

## **CHAPTER 14**

### **CULTURAL RESOURCES**

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Cultural resources defined within the framework of the regulations include archeological sites, historic sites, and traditional cultural properties associated with Native Americans and other cultural groups. Actions that physically disturb a site, alter its setting, or introduce elements out of character with the site may constitute a potential impact. Similarly, if a site is eligible for inclusion in the National Register of Historic Places (NRHP), any type of physical damage results in a permanent loss of information that reduces our understanding of the site's contribution to the past.

Cultural resources are evaluated because the Proposed Project/Action and alternatives considered in this EIR/EIS could alter environmental conditions (e.g., changes in water surface elevation levels) related to exposure or inundation of cultural resources within the project study area.

#### **14.1 ENVIRONMENTAL SETTING/AFFECTED ENVIRONMENT**

Information regarding traditional cultural properties, historic properties, and ethnographic resources located in the project study area can be used to characterize the prehistoric, ethnographic, and historic cultural resources that may be affected by the Proposed Project/Action and alternatives. The information provided below is organized by waterbody, and also identifies: (1) the early human and Native American groups that lived in the area; (2) cultural surveys performed at locations of archeological interest; and (3) the number and nature of sites of cultural or historical importance. Because of the ongoing, severe problem of pothunting or vandalism to cultural resources, documents describing site locations are exempt from public review under the California Public Records Act (PRC 6254.10). Therefore, cultural resource descriptions are discussed in general, by region.

##### **14.1.1 YUBA REGION**

The Yuba Region includes New Bullards Bar Reservoir, Englebright Reservoir, lower Yuba River downstream to the confluence with the Feather River, and groundwater well locations within Yuba County.

###### **14.1.1.1 NEW BULLARDS BAR RESERVOIR**

Investigation of the area around New Bullards Bar Reservoir revealed prehistoric evidence of the Northwestern Maidu settlements and earlier distinct Mesilla and Martis cultural complexes. The east side of New Bullards Bar Reservoir, which experienced a recent fire, was subject to an intense pedestrian survey of cultural resources; inventories of the reservoir's west side are few. The reservoir contains 12 recorded prehistoric sites, two of which also are historic sites. Ten of the sites are inundated. Nine studies comprise the body of literature pertaining to the area within reservoir boundaries (Baldrica 2000; Deal 1980; Meals 1978; Riddell and Olsen 1966).

###### **14.1.1.2 LOWER YUBA RIVER**

The Maidu and Nisenan occupied the areas around the Yuba River. The Maidu is the Native American group indigenous to Yuba County. Nisenan villages were generally located along the watercourses in the county with a major political Nisenan site near the mouth of the Yuba

River. Eels and salmon were caught in immense quantities in the larger watercourses and the Nisenan were able to transform huge seasonal surpluses of salmon into a reliable year-round staple by drying the fish and pounding it into a meal that could be preserved for at least a year. Traditional cultural practices of both the Maidu and Nisenan include weaving baskets and tule mats.

### **14.1.1.3 NORTH YUBA AND SOUTH YUBA SUBBASINS**

The groundwater wells in Yuba County would be utilized under the conjunctive use component of the Yuba Accord Alternative. Under this program, groundwater pumping would remain within the safe yield of the groundwater aquifer to safeguard local agricultural, domestic, and municipal wells (see Chapter 6 for a description of groundwater operations).

### **14.1.1.4 YUBA COUNTY**

#### **PREHISTORY/ARCHEOLOGY**

Most of what is presently known about the human prehistory of the valley portions of Yuba County is inferred from archaeological excavations of shell mounds in the Central Valley, Delta and San Francisco Bay regions. These excavations indicate what appears to be three distinct cultural periods, known to archaeologists as the Early, Middle, and Late horizons, spanning approximately the last 4,500 years (Beardsley 1948; Moratto 1984). It is likely that permanent year-round occupation of the valley floor in Yuba County began no earlier than in the Early horizon. The prehistory of the valley, foothill, and mountain regions of Yuba County culminated in the Nisenan Indian culture (County of Yuba 1994)

#### **ETHNOHISTORY**

The Indians who claimed most of what is now Yuba County were the Nisenan or Southern Maidu. The northeastern tip of Yuba County may have been occupied or claimed by either the Nisenan or Northeastern Maidu. They spoke a Maidu language. Valley and hill Nisenan groups were culturally, linguistically, and presumably ethnically related, but these groups were more likely to have close relationships with peoples in their geographic surroundings. Valley Nisenan villages were generally distributed along the margins of primary watercourses and the valley-dwelling Nisenan were heavily dependent on fish and acorns for substance. Hill and mountain Nisenan villages were located on ridges adjacent to streams or on flats along the rivers. The hill Nisenan probably depended relatively less on fishing and more on hunting than their valley counterparts (Wilson and Towne 1978).

#### **EURO-AMERICAN HISTORY**

Spanish explorers were the first Europeans to visit Yuba County. White settlement of the area around Marysville began around 1841, when John Sutter established a huge domain consisting of Mexican land grants that included much of what is now Yuba County. John C. Fremont's famous expedition explored Yuba County in 1846 (Hoover *et al.* 1990). Yuba County was among the 27 original California counties established in 1850. The town of Marysville was laid out in 1850 and soon became the head of navigation on the Feather River and an important commercial center for the northern mines, resulting in phenomenal growth. The City of Wheatland also arose from a Mexican land grant, starting in 1844. In 1849, the United States government established Camp Far West about four miles east of Wheatland, however, the post

was abandoned in 1852 and is now under the waters of the Camp Far West Reservoir (Hoover *et al.* 1990).

Many of the small rural communities of Yuba County, including Smartsville, Dobbins, Brownsville, Browns Valley, and Camptonville, had their beginnings as gold mining camps. It is believed by some historians that Jonas Spect was the first person to find gold in Yuba County in June 1848 at a place later called Rose's Bar on the Yuba River.

### **EXISTING CULTURAL RESOURCES**

There are eight historical properties on the NRHP in Yuba County and eight additional sites have been determined eligible for the NRHP. Seven California Historical Landmarks exist in Yuba County and 12 properties have been determined to be California Points of Interest. There are 237 place names in Yuba County associated with gold mining (Gudde and Gudde 1975). County maps were commissioned in 1851, 1852 and 1854 and Camp Far West at Johnson's Rancho near Wheatland was the end of the California branch of the Oregon-California Trail that went through Donner Pass. There are 25 Yuba County sites that appear in the California Inventory of Historic Resources and seven gold districts including, Camptonville, Browns Valley, Brownsville, Dobbins, Hammonton, Smartville, and Wheatland, have been recognized in Yuba County (Clark 1970). Portions of the county that lie within these gold districts have high sensitivity with respect to historical resources.

#### **14.1.2 CVP/SWP UPSTREAM OF THE DELTA REGION**

The CVP/SWP Upstream of the Delta Region includes the Feather River Basin (i.e., Oroville Reservoir and associated facilities, and the lower Feather River from the Oroville facilities downstream to the confluence with the Sacramento River) and the Sacramento River Basin (i.e., Shasta Reservoir and the Sacramento River from Shasta Reservoir downstream to the Delta) and.

##### **14.1.2.1 FEATHER RIVER BASIN**

#### **OROVILLE RESERVOIR**

All of the prehistoric archaeological periods are represented at Oroville Reservoir, including the ethnographic settlement pattern of the village community and the period of historic contact with Euro-American settlers (Kroeber 1925; Riddell 1978). Several archaeological studies have been conducted in the area. Hines (1987) conducted an archaeological analysis and concluded that there were 196 sites, with 127 seasonally exposed during low pool elevations or completely above the inundation zone (i.e., 78 sites in the fluctuation zone between elevation 640 and 900 feet msl and 49 sites above the high pool elevation). Including surveys conducted since then, a revised total of 173 sites are now completely or periodically accessible (DWR 2001). Site types include lithic scatters, quarries and toolstone source locales, caves and rockshelters, seasonal camps, large village settlements and burial grounds. Associated elements include milling features, structural remains and rock art. The Oroville Reservoir area also has significant historic record. With the discovery of gold in 1849, thousands of gold seekers poured into the hills around Oroville and many foothill mining towns were established. These towns were short-lived and later deserted when the gold was depleted and the effort moved to river dredging at lower elevations. Remains of several of these towns were inundated by the reservoir.

Several historic properties associated with Oroville Reservoir have qualified for local, state, and federal recognition. Notable historic objects include the Bidwell Bar Bridge, Old Toll House, and Mother Orange Tree. However, no historic properties at Oroville Reservoir have been determined eligible or are listed on the NRHP (DWR 2001).

## **LOWER FEATHER RIVER**

### **Prehistory/Archaeology**

Evidence of the early human occupation along the headwaters of the Feather River dates from 2000 B.C. or earlier to 500 A.D. (Jensen and Reed 1979). Much of the pre-recorded history in the area is due to the intensive archaeological investigations that were conducted along the Feather River in association with the construction of Oroville Dam. The cultural resource sequence is divided into four phases that span 1000 B.C. to 1850 A.D.: Mesila, Bidwell, Sweetwater, and Oroville (DWR 2001).

### **Ethnohistory**

Evidence indicates that the Wintun and Maidu people inhabited the Feather River region for thousands of years. The southernmost Maidu called themselves the Nisenan people, and occupied the lower drainages of the Feather River.

The Maidu occupied areas near the Feather River headwaters, and the Nisenan lived in the downstream areas south of the Middle Fork Feather River. Traditional cultural practices of the Maidu and Nisenan include weaving baskets and tule mats. Maidu and Nisenan would coil peeled willow and peeled and unpeeled redbud in a clockwise manner to form baskets. Baskets were made to hold water by overlaying hazel shoots, pine roots, and maidenhair fern shoots and covering with pitch (Swartz 1958). Maidu also wove tule mats that they used for seats, beds, camp roofing, and doors (Kroeber 1925).

### **Euro-American History**

The Euro-American colonization of the areas around the Feather River was similar to that which is described for the Sacramento River Basin (see 14.1.2.2).

### **Existing Cultural Resources**

Historic landmarks in the Feather River watershed include gold mining sites of Dogtown, Nugget, and Oregon City, along with the original propagation site of the Thompson seedless grape. In the lower Feather River area, archaeological sites indicate intensive occupation over a long time period; deep, stratified, multi-component midden deposits denote village settlements, with associated cemeteries, structural depressions, and milling stations. The Table Mountain Boulevard Bridge is the only resource in the lower Feather River area listed in the NRHP. Additionally, 20 sites that have been recorded are still thought to exist in the lower Feather River area (DWR 2001).

### **14.1.2.2 SACRAMENTO RIVER BASIN**

#### **SACRAMENTO RIVER**

##### **Prehistory/Archaeology**

Archaeological evidence of human occupation in the Sacramento Valley and nearby areas extends back several thousand years. Tribal oral histories would place Native American occupation back to “time immemorial.” In the span between about 10,000 B.C. and A.D. 1774, prehistoric societies occupying the greater Sacramento Valley and surrounding areas underwent a series of slow but important changes in subsistence and economic orientation, population densities and distribution, and social organization. The evidence for these changes is found within the known archaeological record. Several models of prehistoric culture history are available for the region and are summarized by (Moratto 1984).

##### **Ethnohistory**

Native Americans initiated California’s rich cultural heritage many generations before Europeans settled in the area. A third of all Native Americans within current United States boundaries lived in California. The Sacramento Valley includes a broad geographic area that encompassed a great deal of environmental and cultural diversity in prehistoric times and during the contact period when Native Americans encountered Spanish and Euro-American explorers and settlers. Native American tribes that occupied the areas around the Sacramento River at the time of contact included the Wintu, Yana, Nomlaki, and Patwin.

