

## 3.8 Cultural and Historic Resources

This section identifies the cultural and historic resources that could be affected by implementation of the proposed program. This section is composed of the following subsections:

- Section 3.8.1, “Environmental Setting,” describes the physical conditions in the program study area as they apply to cultural and historic resources.
- Section 3.8.2, “Regulatory Setting,” summarizes federal, State, and regional and local laws and regulations pertinent to evaluation of the proposed program’s impacts on cultural and historic resources.
- Section 3.8.3, “Analysis Methodology and Thresholds of Significance,” describes the methods used to assess the environmental effects of the proposed program and lists the thresholds used to determine the significance of those effects.
- Section 3.8.4, “Environmental Impacts and Mitigation Measures for NTMAs,” discusses the environmental effects of the near-term management activities (NTMAs) and identifies mitigation measures for significant environmental effects.
- Section 3.8.5, “Environmental Impacts, Mitigation Measures, and Mitigation Strategies for LTMAAs,” discusses the environmental effects of the long-term management activities (LTMAAs) and identifies mitigation measures for significant environmental effects.

NTMAs and LTMAAs are described in detail in Section 2.4, “Proposed Management Activities.”

See Section 3.10, “Geology, Soils, and Seismicity (Including Mineral and Paleontological Resources),” for a discussion of paleontological resources.

### 3.8.1 Environmental Setting

#### ***Information Sources Consulted***

Sources of information used to prepare this section include the following:

- *California Archaeology*, by Michael J. Moratto (2004)
- *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar (Jones and Klar 2007)

- 1 • *Handbook of North American Indians, Vol. 8, California*, edited by  
2 Robert F. Heizer (1978)
- 3 • *Five Views: An Ethnic Historic Site Survey for California* (OHP 1988)

#### 4 **Geographic Areas Discussed**

5 The following discussion has been divided into the following two  
6 geographic regions defined for the proposed program, to identify potential  
7 effects on cultural resources within those areas:

- 8 • Extended systemwide planning area (Extended SPA) divided into the  
9 Sacramento and San Joaquin Valley and foothills, and the Sacramento–  
10 San Joaquin Delta (Delta) and Suisun Marsh
- 11 • Sacramento and San Joaquin Valley watersheds

12 None of the management activities included in the proposed program  
13 would be implemented in the SoCal/coastal Central Valley Project/State  
14 Water Project (CVP/SWP) service areas. In addition, implementation of the  
15 proposed program would not result in substantial or long-term reductions in  
16 water deliveries to the SoCal/coastal CVP/SWP service areas (see Section  
17 2.6, “No Near- or Long-Term Reduction in Water or Renewable Electricity  
18 Deliveries”). Given these conditions, the program is not expected to result  
19 in adverse impacts on cultural and historic resources in the portion of the  
20 CVP/SWP service areas located outside of the Sacramento and San Joaquin  
21 Valley watersheds and Sacramento and San Joaquin Valley and foothills.  
22 Therefore, this geographic area is not discussed in detail in this section.

#### 23 **Definitions**

24 *Cultural resources* are sites, buildings, structures, objects, and districts that  
25 may have traditional or cultural value for the historical significance they  
26 possess or convey. Cultural resources include but are not limited to the  
27 following types of resources: prehistoric and historic-era archaeological  
28 deposits; historic-era features, such as roadways and railroad tracks;  
29 buildings and structures of architectural significance; and places that are  
30 important for maintaining a community’s identity or culture (i.e., traditions,  
31 beliefs, lifeways, social institutions).

32 *Historical resources* are those cultural resources that are determined  
33 eligible for listing in the California Register of Historical Resources  
34 (CRHR) pursuant to Public Resources Code (PRC) Section 5024.1.

35 *Historic properties* are cultural resources that are found eligible for  
36 inclusion in the National Register of Historic Places (NRHP) by meeting

1 the criteria outlined in Title 36, Section 60.4 of the Code of Federal  
2 Regulations (CFR) (36 CFR 60.4).

3 *Traditional cultural properties* are a subset of historic properties. These  
4 resources have been found eligible for listing in the NRHP “because of  
5 [their] association with cultural practices or beliefs of a living community  
6 that (a) are rooted in that community’s history, and (b) are important in  
7 maintaining the continuing cultural identity of the community” (Parker and  
8 King 1998).

9 Generally, for a cultural resource to be considered a historical resource (or  
10 a historic property), it must be at least 50 years old. However, properties  
11 less than 50 years of age that are of exceptional importance or are  
12 contributors to a district can also be included in the NRHP. For example, in  
13 California, the Oroville Dam and hydroelectric facilities are less than 50  
14 years of age, but they have been determined eligible for the NRHP because  
15 of their importance as part of the SWP. See Section 3.8.2, “Regulatory  
16 Setting,” for further description of the NRHP and CRHR.

### 17 **Background**

18 As mentioned previously, the Extended SPA and the Sacramento and San  
19 Joaquin Valley watersheds compose the CVFPP study area for purposes of  
20 cultural and historic resources. Because of the geographic diversity (i.e.,  
21 differences in climate, vegetation, and land form) of this large territory,  
22 prehistoric land use varied accordingly. Prehistoric populations responded  
23 with great specificity to their respective environments, and this is reflected  
24 in the material culture left behind. As a result, archaeologists such as  
25 Moratto (2004:Figure 1) have divided the state into eight archaeological  
26 regions that basically correspond to differing environmental zones: the  
27 North Coast, Northeastern, Central Valley, Sierra Nevada, San Francisco  
28 Bay, Central Coast, South Coast, and Desert archaeological regions. Each  
29 of these archaeological regions exhibits unique cultural adaptations to its  
30 environment. In turn, archaeological data have been compiled to reflect  
31 various cultural chronologies for each region.

32 The Extended SPA and the Sacramento and San Joaquin Valley watersheds  
33 primarily incorporate three of the archaeological regions: the Central  
34 Valley, Northeastern, and Sierra Nevada (Figure 3.8-1). The eastern edge  
35 of the North Coast archaeological region is also included in this geographic  
36 area.

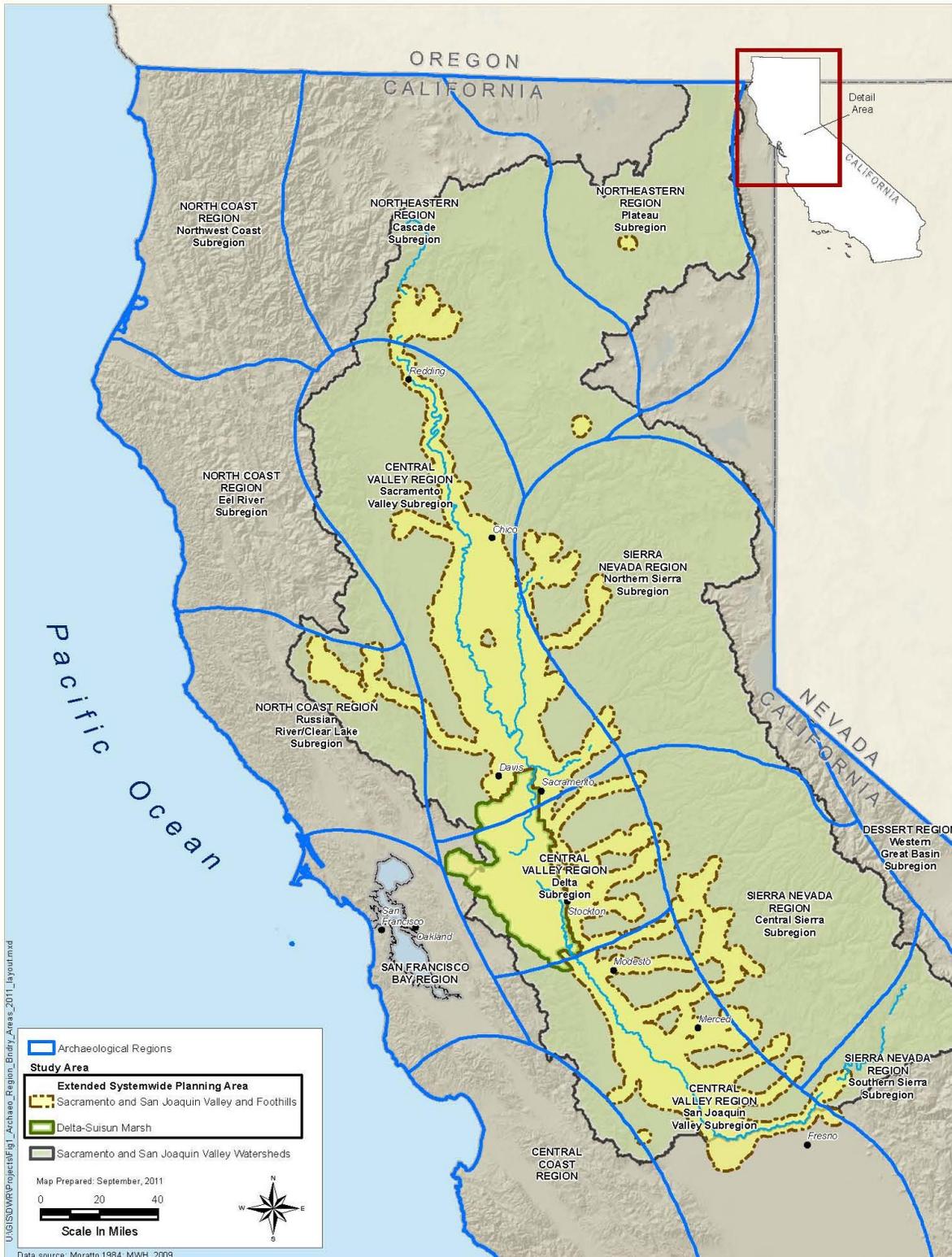
1     ***Extended Systemwide Planning Area***

2     **Sacramento and San Joaquin Valley and Foothills**

3     *Prehistoric Context* The Sacramento and San Joaquin Valley and foothills  
4     area of the Extended SPA falls largely within the Central Valley  
5     archaeological region, which includes the Central Valley and the lower  
6     elevations of the adjacent mountain foothills.

7     Portions of the Sacramento and San Joaquin Valley and foothills that  
8     extend up the waterways flowing into the Central Valley are marginally  
9     included in the Northeastern, Sierra Nevada, and North Coast  
10    archaeological regions. Shasta Lake is located within the Northeastern  
11    archaeological region. The Sierra Nevada archaeological region contains  
12    several lakes and reservoirs of the Sacramento and San Joaquin Valley and  
13    foothills area: Lake Oroville, New Bullards Bar Reservoir, Folsom Lake,  
14    Monticello Dam, New Melones Lake, New Don Pedro Reservoir, Lake  
15    McClure, and Millerton Lake. To the west, Clear Lake and Indian Valley  
16    Reservoir are in the North Coast archaeological region.

