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Chapter 4.5 CULTURAL RESOURCES

4.5.1 Introduction

Cultural resources include prehistoric archaeological resources, historic-era archaeological resources, historic architectural resources, as well as paleontological resources (i.e., fossils). The Initial Study found that the Proposed Program would have no significant impacts to historic architectural resources or paleontological resources (see Appendix B). As such, this section focuses solely on the potential impacts of suction dredge mining on historical resources, including shipwrecks and Traditional Cultural Properties, prehistoric and historic-era archaeological resources, and human remains.

4.5.2 Regulatory Setting

The State of California implements the National Historic Preservation Act of 1966, as amended, through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP) is an office of the California Department of Parks and Recreation, and implements the policies of the National Historic Preservation Act (NHPA) on a statewide level. The OHP also maintains the California Historic Resources Inventory. The State Historic Preservation Officer is an appointed official who implements historic preservation programs within the state’s jurisdictions.

California Environmental Quality Act

CEQA, as codified in the California Public Resources Code (PRC) section 21000 et seq., is the principal statute governing the environmental review of projects in the state. CEQA requires lead agencies to determine if a proposed project would have a significant effect on historical resources, including archaeological resources. The CEQA Guidelines define a historical resource as: (1) a resource listed in or eligible for listing in the California Register of Historical Resources (CRHR); (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California, provided the lead agency’s determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of PRC section 21084.1 and CEQA Guidelines section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC section 21083 regarding unique archaeological resources. A unique archaeological resource is “an archaeological artifact, object, or site

1 about which it can be clearly demonstrated that, without merely adding to the current body
2 of knowledge, there is a high probability that it meets any of the following criteria:

- 3 ■ Contains information needed to answer important scientific research questions
4 and that there is a demonstrable public interest in that information.
- 5 ■ Has a special and particular quality such as being the oldest of its type or the
6 best available example of its type.
- 7 ■ Is directly associated with a scientifically recognized important prehistoric or
8 historic event or person (PRC § 21083.2 [g]).”

9 The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor
10 a historical resource, the effects of the project on that resource shall not be considered a
11 significant effect on the environment (CEQA Guidelines S§ 15064[c][4]).

12 ***California Public Resources Code***

13 Several sections of the California Public Resources Code (PRC) protect paleontological
14 resources. Section 5097.5 prohibits “knowing and willful” excavation, removal, destruction,
15 injury, and defacement of any paleontological feature on public lands (lands under state,
16 county, city, district, or public authority jurisdiction, or the jurisdiction of a public
17 corporation), except where the agency with jurisdiction has granted permission.

18 Section 7050.5 of the Health and Safety Code protects human remains by prohibiting the
19 disinterring, disturbing, or removing human remains from any location other than a
20 dedicated cemetery. Section 5097.98 of the PRC (and reiterated in CEQA Section 15064.59
21 [e]) also states that in the event of the accidental discovery or recognition of any human
22 remains in any location other than a dedicated cemetery, the following steps should be
23 taken:

24 (1) There shall be no further excavation or disturbance of the site or any nearby area reasonably
25 suspected to overlie adjacent human remains until:

26 (A) The coroner of the county in which the remains are discovered must be contacted to
27 determine that no investigation of the cause of death is required, and

28 (B) If the coroner determines the remains to be Native American:

- 29 1. The coroner shall contact the Native American Heritage Commission within
30 24 hours.
- 31 2. The Native American Heritage Commission shall identify the person or persons
32 it believes to be the most likely descended from the deceased Native American.
- 33 3. The most likely descendent may make recommendations to the landowner or
34 the person responsible for the excavation work, for means of treating or
35 disposing of, with appropriate dignity, the human remains and any associated
36 grave goods as provided in Public Resources Code Section 5097.98, or

- 1 (2) Where the following conditions occur, the landowner or his authorized representative shall
2 rebury the Native American human remains and associated grave goods with appropriate
3 dignity on the property in a location not subject to further subsurface disturbance.
- 4 (A) The Native American Heritage Commission is unable to identify a most likely descendent
5 or the most likely descendent failed to make a recommendation within 48 hours after
6 being notified by the commission.
- 7 (B) The descendant identified fails to make a recommendation; or
- 8 (C) The landowner or his authorized representative rejects the recommendation of the
9 descendant, and the mediation by the Native American Heritage Commission fails to
10 provide measures acceptable to the landowner.

11 ***California Register of Historical Resources***

12 The California Register of Historical Resources (CRHR) is “an authoritative listing and guide
13 to be used by state and local agencies, private groups, and citizens in identifying the existing
14 historical resources of the state and to indicate which resources deserve to be protected, to
15 the extent prudent and feasible, from substantial adverse change” (PRC § 5024.1[a]). The
16 criteria for eligibility to the CRHR are based on National Register of Historic Places (NRHP)
17 criteria (PRC § 5024.1[b]). Certain resources are determined by the statute to be
18 automatically included in the CRHR, including California properties listed in or formally
19 determined eligible for listing in the NRHP.

