3.4. Archaeological, Historical, and Tribal Cultural Resources

This section analyzes and evaluates the potential direct and indirect impacts of the project on known and unknown cultural resources. Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include prehistoric, historic-era, and tribal cultural resources (TCRs) (the latter as defined by Assembly Bill [AB] 52, Statutes of 2014, in Public Resources Code [PRC] Section 21074).

Archaeological resources are locations where human activity has measurably altered the earth or left deposits of prehistoric or historic-era physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical resources include standing buildings (e.g., houses, barns, outbuildings, cabins), intact structures (e.g., dams, bridges, wells), or other remains of humans’ alteration of the environment (foundation pads, remnants of rock walls). TCRs were added as a distinct resource subject to review under CEQA, effective January 1, 2015, under AB 52. This is a new category of resources under CEQA and includes site features, places, cultural landscapes, and sacred places or objects, which are of cultural value to a tribe.

3.4.1. Regulatory Setting

Federal

Section 106 of the National Historic Preservation Act

The following laws and organizations facilitate federal protection of cultural resources:

- National Historic Preservation Act (NHPA) of 1966, as amended by Title 16, Section 470 of the United States Code
- Archaeological Resource Protection Act of 1979
- Advisory Council on Historical Preservation

These laws and organizations maintain processes for determining effects on historical properties eligible for listing in the National Register of Historic Places (NRHP).

NHPA Section 106 and accompanying regulations (Title 36, Part 800 of the Code of Federal Regulations [36 CFR 800]), the main federal regulatory framework guiding cultural resources investigations, require consideration of effects on properties that are listed in or may be eligible for listing in the NRHP. The NRHP, administered by the National Park Service, is the nation’s master inventory of known historic resources. It includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, and cultural characteristics that are considered significant at the national, state, or local level.
The formal criteria (36 CFR 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old. (However, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP.)

2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations.

3. It possesses at least one of the following criteria:
   
   A. Association with events that have made a significant contribution to the broad patterns of history (events).

   B. Association with the lives of persons significant in the past (persons).

   C. Distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).

   D. Has yielded, or may be likely to yield, information important to prehistory or history (information potential).

Listing in the NRHP does not entail specific protection of or assistance for a property. However, listing does guarantee the property’s recognition during planning for federal or federally assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

State

**California Register of Historic Resources**

The California Register of Historical Resources (CRHR) established a list of properties that are to be protected from substantial adverse change (PRC Section 5024.1). A historical resource may be listed in the CRHR if it meets any of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.

2. It is associated with the lives of persons important in California’s past.

3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value.
4. It has yielded or is likely to yield information important in prehistory or history.

The CRHR includes properties that are listed or have been formally determined to be eligible for listing in the NRHP, State Historical Landmarks, and eligible Points of Historical Interest. Other resources require nomination for inclusion in the CRHR. These may include:

- resources contributing to the significance of a local historic district,
- individual historical resources,
- historical resources identified in historic resource surveys conducted in accordance with State Historic Preservation Office procedures,
- historic resources or districts designated under a local ordinance consistent with Commission procedures, and
- local landmarks or historic properties designated under local ordinance.

**California Environmental Quality Act**

CEQA requires public agencies to consider the effects of their actions on historical resources, unique archaeological resources, and TCRs. Under PRC Section 21084.1, a “project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” Under PRC Section 21084.2, a “project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment.” Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources.

**Historical Resources**

“Historical resource” is a term with a defined statutory meaning (PRC Section 21084.1). The determination of significant impacts on historical and archaeological resources is described in Sections 15064.5(a) and 15064.5(b) of the State CEQA Guidelines. Section 15064.5(a) states that historical resources include the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (PRC Section 5024.1).

2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the PRC or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which 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 may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1).