3.0 Environmental Setting, Impacts, and Mitigation Measures  
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1  
 2 **Figure 3.8-1. Boundaries of Archaeological Regions within the CVFPP Study Area**

1     *Ethnographic Context* The Central Valley and Clear Lake area were  
2 among the most densely populated areas in California before colonization  
3 by the Spanish, Mexicans, and Euro-Americans. Cook (1978:91) has  
4 estimated that approximately 160,000 people occupied these regions. This  
5 population has translated into as many as 13 tribes currently affiliated with  
6 the area included in the Sacramento and San Joaquin Valley and foothills:  
7 the Wintu, Nomlaki, Konkow, Patwin, Nisenan, Plains Miwok, Northern  
8 Valley Yokuts, Pomo, Lake Wappo, Lake Miwok, Maidu, Sierra Miwok,  
9 and Foothill Yokuts (Figure 3.8-2). These tribes are described below,  
10 generally from north to south within their respective archaeological  
11 regions. Central Valley tribes are discussed first, followed by tribes in the  
12 pertinent areas of the North Coast Ranges, and then indigenous populations  
13 in the Sierra Nevada.

14             *Central Valley* As described below, the Central Valley was  
15 occupied by the Wintu, Nomlaki, Konkow, Patwin, Nisenan, Plains  
16 Miwok, and Northern Valley Yokuts.

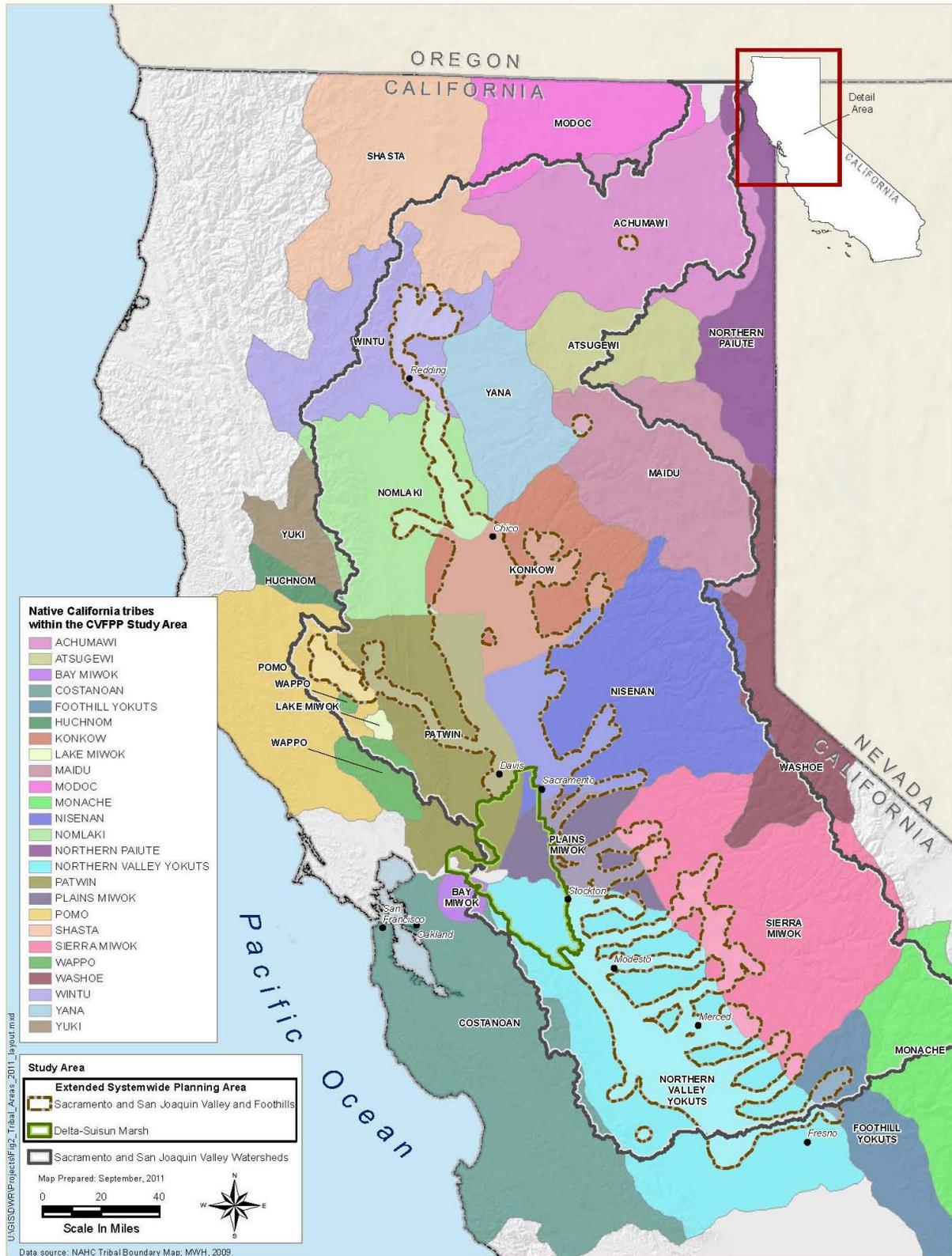
17 The Wintu lived at the northern end of the Sacramento Valley. They  
18 occupied both sides of the Sacramento River drainage, from above Shasta  
19 Lake south to Cottonwood Creek.

20 The Nomlaki held the next section along both sides of the Sacramento  
21 River, from Cottonwood Creek south to about Deer Creek. They also  
22 controlled all of the west side of the Sacramento Valley and the adjacent  
23 east slope of the North Coast Ranges, including Thomes Creek, Stony  
24 Creek, and present-day Black Butte Reservoir.

25 Below the Nomlaki, the Konkow inhabited a short section on both banks of  
26 the Sacramento River, from near Deer Creek to about 15 miles downstream  
27 from Chico. Konkow lands also extended up the west slopes of the Sierra  
28 Nevada and contained much of the Feather River watershed. Lake Oroville  
29 and the Feather River to Honcut Creek are in Konkow territory.

30 The Patwin controlled the next portion of the Sacramento River area, from  
31 about 15 miles downstream from Chico, south to just below Knights  
32 Landing. From this point south, Patwin territory diverged westward from  
33 the river along the west edge of the Yolo Basin, all the way to the Delta.  
34 The Patwin also held the entire west side of the Sacramento Valley, from  
35 around Princeton to Suisun Bay, and inhabited the adjacent eastern slopes  
36 of the North Coast Ranges (as described below, under “North Coast  
37 Ranges”).

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1  
 2 **Figure 3.8-2. Tribal Areas within the CVFPP Study Area**

1 The Sacramento River, from just below Knights Landing to south of  
2 Sacramento, was held by the Nisenan. The Nisenan also controlled the  
3 Feather River below Konkow territory to its confluence with the  
4 Sacramento River. Other important watersheds occupied by the Nisenan  
5 included those of the Yuba, Bear, and American rivers. Several reservoirs  
6 are now in what was Nisenan territory: New Bullards Bar, French  
7 Meadows, and Union Valley reservoirs, and Folsom Lake.

8 The remaining area along the Sacramento River, from Sacramento to the  
9 Delta, was in the hands of the Plains Miwok. Their territory extended  
10 eastward into the Sierra Nevada foothills and included the Cosumnes River  
11 and the Mokelumne River upstream to around the elevation of Camanche  
12 Reservoir. The very northern extent of the San Joaquin River, where it  
13 enters the Delta, was also held by the Plains Miwok.

14 Virtually all of the area along the San Joaquin River was part of Northern  
15 Valley Yokuts territory, which extended from the Delta and the Stockton  
16 area south to Mendota. The southern limit of their lands was the south bank  
17 of the San Joaquin River on the east side of the San Joaquin Valley, but  
18 their boundary trended southward along the valley's west side. In addition,  
19 the Northern Valley Yokuts inhabited the Sierra Nevada foothills adjacent  
20 to the valley, claiming the lower reaches of all major drainages—the  
21 Cosumnes, Stanislaus, Tuolumne, Merced, Mariposa, Chowchilla, and  
22 Fresno rivers. The eastern limits of the Northern Valley Yokuts' territory  
23 reached elevations that included many of the reservoirs located in the  
24 western Sierra Nevada foothills today, such as New Hogan and Farmington  
25 reservoirs. The hills around San Luis Reservoir and Los Banos Creek  
26 Reservoir on the west side of the San Joaquin Valley also belonged to the  
27 Northern Valley Yokuts.

28 *North Coast Ranges* Lakes, reservoirs, and other water bodies of  
29 the Sacramento and San Joaquin Valley and foothills located in the North  
30 Coast Ranges include Clear Lake and Cache Creek, Indian Valley  
31 Reservoir, and Lake Berryessa. In addition to the areas of the Central  
32 Valley described above, the Patwin inhabited Cache Creek upstream to just  
33 below Clear Lake, the area of Indian Valley Reservoir, and all of Putah  
34 Creek, including Lake Berryessa. Other tribes living around Clear Lake  
35 included the Pomo, the Lake Wappo, and the Lake Miwok.

36 *Sierra Nevada* Many of the tribes that occupied the Sierra Nevada  
37 foothills portion of the Sacramento and San Joaquin Valley and foothills  
38 have already been discussed: the Konkow, Nisenan, Plains Miwok, and  
39 Northern Valley Yokuts. The remaining tribes that held lands in this area  
40 were the Maidu, Sierra Miwok, and Foothill Yokuts.

**3.0 Environmental Setting, Impacts, and Mitigation Measures**  
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1 Maidu territory included the upper reaches of the North and Middle forks  
2 of the Feather River and the area around Lake Almanor.

3 The Sierra Miwok lived on the western slopes of the Sierra Nevada, from  
4 the Cosumnes River south to the Fresno River. Other important drainages  
5 within their territory were the Mokelumne, Calaveras, Stanislaus,  
6 Tuolumne, Merced, Mariposa, and Chowchilla rivers. The upper reaches of  
7 several reservoirs are now at the western margins of what were Sierra  
8 Miwok lands: New Melones and New Don Pedro reservoirs, and Lake  
9 McClure.

10 The Northern Foothill Yokuts inhabited the western Sierra Nevada directly  
11 south of the Sierra Miwok. The area around Millerton Lake was at the very  
12 western edge of their territory.

13 *Historic-Era Context* The history of the Sacramento and San Joaquin  
14 Valley and foothills is largely tied to agriculture. It began with the Spanish  
15 and Mexican land grants, and continued through the development of farms  
16 and ranches to feed the thousands of miners who arrived during the Gold  
17 Rush. The Gold Rush was followed by World War II, the farm labor  
18 movement and the evolution of agribusiness that we see today. The area  
19 was sparsely populated by nonindigenous peoples just before the mid  
20 1800s, but the Gold Rush resulted in an explosion of small towns, both in  
21 the valley and in the adjacent foothills to the east, to serve the miners. The  
22 establishment of the railroad solidified the presence of these towns,  
23 allowing agricultural goods to be shipped to midwestern and eastern  
24 markets, and to the population centers along the California coast. The Clear  
25 Lake area and east slopes of the North Coast Ranges contain similar kinds  
26 of resources, though not those specifically related to the Gold Rush.

27 The control of water resources, particularly in Northern California, has  
28 played an important part in the development of the state and contributed  
29 substantially to widespread agricultural enterprises throughout the Central  
30 Valley. The construction of water-related structures and systems began at  
31 the local level during the early days of Euro-American settlement. These  
32 largely consisted of levee construction projects for flood control and  
33 reclamation purposes, such as the levee construction along the Sacramento  
34 River to protect the fledgling city of Sacramento after the great flood of  
35 1850 and the 1849 private construction of levees around Grand Island in  
36 the Delta for reclamation. The State recognized the need for integrated  
37 water-management infrastructure in Delta systems to control floodwaters,  
38 transfer water for irrigation, and reclaim land for agriculture shortly after  
39 achieving statehood. The State legislature enacted a series of measures to  
40 achieve these ends in the 1850s and 1860s.

