  
 5 measures may result in adverse and beneficial effects on recreational resources in the Delta region,  
 6 resulting in the potential for decreased or increased economic activities related to recreation.

7 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
 8 recreation and compromise the quality of activities, leading to potential economic impacts.  
 9 However, over time, implementation could also improve the quality of existing recreational  
 10 opportunities, creating increased economic value with respect to recreation. This section considers  
 11 only the economic effects of recreational changes brought about by conservation measure  
 12 implementation. Potential physical changes to the environment relating to recreational resources  
 13 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.11, Impacts REC-9 through  
 14 REC-11.

15 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
 16 **Implementing the Proposed Conservation Measures 2–22**

17 Effects on agricultural economics as a result of the proposed Conservation Measures 2–22 would be  
 18 similar to those described under Alternative 1A, Impact ECON-18. Conservation Measures 2–22  
 19 would convert land from existing agricultural uses. These direct effects on agricultural land are  
 20 described qualitatively in Chapter 14, *Agricultural Resources*, Section 14.3.3.11, Impacts AG-3 and  
 21 AG-4. Effects on agricultural economics would include effects on crop production and agricultural  
 22 investments resulting from restoration actions on agricultural lands. The effects would be similar in  
 23 kind to those described for lands converted due to construction and operation of the conveyance  
 24 features and facilities. The total acreage and crop mix of agricultural land potentially affected is not  
 25 specified at this time, but when required, the BDCP proponents would provide compensation to  
 26 property owners for losses due to implementation of the alternative.

27 **NEPA Effects:** Because implementation of Conservation Measures 2–22 would be anticipated to lead  
 28 to reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
 29 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 30 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 31 agricultural productivity and compensating off-site.

32 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
 33 agricultural production in the Delta region. The permanent removal of agricultural land from  
 34 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.11, Impacts AG-3 and  
 35 AG-4. The reduction in the value of agricultural production is not considered an environmental  
 36 impact. Significant environmental impacts would only result if the changes in regional economics  
 37 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 38 required, the BDCP proponents would provide compensation to property owners for economic  
 39 losses due to implementation of the alternative. While the compensation to property owners would  
 40 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 41 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 42 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

## 1 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

2 Decreased water deliveries may affect socioeconomics in hydrologic regions through similar  
3 mechanisms as described for other alternatives above; however, the effects would generally be  
4 reversed. For example, it is reasonable to expect that reduced or less reliable water deliveries would  
5 result in decreased agricultural production and, in turn, a reduction in both direct and indirect  
6 agricultural employment. Economic and social patterns tied to predominant agricultural industrial  
7 activities and land uses could erode, changing the character of agricultural communities in  
8 hydrologic regions.

### 9 **Changes in SWP Deliveries Compared to No Action Alternative**

10 Compared to No Action Alternative (2060), Alternative 6A would decrease deliveries to all  
11 hydrologic regions except for the San Joaquin River Region, which would experience no change in  
12 deliveries. Compared to the No Action Alternative (2060), South Coast would receive the largest net  
13 decrease (up to 287 TAF of Table A plus Article 21 deliveries) among the regions, which represents  
14 75% of the decrease in Table A plus Article 21 M&I deliveries under Alternative 6A (refer to Chapter  
15 30, *Growth Inducement and Other Indirect Effects*, Table 30-16, for more information).

### 16 **Changes in CVP Deliveries Compared to No Action Alternative**

17 Alternative 6A would not change M&I deliveries for the Sacramento River, South Coast, South  
18 Lahontan and Colorado River Regions because there are no affected CVP contractors located in these  
19 regions. Compared to the No Action Alternative (2060), Alternative 6A would result in decreased  
20 deliveries to the other hydrologic regions. Compared to the No Action Alternative (2060) San  
21 Francisco Bay is projected to receive the largest potential decrease (approximately 8 TAF) among  
22 the hydrologic regions (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-  
23 17 for more information).

24 **NEPA Effects:** If operation of water conveyance facilities under Alternative 6A reduced M&I  
25 deliveries to the extent that it would, in the long run, constrain population growth, its  
26 implementation could reinforce a socioeconomic status quo or limit potential economic and  
27 employment growth in hydrologic regions. A detailed discussion of these potential effects is found in  
28 Appendix 5B, *Responses to Reduced South of Delta Water Supplies*. Such changes to agricultural  
29 production and population growth with its associated economic activity could also lead to shifts in  
30 the character of communities in the hydrologic regions with resultant beneficial or adverse effects.  
31 Likewise, limited growth associated with reduced deliveries could require lower expenditures for  
32 local governments while also leading to reduced revenue.

33 **CEQA Conclusion:** As described above, the operational components of BDCP Conservation Measure  
34 1 could result in a number of effects in areas receiving SWP and CVP water deliveries outside of the  
35 Delta.

### 36 **Changes in SWP Deliveries Compared to Existing Conditions**

37 Compared to Existing Conditions, Alternative 6A would decrease deliveries to all hydrologic regions  
38 except for the San Joaquin River Region, which would experience no change in deliveries. South  
39 Coast would receive the largest net decrease (up to 356 TAF of Table A plus Article 21 deliveries)  
40 among the regions, which represents 72% of the decrease in Table A plus Article 21 M&I deliveries  
41 under Alternative 6A (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-  
42 16 for more information).

## 1 **Changes in CVP Deliveries Compared to Existing Conditions**

2 Alternative 6A would not change M&I deliveries for the Sacramento River, South Coast, South  
3 Lahontan, and Colorado River Regions because there are no affected CVP contractors located in  
4 these regions. Compared to Existing Conditions, Alternative 6A would result in decreased deliveries  
5 to the other hydrologic regions. Compared to Existing Conditions, San Francisco Bay is projected to  
6 receive the largest decrease (up to 16 TAF) among the hydrologic regions (refer to Chapter 30,  
7 *Growth Inducement and Other Indirect Effects*, Table 30-17 for more information).

## 8 **Summary**

9 Operation of water conveyance facilities under Alternative 6A could affect socioeconomic conditions  
10 in the hydrologic regions receiving water from the SWP and CVP. However, because these impacts  
11 are social and economic in nature, rather than physical, they are not considered environmental  
12 impacts under CEQA. To the extent that changes in socioeconomic conditions in the hydrologic  
13 regions would lead to physical impacts, such impacts are described in Chapter 30, *Growth*  
14 *Inducement and Other Indirect Effects*, Section 30.3.2.

### 15 **16.3.3.12 Alternative 6B—Isolated Conveyance with East Alignment and** 16 **Intakes 1–5 (15,000 cfs; Operational Scenario D)**

17 Facilities construction under Alternative 6B would be similar to those described for Alternative 1B.  
18 However, Alternative 6B would be an isolated conveyance, no longer involving operation of the  
19 existing SWP and CVP south Delta diversion facilities for Clifton Court Forebay and Jones Pumping  
20 Plant. Operations would be different under Alternative 6B than under Alternative 1B.

#### 21 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 22 **Region during Construction of the Proposed Water Conveyance Facilities**

23 Temporary effects on regional economics during construction of the proposed water conveyance  
24 facilities would be similar to those described under Alternative 1B, Impact ECON-1. As shown in  
25 Table 16-25, over the construction period, regional effects of construction activities would result in  
26 direct employment of more than 29,000 FTE, with total employment effects in excess of 63,000 FTE.  
27 Increases in labor income associated with this employment would also be expected. Declines in  
28 agricultural production would be expected to lead to a decrease in employment of 90 FTE, with total  
29 effects leading to a decline of 340 FTE. Similarly, labor income related to these positions would  
30 decline, as shown in Table 16-26.

31 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
32 construction-related employment and labor income, this would be considered a beneficial effect.  
33 However, these activities would also be anticipated to result in a decrease in agricultural-related  
34 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
35 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
36 available to reduce these effects by preserving agricultural productivity and compensating off-site.

37 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
38 employment and income in the Delta region, temporarily. The increase in employment and income  
39 that would result from expenditures on construction would be greater than the reduction in  
40 employment and income attributable to losses in agricultural production. Changes in recreational  
41 expenditures and natural gas well operations could also affect regional employment and income, but

1 these have not been quantified. The total change in employment and income is not, in itself,  
2 considered an environmental impact. Significant environmental impacts would only result if the  
3 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
4 throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation Costs and*  
5 *Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
6 *Agricultural Resources*, Section 14.3.3.12, Impacts AG-1 and AG-2; changes in recreation related  
7 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.12, REC-1 through REC-4;  
8 abandonment of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.12,  
9 Impact MIN-1. When required, DWR would provide compensation to property owners for economic  
10 losses due to implementation of the alternative. While the compensation to property owners would  
11 reduce the severity of economic effects related to the loss of agricultural land, it would not  
12 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
13 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
14 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
15 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
16 Zones.

### 17 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 18 **the Proposed Water Conveyance Facilities**

19 Effects on population and housing during construction of the proposed water conveyance facilities  
20 would be similar to those described under Alternative 1B, Impact ECON-2. It is anticipated that non-  
21 local workers would temporarily relocate to the Delta region, thus adding to the local population.  
22 However, this additional population would constitute a minor increase in the total 2020 projected  
23 regional population of 4.6 million and be distributed throughout the region. Within specific local  
24 communities, there could be localized effects on housing. However, given the availability of housing  
25 within the five-county region, predicting where this impact might fall would be speculative. In  
26 addition, new residents would likely be dispersed across the region, thereby not creating a  
27 substantial burden on any one community.

28 **NEPA Effects:** Because these activities would not result in permanent concentrated, substantial  
29 increases in population or new housing, they would not be considered to have an adverse effect.

30 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
31 temporary population increases in the Delta region, which has an adequate housing supply to  
32 accommodate the change in population. Therefore, adverse physical changes resulting from the  
33 minor increase in population are not anticipated.

### 34 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 35 **Water Conveyance Facilities**

36 **NEPA Effects:** Under Alternative 6B, effects on community character would be similar to those  
37 described under Alternative 1B, Impact ECON-3. While water conveyance construction could result  
38 in beneficial effects relating to the economic welfare of a community, adverse social effects could  
39 also arise as a result of declining economic stability or changes in community cohesion in  
40 communities closest to construction effects and in those most heavily influenced by agricultural and  
41 recreational activities. Implementation of mitigation measures and environmental commitments  
42 related to noise, visual effects, transportation, agriculture, and recreation would reduce adverse

1 effects (see Appendix 3B, *Environmental Commitments*). These actions are summarized under  
2 Alternative 1A, Impact ECON-3.

3 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 6B could affect  
4 community character in the Delta region. However, because these impacts are social in nature,  
5 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
6 community character would lead to physical impacts involving population growth, such impacts are  
7 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
8 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
9 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
10 character stemming from a lack of maintenance, upkeep, and general investment. However,  
11 implementation of mitigation measures and environmental commitments related to noise, visual  
12 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
13 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
14 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
15 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
16 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
17 Management Plans.

#### 18 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 19 **the Proposed Water Conveyance Facilities**

20 **NEPA Effects:** Effects on tax revenue as a result of water conveyance construction under Alternative  
21 6B would be identical to those described under Alternative 1B, Impact ECON-4. While this economic  
22 effect would be considered adverse, BDCP proponents would compensate local governments for the  
23 loss of property tax or assessment revenue associated with construction of water conveyance  
24 facilities. Additionally, local entities could benefit from an increase in sales tax revenue.

25 **CEQA Conclusion:** Construction of water conveyance facilities for Alternative 6B would result in the  
26 removal of a portion of the property tax base for various local government entities in the Delta  
27 region. However, entities receiving water from the State Water Project and federal Central Valley  
28 Project would mitigate for lost property tax and assessment revenue associated with land needed  
29 for the construction of new conveyance facilities (Water Code Section 85089). Additionally, any  
30 losses could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
31 require a discussion of socioeconomic effects except where they would result in reasonably  
32 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
33 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
34 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
35 speculative to ascertain.

#### 36 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 37 **Water Conveyance Facilities**

38 **NEPA Effects:** Under Alternative 6B, disruption of recreational activities during the construction  
39 period would be similar to that described under Alternative 1B, Impact ECON-5. Access to  
40 recreational facilities may be restricted throughout the construction period. Additionally, the quality  
41 of recreational activities including boating, fishing, waterfowl hunting, and hiking in the Delta could  
42 be indirectly affected by noise, lighting, traffic, and visual degradation in proximity to water  
43 conveyance construction.

1 Construction of water conveyance structures under this alternative would be anticipated to result in  
 2 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
 3 the implementation of mitigation measures, including enhancement of fishing access sites and  
 4 incorporation of recreational access into project design, and environmental and non-environmental  
 5 commitments, including providing funding to implement recreational improvements and control  
 6 aquatic weeds, providing notification of maintenance activities in waterways, and developing and  
 7 implementing a noise abatement plan, as described in Appendix 3B, *Environmental Commitments*.  
 8 With a decrease in recreational quality, the number of visits would be anticipated to decline, at least  
 9 in areas closest to construction activities. The multi-year schedule and geographic scale of  
 10 construction activities and the anticipated decline in recreational spending would be considered an  
 11 adverse effect. The commitments and mitigation measure cited above would contribute to the  
 12 reduction of this effect.

13 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 6B  
 14 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
 15 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
 16 recreational activities. This section considers only the economic effects of recreational changes  
 17 brought about by construction of the proposed water conveyance facilities. Potential physical  
 18 changes to the environment relating to recreational resources are described and evaluated in  
 19 Chapter 15, *Recreation*, Section 15.3.3.12, Impacts REC-1 through REC-4.

## 20 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 21 **the Proposed Water Conveyance Facilities**

22 Effects on agricultural economics during construction of the proposed water conveyance facilities  
 23 would be similar to those described under Alternative 1B, Impact ECON-6. Total value of irrigated  
 24 crop production in the Delta would decline on average by \$32.8 million per year during the  
 25 construction period, with total irrigated crop acreage declining by about 19,460 acres. Alternative  
 26 6B may also affect production costs on lands even if gross revenues are largely unaffected. Costs  
 27 could be increased by operational constraints and longer travel times due to facilities construction.  
 28 Additionally, loss of investments in production facilities and standing orchards and vineyards would  
 29 occur as a result of facilities construction.

30 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
 31 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
 32 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 33 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 34 agricultural productivity and compensating off-site.

35 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
 36 value of agricultural production in the Delta region. The removal of agricultural land from  
 37 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.12, Impacts AG-1 and  
 38 AG-2. The reduction in the value of agricultural production is not considered an environmental  
 39 impact. Significant environmental impacts would only result if the changes in regional economics  
 40 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 41 required, DWR would provide compensation to property owners for economic losses due to  
 42 implementation of the alternative. While the compensation to property owners would reduce the  
 43 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 44 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,

1 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 2 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 3 and land subject to Williamson Act contracts or in Farmland Security Zones.

4 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region**  
 5 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

6 Permanent effects on regional economics during operation and maintenance of the proposed water  
 7 conveyance facilities would be similar to those described under Alternative 1B, Impact ECON-7.  
 8 Increased expenditures related to operation and maintenance of water conveyance facilities would  
 9 be expected to result in a permanent increase in regional employment and income, as presented in  
 10 Table 16-28. The permanent removal of agricultural land following construction would have lasting  
 11 negative effects on agricultural employment and income, as shown in Table 16-29.

12 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
 13 result in an increase in operations-related employment and labor income, this would be considered  
 14 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
 15 agricultural-related employment and labor income, which would be considered an adverse effect.  
 16 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 17 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 18 compensating off-site.

19 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 20 decrease total employment and income in the Delta region. The change would result from  
 21 expenditures on operation and maintenance, increasing employment, and from changes in  
 22 agricultural production, decreasing employment. The total change in income and employment is not,  
 23 in itself, considered an environmental impact. Significant environmental impacts would only result if  
 24 the changes in regional economics cause physical impacts. Such effects are discussed in other  
 25 chapters throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation*  
 26 *Costs and Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
 27 *Agricultural Resources*, Section 14.3.3.12, Impacts AG-3 and AG-4; changes in recreation related  
 28 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.12, Impacts REC-5 through REC-8.  
 29 When required, DWR would provide compensation to landowners as a result of acquiring lands for  
 30 the proposed conveyance facilities. While the compensation to property owners would reduce the  
 31 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 32 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 33 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 34 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 35 and land subject to Williamson Act contracts or in Farmland Security Zones.

36 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during**  
 37 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

38 Permanent effects on population and housing during operation and maintenance of the proposed  
 39 water conveyance facilities would be similar to those described under Alternative 1B, Impact ECON-  
 40 8. It is anticipated that non-local workers would relocate to the five-county region, thus adding to  
 41 the local population. However, this additional population would constitute a minor increase in the  
 42 total 2020 projected regional population of 4.6 million and be distributed throughout the region. It

1 is anticipated that most of the operational workforce would be drawn from within the five-county  
2 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

3 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
4 population or new housing, they would not be considered to have an adverse effect.

5 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
6 result in minor population increases in the Delta region with adequate housing supply to  
7 accommodate the change in population and therefore adverse changes in the physical environment  
8 are not anticipated.

### 9 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 10 **Proposed Water Conveyance Facilities**

11 **NEPA Effects:** Under Alternative 6B, effects on community character would be similar in nature,  
12 location, and magnitude to those described under Alternative 1B, Impact ECON-9. While water  
13 conveyance operation and maintenance could result in beneficial effects relating to the economic  
14 welfare of a community, lasting adverse social effects, including effects on community cohesion,  
15 could also result in communities closest to physical features and in those most heavily influenced by  
16 agricultural and recreational activities. Implementation of mitigation measures and environmental  
17 commitments related to noise, visual effects, transportation, agriculture, and recreation would  
18 reduce adverse effects (see Appendix 3B, *Environmental Commitments*). These actions are  
19 summarized under Alternative 1A, Impact ECON-9.

20 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 6B  
21 could affect community character in the Delta region. However, because these impacts are social in  
22 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
23 changes to community character would lead to physical impacts involving population growth, such  
24 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
25 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
26 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
27 community character stemming from a lack of maintenance, upkeep, and general investment.

### 28 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and** 29 **Maintenance of the Proposed Water Conveyance Facilities**

30 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operation and  
31 maintenance under Alternative 6B would be similar to those described under Alternative 1B, Impact  
32 ECON-10. While this economic effect would be considered adverse, BDCP proponents would  
33 compensate local governments for the loss of property tax or assessment revenue associated with  
34 construction of water conveyance facilities.

35 **CEQA Conclusion:** Continued operation and maintenance of water conveyance facilities for  
36 Alternative 6B would result in the removal of a portion of the property tax base for various local  
37 government entities in the Delta region. However, entities receiving water from the State Water  
38 Project and federal Central Valley Project would mitigate for lost property tax and assessment  
39 revenue associated with land needed for the siting of conveyance facilities (Water Code Section  
40 85089). CEQA does not require a discussion of socioeconomic effects except where they would  
41 result in reasonably foreseeable physical changes. If an alternative is not anticipated to result in a  
42 physical change to the environment, it would not be considered to have a significant impact under

1 CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any physical consequences resulting  
2 from fiscal impacts are too speculative to ascertain.

### 3 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the** 4 **Proposed Water Conveyance Facilities**

5 Effects on recreation economics during operation and maintenance of the proposed water  
6 conveyance facilities under Alternative 6B would be similar to those described under Alternative 1A,  
7 Impact ECON-11.

8 **NEPA Effects:** Maintenance of conveyance facilities, including intakes, would result in periodic  
9 temporary but not substantial adverse effects on boat passage and water-based recreational  
10 activities. Because effects of facility maintenance would be short-term and intermittent, substantial  
11 economic effects are not anticipated to result from operation and maintenance of the facilities.

12 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
13 conveyance facilities under Alternative 6B are anticipated to create minor effects on recreational  
14 resources and therefore, are not expected to substantially reduce economic activity related to  
15 recreational activities. This section considers only the economic effects of recreational changes.  
16 Potential physical changes to the environment relating to recreational resources are described and  
17 evaluated in Chapter 15, *Recreation*, Section 15.3.3.12, Impacts REC-5 through REC-8.

### 18 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during** 19 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

20 Permanent effects on agricultural economics during operation and maintenance of the proposed  
21 water conveyance facilities would be similar to those described under Alternative 1B, Impact ECON-  
22 12. Total value of irrigated crop production in the Delta would decline on average by \$29.2 million  
23 per year during operation and maintenance, with total irrigated crop acreage declining by about  
24 17,700 acres. Alternative 6B may also affect production costs on lands even if gross revenues are  
25 largely unaffected. Costs could be increased by operational constraints, changes in water quality,  
26 and longer travel times due to the permanent footprint of facilities. Additionally, loss of investments  
27 in production facilities and standing orchards and vineyards would occur as a result of facilities  
28 construction.

29 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
30 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
31 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
32 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
33 productivity and compensating off-site.

34 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities,  
35 the value of agricultural production in the Delta region would be reduced. The permanent removal  
36 of agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
37 14.3.3.12, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
38 considered an environmental impact. Significant environmental impacts would only result if the  
39 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
40 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
41 economic losses due to implementation of the alternative. While the compensation to property  
42 owners would reduce the severity of economic effects related to the loss of agricultural land, it

1 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
2 are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
3 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
4 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
5 Zones.

### 6 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 7 **Implementation of the Proposed Conservation Measures 2-22**

8 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2-  
9 22 would be similar to those described under Alternative 1A, Impact ECON-13 because the  
10 measures are similar. In the Delta region, spending on Conservation Measures 2-22 would include  
11 construction, operation and maintenance activities that would convert or disturb existing land use.  
12 Because implementation of Conservation Measures 2-22 would be anticipated to result in an  
13 increase in construction and operation and maintenance-related employment and labor income, this  
14 would be considered a beneficial effect. However, implementation of these components would also  
15 be anticipated to result in a decrease in agricultural-related employment and labor income, which  
16 would be considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14,  
17 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by  
18 preserving agricultural productivity and compensating off-site. Additionally, implementation of  
19 these components are anticipated to result in the abandonment of natural gas wells, causing a  
20 decrease in employment and labor income associated with monitoring and maintaining wells, which  
21 would be considered an adverse effect. Mitigation Measure MIN-5, described in Chapter 26, *Mineral*  
22 *Resources*, Section 26.3.3.2, Impact MIN-5, would be available to reduce these effects by minimizing,  
23 to the extent feasible, the need for well abandonment or relocation.

24 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would affect total  
25 employment and income in the Delta region. The change in total employment and income in the  
26 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
27 Measures 2-22 and any resulting changes in agricultural production, recreation, and natural gas  
28 production activities. The total change in employment and income is not, in itself, considered an  
29 environmental impact. Significant environmental impacts would only result if the changes in  
30 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
31 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
32 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
33 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
34 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

### 35 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 36 **Implementing the Proposed Conservation Measures 2-22**

37 Effects on population and housing as a result of the proposed Conservation Measures 2-22 would be  
38 similar to those described under Alternative 1A, Impact ECON-14 because the measures are similar.  
39 In general, the changes in population and housing would include increases in population from the  
40 construction and operation and maintenance-related activity and declines in residential housing and  
41 business establishments as a result of lands converted or impaired.

42 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
43 population or new housing, they would not be considered to have an adverse effect.

1 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
 2 population and housing in the Delta region. The change in total population and housing in the Delta  
 3 region is based on employment resulting from implementation of the proposed Conservation  
 4 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
 5 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
 6 physical environment are not anticipated to result.

7 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed**  
 8 **Conservation Measures 2–22**

9 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
 10 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
 11 measures are similar. While implementation of Conservation Measures 2–22 could result in  
 12 beneficial effects relating to the economic welfare of a community, adverse social effects, including  
 13 effects on community cohesion, could also occur to those communities closest to character-changing  
 14 effects and those most heavily influenced by agricultural activities. Implementation of mitigation  
 15 measures and environmental commitments related to noise, visual effects, transportation,  
 16 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
 17 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

18 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 6B could  
 19 affect community character within the Delta region. However, because these impacts are social in  
 20 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 21 changes to community character are related to physical impacts involving population growth, these  
 22 impacts are described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.  
 23 Furthermore, notable decreases in population or employment, even if limited to certain areas,  
 24 sectors, or the vacancy of individual buildings, could result in alteration of community character  
 25 stemming from a lack of maintenance, upkeep, and general investment.

26 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing**  
 27 **the Proposed Conservation Measures 2–22**

28 **NEPA Effects:** Under Alternative 6B, effects on local government fiscal conditions as a result of  
 29 conservation measure implementation would be similar to those described under Alternative 1A,  
 30 Impact ECON-16. Conservation Measures 2–22 would remove some private land from local property  
 31 tax and assessment rolls. This economic effect would be considered adverse; however, the BDCP  
 32 proponents would offset forgone property tax and assessments levied by local governments and  
 33 special districts on private lands converted to habitat.

34 **CEQA Conclusion:** Under Alternative 6B, implementation of Conservation Measures 2–22 would  
 35 result in the removal of a portion of the property tax base for various local government entities in  
 36 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
 37 estimated to reach \$176.7 million. However, the BDCP proponents would compensate local  
 38 governments and special districts for forgone revenue. CEQA does not require a discussion of  
 39 socioeconomic effects except where they would result in physical changes. If an alternative is not  
 40 anticipated to result in a physical change to the environment, it would not be considered to have a  
 41 significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131).

1 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the**  
2 **Proposed Conservation Measures 2–22**

3 **NEPA Effects:** Effects related to implementation of the Conservation Measures 2–22 under this  
4 alternative would be similar to those described under Alternative 1A, Impact ECON-17. These  
5 measures may result in adverse and beneficial effects on recreational resources in the Delta region,  
6 resulting in the potential for decreased or increased economic activities related to recreation.

7 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
8 recreation and compromise the quality of activities, leading to potential economic impacts.  
9 However, over time, implementation could also improve the quality of existing recreational  
10 opportunities, creating increased economic value with respect to recreation. This section considers  
11 only the economic effects of recreational changes brought about by conservation measure  
12 implementation. Potential physical changes to the environment relating to recreational resources  
13 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.12, Impacts REC-9 through  
14 REC-11.

15 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
16 **Implementing the Proposed Conservation Measures 2–22**

17 Effects on agricultural economics as a result of the proposed Conservation Measures 2–22 would be  
18 similar to those described under Alternative 1A, Impact ECON-18 because the measures are similar.  
19 Conservation Measures 2–22 would convert land from existing agricultural uses. These direct effects  
20 on agricultural land are described qualitatively in Chapter 14, *Agricultural Resources*, Section  
21 14.3.3.12, Impacts AG-3 and AG-4. Effects on agricultural economics would include effects on crop  
22 production and agricultural investments resulting from restoration actions on agricultural lands.  
23 The effects would be similar in kind to those described for lands converted due to construction and  
24 operation of the conveyance features and facilities. The total acreage and crop mix of agricultural  
25 land potentially affected is not specified at this time, but when required, the BDCP proponents  
26 would provide compensation to property owners for losses due to implementation of the  
27 alternative.

28 **NEPA Effects:** Because implementation of the Conservation Measures 2–22 would be anticipated to  
29 lead to reductions in crop acreage and in the value of agricultural production in the Delta region, this  
30 is considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
31 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
32 agricultural productivity and compensating off-site.

33 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
34 agricultural production in the Delta region. The permanent removal of agricultural land from  
35 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.12, Impacts AG-3 and  
36 AG-4. The reduction in the value of agricultural production is not considered an environmental  
37 impact. Significant environmental impacts would only result if the changes in regional economics  
38 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
39 required, the BDCP proponents would provide compensation to property owners for economic  
40 losses due to implementation of the alternative. While the compensation to property owners would  
41 reduce the severity of economic effects related to the loss of agricultural land, it would not  
42 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
43 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

## 1 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

2 **NEPA Effects:** The socioeconomic effects associated with operation of Alternative 6B would be the  
 3 same as those described under Alternative 6A, Impact ECON-19, because deliveries would be based  
 4 on the same operational guidelines. Changes in deliveries to hydrologic regions could result in  
 5 adverse or beneficial socioeconomic effects in these areas. Reduced or less reliable water deliveries  
 6 would result in decreased agricultural production and, in turn, a reduction in both direct and  
 7 indirect agricultural employment. Economic and social patterns tied to predominant agricultural  
 8 industrial activities and land uses could erode, changing the character of agricultural communities in  
 9 hydrologic regions. If M&I deliveries were reduced to the extent that it would, in the long run,  
 10 constrain population growth, implementation of Alternative 6B could reinforce a socioeconomic  
 11 status quo or limit potential economic and employment growth in hydrologic regions. Changes to  
 12 agricultural production and population growth with its associated economic activity could also lead  
 13 to shifts in the character of communities in the hydrologic regions with resultant beneficial or  
 14 adverse effects. Likewise, limited growth associated with reduced deliveries could require lower  
 15 expenditures for local governments while also leading to reduced revenue.