The Wintu territory covered parts of what is now Trinity, Shasta, Siskiyou, and Tehama counties, including the area north of Cottonwood Creek and extending from Cow Creek on the east to the South Fork of the Trinity on the west (Access Genealogy Website 2007). The Yana extended from Pit River to Rock Creek, and from the edge of the upper Sacramento Valley to the headwaters of the eastern tributaries of Sacramento River (Access Genealogy Website 2007). The Nomlaki consisted of two groups. The River Nomlaki lived in the Sacramento River Valley in present Tehama County, south of Cottonwood Creek, while the Hill Nomlaki lived in the foothills to the west, extending to the summit of the Coast Range in what is now Tehama and Glenn counties (Wikipedia Website 2007b). The Patwin were a southern branch of the Wintu group and native inhabitants of Northern California who occupied what is now Suisun, Vacaville, and Putah Creek (Wikipedia Website 2007a).

The climate and topography north of the Delta area supports a variety of forest, grassland, savannah, riparian, and wetland habitats. Native American groups that occupied the Sacramento River drainage survived on non-domesticated plants and animals that provided food and material for baskets, houses, and clothing. For generations, Native Americans created baskets from willows, sedge root, bulrush root and new shoots of the western redbud. Some modern Native Americans maintain their culture by gathering vegetation and wildlife formerly used by their ancestors and performing traditional ceremonies. USFS policy encourages, protects, and perpetuates traditional tribal practices by reserving areas on USFS lands for gathering basketry materials and practicing cultural traditions.

##### **Euro-American History**

Many areas in the northern Sacramento Valley saw the first major wave of Euro-American colonization following the Gold Rush. By the time the local Indians had been forcibly taken to

reservations, many small towns and settlements had already been established. Copper replaced gold as the main mineral produced in Shasta County in 1897. Smoke and fumes from Shasta County smelters killed vegetation, fish, and fruit trees as far south as Anderson and Cottonwood. All the smelters were closed by court order by 1919.

Through the late 19<sup>th</sup> and 20<sup>th</sup> centuries, the spread of riverboat and ferry transportation and later railroad and highway transportation infrastructure increased access to more distant markets. The northern end of the Sacramento Valley developed a growing population sustained by a mix of mineral and timber extraction industries and farm and ranch operations. Large-scale irrigation was made possible in the mid-20<sup>th</sup> century by completion of Shasta Dam and other large water reservoirs and aqueduct projects.

Following the Gold Rush, Euro-American colonists developed the rich farmland in the central region and made use of its abundant water. After the Gold Rush, many disappointed miners became permanent settlers who raised cattle, sheep, wheat, and barley. Initially, the location of towns and settlements was influenced by access to water and water transportation routes. Emphasis shifted from livestock grazing to growing grain and orchard crops in the late 19<sup>th</sup> century.

The railroad progressed northward in the 1870s, carrying new settlers to the area and enabling such towns as Arbuckle, Williams, Maxwell, Willows, and Orland to be established. Large-scale, diversified farming was introduced as new lands were irrigated and brought into production and as shipment of local products to domestic and international markets increased as a result of the improved railroad and highway transportation system.

### **Existing Cultural Resources**

Many prehistoric and/or ethnographic sites were recorded along the banks of the lower Sacramento River in 1934 by R.F. Heizer, who described them as burial mounds which had been partially or completely leveled for agriculture or other development (Heizer 1934). Many of these were built on or adjacent to the natural levees, and over time have been severely affected by river erosion and levee construction (Corps 1990). Excavations at a few of these mounds have shown them to contain human burials, grave offerings, and occupational debris, some of which are at least 2,000 years old (City of Sacramento 1994; Corps 1990; Olsen and Riddel 1963). These sites, wherever they may survive, are extremely important. To date, the most complete field inventory of the lower Sacramento River has been done by Far Western Anthropological Research Group, Inc. (Corps 1990) who surveyed and augered the toe of the levees between the Natomas Cross Canal and the town of Freeport. Two segments of the levee at the confluence have been recorded as historical features and one has been determined eligible for inclusion in the NRHP (Nilsson *et al.* 1995).

One historic feature adjacent to the river, the Walnut Grove Branch Line Railroad, is considered significant and eligible for inclusion on the NRHP (Corps 1991). There also is the potential for other important historic resources along the river, where many landings, ferries, small settlements, and private homes/ranches are known to have been established between the 1850s and the 1930s (Corps 1990). However, this survey did not detect the remains of any of these resources. The banks of the lower Sacramento River are considered highly sensitive for archaeological and historical resources.

### 14.1.3 DELTA REGION

The Delta is one of the most intensely investigated areas of California because of its high prehistoric population density and proximity to population centers. Although the bulk of cultural sites were recorded prior to 1960, there has been little systematic inventory for cultural resources. Most of the early archeological work in the region focuses on prominent prehistoric mounds. Documentation of historic sites has largely occurred within the last 20 to 30 years. At least 171 sites within the Delta Region have been listed in the NRHP as individual properties or districts. Six sites in the region also have been listed as California Historical Landmarks and four are listed as California Points of Historical Interest (CALFED 1998). Prehistoric site types include village sites, temporary campsites, milling-related activity sites, and lithic scatters. Potential historic resources in the Delta Region are largely related to agriculture. However, other types are present including farmsteads, labor camps, landings for the shipment of agricultural produce, canneries, pumping stations, siphons, canals, drains, unpaved roads, bridges, and ferry crossings. Forty known historic sites coincide with prehistoric sites (CALFED 1998).

Several Native American burial and cremation sites have been discovered in the Delta Region. Native Americans in the Delta at the time of European contact were the Northern Valley Yokuts who were settled along the San Joaquin River. Plains Miwok people lived primarily in the north with territory extending nearly to Sacramento (DWR and Reclamation 1996). Wintun and Nisenan occupied areas on the north and northeastern Delta. Those in the south Delta proper were the Chulamni or Nochochomne.

### 14.1.4 REGULATORY SETTING

Preserving the culture and history of our nation's past are the goals of regulations that include the American Antiquities Act of 1906, Historic Sites Act of 1935, National Historic Preservation Act (NHPA) of 1966, NEPA, Archaeological and Historic Preservation Act of 1974, American Indian Religious Freedom Act, Archeological Resource Protection Act of 1979, President's April 29, 1994 Memorandum, and Executive Order 13007. Similar state regulations protect archeological, paleontological, and historical sites and specifically provide for identification and protection of traditional Native American gathering and ceremonial sites on state lands. These organizations and individuals are integral in identifying issues related to historic properties that may be affected by the Proposed Project/Action or alternatives.

#### 14.1.4.1 FEDERAL

##### **AMERICAN ANTIQUITIES ACT OF 1906**

The American Antiquities Act of 1906 (34 Stat. 225) authorizes the President of the United States to designate objects or areas of historic or scientific interest on lands owned or controlled by the United States as National Monuments. The act requires that a permit be obtained for examination of ruins, excavation of archaeological sites, and the gathering of objects of antiquity on lands under the jurisdiction of the Secretaries of Interior, Agriculture, and Army, and provided penalties for violations.

##### **HISTORIC SITES ACT OF 1935**

The Historic Sites Act of 1935 (49 Stat. 666), as amended by PL 89-249 in 1965 (79 Stat. 971) declares it a national policy to preserve historic sites and objects of national significance,

including those located on refuges. The Act provides procedures for the designation, acquisition, administration, and protection of such sites. Among other things, National Historic and Natural Landmarks are designated under authority of this Act. As of 1989, 31 national wildlife refuges contained such sites.

### **NATIONAL HISTORIC PRESERVATION ACT**

The NHPA of 1966, as amended, is the principal legislation that guides cultural resource management for federal agencies. Section 106 of the NHPA requires that federal agencies take into account the effects of an undertaking on historic properties listed or eligible for listing on the NRHP. The Section 106 review process is described in 36 CFR 800. The five steps in this process include: (1) initiation of the Section 106 process by identifying interested parties and an area of potential effect (APE); (2) identification and evaluation of historic properties within the APE; (3) assessment of the effects of the undertaking on historic properties within the APE; (4) preparation of an agreement document to address any identified adverse effects on historic properties within the APE; and (5) receipt from the Advisory Council on Historic Preservation (ACHP) of comments on the agreement or results of consultation. The Section 106 process requires consultation through each phase with the State Historic Preservation Officer (SHPO), Indian tribes, and interested parties.

### **NATIONAL ENVIRONMENTAL POLICY ACT**

NEPA declares that it is the policy of the federal government to preserve important historical and cultural properties that represent our national heritage. NEPA requires consideration of adverse impacts to resources in the planning process for federal projects or privately initiated undertakings on federal lands or that require federal licensing, permits, or funding.

### **ARCHAEOLOGICAL AND HISTORIC PRESERVATION ACT OF 1974**

PL 86-523, approved June 27, 1960, (74 Stat. 220) as amended by PL 93-291, approved May 24, 1974, (88 Stat. 174) to carry out the policy established by the Historic Sites Act of 1935, directs federal agencies to notify the Secretary of the Interior whenever they find a federal or federally assisted, licensed or permitted project may cause loss or destruction of significant scientific, prehistoric or archaeological data. The act authorizes use of appropriated, donated, or transferred funds for the recovery, protection and preservation of such data.

### **AMERICAN INDIAN RELIGIOUS FREEDOM ACT**

This act became law on August 11, 1978 (PL 95-341, 42 U.S.C. 1996 and 1996a, as amended) and establishes a policy for the United States to protect and preserve American Indians inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including but not limited to, access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites. The act also authorizes the President to direct the various federal departments, agencies, and other instrumentalities responsible for administering relevant laws, to evaluate their policies and procedures in consultation with Native American traditional religious leaders to determine appropriate changes necessary to protect and preserve Native American religious cultural rights and practices.

### **ARCHEOLOGICAL RESOURCE PROTECTION ACT OF 1979**

PL 96-95, approved October 31, 1979, (93 Stat. 721) largely supplanted the resource protection provisions of the American Antiquities Act of 1906 for archaeological items. This act establishes detailed requirements for issuance of permits for any excavation for or removal of archaeological resources from federal or Indian lands. It also establishes civil and criminal penalties for the unauthorized excavation, removal, or damage of any such resources; for any trafficking in such resources removed from federal or Indian lands in violation of any provision of federal law; and for interstate and foreign commerce in such resources acquired, transported or received in violation of any state or local law.

### **PRESIDENT'S APRIL 29, 1994 MEMORANDUM – ENGAGEMENT OF FEDERALLY RECOGNIZED TRIBAL GOVERNMENTS IN THE PLANNING AND DEVELOPMENT OF PROJECTS**

On April 29, 1994, President Clinton signed a memorandum outlining the principles that executive departments and agencies, including every component bureau and office, are to follow in their interactions with Native American tribal governments. The memorandum states that to ensure that the rights of sovereign tribal governments are fully respected, executive branch activities are to be guided by the following: (1) the head of each executive department and agency shall be responsible for ensuring that the department or agency operates within a government-to-government relationship with federally recognized tribal governments; (2) each executive department and agency shall consult, to the greatest extent practical and to the extent permitted by law, with tribal governments prior to taking actions that affect federally recognized tribal governments; (3) all such consultations are to be open and candid so that all interested parties may evaluate for themselves the potential impact of relevant proposals; (4) each executive department and agency shall assess the impact of federal government plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during the development of such plans, projects, programs, and activities; (5) each executive department and agency shall take appropriate steps to remove any procedural impediments to working directly and effectively with tribal government rights of the tribes; and (6) each executive department and agency shall work cooperatively with other federal departments and agencies to enlist their interest and support in cooperative efforts, where appropriate, to accomplish the goals of the memorandum.