1 These early efforts lacked cohesion and uniformity, and the need for a  
2 coordinated effort became obvious by the end of the 19th century.  
3 Accordingly, various engineering solutions were advanced at the State  
4 level by the Department of Public Works, which offered differing visions  
5 of how the Sacramento and San Joaquin rivers might be managed. In their  
6 1896 report, Marsden Manson and Carl Ewald Grunsky suggested a system  
7 of bypasses and levees, while the 1905 report of the Dabney  
8 Commission—formed of experienced officers of the U.S. Army Corps of  
9 Engineers (USACE)—focused on levees to confine the river in a more-  
10 defined channel. None of these proposals, however, were adopted.

11 Following additional heavy flooding at the close of the 19th century and  
12 into the 20th century, USACE became involved with California’s struggle  
13 to control the Sacramento and San Joaquin rivers. The joint State and  
14 federal “Jackson Report,” named after its author, U.S. Army Captain  
15 Thomas H. Jackson, was completed in 1910. The Jackson Report (often  
16 referred to as House Doc. 81) offered a comprehensive plan for flood  
17 control that embraced construction of bypasses and levees, as well as  
18 dredging. Jackson’s 1910 plan incorporated existing flood control works  
19 built by local entities into an overall system of new works designed and  
20 constructed by USACE. The Sacramento River Flood Control Project  
21 (SRFCP) was one of the largest public works projects in the nation, with  
22 hundreds of river miles dredged and thousands of miles of levees  
23 constructed, along with weirs and bypasses. It is these features—project  
24 levees, weirs (Moulton, Colusa, Tisdale, Fremont, Sacramento, Cache  
25 Creek), bypasses (Colusa, Sutter, Yolo, Sacramento), pumping plants, and  
26 related structures (Cache Creek settling basin)—that may be affected by the  
27 CVFPP.

28 The federal and State governments both continued to develop large-scale  
29 water projects throughout the first half of the 20th century, after  
30 construction of the SRFCP began in 1917. Although the State originally  
31 planned the construction of the CVP, the U.S. Bureau of Reclamation  
32 (Reclamation) initiated construction in 1935 to store and transfer water  
33 from Northern California to the southern San Joaquin Valley. Important  
34 elements of the CVP include Shasta Dam on the Sacramento River, Friant  
35 Dam on the San Joaquin River, and the Delta-Mendota Canal.

36 Later, California’s SWP was built to capture and store rainfall and  
37 snowmelt runoff in Northern California and deliver it to areas of need  
38 throughout the state. This includes water agencies and districts in Southern  
39 California, Central Coastal, San Joaquin Valley, South Bay, North Bay, and  
40 upper Feather River areas.

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1 Construction began on Oroville Dam in 1961 and on the California  
2 Aqueduct about 2 years later. The B. F. Sisk Dam, completed in 1967 to  
3 form San Luis Reservoir, is owned by Reclamation but operated by DWR.

4 *Potential Cultural Resources of the Sacramento and San Joaquin Valley*  
5 *and Foothills* Prehistoric archaeological sites are present within all  
6 portions of the Sacramento and San Joaquin Valley and foothills, and all  
7 site types are represented. Sites within the Central Valley are generally  
8 associated with mounds and natural levees along the major rivers, streams,  
9 and sloughs. These deposits have often been obliterated by agricultural  
10 practices, or have been affected by construction of levees or other water-  
11 related facilities. Identifying sites in the Sacramento and San Joaquin  
12 Valley is also complicated by the high degree of sedimentation in those  
13 areas. As a result, not all sites have visible evidence on the ground surface  
14 and may be buried under many feet of alluvium (Rosenthal et al. 2007:149–  
15 150).

16 Like valley sites, prehistoric habitation sites in the foothills are often near  
17 water, such as rivers, streams, or springs. Resource procurement or  
18 processing sites might be anywhere on the landscape where important  
19 resources (e.g., acorns and pine nuts; other botanical resources used for  
20 food, basketry, or medicine; and a variety of game animals) are present.  
21 Sites of a ceremonial or religious nature might also be located anywhere in  
22 the foothill zones.

23 It is expected that ethnographic resources would be of the same nature as  
24 those of prehistoric sites, and would be found in the same locations. Both  
25 the Central Valley and the Clear Lake area were densely populated before  
26 colonization.

27 Historic-era resources would include the full spectrum of sites related to  
28 early settlement of these regions. Resources reflecting the agricultural,  
29 mining, transportation, and settlement themes would be expected to  
30 dominate the site types, with agricultural sites dominating the Central  
31 Valley and mining sites being present in the foothill zones. Some examples  
32 of known specific historic resources within the Central Valley are Sutter's  
33 Fort, the State Capitol, and Old Sacramento State Historic Park.

34 Also in the Sacramento and San Joaquin Valley and foothills, the Central  
35 Valley's flood control works—its levees, bypasses, weirs, and control  
36 structures—form the infrastructural basis for plans by the State and federal  
37 governments to protect the farms and towns of the valley. These structures  
38 would be affected by the proposed program, and many of the elements of  
39 the SRFCP, CVP, and SWP have exceeded the 50-year age criterion for  
40 potential eligibility for the CRHR and NRHP. These include many

1 important structures that contribute to the successful operation of the  
2 system: bypasses (Colusa, Sutter, Sacramento, Yolo, Eastside, and  
3 Chowchilla), dams (Shasta, Black Butte, Indian Valley, Clear Lake,  
4 Oroville, New Bullards Bar, Folsom, Camanche, New Hogan, Farmington,  
5 New Melones, New Don Pedro, New Exchequer, Buchanan, Hidden, and  
6 Friant), weirs (Colusa, Fremont, Tisdale, Sacramento, Cache Creek, and  
7 Moulton, and the Chowchilla Bypass Bifurcation Structure), and pumping  
8 plants operated by the State and local agencies.

9 **Delta and Suisun Marsh**

10 *Prehistoric Context* The Delta and Suisun Marsh lie within the Central  
11 Valley archaeological region, described above for the Sacramento and San  
12 Joaquin Valley and foothills.

13 *Ethnographic Context* The Patwin, Plains Miwok, Bay Miwok, and  
14 Northern Valley Yokuts were the primary occupants of the area before  
15 colonization. The Patwin occupied most of the territory in the northern half  
16 of this geographic area. They held the lands surrounding Suisun Marsh,  
17 adjacent portions of the Delta eastward to the Montezuma Hills and the  
18 west edge of the Yolo Basin, and all commensurate territory to the north  
19 and west in the Delta.

20 The Plains Miwok lived directly east of the Patwin, occupying the  
21 northeastern section of the Delta and Suisun Marsh area. Their territory  
22 included the Yolo Basin on the west side of the Sacramento River, and the  
23 Delta east of the river and south nearly to the Calaveras River. The  
24 southern reach was near present-day Oakley.

25 Lands south of Suisun Bay belonged to the Bay Miwok. This territory  
26 extended east to Oakley and south around the east side of Mount Diablo.  
27 The remainder, and thus a majority of the southern half of the Delta and  
28 Suisun Marsh area, was controlled by the Northern Yokuts.

29 *Historic-Era Context* The history of the Delta and Suisun Marsh is  
30 steeped in the development of agriculture and the construction of levees to  
31 reclaim land for those purposes. These efforts date back to the mid 1800s  
32 and evolved over the next century to form and preserve the Delta's  
33 agricultural islands. Transportation has also been an important aspect of  
34 Delta history; the Delta's many waterways were used for water transport,  
35 including movement of large ships up the Sacramento and San Joaquin  
36 rivers to Sacramento and Stockton, respectively. The region has also been  
37 popular as a recreation area for boating, fishing, and hunting. The operation  
38 of duck hunting clubs in the Suisun Marsh area has supported an important  
39 recreation activity for the past 150 years.

1 *Potential Cultural Resources of the Delta and Suisun Marsh* As in the  
2 Central Valley, prehistoric archaeological sites within the Delta and Suisun  
3 Marsh are often difficult to detect because sediments have accumulated and  
4 surface features have been disturbed by agricultural and other activities.  
5 Throughout the southwest Delta, archaeological sites are often found in  
6 Piper Sands soils because of their generally higher elevations as crests of  
7 old sand dunes (West et al. 1999). Ethnographic sites would be expected in  
8 similar conditions.

9 The Delta and Suisun Marsh are anticipated to include primarily historic-  
10 era resources pertaining to agriculture, the transportation of agricultural  
11 goods, and early settlement. Numerous shipwrecks are known to be located  
12 within the waters of the rivers and sloughs in this geographic area. Early  
13 20th-century duck hunting clubs, including their associated structures,  
14 within the area might also be found historically significant. The town of  
15 Locke is an example of a known historical resource within the Delta and  
16 Suisun Marsh area. Resources related to the Central Valley flood-control  
17 system in this region include the Yolo Bypass, levees, weirs, and  
18 constructed channels, such as Victoria Canal; water supply facilities  
19 include the Clifton Court Forebay, Harvey O. Banks Pumping Plant, and  
20 Delta Cross Channel.

### 21 ***Sacramento and San Joaquin Valley Watersheds***

22 **Prehistoric Context** The Sacramento and San Joaquin Valley watersheds  
23 encompass the entire Central Valley, from Fresno north, and include the  
24 Delta. This geographic area also encompasses the watersheds of the rivers  
25 and streams in the adjacent southern Cascade Range (including the Pit  
26 River system), Sierra Nevada, and North Coast Ranges that flow into the  
27 Central Valley. Thus, all of the waterways and water bodies found within  
28 the Extended SPA are also found within the Sacramento and San Joaquin  
29 Valley watersheds. However, the Sacramento and San Joaquin Valley  
30 watersheds much more prominently incorporate portions of the  
31 Northeastern and Sierra Nevada archaeological regions, along with small  
32 sections of the North Coast archaeological region.

33 The entire watershed of the Pit River, including Goose Lake and the  
34 McCloud River, is an important aspect of the Northeastern archaeological  
35 region, as is Lake Almanor. The headwaters of many of the streams and  
36 rivers that drain westerly into the Central Valley are found within the Sierra  
37 Nevada archaeological region. Similarly, on the west side of the Central  
38 Valley, the headwaters of creeks (e.g., Sony and Putah creeks) flowing east  
39 into the valley are associated with the North Coast archaeological region.

40 **Ethnographic Context** At least 22 ethnographic groups have been  
41 identified for the Sacramento and San Joaquin Valley watersheds. From

1 north to south within the Central Valley, these include the Wintu, Nomlaki,  
2 Konkow, Patwin, Nisenan, Bay Miwok, Plains Miwok, and Northern  
3 Valley Yokuts. The occupants of the southern Cascade Range north and  
4 east of the Sacramento Valley and in the Pit River watershed were the  
5 Wintu, Shasta, Achumawi, Atsugewi, and Yana peoples. Tribes living on  
6 the west slope of the Sierra Nevada were the Maidu, Konkow, Nisenan,  
7 Washoe, Sierra Miwok, Northern Foothill Yokuts, and North Fork Mono.  
8 The Eastern and Southeastern Pomo inhabited Clear Lake and the upper  
9 reaches of Cache Creek in the North Coast Ranges. They shared territory  
10 with the Lake Miwok at the southeast end of Clear Lake and with the Lake  
11 Wappo at the south edge of the lake near Kelseyville. The Putah Creek  
12 drainage was held by the Patwin, while the Wappo were in northern Napa  
13 County.