4. The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1[k] of the PRC), or identified in a historical resources survey (meeting the criteria in Section 5024.1[g] of the PRC) does not preclude a lead agency from determining that the resource may be an historical resource as defined in PRC Section 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects will affect unique archaeological resources. PRC Section 21083.2(g) states that a “unique archaeological resource” means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal Cultural Resources

CEQA also requires lead agencies to consider whether projects will affect TCRs. PRC Section 21074 states the following:

(a) “Tribal cultural resources” are either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

(b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.

(c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Health and Safety Code, Section 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance of Native American cemeteries is a felony. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If determined to be Native American, the coroner must contact the California Native American Heritage Commission (NAHC).

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. This law requires that if human remains are discovered, construction or excavation activity must cease and the county coroner must be notified. If the remains are of a Native American, the coroner must notify the NAHC. The NAHC then notifies those persons most likely to be descended from the Native American whose remains were discovered. The California Native American Historical, Cultural, and Sacred Sites Act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resources Code, Section 5097

PRC Section 5097 specifies the procedures to follow in the event of the unexpected discovery of human remains on nonfederal land. The disposition of Native American burial falls within the jurisdiction of the NAHC. PRC Section 5097.5 states the following:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature,
situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

**Assembly Bill 52**

AB 52, signed by Governor Edmund G. Brown Jr. in September 2014, establishes a new class of resources under CEQA: “tribal cultural resources” (or TCRs). AB 52 (PRC Sections 21080.3.4, 21080.3.2, and 21082.3) states that upon written request by a California Native American Tribe, a CEQA lead agency must begin consultation once it determines that the project application is complete, before the agency issues a notice of preparation (NOP) of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration. AB 52 also required a revision of State CEQA Guidelines Appendix G, the environmental checklist. This revision created a new category for TCRs.

As defined in PRC Section 21074, to be considered a TCR, a resource must be either:

1. listed or determined to be eligible for listing, on the national, state, or local register of historic resources; or

2. a resource that the lead agency determines, in its discretion and supported by substantial evidence, to treat as a tribal cultural resource pursuant to the criteria in PRC Section 50241(c). PRC Section 5024.1(c) provides that a resource meets criteria for listing as an historic resource in the California Register if any of the following apply:

   (1) It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.

   (2) It is associated with the lives of persons important in our past.

   (3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.

   (4) It has yielded, or may be likely to yield, information important in prehistory or history.

**Local**

The following information is provided in the *Solano County General Plan Update, Cultural and Paleontological Resources Background Report* (Solano County 2006).

The Solano County General Plan’s Land Use and Circulation and Resource Conservation and Open Space elements recognize that the county contains a diversity of archaeological sites and historical resources. While these elements acknowledge that additional study is needed to establish baseline cultural resource conditions for many communities and unincorporated areas, the elements also include policy goals to identify and preserve significant historical structures and features, and to establish a process for the identification and management of significant archaeological sites. Though these
policy goals exist, the elements do not contain a means to achieve the goals. In lieu of actions to achieve policy goals, and to reduce the likelihood that sensitive archaeological sites are damaged by development pursuant to the General Plan, Solano County has routinely required that land development proposals that require the preparation of an EIR be referred to the California Office of Historic Preservation (OHP) for review.

As discussed in Section 1.2, construction of facilities for the production of electrical energy by a local agency like SMUD is exempt from County zoning and building ordinances (Government Code ARTICLE 5. Regulation of Local Agencies by Counties and Cities [53090 - 53097.5]).

3.4.2. Environmental Setting

Prehistoric Archaeological Context

The project area is located in the Sacramento–San Joaquin Delta (Delta), a region where rapid alluvial and colluvial deposition has occurred over the last 10,000 years, resulting in the presence of deeply buried archaeological deposits throughout much of the region. The following historic context has been extracted from the *Solano Wind Project Historic Resources Inventory and Evaluation Report Update* (SMUD 2010) and the *Cultural Resources Inventory and Evaluation Report Prepared for the Solano 4 Wind Project* (SMUD 2018).