20 To be eligible for listing in the CRHR, a prehistoric or historic-era resource must be
21 significant at the local, state, and/or federal level under one or more of the following
22 criteria:

- 23 ■ Is associated with events that have made a significant contribution to the broad
24 patterns of California’s history and cultural heritage;
- 25 ■ Is associated with the lives of persons important in our past;
- 26 ■ Embodies the distinctive characteristics of a type, period, region, or method of
27 construction, or represents the work of an important creative individual, or
28 possesses high artistic values; or,
- 29 ■ Has yielded, or may be likely to yield, information important in prehistory or
30 history (CEQA §15064.5 [a][3]).

31 For a resource to be eligible for the CRHR, it must also retain enough integrity to be
32 recognizable as a historical resource and to convey its significance. A resource that does not
33 retain sufficient integrity to meet the NRHP criteria may still be eligible for listing in the
34 CRHR.

4.5.3 Environmental Setting

Prehistoric Setting

Introduction

The following prehistoric setting of California is approached by describing archaeological data, ethnographic/linguistic studies, and modern traditions which illustrate the settlement patterns, lifeways, languages, cultures, and beliefs of California's Native peoples. Each of these topical areas is described briefly below, followed by a discussion of prehistoric property types that are commonly found along California's waterways.

Archaeological Data

Current archaeological evidence indicates that human occupation in California began at least 15,000 years ago; earlier occupation dates have been debated though not firmly established (Erlandson et al., 2007:62). Perceptions of human colonization of the Americas have shifted in the past 20 years. The theory of terrestrial migration, where big-game hunters crossed over the ice bridge from northeastern Asia and traveled down the ice-free corridor into the central plains, has recently been remodeled. Archaeologists now understand that coastal migrations as well as multiple periods of migration should be included in a viable discussion about California's first human settlement (Erlandson et al., 2007).

Categorizing prehistoric human occupation into broad environmental regions and cultural stages allows researchers to describe a wide number of archaeological sites with similar cultural patterns and components in a particular location, during a given period of time, thereby creating a regional chronology. Numerous and varying cultural chronologies have been developed for California's regions (generally referred to as the Northwest, Northeast, San Francisco Bay Area, Central Valley, Sierra Nevada, Central Coast, Northern Bight, Southern Bight, Mojave Desert, and Colorado Desert); however, interregional diversity cannot be simplified. The variation of environments in California has created differences in both the cultural behavior of the prehistoric inhabitants as well as in the approach of archaeological methods and research, thereby creating a complex and ever expanding understanding of California prehistory (Moratto and Chartkoff, 2007).

While the names and dates of California's prehistoric periods vary by region, time has generally been divided into broad periods that reflect major changes in material culture and settlement patterns (i.e. the Paleoindian Period, the Early Period, the Middle Period, and the Late Period). Economic and technological types, socio-politics, trade networks, population density, and variations of artifact types further delineate cultural periods.

The Paleoindian Period (ca. 15,000 to 8000 B.C.) was characterized by big-game hunters occupying broad geographic areas. During the Early Period (ca. 8000 to 500 B.C.) geographic mobility continued and is characterized by the millingslab and handstone as well as large wide-stemmed and leaf-shaped projectile points. Cut shell beads and the mortar and pestle are first documented in burials during this period, indicating the beginnings of a shift to more sedentary ways. During the Middle Period (ca. 500 B.C. to A.D. 1200) geographic mobility may have continued, although groups began to establish longer-term base camps in localities from which a more diverse range of resources could be

1 exploited. The occurrence of sites in a wider range of environments suggests that the
2 economic base was more diverse and mobility was slowly replaced by the development of
3 small villages. During the Late Period (ca. A.D. 1200 to 1550), social complexity developed
4 toward lifeways of large, central villages with resident political leaders and specialized
5 activity sites. Artifacts associated with the Late Period include the bow and arrow, small
6 corner-notched points, and a diversity of beads and ornaments.

7 Ethnographies

8 Beginning in the early 16th century, but primarily during the late 19th and early 20th
9 centuries, Native American lifeways and languages (i.e., ethnographic data) were
10 documented throughout California. Whether by professional ethnographers/archaeologists,
11 field personnel from government agencies such as the Bureau of Indian Affairs, soldiers,
12 merchants, settlers, or travelers, ethnographic accounts partly illuminate the traditions,
13 beliefs, and cultures of Native American groups during specific points in time. Synthesized
14 narratives such as the *Handbook of North American Indians, California: Volume 8* (Heizer,
15 1978) categorize Native traditions and practices; however, the complexity of regional
16 diversity should not be overlooked.