14 Many of these tribes have already been discussed in relation to the  
15 Extended SPA, particularly those in the Central Valley, the North Coast  
16 Ranges, and the lower foothills of the Sierra Nevada. Because the Extended  
17 SPA is fully contained within the Sacramento and San Joaquin Valley  
18 watersheds area, information on those occupants is not repeated here. The  
19 remaining tribes in the Northeastern and Sierra Nevada areas are presented  
20 according to the archaeological regions with which they are primarily  
21 affiliated.

22 *Northeastern Region* Tribes that inhabited the Northeastern Region of the  
23 Sacramento and San Joaquin Valley watersheds include the Wintu, Shasta,  
24 Achumawi, Atsugewi, and Yana. The Wintu occupied a small section in  
25 the southern part of this area. This was the area surrounding Lake Shasta,  
26 and the drainages of the Sacramento and McCloud rivers upstream nearly  
27 to the Shasta-Siskiyou county line. Directly north of the Wintu, the  
28 Okwanuchu Shasta held the northwest corner of this geographic area. Their  
29 territory included the headwaters of the Sacramento and McCloud rivers,  
30 and lands north to the base of Mount Shasta.

31 Most of the Northeastern Region belonged to the Achumawi, who  
32 controlled nearly the entire watershed of the Pit River, beginning at Goose  
33 Lake. The largest concentration of known ethnographic villages is along  
34 the lower reaches of the Pit River, from the Fall River Valley downstream  
35 to their boundary with the Wintu.

36 The Atsugewi occupied the area south of the Achumawi, including a  
37 portion of the Pit River at its confluence with Horse Creek. They held most  
38 of Hat Creek, from its headwaters and downstream to near its junction with  
39 the Pit River; the headwaters of Burney Creek downstream to Burney; and  
40 the headwaters of Old Cow Creek and Cow Creek, which ultimately flow  
41 into the Sacramento River.

1 Directly west of the Atsugewi were the Yana, who inhabited the drainages  
2 and foothills of the southern Cascade Range from at or near the south bank  
3 of the Pit River, south almost to Chico. The Yana held the headwaters and  
4 virtually all of the watersheds of the creeks that flow into the Sacramento  
5 River (occupied by the Wintu and Nomlaki) within this area.

6 *Sierra Nevada* Many of the tribes living in the Sierra Nevada inhabited  
7 regions above the foothill zones. In addition to the Nisenan and the Sierra  
8 Miwok (both discussed previously), these tribes include the Maidu,  
9 Washoe, and North Fork Mono. The Maidu controlled territory surrounding  
10 most of the upper Feather River watershed, including virtually all of the  
11 North Fork Feather River above Richbar and the Middle Fork below Sierra  
12 Valley. This area encompasses Lake Almanor and Antelope Lake.

13 The Washoe occupied Sierra Valley and the headwaters of the Middle Fork  
14 Feather River, including the mountains around Lake Davis and Frenchman  
15 Lake. They also occupied the headwaters of the Stanislaus River and  
16 regularly traveled the west slope of the Sierra Nevada to gather acorns and  
17 trade with their neighbors.

18 The North Fork Mono occupied a very small segment of the Sacramento  
19 and San Joaquin Valley watersheds, along the upper reaches of the San  
20 Joaquin River above Millerton Lake.

21 **Historic-Era Context** Much of the historic context for the Sacramento  
22 and San Joaquin Valley watersheds is identical to that of the Extended  
23 SPA. Adding northeastern California, the higher elevations of the Sierra  
24 Nevada, and an expanded portion of the North Coast Ranges does little to  
25 change the overall historic-era background. However, a noticeable  
26 difference would be an emphasis on timber-related activities in these  
27 regions instead of the Gold Rush activities that occurred in the foothills.

28 **Potential Cultural Resources of the Sacramento and San Joaquin**  
29 **Valley Watersheds** The potential for the presence of prehistoric  
30 archaeological sites in the Sacramento and San Joaquin Valley watersheds  
31 is the same as the potential in both the Sacramento and San Joaquin Valley  
32 and foothills and the Delta and Suisun Marsh. Because of the harsher  
33 climates in these areas, the Northeastern and Sierra Nevada archaeological  
34 regions supported fewer people and in a more seasonal manner; thus, site  
35 density is generally lower, except around the margins of valleys, marshes,  
36 and lakes, and along major rivers and streams. On the other hand, the  
37 potential for prehistoric quarry sites is higher in these regions, along with  
38 Clear Lake and parts of Napa Valley, where important sources of tool stone  
39 (i.e., obsidian, basalt) are located. Expectations for ethnographic sites in the

1 Sacramento and San Joaquin Valley watersheds generally reflect those for  
2 the prehistoric archaeological sites.

3 Historic-era resources present in the Sacramento and San Joaquin Valley  
4 watersheds would be the same as those present in the Extended SPA.  
5 Agricultural, mining, transportation, and settlement themes would be  
6 expected to dominate the site types, with agricultural sites dominating the  
7 Central Valley, and mining and timber industry sites being present in the  
8 Sierra Nevada foothill zones. These would also be applicable to northeast  
9 California and the North Coast Ranges. Most of the currently existing flood  
10 control facilities (i.e., reservoirs, levees, bypasses, weirs) north of Fresno  
11 are also located within the Sacramento and San Joaquin Valley watersheds.

### 12 **3.8.2 Regulatory Setting**

13 The following text summarizes federal, State, and regional and local laws  
14 and regulations pertinent to evaluation of the proposed program's impacts  
15 on cultural and historic resources.

#### 16 ***Federal***

17 **National Historic Preservation Act of 1966** The National Historic  
18 Preservation Act (NHPA) established federal policy on historic  
19 preservation at a time when post–World War II infrastructure development  
20 and urban renewal projects were rapidly destroying archaeological sites and  
21 historic buildings throughout the nation. The NHPA acknowledges the  
22 importance of our heritage resources and affirms the public interest in  
23 preserving those resources so that their “vital legacy of cultural,  
24 educational aesthetic, inspirational, economic, and energy benefits will be  
25 maintained and enriched for future generations of Americans” (NHPA  
26 1966:Section 1(b)(4)). To this end, the NHPA established the National  
27 Historic Landmarks designation, the State Historic Preservation Offices  
28 (SHPOs), and the NRHP.

29 *National Register of Historic Places* The NRHP is the nation's master  
30 inventory of historic properties identified as important to the history of the  
31 United States. In California, the NRHP is administered by the National  
32 Park Service in conjunction with the SHPOs. The NRHP includes listings  
33 of buildings, structures, sites, objects, and districts that possess historic,  
34 architectural, engineering, archaeological, or cultural significance at the  
35 national, state, or local level. The NRHP criteria and associated definitions  
36 are outlined in National Register Bulletin Number 15, *How to Apply the*  
37 *National Register Criteria for Evaluation* (Andrus 1990). The criteria for  
38 eligibility for listing on the NRHP are found in 36 CFR 60.4, and include  
39 resources that:

**3.0 Environmental Setting, Impacts, and Mitigation Measures**  
**3.8 Cultural and Historic Resources**

- 1 a) are associated with events that have made a significant contribution to  
2 the broad patterns of our history; or
- 3 b) are associated with the lives of persons significant in our past; or
- 4 c) embody the distinctive characteristics of a type, period, or method of  
5 construction, or that represent the work of a master, or that possess high  
6 artistic values, or that represent a significant and distinguishable entity  
7 whose components may lack individual distinction; or
- 8 d) have yielded, or may be likely to yield, information important in  
9 prehistory or history.

10 *Section 106 Review* Section 106 of the NHPA requires a federal agency  
11 with jurisdiction over a federally funded, assisted, or licensed undertaking  
12 to take into account the effects of the agency's undertaking on properties  
13 listed or eligible for listing in the NRHP (16 U.S. Code (USC) 470 et seq.).  
14 Some individual projects under the proposed program would be under the  
15 jurisdiction of USACE or Reclamation, and these projects would need to  
16 comply with Section 106 of the NHPA.

17 For compliance with Section 106 of the NHPA, the lead federal agency or  
18 the federal agency acting as a federal nexus for Section 106 through a  
19 required federal permit such as USACE's permits for Section 10 of the  
20 Rivers and Harbors Act of 1899 and Section 404 of the Clean Water Act, is  
21 required to consult with the SHPO before granting permits, funding, or any  
22 other authorization related to the undertaking. The Section 106 review  
23 process is implemented using a five-step procedure:

- 24 • Identify and evaluate historic properties.
- 25 • Assess the effects of the undertaking on properties that are eligible for  
26 listing in the NRHP.
- 27 • Consult with the SHPO and other agencies for the development of an  
28 agreement that addresses the treatment of historic properties.
- 29 • Receive comments from the Advisory Council on Historic Preservation  
30 on the agreement or results of consultation.
- 31 • Implement the project according to the conditions of the agreement.

32 Title 36, Section 800.5(a)(1) of the CFR presents the NRHP criteria for  
33 adverse effect. An undertaking has an adverse effect when it may alter,  
34 directly or indirectly, any of the characteristics of a historic property that  
35 qualify the property for inclusion in the NRHP, in a manner that would

1 diminish the integrity of the property's location, design, setting, materials,  
2 workmanship, feeling, or association.

3 Examples of adverse effects, as listed in 36 CFR 800.5(a)(2), are as  
4 follows:

- 5 • Physical destruction of or damage to all or part of the property
- 6 • Alteration, isolation, or removal of the property, or change of the  
7 character of the property's use or of physical features within the  
8 property's setting that contribute to its historic significance
- 9 • Introduction of visual, audible, or atmospheric elements that diminish  
10 the integrity of the property's significant historic properties
- 11 • Neglect of a property that causes its deterioration, unless such  
12 deterioration is consistent with cultural values
- 13 • Transfer, lease, or sale of property out of federal ownership

14 The SHPO has 30 days to review the finding of effect for a proposed  
15 project.

16 **Antiquities Act of 1906** The Antiquities Act of 1906 (16 USC 431–433)  
17 provides for fines or imprisonment of any person convicted of  
18 appropriating, excavating, injuring, or destroying any historic or prehistoric  
19 ruin or monument or other object of antiquity that falls under the  
20 jurisdiction of the federal government.

21 **American Indian Religious Freedom Act of 1978** The American Indian  
22 Religious Freedom Act (Public Law (PL) 95-341; 42 USC 1996)  
23 established federal policy to protect and preserve the inherent rights of  
24 freedom for American Indians, Eskimos, Aleuts, and Native Hawaiians to  
25 believe, express, and exercise their traditional religions on federal and  
26 tribal trust lands. Among these rights are access to sites, use and possession  
27 of sacred objects, and the freedom to worship through traditional  
28 ceremonies and rites.