### **EXECUTIVE ORDER 13007 – INDIAN SACRED SITES**

Executive Order 13007, signed by President Clinton on May 24, 1996, mandates that each executive branch agency with statutory or administrative responsibility for the management of federal lands shall, to the extent practical, permitted by law, and not clearly inconsistent with essential agency functions: (1) accommodate access to, and ceremonial use of, Indian sacred sites by Indian religious practitioners; and (2) avoid adversely affecting the physical integrity of such sacred sites. Where appropriate, agencies shall maintain the confidentiality of sacred sites.

### **14.1.4.2 STATE**

#### **TITLE 14 CALIFORNIA CODE OF REGULATIONS, SECTION 15064.5 AND SECTION 15126.4 (B)**

Under Title 14 of the CCR, CEQA requires that public or private projects financed or approved by public agencies be assessed to determine the effects of the project on historical resources. The CEQA statutes define historical resources to include the following: (1) the resource is listed in or determined eligible for listing in the California Register of Historic Resources (CRHR); (2) the resource is included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code, or is identified as significant in a historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the preponderance of evidence demonstrates that it is not historically or culturally significant; or (3) the lead agency determines the resource to be significant, as supported by substantial evidence in light of the whole record (Title 14 CCR 15064.5[a]).

Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the CRHR. CEQA statutes also state that if implementation of a project would result in significant effects on historical resources, alternative plans or mitigation measures must be considered (Title 14 CCR 15126.4 (b)).

#### **STATE HISTORIC PRESERVATION OFFICE COORDINATION**

Cultural resources in California are regulated by the SHPO, which was established by the NHPA of 1966. This office is responsible for administering preservation programs established by state and federal law, including the NHPA, the Archeological and Historic Preservation Act (PL 93-291), the American Indian Religious Freedom Act (PL 96-34), and the Archeological Resources Protection Act (PL 96-95). Under Section 106 of the NHPA and CEQA, the SHPO, in conjunction with state and federal agencies, identifies resources that may be eligible for inclusion in the NRHP. If a project may affect a historic site, the SHPO must review the project impacts to that site and the proposed mitigation measures to reduce the significance of the impact. During this process, SHPO’s Native American Coordinator ensures that Native American concerns for archeological sites and other cultural properties are also considered.

### **14.1.4.3 LOCAL**

The Land Use Element of the Yuba County General Plan (County of Yuba 1996) is a collection of long-range objectives, policies and proposals concerning the physical, economic and social development of the county. The primary purpose of the Land Use Element is to promote a balanced and functional mix of land uses. The Land Use Element contains numerous goals to promote a balanced and functional mix of land uses, including those associated with new development. The goal is to ensure that new development is planned and occurs in a manner which will minimize grading, vegetation disturbance, intrusion on natural water courses, and encroachment onto archaeological, historic, or rare and endangered species sites. To implement this goal, significant natural, open space, and cultural resources shall be identified in advance of development and incorporated into site-specific project design, specific and community plans. The planning department will require that the necessary technical studies are conducted in advance of new development project approval to assure that unique features are identified and reflected in the project design and plans.

## 14.2 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES

The Proposed Yuba Accord includes ground-disturbing activities related to groundwater well pump conversions that could disturb cultural resources. Actions that physically disturb a cultural resource, alter its setting, or introduce elements out of character with the property might constitute an adverse impact. Potentially significant adverse impacts also occur indirectly through alteration of the character of the site setting and introduction of visual, audible, or atmospheric elements that change the character of a site or its setting, which might affect the eligibility of the site for inclusion in the NRHP or the CRHR. The groundwater well pump conversion may result in ground-disturbing activities that could result in alteration of the character of a site setting.

River flow fluctuations associated with deliveries to water diverters and changes in instream flow requirements could result in increased inundation of previously exposed areas or exposure of previously inundated lands. Changes in reservoir operations associated with water deliveries, carry-over storage, and refill criteria could increase or lower reservoir levels within the water level fluctuation zone, which could increase exposure of cultural resources to cycles of inundation and drawdown, potentially eroding the value and character of the historical resource. Cultural resources previously untouched by water could be inundated if the reservoir's water surface elevation rises above the maximum water elevation under the basis of comparison. Conversely, a water surface elevation below the reservoir's minimum level could expose cultural resources that were previously submerged. Additionally, and perhaps more significantly, if the Proposed Project/Action and alternatives result in a shift in the zone of fluctuation, cultural resources located within the zone also could be potentially affected through increased exposure to erosion, hydrologic sorting caused by wave action, and breakdown of organic matter through repeated wetting and drying. Any changes in water levels caused by increased diversions or other changes have the potential to impact important or unevaluated cultural resources within a particular reservoir basin. It is also the case; however, that many of the cultural deposits in the upper part of a reservoir have been scoured down to bare granite sand and bedrock. Studies of reservoir impacts to cultural sites have shown that the greatest impacts are from wave action, which erodes the deposit and moves artifacts, and from cycles of inundation and drawdown, which also cause erosion and movement, in addition to repeated wetting and drying of the deposit (DWR and Reclamation 1996; Foster *et al.* 1977; Foster and Bingham 1978; Henn and Sundahl 1986; Lenihan *et al.* 1981; Stoddard and Fredrickson 1978). The same studies suggest that sites that lie permanently submerged (e.g., within the deep pool of a reservoir), suffer much less damage than those within the drawdown zone. For sites that are already submerged, continued submergence does not constitute an effect. However, inundation to sites that lie above the present waterline (and that have not been subject to inundation before) potentially would be an adverse effect.

### 14.2.1 IMPACT ASSESSMENT METHODOLOGY

#### 14.2.1.1 ANALYTICAL APPROACH FOR EVALUATING CULTURAL RESOURCES

Cultural resources are those sites, artifacts, and features associated with the prehistoric and historic past. *Sites* are those locations where discernible changes to the natural environment have occurred as a result of human activity or occupation. *Artifacts* are those objects manufactured, used or altered by humans. Common examples include tools, utensils, art, food remains, and other products of human activity (Clark 1970). *Features* include structures, cemeteries, fences, roads, dams, and other works of humans that are not sites of general human

activity or occupation, but rather isolated objects that generally represent a single or specialized human activity. Features exist both alone or on a site. For example, within a prehistoric village *site*, archaeologists often refer to fire hearths as cultural *features*. Historical landmarks are sites, buildings, features, or events of statewide significance that have anthropological, cultural, military, political, architectural, economic, scientific, or technical, religious, experimental, or other value (Office of Historic Preservation Website 2007).

Actions that physically disturb a historic property, alter its setting, or introduce elements out of character with the property might constitute an adverse impact. The cultural resource impact assessment relies on the type of site, the type of impact, and the extent of the disturbance on historic properties or unique archeological resources. Potentially significant adverse impacts also occur indirectly through alteration of the character of the site setting and introduction of visual, audible, or atmospheric elements that change the character of a site or its setting, which might affect the eligibility of the site for inclusion in the NRHP or the CRHR. The Proposed Project/Action and alternatives were reviewed for their potential to cause these types of impacts.

More specifically, to evaluate potential impacts to cultural resources in and around project area reservoirs, a comparison was made between the Proposed Project/Action and alternatives and the basis of comparison to determine the changes in maximum, minimum, and average end-of-month water surface elevation fluctuations, and annual frequency of water level fluctuations. To estimate the magnitude and frequency of bank exposure and bank inundation along the rivers, a comparison was made between the Proposed Project/Action and alternatives and the basis of comparison to determine changes in the minimum and maximum monthly mean flows. Fluctuations in river flows could result in increased inundation of previously exposed areas or exposure of previously inundated lands. A qualitative analysis was utilized to determine the potential effects to the cultural resource sites associated with the groundwater wells. These impact indicators were then compared to established criteria to identify the significance of the potential impact.

## 14.2.2 IMPACT INDICATORS AND SIGNIFICANCE CRITERIA FOR CULTURAL RESOURCES

Indicators of potential impacts were developed by evaluating the project scope, site conditions, and impact issues identified by the public. Applicable laws, ordinances, regulations, and standards and CEQA statutes also were consulted. Significance criteria were developed from the indicators to measure the impacts expected to occur as a result of implementing the Proposed Project/Action or an alternative.

CEQA requires that important cultural resources be protected. In addition to CEQA compliance, any project that involves federal undertakings, lands, funds, or permits must comply with Section 106 of the NHPA. State Historic Landmarks, and any cultural resource that has been determined eligible to the National Register, automatically qualify for the State Register. Where a cultural resource has not been evaluated for its importance, it is treated as potentially important until an evaluation can be done.

The impact indicators and significance criteria used in the evaluation of potential effects on cultural resources are presented in **Table 14-1**.

**Table 14-1. Impact Indicators and Significance Criteria for Cultural Resources**

Impact Indicator	Significance Criteria
Maximum, minimum and average end-of-month water surface elevation fluctuations and annual frequency of water level fluctuations for New Bullards Bar and Oroville reservoirs.	Substantial elevation or lowering water level fluctuation zone, relative to the basis of comparison, which would result in increased inundation of previously exposed areas or exposure of previously inundated lands, of sufficient frequency to adversely affect sensitive cultural resources, for any given month of the year over the 72-year simulation period.
Maximum and minimum monthly mean river flows in the lower Yuba, lower Feather, and Sacramento rivers.	Substantial increase in maximum monthly mean river flows or decrease in minimum monthly mean river flows, relative to the basis of comparison, which would result in increased inundation of previously exposed areas or exposure of previously inundated lands, of sufficient frequency to adversely affect sensitive cultural resources, for any given month of the year over the 72-year simulation period.
Character of a site or its setting and associated eligibility of the site for inclusion in the NRHP.	Alteration of the character of the site setting and introduction of visual, audible, or atmospheric elements that change the character of the site or its setting, which might affect the eligibility of the site for inclusion in the NRHP.

As discussed in Chapter 4, CEQA and NEPA have different legal and regulatory standards that require slightly different assumptions in the modeling runs used to compare the Proposed Project/Action and alternatives to the appropriate CEQA and NEPA bases of comparison in the impact assessments. Although only one project (the Yuba Accord Alternative) and one action alternative (the Modified Flow Alternative) are evaluated in this EIR/EIS, it is necessary to use separate NEPA and CEQA modeling scenarios for the Proposed Project/Action, alternatives and bases of comparisons to make the appropriate comparisons. As a result, the scenarios compared in the impact assessments below have either a “CEQA” or a “NEPA” prefix before the name of the alternative being evaluated. A detailed discussion of the different assumptions used for the CEQA and NEPA scenarios is included in Appendix D, Modeling Technical Memorandum.

As also discussed in Chapter 4, while the CEQA and NEPA analyses in this EIR/EIS refer to “potentially significant,” “less than significant,” “no” and “beneficial” impacts, the first two comparisons (CEQA Yuba Accord Alternative compared to the CEQA No Project Alternative and CEQA Modified Flow Alternative compared to the CEQA No Project Alternative) presented below instead refer to whether or not the proposed change would “unreasonably affect” the evaluated parameter. This is because these first two comparisons are made to determine whether the action alternative would satisfy the requirement of Water Code Section 1736 that the proposed change associated with the action alternative “*would not unreasonably affect fish, wildlife, or other instream beneficial uses.*”

### **14.2.3 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES OF THE CEQA YUBA ACCORD ALTERNATIVE COMPARED TO THE CEQA NO PROJECT ALTERNATIVE**

#### ***Impact 14.2.3-1: Changes in New Bullards Bar Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

The CEQA Yuba Accord Alternative would not affect cultural resources because it would not result in substantial departures from the range of water surface elevations maintained under recent historical operating rules for water levels in New Bullards Bar Reservoir. The reservoir’s long-term average monthly water surface elevations range from a minimum of 1,865 feet msl in November to a maximum of 1,934 feet msl in May under the CEQA No Project Alternative over

the 72-year simulation period. Under the CEQA Yuba Accord Alternative, long-term average water surface elevations range from a minimum of 1,851 feet msl in November to a maximum of 1,933 feet msl in May. The lowest average monthly water surface elevation under the CEQA Yuba Accord Alternative is 1,798 feet msl and occurs in September of critical water year types. This elevation is approximately 10 feet msl lower than the lowest water surface elevation that occurs under the CEQA No Project Alternative during critical water years (Appendix F4, 3 vs. 2, pg. 50). However, these decreases in monthly water surface elevations are within the range of recent historical average monthly maximum and minimum elevations observed in New Bullards Bar Reservoir. Therefore, it is unlikely that the CEQA Yuba Accord Alternative would expose any previously inundated lands which would substantially impact cultural resources associated with New Bullards Bar Reservoir relative to the CEQA No Project Alternative.