17 There are at least six primary language families in California, with perhaps over 300
18 different dialects of approximately 100 languages. The “geolinguistic mosaic of the
19 ethnographic period, with a startling diversity of languages and language families” indicates
20 numerous major population shifts and migrations (Golla, 2007:71). Ethnographers have
21 also quantified at least 60 greater Indian cultures with as many as 250 specific tribes.

22 Similarities between California’s native populations crossed geographic, climatic, and
23 cultural boundaries. Acorns, where available, were a staple throughout California. Deer, elk,
24 small mammals, birds, and fish were relied upon. Resources were used to their fullest
25 extent, with little to no waste product. Ethnographically-documented communities were
26 generally focused on a central tribe with smaller satellite tribelets, however, this varied
27 from region to region. Shamanism and ceremonialism played important roles in the lives of
28 most California Native Americans. Basketry was well-practiced, although some
29 southeastern tribes manufactured pottery. Hunting, trapping, and fishing technologies were
30 shared across tribal and cultural boundaries, yet varied depending on environmental
31 conditions.

32 Native American fishing techniques along inland waterways included the construction of
33 fish weirs or dams across rivers to trap anadromous fish during upstream migration. Weirs
34 were constructed of wood poles, logs, and small stakes to completely obstruct fish passage
35 up a waterway. While some fish weirs were built and used by small groups, mainly
36 individual families, communal constructions were also common (Gould, 1975). Cooperation
37 to construct a communal fish weir included organized labor teams from many surrounding
38 villages who would collect logs for the construction of the dam, catch fish, gather firewood,
39 and process the catch. The dam would be in place for approximately ten days before the
40 group would tear it down (Chartkoff, 2004). Other methods of fishing included net traps,
41 harpoons, spears, platforms, and clubs. Tule balsa canoes and dugout canoes were also used
42 in fishing (Wilson and Towne, 1978). Other important riverine subsistence species included
43 steelhead, candlefish, lamprey, eel, and trout among others.

1 Trade was well developed in California. Shell beads as currency began as early as the later
2 part of the Middle Period. Food, ornaments, household items, clothing, industrial materials
3 such as obsidian, finished items including canoes, pottery, and basketry, and tobacco were
4 used for trade items. Trade networks were well established, and although it appears that
5 there were not professional traders, central villages served as focal points for trading
6 (Heizer, 1978).

7 While regional differences are significant among Native American beliefs, there is a common
8 identity and relationship with the environment. California Native peoples believe that
9 nature is interrelated and immersed with sacred power. Creation myths are told in most
10 California tribes, often explaining the origins of the earth, human existence, and individual
11 cultural attributes. Stories often pointed morality or defined the establishment of elements.
12 Modern Native American beliefs vary, but are rooted in their ancestral land and traditions.

13 *Modern Native Americans*

14 The 2000 U.S. Census recorded 220,657 American Indians in California, for those
15 designating only one race, excluding Alaska Natives and Native Hawaiians. Of that number,
16 some come from tribes outside the modern boundaries of California. Currently there are
17 107 federally-recognized Tribes in California and approximately 40 groups seeking to gain
18 recognition. While the devastation brought about by the introduction of disease and
19 displacement following European contact was overwhelming, Native American individuals
20 and communities have continued to protect their cultural heritage and identity and
21 maintain their languages and traditions.

22 Prehistoric Property-Types along California Waterways

23 Water—whether springs, creeks, rivers, lakes, bays, or the ocean—is one of the most
24 important resources necessary for human use and settlement. Water, and access to water,
25 gives sustenance, provides corridors for travel and trade, and establishes traditional
26 boundaries. Both archaeological sites and Traditional Cultural Properties are located along
27 waterways throughout California. Each of these types of properties is described below.

28 *Archaeological Sites*

29 Prehistoric archaeological sites generally found along California's waterways include
30 permanent or semi-permanent habitation sites, temporary camps or food processing
31 localities, and isolated artifacts. Archaeological materials that could be found at sites along
32 waterways include obsidian and chert flaked-stone tools (e.g., projectile points, knives,
33 scrapers) or tool making debris; culturally darkened soil ("midden") containing heat-
34 affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles,
35 handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted
36 stones. Native American human remains can also be found at prehistoric archaeological
37 sites. Although it is less likely that these types of resources are located within the riverbed,
38 there is a high potential that prehistoric resources are located on the adjacent riverbanks
39 and surrounding vicinity (Foster, Dillon, and Sandelin, 2005).

40 While the construction of fish weirs and platforms is well documented ethnographically and
41 traditionally, no archaeological evidence has been found in California related to these
42 structures. However, evidence of semi-permanent wood-stake fish weirs have been
43 identified on the Oregon Coast along tidal flats (Tveskov and Erlandson, 2003).