29 **Archaeological Resources Protection Act of 1979** The Archaeological  
30 Resources Protection Act (16 USC 470aa–470mm) amended the  
31 Antiquities Act, set a broad policy stating that archaeological resources are  
32 important to the nation and should be protected, and required special  
33 permits before the excavation or removal of archaeological resources from  
34 public or Indian lands. The purpose of this act was to secure, for the present  
35 and future benefit of the American people, the protection of archaeological

1 resources and sites that are on public lands and Indian lands. The act was  
2 also intended to foster increased cooperation and exchange of information  
3 between governmental authorities, the professional archaeological  
4 community, and private individuals with collections of archaeological  
5 resources and data obtained before October 31, 1979. The Archaeological  
6 Resources Protection Act also requires confidentiality of information on the  
7 nature and location of archaeological sites.

8 **Native American Graves Protection and Repatriation Act of 1990** The  
9 Native American Graves Protection and Repatriation Act (PL 101-601; 25  
10 USC 3001 et seq.) was intended to ensure the protection and rightful  
11 disposition of Native American cultural items and burials located on  
12 federal or tribal trust lands, and in the possession or control of the federal  
13 government. This law requires federal agencies and certain recipients of  
14 federal funds (including state agencies) to document Native American  
15 human remains and cultural items within their collections, notify Native  
16 groups of their holdings, and provide an opportunity for the repatriation of  
17 these materials. This act also requires planning to deal with the potential  
18 inadvertent discovery and collection of Native American human remains  
19 and associated funerary objects, sacred objects, and objects of cultural  
20 patrimony on federal and tribal trust lands.

21 **Executive Order 13007, Indian Sacred Sites, of 1996** On March 24,  
22 1996, President Bill Clinton issued Executive Order (EO) 13007, requiring  
23 executive branch agencies with statutory or administrative responsibility  
24 for management of federal lands to (1) accommodate access to and  
25 ceremonial use of Indian sacred sites by Indian religious practitioners, and  
26 (2) avoid adversely affecting the physical integrity of such sacred sites, to  
27 the extent practicable. Where appropriate, agencies must maintain the  
28 confidentiality of sacred sites.

29 **Executive Order 13175, Consultation and Coordination with Indian**  
30 **Tribal Governments, of 2000** On November 6, 2000, President Clinton  
31 issued EO 13175, recognizing the unique legal relationship between the  
32 United States and American Indian tribal governments. The executive order  
33 requires federal agencies to consult and collaborate with federally  
34 recognized Indian tribes as part of a process to strengthen government-to-  
35 government relationships. EO 13175 also established policies for reviews  
36 of waiver applications by tribes, as well as accountability practices for  
37 federal agencies in collaborating and consulting with Indian tribes.

### 38 **State**

39 **California Environmental Quality Act Statute and Guidelines** CEQA  
40 and the CEQA Guidelines include procedures for identifying, analyzing,  
41 and disclosing potential adverse impacts on cultural resources, which

1 include all resources listed in or formally determined eligible for listing in  
2 the NRHP, the CRHR, or local registers.

3 *Section 21083.2* CEQA Section 21083.2 defines a “unique archaeological  
4 resource” as “an archaeological artifact, object, or site” that meets the  
5 following criteria:

- 6 1. Contains information needed to answer important scientific questions  
7 and that there is a demonstrable public interest in that information
- 8 2. Has a special and particular quality such as being the oldest of its type  
9 or best available example of its type
- 10 3. Is directly associated with a scientifically recognized important  
11 prehistoric or historic event or person

12 Section 21083.2 also requires the lead agency to consider the effects of a  
13 project on these resources. If it is demonstrated that a project will affect a  
14 unique archaeological resource, treatment to preserve the site may be  
15 required. Such treatments may include but are not limited to:

- 16 1. Planning construction to avoid archaeological sites
- 17 2. Deeding archaeological sites into permanent conservation easements
- 18 3. Capping or covering archaeological sites with a layer of soil before  
19 building on the sites
- 20 4. Planning parks, green space, or other open space to incorporate  
21 archaeological sites

22 If a unique archaeological site cannot be avoided, mitigation, which may  
23 involve excavation, is required.

24 *Section 15064.5* Section 15064.5 of the CEQA Guidelines further requires  
25 that the lead agency mitigate substantial adverse changes to resources listed  
26 on the CRHR or local registers, and coordinate with the Native American  
27 Heritage Commission (NAHC) if Native American human remains are  
28 identified as a result of a project. A substantial adverse change is defined as  
29 “physical demolition, destruction, relocation, or alteration of the resource  
30 or its immediate surroundings such that the significance of an historical  
31 resource would be materially impaired.” Treatment and mitigation  
32 measures are further discussed under Section 15126.4(b). Section 15064.5  
33 also reiterates the need to contact NAHC if human remains are found  
34 pursuant to PRC Section 5024.1, as stated below.

1 **California Public Resources Code**

2 *PRC Section 5024.1: California Register of Historical Resources* The  
3 CRHR includes resources that are listed in or formally determined eligible  
4 for listing in the NRHP, as well as some designated California State  
5 Landmarks and Points of Historical Interest. Properties of local  
6 significance that have been designated under a local preservation ordinance  
7 (local landmarks or landmark districts) or that have been identified in a  
8 local historical resources inventory may be eligible for listing in the CRHR.  
9 Those properties are presumed to be significant resources for purposes of  
10 CEQA unless a preponderance of evidence indicates otherwise. The  
11 eligibility criteria for listing in the CRHR are similar to those for NRHP  
12 listing, but focus on the importance of the resources to California history  
13 and heritage. The criteria of eligibility for the CRHR include a resource  
14 that:

- 15 1. Is associated with events that have made a significant contribution to  
16 the broad patterns of California's history and cultural heritage
- 17 2. Is associated with the lives of persons important in our past
- 18 3. Embodies the distinctive characteristics of a type, period, region, or  
19 method of construction, or represents the work of an important creative  
20 individual, or possesses high artistic values
- 21 4. Has yielded, or may be likely to yield, information important in  
22 prehistory or history

23 *PRC Sections 5097.91 Through 5097.98: California Native American*  
24 *Heritage Commission* The California NAHC was established in 1976.  
25 This legislation requires State and local agencies to cooperate with the  
26 NAHC with respect to Native American resources. The NAHC identifies  
27 and catalogs places of special religious or social significance to Native  
28 Americans, and known graves and cemeteries of Native Americans on  
29 private lands. In addition, the NAHC performs other duties regarding the  
30 preservation and accessibility of sacred sites and burials, and the  
31 disposition of Native American human remains and burial items. If human  
32 remains of Native American origin are discovered, the NAHC is  
33 responsible for identifying the person or persons it believes to be the most  
34 likely descendant of the deceased Native American.

35 **California Health and Safety Code** Projects implemented under the  
36 proposed program would be subject to sections of the California Health and  
37 Safety Code pertaining to the discovery and treatment of human remains.

1     *Section 7050.5: Removal of Human Remains* Sections 7050.5(b) and  
2     7050.5(c) of the California Health and Safety Code pertain to the discovery  
3     of human remains in a location outside of a dedicated cemetery. Should  
4     human remains be uncovered during the course of construction, work must  
5     cease immediately in the vicinity of the finds until the county coroner has  
6     had an opportunity to examine the remains. The coroner has 2 working  
7     days to respond to notification of the presence of human remains. If the  
8     coroner determines that the finds are of an archaeological nature and are  
9     likely Native American, he or she must notify NAHC about the remains  
10    within 24 hours.

11    *Sections 8010–8030: California Native American Graves Protection and*  
12    *Repatriation Act of 2001* Sections 8010–8011 of the California Health and  
13    Safety Code establish a State repatriation policy that is consistent with and  
14    facilitates implementation of the federal Native American Graves  
15    Protection and Repatriation Act. The policy requires that all California  
16    Indian human remains and cultural items be treated with dignity and  
17    respect, and encourages voluntary disclosure and return of remains and  
18    cultural items by publicly funded agencies and museums in California. The  
19    policy provides mechanisms to aid California Indian tribes, including those  
20    not recognized by the federal government, in filing repatriation claims and  
21    obtaining responses to those claims.

### 22    ***Regional and Local***

23    Future actions under the proposed program would occur in multiple  
24    jurisdictions. As a result, each action could trigger disparate regulatory  
25    requirements related to cultural resources. For example, this may include  
26    local (county and city) ordinances and regulations regarding the  
27    preservation of historical resources. The number of possible ordinances that  
28    might be applicable to the proposed program throughout California are too  
29    numerous to list, although they will be thoroughly addressed when specific  
30    projects are implemented under the program. Consultation with local  
31    agencies regarding local cultural resources ordinances and jurisdictions will  
32    occur, as necessary.

33    Should a place-based project be defined and pursued as part of the  
34    proposed program, and should the CEQA lead agency be subject to the  
35    authority of local jurisdictions, the applicable county and city policies and  
36    ordinances would be addressed in a project-level CEQA document as  
37    necessary.

### 38           **3.8.3 Analysis Methodology and Thresholds of** 39           **Significance**

40    This section provides a program-level evaluation of the direct and indirect  
41    effects on cultural resources of implementing management actions included

1 in the proposed program. These proposed management actions are  
2 expressed as NTMAs and LTMA. The methods used to assess how  
3 different categories of NTMAs and LTMA could affect cultural resources  
4 are summarized in “Analysis Methodology”; thresholds for evaluating the  
5 significance of potential impacts are listed in “Thresholds of Significance.”  
6 Potential effects related to each significance threshold are discussed in  
7 Section 3.8.4, “Environmental Impacts and Mitigation Measures for  
8 NTMAs,” and Section 3.8.5, “Environmental Impacts, Mitigation  
9 Measures, and Mitigation Strategies for LTMA.”

10 ***Analysis Methodology***

11 Impact evaluations were based on a review of the management actions  
12 proposed under the CVFPP, expressed as NTMAs and LTMA in this  
13 PEIR, to determine whether these actions could potentially result in  
14 impacts on cultural and historical resources. NTMAs and LTMA are  
15 described in more detail in Section 2.4, “Proposed Management  
16 Activities.” The overall approach to analyzing the impacts of NTMAs and  
17 LTMA and providing mitigation is summarized below and described in  
18 detail in Section 3.1, “Approach to Environmental Analysis.” NTMAs can  
19 consist of any of the following types of activities:

- 20 • Improvement, remediation, repair, reconstruction, and operation and  
21 maintenance of existing facilities
- 22 • Construction, operation, and maintenance of small setback levees
- 23 • Purchase of easements and/or other interests in land
- 24 • Operational criteria changes to existing reservoirs that stay within  
25 existing storage allocations
- 26 • Implementation of the vegetation management strategy included in the  
27 CVFPP
- 28 • Initiation of conservation elements included in the proposed program
- 29 • Implementation of various changes to DWR and Statewide policies that  
30 could result in alteration of the physical environment

31 All other types of CVFPP activities fall within the LTMA category.  
32 NTMAs are evaluated using a typical “impact/mitigation” approach. Where  
33 impact descriptions and mitigation measures identified for NTMAs also  
34 apply to LTMA, they are also attributed to LTMA, with modifications or  
35 expansions as needed.

1 Beyond direct implementation of NTMAs and LTMAs, land use changes  
2 and induced growth are two mechanisms by which effects on cultural  
3 resources could occur. Effects of land use changes are discussed in Section  
4 3.14, “Land Use and Planning,” and the effects of induced growth are  
5 discussed in Section 6.1, “Growth-Inducing Impacts.”