Therefore, based on this analysis, changes in New Bullards Bar Reservoir water surface elevations in under the CEQA Yuba Accord Alternative, relative to the CEQA No Project Alternative, would not unreasonably affect cultural resources.

***Impact 14.2.3-2: Alteration of the character of the New Bullards Bar Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the New Bullards Bar Reservoir site or its setting, and therefore, would not unreasonably affect the eligibility of the site for inclusion in the NRHP.

***Impact 14.2.3-3: Changes in lower Yuba River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Over the 72-year simulation period, the maximum long-term average flows at Marysville would occur during February under both the CEQA Yuba Accord Alternative and the CEQA No Project Alternative. During February, long-term average flows under the CEQA Yuba Accord Alternative would be approximately 3 percent higher than the CEQA No Project Alternative. Conversely, the minimum long-term average flows would occur in October under the CEQA Yuba Accord Alternative and the CEQA No Project Alternative. During October, long-term average flows under the CEQA Yuba Accord Alternative would be approximately 13 percent higher than the CEQA No Project Alternative (Appendix F4, 3 vs. 2, pg. 272). These changes in flow would be within the range of maximum and minimum flows that generally occur in the lower Yuba River under the CEQA No Project Alternative, and therefore are unlikely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, changes in lower Yuba River flows under the CEQA Yuba Accord Alternative, relative to the CEQA No Project Alternative, would not unreasonably affect cultural resources.

***Impact 14.2.3-4: Alteration of the character of the lower Yuba River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the lower Yuba River site or its setting, and therefore, would not unreasonably affect the eligibility of the site for inclusion in the NRHP.

***Impact 14.2.3-5: Changes in Oroville Reservoir monthly mean water surface elevations that could result in adverse impacts to sensitive cultural resources***

Long-term average water surface elevations are essentially equivalent under the Yuba Accord and CEQA No Project Alternatives over the 72-year simulation period (Appendix F4, 3 vs. 2, pg. 455). Based on this analysis, the CEQA Yuba Accord Alternative would not affect cultural resources because it would not result in significant departures from the range of water surface elevations in Oroville Reservoir relative to the CEQA No Project Alternative.

Based on this analysis, changes in Oroville Reservoir water surface elevations under the CEQA Yuba Accord Alternative, relative to the CEQA No Project Alternative would not unreasonably affect cultural resources.

***Impact 14.2.3-6: Alteration of the character of the Oroville Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Oroville Reservoir site or its setting, and therefore, would not unreasonably affect the eligibility of the site for inclusion in the NRHP.

***Impact 14.2.3-7: Changes in Feather River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Differences in long-term average monthly flows in the Feather River under the CEQA Yuba Accord Alternative, compared to the CEQA No Project Alternative, are less than 10 percent over the 72-year simulation period (Appendix F4, 3 vs. 2, pg. 603). These differences in flow are within the normal range of minimum and maximum flows occurring in the Feather River under the CEQA No Project Alternative, and would not result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, changes in Feather River flows under the CEQA Yuba Accord Alternative, relative to the CEQA No Project Alternative, would not unreasonably affect cultural resources.

***Impact 14.2.3-8: Alteration of the character of the Feather River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Feather River site or its setting, and therefore, would not unreasonably affect the eligibility of the site for inclusion in the NRHP.

***Impact 14.2.3-9: Changes in Sacramento River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Over the 72-year simulation period, long-term average flows in the Sacramento River do not differ by more than 5 percent under the CEQA Yuba Accord Alternative, relative to the CEQA No Project Alternative (Appendix F4, 3 vs. 2, pg. 882). Relative to the CEQA No Project Alternative, these differences would be within the range of maximum and minimum average monthly flows, and are not likely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, changes in Sacramento River flows under the CEQA Yuba Accord

Alternative, relative to the CEQA No Project Alternative, would not unreasonably affect cultural resources.

***Impact 14.2.3-10: Alteration of the character of the Sacramento River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Sacramento River site or its setting, and therefore, would not unreasonably affect the eligibility of the site for inclusion in the NRHP.

**14.2.4 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES OF THE CEQA MODIFIED FLOW ALTERNATIVE COMPARED TO THE CEQA NO PROJECT ALTERNATIVE**

***Impact 14.2.4-1: Changes in New Bullards Bar Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

The CEQA Modified Flow Alternative would not affect cultural resources because it would not result in substantial departures from the range of water surface elevations maintained under recent historical operating rules for water levels in New Bullards Bar Reservoir. The reservoir's long-term average monthly water surface elevations range from a minimum of 1,865 feet msl in November to a maximum of 1,934 feet msl in May under the CEQA No Project Alternative during the 72-year simulation period. Under the CEQA Modified Flow Alternative, long-term average water surface elevations range from a minimum of 1,860 feet msl in November and October to a maximum of 1,936 feet msl in May. The lowest water surface elevation under the CEQA Modified Flow Alternative is 1,829 feet msl and occurs in September of critical water year types. This elevation is approximately 21 feet msl higher than the lowest long-term average elevation occurring under the CEQA No Project Alternative over the 72-year simulation period (Appendix F4, 4 vs. 2, pg. 50). Since average water surface elevations in New Bullards Bar Reservoir would not drop below the lowest elevation observed under the CEQA Modified Flow Alternative, it is unlikely that the CEQA Modified Flow Alternative would expose any previously inundated lands associated with New Bullards Bar Reservoir.

Based on this analysis, changes in New Bullards Bar Reservoir water surface elevations under the CEQA Modified Flow Alternative, relative to the CEQA No Project Alternative, would not unreasonably affect cultural resources.

***Impact 14.2.4-2: Alteration of the character of the New Bullards Bar Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the New Bullards Bar Reservoir site or its setting, and therefore, would not unreasonably affect the eligibility of the site for inclusion in the NRHP.

***Impact 14.2.4-3: Changes in lower Yuba River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Over the 72-year simulation period, the maximum long-term average monthly flows at Marysville would occur during February, and would be essentially equivalent under the CEQA Modified Flow Alternative and the CEQA No Project Alternative. Conversely, the minimum

long-term average flows would occur in October under both the CEQA Modified Flow Alternative and the CEQA No Project Alternative. During October, long-term average flows under the CEQA Modified Flow Alternative would be up to approximately 2 percent higher than the CEQA No Project Alternative (Appendix F4, 4 vs. 2, pg. 272). These differences in flow would be within the range of maximum and minimum average monthly flows, relative to the CEQA No Project Alternative, and therefore are unlikely to result in an increased inundation of previous exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, changes in lower Yuba River flows under the CEQA Modified Flow Alternative, relative to the CEQA No Project Alternative, would not unreasonably affect cultural resources.

***Impact 14.2.4-4: Alteration of the character of the lower Yuba River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the lower Yuba River site or its setting, and therefore, would not unreasonably affect the eligibility of the site for inclusion in the NRHP.

***Impact 14.2.4-5: Changes in Oroville Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

Over the 72-year simulation period, long-term average water surface elevations are essentially equivalent under the CEQA Modified Flow Alternative and the CEQA No Project Alternative (Appendix F4, 4 vs. 2, pg. 455). As a result, the CEQA Modified Flow Alternative would not unreasonably affect cultural resources because it would not result in significant departures from the range of water surface elevations in Oroville Reservoir, relative to the CEQA No Project Alternative.

Based on this analysis, changes in Oroville Reservoir water surface elevations under the CEQA Modified Flow Alternative, relative to the CEQA No Project Alternative, would not unreasonably affect cultural resources.

***Impact 14.2.4-6: Alteration of the character of the Oroville Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Oroville Reservoir site or its setting, and therefore, would not unreasonably affect the eligibility of the site for inclusion in the NRHP.

***Impact 14.2.4-7: Changes in Feather River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Differences in long-term average flows in the Feather River under the CEQA Modified Flow Alternative, relative to the CEQA No Project Alternative, do not exceed approximately 2 percent over the 72-year simulation period (Appendix F4, 4 vs. 2, pg. 603). These differences in flow are within the normal range of minimum and maximum flows occurring in the Feather River and would not result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, changes in Feather River flows under the CEQA Modified Flow Alternative, relative to the CEQA No Project Alternative, would not unreasonably affect cultural resources.

***Impact 14.2.4-8: Alteration of the character of the Feather River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Feather River site or its setting, and therefore, would not unreasonably affect the eligibility of the site for inclusion in the NRHP.

***Impact 14.2.4-9: Changes in Sacramento River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Over the 72-year simulation period, long-term average flows in the Sacramento River do not differ by more than 4 percent under the CEQA Modified Flow Alternative, relative to the CEQA No Project Alternative (Appendix F4, 4 vs. 2, pg. 882). Compared to the CEQA No Project Alternative, these differences in flow would be within the range of average monthly maximum and minimum flows, and are not likely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, changes in Sacramento River flows under the CEQA Modified Flow Alternative, relative to the CEQA No Project Alternative, would not unreasonably affect cultural resources.

***Impact 14.2.4-10: Alteration of the character of the Sacramento River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Sacramento River site or its setting, and therefore, would not unreasonably affect the eligibility of the site for inclusion in the NRHP.

## **14.2.5 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES OF THE CEQA YUBA ACCORD ALTERNATIVE COMPARED TO THE CEQA EXISTING CONDITION**

***Impact 14.2.5-1: Change in New Bullards Bar Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

The CEQA Yuba Accord Alternative would not affect cultural resources because it would not result in substantial departures from the range of water surface elevations maintained under recent historical operating rules for water levels in New Bullards Bar Reservoir. The reservoir's long-term average monthly water surface elevations range from a minimum of 1,856 feet msl in October to a maximum of 1,936 feet msl in May under the CEQA Existing Condition over the 72-year simulation period. Under the CEQA Yuba Accord Alternative, long-term average water surface elevations range from a minimum of 1,851 feet msl in November to a maximum of 1,933 feet msl in May. The lowest monthly average water surface elevation under the CEQA Yuba Accord Alternative is 1,798 feet msl and occurs in September of critical water year types, and is approximately 30 feet msl lower than the water surface elevation occurring under the CEQA Existing Condition (Appendix F4, 3 vs. 1, pg 50). However, these decreases in monthly water surface elevations are within the range of recent historical average monthly maximum and minimum elevations observed in New Bullards Bar Reservoir. Therefore, it is unlikely that the CEQA Yuba Accord Alternative would expose any previously inundated lands which would

substantially impact cultural resources associated with New Bullards Bar Reservoir relative to the CEQA Existing Condition.

Based on this analysis, potential impacts on cultural resources from changes in New Bullards Bar Reservoir water surface elevations under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.5-2: Alteration of the character of the New Bullards Bar Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the New Bullards Bar Reservoir site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, are considered less than significant.