16 **CEQA Conclusion:** Operation of water conveyance facilities under Alternative 6B could affect  
 17 socioeconomic conditions in the hydrologic regions receiving water from the SWP and CVP.  
 18 However, because these impacts are social and economic in nature, rather than physical, they are  
 19 not considered environmental impacts under CEQA. To the extent that changes in socioeconomic  
 20 conditions in the hydrologic regions would lead to physical impacts, such impacts are described in  
 21 Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.

### 22 **16.3.3.13 Alternative 6C—Isolated Conveyance with West Alignment and** 23 **Intakes W1–W5 (15,000 cfs; Operational Scenario D)**

24 Facilities construction under Alternative 6C would be similar to those described for Alternative 1C.  
 25 However, Alternative 6C would be an isolated conveyance, no longer involving operation of the  
 26 existing SWP and CVP south Delta diversion facilities for Clifton Court Forebay and Jones Pumping  
 27 Plant. Operations would be different under Alternative 6C than under Alternative 1C.

#### 28 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 29 **Region during Construction of the Proposed Water Conveyance Facilities**

30 Temporary effects on regional economics during construction of the proposed water conveyance  
 31 facilities would be similar to those described under Alternative 1C, Impact ECON-1. As shown in  
 32 Table 16-31, over the construction period, regional effects of construction activities would result in  
 33 direct employment of more than 26,000 FTE, with total employment effects of nearly 61,000 FTE.  
 34 Increases in labor income associated with this employment would also be expected. Declines in  
 35 agricultural production would be expected to lead to a decrease in employment of 64 FTE, with total  
 36 effects leading to a decline of 240 FTE. Similarly, labor income related to these positions would  
 37 decline, as shown in Table 16-32.

38 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
 39 construction-related employment and labor income, this would be considered a beneficial effect.  
 40 However, these activities would also be anticipated to result in a decrease in agricultural-related  
 41 employment and labor income, which would be considered an adverse effect. Mitigation Measure

1 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
2 available to reduce these effects by preserving agricultural productivity and compensating off-site.

3 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
4 employment and income in the Delta region, temporarily. The increase in employment and income  
5 that would result from expenditures on construction would be greater than the reduction in  
6 employment and income attributable to losses in agricultural production. Changes in recreational  
7 expenditures and natural gas well operations could also affect regional employment and income, but  
8 these have not been quantified. The total change in employment and income is not, in itself,  
9 considered an environmental impact. Significant environmental impacts would only result if the  
10 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
11 throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation Costs and*  
12 *Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
13 *Agricultural Resources*, Section 14.3.3.13, Impacts AG-1 and AG-2; changes in recreation related  
14 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.13, REC-1 through REC-4;  
15 abandonment of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.13,  
16 Impact MIN-1. When required, DWR would provide compensation to property owners for economic  
17 losses due to implementation of the alternative. While the compensation to property owners would  
18 reduce the severity of economic effects related to the loss of agricultural land, it would not  
19 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
20 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
21 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
22 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
23 Zones.

#### 24 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 25 **the Proposed Water Conveyance Facilities**

26 Effects on population and housing during construction of the proposed water conveyance facilities  
27 would be similar to those described under Alternative 1C, Impact ECON-2. It is anticipated that non-  
28 local workers would temporarily relocate to the Delta region, thus adding to the local population.  
29 However, this additional population would constitute a minor increase in the total 2020 projected  
30 regional population of 4.6 million and be distributed throughout the region. Within specific local  
31 communities, there could be localized effects on housing. However, given the availability of housing  
32 within the five-county region, predicting where this impact might fall would be speculative. In  
33 addition, new residents would likely be dispersed across the region, thereby not creating a  
34 substantial burden on any one community.

35 **NEPA Effects:** Because these activities would not result in permanent concentrated, substantial  
36 increases in population or new housing, they would not be considered to have an adverse effect.

37 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
38 temporary population increases in the Delta region, which has an adequate housing supply to  
39 accommodate the change in population. Therefore, adverse physical changes resulting from the  
40 minor increase in population are not anticipated.

### 1 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 2 **Water Conveyance Facilities**

3 **NEPA Effects:** Under Alternative 6C, effects on community character would be similar to those  
4 described under Alternative 1C, Impact ECON-3. While water conveyance construction could result  
5 in beneficial effects relating to the economic welfare of a community, adverse social effects could  
6 also arise as a result of declining economic stability or changes in community cohesion in  
7 communities closest to construction effects and in those most heavily influenced by agricultural and  
8 recreational activities. Implementation of mitigation measures and environmental commitments  
9 related to noise, visual effects, transportation, agriculture, and recreation would reduce adverse  
10 effects (see Appendix 3B, *Environmental Commitments*). These actions are summarized under  
11 Alternative 1A, Impact ECON-3.

12 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 6C could affect  
13 community character in the Delta region. However, because these impacts are social in nature,  
14 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
15 community character would lead to physical impacts involving population growth, such impacts are  
16 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
17 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
18 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
19 character stemming from a lack of maintenance, upkeep, and general investment. However,  
20 implementation of mitigation measures and environmental commitments related to noise, visual  
21 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
22 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
23 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
24 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
25 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
26 Management Plans.

### 27 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 28 **the Proposed Water Conveyance Facilities**

29 **NEPA Effects:** Effects on tax revenue as a result of water conveyance construction under Alternative  
30 6C would be identical to those described under Alternative 1C, Impact ECON-4. While this economic  
31 effect would be considered adverse, BDCP proponents would compensate local governments for the  
32 loss of property tax or assessment revenue associated with construction of water conveyance  
33 facilities. Additionally, local entities could benefit from an increase in sales tax revenue.

34 **CEQA Conclusion:** Construction of water conveyance facilities for Alternative 6C would result in the  
35 removal of a portion of the property tax base for various local government entities in the Delta  
36 region. However, entities receiving water from the State Water Project and federal Central Valley  
37 Project would mitigate for lost property tax and assessment revenue associated with land needed  
38 for the construction of new conveyance facilities (Water Code Section 85089). Additionally, any  
39 losses could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
40 require a discussion of socioeconomic effects except where they would result in reasonably  
41 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
42 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
43 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
44 speculative to ascertain.

1 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed**  
2 **Water Conveyance Facilities**

3 **NEPA Effects:** Under Alternative 6C, disruption of recreational activities during the construction  
4 period would be identical to that described under Alternative 1C, Impact ECON-5. Access to  
5 recreational facilities may be restricted throughout the construction period. Additionally, the quality  
6 of recreational activities including boating, fishing, waterfowl hunting, and hiking in the Delta could  
7 be indirectly affected by noise, lighting, traffic, and visual degradation in proximity to water  
8 conveyance construction.

9 Construction of water conveyance structures under this alternative would be anticipated to result in  
10 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
11 the implementation of mitigation measures, including enhancement of fishing access sites and  
12 incorporation of recreational access into project design, and environmental and non-environmental  
13 commitments, including providing funding to implement recreational improvements and control  
14 aquatic weeds, providing notification of maintenance activities in waterways, and developing and  
15 implementing a noise abatement plan, as described in Appendix 3B, *Environmental Commitments*.  
16 With a decrease in recreational quality, the number of visits would be anticipated to decline, at least  
17 in areas closest to construction activities. The multi-year schedule and geographic scale of  
18 construction activities and the anticipated decline in recreational spending would be considered an  
19 adverse effect. The commitments and mitigation measure cited above would contribute to the  
20 reduction of this effect.

21 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 6C  
22 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
23 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
24 recreational activities. This section considers only the economic effects of recreational changes  
25 brought about by construction of the proposed water conveyance facilities. Potential physical  
26 changes to the environment relating to recreational resources are described and evaluated in  
27 Chapter 15, *Recreation*, Section 15.3.3.13, Impacts REC-1 through REC-4.

28 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of**  
29 **the Proposed Water Conveyance Facilities**

30 Effects on agricultural economics during construction of the proposed water conveyance facilities  
31 would be similar to those described under Alternative 1C, Impact ECON-6. Total value of irrigated  
32 crop production in the Delta would decline on average by \$22.2 million per year during the  
33 construction period, with total irrigated crop acreage declining by about 14,300 acres. Alternative  
34 6C may also affect production costs on lands even if gross revenues are largely unaffected. Costs  
35 could be increased by operational constraints and longer travel times due to facilities construction.  
36 Additionally, loss of investments in production facilities and standing orchards and vineyards would  
37 occur as a result of facilities construction.

38 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
39 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
40 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
41 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
42 agricultural productivity and compensating off-site.

1 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
2 value of agricultural production in the Delta region. The removal of agricultural land from  
3 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.13, Impacts AG-1 and  
4 AG-2. The reduction in the value of agricultural production is not considered an environmental  
5 impact. Significant environmental impacts would only result if the changes in regional economics  
6 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
7 required, DWR would provide compensation to property owners for economic losses due to  
8 implementation of the alternative. While the compensation to property owners would reduce the  
9 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
10 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
11 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
12 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
13 and land subject to Williamson Act contracts or in Farmland Security Zones.

#### 14 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 15 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

16 Permanent effects on regional economics during operation and maintenance of the proposed water  
17 conveyance facilities would be similar to those described under Alternative 1C, Impact ECON-7.  
18 Increased expenditures related to operation and maintenance of water conveyance facilities would  
19 be expected to result in a permanent increase in regional employment and income, as presented in  
20 Table 16-34. The permanent removal of agricultural land following construction would have lasting  
21 negative effects on agricultural employment and income, as shown in Table 16-35.

22 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
23 result in an increase in operations-related employment and labor income, this would be considered  
24 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
25 agricultural-related employment and labor income, which would be considered an adverse effect.  
26 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
27 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
28 compensating off-site.

29 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
30 increase total employment and income in the Delta region. The net change would result from  
31 expenditures on operation and maintenance and from changes in agricultural production. The total  
32 change in income and employment is not, in itself, considered an environmental impact. Significant  
33 environmental impacts would only result if the changes in regional economics cause physical  
34 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
35 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
36 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.13, Impacts AG-3  
37 and AG-4; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
38 15.3.3.13, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
39 landowners as a result of acquiring lands for the proposed conveyance facilities. While the  
40 compensation to property owners would reduce the severity of economic effects related to the loss  
41 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
42 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
43 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
44 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
45 contracts or in Farmland Security Zones.

1 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during**  
 2 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

3 Permanent effects on population and housing during of operation and maintenance of the proposed  
 4 water conveyance facilities would be similar to those described under Alternative 1C, Impact ECON-  
 5 8. It is anticipated that non-local workers would relocate to the five-county region, thus adding to  
 6 the local population. However, this additional population would constitute a minor increase in the  
 7 total 2020 projected regional population of 4.6 million and be distributed throughout the region. It  
 8 is anticipated that most of the operational workforce would be drawn from within the five-county  
 9 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

10 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 11 population or new housing, they would not be considered to have an adverse effect.

12 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 13 result in minor population increases in the Delta region with adequate housing supply to  
 14 accommodate the change in population and therefore adverse changes in the physical environment  
 15 are not anticipated.

16 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the**  
 17 **Proposed Water Conveyance Facilities**

18 **NEPA Effects:** Under Alternative 6C, effects on community character would be similar in nature,  
 19 location, and magnitude to those described under Alternative 1C, Impact ECON-9. While water  
 20 conveyance operation and maintenance could result in beneficial effects relating to the economic  
 21 welfare of a community, lasting adverse social effects, including effects on community cohesion,  
 22 could also arise in communities closest to physical features and in those most heavily influenced by  
 23 agricultural and recreational activities. Implementation of mitigation measures and environmental  
 24 commitments related to noise, visual effects, transportation, agriculture, and recreation would  
 25 reduce the intensity of adverse effects on the character of Delta communities (see Appendix 3B,  
 26 *Environmental Commitments*). These actions are summarized under Alternative 1A, Impact ECON-9.

27 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 6C  
 28 could affect community character in the Delta region. However, because these impacts are social in  
 29 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 30 changes to community character would lead to physical impacts involving population growth, such  
 31 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 32 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
 33 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
 34 community character stemming from a lack of maintenance, upkeep, and general investment.

35 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and**  
 36 **Maintenance of the Proposed Water Conveyance Facilities**

37 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operation and  
 38 maintenance under Alternative 6C would be similar to those described under Alternative 1C, Impact  
 39 ECON-10. While this economic effect would be considered adverse, BDCP proponents would  
 40 compensate local governments for the loss of property tax or assessment revenue associated with  
 41 construction of water conveyance facilities. Additionally, local entities may benefit from an increase  
 42 in sales tax revenue.

1 **CEQA Conclusion:** Continued operation and maintenance of water conveyance facilities for  
2 Alternative 6C would result in the removal of a portion of the property tax base for various local  
3 government entities in the Delta region. However, entities receiving water from the State Water  
4 Project and federal Central Valley Project would mitigate for lost property tax and assessment  
5 revenue associated with land needed for the siting of conveyance facilities (Water Code Section  
6 85089). Additionally, any losses may be offset, at least in part, by an anticipated increase in sales tax  
7 revenue. CEQA does not require a discussion of socioeconomic effects except where they would  
8 result in reasonably foreseeable physical changes. If an alternative is not anticipated to result in a  
9 physical change to the environment, it would not be considered to have a significant impact under  
10 CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any physical consequences resulting  
11 from fiscal impacts are too speculative to ascertain.

### 12 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the** 13 **Proposed Water Conveyance Facilities**

14 Effects on recreation economics during operation and maintenance of the proposed water  
15 conveyance facilities under Alternative 6C would be similar to those described under Alternative 1A,  
16 Impact ECON-11.

17 **NEPA Effects:** Maintenance of conveyance facilities, including intakes, would result in periodic  
18 temporary but not substantial adverse effects on boat passage and water-based recreational  
19 activities. Because effects of facility maintenance would be short-term and intermittent, substantial  
20 economic effects are not anticipated to result from operation and maintenance of the facilities.

21 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
22 conveyance facilities under Alternative 6C are anticipated to create minor effects on recreational  
23 resources and therefore, are not expected to substantially reduce economic activity related to  
24 recreational activities. This section considers only the economic effects of recreational changes.  
25 Potential physical changes to the environment relating to recreational resources are described and  
26 evaluated in Chapter 15, *Recreation*, Section 15.3.3.13, Impacts REC-5 through REC-8.

### 27 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during** 28 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

29 Permanent effects on agricultural economics during operation and maintenance of the proposed  
30 water conveyance facilities would be similar to those described under Alternative 1C, Impact ECON-  
31 12. Total value of irrigated crop production in the Delta would decline on average by \$17.7 million  
32 per year during operation and maintenance, with total irrigated crop acreage declining by about  
33 11,700 acres. Alternative 6C may also affect production costs on lands even if gross revenues are  
34 largely unaffected. Costs could be increased by operational constraints, changes in water quality,  
35 and longer travel times due to the permanent footprint of facilities. Additionally, loss of investments  
36 in production facilities and standing orchards and vineyards would occur as a result of facilities  
37 construction.

38 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
39 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
40 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
41 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
42 productivity and compensating off-site.

1 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities,  
 2 the value of agricultural production in the Delta region would be reduced. The permanent removal  
 3 of agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 4 14.3.3.13, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 5 considered an environmental impact. Significant environmental impacts would only result if the  
 6 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 7 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 8 economic losses due to implementation of the alternative. While the compensation to property  
 9 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 10 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
 11 are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 12 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 13 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 14 Zones.

15 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the**  
 16 **Implementation of the Proposed Conservation Measures 2–22**

17 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2–  
 18 22 would be similar to those described under Alternative 1A, Impact ECON-13 because the  
 19 measures are similar. In the Delta region, spending on Conservation Measures 2–22 would include  
 20 construction, operation and maintenance activities that would convert or disturb existing land use.  
 21 Because implementation of Conservation Measures 2–22 would be anticipated to result in an  
 22 increase in construction and operation and maintenance-related employment and labor income, this  
 23 would be considered a beneficial effect. However, implementation of these components would also  
 24 be anticipated to result in a decrease in agricultural-related employment and labor income, which  
 25 would be considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14,  
 26 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by  
 27 preserving agricultural productivity and compensating off-site. Additionally, implementation of  
 28 these components are anticipated to result in the abandonment of natural gas wells, causing a  
 29 decrease in employment and labor income associated with monitoring and maintaining wells, which  
 30 would be considered an adverse effect. Mitigation Measure MIN-5, described in Chapter 26, *Mineral*  
 31 *Resources*, Section 26.3.3.2, Impact MIN-5, would be available to reduce these effects by minimizing,  
 32 to the extent feasible, the need for well abandonment or relocation.

33 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would affect total  
 34 employment and income in the Delta region. The change in total employment and income in the  
 35 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 36 Measures 2–22 and any resulting changes in agricultural production, recreation, and natural gas  
 37 production activities. The total change in employment and income is not, in itself, considered an  
 38 environmental impact. Significant environmental impacts would only result if the changes in  
 39 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 40 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
 41 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
 42 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
 43 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

1 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of**  
 2 **Implementing the Proposed Conservation Measures 2–22**

3 Effects on population and housing as a result of the proposed Conservation Measures 2–22 would be  
 4 similar to those described under Alternative 1A, Impact ECON-14 because the measures are similar.  
 5 In general, the changes in population and housing would include increases in population from the  
 6 construction and operation and maintenance-related activity and declines in residential housing and  
 7 business establishments as a result of lands converted or impaired.

8 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 9 population or new housing, they would not be considered to have an adverse effect.

10 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
 11 population and housing in the Delta region. The change in total population and housing in the Delta  
 12 region is based on employment resulting from implementation of the proposed Conservation  
 13 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
 14 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
 15 physical environment are not anticipated to result.

16 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed**  
 17 **Conservation Measures 2–22**

18 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
 19 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
 20 measures are similar. While implementation of Conservation Measures 2–22 could result in  
 21 beneficial effects relating to the economic welfare of a community, adverse social effects, including  
 22 effects on community cohesion, could also arise in those communities closest to character-changing  
 23 effects and those most heavily influenced by agricultural activities. Implementation of mitigation  
 24 measures and environmental commitments related to noise, visual effects, transportation,  
 25 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
 26 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

27 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 6C could affect  
 28 community character within the Delta region. However, because these impacts are social in nature,  
 29 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
 30 community character are related to physical impacts involving population growth, these impacts are  
 31 described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore,  
 32 notable decreases in population or employment, even if limited to certain areas, sectors, or the  
 33 vacancy of individual buildings, could result in alteration of community character stemming from a  
 34 lack of maintenance, upkeep, and general investment.

35 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing**  
 36 **the Proposed Conservation Measures 2–22**

37 **NEPA Effects:** Under Alternative 6C, effects on local government fiscal conditions as a result of  
 38 conservation measure implementation would be similar to those described under Alternative 1A,  
 39 Impact ECON-16. Conservation Measures 2–22 would remove some private land from local property  
 40 tax and assessment rolls. This economic effect would be considered adverse; however, the BDCP  
 41 proponents would offset forgone property tax and assessments levied by local governments and  
 42 special districts on private lands converted to habitat.

1 **CEQA Conclusion:** Under Alternative 6C, implementation of Conservation Measures 2–22 would  
 2 result in the removal of a portion of the property tax base for various local government entities in  
 3 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
 4 estimated to reach \$176.7 million. However, the BDCP proponents would compensate local  
 5 governments and special districts for forgone revenue. CEQA does not require a discussion of  
 6 socioeconomic effects except where they would result in physical changes. If an alternative is not  
 7 anticipated to result in a physical change to the environment, it would not be considered to have a  
 8 significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131).

9 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the**  
 10 **Proposed Conservation Measures 2–22**

11 **NEPA Effects:** Effects related to implementation of the Conservation Measures 2–22 under this  
 12 alternative would be similar to those described under Alternative 1A, Impact ECON-17. These  
 13 measures may result in adverse and beneficial effects on recreational resources in the Delta region,  
 14 resulting in the potential for decreased or increased economic activities related to recreation.

15 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
 16 recreation and compromise the quality of activities, leading to potential economic impacts.  
 17 However, over time, implementation could also improve the quality of existing recreational  
 18 opportunities, creating increased economic value with respect to recreation. This section considers  
 19 only the economic effects of recreational changes brought about by conservation measure  
 20 implementation. Potential physical changes to the environment relating to recreational resources  
 21 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.13, Impacts REC-9 through  
 22 REC-11.

23 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
 24 **Implementing the Proposed Conservation Measures 2–22**

25 Effects on agricultural economics as a result of the proposed Conservation Measures 2–22 would be  
 26 similar to those described under Alternative 1A, Impact ECON-18 because the measures are similar.  
 27 Conservation Measures 2–22 would convert land from existing agricultural uses. These direct effects  
 28 on agricultural land are described qualitatively in Chapter 14, *Agricultural Resources*, Section  
 29 14.3.3.13, Impacts AG-3 and AG-4. Effects on agricultural economics would include effects on crop  
 30 production and agricultural investments resulting from restoration actions on agricultural lands.  
 31 The effects would be similar in kind to those described for lands converted due to construction and  
 32 operation of the conveyance features and facilities. The total acreage and crop mix of agricultural  
 33 land potentially affected is not specified at this time, but when required, the BDCP proponents  
 34 would provide compensation to property owners for losses due to implementation of the  
 35 alternative.

36 **NEPA Effects:** Because implementation of Conservation Measures 2–22 would be anticipated to lead  
 37 to reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
 38 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 39 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 40 agricultural productivity and compensating off-site.

41 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
 42 agricultural production in the Delta region. The permanent removal of agricultural land from  
 43 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.13, Impacts AG-3 and

1 AG-4. The reduction in the value of agricultural production is not considered an environmental  
 2 impact. Significant environmental impacts would only result if the changes in regional economics  
 3 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 4 required, the BDCP proponents would provide compensation to property owners for economic  
 5 losses due to implementation of the alternative. While the compensation to property owners would  
 6 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 7 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 8 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

### 9 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

10 **NEPA Effects:** The socioeconomic effects associated with operation of Alternative 6C would be the  
 11 same as those described under Alternative 6A, Impact ECON-19, because deliveries would be based  
 12 on the same operational guidelines. Changes in deliveries to hydrologic regions could result in  
 13 adverse or beneficial socioeconomic effects in these areas. Reduced or less reliable water deliveries  
 14 would result in decreased agricultural production and, in turn, a reduction in both direct and  
 15 indirect agricultural employment. Economic and social patterns tied to predominant agricultural  
 16 industrial activities and land uses could erode, changing the character of agricultural communities in  
 17 hydrologic regions. If M&I deliveries were reduced to the extent that it would, in the long run,  
 18 constrain population growth, implementation of Alternative 6C could reinforce a socioeconomic  
 19 status quo or limit potential economic and employment growth in hydrologic regions. Changes to  
 20 agricultural production and population growth with its associated economic activity could also lead  
 21 to shifts in the character of communities in the hydrologic regions with resultant beneficial or  
 22 adverse effects. Likewise, limited growth associated with reduced deliveries could require lower  
 23 expenditures for local governments while also leading to reduced revenue.

24 **CEQA Conclusion:** Operation of water conveyance facilities under Alternative 6C could affect  
 25 socioeconomic conditions in the hydrologic regions receiving water from the SWP and CVP.  
 26 However, because these impacts are social and economic in nature, rather than physical, they are  
 27 not considered environmental impacts under CEQA. To the extent that changes in socioeconomic  
 28 conditions in the hydrologic regions would lead to physical impacts, such impacts are described in  
 29 Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.

### 30 **16.3.3.14 Alternative 7—Dual Conveyance with Pipeline/Tunnel, Intakes 2,** 31 **3, and 5, and Enhanced Aquatic Conservation (9,000 cfs;** 32 **Operational Scenario E)**

33 Facilities constructed under Alternative 7 would be similar to those described for Alternative 1A but  
 34 with only three intakes as opposed to five. Operations would be different under Alternative 7 than  
 35 under Alternative 1A.

### 36 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 37 **Region during Construction of the Proposed Water Conveyance Facilities**

38 The regional economic effects on employment and income in the Delta region during construction  
 39 were evaluated. Changes are shown relative to the Existing Conditions and the No Action Alternative  
 40 (regional economic conditions do not differ between Existing Conditions and No Action Alternative).  
 41 The effects on employment and income are displayed in Table 16-51. The table shows the direct and  
 42 total changes that would result from conveyance-related spending. As evident in Table 16-51,

1 spending on conveyance construction would result in substantial economic activity in the region. As  
 2 shown, direct construction employment is anticipated to vary over the 8-year construction period,  
 3 with an estimated 2,018 FTE jobs in the first year and 129 FTE jobs in the final year of the  
 4 construction period. Construction employment is estimated to peak at 3,360 FTE jobs in year 4.  
 5 Total employment (direct, indirect, and induced) would peak in year 1, at 11,018 FTE jobs.

6 **Table 16-51. Regional Economic Effects on Employment and Labor Income during Construction**  
 7 **(Alternative 7)**

Regional Economic Impact <sup>a</sup>	Year								Total
	1	2	3	4	5	6	7	8	
<b>Employment (FTE)</b>									
Direct	2,018	2,256	3,141	3,360	2,937	2,763	547	129	17,152
Total <sup>b</sup>	11,018	9,174	10,635	9,729	7,264	5,811	923	183	54,737
<b>Labor Income</b> (million \$)									
Direct	298.7	220.6	229.9	186.1	125.9	74.0	6.4	0.3	1,141.9
Total <sup>b</sup>	537.9	409.8	440.1	369.9	251.1	170.6	19.9	2.6	2,201.8

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects; numbers may not sum to the total due to rounding.

Detailed estimates are presented in Appendix 16A, *Regional Economic Impacts of Water Conveyance Facility Construction*.

8  
 9 The footprint of conveyance and related facilities such as roads and utilities would remove some  
 10 existing agricultural land from production, so the effects on employment and income would be  
 11 negative. The regional economic effects on employment and income in the Delta region from the  
 12 change in agricultural production are reported in Table 16-52. As shown, direct agricultural  
 13 employment would be reduced by an estimated 25 FTE jobs, while total employment (direct,  
 14 indirect, and induced) associated with agricultural employment would fall by 94 FTE jobs. Mapbook  
 15 Figures M14-1 and M14-2 display areas of Important Farmland and lands under Williamson Act  
 16 contracts that could be converted to other uses due to the construction of water conveyance  
 17 facilities for the Pipeline/Tunnel alignment. Note that not all of these structures would be  
 18 constructed under this alternative.

1 **Table 16-52. Regional Economic Effects on Agricultural Employment and Labor Income during**  
 2 **Construction (Alternative 7)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-25
Total <sup>b</sup>	-94
<b>Labor Income (million \$)</b>	
Direct	-3.1
Total <sup>b</sup>	-6.1

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).  
<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.  
<sup>b</sup> Includes direct, indirect, and induced effects.

3  
 4 Additionally, the Alternative 7 construction footprint would result in the abandonment of an  
 5 estimated six producing natural gas wells in the study area, as described in Chapter 26, *Mineral*  
 6 *Resources*, Section 26.3.3.14, Impact MIN-1. This could result in the loss of employment and labor  
 7 income associated with monitoring and maintaining these wells. Generally, small crews perform  
 8 ongoing monitoring and maintenance of several wells at a time. As shown in Chapter 26, *Mineral*  
 9 *Resources*, Table 26-3, 516 active producer wells are located in the study area. Even if all six  
 10 producing wells in the Alternative 7 construction footprint were abandoned and not replaced with  
 11 new wells installed outside the construction footprint, the percentage reduction in the number of  
 12 natural gas wells would be very small. As a result, the employment and labor income effects  
 13 associated with well abandonment, while negative, would be minimal.

14 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
 15 construction-related employment and labor income, this would be considered a beneficial effect.  
 16 However, these activities would also be anticipated to result in a decrease in agricultural-related  
 17 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
 18 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
 19 available to reduce these effects by preserving agricultural productivity and compensating off-site.

20 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would temporarily  
 21 increase total employment and income in the Delta region. The change would result from  
 22 expenditures on construction, increasing employment, and from changes in agricultural production,  
 23 decreasing employment. Changes in recreational expenditures and natural gas well operations could  
 24 also affect regional employment and income, but these have not been quantified. The total change in  
 25 employment and income is not, in itself, considered an environmental impact. Significant  
 26 environmental impacts would only result if the changes in regional economics cause physical  
 27 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 28 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 29 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.14, Impacts AG-1  
 30 and AG-2; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
 31 15.3.3.14, REC-1 through REC-4; abandonment of natural gas wells is addressed in Chapter 26,  
 32 *Mineral Resources*, Section 26.3.3.14, Impact MIN-1. When required, DWR would provide  
 33 compensation to property owners for economic losses due to implementation of the alternative.  
 34 While the compensation to property owners would reduce the severity of economic effects related

1 to the loss of agricultural land, it would not constitute mitigation for any related physical impact.  
 2 Measures to reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section  
 3 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve  
 4 agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson  
 5 Act contracts or in Farmland Security Zones.