Traditional Cultural Properties

Places of importance to Native Americans can be considered historical resources as “areas” or “places” determined to be significant in the “social” and “cultural annals of California” (CEQA § 15064.5[a][3]). Defined as Traditional Cultural Properties (TCP) in the federal nomenclature, a TCP is generally significant because of its association with the “cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community” (Parker, et. al., 1998). According to NRHP Bulletin 38, there are two integrity issues that should be considered in determining the eligibility of a TCP: (1) integrity of relationship and (2) integrity of condition. Assessing integrity of relationship includes developing “some understanding about how the group that holds the beliefs or carries out the practices is likely to view the property” (Parker, et. al., 1998). The condition of the TCP is determined by whether the property maintains that relationship. One defined TCP is a “Riverscape,” or “a river and its environs, including their natural and cultural resources, wildlife, and domestic animals, associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values” (King, 2004). Riverscape analysis requires that the entire river system be holistically considered for the cultural values that it conveys for Native peoples, and includes contributing elements such as spatial organization, topography, vegetation, wildlife (including fish), water features, and sites, structures, and objects (Gates, 2003).

Salmon is not only a source of subsistence for Native peoples, but also has ceremonial value in places where this resource is available. Most tribes consider the first salmon catch of the season an important ceremonial occasion; in some cases a shaman is required to spear the first fish that is then eaten communally. Only then can the salmon fishing season begin (Riddell, 1978:374). Other annual traditions include honoring the location where salmon was created (Bright, 1978:188). Ceremonial sites are potential Traditional Cultural Properties.

Historic Setting

Spanish Discovery

The earliest European presence in California came with the Spanish discovery and exploration of the California coast in the mid-sixteenth century. Alta California had been claimed for Spain in 1542 by the Portuguese Juan Cabrillo, who sailed up the Pacific Coast as far as Fort Ross. Due to the prosperity of its more southern colonies and the great distances required to travel so far north, Spain largely ceased overland and maritime exploration of Alta California (i.e., the area encompassing modern-day California) until the eighteenth century. Spain had originally focused its energy and attention on its southern colonies in New Spain; however, in the eighteenth century the increased presence of Russian settlements along the northwest coast and the British acquisition of Canada in 1763 encouraged Spain to explore and occupy Alta California in order to prevent Russian and British encroachment from the north.

Mission Period

European expansion into Alta California began when Spanish Mexico instigated the establishment of a string of Franciscan missions throughout the region. The California mission system had two goals: to Christianize and civilize the native population of California and to gain political and social control of the area for the Spanish government in Mexico.

1 Mission San Diego de Alcalá, the first of 21 California missions, was founded in July 1769.
2 Over the next 50 years the mission system was extended further north. Alongside the
3 missions came a network of military establishments or *presidios* and civilian settlements or
4 *pueblos*. Exploration of the California hinterland focused predominantly on the
5 identification of rancho sites to support the mission network as well as the recapture of
6 runaway Natives.

7 Mexican Ranchos

8 Although the original Spanish plan for the mission system included secularization, the
9 process did not begin until Mexican independence from Spain. Fueled by reports of
10 Franciscans padres degrading the Native peoples and failing to provide food and services to
11 the military, the Mexican government began secularization in mid-1834. During the process,
12 the mission lands were to be divided among the Native American neophytes, although
13 rarely did this actually happen. More often the mission lands were granted to high-ranking
14 Mexican Californian soldiers, politicians, and socialites.

15 Mexican Californians, or *Californios*, were well known for their hospitality and easygoing
16 lifeways. Early accounts describe ranchos with large households, operated by a large Native
17 American labor force. Most ranchos were intensively involved in the hide-and-tallow trade,
18 supporting huge herds of cattle on their vast landholdings. The cattle were driven to
19 *matanzas*, or slaughter sites, that were usually as near to water transportation as possible
20 for easy transport onto foreign trade vessels. The relationship between the *Californios* and
21 the foreign ships had been active since the early 1820s. The ships imported all manner of
22 trade goods, since little refined manufacturing occurred in Mexican California.

23 Beginning in the 1830s, Americans began to migrate to California. Many became Mexican
24 citizens, married into prominent *Californio* families, and were granted lands from the
25 governor. These first immigrants became acculturated into Mexican society and politics,
26 while many were prominent businessmen and landowners.