***Impact 14.2.5-3: Changes in lower Yuba River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Over the 72-year simulation period, the maximum long-term average monthly flows at Marysville would occur during February, and would be about 2 percent lower under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition. Conversely, the minimum long-term average flows would occur in October under both the CEQA Yuba Accord Alternative and the CEQA Existing Condition. During October, long-term average flows under the CEQA Yuba Accord Alternative would be approximately 5 percent higher than the CEQA Existing Condition (Appendix F4, 3 vs. 1, pg. 272). These differences in flow would be within the range of maximum and minimum flows, relative to the CEQA Existing Condition, and therefore are unlikely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely affect sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in lower Yuba River flows under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.5-4: Alteration of the character of the lower Yuba River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the lower Yuba River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition are considered less than significant.

***Impact 14.2.3-5: Changes in Oroville Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

Long-term average monthly water surface elevations are essentially equivalent under the CEQA Yuba Accord Alternative and the CEQA Existing Condition over the 72-year simulation period (Appendix F4, 3 vs. 1, pg. 455). As a result, the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, would not affect cultural resources because it would not result in significant departures from the range of water surface elevations in Oroville Reservoir.

Based on this analysis, potential impacts on cultural resources from changes in maximum and minimum average monthly reservoir water surface elevations in Oroville Reservoir under the

CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.5-6: Alteration of the character of the Oroville Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Oroville Reservoir site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, are considered less than significant.

***Impact 14.2.5-7: Changes in Feather River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Differences in long-term average monthly flows in the Feather River under the CEQA Yuba Accord Alternative, compared to the CEQA Existing Condition, do not exceed approximately 3 percent over the 72-year simulation period (Appendix F4, 3 vs. 1, pg. 603). These differences in flow are within the normal range of maximum and minimum flows occurring in the Feather River and would not result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in Feather River flows under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.5-8: Alteration of the character of the Feather River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Feather River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, are considered less than significant.

***Impact 14.2.5-9: Changes in Sacramento River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Long-term average monthly flows in the Sacramento River do not differ by more than 5 percent under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, over the 72-year simulation period (Appendix F4, 3 vs. 1, pg. 882). These differences in flow would be within the range of maximum and minimum average monthly flows, relative to the CEQA Existing Condition, and are not likely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in Sacramento River flows under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.5-10: Alteration of the character of the Sacramento River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Sacramento River site

or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA Yuba Accord Alternative, relative to the CEQA Existing Condition, are considered less than significant.

#### **14.2.6 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES OF THE CEQA MODIFIED FLOW ALTERNATIVE COMPARED TO THE CEQA EXISTING CONDITION**

##### ***Impact 14.2.6-1: Change in New Bullards Bar Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

The CEQA Modified Flow Alternative would not affect cultural resources because it would not result in substantial departures from the range of water surface elevations maintained under recent historical operating rules for water levels in New Bullards Bar Reservoir. The reservoir's long-term average monthly water surface elevations and average monthly water surface elevations by water year type are essentially equivalent under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, over the 72-year simulation period (Appendix F4, 4 vs. 1, pg. 50).

Based on this analysis, potential impacts on cultural resources from changes in average monthly maximum and minimum reservoir water surface elevations in New Bullards Bar Reservoir under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, would be less than significant.

##### ***Impact 14.2.6-2: Alteration of the character of the New Bullards Bar Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the New Bullards Bar Reservoir site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, are considered less than significant.

##### ***Impact 14.2.6-3: Changes in lower Yuba River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Over the 72-year simulation period, the maximum long-term average monthly flows at Marysville would occur during February under both the CEQA Modified Flow Alternative and the CEQA Existing Condition. Long-term average flows in February would be essentially equivalent under both the alternative and the basis of comparison. Conversely, the minimum long-term average flows would occur in October under both the CEQA Modified Flow Alternative and the CEQA Existing Condition. During October, long-term average flows under the CEQA Modified Flow Alternative would be about 5 percent lower than the CEQA Existing Condition (Appendix F4, 4 vs. 1, pg. 272). Therefore, the CEQA Modified Flow Alternative is unlikely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in lower Yuba River flows under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.6-4: Alteration of the character of the lower Yuba River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the lower Yuba River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, are considered less than significant.

***Impact 14.2.6-5: Changes in Oroville Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

Long-term average monthly water surface elevations are essentially equivalent under the CEQA Modified Flow Alternative and the CEQA Existing Condition over the 72-year simulation period (Appendix F4, 4 vs. 1, pg 455). As a result, the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, would not affect cultural resources because it would not result in significant departures from the range of water surface elevations in Oroville Reservoir.

Based on this analysis, potential impacts on cultural resources from changes in Oroville Reservoir water surface elevations under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.6-6: Alteration of the character of the Oroville Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Oroville Reservoir site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, are considered less than significant.

***Impact 14.2.6-7: Changes in Feather River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Long-term average monthly flows in the Feather River under the CEQA Modified Flow Alternative are essentially equivalent to the CEQA Existing Condition (Appendix F4, 4 vs. 1, pg. 603). These differences in flow are within the normal range of average monthly maximum and minimum flows occurring in the Feather River and would not result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in Feather River flows under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.6-8: Alteration of the character of the Feather River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Feather River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, are considered less than significant.

***Impact 14.2.6-9: Changes in Sacramento River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Long-term average monthly flows in the Sacramento River are essentially equivalent under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, over the 72-year simulation period (Appendix F4, 4 vs. 1, pg. 882). Therefore, the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, is not likely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in Sacramento River flows under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.6-10: Alteration of the character of the Sacramento River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Sacramento River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA Modified Flow Alternative, relative to the CEQA Existing Condition, are considered less than significant.

#### **14.2.7 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES OF THE CEQA NO PROJECT/NEPA NO ACTION ALTERNATIVE COMPARED TO THE CEQA EXISTING CONDITION/NEPA AFFECTED ENVIRONMENT**

As discussed in Chapter 3, the key elements and activities (e.g., implementation of the RD-1644 Long-term instream flow requirements) for the CEQA No Project Alternative would be the same for the NEPA No Action Alternative. The primary differences between the CEQA No Project and NEPA No Action alternatives are various hydrologic and other modeling assumptions (see Section 4.5 and Appendix D). Because of these differences between the No Project and No Action alternatives, these alternatives are distinguished as separate alternatives for CEQA and NEPA evaluation purposes.

Based on current plans and consistent with available infrastructure and community services, the CEQA No Project Alternative in this EIR/EIS is based on current environmental conditions (e.g., project operations, water demands, and level of land development) plus potential future operational and environmental conditions (e.g., implementation of the RD-1644 Long-term instream flow requirements in the lower Yuba River) that probably would occur in the foreseeable future in the absence of the Proposed Project/Action or another action alternative. The NEPA No Action Alternative also is based on conditions without the proposed project, but uses a longer-term future timeframe that is not restricted by existing infrastructure or physical and regulatory environmental conditions. The differences between these modeling characterizations and assumptions for the CEQA No Project and the NEPA No Action alternatives, including the rationale for developing these two different scenarios for this EIR/EIS, are explained in Chapter 4<sup>1</sup>.

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<sup>1</sup> For modeling purposes related to CEQA analytical requirements, OCAP Study 3 (2001 level of development) is used as the foundational study upon which the modeling scenarios for the CEQA No Project Alternative and the CEQA Existing Condition were developed. For modeling purposes related to NEPA analytical requirements, OCAP

Although implementation of the RD-1644 Long-term instream flow requirements would occur under both the CEQA No Project and the NEPA No Action alternatives, the resultant model outputs for both scenarios are different because of variations in the way near-term and long-term future operations are characterized for other parameters in the CEQA and NEPA assumptions. As discussed in Chapter 4, the principal difference between the CEQA No Project Alternative and the NEPA No Action Alternative is that the NEPA No Action Alternative includes several potential future water projects in the Sacramento and San Joaquin valleys (e.g., CVP/SWP Intertie, FRWP, SDIP and a long-term EWA Program or a program equivalent to the EWA), while the CEQA No Project Alternative does not. Because many of the other assumed conditions for these two scenarios are similar, the longer-term analysis of the NEPA No Action Alternative compared to the NEPA Affected Environment builds upon the nearer-term analysis of the CEQA No Project Alternative compared to the CEQA Existing Condition.

Because the same foundational modeling base (OCAP Study 3) was used to characterize near-term conditions (2001 level of development) both the CEQA No Project Alternative and the CEQA Existing Condition, it was possible to conduct a detailed analysis to quantitatively evaluate the hydrologic changes in the Yuba Region and the CVP/SWP system that would be expected to occur under these conditions. Building on this CEQA analysis, the analysis of the NEPA No Action Alternative compared to the NEPA Affected Environment consists of two components: (1) an analysis of near-term future without project conditions quantified through the CEQA No Project Alternative, relative to the CEQA Existing Condition, and (2) a qualitative analysis of longer-term future without project conditions (the NEPA No Action Alternative)<sup>2</sup>.

#### ***14.2.7.1 CEQA NO PROJECT ALTERNATIVE COMPARED TO THE CEQA EXISTING CONDITION***

##### ***Impact 14.2.7-1: Change in New Bullards Bar Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

The CEQA No Project Alternative would not affect cultural resources relative to the CEQA Existing Condition because it would not result in substantial departures from the range of water surface elevations maintained under recent historical operating rules for water levels in New Bullards Bar Reservoir. Long-term average monthly water surface elevations are essentially equivalent under the CEQA No Project Alternative and CEQA Existing Condition over the 72-year simulation period (Appendix F4, 2 vs. 1, pg. 50). Since average monthly water surface elevations under the CEQA No Project Alternative in New Bullards Bar Reservoir do not drop below the lowest elevation observed, and do not increase above the highest elevation under the CEQA Existing Condition, it is unlikely that the CEQA No Project Alternative would expose any previously inundated lands, or inundate any previously exposed lands surrounding New Bullards Bar Reservoir.

Based on this analysis, potential impacts on cultural resources from changes in average monthly maximum and minimum reservoir water surface elevations in New Bullards Bar Reservoir under the CEQA No Project Alternative, relative to the CEQA Existing Condition, would be less than significant.

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Study 5 (2020 level of development) is used as the foundational study upon which the modeling scenarios for the NEPA No Action Alternative was developed.

<sup>2</sup> The second analytical component cannot be evaluated quantitatively due to the differences in the underlying baseline assumptions for OCAP Study 3 and OCAP Study 5.

***Impact 14.2.7-2: Alteration of the character of the New Bullards Bar Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA No Project Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the New Bullards Bar Reservoir site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA No Project Alternative, relative to the CEQA Existing Condition, are considered less than significant.

***Impact 14.2.7-3: Changes in lower Yuba River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Over the 72-year simulation period, the maximum long-term average monthly flows at Marysville would occur during February, and would be approximately 1 percent lower under the CEQA No Project Alternative, relative to the CEQA Existing Condition. Conversely, the minimum long-term average monthly flows would occur in October under the CEQA No Project Alternative and the CEQA Existing Condition. During October, long-term average flows under the CEQA No Project Alternative would be approximately 7 percent higher than the CEQA Existing Condition (Appendix F4, 2 vs. 1, pg. 272). Relative to the CEQA Existing Condition, these differences in flow would be within the range of maximum and minimum average monthly flows, and therefore are unlikely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in lower Yuba River flows under the CEQA No Project Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.7-4: Alteration of the character of the lower Yuba River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA No Project Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the lower Yuba River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA No Project Alternative, relative to the CEQA Existing Condition, are considered less than significant.