## 6 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 7 **the Proposed Water Conveyance Facilities**

### 8 **Population**

9 Construction of conveyance facilities would require an estimated peak of 3,360 workers in year 4 of  
 10 the assumed 8-year construction period. It is anticipated that many of these new jobs would be filled  
 11 from within the existing five-county labor force. However, construction of the tunnels may require  
 12 specialized worker skills not readily available in the local labor pool. As a result, it is anticipated that  
 13 some specialized workers may be recruited from outside the five-county region.

14 Considering the multi-year duration of conveyance facility construction, it is anticipated that non-  
 15 local workers would temporarily relocate to the five-county region, thus adding to the local  
 16 population. As discussed in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section  
 17 30.3.2.1, Direct Growth Inducement, an estimated 30 percent of workers could come from out of the  
 18 Delta region, suggesting that approximately 1,010 workers could relocate to the Delta region at the  
 19 peak of the construction period. However, this additional population would constitute a minor  
 20 increase in the total 2020 projected regional population of 4.6 million and be distributed throughout  
 21 the region. Changes in demand for public services resulting from any increase in population are  
 22 addressed in Chapter 20, *Public Services and Utilities*, Section 20.3.3.14, Impact UT-1 through UT-6.

### 23 **Housing**

24 Changes in housing demand are based on changes in supply resulting from displacement during  
 25 facilities construction and changes in housing demand resulting from employment associated with  
 26 construction of conveyance facilities. As described in Chapter 13, *Land Use*, Section 13.3.3.14, Impact  
 27 LU-2, construction of water conveyance facilities under Alternative 7 would conflict with  
 28 approximately 38 residential structures.

29 The construction workforce would most likely commute daily to the work sites from within the five-  
 30 county region; however, if needed, there are about 53,000 housing units available to accommodate  
 31 workers who may choose to commute to on a workweek basis or who may choose to temporarily  
 32 relocate to the region for the duration of the construction period, including the estimated 1,010  
 33 workers who may temporarily relocate to the Delta region from out of the region. In addition to the  
 34 available housing units, there are recreational vehicle parks and hotels and motels within the five-  
 35 county region to accommodate any construction workers. As a result, and as discussed in more  
 36 detail in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.1, Direct Growth  
 37 Inducement, construction of the proposed conveyance facilities is not expected to substantially  
 38 increase the demand for housing within the five-county region.

39 **NEPA Effects:** Within specific local communities, there could be localized effects on housing.  
 40 However, given the availability of housing within the five-county region, predicting where this  
 41 impact might fall would be speculative. In addition, new residents would likely be dispersed across  
 42 the region, thereby not creating a burden on any one community.

1 Because these activities would not result in permanent concentrated, substantial increases in  
2 population or new housing, they would not be considered to have an adverse effect.

3 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
4 population increases in the Delta region with adequate housing supply to accommodate the change  
5 in population. Therefore, the minor increase in housing is not anticipated to lead to adverse physical  
6 changes to the environment.

### 7 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 8 **Water Conveyance Facilities**

9 **NEPA Effects:** Under Alternative 7, effects on community character would be similar in nature to  
10 those described under Alternative 1A, Impact ECON-3. However, the intensity of these effects would  
11 be reduced due to the construction of three intake facilities. As such, regional population and  
12 employment would increase to levels described above under Impact ECON-1 and ECON-2. While  
13 water conveyance construction could result in beneficial effects relating to the economic welfare of a  
14 community, adverse social effects could also arise as a result of declining economic stability or  
15 changes in community cohesion in communities closest to construction effects and in those most  
16 heavily influenced by agricultural and recreational activities. Implementation of mitigation  
17 measures and environmental commitments related to noise, visual effects, transportation,  
18 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
19 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-3.

20 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 7 could affect  
21 community character in the Delta region. However, because these impacts are social in nature,  
22 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
23 community character would lead to physical impacts involving population growth, such impacts are  
24 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
25 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
26 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
27 character stemming from a lack of maintenance, upkeep, and general investment. However,  
28 implementation of mitigation measures and environmental commitments related to noise, visual  
29 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
30 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
31 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
32 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
33 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
34 Management Plans.

### 35 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 36 **the Proposed Water Conveyance Facilities**

37 **NEPA Effects:** Under Alternative 7, publicly-owned water conveyance facilities would be constructed  
38 on land of which some is currently held by private owners. Property tax and assessment revenue  
39 forgone as a result of water conveyance facilities is estimated at \$7.9 million over the construction  
40 period. These decreases in revenue could potentially result in the loss of a substantial share of some  
41 agencies' tax bases, particularly for smaller districts affected by the BDCP, such as reclamation  
42 districts where conveyance facilities and associated work areas are proposed. This economic effect  
43 would be considered adverse; however, the BDCP proponents would make arrangements to

1 compensate local governments for the loss of property tax or assessment revenue for land used for  
 2 constructing, locating, operating, or mitigating for new Delta water conveyance facilities.  
 3 Additionally, as discussed under Impact ECON-1, construction of the water conveyance facilities  
 4 would be anticipated to result in a net temporary increase of income and employment in the Delta  
 5 region. This would also create an indirect beneficial effect through increased sales tax revenue for  
 6 local government entities that rely on sales taxes.

7 **CEQA Conclusion:** Under Alternative 7, construction of water conveyance facilities would result in  
 8 the removal of a portion of the property tax base for various local government entities in the Delta  
 9 region. Over the construction period, property tax and assessment revenue forgone is estimated at  
 10 \$7.9 million. However, the Sacramento-San Joaquin Delta Reform Act commits the entities receiving  
 11 water from the State Water Project and federal Central Valley Project to mitigate for lost property  
 12 tax and assessment revenue associated with land needed for the construction of new conveyance  
 13 facilities (Water Code Section 85089). Additionally, any losses could be offset, at least in part, by an  
 14 anticipated increase in sales tax revenue. CEQA does not require a discussion of socioeconomic  
 15 effects except where they would result in reasonably foreseeable physical changes. If an alternative  
 16 is not anticipated to result in a physical change to the environment, it would not be considered to  
 17 have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any  
 18 physical consequences resulting from fiscal impacts are too speculative to ascertain.

#### 19 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 20 **Water Conveyance Facilities**

21 **NEPA Effects:** Under Alternative 7, disruption of recreational activities during the construction  
 22 period would be similar in character to that described under Alternative 1A, Impact ECON-5.  
 23 However, fewer intake facilities would be constructed under this alternative, resulting in less severe  
 24 effects relative to Alternative 1A. While access to recreational facilities would be maintained  
 25 throughout construction, the quality of recreational activities including boating, fishing, waterfowl  
 26 hunting, and hiking in the Delta could be indirectly affected by noise, lighting, traffic, and visual  
 27 degradation in proximity to water conveyance construction.

28 Construction of water conveyance structures under this alternative would be anticipated to result in  
 29 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
 30 the implementation of mitigation measures, including enhancement of fishing access sites and  
 31 incorporation of recreational access into project design, and environmental and non-environmental  
 32 commitments, including providing funding to implement recreational improvements and control  
 33 aquatic weeds, providing notification of maintenance activities in waterways, and developing and  
 34 implementing a noise abatement plan, as described in Appendix 3B, *Environmental Commitments*.  
 35 With a decrease in recreational quality, the number of visits would be anticipated to decline, at least  
 36 in areas closest to construction activities. The multi-year schedule and geographic scale of  
 37 construction activities and the anticipated decline in recreational spending would be considered an  
 38 adverse effect. The commitments and mitigation measure cited above would contribute to the  
 39 reduction of this effect.

40 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 7  
 41 could impact recreational revenue in the Delta region if construction activities result in fewer visits  
 42 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
 43 recreational activities. This section considers only the economic effects of recreational changes  
 44 brought about by construction of the proposed water conveyance facilities. Potential physical

1 changes to the environment relating to recreational resources are described and evaluated in  
2 Chapter 15, *Recreation*, Section 15.3.3.14, Impacts REC-1 through REC-4.

3 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of**  
4 **the Proposed Water Conveyance Facilities**

5 Construction of conveyance facilities would convert land from existing agricultural uses to uses that  
6 include direct facility footprints, construction staging areas, borrow/spoils areas, RTM storage,  
7 temporary and permanent roads, and utilities. Agricultural land could also be affected by changes in  
8 water quality and other conditions that would affect crop productivity. These direct effects on  
9 agricultural land are described in Chapter 14, *Agricultural Resources*, Section 14.3.3.14, Impacts AG-  
10 1 and AG-2.

11 Changes in crop acreage were used to describe the associated changes in economic values. Unit  
12 prices, yields, and crop production and investment costs were presented in Section 16.1,  
13 *Environmental Setting/Affected Environment*. Table 16-53 summarizes the changes in acreage and  
14 value of agricultural production that would result in the Delta region as a result of Alternative 7  
15 construction. Changes are shown relative to the Existing Conditions and the No Action Alternative  
16 by aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
17 Alternative were assumed to be the same). The table also includes a summary of changes in crop  
18 acreages that are reported in greater detail in Appendix 14A, *Individual Crop Effects as a Result of*  
19 *BDCP Water Conveyance Facility Construction*.

20 Total value of irrigated crop production in the Delta would decline on average by \$8.7 million per  
21 year during the construction period, with total irrigated crop acreage declining by about 5,300 acres,  
22 These estimates are not dependent on water year type.

23 **Table 16-53. Crop Acres and Value of Agricultural Production in the Delta during Construction**  
24 **(Alternative 7)**

Analysis Metric	Alternative 7	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	478.3	-5.3
Grains	58.1	-0.6
Field crops	189.5	-1.6
Forage crops	111.5	-1.2
Vegetable, truck, and specialty crops	76.6	-0.5
Orchards and vineyards	42.7	-1.4
Total Value of Production (million \$)	641.4	-8.7
Grains	24.0	-0.2
Field crops	112.8	-1.0
Forage crops	72.1	-1.0
Vegetable, truck, and specialty crops	266.5	-1.8
Orchards and vineyards	165.9	-4.7

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

25

1 Alternative 7 may also affect production costs on lands even if gross revenues are largely unaffected.  
2 Costs could be increased by operational constraints and longer travel times due to facilities  
3 construction. Construction designs and costs have provided for such costs in two ways. In most  
4 cases, affected lands fall within the facilities footprint, and are included in the agricultural acreage  
5 and value of production described elsewhere in this chapter and in Chapter 14, *Agricultural*  
6 *Resources*, Section 14.3.3.14, Impacts AG-1 and AG-2. For potentially affected lands not included in  
7 the facilities footprint, conveyance construction costs include temporary and permanent roads,  
8 bridges, and other facilities as needed to service agricultural lands (California Department of Water  
9 Resources 2010a, 2010b). There could be some additional travel time and other costs associated  
10 with using these facilities, but such costs are not environmental impacts requiring mitigation.

11 Loss of investments in production facilities and standing orchards and vineyards would occur as a  
12 result of facilities construction. The value of structures and equipment potentially affected would  
13 vary widely across parcels. Much of the equipment is portable (e.g., machinery, tools, portable  
14 sprinkler pipe), and could be sold or used on other lands. Shop and storage buildings and permanent  
15 irrigation and drainage equipment plus orchards and vineyards may have little or no salvage value.  
16 The negotiated purchase of lands for the conveyance and associated facilities would compensate for  
17 some, but perhaps not all of that value. According to Cooperative Extension cost of production  
18 studies (University of California Cooperative Extension 2003a, 2003b, 2004, 2005, 2006a, 2006b,  
19 2007a, 2007b, 2008a, 2008b, 2008c, 2008d), permanent structures, irrigation systems, and drainage  
20 systems can represent a wide range of investment, from less than \$100 per acre for field and  
21 vegetable crops up to over \$3,000 per acre for some orchards. Most such investments would not be  
22 new, so their depreciated values would be substantially lower.

23 Investment in standing orchards and vineyards would also be considered during negotiations for  
24 land purchases. Typical investments required to bring permanent crops into production are shown  
25 in Section 16.1, *Environmental Setting/Affected Environment*. For example, the establishment of wine  
26 grapes requires an investment of over \$15,000 per acre and Bartlett pears require over \$20,000 per  
27 acre. Forage crops such as irrigated pasture and alfalfa may require an establishment cost of about  
28 \$400 per acre. The depreciated values of the growing stock could be substantially below these  
29 establishment costs, depending on the ages of the stands that would be affected.

30 Only minor changes in salinity of agricultural water supply are expected during construction.  
31 Consequently, costs related to salinity changes would also be minor. Further discussion of effects  
32 from changes in salinity is presented in Chapter 14, *Agricultural Resources*, Section 14.3.3.14,  
33 Impacts AG-1 and AG-2.

34 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
35 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
36 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
37 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
38 agricultural productivity and compensating off-site.

39 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
40 value of agricultural production in the Delta region. The removal of agricultural land from  
41 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.14, Impacts AG-1 and  
42 AG-2. The reduction in the value of agricultural production is not considered an environmental  
43 impact. Significant environmental impacts would only result if the changes in regional economics  
44 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When

1 required, DWR would provide compensation to property owners for economic losses due to  
 2 implementation of the alternative. While the compensation to property owners would reduce the  
 3 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 4 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 5 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 6 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 7 and land subject to Williamson Act contracts or in Farmland Security Zones.

#### 8 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 9 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

10 Permanent effects on regional economics during operation and maintenance of the proposed water  
 11 conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-7.  
 12 Increased expenditures related to operation and maintenance of water conveyance facilities would  
 13 be expected to result in a permanent increase in regional employment and income, as presented in  
 14 Table 16-22. The permanent removal of agricultural land following construction would have lasting  
 15 negative effects on agricultural employment and income, as shown in Table 16-23.

16 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
 17 result in an increase in operations-related employment and labor income, this would be considered  
 18 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
 19 agricultural-related employment and labor income, which would be considered an adverse effect.  
 20 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 21 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 22 compensating off-site.

23 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 24 increase total employment and income in the Delta region. The net change would result from  
 25 expenditures on operation and maintenance and from changes in agricultural production. The total  
 26 change in income and employment is not, in itself, considered an environmental impact. Significant  
 27 environmental impacts would only result if the changes in regional economics cause physical  
 28 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 29 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 30 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.14, Impacts AG-3  
 31 and AG-4; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
 32 15.3.3.14, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
 33 landowners as a result of acquiring lands for the proposed conveyance facilities. While the  
 34 compensation to property owners would reduce the severity of economic effects related to the loss  
 35 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
 36 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 37 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
 38 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
 39 contracts or in Farmland Security Zones.

#### 40 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 41 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

42 Permanent effects on population and housing during operation and maintenance of the proposed  
 43 water conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-

1 8. It is anticipated that non-local workers would relocate to the five-county region, thus adding to  
 2 the local population. However, this additional population would constitute a minor increase in the  
 3 total 2020 projected regional population of 4.6 million and be distributed throughout the region. It  
 4 is anticipated that most of the operational workforce would be drawn from within the five-county  
 5 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

6 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 7 population or new housing, they would not be considered to have an adverse effect.

8 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 9 result in minor population increases in the Delta region with adequate housing supply to  
 10 accommodate the change in population and therefore adverse changes in the physical environment  
 11 are not anticipated.

### 12 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 13 **Proposed Water Conveyance Facilities**

14 **NEPA Effects:** Under Alternative 7, effects on community character would be similar in nature,  
 15 location, and magnitude to those described under Alternative 1A, Impact ECON-9. However, the  
 16 intensity of these effects would be reduced based on the operation and maintenance of three intake  
 17 facilities. While water conveyance operation and maintenance could result in beneficial effects  
 18 relating to the economic welfare of a community, lasting adverse social effects, including effects on  
 19 community cohesion, could also arise in communities closest to physical features and in those most  
 20 heavily influenced by agricultural and recreational activities. Implementation of mitigation  
 21 measures and environmental commitments related to noise, visual effects, transportation,  
 22 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
 23 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-9.

24 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 7  
 25 could affect community character in the Delta region. However, because these impacts are social in  
 26 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 27 changes to community character would lead to physical impacts involving population growth, such  
 28 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 29 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
 30 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
 31 community character stemming from a lack of maintenance, upkeep, and general investment.

### 32 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and** 33 **Maintenance of the Proposed Water Conveyance Facilities**

34 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operations under  
 35 Alternative 4 would be similar to those described under Alternative 1A, Impact ECON-10. However,  
 36 with the construction of fewer intake facilities, forgone revenue is estimated at \$47.3 million over  
 37 the 50-year permit period. These decreases in revenue could potentially result in the loss of a  
 38 substantial share of some agencies' tax bases, particularly for smaller districts affected by the BDCP.  
 39 This economic effect would be adverse; however, the BDCP proponents would make arrangements  
 40 to compensate local governments for the loss of property tax or assessment revenue for land used  
 41 for constructing, locating, operating, or mitigating for new Delta water conveyance facilities.  
 42 Additionally, as discussed under Impact ECON-7, continued operation and maintenance of the water  
 43 conveyance facilities would be anticipated to result in a net increase of income and employment in

1 the Delta region. This could also create an indirect beneficial effect through increased sales tax  
2 revenue for local government entities that rely on sales taxes.

3 **CEQA Conclusion:** Under Alternative 7, the ongoing operation and maintenance of water  
4 conveyance facilities would restrict property tax revenue levels for various local government  
5 entities in the Delta region. Over the 50-year permit period, property tax and assessment revenue  
6 forgone is estimated at \$47.3 million. However, the Sacramento-San Joaquin Delta Reform Act  
7 commits the entities receiving water from the State Water Project and federal Central Valley Project  
8 to mitigate for lost property tax and assessment revenue associated with land needed for the  
9 construction of new conveyance facilities (Water Code Section 85089). Additionally, any losses  
10 could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
11 require a discussion of socioeconomic effects except where they would result in reasonably  
12 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
13 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
14 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
15 speculative to ascertain.

#### 16 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the** 17 **Proposed Water Conveyance Facilities**

18 Effects on recreation economics during operation and maintenance of the proposed water  
19 conveyance facilities under Alternative 7 would be similar to those described under Alternative 1A,  
20 Impact ECON-11.

21 **NEPA Effects:** Maintenance of conveyance facilities, including intakes, would result in periodic  
22 temporary but not substantial adverse effects on boat passage and water-based recreational  
23 activities. Because effects of facility maintenance would be short-term and intermittent, substantial  
24 economic effects are not anticipated to result from operation and maintenance of the facilities.

25 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
26 conveyance facilities under Alternative 7 are anticipated to create minor effects on recreational  
27 resources and therefore, are not expected to substantially reduce economic activity related to  
28 recreational activities. This section considers only the economic effects of recreational changes.  
29 Potential physical changes to the environment relating to recreational resources are described and  
30 evaluated in Chapter 15, *Recreation*, Section 15.3.3.14, Impacts REC-5 through REC-8.

#### 31 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during** 32 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

33 During operation and maintenance of conveyance facilities existing agricultural land would be in  
34 uses that include direct facility footprints and associated permanent roads and utilities. Agricultural  
35 land could also be affected by changes in water quality and other conditions that would affect crop  
36 productivity. These direct effects on agricultural land are described in Chapter 14, *Agricultural*  
37 *Resources*, Section 14.3.3.14, Impacts AG-1 and AG-2.

38 Changes in crop acreage were used to estimate the associated changes in economic values. Unit  
39 prices, yields, and crop production and investment costs were presented in Section 16.1,  
40 *Environmental Setting/Affected Environment*. Table 16-54 summarizes the changes in acreage and  
41 value of agricultural production that would result in the Delta region during operation of Alternative  
42 7. Changes are shown relative to the Existing Conditions and the No Action Alternative by aggregate

1 crop category (agricultural resources under Existing Conditions and in the No Action Alternative  
2 were assumed to be the same). The changes in crop acreages are reported in greater detail in  
3 Appendix 14A, *Individual Crop Effects as a Result of BDCP Water Conveyance Facility Construction*.

4 Total value of irrigated crop production in the Delta region would decline on average by \$7.2 million  
5 per year during operation and maintenance, with total irrigated crop acreage declining by about  
6 4,400 acres. These estimates are not dependent on water year type.

7 **Table 16-54. Crop Acres and Value of Agricultural Production in the Delta during Operations and**  
8 **Maintenance (Alternative 7)**

Analysis Metric	Alternative 7	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	479.3	-4.4
Grains	58.3	-0.4
Field crops	189.8	-1.3
Forage crops	111.6	-1.1
Vegetable, truck, and specialty crops	76.7	-0.4
Orchards and vineyards	42.8	-1.2
Total Value of Production (million \$)	642.8	-7.2
Grains	24.1	-0.1
Field crops	113.1	-0.8
Forage crops	72.2	-0.9
Vegetable, truck, and specialty crops	266.9	-1.5
Orchards and vineyards	166.7	-3.9

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

9  
10 Alternative 7 may also affect production costs on lands even if gross revenues are largely unaffected.  
11 Costs could be associated with operational constraints and longer travel times due to permanent  
12 facilities. In most cases, affected lands fall within the facilities footprint, and are included in the  
13 agricultural acreage and value of production described elsewhere in this Chapter and in Chapter 14,  
14 *Agricultural Resources*, Section 14.3.3.14.

15 Crop yields and crop selection on lands in the Delta could be affected by changes in salinity of  
16 agricultural water supply during operation and maintenance activities. If operation of the proposed  
17 conveyance facilities increases salinity in part of the Delta, crops that are more sensitive to salinity  
18 could shift to other lands in the five-county Delta region. See Chapter 14, *Agricultural Resources*,  
19 Section 14.3.3.14, Impact AG-2, for further discussion of effects from changes in salinity.

20 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
21 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
22 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
23 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
24 productivity and compensating off-site.

25 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities  
26 the value of agricultural production in the Delta region would be reduced. The permanent removal

1 agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 2 14.3.3.14, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 3 considered an environmental impact. Significant environmental impacts would only result if the  
 4 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 5 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 6 economic losses due to implementation of the alternative). While the compensation to property  
 7 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 8 would not constitute mitigation for any related physical effect. Measures to reduce these impacts are  
 9 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 10 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 11 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 12 Zones.

### 13 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 14 **Implementation of the Proposed Conservation Measures 2-22**

15 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2-  
 16 22 would be similar to those described under Alternative 1A, Impact ECON-13. However, the  
 17 magnitude of effects related specifically to CM6, Channel Margin Habitat Enhancement, would be  
 18 larger, as this alternative would enhance 40 linear miles rather than 20 linear miles. Additionally,  
 19 this alternative would restore 20,000 acres of seasonally-inundated floodplain under CM5, rather  
 20 than 10,000 acres. In the Delta region, spending on Conservation Measures 2-22 would include  
 21 construction, operation and maintenance activities that would convert or disturb existing land use.  
 22 Because implementation of Conservation Measures 2-22 would be anticipated to result in an  
 23 increase in construction and operation and maintenance-related employment and labor income, this  
 24 would be considered a beneficial effect. However, implementation of these components would also  
 25 be anticipated to result in a decrease in agricultural-related employment and labor income, which  
 26 would be considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14,  
 27 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by  
 28 preserving agricultural productivity and compensating off-site. Additionally, implementation of  
 29 these components are anticipated to result in the abandonment of natural gas wells, causing a  
 30 decrease in employment and labor income associated with monitoring and maintaining wells, which  
 31 would be considered an adverse effect. Mitigation Measure MIN-5, described in Chapter 26, *Mineral*  
 32 *Resources*, Section 26.3.3.2, Impact MIN-5, would be available to reduce these effects by minimizing,  
 33 to the extent feasible, the need for well abandonment or relocation.

34 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would affect total  
 35 employment and income in the Delta region. The change in total employment and income in the  
 36 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 37 Measures 2-22 and any resulting changes in agricultural production, recreation, and natural gas  
 38 production activities. The total change in employment and income is not, in itself, considered an  
 39 environmental impact. Significant environmental impacts would only result if the changes in  
 40 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 41 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
 42 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
 43 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
 44 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

1 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of**  
2 **Implementing the Proposed Conservation Measures 2–22**

3 Effects on population and housing as a result of the proposed Conservation Measures 2–22 would be  
4 similar to those described under Alternative 1A, Impact ECON-14. However, the magnitude of effects  
5 related specifically to CM6, Channel Margin Habitat Enhancement, would be larger, as this  
6 alternative would enhance 40 linear miles rather than 20 linear miles. Additionally, this alternative  
7 would restore 20,000 acres of seasonally-inundated floodplain under CM5, rather than 10,000 acres.  
8 In general, the changes in population and housing would include increases in population from the  
9 construction and operation and maintenance-related activity and declines in residential housing and  
10 business establishments as a result of lands converted or impaired.

11 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
12 population or new housing, they would not be considered to have an adverse effect.

13 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
14 population and housing in the Delta region. The change in total population and housing in the Delta  
15 region is based on employment resulting from implementation of the proposed Conservation  
16 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
17 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
18 physical environment are not anticipated to result.

19 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed**  
20 **Conservation Measures 2–22**

21 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
22 22 would be similar to those described under Alternative 1A, Impact ECON-15. However, the  
23 magnitude of effects related specifically to CM6, Channel Margin Habitat Enhancement, would be  
24 larger, as this alternative would enhance 40 linear miles rather than 20 linear miles. Additionally,  
25 this alternative would restore 20,000 acres of seasonally-inundated floodplain under CM5, rather  
26 than 10,000 acres. While implementation of Conservation Measures 2–22 could result in beneficial  
27 effects relating to the economic welfare of a community, adverse social effects, including effects on  
28 community cohesion, could also arise in those communities closest to character-changing effects  
29 and those most heavily influenced by agricultural activities. Implementation of mitigation measures  
30 and environmental commitments related to noise, visual effects, transportation, agriculture, and  
31 recreation would reduce adverse effects (see Appendix 3B, *Environmental Commitments*). These  
32 actions are summarized under Alternative 1A, Impact ECON-15.

33 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 7 could affect  
34 community character within the Delta region. However, because these impacts are social in nature,  
35 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
36 community character are related to physical impacts involving population growth, these impacts are  
37 described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore,  
38 notable decreases in population or employment, even if limited to certain areas, sectors, or the  
39 vacancy of individual buildings, could result in alteration of community character stemming from a  
40 lack of maintenance, upkeep, and general investment.

1 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing**  
 2 **the Proposed Conservation Measures 2–22**

3 **NEPA Effects:** Under Alternative 7, effects on local government fiscal conditions as a result of  
 4 conservation measure implementation would be anticipated to be greater than those described  
 5 under Alternative 1A, Impact ECON-16. Under this alternative, 20,000 acres would be restored  
 6 under CM5, rather than 10,000 acres. Forgone revenue would be estimated to reach \$186.6 million.  
 7 Conservation Measures 2–22 would remove some private land from local property tax and  
 8 assessment rolls. This economic effect would be considered adverse; however, the BDCP proponents  
 9 would offset forgone property tax and assessments levied by local governments and special districts  
 10 on private lands converted to habitat.

11 **CEQA Conclusion:** Under Alternative 7, implementation of Conservation Measures 2–22 would  
 12 result in the removal of a portion of the property tax base for various local government entities in  
 13 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
 14 estimated to reach \$186.6 million. However, the BDCP proponents would compensate local  
 15 governments and special districts for forgone revenue. CEQA does not require a discussion of  
 16 socioeconomic effects except where they would result in physical changes. If an alternative is not  
 17 anticipated to result in a physical change to the environment, it would not be considered to have a  
 18 significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131).

19 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the**  
 20 **Proposed Conservation Measures 2–22**

21 **NEPA Effects:** Effects related to implementation of the Conservation Measures 2–22 under this  
 22 alternative would be similar to those described under Alternative 1A, Impact ECON-17. However,  
 23 the magnitude of effects related specifically to CM6, Channel Margin Habitat Enhancement, would be  
 24 larger, as this alternative would enhance 40 linear miles rather than 20 linear miles. Additionally,  
 25 this alternative would restore 20,000 acres of seasonally-inundated floodplain under CM5, rather  
 26 than 10,000 acres. Conservation Measures 2–22 may result in adverse and beneficial effects on  
 27 recreational resources in the Delta region, resulting in the potential for decreased or increased  
 28 economic activities related to recreation.

29 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
 30 recreation and compromise the quality of activities, leading to potential economic impacts.  
 31 However, over time, implementation could also improve the quality of existing recreational  
 32 opportunities, creating increased economic value with respect to recreation. This section considers  
 33 only the economic effects of recreational changes brought about by conservation measure  
 34 implementation. Potential physical changes to the environment relating to recreational resources  
 35 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.14, Impacts REC-9 through  
 36 REC-11.