27 Gold Rush

28 The discovery of gold in California in 1848 instigated one of the largest migrations in
29 history. Thousands came by land and sea in search of their fortunes. Most came to dig for
30 the gold, but many came with the foresight that miners needed supplies. Earlier residents of
31 California, including many *Californios* and previous Euroamerican immigrants, capitalized
32 on the new immigrant population. Many *Californios* also struggled to hold on to their vast
33 landholdings. Although the Treaty of Guadalupe Hidalgo promised that property belonging
34 to the Mexicans be “inviolably respected,” the new Americans generally believed that the
35 lands in California should be public property as a privilege of military victory. The vague
36 land-grant maps, or *diseños*, that marked the boundaries of each rancho territory were
37 protested and ignored by the land-hungry immigrants. “Squatters” settled on land officially
38 owned by Mexicans and violence often erupted. Many *Californios* lost substantial amounts
39 of land, despite legal efforts to hold on to it. Although many claims were confirmed, the
40 Mexican landowners were often bankrupt by the end of the long and costly proceedings.

Settlers

Mining camps and towns were established almost immediately throughout the California's gold-bearing regions, which are generally located along the western foothills of the Sierra Nevada mountain range and along the Klamath and Trinity river basins. At the outset, the mining population was made up almost exclusively of single men. But miners needed food and supplies, and people who could provide those goods followed. Ultimately women and children also relocated to mining communities. The influx also brought an extreme diversity of cultures and nationalities. California gold mining was very successful; in 1852 California produced more than \$81,000,000 worth of gold—60 percent of the world production for that year (Clark, 1957:223). Almost immediately after the discovery of gold, investors began talking about the construction of a transcontinental railroad that would connect eastern goods, money, and services to the new western enterprises. Prior to construction of the railroad however, the extensive inland waterway network of California was crucial for travel to the interior.

Suction Dredge Mining

Successful dredge mining operations began in California in the late 1890s (Caltrans, 2008). Dredging equipment included buckets or draglines attached to floating boats or barges that would scoop up gold-bearing gravel for processing. Dredging operations were generally located in rivers at lower elevations and created expansive tailing piles along the water banks. Large-scale dredge mining reached a peak during the 1930s. In the 1950s small-scale suction-dredge equipment was developed for the individual miner. The first machines were hand-constructed; however, manufactured suction dredges were soon available. Suction-dredge mining, for both recreational and financial opportunities, expanded in areas of California wherever placer gold deposits can be found.

Many other minerals were mined in California; however, gold deposits dominated the initial rush and continue to be a productive enterprise. Two types of gold deposits (placer and lode) involve four basic types of extraction (placer, hydraulic, underground, and dredging). All mining activities have left their mark on the landscape, including river diversions, waste rock and tailing piles, dredge tailings, cut banks, prospect pits, shafts, adits, and water conveyance systems such as dams, reservoirs, ditches, and flumes.

Historic-Era Property Types along California Waterways

Submerged Vessels

Potential historic-era resources that are located within California's river system are submerged vessels. The California State Lands Commission maintains a Shipwreck Database that currently identifies approximately 1,550 recorded shipwrecks in California, of which about 70 are recorded in California's river system (California State Lands Commission, 2009). The vast majority of these resources are wood-hulled, Gold Rush-era vessels submerged within the Sacramento, American, Feather, Yuba, and San Joaquin rivers in Central California. The title to all abandoned shipwrecks is under the jurisdiction of the California State Lands Commission. Any submerged vessel remaining in state waters for more than 50 years is considered a potentially significant historical resource.

Mining Sites and Features

Other historic-era resources that might be present in California's waterways are mining sites and features that are submerged within or adjacent to the state's river system. Property types include mining remains such as tailing piles and river diversions; water conveyance features such as ditches, flumes, and dams; and community remains including foundations, dugouts, and refuse deposits located along riverbanks and in the surrounding vicinity (Caltrans, 2008). Similar to submerged vessels, many of these other Gold Rush-era resources are concentrated within California's Sierra Nevada foothills, but may exist anywhere within the state's waterways.

Modern Development

California's waterways are a patchwork of both highly altered riverine systems and wild and scenic drainages that are undisturbed by modern development. The construction of dams, levees, canals, and reservoirs during modern times, whether for power generation, irrigation, flood control or transportation, have greatly altered the state's waterways, and with it, much of the surface evidence associated with the types of prehistoric and historic-era sites described above. Natural processes such as flooding and erosion/deposition have also altered or destroyed many of the cultural resources found along the state's waterways. Regardless of these natural and human-made disturbances, the state's waterways remain abundant with both recorded and unrecorded cultural resources, all of which provide a detailed record of California's rich cultural heritage.

4.5.4 Impact Analysis

The methodology described below accounts for activities conducted in accordance with the proposed regulations contained in Chapter 2. Additional or more extensive impacts related to cultural resources may result for those suction dredge activities requiring notification under Fish and Game Code section 1602. Notification is required for the following activities:

- Use of gas or electric powered winches for the movement of instream boulders or wood to facilitate suction dredge activities;
- Temporary or permanent flow diversions, impoundments, or dams constructed for the purposes of facilitating suction dredge activities;
- Suction dredging within lakes; and
- Use of a dredge with an intake nozzle greater than 4 inches in diameter.