***Impact 14.2.7-5: Changes in Oroville Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

Long-term average monthly water surface elevations are essentially equivalent under the CEQA No Project Alternative and the CEQA Existing Condition over the 72-year simulation period (Appendix F4, 2 vs. 1, pg. 455). As a result, the CEQA No Project Alternative, relative to the CEQA Existing Condition, would not impact cultural resources because it would not result in significant departures from the range of water surface elevations in Oroville Reservoir.

Based on this analysis, potential impacts on cultural resources from changes in average monthly maximum and minimum reservoir water surface elevations in Oroville Reservoir under the CEQA No Project Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.7-6: Alteration of the character of the Oroville Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA No Project Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Oroville Reservoir site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA No Project Alternative, relative to the CEQA Existing Condition, are considered less than significant.

***Impact 14.2.7-7: Changes in Feather River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Differences in long-term average monthly flows in the Feather River under the CEQA No Project Alternative, compared to the CEQA Existing Condition, do not exceed approximately 10 percent over the 72-year simulation period (Appendix F4, 2 vs. 1, pg. 603). These differences in flow are within the normal range of minimum and maximum flows occurring in the Feather River occurring under the CEQA Existing Condition, and would not result in an increased inundation of previous exposed areas or exposure of previous inundated lands to adversely affect sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in Feather River flows under the CEQA No Project Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.7-8: Alteration of the character of the Feather River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA No Project Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Feather River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA No Project Alternative, relative to the CEQA Existing Condition, are considered less than significant.

***Impact 14.2.7-9: Changes in Sacramento River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Long-term average flows in the Sacramento River do not differ by more than 5 percent under the CEQA No Project Alternative, relative to the CEQA Existing Condition, over the 72-year simulation period (Appendix F4, 2 vs. 1, pg. 882). These differences in flow would be within the range of average monthly maximum and minimum flows, relative to the CEQA Existing Condition, and are not likely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in Sacramento River flows under the CEQA No Project Alternative, relative to the CEQA Existing Condition, would be less than significant.

***Impact 14.2.7-10: Alteration of the character of the Sacramento River site setting that could affect eligibility for site inclusion in the NRHP***

The CEQA No Project Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Sacramento River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the CEQA No Project Alternative, relative to the CEQA Existing Condition, are considered less than significant.

### ***14.2.7.2 NEPA NO ACTION ALTERNATIVE COMPARED TO THE NEPA AFFECTED ENVIRONMENT***

In the Yuba Region, the primary differences between the NEPA No Action Alternative and the NEPA Affected Environment would be the changes in lower Yuba River flows associated with the implementation of the RD-1644 Long-term instream flow requirements, to replace the RD-1644 Interim instream flow requirements, and the increased local surface water demands for the Wheatland Water District. These also are the primary differences that would occur in the Yuba Region between the CEQA No Project Alternative and the CEQA Existing Condition. The potential effects to cultural resources that were evaluated in the quantitative analyses that is presented in Section 14.2.7.1 above for the CEQA No Project Alternative, relative to the CEQA Existing Condition (see also Appendix F4, 2 vs. 1) therefore also are used for comparison of the NEPA No Action Alternative, relative to the NEPA Affected Environment, and are not repeated here.

As discussed above, the analysis of the NEPA No Action Alternative includes several additional proposed projects in the project study area that are not included in the CEQA analysis. However, these other proposed projects would not significantly affect hydrologic conditions or cultural resources in the Yuba Region and, thus, are only discussed in the context of CVP/SWP operations upstream of and within the Delta.

Under the NEPA No Action Alternative, future levels of demand for water in California would be addressed through the implementation of numerous projects, including water storage and conveyance projects (e.g., SDIP<sup>3</sup>), water transfers and acquisition programs (e.g., a long-term EWA Program or a program equivalent to the EWA), and other projects related to CVP/SWP system operations (e.g., CVP/SWP Intertie and FRWP).

If not already completed, construction activities associated with future proposed water conveyance projects (e.g. FRWP and SDIP) along the Sacramento River and in the Delta under the NEPA No Action Alternative would require a cultural resources inventory and evaluation of property with the inundation zones and development of appropriate cultural resource protection to reduce impacts to a less than significant level. Other projects related to CVP/SWP system operations that could contribute to cultural resources impacts in the project study area generally would do so by affecting water surface elevations in the CVP/SWP reservoirs, river flows in the Feather and Sacramento rivers and Delta inflows.

To meet increased future demands, several other projects would increase water diversions from the Sacramento River under the NEPA No Action Alternative, relative to the NEPA Affected Environment. Water transfer and acquisition programs under the NEPA No Action Alternative could purchase water from the same agency or reservoir, and, thus, could collectively draw down reservoirs further than under the NEPA Affected Environment. The additional water sold for other programs could reduce water surface elevations in CVP/SWP reservoirs, which could result in potential impacts if previously inundated cultural resources were exposed. Although flows in the Sacramento and Feather rivers would vary as a result of implementing the other proposed projects identified above, these flow changes would generally occur during the lower flow conditions (e.g., July through September) and, thus, would not be expected to exceed the channel capacities of these rivers or the Delta. As a result, river flow changes and Delta inflows would not be likely to result in an increased inundation of previously exposed

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<sup>3</sup> The SDIP includes a maximum pumping rate of 8,500 cfs at the Banks Pumping Plant.

areas or exposure of previously inundated lands to adversely impact sensitive cultural resources.

It is uncertain how the implementation of the various other proposed projects under the NEPA No Action Alternative would change evaluated parameters (e.g., exports) within the Delta Region. Water transfer and acquisition projects would be expected to result in increased water availability and therefore increased CVP/SWP operational flexibility to meet various instream beneficial uses. By contrast, some of the other proposed projects could be expected to result in decreased operational and management flexibility due to the primary purposes of increased diversions and water supplies associated with future levels of demand, which could result in reduced inflows and increased exports.

As discussed above, potential impacts under the NEPA No Action Alternative could occur if previously inundated cultural resources in CVP/SWP reservoirs were exposed as a result of the combined effects of increased future demands and the simultaneous activities of multiple water transfer and acquisition projects, which could collectively draw down reservoir water surface elevations to an extent that is greater than that which occurs under the NEPA Affected Environment. Therefore, the overall effects of water conveyance projects, new water transfer and acquisition programs and projects related to CVP/SWP operations under the NEPA No Action Alternative, relative to the NEPA Affected Environment, could result in potentially adverse effects to cultural resources in the CVP/SWP system.

#### **14.2.8 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES OF THE NEPA YUBA ACCORD ALTERNATIVE COMPARED TO THE NEPA NO ACTION ALTERNATIVE**

##### ***Impact 14.2.8-1: Change in New Bullards Bar Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

The NEPA Yuba Accord Alternative would not affect cultural resources because it would not result in substantial departures from the range of water surface elevations maintained under recent historical operating rules for water levels in New Bullards Bar Reservoir. Over the 72-year simulation period, long-term average monthly mean water surface elevation in New Bullards Bar Reservoir under the NEPA Yuba Accord Alternative range from a minimum of 1,850 feet msl in November to a maximum of 1,933 feet msl in May. Under the NEPA No Action Alternative, long-term average water surface elevations range from a minimum of 1,865 feet msl in November to a high of 1,934 feet msl in May. The lowest average monthly water surface elevation under both the Yuba Accord (1,798 feet msl) and No Action (1,808 feet msl) alternatives occurs in September of critical water year types, and is 10 feet msl (1 percent) lower under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative (Appendix F4, 6 vs. 5, pg. 50). However, these decreases in monthly water surface elevations are within the range of recent historical average monthly maximum and minimum elevations observed in New Bullards Bar Reservoir. Therefore, it is unlikely that the NEPA Yuba Accord Alternative would expose any previously inundated lands which would substantially impact cultural resources associated with New Bullards Bar Reservoir relative to the NEPA No Action Alternative.

Based on this analysis, potential impacts on cultural resources from changes in average monthly maximum and minimum reservoir water surface elevations in New Bullards Bar Reservoir under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative would be less than significant.

***Impact 14.2.8-2: Alteration of the character of the New Bullards Bar Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The NEPA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the New Bullards Bar Reservoir site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, are considered less than significant.

***Impact 14.2.8-3: Changes in lower Yuba River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Over the 72-year simulation period, the maximum long-term average monthly flows at Marysville would occur during February and would be approximately 3 percent lower under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative. Conversely, the minimum long-term average monthly flows would occur in October under the NEPA Yuba Accord Alternative and the NEPA No Action Alternative. During October, long-term average flows under the NEPA Yuba Accord Alternative would be approximately 13 percent higher (3,364 vs. 3,460 cfs) than the NEPA No Action Alternative (Appendix F4, 6 vs. 5, pg. 272). Average flows by water year type range from 557 cfs higher to 512 cfs lower during wet years. These changes in flow would be within the range of maximum and minimum flows that generally occur in the lower Yuba River under the NEPA No Action Alternative, and therefore are unlikely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in lower Yuba River flows under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, would be less than significant.

***Impact 14.2.8-4: Alteration of the character of the lower Yuba River site setting that could affect eligibility for site inclusion in the NRHP***

The NEPA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the lower Yuba River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, are considered less than significant.

***Impact 14.2.8-5: Changes in Oroville Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

Long-term average monthly water surface elevations are essentially equivalent (0 percent change) under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, over the 72-year simulation period (Appendix F4, 6 vs. 5, pg. 455). Therefore, the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, would not affect cultural resources because it would not result in significant departures from the range of water surface elevations in Oroville Reservoir.

Based on this analysis, potential impacts on cultural resources from changes in Oroville Reservoir water surface elevations under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, would be less than significant.

***Impact 14.2.8-6: Alteration of the character of the Oroville Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The NEPA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Oroville Reservoir site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, are considered less than significant.

***Impact 14.2.8-7: Changes in Feather River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Differences in long-term average flows in the Feather River below Thermalito Afterbay outlet under the NEPA Yuba Accord Alternative compared to the NEPA No Action Alternative, are about 3 percent lower (4,735 vs. 4,886 cfs) over the 72-year simulation period (Appendix F4, 6 vs. 5, pg. 603). These differences in flow are within the normal range of average monthly minimum and maximum flows occurring in the Feather River under the NEPA No Action Alternative, and would not result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in Feather River flows under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, would be less than significant.

***Impact 14.2.8-8: Alteration of the character of the Feather River site setting that could affect eligibility for site inclusion in the NRHP***

The NEPA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Feather River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, are considered less than significant.

***Impact 14.2.8-9: Changes in Sacramento River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Long-term average monthly flows in the Sacramento River below the confluence with the Feather River do not differ by more than approximately 3.5 percent (12,809 vs. 12,402 cfs) under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, over the 72-year simulation period (Appendix F4, 6 vs. 5, pg. 882). Relative to the NEPA No Action Alternative, these differences are within the range of average monthly maximum and minimum flows, and are not likely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in Sacramento River flows under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, would be less than significant.

***Impact 14.2.8-10: Alteration of the character of the Sacramento River site setting that could affect eligibility for site inclusion in the NRHP***

The NEPA Yuba Accord Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Sacramento River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP.

Therefore, potential impacts under the NEPA Yuba Accord Alternative, relative to the NEPA No Action Alternative, are considered less than significant.