The following discussion focuses on cultural assemblages from a sequence of time periods in Solano County and neighboring counties to the south. As described below, five time periods were used to order the local archaeological record (Groza 2002; Groza et al. 2011; Meyer and Rosenthal 1997):

- Lower Archaic (10,000–6000 years Before Present [B.P.])
- Early Middle Archaic (7000–4500 B.P.)
- Terminal Middle Archaic/Early Period (4500–2500 B.P.)
- Upper Archaic or Middle Period (2500–1300 B.P.)
- Emergent Period or Late Period (1300–200 B.P.)

**Lower Archaic (10,000–6000 B.P.)**

The oldest archaeological component found so far in the San Francisco Bay–Delta region derives from the Los Vaqueros Reservoir area in eastern Contra Costa County. Two sites at the reservoir (CA-CCO-637 and CA-CCO-696) have recently produced artifact assemblages and human burials dated between 9,870 and 6,600 years ago (Meyer and Rosenthal 1997, 1998). These deposits were buried 2–4 meters below the surface in alluvial fan/floodplain sediments along Kellogg Creek.
The combined Lower Archaic assemblage at Los Vaqueros Reservoir included handstones and millingslabs, cobble-core tools, and a wide-stemmed obsidian projectile point, reminiscent of archaeological deposits found in the southern Clear Lake Basin and elsewhere in the southern North Coast Ranges at this time (White 2002). At least three human burials from Los Vaqueros Reservoir are known to date to this time period, one of which was buried under a stone cairn. Small but diverse floral and faunal assemblages indicate that the site inhabitant used a variety of animal and plant species. Large nuts (acorns and wild cucumber) and berries (manzanita) were the dominant plant resources represented in the archaeological deposits. Obsidian from both the North Coast Ranges and the eastern Sierra Nevada was used. Overall, the Lower Archaic assemblage from Contra Costa County appears to have affinities with assemblages assigned to the Borax Lake Pattern in the North Coast Ranges and “Milling Stone Horizon” assemblages to the south. Sites of this age are known from Solano County.

**Early Middle Archaic (7000–4500 B.P.)**

Extensive early Middle Archaic deposits are rare in central California, but two sites of this age are known from Los Vaqueros Reservoir (Meyer and Rosenthal 1997, 1998). Site CA-CCO-637, located in a small valley, included deeply buried components found in an alluvial fan adjacent to Kellogg Creek. The site was contained in buried soil and included a diverse assortment of habitation debris, several human burials, and residential and processing features.

Several characteristics of this important deposit, including exclusive use of the mortar and pestle, suggest that this assemblage may be affiliated with the Berkeley Pattern (associated with the West Berkeley Shellmound), previously placed no farther back in time than the Terminal Middle Archaic or Early Period (see below) (Fredrickson 1973). Among the distinctive artifacts associated with this component is one of the oldest dated shell bead lots in central California (4160 B.P.) and a unique type of pestle apparently used with a wooden mortar (Meyer and Rosenthal 1997).

**Terminal Middle Archaic/Early Period (4500–2500 B.P.)**

A number of archaeological sites in Contra Costa and Solano counties date to the Terminal Middle Archaic Period, including portions of CA-CCO-637 and CA-CCO-696 at Los Vaqueros Reservoir (Meyer and Rosenthal 1997, 1998), CA-CCO-308 in the San Ramon Valley (Fredrickson 1966), and CA-SOL-315 (Wiberg 1992) and CA-SOL-391 (Wohlgemuth and Rosenthal 1999) in Green Valley, just west of Vacaville. The latter two sites are the oldest well-dated archaeological deposits in Solano County. Initial use of the shell mound sites along the San Francisco estuary also appears to have begun during this time interval (Banks and Orlins 1985; Broughton 1997; Lightfoot 1997; Waechter 1992). The Terminal Middle Archaic is equivalent to the Early Period in Dating Scheme B, the earliest time period covered by that scheme.