A general description of how such activities requiring Fish and Game Code section 1602 notification would deviate from the impact findings are described at the end of the impact section below.

Findings of 1994 Environmental Impact Report

The 1994 EIR did not make findings for this environmental resource area.

Criteria for Determining Significance

For the purposes of this analysis, the Proposed Program would result in a significant impact if it would cause:

- A substantial adverse change, when considered statewide, in the significance of historical resources that are either listed or eligible for listing on the National Register of Historic Places, the California Register of Historical Resources, or a local register of historic resources;
- A substantial adverse change, when considered statewide, in the significance of unique archaeological resources; or
- Disturbance of any human remains, including those interred outside of formal cemeteries.

Historical Resources

CEQA Guidelines section 15064.5 requires the lead agency to consider the effects of a project on historical resources. A historical resource is defined as any building, structure, site, or object listed in or determined to be eligible for listing in the CRHR, or determined by a lead agency to be significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, or cultural annals of California. Types of historical resources potentially located in areas where suction dredge mining is conducted includes submerged vessels, TCPs, and historic-era mining sites and features. Archaeological resources that are potentially historical resources according to section 15064.5 are addressed in *Unique Archaeological Resources* below.

Archaeological Resources

The effects of a project on archaeological resources, both as historical resources according to section 15064.5, as well as unique archaeological resources as defined in section 21083.2 (g) must also be considered.

Human Remains

Human remains, including those buried outside formal cemeteries, are protected under a number of state laws including Public Resources Code section 5097.98 and Health and Safety Code section 7050.5.

4.5.5 Environmental Impacts

Impact CUL-1: Substantial Adverse Changes, When Considered Statewide, in the Significance of Historical Resources (Significant and Unavoidable)

Historical Resources

A significant impact could occur if suction dredge mining would cause a substantial adverse change, when considered statewide, in the significance of historical resources that are either listed or eligible for listing on the NRHP, the CRHR, or a local register of historic resources. Substantial adverse change is defined as the demolition, relocation, or alteration

1 of a resource to the extent that the character defining features which convey its significance
2 would be lost.

3 Many cultural resources are known to exist in the rivers where suction dredge mining could
4 occur. Some cultural resources may meet the criteria of significance defined in CEQA section
5 15064.5, and would be considered historical resources for CEQA purposes, while others
6 may not meet the criteria, and therefore would not be considered historical resources under
7 CEQA. The significance of cultural resources is derived from one or more factors including:
8 associations with important historical events or persons; possession of high artistic value or
9 distinctive characteristics; and the potential to yield important information. To be
10 considered significant, a resource must also retain sufficient integrity, including integrity of
11 location, design, setting, materials, workmanship, feeling, and association. Impacts to non-
12 significant resources would not be a significant impact to historical resources under CEQA
13 section 15064.5. However, suction dredge mining does have the potential to affect
14 significant resources. Whether this impact would have a substantial adverse change in the
15 significance of a resource when considered statewide is a function of the likelihood of
16 disturbance to these resources and their individual and/or collective significance. It is
17 unknown whether suction dredge mining would affect significant historical resources to a
18 level that would be considered significant statewide. As described in Chapter 2, CDFG will
19 distribute an informational packet to each suction dredge permit holder to provide “Best
20 Management Practices” guidance. This information packet will include measures regarding
21 the identification and avoidance of historic and cultural resources if they are encountered
22 during dredging activities. However, such adverse impacts cannot be entirely discounted,
23 even with the inclusion of avoidance measures contained within the “Best Management
24 Practices” information packet. For this reason, impacts to historical resources are
25 considered potentially significant.

26 For example, the numerous submerged vessels within California’s river system might be
27 located within areas of suction dredge mining. Submerged historic-era vessels, both
28 recorded and unrecorded, which have the potential to yield information important to
29 statewide history, would be considered historical resources for CEQA purposes. While many
30 of these resources are concentrated within the rivers and tributaries of the Sacramento-San
31 Joaquin Delta, they may exist anywhere within the state’s waterways. Damage to, or
32 destruction of, historically-significant submerged vessels would be a potentially significant
33 impact. Although the potential damage to or destruction of such resources resulting from
34 dredge mining operations is unknown and may be somewhat reduced by the information
35 contained in the “Best Management Practices” packet, it cannot be entirely discounted. As
36 both recorded and unrecorded submerged vessels may exist in locations where suction
37 dredge mining may occur, potential damage to such resources is considered a significant
38 impact.