#### 6 ***Thresholds of Significance***

7 The following applicable thresholds of significance have been used to  
8 determine whether implementing the proposed program would result in a  
9 significant impact. These thresholds of significance are based on the  
10 questions posed in Appendix G of the CEQA Guidelines, as amended. A  
11 cultural resource impact is considered significant if implementation of the  
12 proposed program would do any of the following when compared against  
13 existing conditions:

- 14 • Result in a substantial adverse change in the significance of a historical  
15 resource as defined in Section 15064.5 of the CEQA Guidelines
- 16 • Result in a substantial adverse change in the significance of an  
17 archaeological resource pursuant to Section 15064.5 of the CEQA  
18 Guidelines
- 19 • Disturb any human remains, including those interred outside of formal  
20 cemeteries

#### 21 **3.8.4 Environmental Impacts and Mitigation Measures** 22 **for NTMAs**

23 This section describes the physical effects of NTMAs on cultural and  
24 historic resources. For each impact discussion, the environmental effect is  
25 determined to be either less than significant, significant, potentially  
26 significant, or beneficial compared to existing conditions and relative to the  
27 thresholds of significance described above. These significance categories  
28 are described in more detail in Section 3.1, “Approach to Environmental  
29 Analysis.” Feasible mitigation measures are identified to address any  
30 significant or potentially significant impacts. Actual implementation,  
31 monitoring, and reporting of the PEIR mitigation measures would be the  
32 responsibility of the project proponent for each site-specific project. For  
33 those projects not undertaken by, or otherwise subject to the jurisdiction of,  
34 DWR or the Board, the project proponent generally can and should  
35 implement all applicable and appropriate mitigation measures. The project  
36 proponent is the entity with primary responsibility for implementing  
37 specific future projects and may include DWR; the Board; reclamation  
38 districts; local flood control agencies; and other federal, State, or local  
39 agencies. Because various agencies may ultimately be responsible for  
40 implementing (or ensuring implementation of) mitigation measures

1 identified in this PEIR, the text describing mitigation measures below does  
2 not refer directly to DWR but instead refers to the “project proponent.”  
3 This term is used to represent all potential future entities responsible for  
4 implementing, or ensuring implementation of, mitigation measures.

5 **Impact CUL-1 (NTMA): *Potential Damage to or Destruction of Known***  
6 ***Archaeological Resources from Ground Disturbance or Other***  
7 ***Construction-Related Activities***

8 Construction of flood protection structures might reduce impacts on  
9 cultural sites that would be eroded and damaged by flooding by reducing  
10 the frequency of flood events. However, construction activities associated  
11 with NTMAs, such as building new levees or modifying or repairing  
12 existing structures, could affect known prehistoric and historic-era  
13 archaeological resources that are listed in, or eligible for listing in, the  
14 NRHP and the CRHR. Significant impacts on known archaeological sites  
15 could result from such actions as preparing levee foundations on top of a  
16 site or grading an access road related to levee construction through an  
17 archaeological deposit. Therefore, this impact would be **potentially**  
18 **significant**.

19 **Mitigation Measure CUL-1a (NTMA): *Conduct Cultural Resource***  
20 ***Studies and Avoid Effects on Known Archaeological Resources***

21 To minimize potential adverse effects on prehistoric and historic-era  
22 archaeological resources, the project proponent will conduct cultural  
23 resource studies before project approval (where feasible and appropriate) to  
24 identify the presence of such resources at all project sites. Where field  
25 surveys cannot be completed before project approval, such as in locations  
26 where access permission has not been received, field surveys will be  
27 completed before ground disturbance begins. These archaeological studies  
28 and surveys will be conducted by professionals who meet the Secretary of  
29 the Interior’s standards for archaeology professionals. Should resources  
30 eligible for listing in the NRHP and CRHR be identified within the study  
31 area, effects on those resources resulting from any NTMA will be avoided,  
32 if feasible. Methods of avoidance may include redesigning or relocating the  
33 project, such as moving an access road around an archaeological site  
34 instead of through it.

35 Where avoidance is implemented and no further mitigation is required,  
36 implementing this mitigation measure would reduce Impact CUL-1  
37 (NTMA) to a **less-than-significant** level. Where avoidance is not feasible,  
38 see Mitigation Measure CUL-1b (NTMA) below.

1     **Mitigation Measure CUL-1b (NTMA): *Conduct Additional Evaluations***  
2     ***and Recover Sufficient Data to Compensate for Damage to or***  
3     ***Destruction of Known Archaeological Sites***

4     If a substantial adverse change to an archaeological resource that has been  
5     determined as eligible for listing in the NRHP or the CRHR cannot be  
6     avoided, the project proponent will deploy a qualified archaeologist to  
7     conduct additional research and other tasks. These tasks will include  
8     preparing a research design; conducting additional archival and historical  
9     research, when appropriate; conducting an archaeological excavation;  
10    analyzing artifacts, features, and other attributes of the resource; and  
11    preparing a technical report documenting the methods and results of the  
12    investigation in accordance with the California Office of Historic  
13    Preservation's *Guidelines for Archaeological Research Design* (1991). The  
14    purpose of this work will be to recover a sufficient quantity of data to  
15    compensate for damage to or destruction of the resource. The procedures to  
16    be employed in this data recovery program will be determined in  
17    consultation with responsible agencies and interested parties, such as  
18    Native American tribes, as appropriate. The approved measures must be  
19    implemented before construction activities occur at the archaeological site.

20    An alternative method to mitigate impacts on archaeological sites  
21    considered eligible for listing in the NRHP and CRHR is to have the  
22    primary construction contractor for the project proponent cap the site with  
23    soil, gravels, rock, or appropriate vegetation to protect the deposit. For  
24    example, sites subject to inundation and water-level fluctuations may be  
25    protected from erosion by application of a layer of gravel/rock or soil, or  
26    both. A layer of soil (i.e., sterile fill) may also be placed over a site where  
27    construction of a building is planned, such that all construction activities  
28    will occur in the fill material. For sites located in areas subject to looting,  
29    vegetation such as blackberry brambles or wild rose may be planted over  
30    the site as a useful deterrent, but only in areas where operations and  
31    maintenance of facilities would not be impaired by the deterrent vegetation.  
32    If capping an archaeological site proves necessary, the project proponent  
33    will provide the materials and labor, regularly monitor and evaluate the  
34    efficacy of the mitigation, and refresh the protection, when necessary.

35    Implementing Mitigation Measures CUL-1a (NTMA) and CUL-1b  
36    (NTMA) would reduce Impact CUL-1 (NTMA) to a **less-than-significant**  
37    level.

38    **Impact CUL-2 (NTMA): *Potential Damage to or Destruction of***  
39    ***Previously Undiscovered Buried Archaeological Resources from Ground***  
40    ***Disturbance or Other Construction-Related Activities***

1 Not all archaeological resources are visible on the ground surface.  
2 Depending on the location and landform, sites have the potential to be  
3 located wherever Holocene alluvium has accumulated, and deposits have  
4 been uncovered at depths of up to 20 feet in the Central Valley (Meyer et  
5 al. 2010). Construction of flood protection structures might reduce erosion  
6 caused by floods that might otherwise expose and damage unknown buried  
7 sites. However, ground-disturbing construction activities associated with  
8 NTMAs, such as building new levees or access roads, could affect NRHP-  
9 and CRHR-eligible prehistoric and historic-era archaeological resources  
10 that are buried and not visible on the ground surface. Therefore, this impact  
11 would be **potentially significant**.

12 **Mitigation Measure CUL-2 (NTMA): *If Cultural Resources Are***  
13 ***Discovered, Immediately Halt Construction and Implement an***  
14 ***Accidental-Discovery Plan***

15 Should cultural resources such as structural features, unusual amounts of  
16 bone or shell, artifacts, human remains, or architectural remains be  
17 encountered during construction activities, work will be suspended  
18 immediately at the location of the find and within a 50-foot radius. A  
19 qualified archaeologist will conduct a field investigation of the specific site  
20 and recommend mitigation necessary to protect or recover any cultural  
21 resource determined by the archaeologist to represent a historical resource  
22 or unique archaeological resource.

23 Based on the archaeologist's recommendations, the project proponent will  
24 develop measures in consultation with responsible agencies and, as  
25 appropriate, interested parties such as Native American tribes. The  
26 approved mitigation must be implemented before construction activities  
27 resume at the archaeological site.

28 All of the steps identified above will be detailed in an accidental-discovery  
29 plan developed before construction so that all parties are aware of the  
30 process that must be implemented should buried archaeological resources  
31 be uncovered during construction.

32 Construction monitoring by a qualified archaeologist in areas determined  
33 particularly sensitive for buried archaeological remains will be  
34 implemented by project proponents when warranted, as recommended by  
35 the archaeological professional. Reasons for providing an archaeological  
36 monitor may include but are not limited to the previous identification of  
37 buried cultural deposits in the project vicinity or the previous recordation of  
38 an archaeological site that could not be recently identified on the ground  
39 surface. Furthermore, some landforms, such as mounded areas in  
40 floodplains adjacent to water courses, are likely to be sensitive for buried

1 resources. Large-scale projects involving a great deal of ground disturbance  
2 (e.g., lengthy levee construction) could benefit from geoarchaeological  
3 studies to determine those areas most likely to contain buried cultural  
4 deposits.

5 Discoveries of human remains will be treated as described in Mitigation  
6 Measure CUL-5c (NTMA), below.

7 Implementing this mitigation measure would reduce Impact CUL-2  
8 (NTMA) to a **less-than-significant** level.

9 **Impact CUL-3 (NTMA): *Potential Damage or Disturbance to or Change***  
10 ***in Significance of Built-Environment Resources***

11 Buildings and other structures (e.g., bridges, weirs, pumping facilities), as  
12 well as features such as roads, canals, ditches, levees, and power lines,  
13 constitute the built environment. Although many of these elements may  
14 exceed 50 years in age, they do not necessarily qualify as historical  
15 resources or historic properties. However, some of these types of built  
16 resources have the potential to meet the eligibility criteria for listing in the  
17 NRHP and the CRHR (see eligibility criteria in Section 3.8.2, above),  
18 either as contributing elements to districts, such as water systems, or as  
19 individual properties. Projects associated with NTMAs could cause  
20 substantial adverse change to eligible resources that are part of the built  
21 environment, possibly via construction or maintenance activities that could  
22 either destroy or modify elements that contribute to the eligibility of a  
23 particular resource. Construction of a new levee that causes an eligible  
24 house to be razed is one example of significant adverse change resulting in  
25 destruction of a resource. Modernization of a weir that has been determined  
26 individually eligible owing to its method of construction, whereby  
27 alterations significantly modify the original design and configuration of the  
28 structure, could be considered a maintenance activity that has an adverse  
29 effect on an eligible resource. Conversely, further alterations to levee and  
30 water conveyance systems that have experienced routine maintenance and  
31 upgrades (e.g., increasing the height or width of levees) would not be  
32 considered adverse effects because the structures have been previously  
33 modified and new modifications would not compromise their continued  
34 historic use.