37 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
 38 **Implementing the Proposed Conservation Measures 2–22**

39 Effects on agricultural economics as a result of the proposed Conservation Measures 2–22 would be  
 40 similar to those described under Alternative 1A, Impact ECON-18, but would extend to 10,000  
 41 additional acres of seasonally-inundated floodplain under CM5 and 20 additional linear miles of  
 42 channel margin habitat under CM6. Conservation Measures 2–22 would convert land from existing  
 43 agricultural uses. These direct effects on agricultural land are described qualitatively in Chapter 14,

1 *Agricultural Resources*, Section 14.3.3.14, Impacts AG-3 and AG-4. Effects on agricultural economics  
 2 would include effects on crop production and agricultural investments resulting from restoration  
 3 actions on agricultural lands. The effects would be similar in kind to those described for lands  
 4 converted due to construction and operation of the conveyance features and facilities. The total  
 5 acreage and crop mix of agricultural land potentially affected is not specified at this time, but when  
 6 required, the BDCP proponents would provide compensation to property owners for losses due to  
 7 implementation of the alternative.

8 **NEPA Effects:** Because implementation of the Conservation Measures 2–22 would be anticipated to  
 9 lead to reductions in crop acreage and in the value of agricultural production in the Delta region, this  
 10 is considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 11 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 12 agricultural productivity and compensating off-site.

13 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
 14 agricultural production in the Delta region. The permanent removal of agricultural land from  
 15 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.14, Impacts AG-3 and  
 16 AG-4. The reduction in the value of agricultural production is not considered an environmental  
 17 impact. Significant environmental impacts would only result if the changes in regional economics  
 18 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 19 required, the BDCP proponents would provide compensation to property owners for economic  
 20 losses due to implementation of the alternative. While the compensation to property owners would  
 21 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 22 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 23 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

#### 24 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

25 The socioeconomic effects associated with operation of Alternative 7 would be similar to those  
 26 described under Alternative 6A, Impact ECON-19, because deliveries would be also be reduced  
 27 based on operational guidelines. In this case, however, the construction of three intakes and  
 28 diversion restrictions associated with operational Scenario E would lead to reduced deliveries.

#### 29 **Changes in SWP Deliveries Compared to No Action Alternative**

30 Compared to No Action Alternative (2060), Alternative 7 would decrease deliveries to the  
 31 hydrologic regions. Compared to the No Action Alternative (2060), South Coast would receive the  
 32 largest net decrease (up to 268 TAF of Table A plus Article 21 deliveries) among the regions, which  
 33 represents 76% of the decrease in Table A plus Article 21 M&I deliveries under Alternative 7 (refer  
 34 to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-16, for more information).

#### 35 **Changes in CVP Deliveries Compared to No Action Alternative**

36 Alternative 7 would not change M&I deliveries for the Sacramento River, South Coast, South  
 37 Lahontan and Colorado River Regions because there are no affected CVP contractors located in these  
 38 regions. Compared to the No Action Alternative (2060), Alternative 7 would result in decreased  
 39 deliveries to the other hydrologic regions. Compared to the No Action Alternative (2060) San  
 40 Francisco Bay is projected to receive the largest potential decrease (approximately 8 TAF) among  
 41 the hydrologic regions (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-  
 42 17 for more information).

1 **NEPA Effects:** Changes in deliveries to hydrologic regions could result in adverse or beneficial  
2 socioeconomic effects in these areas. Reduced or less reliable water deliveries would result in  
3 decreased agricultural production and, in turn, a reduction in both direct and indirect agricultural  
4 employment. Economic and social patterns tied to predominant agricultural industrial activities and  
5 land uses could erode, changing the character of agricultural communities in hydrologic regions. If  
6 M&I deliveries were reduced to the extent that it would, in the long run, constrain population  
7 growth, implementation of Alternative 7 could reinforce a socioeconomic status quo or limit  
8 potential economic and employment growth in hydrologic regions. Changes to agricultural  
9 production and population growth with its associated economic activity could also lead to shifts in  
10 the character of communities in the hydrologic regions with resultant beneficial or adverse effects.  
11 Likewise, limited growth associated with reduced deliveries could require lower expenditures for  
12 local governments while also leading to reduced revenue.

13 **CEQA Conclusion:** As described above, the operational components of BDCP Conservation Measure  
14 1 could result in a number of effects in areas receiving SWP and CVP water deliveries outside of the  
15 Delta.

### 16 **Changes in SWP Deliveries Compared to Existing Conditions**

17 Compared to Existing Conditions, Alternative 7 would decrease deliveries to all hydrologic regions  
18 except for the San Joaquin River Region, which would experience no change in deliveries. South  
19 Coast would receive the largest net decrease (up to 337 TAF of Table A plus Article 21 deliveries)  
20 among the regions, which represents 73% of the decrease in Table A plus Article 21 M&I deliveries  
21 under Alternative 7 (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-16  
22 for more information).

### 23 **Changes in CVP Deliveries Compared to Existing Conditions**

24 Alternative 7 would not change M&I deliveries for the Sacramento River, South Coast, South  
25 Lahontan, and Colorado River Regions because there are no affected CVP contractors located in  
26 these regions. Compared to Existing Conditions, Alternative 7 would result in decreased deliveries  
27 to the other hydrologic regions. Compared to Existing Conditions, San Francisco Bay is projected to  
28 receive the largest decrease (up to 16 TAF) among the hydrologic regions (refer to Chapter 30,  
29 *Growth Inducement and Other Indirect Effects*, Table 30-17 for more information).

### 30 **Summary**

31 Operation of water conveyance facilities under Alternative 7 could affect socioeconomic conditions  
32 in the hydrologic regions receiving water from the SWP and CVP. However, because these impacts  
33 are social and economic in nature, rather than physical, they are not considered environmental  
34 impacts under CEQA. To the extent that changes in socioeconomic conditions in the hydrologic  
35 regions would lead to physical impacts, such impacts are described in Chapter 30, *Growth*  
36 *Inducement and Other Indirect Effects*, Section 30.3.2.

1 **16.3.3.15 Alternative 8—Dual Conveyance with Pipeline/Tunnel, Intakes 2,**  
 2 **3, and 5 and Increased Delta Outflow (9,000 cfs; Operational**  
 3 **Scenario F)**

4 Facilities constructed under Alternative 8 would be similar to those described for Alternative 1A but  
 5 with only three intakes as opposed to five. Operations would be different under Alternative 8 than  
 6 under Alternative 1A.

7 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta**  
 8 **Region during Construction of the Proposed Water Conveyance Facilities**

9 Temporary effects on regional economics during construction of the proposed water conveyance  
 10 facilities would be identical to those described under Alternative 7, Impact ECON-1. As shown in  
 11 Table 16-51, over the construction period, regional effects of construction activities would result in  
 12 direct employment of more than 17,000 FTE, with total employment effects of nearly 55,000 FTE.  
 13 Increases in labor income associated with this employment would also be expected. Declines in  
 14 agricultural production would be expected to lead to a decrease in employment of 25 FTE, with total  
 15 effects leading to a decline of 94 FTE. Similarly, labor income related to these positions would  
 16 decline, as shown in Table 16-52.

17 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
 18 construction-related employment and labor income, this would be considered a beneficial effect.  
 19 However, these activities would also be anticipated to result in a decrease in agricultural-related  
 20 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
 21 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
 22 available to reduce these effects by preserving agricultural productivity and compensating off-site.

23 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
 24 employment and income in the Delta region, temporarily. The increase in employment and income  
 25 that would result from expenditures on construction would be greater than the reduction in  
 26 employment and income attributable to losses in agricultural production. Changes in recreational  
 27 expenditures and natural gas well operations could also affect regional employment and income, but  
 28 these have not been quantified. The total change in employment and income is not, in itself,  
 29 considered an environmental impact. Significant environmental impacts would only result if the  
 30 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
 31 throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation Costs and*  
 32 *Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
 33 *Agricultural Resources*, Section 14.3.3.15, Impacts AG-1 and AG-2; changes in recreation related  
 34 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.15, REC-1 through REC-4;  
 35 abandonment of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.15,  
 36 Impact MIN-1. When required, DWR would provide compensation to property owners for economic  
 37 losses due to implementation of the alternative. While the compensation to property owners would  
 38 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 39 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 40 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 41 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 42 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 43 Zones.

1 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of**  
 2 **the Proposed Water Conveyance Facilities**

3 Effects on population and housing during construction of the proposed water conveyance facilities  
 4 would be identical to those described under Alternative 7, Impact ECON-2. It is anticipated that non-  
 5 local workers would temporarily relocate to the Delta region, thus adding to the local population.  
 6 However, this additional population would constitute a minor increase in the total 2020 projected  
 7 regional population of 4.6 million and be distributed throughout the region. Within specific local  
 8 communities, there could be localized effects on housing. However, given the availability of housing  
 9 within the five-county region, predicting where this impact might fall would be speculative. In  
 10 addition, new residents would likely be dispersed across the region, thereby not creating a  
 11 substantial burden on any one community.

12 **NEPA Effects:** Because these activities would not result in permanent concentrated, substantial  
 13 increases in population or new housing, they would not be considered to have an adverse effect.

14 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
 15 temporary population increases in the Delta region, which has an adequate housing supply to  
 16 accommodate the change in population. Therefore, adverse physical changes resulting from the  
 17 minor increase in population are not anticipated.

18 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed**  
 19 **Water Conveyance Facilities**

20 **NEPA Effects:** Under Alternative 8, effects on community character would be identical to those  
 21 described under Alternative 7, Impact ECON-3. However, the intensity of these effects would be  
 22 reduced due to the construction of three intake facilities. As such, regional population and  
 23 employment would increase to levels described above under Impact ECON-1 and ECON-2. While  
 24 water conveyance construction could result in beneficial effects relating to the economic welfare of a  
 25 community, adverse social effects could also arise as a result of declining economic stability or  
 26 changes in community cohesion in communities closest to construction effects and in those most  
 27 heavily influenced by agricultural and recreational activities. Implementation of mitigation  
 28 measures and environmental commitments related to noise, visual effects, transportation,  
 29 agriculture, and recreation would reduce the intensity of adverse effects on the character of Delta  
 30 communities (see Appendix 3B, *Environmental Commitments*). These actions are summarized under  
 31 Alternative 1A, Impact ECON-3.

32 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 8 could affect  
 33 community character in the Delta region. However, because these impacts are social in nature,  
 34 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
 35 community character would lead to physical impacts involving population growth, such impacts are  
 36 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
 37 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
 38 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
 39 character stemming from a lack of maintenance, upkeep, and general investment. However,  
 40 implementation of mitigation measures and environmental commitments related to noise, visual  
 41 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
 42 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
 43 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
 44 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise

1 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
2 Management Plans.

3 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing**  
4 **the Proposed Water Conveyance Facilities**

5 **NEPA Effects:** Effects on tax revenue as a result of water conveyance construction under Alternative  
6 8 would be identical to those described under Alternative 7, Impact ECON-4. While this economic  
7 effect would be considered adverse, BDCP proponents would compensate local governments for the  
8 loss of property tax or assessment revenue associated with construction of water conveyance  
9 facilities. Additionally, local entities could benefit from an increase in sales tax revenue.

10 **CEQA Conclusion:** Construction of water conveyance facilities for Alternative 8 would result in the  
11 removal of a portion of the property tax base for various local government entities in the Delta  
12 region. However, entities receiving water from the State Water Project and federal Central Valley  
13 Project would mitigate for lost property tax and assessment revenue associated with land needed  
14 for the construction of new conveyance facilities (Water Code Section 85089). Additionally, any  
15 losses could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
16 require a discussion of socioeconomic effects except where they would result in reasonably  
17 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the  
18 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
19 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
20 speculative to ascertain.

21 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed**  
22 **Water Conveyance Facilities**

23 **NEPA Effects:** Under Alternative 8, disruption of recreational activities during the construction  
24 period would be similar to that described under Alternative 1A, Impact ECON-5. However, fewer  
25 intake facilities would be constructed under this alternative, resulting in less severe effects relative  
26 to Alternative 1A. While access to recreational facilities would be maintained throughout  
27 construction, the quality of recreational activities including boating, fishing, waterfowl hunting, and  
28 hiking in the Delta could be indirectly affected by noise, lighting, traffic, and visual degradation in  
29 proximity to water conveyance construction.

30 Construction of water conveyance structures under this alternative would be anticipated to result in  
31 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
32 the implementation of mitigation measures, including enhancement of fishing access sites and  
33 incorporation of recreational access into project design, and environmental and non-environmental  
34 commitments, including providing funding to implement recreational improvements and control  
35 aquatic weeds, providing notification of maintenance activities in waterways, and developing and  
36 implementing a noise abatement plan, as described in Appendix 3B, *Environmental Commitments*.  
37 With a decrease in recreational quality, the number of visits would be anticipated to decline, at least  
38 in areas closest to construction activities. The multi-year schedule and geographic scale of  
39 construction activities and the anticipated decline in recreational spending would be considered an  
40 adverse effect. The commitments and mitigation measure cited above would contribute to the  
41 reduction of this effect.

42 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 8  
43 could impact recreational revenue in the Delta region if construction activities result in fewer visits

1 to the area. Fewer visits would be anticipated to result in decreased economic activity related to  
 2 recreational activities. This section considers only the economic effects of recreational changes  
 3 brought about by construction of the proposed water conveyance facilities. Potential physical  
 4 changes to the environment relating to recreational resources are described and evaluated in  
 5 Chapter 15, *Recreation*, Section 15.3.3.15, Impacts REC-1 through REC-4.

#### 6 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 7 **the Proposed Water Conveyance Facilities**

8 Effects on agricultural economics during construction of the proposed water conveyance facilities  
 9 would be identical to those described under Alternative 7, Impact ECON-6. Total value of irrigated  
 10 crop production in the Delta would decline on average by \$8.7 million per year during the  
 11 construction period, with total irrigated crop acreage declining by about 5,300 acres. Alternative 8  
 12 may also affect production costs on lands even if gross revenues are largely unaffected. Costs could  
 13 be increased by operational constraints and longer travel times due to facilities construction.  
 14 Additionally, loss of investments in production facilities and standing orchards and vineyards would  
 15 occur as a result of facilities construction.

16 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
 17 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
 18 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 19 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 20 agricultural productivity and compensating off-site.

21 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
 22 value of agricultural production in the Delta region. The removal of agricultural land from  
 23 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.15, Impacts AG-1 and  
 24 AG-2. The reduction in the value of agricultural production is not considered an environmental  
 25 impact. Significant environmental impacts would only result if the changes in regional economics  
 26 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 27 required, DWR would provide compensation to property owners for economic losses due to  
 28 implementation of the alternative. While the compensation to property owners would reduce the  
 29 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 30 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 31 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 32 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 33 and land subject to Williamson Act contracts or in Farmland Security Zones.

#### 34 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 35 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

36 Permanent effects on regional economics during operation and maintenance of the proposed water  
 37 conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-7.  
 38 Increased expenditures related to operation and maintenance of water conveyance facilities would  
 39 be expected to result in a permanent increase in regional employment and income, as presented in  
 40 Table 16-22. The permanent removal of agricultural land following construction would have lasting  
 41 negative effects on agricultural employment and income, as shown in Table 16-23.

42 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
 43 result in an increase in operations-related employment and labor income, this would be considered

1 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
 2 agricultural-related employment and labor income, which would be considered an adverse effect.  
 3 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 4 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 5 compensating off-site.

6 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 7 increase total employment and income in the Delta region. The net change would result from  
 8 expenditures on operation and maintenance and from changes in agricultural production. The total  
 9 change in income and employment is not, in itself, considered an environmental impact. Significant  
 10 environmental impacts would only result if the changes in regional economics cause physical  
 11 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 12 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 13 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.15, Impacts AG-3  
 14 and AG-4; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
 15 15.3.3.15, Impacts REC-5 through REC-8. When required, DWR would provide compensation to  
 16 landowners as a result of acquiring lands for the proposed conveyance facilities. While the  
 17 compensation to property owners would reduce the severity of economic effects related to the loss  
 18 of agricultural land, it would not constitute mitigation for any related physical impact. Measures to  
 19 reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 20 AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve agricultural  
 21 productivity and mitigate for loss of Important Farmland and land subject to Williamson Act  
 22 contracts or in Farmland Security Zones.

### 23 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 24 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

25 Permanent effects on population and housing during operation and maintenance of the proposed  
 26 water conveyance facilities would be similar to those described under Alternative 1A, Impact ECON-  
 27 8. It is anticipated that non-local workers would relocate to the five-county region, thus adding to  
 28 the local population. However, this additional population would constitute a minor increase in the  
 29 total 2020 projected regional population of 4.6 million and be distributed throughout the region. It  
 30 is anticipated that most of the operational workforce would be drawn from within the five-county  
 31 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.

32 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 33 population or new housing, they would not be considered to have an adverse effect.

34 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 35 result in minor population increases in the Delta region with adequate housing supply to  
 36 accommodate the change in population and therefore adverse changes in the physical environment  
 37 are not anticipated.

### 38 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 39 **Proposed Water Conveyance Facilities**

40 **NEPA Effects:** Under Alternative 8, effects on community character would be similar in nature,  
 41 location, and magnitude to those described under Alternative 1A, Impact ECON-9. However, the  
 42 intensity of these effects would be reduced based on the operation and maintenance of three intake  
 43 facilities. While water conveyance operation and maintenance could result in beneficial effects

1 relating to the economic welfare of a community, lasting adverse social effects, including effects on  
 2 community cohesion, could also arise in communities closest to physical features and in those most  
 3 heavily influenced by agricultural and recreational activities. Implementation of mitigation  
 4 measures and environmental commitments related to noise, visual effects, transportation,  
 5 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
 6 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-9.

7 **CEQA Conclusion:** Operation and maintenance of water conveyance facilities under Alternative 8  
 8 could affect community character in the Delta region. However, because these impacts are social in  
 9 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
 10 changes to community character would lead to physical impacts involving population growth, such  
 11 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
 12 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment, even if  
 13 limited to specific areas, sectors, or the vacancy of individual buildings, could result in alteration of  
 14 community character stemming from a lack of maintenance, upkeep, and general investment.

#### 15 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and** 16 **Maintenance of the Proposed Water Conveyance Facilities**

17 **NEPA Effects:** Effects on tax revenue as a result of ongoing water conveyance operation and  
 18 maintenance under Alternative 8 would be similar to those described under Alternative 7, Impact  
 19 ECON-10. While this economic effect would be considered adverse, BDCP proponents would  
 20 compensate local governments for the loss of property tax or assessment revenue associated with  
 21 construction of water conveyance facilities. Additionally, local entities could benefit from an  
 22 increase in sales tax revenue.

23 **CEQA Conclusion:** Continued operation and maintenance of water conveyance facilities for  
 24 Alternative 8 would result in the removal of a portion of the property tax base for various local  
 25 government entities in the Delta region. However, entities receiving water from the State Water  
 26 Project and federal Central Valley Project would mitigate for lost property tax and assessment  
 27 revenue associated with land needed for the siting of conveyance facilities (Water Code Section  
 28 85089). Additionally, any losses could be offset, at least in part, by an anticipated increase in sales  
 29 tax revenue. CEQA does not require a discussion of socioeconomic effects except where they would  
 30 result in reasonably foreseeable physical changes. If an alternative is not anticipated to result in a  
 31 physical change to the environment, it would not be considered to have a significant impact under  
 32 CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any physical consequences resulting  
 33 from fiscal impacts are too speculative to ascertain.

#### 34 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the** 35 **Proposed Water Conveyance Facilities**

36 Effects on recreation economics during operation and maintenance of the proposed water  
 37 conveyance facilities under Alternative 8 would be similar to those described under Alternative 1A,  
 38 Impact ECON-11.

39 **NEPA Effects:** Maintenance of conveyance facilities, including intakes, would result in periodic  
 40 temporary but not substantial adverse effects on boat passage and water-based recreational  
 41 activities. Because effects of facility maintenance would be short-term and intermittent, substantial  
 42 economic effects are not anticipated to result from operation and maintenance of the facilities.

1 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
2 conveyance facilities under Alternative 8 are anticipated to create minor effects on recreational  
3 resources and therefore, are not expected to substantially reduce economic activity related to  
4 recreational activities. This section considers only the economic effects of recreational changes.  
5 Potential physical changes to the environment relating to recreational resources are described and  
6 evaluated in Chapter 15, *Recreation*, Section 15.3.3.15, Impacts REC-5 through REC-8.

### 7 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during** 8 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

9 Permanent effects on agricultural economics during operation and maintenance of the proposed  
10 water conveyance facilities would be similar to those described under Alternative 7, Impact ECON-  
11 12. Total value of irrigated crop production in the Delta would decline on average by \$7.2 million  
12 per year during operation and maintenance, with total irrigated crop acreage declining by about  
13 4,400 acres. Alternative 8 may also affect production costs on lands even if gross revenues are  
14 largely unaffected. Costs could be increased by operational constraints, changes in water quality,  
15 and longer travel times due to the permanent footprint of facilities. Additionally, loss of investments  
16 in production facilities and standing orchards and vineyards would occur as a result of facilities  
17 construction.

18 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
19 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
20 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
21 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
22 productivity and compensating off-site.

23 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities,  
24 the value of agricultural production in the Delta region would be reduced. The permanent removal  
25 of agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
26 14.3.3.15, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
27 considered an environmental impact. Significant environmental impacts would only result if the  
28 changes in regional economics cause physical impacts. Such effects are discussed in other chapters  
29 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
30 economic losses due to implementation of the alternative. While the compensation to property  
31 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
32 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
33 are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
34 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
35 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
36 Zones.

### 37 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 38 **Implementation of the Proposed Conservation Measures 2-22**

39 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2-  
40 22 would be similar to those described under Alternative 1A, Impact ECON-13. In the Delta region,  
41 spending on Conservation Measures 2-22 would include construction, operation and maintenance  
42 activities that would convert or disturb existing land use. Because implementation of Conservation  
43 Measures 2-22 would be anticipated to result in an increase in construction and operation and

1 maintenance-related employment and labor income, this would be considered a beneficial effect.  
 2 However, implementation of these components would also be anticipated to result in a decrease in  
 3 agricultural-related employment and labor income, which would be considered an adverse effect.  
 4 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 5 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 6 compensating off-site. Additionally, implementation of these components are anticipated to result in  
 7 the abandonment of natural gas wells, causing a decrease in employment and labor income  
 8 associated with monitoring and maintaining wells, which would be considered an adverse effect.  
 9 Mitigation Measure MIN-5, described in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-  
 10 5, would be available to reduce these effects by minimizing, to the extent feasible, the need for well  
 11 abandonment or relocation.

12 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would affect total  
 13 employment and income in the Delta region. The change in total employment and income in the  
 14 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 15 Measures 2–22 and any resulting changes in agricultural production, recreation, and natural gas  
 16 production activities. The total change in employment and income is not, in itself, considered an  
 17 environmental impact. Significant environmental impacts would only result if the changes in  
 18 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 19 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
 20 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
 21 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
 22 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

#### 23 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 24 **Implementing the Proposed Conservation Measures 2–22**

25 Effects on population and housing as a result of the proposed Conservation Measures 2–22 would be  
 26 similar to those described under Alternative 1A, Impact ECON-14. In general, the changes in  
 27 population and housing would include increases in population from the construction and operation  
 28 and maintenance-related activity and declines in residential housing and business establishments as  
 29 a result of lands converted or impaired.

30 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
 31 population or new housing, they would not be considered to have an adverse effect.

32 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
 33 population and housing in the Delta region. The change in total population and housing in the Delta  
 34 region is based on employment resulting from implementation of the proposed Conservation  
 35 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
 36 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
 37 physical environment are not anticipated to result.

#### 38 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 39 **Conservation Measures 2–22**

40 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
 41 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
 42 measures are similar. While implementation of Conservation Measures 2–22 could result in  
 43 beneficial effects relating to the economic welfare of a community, adverse social effects, including

1 effects on community cohesion, could also arise in those communities closest to character-changing  
 2 effects and those most heavily influenced by agricultural activities. Implementation of mitigation  
 3 measures and environmental commitments related to noise, visual effects, transportation,  
 4 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
 5 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

6 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 8 could affect  
 7 community character within the Delta region. However, because these impacts are social in nature,  
 8 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
 9 community character are related to physical impacts involving population growth, these impacts are  
 10 described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore,  
 11 notable decreases in population or employment, even if limited to certain areas, sectors, or the  
 12 vacancy of individual buildings, could result in alteration of community character stemming from a  
 13 lack of maintenance, upkeep, and general investment.

#### 14 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing** 15 **the Proposed Conservation Measures 2–22**

16 **NEPA Effects:** Under Alternative 8, effects on local government fiscal conditions as a result of  
 17 conservation measure implementation would be similar to those described under Alternative 1A,  
 18 Impact ECON-16. Conservation Measures 2–22 would remove some private land from local property  
 19 tax and assessment rolls. This economic effect would be considered adverse; however, the BDCP  
 20 proponents would offset forgone property tax and assessments levied by local governments and  
 21 special districts on private lands converted to habitat.

22 **CEQA Conclusion:** Under Alternative 8, implementation of Conservation Measures 2–22 would  
 23 result in the removal of a portion of the property tax base for various local government entities in  
 24 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
 25 estimated to reach \$176.7 million. However, the BDCP proponents would compensate local  
 26 governments and special districts for forgone revenue. CEQA does not require a discussion of  
 27 socioeconomic effects except where they would result in physical changes. If an alternative is not  
 28 anticipated to result in a physical change to the environment, it would not be considered to have a  
 29 significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131).

#### 30 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the** 31 **Proposed Conservation Measures 2–22**

32 **NEPA Effects:** Effects related to implementation of Conservation Measures 2–22 under this  
 33 alternative would be similar to those described under Alternative 1A, Impact ECON-17. These  
 34 measures may result in adverse and beneficial effects on recreational resources in the Delta region,  
 35 resulting in the potential for decreased or increased economic activities related to recreation.

36 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
 37 recreation and compromise the quality of activities, leading to potential economic impacts.  
 38 However, over time, implementation could also improve the quality of existing recreational  
 39 opportunities, creating increased economic value with respect to recreation. This section considers  
 40 only the economic effects of recreational changes brought about by conservation measure  
 41 implementation. Potential physical changes to the environment relating to recreational resources  
 42 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.15, Impacts REC-9 through  
 43 REC-11.

1 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
 2 **Implementing the Proposed Conservation Measures 2–22**

3 Effects on agricultural economics as a result of the proposed Conservation Measures 2–22 would be  
 4 similar to those described under Alternative 1A, Impact ECON-18. Conservation Measures 2–22  
 5 would convert land from existing agricultural uses. These direct effects on agricultural land are  
 6 described qualitatively in Chapter 14, *Agricultural Resources*, Section 14.3.3.15, Impacts AG-3 and  
 7 AG-4. Effects on agricultural economics would include effects on crop production and agricultural  
 8 investments resulting from restoration actions on agricultural lands. The effects would be similar in  
 9 kind to those described for lands converted due to construction and operation of the conveyance  
 10 features and facilities. The total acreage and crop mix of agricultural land potentially affected is not  
 11 specified at this time, but when required, the BDCP proponents would provide compensation to  
 12 property owners for losses due to implementation of the alternative.

13 **NEPA Effects:** Because implementation of the Conservation Measures 2–22 would be anticipated to  
 14 lead to reductions in crop acreage and in the value of agricultural production in the Delta region, this  
 15 is considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 16 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 17 agricultural productivity and compensating off-site.

18 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
 19 agricultural production in the Delta region. The permanent removal of agricultural land from  
 20 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.15, Impacts AG-3 and  
 21 AG-4. The reduction in the value of agricultural production is not considered an environmental  
 22 impact. Significant environmental impacts would only result if the changes in regional economics  
 23 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 24 required, the BDCP proponents would provide compensation to property owners for economic  
 25 losses due to implementation of the alternative. While the compensation to property owners would  
 26 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 27 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 28 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

29 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

30 The socioeconomic effects associated with operation of Alternative 8 would be similar to those  
 31 described under Alternative 6A, Impact ECON-19, because deliveries would be also be reduced  
 32 based on operational guidelines. In this case, however, the construction of three intakes and  
 33 diversion restrictions associated with operational Scenario F would lead to reduced deliveries.

34 **Changes in SWP Deliveries Compared to No Action Alternative**

35 Compared to No Action Alternative (2060), Alternative 8 would decrease deliveries to the  
 36 hydrologic regions. Compared to the No Action Alternative (2060), South Coast would receive the  
 37 largest net decrease (up to 567 TAF of Table A plus Article 21 deliveries) among the regions, which  
 38 represents 78% of the decrease in M&I deliveries under Alternative 8 (refer to Chapter 30, *Growth*  
 39 *Inducement and Other Indirect Effects*, Table 30-16, for more information).

## 1 **Changes in CVP Deliveries Compared to No Action Alternative**

2 Alternative 8 would not change M&I deliveries for the Sacramento River, South Coast, South  
3 Lahontan and Colorado River Regions because there are no affected CVP contractors located in these  
4 regions. Compared to the No Action Alternative (2060), Alternative 8 would result in decreased  
5 deliveries to the other hydrologic regions. Compared to the No Action Alternative (2060) San  
6 Francisco Bay is projected to receive the largest potential decrease (approximately 25 TAF) among  
7 the hydrologic regions (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-  
8 17 for more information).