39 Other potential historical resources that might be present in areas of suction dredge mining
40 are historic-era mining sites and features that are submerged within or adjacent to
41 waterways. Property types might include mining remains such as tailing piles and river
42 diversions; water conveyance features such as ditches, flumes, and dams; and community
43 remains including foundations, dugouts, and refuse deposits located along riverbanks and
44 in the surrounding vicinity (Caltrans, 2008). Mining-related cultural resources are
45 numerous in locations where modern suction dredge mining is conducted. Many of these
46 Gold Rush-era resources are concentrated within California’s Sierra Nevada foothills, or

1 'Gold Country,' but may exist anywhere within the state's waterways. A previous study
2 conducted on the effects of suction dredge mining on cultural resources concluded that the
3 activity has the potential to affect historic-era resources along the creek banks during
4 access and camping activities (USFS, 2006).

5 While the potential impacts to specific historical resources may be reduced if certain river
6 reaches are closed to suction dredge mining, the potential impact to historical resources
7 that continue to be part of the Program Area would not diminish. And though the guidance
8 provided in the "Best Management Practices" packets could reduce these effects, the
9 potential for Program activities to result in a substantial adverse change in the significance
10 of a historical resource due to possible demolition, relocation, or alteration would remain.
11 For these reasons, impacts to historical resources resulting from suction dredge mining
12 activities are considered potentially significant.

13 Mitigation measures designed to reduce impacts to a less-than-significant level are available
14 for historical resources that may be affected by a project. These mitigation measure include
15 archival research at the California Historical Resources Information System (CHRIS) or the
16 State Lands Commission, field surveys by qualified archaeologists and/or architectural
17 historians, to determine the location of recorded resources prior to dredging activities, and
18 data recovery and other documentation efforts designed to collect or record the significant
19 data associated with the resources. Despite the information contained in the "Best
20 Management Practices" packets to avoid such adverse effects, CDFG does not have the
21 jurisdictional authority to mitigate impacts to historical resources. Therefore impacts to
22 historical resources are considered significant and unavoidable.

23 Traditional Cultural Properties

24 TCPs are known to exist in and around waterways where suction dredge mining could
25 occur. The natural settings associated with "Riverscapes" are a recognized type of TCP (King
26 2004). Riverscape analysis requires that the entire river system be holistically considered
27 for the cultural values that it conveys for Native peoples, and includes contributing
28 elements such as spatial organization, topography, vegetation, wildlife (including fish),
29 water features, and sites, structures, and objects (Gates, 2003).

30 Suction dredging activities could cause a substantial adverse change to TCPs through the
31 introduction of increased human activity around the state's waterways. Implications of
32 suction dredge mining could include elevated noise levels, intrusion by non-local or non-
33 tribal persons, and the potential alteration of the physical environment associated with
34 TCPs. Some of the TCPs that might be subject to impacts from suction dredge mining may
35 meet the criteria of significance, as defined in CEQA section 15064.5, and would be
36 considered historical resources for CEQA purposes. Other TCPs may not meet the criteria of
37 significance as defined in CEQA section 15064.5, and would not be considered historical
38 resources for CEQA purposes. Because TCPs are distinctive depending on location, setting,
39 context, and association, substantial adverse changes to even one TCP may be considered a
40 significant impact even in the statewide context of the Program. The informational packet
41 distributed to each suction dredge permit holder will include guidelines to minimize and
42 avoid adverse affects to TCPs. However, such guidance would only be advisory and would
43 therefore not reduce adverse effects to a less-than-significant level.

1 Information about TCPs is generally gathered through the processes of consultation with
2 Native American groups and local communities and ethnographic study. Due to the broad
3 statewide nature of the Program, consultation and study were not feasible within the
4 context of this SEIR. Without consultation and study, it is not possible to determine
5 whether TCPs that qualify as historical resources under CEQA will also be subject to impacts
6 from suction dredge mining activities. Conversely, without consultation and analysis of all
7 locations where suction dredge mining occurs, it is not possible to determine the specific
8 locations of all CEQA-significant TCPs in a statewide context. Furthermore, some TCPs
9 would be required to be kept confidential, which would make regulation of those sites
10 difficult. Mitigation measures, including documentation and interpretation, designed to
11 reduce impacts to a less-than-significant level are available for significant TCPs that may be
12 affected by a project. However, as CDFG does not have the jurisdictional authority to
13 mitigate impacts to historical resources, impacts to TCPs are therefore considered
14 significant and unavoidable.

15 ***Impact CUL-2: Substantial Adverse Changes, When Considered Statewide, in the***
16 ***Significance of Unique Archaeological Resources (Significant and Unavoidable)***

17 Archaeological resources are usually eligible to be listed in the CRHR as historical resources
18 under criterion d: a resource that has yielded, or may be likely to yield, information
19 important in prehistory or history. In order to evaluate an archaeological site under
20 criterion d, data requirements, research questions, and the historic context of that property
21 must be identified and the integrity of the property must be addressed. If an archaeological
22 resource does not qualify as a historical resource under CEQA, then the resource must be
23 evaluated to determine whether it meets the criteria to qualify as a unique archaeological
24 resource. Unique archaeological resources can include prehistoric and historic-era
25 archaeological sites, individual artifacts, or objects. To be considered a unique
26 archaeological resource, the resource must: (1) contain important scientific information of
27 interest to the public; (2) retain a special quality, such as being the oldest or best example of
28 its type and/or; (3) be associated with an important event or person. Alteration or
29 destruction of a unique archaeological resource would be a significant impact.