35 However, because implementing the proposed program could adversely  
36 affect the eligibility of elements of the built environment that constitute  
37 historic resources for listing in the NRHP or the CRHR, this impact would  
38 be **potentially significant**.

1 **Mitigation Measure CUL-3a (NTMA): *Conduct Cultural Resources***  
2 ***Studies and Avoid Effects on Built-Environment Resources***

3 In areas potentially containing historic resources, the project proponent will  
4 ensure that architectural history studies and surveys will be conducted by  
5 professionals who meet the Secretary of the Interior's professional  
6 standards, to identify the presence of built-environment resources within a  
7 particular project location. Should buildings or structures that are eligible  
8 for listing in the NRHP or CRHR be identified within the study area,  
9 impacts on those resources resulting from any NTMA will be avoided, if  
10 feasible. Project relocation and redesign are appropriate avoidance  
11 measures. For example, should constructing a new levee require removal of  
12 a historic farmhouse, realigning the levee away from the structure would  
13 avoid a significant adverse change to the structure.

14 Where avoidance is implemented and no further mitigation is required,  
15 implementing this mitigation measure would reduce Impact CUL-3  
16 (NTMA) to a **less-than-significant** level. If avoidance is not feasible, see  
17 Mitigation Measure CUL-3b (NTMA) below.

18 **Mitigation Measure CUL-3b (NTMA): *Follow the Secretary of the***  
19 ***Interior's Standards for the Treatment of Historic Properties***

20 In some cases, completely avoiding an element of the built environment  
21 that qualifies as a historical resource or historic property may not be  
22 feasible, and the feature must be altered as part of project implementation.  
23 In such a scenario, any program-related alterations to historic-era buildings  
24 or structures, including relocations, will conform to the *Secretary of the*  
25 *Interior's Standards for the Treatment of Historic Properties and*  
26 *Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing*  
27 *Historic Buildings* (1995). The project proponent will develop and  
28 implement any plans necessary to mitigate alterations to historic properties  
29 in accordance with these standards. The plans will be submitted to the  
30 SHPO for approval before project implementation.

31 Where a resource can be modified or relocated consistent with these  
32 standards and no further mitigation is required, implementing this  
33 mitigation measure would reduce Impact CUL-3 (NTMA) to a **less-than-**  
34 **significant** level. If these standards cannot be met, see Mitigation Measure  
35 CUL-3c (NTMA) below.

36 **Mitigation Measure CUL-3c (NTMA): *Record Built-Environment***  
37 ***Resources to Historic American Buildings Survey and Historic American***  
38 ***Engineering Record Standards***

1 In some cases, avoiding or relocating a building or structure considered  
2 eligible for the NRHP or CRHR may not be feasible, and that resource  
3 must be demolished. These situations are expected to be rare occurrences.  
4 However, in such a scenario, the project proponent will retain a qualified  
5 architectural historian to document the affected historical built-environment  
6 resource according to Historic American Buildings Survey (HABS) or  
7 Historic American Engineering Record (HAER) standards, as appropriate.  
8 HABS and HAER documentation packages will be entered into the Library  
9 of Congress, as well as the appropriate Information Center of the California  
10 Historical Resources Information System.

11 However, recording a building or structure to HABS/HAER standards as  
12 described in Mitigation Measure CUL-3c (NTMA) may not reduce the  
13 impact on significant historic buildings and structures to a less-than-  
14 significant level; although information on the building or structure would  
15 be recorded, the building or structure would still be removed. Where  
16 Mitigation Measure CUL-3c (NTMA) must be implemented, Impact CUL-  
17 3 would be **potentially significant and unavoidable**.

18 **Impact CUL-4 (NTMA): *Potential Damage or Disturbance to***  
19 ***Traditional Cultural Properties during Ground Disturbance or Other***  
20 ***Construction-Related Activities***

21 Traditional cultural properties (TCPs) are cultural resources with tangible  
22 locations that are important to the cultural continuity and longevity of a  
23 community, have been important to the community for more than 50 years,  
24 and meet the criteria for eligibility for listing in the NRHP and CRHR.  
25 Although most TCPs in California are associated with Native American  
26 communities, they are not exclusively so. TCPs can be archaeological or  
27 built-environment resources, or they can be features of the natural  
28 landscape. TCPs are often locations on the landscape that have sacred or  
29 other special meaning to Native American communities. Cultivating and  
30 harvesting plants for traditional medicines and foods, and for uses such as  
31 basketry, remain important activities to Native American communities.  
32 Some of the areas where such plants grow, which are often located adjacent  
33 to rivers and streams, may qualify as TCPs. Ground-disturbing construction  
34 activities or the demolition or modification of the built environment  
35 associated with NTMA projects could cause a significant adverse change to  
36 TCPs. Therefore, this impact would be **potentially significant**.

37 **Mitigation Measure CUL-4a (NTMA): *Conduct Cultural Resources***  
38 ***Studies and Avoid Effects on TCPs***

39 In areas potentially containing traditional cultural properties, an  
40 ethnographer or archaeologist who meets the Secretary of the Interior's

1 standards as a professional cultural resource specialist will consult with  
2 appropriate populations (Native Americans or otherwise) before approval  
3 of any project and identify the presence of any TCPs at the project location.  
4 Native American TCPs may be identified by an ethnographer who has  
5 worked intensively with community members (often, but not always,  
6 elders) possessed of considerable knowledge about places important to the  
7 community. Should TCPs be identified in the project area, they will be  
8 avoided by project redesign or relocation, if feasible. As an example, the  
9 proposed location of a water-monitoring device may be moved to another,  
10 still appropriate, place along a stream bed to avoid a section of the creek  
11 bank that is a TCP for medicinal plants, thereby avoiding a substantial  
12 adverse change to the resource.

13 Where avoidance is implemented and no further mitigation is required,  
14 implementing this mitigation measure would reduce Impact CUL-4  
15 (NTMA) to a **less-than-significant** level. However, if avoidance is not  
16 feasible, see Mitigation Measure CUL-4b (NTMA) below.

17 **Mitigation Measure CUL-4b (NTMA): *Consult with Native American***  
18 ***Communities and Implement Appropriate Measures to Mitigate Effects***  
19 ***on TCPs***

20 Effects to TCPs are expected to be rare occurrences. However, where an  
21 identified TCP cannot be fully avoided by a proposed project, the project  
22 proponent will engage in early, meaningful consultation with Native  
23 American communities to identify ways to mitigate impacts on TCPs. For  
24 example, if TCP locations that presently support plant species cultivated  
25 and harvested by Native American communities for traditional medicines  
26 and foods, or for uses such as basketry, are slated for destruction to make  
27 way for planned construction, the project proponent may work with the  
28 Native American community associated with the TCP to identify other  
29 nearby locations that can support these same plants. The project proponent  
30 can then take steps to enhance existing plant populations at those locations  
31 or provide materials and labor to cultivate new plants, with assistance from  
32 the Native American community.

33 Working with local Native American communities to develop interpretive  
34 programs is another measure to mitigate impacts on TCPs. Programs may  
35 include developing signage, constructing visitor centers describing  
36 locations that have sacred or other special meaning to Native Americans,  
37 developing and implementing management plans for important cultural  
38 resources, or establishing conservation easements to protect culturally  
39 important places.

1 Implementing Mitigation Measure CUL-4a (NTMA) and a suite of  
2 measures as necessary in Mitigation Measure CUL-4b (NTMA) would  
3 reduce Impact CUL-4 (NTMA) to a less-than-significant level in most  
4 cases, but may not necessarily reduce impacts on some categories of TCPs.  
5 For example, a tribe's sacred site that is regularly visited for ceremonies  
6 could be destroyed during levee construction. In this situation, the direct  
7 impacts of the action cannot be fully mitigated even though some form of  
8 mitigation may be negotiated with the tribe to ameliorate the action. In such  
9 instances, Impact CUL-4 (NTMA) would be **potentially significant and**  
10 **unavoidable.**

11 **Impact CUL-5 (NTMA): *Potential Damage or Disturbance to Human***  
12 ***Remains, Including Those Interred Outside of Formal Cemeteries,***  
13 ***during Ground Disturbance or Other Construction-Related Activities***

14 Cemeteries are defined by fencing or grave markers or both, but they may  
15 also be unmarked. Marked cemeteries may be informal family cemeteries  
16 found in rural settings or formal entities managed by local governments or  
17 cemetery boards. Formal cemeteries, in particular, can often be identified  
18 during record searches early in the project-planning process. However,  
19 unmarked cemeteries and Native American burials are difficult to locate  
20 during project planning and are often discovered only after construction has  
21 begun. Ground disturbance associated with NTMAs could disturb  
22 cemeteries and burial places, especially previously undiscovered burial  
23 places. Because cemeteries and burial places could be disturbed, this  
24 impact would be **potentially significant.**

25 **Mitigation Measure CUL-5a (NTMA): *Conduct Cultural Resources***  
26 ***Studies and Avoid Effects on Human Remains***

27 The project proponent will ensure that archaeological and historical studies  
28 and surveys will be conducted by professionals who meet the Secretary of  
29 the Interior's standards, to identify the presence of human remains within a  
30 particular project location. Should human remains be identified within the  
31 study area, impacts on those remains resulting from any NTMA will be  
32 avoided, if feasible. Project relocation and redesign are appropriate  
33 avoidance measures. For example, should construction of a new  
34 maintenance facility be proposed at a place known to contain human  
35 remains, relocation of the facility would avoid disturbing the burials.

36 Where avoidance is implemented and no further mitigation is required,  
37 implementing this mitigation measure would reduce Impact CUL-5  
38 (NTMA) to a **less-than-significant** level. However, if avoidance is not  
39 feasible, see Mitigation Measures CUL-5b (NTMA) and/or CUL-5c  
40 (NTMA) below, as applicable.

1 **Mitigation Measure CUL-5b (NTMA): *Relocate Known Cemeteries***

2 The project proponent will consult with the entity (county, city, or private)  
3 that has jurisdiction over the cemetery, and with interested parties as  
4 appropriate, to identify a satisfactory place to relocate human remains that  
5 would provide protection from future disturbance. Similarly, if Native  
6 American burials are known to exist in an archaeological site, the project  
7 proponent will work with the appropriate tribe to identify a satisfactory  
8 location for reinterment of burials in a protected location. In these and other  
9 circumstances where a known cemetery must be relocated, implementing  
10 this mitigation measure would reduce Impact CUL-5 (NTMA) to a **less-**  
11 **than-significant** level.

12 **Mitigation Measure CUL-5c (NTMA): *Immediately Halt Construction***  
13 ***If Human Remains Are Discovered and Implement a Burial Treatment***  
14 ***Plan***

15 Construction activities have the potential to result in unanticipated effects  
16 on buried human remains where there is no surface indication of their  
17 presence. Under these circumstances, the project proponent will adhere to  
18 the requirements described in Section 7050.5 of the California Health and  
19 Safety Code and PRC Section 5097.98:

- 20 • If human remains are uncovered during ground-disturbing activities,  
21 potentially damaging excavation must halt in the area of the remains  
22 and the local county coroner must be notified. The coroner is required  
23 to examine all discoveries of human remains within 48 hours of  
24 receiving notice of a discovery on private or state lands (Health and  
25 Safety Code, Section 7050.5(b)).
- 26 • If the coroner determines that the remains are those of a Native  
27 American, he or she must contact the NAHC by phone within 24 hours  
28 of making that determination (Health and Safety Code, Section  
29 7050(c)).
- 30 • In turn, under the provisions of PRC Section 5097.98, NAHC will  
31 identify a Most Likely Descendant (MLD). The MLD designated by the  
32 NAHC will have at least 48 hours to inspect the site and propose  
33 treatment and disposition of the remains and any associated grave  
34 goods.