9 **NEPA Effects:** Changes in deliveries to hydrologic regions could result in adverse or beneficial  
10 socioeconomic effects in these areas. Reduced or less reliable water deliveries would result in  
11 decreased agricultural production and, in turn, a reduction in both direct and indirect agricultural  
12 employment. Economic and social patterns tied to predominant agricultural industrial activities and  
13 land uses could erode, changing the character of agricultural communities in hydrologic regions. If  
14 M&I deliveries were reduced to the extent that it would, in the long run, constrain population  
15 growth, implementation of Alternative 8 could reinforce a socioeconomic status quo or limit  
16 potential economic and employment growth in hydrologic regions. Changes to agricultural  
17 production and population growth with its associated economic activity could also lead to shifts in  
18 the character of communities in the hydrologic regions with resultant beneficial or adverse effects.  
19 Likewise, limited growth associated with reduced deliveries could require lower expenditures for  
20 local governments while also leading to reduced revenue.

21 **CEQA Conclusion:** As described above, the operational components of BDCP Conservation Measure  
22 1 could result in a number of effects in areas receiving SWP and CVP water deliveries outside of the  
23 Delta.

## 24 **Changes in SWP Deliveries Compared to Existing Conditions**

25 Compared to Existing Conditions, Alternative 8 would decrease deliveries to all hydrologic regions  
26 except for the San Joaquin River Region, which would experience no change in deliveries. South  
27 Coast would receive the largest net decrease (up to 636 TAF of Table A plus Article 21 deliveries)  
28 among the regions, which represents 72% of the decrease in M&I deliveries under Alternative 8  
29 (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-16 for more  
30 information).

## 31 **Changes in CVP Deliveries Compared to Existing Conditions**

32 Alternative 8 would not change M&I deliveries for the Sacramento River, South Coast, South  
33 Lahontan, and Colorado River Regions because there are no affected CVP contractors located in  
34 these regions. Compared to Existing Conditions, Alternative 8 would result in decreased deliveries  
35 to the other hydrologic regions. Compared to Existing Conditions, San Francisco Bay is projected to  
36 receive the largest decrease (up to 33 TAF) among the hydrologic regions (refer to Chapter 30,  
37 *Growth Inducement and Other Indirect Effects*, Table 30-17 for more information).

## 38 **Summary**

39 Operation of water conveyance facilities under Alternative 8 could affect socioeconomic conditions  
40 in the hydrologic regions receiving water from the SWP and CVP. However, because these impacts  
41 are social and economic in nature, rather than physical, they are not considered environmental  
42 impacts under CEQA. To the extent that changes in socioeconomic conditions in the hydrologic

1 regions would lead to physical impacts, such impacts are described in Chapter 30, *Growth*  
 2 *Inducement and Other Indirect Effects*, Section 30.3.2.

### 3 **16.3.3.16 Alternative 9—Through Delta/Separate Corridors (15,000 cfs;** 4 **Operational Scenario G)**

5 Facilities constructed under Alternative 9 would include two fish-screened intakes along the  
 6 Sacramento River near Walnut Grove, fourteen operable barriers, two pumping plants and other  
 7 associated facilities, two culvert siphons, three canal segments, new levees, and new channel  
 8 connections. Some existing channels would also be enlarged under this alternative. Nearby areas  
 9 would be altered as work or staging areas or used for the deposition of spoils.

#### 10 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 11 **Region during Construction of the Proposed Water Conveyance Facilities**

12 The regional economic effects on employment and income in the Delta region during construction  
 13 were evaluated. Changes are shown relative to the Existing Conditions and the No Action Alternative  
 14 (regional economic conditions do not differ between Existing Conditions and No Action Alternative).  
 15 The effects on employment and income are displayed in Table 16-55. The direct and total change is  
 16 shown that would result from conveyance-related spending. As evident in Table 16-55, spending on  
 17 conveyance construction would result in substantial economic activity in the region. As shown,  
 18 direct construction employment is anticipated to vary over the 8-year construction period, with an  
 19 estimated 1,922 FTE jobs in the first year and 85 FTE jobs in the final year of the construction  
 20 period. Construction employment is estimated to peak at 3,209 FTE jobs in year 4. Total  
 21 employment (direct, indirect, and induced) would also peak in year 4, at 6,371 FTE jobs.

22 **Table 16-55. Regional Economic Effects on Employment and Labor Income during Construction**  
 23 **(Alternative 9)**

Regional Economic Impact <sup>a</sup>	Year								Total
	1	2	3	4	5	6	7	8	
<b>Employment (FTE)</b>									
Direct	1,922	2,146	3,087	3,209	2,277	2,798	318	85	15,843
Total <sup>b</sup>	4,227	4,446	6,209	6,371	4,190	5,073	598	117	31,232
<b>Labor Income</b> (million \$)									
Direct	58.1	55.1	72.5	72.3	39.4	45.7	6.0	0.0	349.0
Total <sup>b</sup>	129.9	128.5	173.4	175.1	104.1	123.3	15.3	1.4	851.1

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects; numbers may not sum to the total due to rounding. Detailed estimates are presented in Appendix 16A, *Regional Economic Impacts of Water Conveyance Facility Construction*.

24  
 25 The footprint of conveyance and related facilities such as roads and utilities would remove some  
 26 existing agricultural land from production, so the effects on employment and income would be  
 27 negative. The regional economic effects on employment and income in the Delta region from the  
 28 change in agricultural production are reported in Table 16-56. As shown, direct agricultural

1 employment would be reduced by an estimated 10 FTE jobs, while total employment (direct,  
 2 indirect, and induced) associated with agricultural employment would fall by 38 FTE jobs. Mapbook  
 3 Figures M14-9 and M14-10 display areas of Important Farmland and lands under Williamson Act  
 4 contracts that could be converted to other uses due to the construction of water conveyance  
 5 facilities for the Through Delta/Separate Corridors alignment.

6 **Table 16-56. Regional Economic Effects on Agricultural Employment and Labor Income during**  
 7 **Construction (Alternative 9)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-10
Total <sup>b</sup>	-38
<b>Labor Income (million \$)</b>	
Direct	-1.2
Total <sup>b</sup>	-2.4

Note: Labor income is reported 2011 dollars (U.S. Department of Commerce 2012).

<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.

<sup>b</sup> Includes direct, indirect, and induced effects.

8  
 9 Additionally, the Alternative 9 construction footprint would result in the abandonment of an  
 10 estimated two producing natural gas wells in the study area, as described in Chapter 26, *Mineral*  
 11 *Resources*, Section 26.3.3.16, Impact MIN-1. This could result in the loss of employment and labor  
 12 income associated with monitoring and maintaining these wells. Generally, small crews perform  
 13 ongoing monitoring and maintenance of several wells at a time. As shown in Chapter 26, *Mineral*  
 14 *Resources*, Table 26-3, 516 active producer wells are located in the study area. Even if both  
 15 producing wells in the Alternative 9 construction footprint were abandoned and not replaced with  
 16 new wells installed outside the construction footprint, the percentage reduction in the number of  
 17 natural gas wells would be very small. As a result, the employment and labor income effects  
 18 associated with well abandonment, while negative, would be minimal.

19 **NEPA Effects:** Because construction of water conveyance facilities would result in an increase in  
 20 construction-related employment and labor income, this would be considered a beneficial effect.  
 21 However, these activities would also be anticipated to result in a decrease in agricultural-related  
 22 employment and labor income, which would be considered an adverse effect. Mitigation Measure  
 23 AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be  
 24 available to reduce these effects by preserving agricultural productivity and compensating off-site.

25 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would increase total  
 26 employment and income in the Delta region. The change would result from expenditures on  
 27 construction, increasing employment, and from changes in agricultural production, decreasing  
 28 employment. Changes in recreational expenditures and natural gas well operations could also affect  
 29 regional employment and income, but these have not been quantified. The total change in  
 30 employment and income is not, in itself, considered an environmental impact. Significant  
 31 environmental impacts would only result if the changes in regional economics cause physical  
 32 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 33 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 34 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.16, Impacts AG-1

1 and AG-2; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
2 15.3.3.16, REC-1 through REC-4; abandonment of natural gas wells is addressed in Chapter 26,  
3 *Mineral Resources*, Section 26.3.3.16, Impact MIN-1. When required, DWR would provide  
4 compensation to property owners for economic losses due to implementation of the alternative.  
5 While the compensation to property owners would reduce the severity of economic effects related  
6 to the loss of agricultural land, it would not constitute mitigation for any related physical impact.  
7 Measures to reduce these impacts are discussed in Chapter 14, *Agricultural Resources*, Section  
8 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1, Develop an ALSP to preserve  
9 agricultural productivity and mitigate for loss of Important Farmland and land subject to Williamson  
10 Act contracts or in Farmland Security Zones.

## 11 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 12 **the Proposed Water Conveyance Facilities**

### 13 **Population**

14 Construction of conveyance facilities would require an estimated peak of 3,210 workers in year 4 of  
15 the assumed 8-year construction period. It is anticipated that many of these new jobs would be filled  
16 from within the existing five-county labor force.

17 Considering the multi-year duration of conveyance facility construction, it is anticipated that non-  
18 local workers would temporarily relocate to the five-county region, thus adding to the local  
19 population. As discussed in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section  
20 30.3.2.1, Direct Growth Inducement, an estimated 30 percent of workers could come from out of the  
21 Delta region, suggesting that approximately 1,000 workers could relocate to the Delta region at the  
22 peak of the construction period. However, this additional population would constitute a minor  
23 increase in the total 2020 projected regional population of 4.6 million and be distributed throughout  
24 the region. Changes in demand for public services resulting from any increase in population are  
25 addressed in Chapter 20, *Public Services and Utilities*, Section 20.3.3.16, Impact UT-1 through UT-6.

### 26 **Housing**

27 Changes in housing demand are based on changes in supply resulting from displacement during  
28 facilities construction and changes in housing demand resulting from employment associated with  
29 construction of conveyance facilities. As described in Chapter 13, *Land Use*, Section 13.3.3.16, Impact  
30 LU-2, construction of water conveyance facilities under Alternative 9 would conflict with  
31 approximately 74 residential structures.

32 The construction workforce would most likely commute daily to the work site from within the five-  
33 county region; however, if needed, there are about 53,000 housing units available to accommodate  
34 workers who may choose to commute on a workweek basis or who may choose to temporarily  
35 relocate to the region for the duration of the construction period, including the estimated 1,000  
36 workers who may temporarily relocate to the Delta region from out of the region. In addition to the  
37 available housing units, there are recreational vehicle parks and hotels and motels within the five-  
38 county region to accommodate any construction workers. As a result, and as discussed in more  
39 detail in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.1, Direct Growth  
40 Inducement, construction of the proposed conveyance facilities is not expected to substantially  
41 increase the demand for housing within the five-county region.

1 **NEPA Effects:** Within specific local communities, there could be localized effects on housing.  
 2 However, given the availability of housing within the five-county region, predicting where this  
 3 impact might fall would be speculative. In addition, new residents would likely be dispersed across  
 4 the region, thereby not creating a burden on any one community.

5 Because these activities would not result in permanent concentrated, substantial increases in  
 6 population or new housing, they would not be considered to have an adverse effect.

7 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would result in minor  
 8 population increases in the Delta region with adequate housing supply to accommodate the change  
 9 in population. Therefore, the minor increase in population is not anticipated to lead to adverse  
 10 physical changes in the environment.

### 11 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 12 **Water Conveyance Facilities**

13 **NEPA Effects:** Under Alternative 9, effects on community character would be similar in nature, but  
 14 not location or magnitude, to those described under Alternative 1A, Impact ECON-3. Under this  
 15 alternative, regional population and employment would increase to levels described above under  
 16 Impact ECON-1 and ECON-2. The geographic extent of these effects would also vary from that  
 17 described for Alternative 1A, as the intensity of effects would be somewhat greater or lesser based  
 18 on communities' ability to accommodate growth and proximity to features constructed for the water  
 19 conveyance alignment under this alternative. Under this alternative, areas adjacent to the proposed  
 20 fish screens in Walnut Grove and Locke could experience the greatest changes in character. Effects  
 21 associated with construction activities could also result in changes to community cohesion if they  
 22 were to restrict mobility, reduce opportunities for maintaining face-to-face relationships, or disrupt  
 23 the functions of community organizations or community gathering places (such as schools, libraries,  
 24 places of worship, and recreational facilities). Under Alternative 9, several gathering places that lie  
 25 in the vicinity of construction areas could be indirectly affected by noise and traffic associated with  
 26 construction activities, including the Walnut Grove Branch Library, Walnut Grove Elementary,  
 27 Walnut Grove Buddhist Church, Walnut Grove Community Church, Delta Food Bank, South County  
 28 Services (formerly Galt Community Concilio), Walnut Grove Fire Department, and several marinas  
 29 or other recreational facilities (see Chapter 15, *Recreation*, Table 15-16).

30 Like Alternative 1A, the anticipated economic shift away from agricultural and recreational activities  
 31 and towards construction could result in demographic changes. In comparing the existing  
 32 demographic composition of agricultural workers and construction laborers within the five-county  
 33 Delta Region, men make up a large proportion of both occupations: 84 percent of agricultural  
 34 workers were male, compared with 98 percent of construction laborers. Approximately 92 percent  
 35 of agricultural workers made less than \$35,000, while 60 percent of construction laborers made less  
 36 than \$35,000. Additionally, 87 percent of agricultural workers within the study area report Hispanic  
 37 origin, while 54 percent of construction laborers claim Hispanic origin within the five-county area  
 38 (U.S. Census Bureau 2012b).

39 Construction activities could be expected to bring about a decline in the rural qualities currently  
 40 exhibited by Delta communities, while expansion of employment and population in the region could  
 41 provide economic opportunities supportive of community stability. While water conveyance  
 42 construction could result in beneficial effects relating to the economic welfare of a community,  
 43 adverse social effects could also arise as a result of declining economic stability in communities  
 44 closest to construction effects and in those most heavily influenced by agricultural and recreational

1 activities. Implementation of mitigation measures and environmental commitments related to noise,  
 2 visual effects, transportation, agriculture, and recreation would reduce adverse effects (see  
 3 Appendix 3B, *Environmental Commitments*). These actions are summarized under Alternative 1A,  
 4 Impact ECON-3.

5 **CEQA Conclusion:** Construction of water conveyance facilities under Alternative 9 could affect  
 6 community character in the Delta region. However, because these impacts are social in nature,  
 7 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
 8 community character would lead to physical impacts involving population growth, such impacts are  
 9 described under Impact ECON-2 and in Chapter 30, *Growth Inducement and Other Indirect Effects*,  
 10 Section 30.3.2. Furthermore, notable decreases in population or employment, even if limited to  
 11 specific areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
 12 character stemming from a lack of maintenance, upkeep, and general investment. However,  
 13 implementation of mitigation measures and environmental commitments related to noise, visual  
 14 effects, transportation, agriculture, and recreation, would reduce the extent of these effects (see  
 15 Appendix 3B, *Environmental Commitments*). Specifically, these commitments include Develop and  
 16 Implement Erosion and Sediment Control Plans, Develop and Implement Hazardous Materials  
 17 Management Plans, Notification of Construction and Maintenance Activities in Waterways, Noise  
 18 Abatement Plan, Fire Prevention and Control Plan, and Prepare and Implement Mosquito  
 19 Management Plans.

#### 20 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 21 **the Proposed Water Conveyance Facilities**

22 **NEPA Effects:** Under Alternative 9, publicly-owned water conveyance facilities would be constructed  
 23 on land of which some is currently held by private owners. Property tax and assessment revenue  
 24 forgone as a result of water conveyance facilities is estimated at \$5.6 million over the construction  
 25 period. These decreases in revenue could potentially result in the loss of a substantial share of some  
 26 agencies' tax bases, particularly for smaller districts affected by the BDCP such as reclamation  
 27 districts where conveyance facilities and associated work areas are proposed. This economic effect  
 28 would be considered adverse; however, the BDCP proponents would make arrangements to  
 29 compensate local governments for the loss of property tax or assessment revenue for land used for  
 30 constructing, locating, operating, or mitigating for new Delta water conveyance facilities.  
 31 Additionally, as discussed under Impact ECON-1, construction of the water conveyance facilities  
 32 would be anticipated to result in a net increase of income and employment in the Delta region. This  
 33 would also create an indirect beneficial effect through increased sales tax revenue for local  
 34 government entities that rely on sales taxes.

35 **CEQA Conclusion:** Under Alternative 9, construction of water conveyance facilities would result in  
 36 the removal of a portion of the property tax base for various local government entities in the Delta  
 37 region. Over the construction period, property tax and assessment revenue forgone is estimated at  
 38 \$5.6 million. However, the Sacramento-San Joaquin Delta Reform Act commits the entities receiving  
 39 water from the State Water Project and federal Central Valley Project to mitigate for lost property  
 40 tax and assessment revenue associated with land needed for the construction of new conveyance  
 41 facilities (Water Code Section 85089). Additionally, any losses could be offset, at least in part, by an  
 42 anticipated increase in sales tax revenue. CEQA does not require a discussion of socioeconomic  
 43 effects except where they would result in reasonably foreseeable physical changes. If an alternative  
 44 is not anticipated to result in a physical change to the environment, it would not be considered to

1 have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any  
2 physical consequences resulting from fiscal impacts are too speculative to ascertain.

### 3 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 4 **Water Conveyance Facilities**

5 **NEPA Effects:** Under Alternative 9, three recreational facilities would be permanently displaced and  
6 three others would be temporarily but directly or indirectly disturbed during construction, as  
7 described in Chapter 15, *Recreation*, Section 15.3.3.16, Impacts REC-1 through REC-4. Construction  
8 of Alternative 9 facilities would result in displacement and permanent loss of recreation facilities  
9 including the Walnut Grove public guest dock, Boathouse Marina, and the Boon Dox guest dock in  
10 Walnut Grove. Additionally, the quality of recreational activities including boating, fishing,  
11 waterfowl hunting, and hiking in the Delta could be indirectly affected by noise, lighting, traffic, and  
12 visual degradation in proximity to water conveyance construction. Recreation areas anticipated to  
13 experience temporary or indirect effects include Delta Meadows State Park, Brannan Island State  
14 Recreation Area, Sherman Island, Delta Meadows River Park, Stone Lakes National Wildlife Refuge,  
15 Cosumnes River Preserve, Dagmar's Landing, Deckhands Marine Supply, Landing 63, Walnut Grove  
16 Marina, Bullfrog Landing & Marina, Union Point Marina Bar & Grill, and Clifton Court Forebay.

17 Construction of water conveyance structures under this alternative would be anticipated to result in  
18 a lower-quality recreational experience in a number of localized areas throughout the Delta, despite  
19 the implementation of mitigation measures, including enhancement of fishing access sites and  
20 incorporation of recreational access into project design, and environmental commitments, including  
21 providing funding to implement recreational improvements and control aquatic weeds, providing  
22 notification of maintenance activities in waterways and developing and implementing a noise  
23 abatement plan, as described in Appendix 3B, *Environmental Commitments*. With a loss of  
24 recreational facilities and a decrease in recreational quality, the number of visits would be  
25 anticipated to decline, at least in areas closest to construction activities. The multi-year schedule and  
26 geographic scale of construction activities and the anticipated decline in recreational spending  
27 would be considered an adverse effect. The commitments and mitigation measure cited above  
28 would contribute to the reduction of this effect.

29 **CEQA Conclusion:** Construction of the proposed water conveyance facilities under Alternative 9  
30 would be anticipated to impact recreational revenue through the loss of recreational facilities and a  
31 decrease in recreational quality. Fewer visits would be anticipated to result in decreased economic  
32 activity related to recreational activities. This section considers only the economic effects of  
33 recreational changes brought about by construction of the proposed water conveyance facilities.  
34 Potential physical changes to the environment relating to recreational resources are described and  
35 evaluated in Chapter 15, *Recreation*, Section 15.3.3.16, Impacts REC-1 through REC-4.

### 36 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 37 **the Proposed Water Conveyance Facilities**

38 Construction of conveyance facilities would convert land from existing agricultural uses to uses that  
39 include direct facility footprints, construction staging areas, borrow/spoils areas, RTM storage,  
40 temporary and permanent roads, and utilities. Agricultural land could also be affected by changes in  
41 water quality and other conditions that would affect crop productivity. These direct effects on  
42 agricultural land are described in Chapter 14, *Agricultural Resources*, Section 14.3.3.16, Impacts AG-  
43 1 and AG-2.

1 Changes in crop acreage were used to describe the associated changes in economic values. Unit  
 2 prices, yields, and crop production and investment costs were presented in Section 16.1,  
 3 *Environmental Setting/Affected Environment*. Table 16-57 summarizes the changes in acreage and  
 4 value of agricultural production that would result in the Delta region as a result of Alternative 9  
 5 construction. Changes are shown relative to the Existing Conditions and the No Action Alternative  
 6 by aggregate crop category (agricultural resources under Existing Conditions and in the No Action  
 7 Alternative were assumed to be the same). The table also includes a summary of changes in crop  
 8 acreages that are reported in greater detail in Appendix 14A, *Individual Crop Effects as a Result of*  
 9 *BDCP Water Conveyance Facility Construction*.

10 Total value of irrigated crop production in the Delta would decline on average by \$3.8 million per  
 11 year during the construction period, with total irrigated crop acreage declining by about 2,600 acres.  
 12 These estimates are not dependent on water year type.

13 **Table 16-57. Crop Acres and Value of Agricultural Production in the Delta during Construction**  
 14 **(Alternative 9)**

Analysis Metric	Alternative 9	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	481.0	-2.6
Grains	58.3	-0.3
Field crops	190.4	-0.7
Forage crops	111.8	-1.0
Vegetable, truck, and specialty crops	76.6	-0.6
Orchards and vineyards	44.0	-0.1
Total Value of Production (million \$)	646.2	-3.8
Grains	24.1	-0.1
Field crops	113.4	-0.4
Forage crops	72.3	-0.8
Vegetable, truck, and specialty crops	266.2	-2.2
Orchards and vineyards	170.3	-0.3

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

15  
 16 Alternative 9 may also affect production costs, investments in production facilities and standing  
 17 orchards and vineyards, and salinity of agricultural water supply. Effects would be similar to those  
 18 qualitatively described under Alternative 1A, Impact ECON-6. See Chapter 14, *Agricultural*  
 19 *Resources*, Section 14.3.3.16, Impacts AG-1 and AG-2, for further discussion of indirect effects on  
 20 agricultural resources.

21 **NEPA Effects:** Because construction of the proposed water conveyance facilities would lead to  
 22 reductions in crop acreage and in the value of agricultural production in the Delta region, this is  
 23 considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 24 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 25 agricultural productivity and compensating off-site.

26 **CEQA Conclusion:** Construction of the proposed water conveyance facilities would reduce the total  
 27 value of agricultural production in the Delta region. The removal of agricultural land from

1 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.16, Impacts AG-1 and  
 2 AG-2. The reduction in the value of agricultural production is not considered an environmental  
 3 impact. Significant environmental impacts would only result if the changes in regional economics  
 4 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 5 required, DWR would provide compensation to property owners for economic losses due to  
 6 implementation of the alternative. While the compensation to property owners would reduce the  
 7 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 8 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 9 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 10 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 11 and land subject to Williamson Act contracts or in Farmland Security Zones.

### 12 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 13 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

14 In the Delta region, ongoing operation and maintenance of BDCP facilities would result in increased  
 15 expenditures relative to the Existing Conditions and the No Action Alternative (regional economic  
 16 conditions do not differ across Existing Conditions and No Action Alternative). The increased  
 17 expenditures are expected to result in a permanent increase in regional employment and income,  
 18 including an estimated 121 direct and 177 total (direct, indirect, and induced) FTE jobs (Table 16-  
 19 58). Potential changes in the value of agricultural production result in changes to regional  
 20 employment and income in the Delta region under the Alternative 9 relative to the Existing  
 21 Conditions and the No Action Alternative.

22 **Table 16-58. Regional Economic Effects on Employment and Labor Income during Operations and**  
 23 **Maintenance (Alternative 9)**

Regional Economic Impact <sup>a</sup>	Impacts from Operations and Maintenance
<b>Employment (FTE)</b>	
Direct	121
Total <sup>b</sup>	177
<b>Labor Income (million \$)</b>	
Direct	7.8
Total <sup>b</sup>	10.5

Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).  
<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.  
<sup>b</sup> Includes direct, indirect, and induced effects.

24  
 25 The operation and maintenance of conveyance and related facilities such as roads and utilities  
 26 would result in the permanent removal of agricultural land from production following construction,  
 27 and the effects on employment and income would be negative, including the loss of an estimated 14  
 28 agricultural and 36 total (direct, indirect, and induced) FTE jobs. The regional economic effects on  
 29 employment and income in the Delta region from the change in agricultural production are reported  
 30 in Table 16-59. Mapbook Figures M14-9 and M14-10 display areas of Important Farmland and lands  
 31 under Williamson Act contracts that could be converted to other uses due to the construction of  
 32 water conveyance facilities for the Separate Corridors/Through Delta alignment.

1 **Table 16-59. Regional Economic Effects on Agricultural Employment and Labor Income during**  
 2 **Operations and Maintenance (Alternative 9)**

Regional Economic Impact <sup>a</sup>	Impacts on Agriculture
<b>Employment (FTE)</b>	
Direct	-14
Total <sup>b</sup>	-36
<b>Labor Income (million \$)</b>	
Direct	-1.0
Total <sup>b</sup>	-1.9

Note: Labor income is reported in 2011 dollars (U.S. Department of Commerce 2012).  
<sup>a</sup> IMPLAN results are changes relative to Existing Condition or No Action Alternative.  
<sup>b</sup> Includes direct, indirect, and induced effects.

3  
 4 **NEPA Effects:** Because continued operation and maintenance of water conveyance facilities would  
 5 result in an increase in operations-related employment and labor income, this would be considered  
 6 a beneficial effect. However, the long-term footprint of facilities would lead to a continued decline in  
 7 agricultural-related employment and labor income, which would be considered an adverse effect.  
 8 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 9 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 10 compensating off-site.

11 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 12 increase total employment and income in the Delta region. The change would result from  
 13 expenditures on BDCP operation and maintenance, increasing employment, and from changes in  
 14 agricultural production, decreasing employment. The total change in income and employment is not,  
 15 in itself, considered an environmental impact. Significant environmental impacts would only result if  
 16 the changes in regional economics cause physical impacts. Such effects are discussed in other  
 17 chapters throughout this EIR/EIS. Costs are addressed in Chapter 8 of the BDCP, *Implementation*  
 18 *Costs and Funding Sources*; removal of agricultural land from production is addressed in Chapter 14,  
 19 *Agricultural Resources*, Section 14.3.3.16, Impacts AG-3 and AG-4; changes in recreation related  
 20 activities are addressed in Chapter 15, *Recreation*, Section 15.3.3.16, Impacts REC-5 through REC-8.  
 21 When required, DWR would provide compensation to property owners for economic losses due to  
 22 implementation of the alternative. While the compensation to property owners would reduce the  
 23 severity of economic effects related to the loss of agricultural land, it would not constitute mitigation  
 24 for any related physical impact. Measures to reduce these impacts are discussed in Chapter 14,  
 25 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly Mitigation Measure AG-1,  
 26 Develop an ALSP to preserve agricultural productivity and mitigate for loss of Important Farmland  
 27 and land subject to Williamson Act contracts or in Farmland Security Zones.

28 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during**  
 29 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

30 **Population**

31 Operations and maintenance of conveyance facilities would require approximately 120 permanent  
 32 new workers. Given the nature of those operation and maintenance jobs, the existing water  
 33 conveyance facilities already in the five-county region, the large workforce in the region, and the

1 large water agencies with headquarters in that region, it is anticipated that most of these new jobs  
2 would be filled from within the existing five-county labor force. However, operation and  
3 maintenance may require specialized worker skills not readily available in the local labor pool. As a  
4 result, it is anticipated that some specialized workers may be recruited from outside the five-county  
5 region.

6 It is anticipated that non-local workers would relocate to the five-county region, thus adding to the  
7 local population. However, this additional population would constitute a minor increase in the total  
8 2020 projected regional population of 4.6 million and be distributed throughout the region. Changes  
9 in demand for public services resulting from any increase in population are addressed in Chapter 20,  
10 *Public Services and Utilities*, Section 20.3.3.16, Impact UT-7.

## 11 **Housing**

12 It is anticipated that most of the operational workforce would be drawn from within the five-county  
13 region. Consequently, operation of the conveyance facilities would not result in impacts on housing.  
14 There are about 53,000 housing units available to accommodate any nonlocal workers who relocate  
15 to the five-county region. As a result, operation and maintenance of the proposed conveyance  
16 facilities is not expected to increase the demand for housing.