30 Riverine settings are considered highly sensitive for the existence of significant
31 archaeological resources. Prehistoric archaeological sites generally found along riverways
32 include permanent or semi-permanent habitation sites, temporary camps or food
33 processing localities, and isolated artifacts. Although it is less likely that these types of
34 resources are located within the riverbed and the immediate area of impact of suction
35 dredge mining, there is a high potential that prehistoric resources are located on the
36 adjacent riverbanks and surrounding vicinity (Meyer and Rosenthal, 2008).

37 Suction dredge mining activities could cause a substantial adverse change to a unique
38 archaeological resource through riverbed suctioning and screening activities that could
39 disturb or destroy cultural materials which may be located just below the surface of the
40 riverbed or along its banks. Impacts to unique archaeological resources resulting from
41 suction dredge mining could also occur through increased human activity in the vicinity of
42 the state's waterways. A significant impact could occur if suction dredge mining activities
43 would cause a substantial adverse change, when considered statewide, in the significance of
44 unique archaeological resource. Whether this impact would have a substantial adverse
45 change in the significance of a unique archaeological resource when considered statewide is

1 a function of the likelihood of disturbance to such a resource and its individual and/or
2 collective significance. It is unknown whether suction dredge mining would affect unique
3 archaeological resources to a level that would be considered significant statewide. However,
4 such adverse impacts cannot be entirely discounted even with the inclusion of avoidance
5 measures contained within the “Best Management Practices” information packet. For this
6 reason, impacts to unique archaeological resources are considered potentially significant.

7 Mitigation measures designed to reduce impacts to a less-than-significant level are available
8 for unique archaeological resources that may be affected by a project. These mitigation
9 measures include archival research at the California Historical Resources Information
10 System (CHRIS) or the State Lands Commission, field surveys by qualified archaeologists
11 and/or architectural historians, to determine the location of recorded resources prior to
12 dredging activities, and data recovery and other documentation efforts designed to collect
13 or record the significant data associated with the resources. Despite the advisory
14 information contained in the “Best Management Practices” packets to avoid such adverse
15 effects, CDFG does not have the jurisdictional authority to adopt or enforce mitigation for
16 impacts to unique archaeological resources. Therefore, impacts to such resources are
17 considered significant and unavoidable.

18 ***Impact CUL-3: Disturbance of Human Remains (Less than Significant)***

19 A significant impact could occur if suction dredge mining would disturb, mutilate or remove
20 human remains, including those which may be interred outside of a formal cemetery.

21 The potential for human remains to be located within or adjacent to areas of suction dredge
22 mining activity is relatively low, but cannot be entirely discounted. Archaeological sites
23 containing human remains may be located in areas subject to suction dredge mining. The
24 suctioning and sorting activities of suction dredge mining could unearth, expose, disturb,
25 and remove buried human remains, which would be considered a significant impact.

26 Potential impacts to human remains are significant; however California state law requires
27 specific steps when human remains are discovered accidentally (section 7050.5 of the
28 Health and Safety Code and section 5097.98 of the Public Resources Code). The specific
29 steps to be taken in the event of discovery of human remains are described in the
30 Regulatory Setting section above, and will be included in the information packet distributed
31 to each suction dredge permit holder. Compliance with State law would ensure impacts are
32 less than significant.

33 ***Activities Requiring Fish and Game Code Section 1602 Notification***

34 Activities requiring notification under Fish and Game Code section 1602 are likely to result
35 in additional site disturbances, increasing the potential to cause adverse changes in the
36 significance of archeological and/or historic resources. Larger nozzle sizes and power
37 winching increase the amount of substrate movement capability, while dredging in lakes
38 would result in potential for disturbances in locations that would not otherwise be subject
39 to dredging under the Proposed Program. Furthermore, dredging in lakes or diverting
40 flows could increase physical intrusions on, or alterations to, TCPs. Though impacts on
41 historical and significant archeological resources (Impacts CUL-1 and CUL-2) have been
42 found to be significant and unavoidable, activities requiring notification under Fish and

1 Game Code section 1602 may contribute to additional adverse effects; the extent of which
2 would need to be evaluated in a CEQA analysis.

3 The potential for additional site disturbance also increase the potential to encounter or
4 disturb human remains. Though activities requiring notification under Fish and Game Code
5 section 1602 may increase the potential for accidental discovery, compliance with State
6 laws would ensure that impacts on this resource would remain less than significant.