### **14.2.9 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES OF THE NEPA MODIFIED FLOW ALTERNATIVE COMPARED TO THE NEPA NO ACTION ALTERNATIVE**

#### ***Impact 14.2.9-1: Change in New Bullards Bar Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

The NEPA Modified Flow Alternative would not affect cultural resources because it would not result in substantial departures from the range of water surface elevations maintained under recent historical operating rules for water levels in New Bullards Bar Reservoir. Long-term average monthly water surface elevations in New Bullards Bar Reservoir under the NEPA Modified Flow Alternative range from a minimum of 1,857 feet msl in November to a maximum of 1,935 feet msl in May over the 72-year simulation period. Under the NEPA No Action Alternative, long-term average water surface elevations range from a minimum of 1,865 feet msl in November to a maximum of 1,934 feet msl in May. The lowest average monthly water surface elevation under the NEPA Modified Flow Alternative is 1,830 feet msl and occurs in September of critical water year types, compared to 1,808 feet msl under the NEPA No Action Alternative, which also occurs in September of critical water years (Appendix F4, 7 vs. 5, pg. 50). Since average monthly water surface elevations under the NEPA Modified Flow Alternative in New Bullards Bar Reservoir do not drop below, or increase above water surface elevations occurring under the NEPA No Action Alternative, it is unlikely that the NEPA Modified Flow Alternative would expose any previously inundated lands, or inundate any previously exposed lands surrounding New Bullards Bar Reservoir.

Based on this analysis, potential impacts on cultural resources from changes in average monthly maximum and minimum reservoir water surface elevations in New Bullards Bar Reservoir under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, would be less than significant.

#### ***Impact 14.2.9-2: Alteration of the character of the New Bullards Bar Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The NEPA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the New Bullards Bar Reservoir site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, are considered less than significant.

#### ***Impact 14.2.9-3: Changes in lower Yuba River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Over the 72-year simulation period, the maximum long-term average monthly flows at Marysville would occur during February, and would be about 1 percent lower (3,410 vs. 3,460 cfs) under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative. Conversely, the minimum long-term average monthly flows would occur in October under the NEPA Modified Flow Alternative and the NEPA No Action Alternative. During October, long-term average flows under the NEPA Modified Flow Alternative would be 13 percent higher (595 vs. 526 cfs) than the NEPA No Action Alternative (Appendix F4, 7 vs. 5, pg. 272). These

average monthly maximum and minimum flows are within the range flows occurring in the lower Yuba River under the NEPA No Action Alternative, and therefore are unlikely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in lower Yuba River flows under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, would be less than significant.

***Impact 14.2.9-4: Alteration of the character of the lower Yuba River site setting that could affect eligibility for site inclusion in the NRHP***

The NEPA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the lower Yuba River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, are considered less than significant.

***Impact 14.2.9-5: Changes in Oroville Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources***

Long-term average monthly water surface elevations are essentially equivalent under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, over the 72-year simulation period (Appendix F4, 7 vs. 5, pg. 455). Based on this analysis, the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, would not affect cultural resources because it would not result in significant departures from the range of water surface elevations in Oroville Reservoir.

Based on this analysis, potential impacts on cultural resources resulting from changes in Oroville Reservoir water surface elevations under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, would be less than significant.

***Impact 14.2.9-6: Alteration of the character of the Oroville Reservoir site setting that could affect eligibility for site inclusion in the NRHP***

The NEPA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Oroville Reservoir site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, are considered less than significant.

***Impact 14.2.9-7: Changes in Feather River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Differences in long-term average monthly flows in the Feather River below the Thermalito Afterbay outlet under the NEPA Modified Flow Alternative, compared to the NEPA No Action Alternative, are less than 2 percent higher (3,669 vs. 3,600 cfs) over the 72-year simulation period (Appendix F4, 7 vs. 5, pg. 603). These differences in flow are within the normal range of average monthly minimum and maximum flows occurring in the Feather River under the NEPA No Action Alternative, and would not result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in Feather River flows under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, would be less than significant.

***Impact 14.2.9-8: Alteration of the character of the Feather River site setting that could affect eligibility for site inclusion in the NRHP***

The NEPA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Feather River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, are considered less than significant.

***Impact 14.2.9-9: Changes in Sacramento River monthly mean flows that could result in adverse impacts to sensitive cultural resources***

Long-term average flows in the Sacramento River below the confluence of the Feather River do not differ by more than approximately 2.5 percent higher (12,710 vs. 12,402 cfs) under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, over the 72-year simulation period (Appendix F4, 7 vs. 5, pg. 882). Relative to the NEPA No Action Alternative, these differences are within the range of average monthly maximum and minimum flows, and are not likely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, potential impacts on cultural resources resulting from changes in Sacramento River flows under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, would be less than significant.

***Impact 14.2.9-10: Alteration of the character of the Sacramento River site setting that could affect eligibility for site inclusion in the NRHP***

The NEPA Modified Flow Alternative would not involve any activities that would introduce visual, audible, or atmospheric elements that change the character of the Sacramento River site or its setting, and therefore, would not affect the eligibility of the site for inclusion in the NRHP. Therefore, potential impacts under the NEPA Modified Flow Alternative, relative to the NEPA No Action Alternative, are considered less than significant.

### **14.3 CUMULATIVE IMPACTS**

Hydrologic modeling was used to evaluate the cumulative effects of the Yuba Accord Alternative and other likely changes in CVP/SWP operations on hydrology and water supply. The proposed projects that have been adequately defined (e.g., in recent project-level environmental documents or CALSIM II modeling) and that have the potential to contribute to cumulative impacts are included in the quantitative assessment of the Yuba Accord's impacts. For analytical purposes of this EIR/EIS, the projects that are considered well defined and "reasonably foreseeable" are described in Chapter 21. Additionally, the assumptions used to categorize future hydrologic cumulative conditions that are quantitatively simulated using CALSIM II and the post-processing tools are presented in Appendix D. To the extent feasible, potential cumulative impacts on resources dependent on hydrology or water supply (e.g., reservoir surface elevation) are analyzed quantitatively. Because several projects cannot be accurately characterized for hydrologic modeling purposes at this time, either due to the nature of the particular project or because specific operations details are only in the preliminary phases of development, these projects are evaluated qualitatively.

Only those projects that could affect cultural resources are included in the qualitative evaluation that is presented in subsequent sections of this chapter. Although most of the proposed projects

described in Chapter 21 could have project-specific impacts that will be addressed in future project-specific environmental documentation, future implementation of these projects is not expected to result in cumulative impacts to regional water supply operations, or water-related and water dependent resources that also could be affected by the Proposed Project/Action or alternatives (see Chapter 21). For this reason, only the limited numbers of projects with the potential to cumulatively impact cultural resources in the project study area are specifically considered qualitatively in the cumulative impacts analysis for cultural resources:

- ❑ Water Storage and Conveyance Projects
  - Shasta Lake Water Resources Investigation (Shasta Reservoir Enlargement)
  - Upstream of Delta Off-Stream Storage (Sites Reservoir)
  - In-Delta Storage Program (Delta Wetlands Project)
  - Upper San Joaquin River Basin Storage Investigation
  - Los Vaqueros Reservoir Expansion Project
  - Folsom Dam Raise Project
- ❑ Projects Related to Changes in CVP/SWP System Operations
  - Trinity River Mainstream Fishery Restoration Act
  - Sacramento Valley Water Management Program
  - Long-term CVP and SWP Operations Criteria and Plan
  - Isolated Delta Facility
  - Delta-Mendota Canal/California Aqueduct Intertie
  - Clifton Court Forebay Intertie
  - CVP Long-term Contract Renewals
  - Sacramento River Water Reliability Study
  - San Joaquin River Restoration Settlement Act
  - Oroville Facilities FERC Relicensing
- ❑ Water Transfer and Acquisition Programs
  - Dry Year Water Purchase Program
  - Sacramento Valley Water Management Program
  - Delta Improvements Package
- ❑ Flood Control, Ecosystem Restoration and Fisheries Improvement Projects
  - North Delta Flood Control and Ecosystem Restoration Project
  - Suisun Marsh Levee and Habitat Restoration Program
  - CALFED Ecosystem Restoration Program
  - CALFED Levees Program
- ❑ Local Projects in the Yuba Region
  - Yuba Project FERC Relicensing

These projects are described in Chapter 21 and are qualitatively addressed below.

### **14.3.1 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES OF THE YUBA ACCORD ALTERNATIVE CUMULATIVE CONDITION COMPARED TO THE EXISTING CONDITION**

For CEQA, the purpose of the cumulative analysis is to determine whether the incremental effects of the Proposed Project (Yuba Accord Alternative) would be expected to be

“cumulatively considerable” when viewed in connection with the effects of past projects, other current projects, and probable future projects (Public Resources Code Section 21083, Subdivision (b)(2)).<sup>4</sup>

For NEPA, the scope of an EIS must include “*cumulative actions, which when viewed with other proposed actions have cumulatively significant impacts and should therefore be discussed in the same impact statement*” (40 CFR §1508.25(a)(2)).

Because the CEQ regulations implementing NEPA and the CEQA guidelines contain very similar requirements for analyzing, and definitions of, cumulative impacts, the discussions of cumulative impacts of the Yuba Accord Alternative Cumulative Condition relative to the Existing Condition will be the basis for evaluation of cumulative impacts for both CEQA and NEPA. In addition, an analysis of the Modified Flow Alternative Cumulative Condition relative to the Existing Condition is provided to fulfill NEPA requirements.

The following sections describe this analysis for the projects discussed in Section 14.3 above.

#### ***14.3.1.1 WATER STORAGE AND CONVEYANCE PROJECTS***

Depending on their location, construction of new water storage and conveyance facilities may impact sensitive cultural resources. Expansion of existing dam and reservoir facilities would raise water surface elevations in reservoirs and potentially inundate previously exposed historic sites and/or landmarks surrounding existing reservoirs. However, activities associated with these projects would require a cultural resources inventory and evaluation of property with the inundation zones and development of appropriate cultural resource protection to reduce impacts to a less than significant level. The Yuba Accord Alternative would not contribute to cumulative effects (e.g., construction activities) on cultural resources because no additional water storage or conveyance projects are proposed as a part of the project.

#### ***14.3.1.2 PROJECTS RELATED TO CVP/SWP SYSTEM OPERATIONS***

Other projects related to CVP/SWP system operations that could contribute to cumulative cultural resources impacts in the project study area generally would do so by affecting water surface elevation levels in CVP/SWP reservoirs, river flows in the Feather and Sacramento rivers and Delta inflows. The Yuba Accord Alternative would not contribute to cumulative effects (e.g., greater reductions in reservoir elevation) on cultural resources at CVP/SWP reservoirs because water available for transfer would be released from New Bullards Bar Reservoir, which is not a reservoir operated by the CVP or the SWP. To meet increased future demands, several other projects would increase water diversions from the Sacramento River. Depending on the timing and operations of these reasonably foreseeable future projects, reductions in river flow associated with these diversions could be offset by the increases in Yuba River flows that would occur under the Yuba Accord Alternative. However, due to the volume of water flowing through the lower reaches of the Feather and Sacramento rivers, it is not anticipated that the river flow would change to such a level as to cause a cumulatively significant effect on cultural resources.

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<sup>4</sup> The “*Guide to the California Environmental Quality Act*” (Remy et al. 1999) states that “...although a project may cause an “individually limited” or “individually minor” incremental impact that, by itself, is not significant, the increment may be “cumulatively considerable”, and thus significant, when viewed against the backdrop of past, present, and probable future projects.” (CEQA Guidelines, § 15064, subd. (i)(1), 15065, subd. (c), 15355, subd. (b)).”

### **14.3.1.3 WATER TRANSFER AND ACQUISITION PROGRAMS**

Other water transfer and acquisition programs (e.g. SVWMP, EWA) could purchase water from the same agency or reservoir, and, thus, could collectively draw down reservoirs further than under the Existing Condition. The additional water sold for other programs could reduce water surface elevations in CVP/SWP reservoirs, which could result in significant cumulative impacts if previously inundated cultural resources resource were exposed. The Yuba Accord Alternative would not contribute to a cumulative effect on reservoir-related cultural resources because water available for transfer would be released from New Bullards Bar Reservoir, which is not a reservoir operated by the CVP or the SWP. Because other water transfer and acquisition programs would not affect New Bullards Bar Reservoir, there is little potential for cultural resources impacts to compound as a result of the Yuba Accord Alternative.