17 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
18 population or new housing, they would not be considered to have an adverse effect.

19 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
20 result in minor population increases in the Delta region with adequate housing supply to  
21 accommodate the change in population. Therefore, the minor increase in population is not  
22 anticipated to lead to adverse physical changes in the environment.

## 23 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 24 **Proposed Water Conveyance Facilities**

25 **NEPA Effects:** Throughout the five-county Delta region, population and employment could slightly  
26 expand due to continued operation and maintenance of the water conveyance facilities under  
27 Alternative 9. Agricultural and recreational contributions to the character and culture of the Delta  
28 would be likely to experience a decline commensurate with the projected effects discussed under  
29 Impact ECON-7 and Impact ECON-11, below. This could result in the closure of businesses  
30 dependent on these industries or their employees, particularly in areas where these activities would  
31 be most affected. Those hired to operate, repair, and maintain water conveyance structures could  
32 bring new influences to Delta communities. To the extent that this anticipated economic shift away  
33 from agriculture and recreation results in demographic changes in population, employment level,  
34 income, age, gender, or race, the study area would be expected to see changes to its character,  
35 particularly in those Delta communities most substantially affected by demographic changes based  
36 on their size or proximity to BDCP facilities.

37 While some of the rural qualities of Delta communities, including relatively low noise and traffic  
38 levels, could return to near pre-construction conditions during the operational phase, other effects  
39 would be lasting. For instance, the visual appearance of intakes and other permanent features would  
40 compromise the predominantly undeveloped and agricultural nature of communities like Walnut  
41 Grove and Locke, which would be closest to the permanent water conveyance features under this  
42 alternative. Where operations make areas less desirable in which to live, work, shop, or participate

1 in recreational activities, localized abandonment of buildings could result. Such lasting effects could  
2 also result in changes to community cohesion if they were to restrict mobility, reduce opportunities  
3 for maintaining face-to-face relationships, or disrupt the functions of community organizations or  
4 community gathering places (such as schools, libraries, places of worship, and recreational  
5 facilities).

6 While ongoing operations could result in beneficial effects relating to the economic welfare of a  
7 community under Alternative 9, adverse social effects could also arise, particularly in communities  
8 closest to character-changing effects and in those most heavily influenced by agricultural and  
9 recreational activities. Implementation of mitigation measures and environmental commitments  
10 related to noise, visual effects, transportation, agriculture, and recreation would reduce adverse  
11 effects (see Appendix 3B, *Environmental Commitments*). These actions are summarized under  
12 Alternative 1A, Impact ECON-9.

13 **CEQA Conclusion:** Operations and maintenance of water conveyance facilities under Alternative 9  
14 could affect community character in the Delta region. However, because these impacts are social in  
15 nature, rather than physical, they are not considered impacts under CEQA. To the extent that  
16 changes to community character would lead to physical impacts involving population growth, these  
17 impacts are described under Impact ECON-8 and in Chapter 30, *Growth Inducement and Other*  
18 *Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population or employment could  
19 result in alteration of community character stemming from a lack of maintenance, upkeep, and  
20 general investment.

### 21 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and** 22 **Maintenance of the Proposed Water Conveyance Facilities**

23 **NEPA Effects:** Under Alternative 9, publicly-owned water conveyance facilities would be located,  
24 operated, and maintained on land of which some is currently held by private owners. Property tax  
25 and assessment revenue forgone as a result of water conveyance facilities is estimated at \$33.7  
26 million over the BDCP's 50-year permit period. These decreases in revenue could potentially result  
27 in the loss of a substantial share of some agencies' tax bases, particularly for smaller districts  
28 affected by the BDCP. This economic effect would be considered adverse; the BDCP proponents  
29 would make arrangements to compensate local governments for the loss of property tax or  
30 assessment revenue for land used for constructing, locating, operating, or mitigating for new Delta  
31 water conveyance facilities. Additionally, as discussed under Impact ECON-7, operation and  
32 maintenance of the water conveyance facilities would be anticipated to result in a net increase of  
33 income and employment in the Delta region. This could also create an indirect beneficial effect  
34 through increased sales tax revenue for local government entities that rely on sales taxes.

35 **CEQA Conclusion:** Under Alternative 9, the ongoing operation and maintenance of water  
36 conveyance facilities would restrict potential property tax revenue for various local government  
37 entities in the Delta region. Over the 50-year permit period, property tax and assessment revenue  
38 forgone is estimated at \$33.7 million. However, the Sacramento-San Joaquin Delta Reform Act  
39 commits the entities receiving water from the State Water Project and Central Valley Project to  
40 mitigate for lost property tax and assessment revenue associated with land needed for the  
41 construction of new conveyance facilities (Water Code Section 85089). Additionally, any losses  
42 could be offset, at least in part, by an anticipated increase in sales tax revenue. CEQA does not  
43 require a discussion of socioeconomic effects except where they would result in reasonably  
44 foreseeable physical changes. If an alternative is not anticipated to result in a physical change to the

1 environment, it would not be considered to have a significant impact under CEQA (CEQA Guidelines  
 2 Sections 15064(f) and 15131). Here, any physical consequences resulting from fiscal impacts are too  
 3 speculative to ascertain.

#### 4 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the** 5 **Proposed Water Conveyance Facilities**

6 **NEPA Effects:** Under Alternative 9, recreational activities including boat passage and navigation  
 7 would be adversely affected by water conveyance operations. An environmental commitment  
 8 related to boat passage facilities would reduce this effect at a majority of operable gate locations,  
 9 allowing continued waterway passage while gates are closed; however, passage would be  
 10 unavailable at three locations. Furthermore, even at those locations that would allow passage,  
 11 boaters would now be required to wait at gates, potentially for longer than 30 minutes during peak  
 12 use times. Operable gate and boat passage facilities would also require speed limits in the vicinity,  
 13 which could adversely affect some recreational opportunities, including waterskiing, wakeboarding,  
 14 and tubing. In some areas, boat navigation could be enhanced due to dredging activities and a new  
 15 channel connection. However, use of operable gates would result in an adverse effect on recreational  
 16 activities and would be anticipated to result in an adverse economic effect, at least in localized areas,  
 17 by reducing the quality of the boating experience, along with other water-based recreation. An  
 18 environmental commitment to retain passage at some facilities, along with implementation of  
 19 Mitigation Measures REC-13a and REC-13b would reduce the severity of this effect.

20 **CEQA Conclusion:** Operation and maintenance activities associated with the proposed water  
 21 conveyance facilities under Alternative 9 are anticipated to result in substantial localized effects on  
 22 recreational resources and therefore, are expected to reduce related economic activity such as  
 23 lodging, food, fuel, and accessories in these areas. This section considers only the economic effects of  
 24 recreational changes brought about by construction of the proposed water conveyance facilities.  
 25 Potential physical changes to the environment relating to recreational resources are described and  
 26 evaluated in Chapter 15, *Recreation*, Section 15.3.3.16, Impacts REC-5 through REC-8.

#### 27 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during** 28 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

29 During operation and maintenance of conveyance facilities, existing agricultural land would be  
 30 within uses that include direct facility footprints and associated permanent roads and utilities.  
 31 Agricultural land could also be affected by changes in water quality and other conditions that would  
 32 affect crop productivity. These direct effects on agricultural land are described in Chapter 14,  
 33 *Agricultural Resources*, Section 14.3.3.16, Impacts AG-1 and AG-2.

34 Changes in crop acreage were used to estimate the associated changes in economic values. Unit  
 35 prices, yields, and crop production and investment costs were presented in Section 16.1,  
 36 *Environmental Setting/Affected Environment*. Table 16-60 summarizes the changes in acreage and  
 37 value of agricultural production that would result in the Delta region during operation of Alternative  
 38 9. Changes are shown relative to the Existing Conditions and the No Action Alternative by aggregate  
 39 crop category (agricultural resources under Existing Conditions and in the No Action Alternative  
 40 were assumed to be the same). The changes in crop acreages are reported in greater detail in  
 41 Appendix 14A, *Individual Crop Effects as a Result of BDCP Water Conveyance Facility Construction*.

1 Total value of irrigated crop production in the Delta region would decline on average by \$3.4 million  
 2 per year during operation and maintenance, with total irrigated crop acreage declining by about  
 3 2,300 acres. These estimates are not dependent on water year type.

4 **Table 16-60. Crop Acres and Value of Agricultural Production in the Delta Region during**  
 5 **Operations and Maintenance (Alternative 9)**

Analysis Metric	Alternative 9	Change from Existing Conditions and No Action Alternative
Total Crop Acreage (thousand acres)	481.4	-2.3
Grains	58.4	-0.2
Field crops	190.5	-0.6
Forage crops	111.8	-0.9
Vegetable, truck, and specialty crops	76.6	-0.6
Orchards and vineyards	44.0	0.0
Total Value of Production (million \$)	646.6	-3.4
Grains	24.2	-0.1
Field crops	113.5	-0.4
Forage crops	72.3	-0.8
Vegetable, truck, and specialty crops	266.3	-2.1
Orchards and vineyards	170.4	-0.1

Note: Value of production is based on prices received by farmers, in 2011 dollars (U.S. Department of Commerce 2012).

6  
 7 Alternative 9 may also affect production costs on lands even if gross revenues are largely unaffected.  
 8 Costs could be associated with operational constraints and longer travel times due to permanent  
 9 facilities. In most cases, affected lands fall within the facilities footprint, and are included in the  
 10 agricultural acreage and value of production described elsewhere in this Chapter and in Chapter 14,  
 11 *Agricultural Resources*, Section 14.3.3.16.

12 Crop yields and crop selection on lands in the Delta could be affected by changes in salinity of  
 13 agricultural water supply during operation and maintenance activities. If operation of the proposed  
 14 conveyance facilities increases salinity in part of the Delta, crops that are more sensitive to salinity  
 15 could shift to other lands in the five-county Delta region. See Chapter 14, *Agricultural Resources*,  
 16 Section 14.3.3.16, Impact AG-2, for further discussion of effects from changes in salinity.

17 **NEPA Effects:** The footprint of water conveyance facilities would result in lasting reductions in crop  
 18 acreage and in the value of agricultural production in the Delta region; therefore, this is considered  
 19 an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
 20 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving agricultural  
 21 productivity and compensating off-site.

22 **CEQA Conclusion:** During operation and maintenance of the proposed water conveyance facilities  
 23 the value of agricultural production in the Delta region would be reduced. The permanent removal  
 24 agricultural land from production is addressed in Chapter 14, *Agricultural Resources*, Section  
 25 14.3.3.16, Impacts AG-1 and AG-2. The reduction in the value of agricultural production is not  
 26 considered an environmental impact. Significant environmental impacts would only result if the  
 27 changes in regional economics cause physical impacts. Such effects are discussed in other chapters

1 throughout this EIR/EIS. When required, DWR would provide compensation to property owners for  
 2 economic losses due to implementation of the alternative. While the compensation to property  
 3 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 4 would not constitute mitigation for any related physical effect. Measures to reduce these impacts are  
 5 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, and particularly  
 6 Mitigation Measure AG-1, Develop an ALSP to preserve agricultural productivity and mitigate for  
 7 loss of Important Farmland and land subject to Williamson Act contracts or in Farmland Security  
 8 Zones.

### 9 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the** 10 **Implementation of the Proposed Conservation Measures 2-22**

11 **NEPA Effects:** Effects on regional economics as a result of the proposed Conservation Measures 2-  
 12 22 would be similar to those described under Alternative 1A, Impact ECON-13. In the Delta region,  
 13 spending on Conservation Measures 2-22 would include construction, operation and maintenance  
 14 activities that would convert or disturb existing land use. Because implementation of Conservation  
 15 Measures 2-22 would be anticipated to result in an increase in construction and operation and  
 16 maintenance-related employment and labor income, this would be considered a beneficial effect.  
 17 However, implementation of these components would also be anticipated to result in a decrease in  
 18 agricultural-related employment and labor income, which would be considered an adverse effect.  
 19 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 20 AG-1, would be available to reduce these effects by preserving agricultural productivity and  
 21 compensating off-site. Additionally, implementation of these components are anticipated to result in  
 22 the abandonment of natural gas wells, causing a decrease in employment and labor income  
 23 associated with monitoring and maintaining wells, which would be considered an adverse effect.  
 24 Mitigation Measure MIN-5, described in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-  
 25 5, would be available to reduce these effects by minimizing, to the extent feasible, the need for well  
 26 abandonment or relocation.

27 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2-22 would affect total  
 28 employment and income in the Delta region. The change in total employment and income in the  
 29 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 30 Measures 2-22 and any resulting changes in agricultural production, recreation, and natural gas  
 31 production activities. The total change in employment and income is not, in itself, considered an  
 32 environmental impact. Significant environmental impacts would only result if the changes in  
 33 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 34 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
 35 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
 36 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
 37 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

### 38 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 39 **Implementing the Proposed Conservation Measures 2-22**

40 Effects on population and housing as a result of the proposed Conservation Measures 2-22 would be  
 41 similar to those described under Alternative 1A, Impact ECON-14. In general, the changes in  
 42 population and housing would include increases in population from the construction and operation  
 43 and maintenance-related activity and declines in residential housing and business establishments as  
 44 a result of lands converted or impaired.

1 **NEPA Effects:** Because these activities would not result in concentrated, substantial increases in  
2 population or new housing, they would not be considered to have an adverse effect.

3 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
4 population and housing in the Delta region. The change in total population and housing in the Delta  
5 region is based on employment resulting from implementation of the proposed Conservation  
6 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
7 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
8 physical environment are not anticipated to result.

### 9 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 10 **Conservation Measures 2–22**

11 **NEPA Effects:** Effects on community character as a result of the proposed Conservation Measures 2–  
12 22 would be similar to those described under Alternative 1A, Impact ECON-15 because the  
13 measures are similar. While implementation of Conservation Measures 2–22 could result in  
14 beneficial effects relating to the economic welfare of a community, adverse social effects, including  
15 effects on community cohesion, could also arise in those communities closest to character-changing  
16 effects and those most heavily influenced by agricultural activities. Implementation of mitigation  
17 measures and environmental commitments related to noise, visual effects, transportation,  
18 agriculture, and recreation would reduce adverse effects (see Appendix 3B, *Environmental*  
19 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

20 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 under Alternative 9 could affect  
21 community character within the Delta region. However, because these impacts are social in nature,  
22 rather than physical, they are not considered impacts under CEQA. To the extent that changes to  
23 community character are related to physical impacts involving population growth, these impacts are  
24 described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore,  
25 notable decreases in population or employment, even if limited to certain areas, sectors, or the  
26 vacancy of individual buildings, could result in alteration of community character stemming from a  
27 lack of maintenance, upkeep, and general investment.

### 28 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing** 29 **the Proposed Conservation Measures 2–22**

30 **NEPA Effects:** Under Alternative 9, effects on local government fiscal conditions as a result of  
31 conservation measure implementation would be similar to those described under Alternative 1A,  
32 Impact ECON-16. Conservation Measures 2–22 would remove some private land from local property  
33 tax and assessment rolls. This economic effect would be considered adverse; however, the BDCP  
34 proponents would offset forgone property tax and assessments levied by local governments and  
35 special districts on private lands converted to habitat.

36 **CEQA Conclusion:** Under Alternative 9, implementation of Conservation Measures 2–22 would  
37 result in the removal of a portion of the property tax base for various local government entities in  
38 the Delta region. Over the 50-year permit period, property tax and assessment revenue forgone is  
39 estimated to reach \$176.7 million. However, the BDCP proponents would compensate local  
40 governments and special districts for forgone revenue. CEQA does not require a discussion of  
41 socioeconomic effects except where they would result in physical changes. If an alternative is not  
42 anticipated to result in a physical change to the environment, it would not be considered to have a  
43 significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131).

1 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the**  
 2 **Proposed Conservation Measures 2–22**

3 **NEPA Effects:** Effects related to implementation of the Conservation Measures 2–22 under this  
 4 alternative would be similar to those described under Alternative 1A, Impact ECON-17. These  
 5 measures may result in adverse and beneficial effects on recreational resources in the Delta region,  
 6 resulting in the potential for decreased or increased economic activities related to recreation.

7 **CEQA Conclusion:** Implementation of conservation measures would limit opportunities for  
 8 recreation and compromise the quality of activities, leading to potential economic impacts.  
 9 However, over time, implementation could also improve the quality of existing recreational  
 10 opportunities, creating increased economic value with respect to recreation. This section considers  
 11 only the economic effects of recreational changes brought about by conservation measure  
 12 implementation. Potential physical changes to the environment relating to recreational resources  
 13 are described and evaluated in Chapter 15, *Recreation*, Section 15.3.3.16, Impacts REC-9 through  
 14 REC-11.

15 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
 16 **Implementing the Proposed Conservation Measures 2–22**

17 Effects on agricultural economics as a result of the proposed Conservation Measures 2–22 would be  
 18 similar to those described under Alternative 1A, Impact ECON-18. Conservation Measures 2–22  
 19 would convert land from existing agricultural uses. These direct effects on agricultural land are  
 20 described qualitatively in Chapter 14, *Agricultural Resources*, Section 14.3.3.16, Impacts AG-3 and  
 21 AG-4. Effects on agricultural economics would include effects on crop production and agricultural  
 22 investments resulting from restoration actions on agricultural lands. The effects would be similar in  
 23 kind to those described for lands converted due to construction and operation of the conveyance  
 24 features and facilities. The total acreage and crop mix of agricultural land potentially affected is not  
 25 specified at this time, but when required, the BDCP proponents would provide compensation to  
 26 property owners for losses due to implementation of the alternative.

27 **NEPA Effects:** Because implementation of the Conservation Measures 2–22 would be anticipated to  
 28 lead to reductions in crop acreage and in the value of agricultural production in the Delta region, this  
 29 is considered an adverse effect. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
 30 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce these effects by preserving  
 31 agricultural productivity and compensating off-site.

32 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
 33 agricultural production in the Delta region. The permanent removal of agricultural land from  
 34 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.3.16, Impacts AG-3 and  
 35 AG-4. The reduction in the value of agricultural production is not considered an environmental  
 36 impact. Significant environmental impacts would only result if the changes in regional economics  
 37 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 38 required, the BDCP proponents would provide compensation to property owners for economic  
 39 losses due to implementation of the alternative. While the compensation to property owners would  
 40 reduce the severity of economic effects related to the loss of agricultural land, it would not  
 41 constitute mitigation for any related physical impact. Measures to reduce these impacts are  
 42 discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

## 1 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

2 The socioeconomic effects associated with operation of Alternative 9 would be similar to those  
 3 described under Alternative 1A, Impact ECON-19; however, the magnitude of the effects would be  
 4 different based on the use of separate corridors and operations under Scenario G would lead to  
 5 slightly reduced overall deliveries compared to the No Action Alternative. Changes in deliveries to  
 6 hydrologic regions could result in beneficial or adverse socioeconomic effects in these areas. In  
 7 hydrologic regions where water deliveries are predicted to increase when compared with the No  
 8 Action Alternative, more stable agricultural activities could support employment and economic  
 9 production associated with agriculture.

### 10 **Changes in SWP Deliveries Compared to No Action Alternative**

11 Compared to No Action Alternative (2060), Alternative 9 would increase deliveries to all regions  
 12 except for the South Coast and Colorado River Regions, which would receive decreases in deliveries,  
 13 and the San Joaquin Region, which would experience no change in deliveries. Compared to the No  
 14 Action Alternative (2060), South Coast would receive the largest net decrease (up to 81 TAF of Table  
 15 A plus Article 21 deliveries) among the regions, while San Francisco Bay would receive the largest  
 16 increase under Alternative 9 (up to 9 TAF of Table A plus Article 21 M&I deliveries) (refer to  
 17 Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-16, for more information).

### 18 **Changes in CVP Deliveries Compared to No Action Alternative**

19 Alternative 9 would not change M&I deliveries for the Sacramento River, South Coast, South  
 20 Lahontan and Colorado River Regions because there are no affected CVP contractors located in these  
 21 regions. Compared to the No Action Alternative (2060), Alternative 9 would result in increased  
 22 deliveries to the other hydrologic regions with the exception of San Joaquin River, which would  
 23 experience a reduction in deliveries. Compared to the No Action Alternative (2060), San Francisco  
 24 Bay is projected to receive the largest net increase (less than 1 TAF) among the hydrologic regions  
 25 (refer to Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-17 for more  
 26 information).

27 **NEPA Effects:** Changes in deliveries to hydrologic regions could result in adverse or beneficial  
 28 socioeconomic effects in these areas. Reduced or less reliable water deliveries would result in  
 29 decreased agricultural production and, in turn, a reduction in both direct and indirect agricultural  
 30 employment. Economic and social patterns tied to predominant agricultural industrial activities and  
 31 land uses could erode, changing the character of agricultural communities in hydrologic regions. If  
 32 M&I deliveries were reduced to the extent that it would, in the long run, constrain population  
 33 growth in certain hydrologic regions, implementation of Alternative 9 could reinforce a  
 34 socioeconomic status quo or limit potential economic and employment growth in hydrologic  
 35 regions. Changes to agricultural production and population growth with its associated economic  
 36 activity could also lead to shifts in the character of communities in the hydrologic regions with  
 37 resultant beneficial or adverse effects. Likewise, limited growth associated with reduced deliveries  
 38 could require lower expenditures for local governments while also leading to reduced revenue.

39 **CEQA Conclusion:** As described above, the operational components of BDCP Conservation Measure  
 40 1 could result in a number of effects in areas receiving SWP and CVP water deliveries outside of the  
 41 Delta.

## 1 **Changes in SWP Deliveries Compared to Existing Conditions**

2 Compared to Existing Conditions, Alternative 9 would decrease deliveries to all hydrologic regions  
 3 except for the San Francisco Bay Region, which would receive an increase in deliveries, and San  
 4 Joaquin River Region, which would experience no change in deliveries. South Coast would receive  
 5 the largest net decrease (up to 151 TAF of Table A plus Article 21 deliveries) among the regions,  
 6 while San Francisco Bay would receive the only increase (up to 4 TAF) under Alternative 9 (refer to  
 7 Chapter 30, *Growth Inducement and Other Indirect Effects*, Table 30-16 for more information).

## 8 **Changes in CVP Deliveries Compared to Existing Conditions**

9 Alternative 9 would not change M&I deliveries for the Sacramento River, South Coast, South  
 10 Lahontan, and Colorado River Regions because there are no affected CVP contractors located in  
 11 these regions. Compared to Existing Conditions, Alternative 9 would result in decreased deliveries  
 12 to the other hydrologic regions. Compared to Existing Conditions, San Francisco Bay is projected to  
 13 receive the largest decrease (up to 7 TAF) among the hydrologic regions (refer to Chapter 30,  
 14 *Growth Inducement and Other Indirect Effects*, Table 30-17 for more information).

## 15 **Summary**

16 Operation of water conveyance facilities under Alternative 9 could affect socioeconomic conditions  
 17 in the hydrologic regions receiving water from the SWP and CVP. However, because these impacts  
 18 are social and economic in nature, rather than physical, they are not considered environmental  
 19 impacts under CEQA. To the extent that changes in socioeconomic conditions in the hydrologic  
 20 regions would lead to physical impacts, such impacts are described in Chapter 30, *Growth*  
 21 *Inducement and Other Indirect Effects*, Section 30.3.2.

## 22 **16.3.4 Cumulative Analysis**

### 23 **16.3.4.1 Assessment Methodology**

24 Socioeconomic effects in the Delta region are expected to change as a result of past, present, and  
 25 reasonably foreseeable future projects, related to population growth and changes in economic  
 26 activity in the three regions (Chapter 30, *Growth Inducement and Other Indirect Effects*).

27 When the effects of the BDCP on socioeconomic conditions are considered in connection with the  
 28 potential effects of projects listed in Appendix 3D, *Defining Existing Conditions, No Action Alternative,*  
 29 *No Project Alternative, and Cumulative Impact Conditions*, the potential effects range from beneficial  
 30 to potentially adverse cumulative effects on socioeconomic conditions. In addition to the projects  
 31 listed in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*  
 32 *Cumulative Impact Conditions*, Table 16-61 lists the specific programs, projects, and policies for each  
 33 impact category based on the potential to contribute to a BDCP impact that could be deemed  
 34 cumulatively considerable. The potential for cumulative impacts on socioeconomic conditions  
 35 within the Delta region is related to physical changes in the environment.

36 Over the long-term, Delta communities and socioeconomic conditions therein would be subject to  
 37 risks associated with climate change, seismic activity, and other phenomena as discussed in  
 38 Appendix 3E, *Long-Term No Action Conditions*.

39

1 **Table 16-61. Effects on Socioeconomics from Programs, Projects, and Policies Included in Cumulative**  
 2 **Impact Assessment for the BDCP EIR/EIS**

Agency	Programs, Projects, and Policies	Potential Effects on Socioeconomics
Department of Fish and Wildlife	California Aquatic Invasive Species Draft Rapid Response Plan	Beneficial effects on recreational economics
Department of Fish and Wildlife	Fremont Landing Conservation Bank	Adverse effects on agricultural economics, community character
Department of Fish and Wildlife	Fish Screen Project at Sherman and Twitchell Islands	
Department of Parks and Recreation	Central Valley Vision	Beneficial effects on recreational economics, community character
Department of Water Resources	North Delta Flood Control and Ecosystem Restoration Project	Potential adverse effects related to population and housing
Department of Water Resources	Dutch Slough Tidal Marsh Restoration Project	
Contra Costa Water District, Bureau of Reclamation, and Department of Water Resources	Los Vaqueros Reservoir Expansion Project	Beneficial effects on regional economics (construction-related employment and income)
Davis, Woodland, and University of California, Davis	Davis-Woodland Water Supply Project	Beneficial effects on regional economics (construction-related employment and income); potential adverse effects related to population and housing
Northeastern San Joaquin County Groundwater Banking Authority	Eastern San Joaquin Integrated Conjunctive Use Program	
University of California, Davis, California Department of Water Resources, Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and Bureau of Reclamation	Delta Smelt Permanent Refuge	Beneficial effects on regional economics (construction and operational employment and income)
Bureau of Reclamation	Delta-Mendota Canal/California Aqueduct Intertie	Beneficial effects on regional economics (construction-related employment and income); potential adverse effects related to population and housing
Bureau of Reclamation, U.S. Fish and Wildlife Service, National Marine Fisheries Services, Department of Water Resources, and Department of Fish and Wildlife	San Joaquin River Restoration Program	Potential beneficial effects on recreational economics and potential adverse agricultural economics
Bureau of Reclamation and San Luis & Delta Mendota Water Authority	Grassland Bypass Project, 2010 – 2019	
Bureau of Reclamation and San Luis & Delta Mendota Water Authority	Agricultural Drainage Selenium Management Program	Potential adverse effects on agricultural economics
Water Forum and U.S. Bureau of Reclamation	Lower American River Flow Management Standard	

Agency	Programs, Projects, and Policies	Potential Effects on Socioeconomics
West Sacramento Area Flood Control Agency and U.S. Army Corps of Engineers	West Sacramento Levee Improvements Program	Beneficial effects on regional economics (construction-related employment and income); potential adverse effects related to population and housing
Freeport Regional Water Authority and Bureau of Reclamation	Freeport Regional Water Project	Potential adverse effects on agricultural economics
Reclamation District 2093	Staten Island Wildlife-Friendly Farming Demonstration	Potential adverse effects on agricultural economics
California Department of Fish and Wildlife	Restoring Ecosystem Integrity in the Northwest Delta	Potential adverse effects on agricultural economics
California Department of Water Resources	South Delta Temporary Barriers Project	Potential beneficial effects on agricultural economics
Central Valley Regional Water Quality Board	Irrigated Lands Regulatory Program	Potential adverse effects on agricultural economics
California Department of Fish and Wildlife	Lower Sherman Island Wildlife Area Land Management Plan	Potential adverse effects on regional economics from abandonment of natural gas wells
San Joaquin Council of Governments	San Joaquin County Multi-Species Habitat Conservation and Open Space Plan	Potential adverse effects on regional economics from abandonment of natural gas wells

1

## 2 16.3.4.2 Cumulative Effects of the No Action Alternative

### 3 Regional Economics

4 Under the No Action Alternative, the regional economy of the Delta region is expected to be similar  
5 in structure to that described in Section 16.1, *Environmental Setting/Affected Environment*. Potential  
6 changes in expenditures related to recreation and municipal and industrial water uses as well as  
7 potential changes in the value of agricultural production could result in changes to regional  
8 employment and income in the Delta region under the No Action Alternative. The scale of the  
9 economy would change with population growth; however, the structure of the economy would not.  
10 Therefore, for the purposes of this analysis, no regional economic impact evaluation is undertaken  
11 as the economy is assumed to be similar to that characterized by the baseline five-county Delta  
12 region IMPLAN model.