35 For large projects (e.g., new levee construction) or projects where a high  
36 probability of encountering human remains exists, a burial treatment plan  
37 will be developed by the project proponent in consultation with local  
38 Native American tribes before construction. During this process, all parties

1 will be made aware of the actions required should buried Native American  
2 human remains be uncovered during construction. The plan will detail all  
3 of the activities identified above and include treatment preferences  
4 identified by the MLD.

5 Smaller, localized projects do not require a burial treatment plan. Examples  
6 of such projects are modifications of existing facilities and projects that do  
7 not involve ground disturbance (e.g., purchases of easements, structure  
8 modifications). However, should human remains be uncovered during these  
9 project activities, treatment of the remains will strictly follow the  
10 requirements in Section 7050.5 of the California Health and Safety Code  
11 and PRC Section 5097.98.

12 Implementing Mitigation Measures CUL-5a (NTMA), CUL-5b (NTMA),  
13 and CUL-5c (NMTA) and complying with other provisions of the  
14 California Health and Safety Code would reduce Impact CUL-5 (NTMA)  
15 to a **less-than-significant** level.

### 16 **3.8.5 Environmental Impacts, Mitigation Measures, and** 17 **Mitigation Strategies for LTMA**

18 This section describes the physical effects of LTMA on cultural and  
19 historic resources. LTMA include a continuation of activities described as  
20 part of the NTMA and all other actions included in the proposed program,  
21 and consist of all of the following types of activities:

- 22 • Widening floodways (through setback levees and/or purchase of  
23 easements)
- 24 • Constructing weirs and bypasses
- 25 • Constructing new levees
- 26 • Changing operation of existing reservoirs
- 27 • Achieving protection of urban areas from a flood event with 0.5 percent  
28 risk of occurrence
- 29 • Changing policies, guidance, standards, and institutional structures
- 30 • Implementing additional and ongoing conservation elements

31 Actions included in the LTMA are described in more detail in Section 2.4,  
32 “Proposed Management Activities.”

1 Impacts and mitigation measures identified above for NTMAs would also  
2 be applicable to many of the LTMAs and are identified below. The NTMA  
3 impact discussions and mitigation measures are modified or expanded  
4 where appropriate, or new impacts and mitigation measures are included if  
5 needed, to address conditions unique to LTMAs. The same approach to  
6 future implementation of mitigation measures described above for NTMAs  
7 and the use of the term “project proponent” to identify the entity  
8 responsible for implementing mitigation measures also apply to LTMAs.

9 ***LTMA Impacts and Mitigation Measures***

10 ***Impact CUL-1 (LTMA): Potential Damage to or Destruction of Known***  
11 ***Archaeological Resources from Ground Disturbance or Other***  
12 ***Construction-Related Activities***

13 Where the LTMAs would continue activities included in the NTMAs, this  
14 impact would be the same as Impact CUL-1 (NTMA). However, the  
15 LTMAs also would include activities of greater scope, which could result  
16 in greater direct effects on prehistoric and historic-era archaeological  
17 resources eligible for listing in the NRHP and the CRHR. Those activities  
18 could involve constructing flood bypasses and restoring and realigning  
19 stream channels. In addition to the impact examples provided under Impact  
20 CUL-1 (NTMA), archaeological sites could be affected by wave activity  
21 from modified reservoir fluctuations. The LTMAs would also occur across  
22 a broader geographic setting than the NTMAs. This impact would be  
23 **potentially significant.**

24 ***Mitigation Measure CUL-1a (LTMA): Implement Mitigation Measure***  
25 ***CUL-1a (NTMA)***

26 Where avoidance is implemented and no further mitigation is required,  
27 implementing this mitigation measure would reduce Impact CUL-1  
28 (LTMA) to a **less-than-significant** level. Where avoidance is not feasible,  
29 see Mitigation Measure CUL-1b (LTMA) below.

30 ***Mitigation Measure CUL-1b (LTMA): Implement Mitigation Measure***  
31 ***CUL-1b (NTMA)***

32 Implementing Mitigation Measures CUL-1a (LTMA) and CUL-1b  
33 (LTMA) would reduce Impact CUL-1 (LTMA) to a **less-than-significant**  
34 level.

35 ***Impact CUL-2 (LTMA): Potential Damage to or Destruction of***  
36 ***Previously Undiscovered Buried Archaeological Resources from Ground***  
37 ***Disturbance or Other Construction-Related Activities***

1 Where the LTMAAs would continue activities included in the NTMAAs, this  
2 impact would be the same as Impact CUL-2 (NTMA). However, the  
3 LTMAAs also would include activities of greater scope, which could result  
4 in greater direct effects on prehistoric and historic-era archaeological  
5 resources eligible for listing in the NRHP and the CRHR. Those activities  
6 could involve constructing flood bypasses and restoring and realigning  
7 stream channels. The LTMAAs would also occur across a broader  
8 geographic setting than the NTMAAs. This impact would be **potentially**  
9 **significant**.

10 **Mitigation Measure CUL-2 (LTMA): *Implement Mitigation Measure***  
11 ***CUL-2 (NTMA)***

12 Implementing this mitigation measure would reduce Impact CUL-2  
13 (LTMA) to a **less-than-significant** level.

14 **Impact CUL-3 (LTMA): *Potential Damage or Disturbance to or Change***  
15 ***in Significance of Built-Environment Resources***

16 Where the LTMAAs would continue activities included in the NTMAAs, this  
17 impact would be the same as Impact CUL-3 (NTMA). However, the  
18 LTMAAs also include activities of greater scope, which could result in  
19 greater direct effects on historic resources or properties. Those activities  
20 could involve constructing new weirs and bypasses. This impact would be  
21 **potentially significant**.

22 **Mitigation Measure CUL-3a (LTMA): *Implement Mitigation Measure***  
23 ***CUL-3a (NTMA)***

24 Where avoidance is implemented and no further mitigation is required,  
25 implementing this mitigation measure would reduce Impact CUL-3  
26 (LTMA) to a **less-than-significant** level. If avoidance is not feasible, see  
27 Mitigation Measure CUL-3b (LTMA) below.

28 **Mitigation Measure CUL-3b (LTMA): *Implement Mitigation Measure***  
29 ***CUL-3b (NTMA)***

30 Where a resource can be modified or relocated consistent with these  
31 standards and no further mitigation is required, implementing this  
32 mitigation measure would reduce Impact CUL-3 (LTMA) to a **less-than-**  
33 **significant** level. If these standards cannot be met, see Mitigation Measure  
34 CUL-3c (LTMA) below.

35 **Mitigation Measure CUL-3c (LTMA): *Implement Mitigation Measure***  
36 ***CUL-3c (NTMA)***

1 Recording a building or structure to HABS/HAER standards as described  
2 in Mitigation Measure CUL-3c (LTMA) would not reduce the impact on  
3 significant historic buildings and structures to a less-than-significant level;  
4 although information on the building or structure would be recorded, the  
5 building or structure would still be removed. Where Mitigation Measure  
6 CUL-3c (LTMA) must be implemented, Impact CUL-3 (LTMA) would be  
7 **potentially significant and unavoidable**.

8 **Impact CUL-4 (LTMA): *Potential Damage or Disturbance to***  
9 ***Traditional Cultural Properties during Ground Disturbance or Other***  
10 ***Construction-Related Activities***

11 Where the LTMA would continue activities included in the NTMA, this  
12 impact would be the same as Impact CUL-4 (NTMA). However, the  
13 LTMA also include activities of greater scope, which could result in  
14 greater direct effects on TCPs. Those activities could involve constructing  
15 flood bypasses and restoring and realigning stream channels. This impact  
16 would be **potentially significant**.

17 **Mitigation Measure CUL-4a (LTMA): *Implement Mitigation Measure***  
18 ***CUL-4a (NTMA)***

19 Where avoidance is implemented and no further mitigation is required,  
20 implementing this mitigation measure would reduce Impact CUL-4  
21 (LTMA) to a **less-than-significant** level. However, if avoidance is not  
22 feasible, see Mitigation Measure CUL-4b (LTMA) below.

23 **Mitigation Measure CUL-4b (LTMA): *Implement Mitigation Measure***  
24 ***CUL-4b (NTMA)***

25 Implementing Mitigation Measure CUL-4a (LTMA) and a suite of  
26 measures as necessary in Mitigation Measure CUL-4b (LTMA) would  
27 reduce Impact CUL-4 (LTMA) to a less-than-significant level in most  
28 cases, but would not necessarily reduce impacts on some categories of  
29 TCPs. In such instances, Impact CUL-4 (LTMA) would be **potentially**  
30 **significant and unavoidable**.

31 **Impact CUL-5 (LTMA): *Potential Damage or Disturbance to Human***  
32 ***Remains, Including Those Interred Outside of Formal Cemeteries,***  
33 ***during Ground Disturbance or Other Construction-Related Activities***

34 This impact would be similar to Impact CUL-5 (NTMA), as described  
35 above. Actions that could affect cemeteries and burial places under the  
36 LTMA include modifying or constructing new weirs and bypasses. This  
37 impact would be **potentially significant**.

1    **Mitigation Measure CUL-5a (LTMA): *Implement Mitigation Measure***  
2    ***CUL-5a (NTMA)***

3    Where avoidance is implemented and no further mitigation is required,  
4    implementing this mitigation measure would reduce Impact CUL-5  
5    (LTMA) to a **less-than-significant** level. However, if avoidance is not  
6    feasible, see Mitigation Measures CUL-5b (LTMA) and/or CUL-5c  
7    (LTMA) below, as applicable.

8    **Mitigation Measure CUL-5b (LTMA): *Implement Mitigation Measure***  
9    ***CUL-5b (NTMA)***

10   If Native American burials are known to exist in an archaeological site, the  
11   project proponent will work with the appropriate tribe to identify a  
12   satisfactory location for reinterment of burials in a protected location. In  
13   these and other circumstances where a known cemetery must be relocated,  
14   implementing this mitigation measure would reduce Impact CUL-5  
15   (LTMA) to a **less-than-significant** level.

16   **Mitigation Measure CUL-5c (LTMA): *Implement Mitigation Measure***  
17   ***CUL-5c (NTMA)***

18   Implementing Mitigation Measures CUL-5a (LTMA), CUL-5b (LTMA),  
19   and CUL-5c (LMTA) and complying with other provisions of the  
20   California Health and Safety Code would reduce Impact CUL-5 (LTMA)  
21   to a **less-than-significant** level.

22    ***LTMA Impact Discussions and Mitigation Strategies***

23    The impacts of the proposed program's NTMAs and LTMA's related to  
24    cultural and historic resources and the associated mitigation measures are  
25    thoroughly described and evaluated above. The general narrative  
26    descriptions of additional LTMA impacts and mitigation strategies for  
27    those impacts that are included in other sections of this draft PEIR are not  
28    required for cultural and historic resources.