### **14.3.1.4 FLOOD CONTROL, ECOSYSTEM RESTORATION AND FISHERIES IMPROVEMENT PROJECTS**

Flood control, ecosystem restoration and fisheries improvement projects would be targeted to improve aquatic habitat conditions within the project study area. Implementation of other projects, in addition to the Yuba Accord Alternative, could improve instream flow and water temperature conditions, physical habitat availability and ecosystem functions. Improvement of levee systems, channel capacities, and fish and wildlife habitat could impact cultural resources through either exposure or burial of archeological sites. Potential impacts could occur from the placement of new levee structural material, addition of habitat-conductive elements, and grading and contouring. However, activities associated with these projects would require a cultural resources inventory and evaluation of property within the area of the project, and development of appropriate cultural resources protection measures to reduce impacts to a less than significant level. The Yuba Accord Alternative would not contribute to cumulative effects (e.g., construction activities) on cultural resources because no additional flood control or ecosystem restoration projects are proposed as a part of the project.

### **14.3.1.5 LOCAL PROJECTS IN THE YUBA REGION**

Proposed license terms and conditions, and PM&Es will be considered during development of the regulatory and environmental documentation associated with the FERC relicensing process. However, it is not anticipated that regulatory requirements resulting from the FERC relicensing process would contribute to potentially significant cumulative adverse impacts on cultural resources.

### **14.3.1.6 OTHER CUMULATIVE CULTURAL RESOURCES IMPACT CONSIDERATIONS**

The quantitative operations-related impact considerations for the CEQA Yuba Accord Alternative, relative to the Existing Condition, are discussed in Section 14.2.5. Potential impacts identified in Section 14.2.5 are summarized below and provide an indication of the potential incremental contributions of the Yuba Accord Alternative to cumulative impacts. These potential impacts are summarized here:

- ❑ Impact 14.2.5-1: Change in New Bullards Bar Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources – Less than Significant
- ❑ Impact 14.2.5-2: Alteration of the character of the New Bullards Bar Reservoir site setting that could affect eligibility for site inclusion in the NRHP – Less than Significant

- ❑ Impact 14.2.5-3: Changes in lower Yuba River monthly mean flows that could result in adverse impacts to sensitive cultural resources – Less than Significant
- ❑ Impact 14.2.5-4: Alteration of the character of the lower Yuba River site setting that could affect eligibility for site inclusion in the NRHP – Less than Significant
- ❑ Impact 14.2.3-5: Changes in Oroville Reservoir water surface elevations that could result in adverse impacts to sensitive cultural resources – Less than Significant
- ❑ Impact 14.2.5-6: Alteration of the character of the Oroville Reservoir site setting that could affect eligibility for site inclusion in the NRHP – Less than Significant
- ❑ Impact 14.2.5-7: Changes in Feather River monthly mean flows that could result in adverse impacts to sensitive cultural resources – Less than Significant
- ❑ Impact 14.2.5-8: Alteration of the character of the Feather River site setting that could affect eligibility for site inclusion in the NRHP – Less than Significant
- ❑ Impact 14.2.5-9: Changes in Sacramento River monthly mean flows that could result in adverse impacts to sensitive cultural resources – Less than Significant
- ❑ Impact 14.2.5-10: Alteration of the character of the Sacramento River site setting that could affect eligibility for site inclusion in the NRHP – Less than Significant

Although these impacts would be less than significant, the potential exists for cumulative impacts nevertheless. Cumulative impact determinations are presented below, and are based upon consideration of the quantified Yuba Accord Alternative impacts relative to the CEQA Existing Condition, in combination with the potential impacts of other reasonably foreseeable projects. These cumulative impact determinations are summarized by region.

#### ***14.3.1.7 POTENTIAL FOR CUMULATIVE CULTURAL RESOURCES IMPACTS WITHIN THE PROJECT STUDY AREA***

Because results from the quantitative analysis generally indicate that direct project-related cultural resources impacts would be less than significant, the potential for the Yuba Accord Alternative to incrementally contribute to cumulative cultural resources impacts within the project study area would be minimal. The frequency and magnitude of these quantitative hydrologic changes, in concert with the other qualitative analytical considerations, are both contributing factors used to reach the overall cumulative impact conclusions discussed below for the Yuba Accord Alternative Cumulative Condition, relative to the Existing Condition.

##### ***Impact 14.3.1.7-1: Potential for significant cumulative cultural resources impacts within the Yuba Region***

Of the projects discussed above, the Yuba Project FERC Relicensing has the potential to affect cultural resources in the Yuba Region. While, as part of the relicensing, FERC may impose new regulatory constraints on the Yuba Project, which could affect New Bullards Bar Reservoir operations and YCWA's ability to manage releases into the lower Yuba River, it is not anticipated that FERC's new conditions would significantly affect cultural resources. The overall effects on cultural resources in the Yuba Region under Yuba Accord Alternative Cumulative Condition, compared to the Existing Condition, would be less than significant.

***Impact 14.3.1.7-2: Potential for potential cumulative cultural resources impacts within the CVP/SWP Upstream of the Delta Region***

For the reasons discussed above, it is anticipated that the water storage and conveyance facilities, projects related to CVP/SWP operations, new water transfer and acquisition programs and new flood control, ecosystem restoration and fisheries improvement projects discussed above could result in potential cumulative impacts on cultural resources in the CVP/SWP Upstream of the Delta Region. Thus, compared to the Existing Condition, the overall effects of the Yuba Accord Alternative Cumulative Condition on cultural resources in the CVP/SWP Upstream of Delta Region could be potentially significant. While some projects would improve ecosystem function and fish and wildlife habitat, which could increase hunting and fishing opportunities associated with tribal entities, the creation of new reservoirs could result in adverse impacts to existing or potential archeological sites in the vicinity of the proposed structures and facilities. It can be reasonably assumed that each of these other projects would make every effort to avoid or minimize adverse impacts to cultural resources associated with their implementation, and individually could result in less than significant impacts. It can also be reasonably assumed, however, that the combination of a number of less than significant impacts could, in fact, result in cumulative potentially significant impacts.

Although there is a potential for cumulative impacts on cultural resources to occur in the CVP/SWP Upstream of the Delta Region as a result of other reasonably foreseeable projects being implemented, particularly construction-related projects, the incremental effects of the Yuba Accord Alternative would be restricted to flow changes in the Feather and Sacramento rivers. Although flows in these rivers will vary as a result of implementing the reasonably foreseeable future projects listed above, these flow changes in combination with those occurring under the Yuba Accord Alternative would generally occur during the lower flow conditions (e.g., July through September) and, thus, would not be expected to exceed the channel capacities of the Feather and Sacramento rivers. As a result, these flow changes would not be likely to result in an increased inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, it is concluded that implementation of the Yuba Accord Alternative in combination with other reasonably foreseeable projects would result in a less than significant cumulative impact to cultural resources in the CVP/SWP Upstream of the Delta Region.

***Impact 14.3.1.7-3: Potential for significant cumulative cultural resources impacts within the Delta Region***

For the reasons discussed above, it is anticipated that the water storage and conveyance facilities, projects related to CVP/SWP operations, new water transfer and acquisition programs, and new flood control, ecosystem restoration and fisheries improvement projects discussed above could result in potential cumulative impacts on cultural resources in the Delta Region. Thus, compared to the Existing Condition, the overall effects of the Yuba Accord Alternative Cumulative Condition on cultural resources in the Delta Region could be potentially significant.

It is uncertain how the implementation of the various reasonably foreseeable projects listed above would change evaluated Delta parameters (e.g., inflows, exports) within the Delta Region. A number of these projects would be expected to result in increased water availability and therefore increased CVP/SWP operational flexibility to meet various instream beneficial uses. By contrast, some of the previously listed reasonably foreseeable projects could be expected to result in decreased operational and management flexibility due to the primary

purposes of increased diversions and water supplies associated with future levels of demand, which could result in reduced inflows and increased exports.

Although there is a potential for cumulative impacts on cultural resources to occur in the Delta Region as a result of other reasonably foreseeable projects being implemented, particularly construction-related projects, the incremental effects of the Yuba Accord Alternative would be restricted to changes in Delta inflow from the Sacramento River. Although Delta inflows will vary as a result of implementing the reasonably foreseeable future projects listed above, these flow changes in combination with those occurring under the Yuba Accord Alternative would generally occur during the lower flow conditions (e.g., July through September) and, due to the total volume of water flowing through the Delta, would not be expected to increase inundation of previously exposed areas or exposure of previously inundated lands to adversely impact sensitive cultural resources. Therefore, it is concluded that implementation of the Yuba Accord Alternative in combination with other reasonably foreseeable projects would result in a less than significant cumulative impact to cultural resources in the Delta Region.

***Impact 14.3.1.7-4: Potential for significant cumulative cultural resources impacts within the Export Service Area***

For the reasons discussed above, it is anticipated that the water storage and conveyance facilities, CVP/SWP operations projects, new water transfer and acquisition programs and the new flood control, ecosystem restoration and fisheries improvement projects discussed above would not adversely impact cultural resources, and therefore would not have any cumulative impacts in the Export Service Area (i.e., San Luis Reservoir). Future San Luis Reservoir operations would be expected to cause fluctuations (increases and decreases) in water surface elevations that would be within the range of historical variation currently observed and, thus, these changes would remain within the range of seasonal drawdown levels observed under the Existing Condition. Therefore, the overall effects on cultural resources at San Luis Reservoir would not occur, and the potential cumulative impacts of the Yuba Accord Alternative Cumulative Condition, compared to the Existing Condition, would be less than significant.

**14.3.2 ENVIRONMENTAL IMPACTS/ENVIRONMENTAL CONSEQUENCES OF THE MODIFIED FLOW ALTERNATIVE CUMULATIVE CONDITION COMPARED TO THE EXISTING CONDITION**

It is anticipated that the Modified Flow Alternative Cumulative Condition will have the same potential for cumulative impacts as the Yuba Accord Cumulative Condition. Therefore, the description of the potential impacts in Section 14.3.1 also serves as the description of cumulative impacts associated with the Modified Flow Alternative. Thus, the Modified Flow Alternative Cumulative Condition would result in the following potential cumulative impacts:

- ❑ Yuba Region - Potential cumulative impacts on cultural resources in the Yuba Region would be less than significant.
- ❑ CVP/SWP Upstream of the Delta Region - Potential cumulative impacts on cultural resources in the CVP/SWP Upstream of the Delta Region would be less than significant.
- ❑ Delta Region - Potential cumulative impacts on cultural resources in the Delta Region would be less than significant.
- ❑ Export Service Area - Potential cumulative impacts on cultural resources in the Export Service Area (San Luis Reservoir) would be less than significant.

#### **14.4 POTENTIAL CONDITIONS TO SUPPORT APPROVAL OF YCWA'S WATER RIGHTS PETITION**

No unreasonable adverse effects to cultural resources would occur under the Proposed Project/Action or an action alternative and, thus, no impact avoidance measures or other protective conditions are identified for the SWRCB's consideration in determining whether or not to approve YCWA's petitions to implement the Yuba Accord.

#### **14.5 MITIGATION MEASURES/ENVIRONMENTAL COMMITMENTS**

No adverse effects would occur to cultural resources under the Proposed Project/Action or an action alternative and, thus, no mitigation measures are required.

#### **14.6 POTENTIALLY SIGNIFICANT UNAVOIDABLE IMPACTS**

There are no potentially significant unavoidable impacts to cultural resources associated with the implementation of the Proposed Project/Action or an action alternative.