### 13 Population and Housing

14 Under the No Action Alternative, it is anticipated that the population would follow the projections  
15 described in Section 16.1, *Environmental Setting/Affected Environment*. Trends in housing demand  
16 and supply would correspond to population trends. It is assumed that the growth in housing would  
17 match the growth in population, as described in Section 16.1, *Environmental Setting/Affected*  
18 *Environment*.

## 1 **Community Character**

2 Under the No Action Alternative, community character within the five-county Delta region would be  
3 similar to that described under Section 16.1, *Environmental Setting/Affected Environment*. Projects  
4 and programs implemented under this alternative would not be anticipated to create adverse effects  
5 on the character of Delta communities.

## 6 **Local Government Fiscal Conditions**

7 In consideration of the programs and plans adopted included in the No Action Alternative, local  
8 government fiscal conditions in Delta region would be anticipated to be similar to those conditions  
9 described under Section 16.1, *Affected Environment/Environmental Setting*. Programs resulting in  
10 public acquisition of privately-held land, in addition to the population and economic changes  
11 described above, could affect property and sales tax revenue; however, the overall effects of this  
12 alternative are not anticipated to be adverse.

## 13 **Recreational Economics**

14 Recreational economics within the five-county Delta region would be anticipated to be similar to  
15 that described under Section 16.1, *Affected Environment/Environmental Setting*. Projects to enhance  
16 and manage recreational resources, along with population growth in the Region, would be expected  
17 to increase economic activity associated with recreation in the Delta. While outside factors including  
18 changes to fisheries could alter the quality of recreational resources, based on consideration of  
19 ongoing measures to support recreation, adverse effects would not be anticipated.

## 20 **Agricultural Economics in the Delta Region**

21 Irrigated crop acreage and value of agricultural production in the Delta region under the No Action  
22 Alternative are summarized in Table 16-18. On average, \$650 million in crop value would be  
23 generated on about 480 thousand irrigated acres. Field and forage crops are the two largest  
24 categories in acreage, and account for over 60% of the total irrigated acreage. Over 65% of the  
25 annual value of crop production is accounted for by two other crop categories: vegetable, truck, and  
26 specialty, and orchards and vineyards. It is possible that some of the projects, programs, and plans  
27 considered part of the No Action Alternative would reduce the total acreage and value of agricultural  
28 production in the Delta region. For example, under the 2008 and 2009 NMFS and USFWS BiOps, up  
29 to 8,000 acres of agricultural land could be converted to tidal habitat. Similarly, agricultural land  
30 uses in the Yolo Bypass or Suisun Marsh could be periodically or permanently disrupted by other  
31 habitat restoration efforts.

32 Because the agricultural economy of the Delta is expected to be similar in structure to that described  
33 in Section 16.1, *Environmental Setting/Affected Environment*, no quantitative impact evaluation was  
34 conducted.

## 35 **Effects in South-of-Delta Hydrologic Regions**

36 Under the No Action Alternative, several assumptions would create a deviation from Existing  
37 Conditions. First, an increase in M&I water rights demands is assumed north of the Delta, increasing  
38 overall system demands and reducing the availability of CVP water for export south of the Delta.  
39 Secondly, the No Action Alternative includes the effects of implementation of the Fall X2 standard,  
40 which requires additional water releases through the Delta and would therefore reduce the  
41 availability of water for export to SWP and CVP facilities. The No Action Alternative also includes

1 effects of sea level rise and climate change, factors that would also reduce the amount of water  
2 available for SWP and CVP supplies. These factors result in a decrease in deliveries under the No  
3 Action Alternative, when compared to Existing Conditions. A detailed explanation of factors  
4 influencing deliveries under the No Action Alternative is provided in Chapter 5, *Water Supply*,  
5 Section 5.3.3.1.

6 As described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section 30.3.2.3, overall  
7 deliveries would decrease, though SWP deliveries to the San Francisco Bay, South Coast, and  
8 Colorado River hydrologic regions would increase to meet projected increases in demand in those  
9 areas. Where there are reduced deliveries to agricultural contractors, it is reasonable to expect that  
10 agricultural production in affected areas would also decline. This decline could result from a shift to  
11 lower value crops or an increase in the acreage of land fallowed as a result of reduced deliveries or  
12 reduced reliability of deliveries. Under this scenario, it would also be anticipated that employment  
13 directly and indirectly associated with agriculture would decline in areas affected by reduced water  
14 deliveries. The location and magnitude of effects would depend largely on local factors and  
15 individual decisions. However, hydrologic regions where SWP and CVP deliveries represent a higher  
16 share of total water supply and where agriculture comprises a larger proportion of applied water  
17 use could be most susceptible to reductions in deliveries under the No Action Alternative. This  
18 includes the Tulare and San Joaquin River regions.

19 Increased SWP deliveries to M&I contractors in the San Francisco Bay, South Coast, and Colorado  
20 River hydrologic regions would be anticipated to meet demand associated with population growth  
21 in those regions. In other areas, M&I deliveries would generally decrease under the No Action  
22 Alternative. As discussed in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section  
23 30.3.2.5, long-term water supply reliability is an important component in enabling long-term  
24 population increases. However, other factors—including natural growth, employment opportunities,  
25 local policy, and quality of life—are more likely to determine population growth. Nonetheless,  
26 population growth could stimulate economic activity resulting from increased demand for goods  
27 and services. This increased demand could create broad economic benefits for regions whose  
28 growth is supported by increased deliveries under BDCP. As with estimating changes in agricultural  
29 production, the location and extent of population growth would depend largely on local factors.  
30 Where M&I deliveries under the No Action Alternative would be reduced compared to Existing  
31 Conditions to the extent that they would, in the long run, constrain population growth, their  
32 implementation could reinforce a socioeconomic status quo or limit potential economic and  
33 employment growth in hydrologic regions. Such a result could have the largest socioeconomic effect  
34 on regions with high dependence on SWP and CVP deliveries and where urban uses represent a high  
35 share of applied water use, including the South Lahontan region and the San Francisco Bay region  
36 (in consideration of a reduction in CVP deliveries). A detailed discussion of these potential effects is  
37 found in Appendix 5B, *Responses to Reduced South of Delta Water Supplies*.

38 Changes to SWP and CVP deliveries to the hydrologic regions under the No Action Alternative could  
39 affect community character. Where agricultural deliveries decline, resultant decreases in  
40 employment and production could destabilize economic and social patterns and institutions in  
41 communities where agriculture is a predominant economic activity. Decreases in M&I deliveries as a  
42 result of the No Action Alternative, were they to constrain long-term population growth, could  
43 reinforce a socioeconomic status quo or limit potential economic and employment growth in  
44 hydrologic regions. Changes in agricultural production and population growth could also affect local  
45 government fiscal conditions. Declining employment and production linked to a reduction in  
46 agricultural water deliveries could lead to a reduction in property and sales tax revenue. Similarly,

1 population growth or employment growth limited by reduced M&I deliveries could result in  
 2 foregone revenue. However, such growth could also require additional public sector expenditures  
 3 for public services and utilities. Again, the location and intensity of these effects would depend on  
 4 factors unique to local conditions and decisions, but as noted above, those regions most dependent  
 5 on SWP and CVP deliveries would generally be anticipated to be most directly affected by reduced  
 6 deliveries under this alternative.

### 7 **Climate Change and Catastrophic Seismic Risks**

8 Agriculture and recreation are primary economic activities in the Delta region. The potential for  
 9 major seismic events, along with the potential effects of climate change, could affect ongoing  
 10 agricultural and recreational uses if they resulted in the failure of levees or in climatic conditions  
 11 less favorable for productive agricultural uses. Such events could also result in changes in the  
 12 character of Delta communities and effects on individual homes and businesses, potentially  
 13 requiring construction of new buildings. Catastrophic events resulting in levee failure could also  
 14 place additional financial burdens on local governments in the Delta region. In hydrologic regions,  
 15 disruptions to Delta water deliveries could alter agricultural and industrial activities, along with  
 16 general effects on water supply in hydrologic regions (See Appendix 3E, *Potential Seismic and*  
 17 *Climate Change Risks to SWP/CVP Water Supplies* and Appendix 5B, *Responses to Reduced South of*  
 18 *Delta Water Supplies*, for more detailed discussion of seismic and climate change risks and potential  
 19 responses to reduced supplies). While similar risks would occur under implementation of the action  
 20 alternatives, these risks may be reduced by BDCP-related levee improvements along with those  
 21 projects identified for the purposes of flood protection in Table 16-61.

22 Overall, the No Action Alternative would result in reduced deliveries to hydrologic regions, which  
 23 could create cumulative adverse socioeconomic effects related to reduced agricultural production,  
 24 employment, and the character of agricultural communities. Reductions in water deliveries could  
 25 occur in areas where a large proportion of economic activity and employment is dependent on  
 26 agricultural production. Reducing exports to the San Joaquin Valley and Tulare Basin would result in  
 27 reduced deliveries to agricultural users and associated reduction in employment opportunities. Any  
 28 reduction in water deliveries would result in an adverse effect to these affected workers'  
 29 employment and income levels. Water deliveries to southern California are made to a broad range of  
 30 municipal and industrial users. To the extent that reductions in deliveries to these areas would  
 31 constrain population or industrial growth, such reductions would also be expected to result in an  
 32 adverse effect on employment and income. Further discussion of these potential effects is included  
 33 in Chapter 28, *Environmental Justice*, Section 28.5.3.1, and in Chapter 30, *Growth Inducement and*  
 34 *Other Indirect Effects*, Section 30.3.4.

### 35 **16.3.4.3 Cumulative Effects of the Action Alternatives**

#### 36 **Impact ECON-1: Temporary Effects on Regional Economics and Employment in the Delta** 37 **Region during Construction of the Proposed Water Conveyance Facilities**

38 **NEPA Effects:** The regional economic impacts on employment and income in the Delta region  
 39 attributable to Alternatives 1A through 9 (including sea level rise and climate change) are evaluated  
 40 in Section 16.3.3, *Effects and Mitigation Approaches*. No additional changes are estimated between  
 41 Existing Conditions and No Action Alternative. Therefore, the impacts of Alternatives 1A through 9  
 42 (including sea level rise and climate change) compared to No Action Alternative (with sea level rise  
 43 and climate change) are the same as in Section 16.3.3.

1 Employment and income associated with the construction of any one of the projects described in  
2 Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*  
3 *Cumulative Impact Conditions*, could increase employment and income in the Delta region. The  
4 projects would also potentially convert or disturb existing land use. The effects on the economy of  
5 the Delta region would be similar in kind, although not magnitude, to those estimated for  
6 construction of conveyance features and facilities for Alternatives 1A through 9 (see analysis earlier  
7 in this chapter). In general, the changes in regional economic activity (employment and income)  
8 would include increases from the construction-related activity, declines resulting from agricultural  
9 or other land uses converted or impaired, declines resulting from abandonment of natural gas wells  
10 on lands converted or impaired, and changes in recreation spending that could be positive or  
11 negative depending on the specific project. A number of the projects described in Appendix 3D,  
12 *Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact*  
13 *Conditions*, are located within the Delta, and if their construction were concurrent with that of the  
14 BDCP, the cumulative effects on employment and income would be larger than for the proposed  
15 water conveyance facilities alone. Construction of water conveyance facilities, in addition to these  
16 other projects would result in an increase in construction-related employment and labor income,  
17 this would be considered a beneficial effect. However, these activities would also be anticipated to  
18 result in a decrease in agricultural-related or natural gas-related employment and labor income,  
19 which would be considered an adverse effect. The scale of BDCP activities indicates that its effects  
20 are cumulatively considerable. Mitigation Measure AG-1, described in Chapter 14, *Agricultural*  
21 *Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce BDCP-related effects by  
22 preserving agricultural productivity and compensating off-site. Mitigation Measure MIN-5,  
23 described in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5, would be available to  
24 reduce BDCP-related effects on natural gas wells and associated employment and labor income by  
25 minimizing, to the extent feasible, the need for well abandonment or relocation.

26 **CEQA Conclusion:** Construction of the BDCP water conveyance facilities and projects described in  
27 Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*  
28 *Cumulative Impact Conditions*, would affect total employment and income in the Delta region. The  
29 potential cumulative change in total employment and income in the Delta region is based on  
30 expenditures resulting from construction and resulting changes in agricultural production  
31 recreation, and natural gas well operations. The total cumulative change in employment and income  
32 is not considered an environmental impact. Significant environmental impacts would only result if  
33 the changes in regional economics cause physical impacts. Such effects are discussed in other  
34 chapters throughout this EIR/EIS. Cumulative removal of agricultural land from production is  
35 addressed in Chapter 14, *Agricultural Resources*, Section 14.3.4, Impacts AG-1 and AG-2; cumulative  
36 changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section 15.3.4,  
37 Impacts REC-16 through REC-19; cumulative abandonment of natural gas wells is addressed in  
38 Chapter 26, *Mineral Resources*, Section 26.3.3.17, Impact MIN-13.

## 39 **Impact ECON-2: Effects on Population and Housing in the Delta Region during Construction of** 40 **the Proposed Water Conveyance Facilities**

41 **NEPA Effects:** The effects on population and housing in the Delta region attributable to Alternatives  
42 1A through 9 (including sea level rise and climate change) are evaluated in Section 16.3.3, *Effects*  
43 *and Mitigation Approaches*. No additional change in impacts is estimated when comparing  
44 Alternatives 1A through 9 to No Action Alternative (with sea level rise and climate change).

1 Employment associated with any one of the projects described in Appendix 3D, *Defining Existing*  
 2 *Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, could  
 3 require the temporary or permanent relocation of workers into the region. The local population  
 4 could increase from the workers and their families, plus any additional employment generated by  
 5 the local spending associated with the project. In turn, demand for housing could increase. The  
 6 magnitude of the potential impacts would depend on the availability of workers with the required  
 7 skills already living within the vicinity of the project. If insufficient labor is available locally, workers  
 8 may relocate into the region, and the number doing this would depend on the scale and rate of  
 9 spending on the project.

10 A number of projects described in Appendix 3D, *Defining Existing Conditions, No Action Alternative,*  
 11 *No Project Alternative, and Cumulative Impact Conditions*, are located within the Delta, and if their  
 12 construction were concurrent with that of conveyance or restoration actions of BDCP alternatives,  
 13 the cumulative effects on population and housing during the common construction period would be  
 14 larger than for the proposed water conveyance facilities alone. While the combined population and  
 15 housing effects from BDCP and projects described in Appendix 3D, *Defining Existing Conditions, No*  
 16 *Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, could lead to a  
 17 cumulatively significantly adverse effect, because the BDCP activities would not result in permanent  
 18 concentrated, substantial increases in population or new housing, they would not be considered to  
 19 be cumulatively considerable.

20 **CEQA Conclusion:** Construction of the BDCP water conveyance facilities and projects described in  
 21 Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*  
 22 *Cumulative Impact Conditions*, would result in population increases in the Delta region. An increase  
 23 in population, by itself, is not considered a physical impact under CEQA. Any physical impacts  
 24 associated with the cumulative effects of the BDCP regarding population are discussed in other  
 25 chapters. Changes in demand for public services resulting from any increase in population are  
 26 addressed in Chapter 20, *Public Services and Utilities*, Section 20.3.3.2, Impact UT-1 through UT-6.

### 27 **Impact ECON-3: Changes in Community Character as a Result of Constructing the Proposed** 28 **Water Conveyance Facilities**

29 **NEPA Effects:** Under BDCP Alternatives 1A through 9, community character could change as a result  
 30 of constructing water conveyance facilities. While the location and magnitude of these effects would  
 31 be anticipated to vary from alternative to alternative, the nature of these effects would be similar.  
 32 Potential increases in population, along with reduced agricultural and recreational economic  
 33 contributions, could create demographic changes in Delta communities, altering their character.  
 34 Additionally, physical effects of construction could lead to changes in rural qualities including  
 35 predominant agricultural land uses, relatively low population densities, and low levels of associated  
 36 noise and vehicular traffic. Construction-related effects could also result in changes to community  
 37 cohesion if they were to restrict mobility, reduce opportunities for maintaining face-to-face  
 38 relationships, or disrupt the functions of community organizations or community gathering places  
 39 (such as schools, libraries, places of worship, and recreational facilities).

40 Employment, income, and land use changes associated with the projects described in Appendix 3D,  
 41 *Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact*  
 42 *Conditions*, could bring about changes in community character similar to those described above. The  
 43 magnitude of the potential impacts would depend on the timing, location, and intensity of effects  
 44 from these projects. Implementation of these projects concurrent with that of BDCP conveyance

1 construction would result in a cumulatively significant adverse social effect on community character  
2 during the common construction period. The incremental contribution of BDCP-related activities to  
3 this effect would be cumulatively considerable. Implementation of mitigation measures and  
4 environmental commitments related to noise, visual effects, transportation, agriculture, and  
5 recreation would reduce cumulative adverse effects (see Appendix 3B, *Environmental*  
6 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-3.

7 **CEQA Conclusion:** Construction of the BDCP water conveyance facilities and projects described in  
8 Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*  
9 *Cumulative Impact Conditions*, could affect the character in Delta communities. To the extent that  
10 project construction schedules and locations overlap, the cumulative impacts on housing and  
11 population within specific communities could be substantial in intensity. However, because these  
12 cumulative impacts are social in nature, rather than physical, they are not considered impacts under  
13 CEQA. To the extent that changes to community character would lead to physical impacts involving  
14 population growth, such impacts are described under Impact ECON-2 and in Chapter 30, *Growth*  
15 *Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population  
16 or employment, even if limited to specific areas, sectors, or the vacancy of individual buildings, could  
17 result in alteration of community character stemming from a lack of maintenance, upkeep, and  
18 general investment. However, implementation of mitigation measures and environmental  
19 commitments related to noise, visual effects, transportation, agriculture, and recreation, would  
20 reduce the extent of these effects (see Appendix 3B, *Environmental Commitments*). Specifically, these  
21 commitments include Develop and Implement Erosion and Sediment Control Plans, Develop and  
22 Implement Hazardous Materials Management Plans, Notification of Construction and Maintenance  
23 Activities in Waterways, Noise Abatement Plan, Fire Prevention and Control Plan, and Prepare and  
24 Implement Mosquito Management Plans.

#### 25 **Impact ECON-4: Changes in Local Government Fiscal Conditions as a Result of Constructing** 26 **the Proposed Water Conveyance Facilities**

27 **NEPA Effects:** Under BDCP Alternatives 1A through 9, publicly-owned water conveyance facilities  
28 would be constructed on land of which some is currently held by private owners. Over the  
29 construction period, local governments and special districts would not be able to collect property  
30 tax and assessment revenue on this land. These decreases in revenue could potentially result in the  
31 loss of a substantial share of some agencies' tax bases, particularly for smaller districts affected by  
32 the project.

33 Land use changes associated with the projects described in Appendix 3D, *Defining Existing*  
34 *Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, could  
35 bring about changes similar to those described above. Those projects involving public acquisition of  
36 land would be anticipated to add to the adverse effects associated with BDCP, resulting in a  
37 cumulatively significant adverse effect. Other projects involving private development could also  
38 create beneficial effects with respect to local government and special district revenue. The  
39 magnitude of the potential effects from these projects would depend on the amount of land affected  
40 and the nature of the conversion.

41 These cumulative economic effects would be considered adverse. Due to the extent of land required  
42 for construction and long-term placement of water conveyance facilities, BDCP's contribution to this  
43 cumulative economic effect would be deemed cumulatively considerable; however, the BDCP  
44 proponents would make arrangements to compensate local governments for the loss of property tax

1 or assessment revenue for land used for constructing, locating, operating, or mitigating for new  
 2 BDCP water conveyance facilities. Additionally, as discussed under Impact ECON-1 for each  
 3 alternative, construction of the water conveyance facilities would be anticipated to result in a net  
 4 increase of income and employment in the Delta region. This would also create an indirect beneficial  
 5 effect through increased sales tax revenue for local government entities that rely on sales taxes.

6 **CEQA Conclusion:** Construction of the BDCP water conveyance facilities and projects described in  
 7 Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*  
 8 *Cumulative Impact Conditions*, would result in the removal of a portion of the property tax base for  
 9 various local government entities in the Delta region. To the extent that these projects collectively  
 10 remove land from individual entities' tax rolls, the cumulative fiscal impacts could be substantial in  
 11 intensity. However, the Sacramento–San Joaquin Delta Reform Act commits the entities receiving  
 12 water from the State Water Project and federal Central Valley Project to mitigate for lost property  
 13 tax and assessment revenue associated with land needed for the construction of new conveyance  
 14 facilities (Water Code Section 85089). Additionally, any losses could be offset, at least in part, by an  
 15 anticipated increase in sales tax revenue. CEQA does not require a discussion of socioeconomic  
 16 effects except where they would result in reasonably foreseeable physical changes. If an alternative  
 17 is not anticipated to result in a physical change to the environment, it would not be considered to  
 18 have a significant impact under CEQA (CEQA Guidelines Sections 15064(f) and 15131). Here, any  
 19 physical consequences resulting from fiscal impacts are too speculative to ascertain.

#### 20 **Impact ECON-5: Effects on Recreational Economics as a Result of Constructing the Proposed** 21 **Water Conveyance Facilities**

22 **NEPA Effects:** Under Alternatives 1A through 9, substantial disruption of recreational activities  
 23 considered temporary and permanent would occur in specific areas during the construction period,  
 24 as described and defined in Chapter 15, *Recreation*, Section 15.3.4, Impacts REC-16 through REC-19.  
 25 The quality of recreational activities including boating, fishing, waterfowl hunting, and hiking in the  
 26 Delta could be affected by noise, lighting, traffic, and visual degradation in proximity to water  
 27 conveyance construction. Additionally, under Alternative 9, several recreational facilities would be  
 28 permanently displaced and others would be temporarily disturbed during construction. A  
 29 substantial decline in visits to the Delta region as a result of facility construction would be expected  
 30 to reduce recreation-related spending, creating an adverse effect throughout the Delta. Additionally,  
 31 if construction activities shift the relative popularity of different recreational sites, the project may  
 32 carry localized beneficial or adverse effects.

33 Changes to recreational opportunities or quality associated with construction of the projects  
 34 described in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative,*  
 35 *and Cumulative Impact Conditions*, could bring about changes similar to those described above.  
 36 Those projects involving in-water construction in recreational areas would be anticipated to add to  
 37 the adverse effects associated with the BDCP; however, other projects involving the development or  
 38 improvement of recreational opportunities could create beneficial effects with respect to  
 39 recreational economic activity.

40 Under the BDCP alternatives, mitigation measures and environmental commitments would be  
 41 implemented to reduce some of the effects of construction activities upon the recreational  
 42 experience. These include protection of waterway navigation, recreational access, public views, and  
 43 noise abatement, as described in Chapter 15, *Recreation*, Chapter 17, *Aesthetics and Visual Resources*,  
 44 Chapter 19, *Transportation*, and Appendix 3B, *Environmental Commitments*.

1 Construction of water conveyance structures, in conjunction with construction activities for other  
 2 projects, would be anticipated to result in a lower-quality recreational experience in a number of  
 3 localized areas throughout the Delta, despite the implementation of environmental commitments.  
 4 With a decrease in recreational quality, the number of visits would be anticipated to decline, at least  
 5 in areas closest to construction activities. Fewer visits would lead to less spending, creating a  
 6 cumulatively significant adverse effect. While visitors can adjust their recreational patterns to avoid  
 7 areas substantially affected by construction activities (by boating or fishing elsewhere in the Delta,  
 8 for instance), recreation-dependent businesses including marinas and recreational supply retailers  
 9 may not be able to economically weather the effects of multiyear construction activities and may be  
 10 forced to close as a result, even while businesses in areas that become more popular could benefit.  
 11 The multi-year schedule and geographic scale of BDCP construction activities and the anticipated  
 12 incremental decline in recreational spending would be cumulatively considerable. The  
 13 environmental commitments cited above would contribute to the reduction of this effect and long-  
 14 term benefits that may improve some recreation access and resources.

15 **CEQA Conclusion:** Construction of the BDCP water conveyance facilities and projects described in  
 16 Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*  
 17 *Cumulative Impact Conditions*, could impact recreational revenue in the Delta region if construction  
 18 activities result in fewer visits to the area. Fewer visits would be anticipated to result in decreased  
 19 economic activity related to recreational activities. This section considers only the economic effects  
 20 of recreational changes brought about by construction of the proposed water conveyance facilities.  
 21 Potential physical changes to the environment relating to cumulative recreational resources are  
 22 described and evaluated in Chapter 15, *Recreation*, Section 15.3.4, Impacts REC-16 through REC-19.

### 23 **Impact ECON-6: Effects on Agricultural Economics in the Delta Region during Construction of** 24 **the Proposed Water Conveyance Facilities**

25 The agricultural economics impact in the Delta region attributable to Alternatives 1A through 9  
 26 (including sea level rise and climate change) is evaluated in Section 16.3.3, *Effects and Mitigation*  
 27 *Approaches*. No additional changes in impacts are estimated when comparing Alternatives 1A  
 28 through 9 to No Action Alternative (with sea level rise and climate change).

29 Projects described in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project*  
 30 *Alternative, and Cumulative Impact Conditions*, could lead to the conversion or impairment of  
 31 existing land uses, resulting in loss of existing economic activity, jobs, and tax revenues. This would  
 32 occur due to temporary or permanent footprints of facilities such as pipelines, canals, levees, or  
 33 habitat restoration. Projects that would convert existing Delta land uses could impose a cumulative  
 34 impact on the Delta region. The nature of such impacts is discussed in the Cumulative Analysis  
 35 section in Chapter 13, *Land Use*, Section 13.3.4, Impact LU-8.

36 **NEPA Effects:** Because construction of the proposed water conveyance facilities, in addition to the  
 37 other projects, programs, and plans considered, would lead to reductions in crop acreage and in the  
 38 value of agricultural production in the Delta region, this is considered an adverse effect and the  
 39 incremental contribution of BDCP-related activities would be cumulatively considerable. Mitigation  
 40 Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would  
 41 be available to reduce BDCP-related effects by preserving agricultural productivity and  
 42 compensating off-site.

43 **CEQA Conclusion:** Construction of the BDCP water conveyance facilities and projects described in  
 44 Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*

1 *Cumulative Impact Conditions*, could reduce the total value of agricultural production in the Delta  
 2 region. The reduction in the value of agricultural production is not considered an environmental  
 3 impact. Significant environmental impacts would only result if the changes in regional economics  
 4 cause physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. The  
 5 potential cumulative impacts from permanent removal of agricultural land from production are  
 6 addressed in Chapter 14, *Agricultural Resources*, Section 14.3.4, Impacts AG-1 and AG-2.

### 7 **Impact ECON-7: Permanent Regional Economic and Employment Effects in the Delta Region** 8 **during Operation and Maintenance of the Proposed Water Conveyance Facilities**

9 Cumulative effects on regional economics during operation and maintenance of the BDCP and  
 10 projects described in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project*  
 11 *Alternative, and Cumulative Impact Conditions*, would be similar in kind, although not magnitude, to  
 12 those described under Section 16.3.4, *Cumulative Analysis*, Impact ECON-1.

13 **NEPA Effects:** Increased expenditures related to operation and maintenance of water conveyance  
 14 facilities would be expected to result in a permanent increase in regional employment and income,  
 15 as presented in Table 16-22. This would be considered a beneficial effect. However, the permanent  
 16 removal of agricultural land following construction would have lasting negative effects on  
 17 agricultural employment and income, as shown in Table 16-23. Considered together, the cumulative  
 18 effects of these projects on agricultural employment would be adverse and the effect of BDCP  
 19 activities would be cumulatively considerable. Mitigation Measure AG-1, described in Chapter 14,  
 20 *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce BDCP-related  
 21 effects by preserving agricultural productivity and compensating off-site.

22 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities would  
 23 increase total employment and income in the Delta region. The net change would result from  
 24 expenditures on operation and maintenance and from changes in agricultural production, which  
 25 could also be affected by other projects, programs, and plans in the Delta region. The total change in  
 26 income and employment is not, in itself, considered an environmental impact. Significant  
 27 environmental impacts would only result if the changes in regional economics cause physical  
 28 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. Costs are addressed  
 29 in Chapter 8 of the BDCP, *Implementation Costs and Funding Sources*; removal of agricultural land  
 30 from production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.4, Impacts AG-1  
 31 and AG-2; changes in recreation related activities are addressed in Chapter 15, *Recreation*, Section  
 32 15.3.4, Impacts REC-20 and REC-21.

### 33 **Impact ECON-8: Permanent Effects on Population and Housing in the Delta Region during** 34 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

35 **NEPA Effects:** Cumulative effects on population and housing during operation and maintenance of  
 36 the BDCP and projects described in Appendix 3D, *Defining Existing Conditions, No Action Alternative,*  
 37 *No Project Alternative, and Cumulative Impact Conditions*, would be similar in kind, although not  
 38 magnitude, to those described under Section 16.3.4, *Cumulative Analysis*, Impact ECON-2. It is  
 39 anticipated that non-local workers would relocate to the five-county region, thus adding to the local  
 40 population. However, this additional population and any population added by other projects in the  
 41 Delta region would be anticipated to result in only a minor increase in the total 2020 projected  
 42 regional population of 4.6 million and be distributed throughout the region. It is anticipated that  
 43 most of the operational workforce would be drawn from within the five-county region.

1 Consequently, operation of the conveyance facilities, in addition to the effects of other projects,  
2 would not result in cumulative adverse effects on housing.

3 **CEQA Conclusion:** Operation and maintenance of the proposed water conveyance facilities, in  
4 addition to other programs, plans, policies, and projects in the Delta region, would result in minor  
5 population increases in the Delta region with adequate housing supply to accommodate the change  
6 in population and therefore adverse changes in the physical environment are not anticipated.

### 7 **Impact ECON-9: Changes in Community Character during Operation and Maintenance of the** 8 **Proposed Water Conveyance Facilities**

9 **NEPA Effects:** Under BDCP Alternatives 1A through 9, community character could change during the  
10 continued operation and maintenance of water conveyance facilities. While the location and  
11 magnitude of these effects would be anticipated to vary from alternative to alternative, the nature of  
12 these effects would be similar. Changes in population, along with reduced agricultural and  
13 recreational economic contributions, could create demographic changes in Delta communities,  
14 altering their character. Additionally, continued physical effects of operations could lead to changes  
15 in rural qualities including predominant agricultural land uses, relatively low population densities,  
16 and low levels of associated noise and vehicular traffic. Such lasting effects could also result in  
17 changes to community cohesion if they were to restrict mobility, reduce opportunities for  
18 maintaining face-to-face relationships, or disrupt the functions of community organizations or  
19 community gathering places (such as schools, libraries, places of worship, and recreational  
20 facilities).

21 Employment, income, and land use changes associated with the projects described in Appendix 3D,  
22 *Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact*  
23 *Conditions*, could bring about changes in community character similar to those described above. The  
24 magnitude of the potential impacts would depend on the location and intensity of effects from these  
25 projects. However, the resultant cumulative social effects on community character would be  
26 significant and adverse. The incremental contribution of BDCP-related activities to this effect would  
27 be cumulatively considerable. Implementation of mitigation measures and environmental  
28 commitments related to noise, visual effects, transportation, agriculture, and recreation would  
29 reduce cumulative adverse effects (see Appendix 3B, *Environmental Commitments*). These actions  
30 are summarized under Alternative 1A, Impact ECON-9.

31 **CEQA Conclusion:** Continued operation and maintenance of BDCP water conveyance features, along  
32 with projects described in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No*  
33 *Project Alternative, and Cumulative Impact Conditions*, could affect the character in Delta  
34 communities. To the extent that project locations overlap, the cumulative impacts on housing and  
35 population within specific communities could be substantial in intensity. However, because these  
36 cumulative impacts are social in nature, rather than physical, they are not considered impacts under  
37 CEQA. To the extent that changes to community character would lead to physical impacts involving  
38 population growth, such impacts are described under Impact ECON-8 and in Chapter 30, *Growth*  
39 *Inducement and Other Indirect Effects*, Section 30.3.2. Furthermore, notable decreases in population  
40 or employment, even if limited to specific areas, sectors, or the vacancy of individual buildings, could  
41 result in alteration of community character stemming from a lack of maintenance, upkeep, and  
42 general investment.

1 **Impact ECON-10: Changes in Local Government Fiscal Conditions during Operation and**  
 2 **Maintenance of the Proposed Water Conveyance Facilities**

3 **NEPA Effects:** Under BDCP Alternatives 1A through 9, publicly-owned water conveyance facilities  
 4 would be located, operated, and maintained on land of which some is currently held by private  
 5 owners. Over the 50-year permit period, local governments and special districts would not be able  
 6 to collect property tax and assessment revenue on this land. These decreases in revenue could  
 7 potentially result in the loss of a substantial share of some agencies' tax bases, particularly for  
 8 smaller districts affected by the project.

9 Land use changes associated with the projects described in Appendix 3D, *Defining Existing*  
 10 *Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, could  
 11 bring about changes similar to those described above. Those projects involving public acquisition of  
 12 land would be anticipated to add to the adverse effects associated with the BDCP resulting in a  
 13 cumulatively significant adverse effect. Other projects involving private development could create  
 14 beneficial effects with respect to local government and special district revenue. The magnitude of  
 15 the potential effects from these projects would depend on the amount of land affected and the  
 16 nature of the conversion.

17 These cumulative economic effects would be considered adverse. Due to the extent of land required  
 18 for construction and long-term placement of water conveyance facilities, BDCP's contribution to this  
 19 cumulative economic effect would be deemed cumulatively considerable; however, the BDCP  
 20 proponents would make arrangements to compensate local governments for the loss of property tax  
 21 or assessment revenue for land used for constructing, locating, operating, or mitigating for new  
 22 BDCP water conveyance facilities. Additionally, as discussed under Impact ECON-7 for Alternatives  
 23 1A, 1C, 2A, 2C, 3, 4, 5, 6A, 6C, 7, 8, and 9 above, construction of the water conveyance facilities would  
 24 be anticipated to result in a net increase of income and employment in the Delta region. This may  
 25 create an indirect beneficial effect through increased sales tax revenue for local government entities  
 26 that rely on sales taxes. However, under Alternatives 1B, 2B, and 6B, decreased income and  
 27 employment could create additional strains on the finances of local government entities.

28 **CEQA Conclusion:** Continued operation and maintenance of the BDCP water conveyance facilities  
 29 and projects described in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project*  
 30 *Alternative, and Cumulative Impact Conditions*, would restrict potential property tax and assessment  
 31 revenue for various local government entities in the Delta region. To the extent that these projects  
 32 collectively remove land from individual entities' tax rolls, the cumulative fiscal impacts could be  
 33 substantial in intensity. However, the Sacramento–San Joaquin Delta Reform Act commits the  
 34 entities receiving water from the State Water Project and federal Central Valley Project to mitigate  
 35 for lost property tax and assessment revenue associated with land needed for the continued  
 36 operation and maintenance of new conveyance facilities (Water Code Section 85089). Additionally,  
 37 under some BDCP alternatives, some losses may be mitigated by increases in sales tax revenue.  
 38 CEQA does not require a discussion of socioeconomic effects except where they would result in  
 39 reasonably foreseeable physical changes. If an alternative is not anticipated to result in a physical  
 40 change to the environment, it would not be considered to have a significant impact under CEQA  
 41 (CEQA Guidelines Sections 15064(f) and 15131). Here, any physical consequences resulting from  
 42 fiscal impacts are too speculative to ascertain.

1 **Impact ECON-11: Effects on Recreational Economics during Operation and Maintenance of the**  
2 **Proposed Water Conveyance Facilities**

3 **Alternatives 1A through 8**

4 Under Alternatives 1A through 8, water conveyance structures are expected to permanently  
5 displace some recreational access along the alternative alignments. These impacts are discussed in  
6 Chapter 15, *Recreation*, Sections 15.3.3.2 through 15.3.3.15.

7 Maintenance of conveyance facilities, including intakes, would result in periodic temporary but not  
8 substantial adverse effects on boat passage and water-based recreational activities. Similarly,  
9 recreational changes associated with operation and maintenance of the projects described in  
10 Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*  
11 *Cumulative Impact Conditions*, would not be anticipated to create adverse economic effects related to  
12 recreation.

13 **NEPA Effects:** Because effects of facility maintenance would be short-term and intermittent,  
14 substantial cumulative economic effects are not anticipated to result.

15 **Alternative 9**

16 Recreational changes associated with operation and maintenance of the projects described in  
17 Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative, and*  
18 *Cumulative Impact Conditions*, would not be anticipated to create adverse economic effects related to  
19 recreation. However, under BDCP Alternative 9, recreational activities including boat passage and  
20 navigation would be adversely affected by water conveyance operations. Operable gate and boat  
21 passage facilities would require boaters to wait for passage and would require speed limits in  
22 nearby areas. In some areas, boat navigation could be enhanced due to dredging activities and a new  
23 channel connection. However, use of operable gates would result in an adverse effect on recreational  
24 activities and would be anticipated to result in a cumulative adverse economic effect, at least in  
25 localized areas, by reducing the quality of the boating experience, along with other water-based  
26 recreation.

27 **NEPA Effects:** The incremental effect of operating BDCP Alternative 9 would be cumulatively  
28 considerable. An environmental commitment to retain passage at some facilities, along with  
29 implementation of Mitigation Measures REC-13a and REC-13b would reduce the severity of this  
30 effect.

31 **CEQA Conclusion:** Recreational changes associated with operation and maintenance of the projects  
32 described in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative,*  
33 *and Cumulative Impact Conditions*, would not be anticipated to create adverse economic effects  
34 related to recreation. Similarly, operation and maintenance activities associated with the proposed  
35 water conveyance facilities under Alternatives 1A through 8 would only be anticipated to create  
36 minor effects on recreational spending. However, operation of Alternative 9 would be anticipated to  
37 result in substantial effects on recreational resources and therefore, to reduce related economic  
38 activity such as lodging, food, fuel, and accessories. This section considers only the economic effects  
39 of recreational changes. Potential physical changes to the environment relating to recreational  
40 resources are described and evaluated in Chapter 15, *Recreation*, Sections 15.3.3.2 through 15.3.3.15  
41 and Section 15.3.4, Impacts REC-20 and REC-21.

1 **Impact ECON-12: Permanent Effects on Agricultural Economics in the Delta Region during**  
 2 **Operation and Maintenance of the Proposed Water Conveyance Facilities**

3 Cumulative effects on agricultural economics during operation and maintenance of the BDCP  
 4 Alternatives 1A through 9 and projects described in Appendix 3D, *Defining Existing Conditions, No*  
 5 *Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, would be similar in  
 6 kind, although not magnitude, to those described under Section 16.3.4, *Cumulative Analysis*, Impact  
 7 ECON-6.

8 **NEPA Effects:** Together, the footprint of water conveyance facilities proposed under BDCP, along  
 9 with other projects, programs, and plans, would result in lasting reductions in crop acreage and in  
 10 the value of agricultural production in the Delta region; therefore, this is considered an adverse  
 11 cumulative effect and the incremental BDCP contribution to this effect would be cumulatively  
 12 considerable. Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section  
 13 14.3.3.2, Impact AG-1, would be available to reduce BDCP-related effects by preserving agricultural  
 14 productivity and compensating off-site.

15 **CEQA Conclusion:** Operation and maintenance of the BDCP and projects described in Appendix 3D,  
 16 *Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact*  
 17 *Conditions*, could reduce the total value of agricultural production in the Delta region. The reduction  
 18 in the value of agricultural production is not considered an environmental impact. Significant  
 19 environmental impacts would only result if the changes in regional economics cause physical  
 20 impacts. Such effects are discussed in other chapters throughout this EIR/EIS. The potential  
 21 cumulative impacts from permanent removal of agricultural land from production are addressed in  
 22 Chapter 14, *Agricultural Resources*, Section 14.3.4, Impacts AG-1 and AG-2.

23 **Impact ECON-13: Effects on the Delta Region's Economy and Employment Due to the**  
 24 **Implementation of the Proposed Conservation Measures 2–22**

25 **NEPA Effects:** Cumulative effects on regional economics as a result of implementing Conservation  
 26 Measures 2–22 related to the BDCP and projects described in Appendix 3D, *Defining Existing*  
 27 *Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, would be  
 28 similar in kind, although not magnitude, to those described under Section 16.3.4, *Cumulative*  
 29 *Analysis*, Impact ECON-1. In the Delta region, spending on Conservation Measures 2–22 associated  
 30 with BDCP Alternatives 1A through 9 and other similar projects would include construction,  
 31 operation and maintenance activities that would convert or disturb existing land use. Because  
 32 implementation of Conservation Measures 2–22, along with effects of similar projects, would be  
 33 anticipated to result in an increase in construction and operation and maintenance-related  
 34 employment and labor income, this would be considered a beneficial effect. However,  
 35 implementation of these BDCP components and other non-BDCP projects would also be anticipated  
 36 to result in a decrease in agricultural-related and natural gas production-related employment and  
 37 labor income, which would be considered an adverse cumulative effect and the incremental BDCP  
 38 contribution to this effect would be cumulatively considerable. Mitigation Measure AG-1, described  
 39 in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1, would be available to reduce  
 40 BDCP-related effects by preserving agricultural productivity and compensating off-site. Mitigation  
 41 Measure MIN-5, described in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5, would  
 42 be available to reduce BDCP-related effects on natural gas well-related employment and labor  
 43 income by minimizing, to the extent feasible, the need for well abandonment or relocation.

1 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would affect total  
 2 employment and income in the Delta region. The change in total employment and income in the  
 3 Delta region is based on expenditures resulting from implementation of the proposed Conservation  
 4 Measures 2–22 and any resulting changes in agricultural production, recreation, and natural gas  
 5 production activities. The total change in employment and income is not, in itself, considered an  
 6 environmental impact. Significant environmental impacts would only result if the changes in  
 7 regional economics cause physical impacts. Such effects are discussed in other chapters throughout  
 8 this EIR/EIS. Removal of agricultural land from production is addressed in Chapter 14, *Agricultural*  
 9 *Resources*, Section 14.3.3.2, Impacts AG-3 and AG-4; changes in recreation-related activities are  
 10 addressed in Chapter 15, *Recreation*, Section 15.3.3.2, Impacts REC-9 through REC-11; abandonment  
 11 of natural gas wells is addressed in Chapter 26, *Mineral Resources*, Section 26.3.3.2, Impact MIN-5.

### 12 **Impact ECON-14: Effects on Population and Housing in the Delta Region as a Result of** 13 **Implementing the Proposed Conservation Measures 2–22**

14 Cumulative effects on population and housing as a result of implementing Conservation Measures 2–  
 15 22 related to the BDCP and projects described in Appendix 3D, *Defining Existing Conditions, No*  
 16 *Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, would be similar in  
 17 kind, although not magnitude, to those described under Section 16.3.4, *Cumulative Analysis*, Impact  
 18 ECON-2. In general, the changes in population and housing associated with BDCP Alternatives 1A  
 19 through 9, as well as similar conservation efforts in the Delta region, would include increases in  
 20 population from the construction and operation and maintenance-related activity and declines in  
 21 residential housing and business establishments as a result of lands converted or impaired.

22 **NEPA Effects:** Because these activities would not be anticipated to result in concentrated,  
 23 substantial increases in population or new housing, they would not be considered to have an  
 24 adverse cumulative effect.

25 **CEQA Conclusion:** Implementation of the proposed Conservation Measures 2–22 would impact total  
 26 population and housing in the Delta region. The change in total population and housing in the Delta  
 27 region is based on employment resulting from implementation of the proposed Conservation  
 28 Measures 2–22. The change in population and housing is expected to be minor relative to the five-  
 29 county Delta region, and dispersed throughout the region. Therefore, significant changes to the  
 30 physical environment are not anticipated to result.

### 31 **Impact ECON-15: Changes in Community Character as a Result of Implementing the Proposed** 32 **Conservation Measures 2–22**

33 **NEPA Effects:** Cumulative effects on community character as a result of implementing Conservation  
 34 Measures 2–22 related to the BDCP and projects described in Appendix 3D, *Defining Existing*  
 35 *Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, would be  
 36 similar in kind, although not magnitude, to those described above under Impacts ECON-3 and ECON-  
 37 9. Changes in population and in agricultural and recreational economic contributions could create  
 38 demographic changes in Delta communities, altering their character and resulting in potential  
 39 effects on community cohesion. Additionally, physical effects of conservation measure  
 40 implementation could improve or detract from the rural qualities of Delta communities.

41 Employment, income, and land use changes associated with the projects described in Appendix 3D,  
 42 *Defining Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact*  
 43 *Conditions*, could bring about changes in community character similar to those described above. The

1 magnitude of the potential impacts would depend on the location and intensity of effects from these  
 2 projects. However, the resulting cumulative social effects on community character would be  
 3 anticipated to be significant and adverse. The incremental contribution of BDCP-related activities to  
 4 this effect would be cumulatively considerable. Implementation of mitigation measures and  
 5 environmental commitments related to noise, visual effects, transportation, agriculture, and  
 6 recreation would reduce cumulative adverse effects (see Appendix 3B, *Environmental*  
 7 *Commitments*). These actions are summarized under Alternative 1A, Impact ECON-15.

8 **CEQA Conclusion:** Implementation of BDCP Conservation Measures 2–22, along with projects  
 9 described in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative,*  
 10 *and Cumulative Impact Conditions*, could affect the character in Delta communities. To the extent  
 11 that project locations overlap, the cumulative impacts on housing and population within specific  
 12 communities could be substantial in intensity. However, because these cumulative impacts are  
 13 social in nature, rather than physical, they are not considered impacts under CEQA. To the extent  
 14 that changes to community character would lead to physical impacts involving population growth,  
 15 such impacts are described in Chapter 30, *Growth Inducement and Other Indirect Effects*, Section  
 16 30.3.2. Furthermore, notable decreases in population or employment, even if limited to specific  
 17 areas, sectors, or the vacancy of individual buildings, could result in alteration of community  
 18 character stemming from a lack of maintenance, upkeep, and general investment.

#### 19 **Impact ECON-16: Changes in Local Government Fiscal Conditions as a Result of Implementing** 20 **the Proposed Conservation Measures 2–22**

21 **NEPA Effects:** Cumulative effects on community character as a result of implementing Conservation  
 22 Measures 2–22 related to the BDCP and projects described in Appendix 3D, *Defining Existing*  
 23 *Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, would be  
 24 similar in kind, although not magnitude, to those described above under Impacts ECON-4 and ECON-  
 25 10. Under BDCP Alternatives 1A through 9, implementation of Conservation Measures 2–22  
 26 including CM3, CM4, CM5, and CM10 would take place on at least some land currently held by  
 27 private owners. Local governments and special districts would not be able to collect property tax  
 28 and assessment revenue on this land. These decreases in revenue could potentially result in the loss  
 29 of a substantial share of some agencies' tax bases, particularly for smaller districts affected by the  
 30 project.

31 Land use changes associated with the projects described in Appendix 3D, *Defining Existing*  
 32 *Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, could  
 33 bring about changes similar to those described above. Those projects involving public acquisition of  
 34 land would be anticipated to add to the adverse effects associated with the BDCP resulting in a  
 35 cumulatively significant adverse effect. Other projects involving private development could create  
 36 beneficial effects with respect to local government and special district revenue. The magnitude of  
 37 the potential effects from these projects would depend on the amount of land affected and the  
 38 nature of the conversion. These cumulative economic effects would be considered adverse. Due to  
 39 the extent of land required for construction and long-term placement of water conveyance facilities,  
 40 BDCP's contribution to this cumulative economic effect would be deemed cumulatively  
 41 considerable; however, the BDCP proponents would offset forgone property tax and assessments  
 42 levied by local governments and special districts on private lands converted to habitat.

43 **CEQA Conclusion:** Implementation of BDCP Conservation Measures 2–22, along with projects  
 44 described in Appendix 3D, *Defining Existing Conditions, No Action Alternative, No Project Alternative,*

1 *and Cumulative Impact Conditions*, would restrict potential property tax and assessment revenue for  
 2 various local government entities in the Delta region. To the extent that these projects collectively  
 3 remove land from individual entities' tax rolls, the cumulative fiscal impacts could be substantial in  
 4 intensity. However, the BDCP proponents would compensate local governments and special districts  
 5 for forgone revenue. CEQA does not require a discussion of socioeconomic effects except where they  
 6 would result in physical changes. If an alternative is not anticipated to result in a physical change to  
 7 the environment, it would not be considered to have a significant impact under CEQA (CEQA  
 8 Guidelines Sections 15064(f) and 15131).

9 **Impact ECON-17: Effects on Recreational Economics as a Result of Implementing the**  
 10 **Proposed Conservation Measures 2-22**

11 **NEPA Effects:** Implementation of Conservation Measures 2-22 under BDCP Alternatives 1A through  
 12 9 would be anticipated to create an adverse effect on recreational resources by limiting access to  
 13 facilities, restricting boat navigation and disturbing fish habitat while restoration activities are  
 14 taking place. These measures may also permanently reduce the extent of upland recreation sites.  
 15 However, over the 50-year permit period, these components could also create beneficial effects by  
 16 enhancing aquatic habitat and fish abundance, expanding the extent of navigable waterways  
 17 available to boaters, and improving the quality of existing upland recreation opportunities. Similar  
 18 adverse or beneficial effects could also result from the projects described in Appendix 3D, *Defining*  
 19 *Existing Conditions, No Action Alternative, No Project Alternative, and Cumulative Impact Conditions*.  
 20 Therefore, the potential exists for the creation of significant cumulative adverse and beneficial  
 21 effects related to recreational economics. In the case that significant adverse economic effects arise,  
 22 the BDCP's incremental contribution could be cumulatively considerable.

23 **CEQA Conclusion:** Site preparation and earthwork activities associated with the BDCP and non-  
 24 BDCP conservation and habitat restoration projects would limit opportunities for recreational  
 25 activities where they are conducted in or near existing recreational areas. Noise, odors, and visual  
 26 effects of construction activities would also temporarily compromise the quality of recreation in and  
 27 around these areas, leading to potential economic impacts. However, over time, implementation of  
 28 these projects could collectively improve the quality of existing recreational opportunities, leading  
 29 to increased economic activity. This section considers only the economic effects of recreational  
 30 changes brought about by conservation measure implementation. Potential physical changes to the  
 31 environment relating to recreational resources are described and evaluated in Chapter 15,  
 32 *Recreation*, Sections 15.3.3.2 through 5.3.3.16, Impacts REC-9 through REC-11.

33 **Impact ECON-18: Effects on Agricultural Economics in the Delta Region as a Result of**  
 34 **Implementing the Proposed Conservation Measures 2-22**

35 Cumulative effects on agricultural economics as a result of implementing Conservation Measures 2-  
 36 22 related to the BDCP and projects described in Appendix 3D, *Defining Existing Conditions, No*  
 37 *Action Alternative, No Project Alternative, and Cumulative Impact Conditions*, would be similar in  
 38 kind, although not magnitude, to those described under Section 16.3.4, *Cumulative Analysis*, Impact  
 39 ECON-6. Conservation Measures 2-22 associated with BDCP alternatives 1A through 9, along with  
 40 other conservation efforts in the Delta region, would convert land from existing agricultural uses.  
 41 These direct effects on agricultural land are described qualitatively in Chapter 14, *Agricultural*  
 42 *Resources*, Section 14.3.4, Impacts AG-3 and AG-4. Effects on agricultural economics would include  
 43 effects on crop production and agricultural investments resulting from restoration actions on  
 44 agricultural lands. The effects would be similar in kind to those described for lands converted due to

1 construction and operation of the conveyance features and facilities. The total acreage and crop mix  
 2 of agricultural land potentially affected is not specified at this time, but when required, the BDCP  
 3 proponents would provide compensation to property owners for economic losses due to  
 4 implementation of a BDCP action alternative.

5 **NEPA Effects:** Because implementation of Conservation Measures 2–22, along with similar activities  
 6 not associated with BDCP, would be anticipated to lead to reductions in crop acreage and in the  
 7 value of agricultural production in the Delta region, this is considered an adverse cumulative effect.  
 8 Mitigation Measure AG-1, described in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact  
 9 AG-1, would be available to reduce BDCP-related effects by preserving agricultural productivity and  
 10 compensating off-site.

11 **CEQA Conclusion:** Implementation of Conservation Measures 2–22 would reduce the total value of  
 12 agricultural production in the Delta region. The permanent removal of agricultural land from  
 13 production is addressed in Chapter 14, *Agricultural Resources*, Section 14.3.4, Impacts AG-3 and AG-  
 14 4. The reduction in the value of agricultural production is not considered an environmental impact.  
 15 Significant environmental impacts would only result if the changes in regional economics cause  
 16 physical impacts. Such effects are discussed in other chapters throughout this EIR/EIS. When  
 17 required, the BDCP proponents would provide compensation to property owners for economic  
 18 losses due to implementation of a BDCP action alternative. While the compensation to property  
 19 owners would reduce the severity of economic effects related to the loss of agricultural land, it  
 20 would not constitute mitigation for any related physical impact. Measures to reduce these impacts  
 21 are discussed in Chapter 14, *Agricultural Resources*, Section 14.3.3.2, Impact AG-1.

## 22 **Impact ECON-19: Socioeconomic Effects in the South-of-Delta Hydrologic Regions**

### 23 **Alternatives 1A through 5**

24 **NEPA Effects:** The cumulative socioeconomic effects associated with the implementation of the  
 25 projects, programs, and policies summarized in Table 16-61, along with operation of Alternatives  
 26 1A, 1B, 1C, 2A, 2B, 2C, 3, 4, and 5 could result in adverse and beneficial effects on socioeconomics in  
 27 the hydrologic regions. Programs and policies that would present barriers to continued growth  
 28 could limit the potential for economic and employment growth while those that would reduce water  
 29 deliveries or increase regulatory burdens for agricultural operations could result in decreased  
 30 production and a decline in related employment. Generally, changes in deliveries to hydrologic  
 31 regions, whether created by BDCP-related activities or other projects, programs, or policies could  
 32 result in beneficial and adverse socioeconomic effects in communities throughout the hydrologic  
 33 regions. These BDCP alternatives would be anticipated to generally contribute to an increase in total  
 34 SWP and CVP deliveries. In hydrologic regions where water deliveries are predicted to increase  
 35 when compared with the No Action Alternative, more stable agricultural activities could support  
 36 employment and economic production associated with agriculture. Such changes to agricultural  
 37 production and population growth with its associated economic activity could also lead to shifts in  
 38 the character of communities in the hydrologic regions with resultant beneficial or adverse effects.  
 39 Likewise, growth associated with deliveries could require additional expenditures for local  
 40 governments while also supporting increases in revenue. Please refer to Chapter 30, *Growth*  
 41 *Inducement and Other Indirect Effects*, Section 30.3.2, for additional discussion.

42 **CEQA Conclusion:** Operation of water conveyance facilities under Alternatives 1A through 5, along  
 43 with socioeconomic effects from other projects, programs, and policies, could affect socioeconomic

1 conditions in the hydrologic regions receiving water from the SWP and CVP. However, because these  
2 cumulative impacts are social and economic in nature, rather than physical, they are not considered  
3 environmental impacts under CEQA. To the extent that changes in socioeconomic conditions in the  
4 hydrologic regions would lead to physical impacts, such impacts are described in Chapter 30,  
5 *Growth Inducement and Other Indirect Effects*, Section 30.3.2.

## 6 **Alternatives 6A through 9**

7 **NEPA Effects:** The cumulative socioeconomic effects associated with the implementation of the  
8 projects, programs, and policies summarized in Table 16-61, along with operation of Alternatives  
9 6A, 6B, 6C, 7, 8, and 9 could result in adverse and beneficial effects on socioeconomics in the  
10 hydrologic regions. Programs and policies that would present barriers to continued growth could  
11 limit the potential for economic and employment growth while those that would reduce water  
12 deliveries or increase regulatory burdens for agricultural operations could result in decreased  
13 production and a decline in related employment. Generally, changes in deliveries to hydrologic  
14 regions, whether created by BDCP-related activities or other projects, programs, or policies could  
15 result in beneficial or adverse socioeconomic effects in communities throughout the hydrologic  
16 regions. These BDCP alternatives would generally be anticipated to contribute to a decrease in total  
17 SWP and CVP deliveries. Reduced or less reliable water deliveries would result in decreased  
18 agricultural production and, in turn, a reduction in both direct and indirect agricultural employment.  
19 Economic and social patterns tied to predominant agricultural industrial activities and land uses  
20 could erode, changing the character of agricultural communities in hydrologic regions. If M&I  
21 deliveries were reduced to the extent that it would, in the long run, constrain population growth in  
22 certain hydrologic regions, implementation of these BDCP alternatives, along with other projects,  
23 programs, and policies, could reinforce a socioeconomic status quo or limit potential economic and  
24 employment growth in hydrologic regions. Changes to agricultural production and population  
25 growth with its associated economic activity could also lead to shifts in the character of  
26 communities in the hydrologic regions with resultant beneficial or adverse effects. Likewise, limited  
27 growth associated with reduced deliveries could require lower expenditures for local governments  
28 while also leading to reduced revenue.

29 **CEQA Conclusion:** Operation of water conveyance facilities under Alternatives 6A through 9, along  
30 with socioeconomic effects from other projects, programs, and policies, could affect socioeconomic  
31 conditions in the hydrologic regions receiving water from the SWP and CVP. However, because these  
32 cumulative impacts are social and economic in nature, rather than physical, they are not considered  
33 environmental impacts under CEQA. To the extent that changes in socioeconomic conditions in the  
34 hydrologic regions would lead to physical impacts, such impacts are described in Chapter 30,  
35 *Growth Inducement and Other Indirect Effects*, Section 30.3.2.

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