All Terminal Middle Archaic sites in Solano and Contra Costa counties have produced human remains and most contain intact burials. A variety of artifacts are associated with
this time period, including side-notched and stemmed projectile points, rectangular Haliotis (abalone) ornaments, shaped and unshaped mortars and pestles, and rectangular Olivella shell beads (Fredrickson 1966; Meyer and Rosenthal 1997). Of particular interest is the vibrant Windmiller Culture that existed in the lower Sacramento Valley during this period; however, no evidence of its distinctive mortuary pattern has been discovered in Solano County.

The use of obsidian from the North Coast Ranges and the eastern Sierra Nevada continued during this period (Jackson 1974; Meyer and Rosenthal 1997; Waechter 1992; Wiberg 1996). In Solano County, however, obsidian from a source in the northern Napa Valley was now used almost exclusively (Wiberg 1992; Wohlgemuth and Rosenthal 1999). Nut and berry crops—acorn, manzanita, and pine nut—appear to have been the primary plant resources targeted during this time period (Meyer and Rosenthal 1997). Along the bayshore, marine shellfish species were an important subsistence resource (Banks and Orlins 1985; Waechter 1992), as were marine fishes and mammals (Broughton 1997; Simons 1992). Interior sites include a similar assortment of faunal resources, but with the notable absence of marine resources.

**Upper Archaic/Middle Period (2500–1300 B.P.)**

The Upper Archaic is equivalent to the Early/Middle Transition and the Middle Period in Dating Scheme B of Bennyhoff and Hughes (1987). Upper Archaic deposits are found throughout the lowland valleys of the Coast Ranges and along the shores of San Francisco and Suisun bays. These sites are typically located near freshwater streams, and many have been found in buried contexts (Banks and Orlins 1979, 1981, 1985; Cook and Elsasser 1956; Fredrickson 1966, 1968; Hammel 1956; Heizer 1949; Holman and Clark 1982; Lightfoot 1997; Meyer and Rosenthal 1997; Waechter et al. 1995). Several excavated sites in Solano County date to this time interval, including sites in the following locations:

- Green Valley—CA-SOL-11 and CA-SOL-355/H (Rosenthal 1996; Snoke 1967; Wiberg 1993);

- Vaca Valley—P-48-816, CA-SOL-320/H, CA-SOL-357, CA-SOL-425/H, and CA-SOL-451 (Whitaker and Carpenter 2010; Rosenthal et al. 2009; Whitaker et al. 2009); and


Upper Archaic sites are typically composed of well-developed midden deposits containing hundreds of human burials and habitation features, representing long-term residential villages. The earliest Upper Archaic sites contain classic Berkeley Pattern assemblages, characterized by well-developed bone tool and ornament industries, numerous saucer- and saddle-shaped Olivella shell beads, steatite disk beads, Haliotis ornaments and pendants, and both unshaped and well-shaped mortars and pestles (Rosenthal 1996;
Wiberg 1993). Projectile points are typically shouldered lanceolate forms, although side-notched and stemmed points also occur, along with large lanceolate bifaces. Well-made charmstones from various types of stone, as well as baked clay, are frequently found at sites in Solano County. Human interments are typically placed in flexed position with distinct burial postures and orientations identified at different sites (Fredrickson 1973; Rosenthal 1996). In the North Bay, obsidian from the Napa Valley appears to have remained an important toolstone (Rosenthal and White 1994; Shapiro and Tremaine 1995; Wiberg 1992).

Subsistence remains indicate that acorns and other large nut and seed crops were an important part of the diet, with a growing emphasis on small-seeded resources (Meyer and Rosenthal 1997; Rosenthal and White 1994; Rosenthal et al. 2009; Whitaker et al. 2009; Wiberg 1993; Wohlgemuth 1996). Faunal assemblages continue to reflect either marine or terrestrial taxa, depending on the location of the site (Broughton 1997; Fredrickson 1966, 1968; Meyer and Rosenthal 1997; Wiberg 1992). However, during the Upper Archaic, marine shellfish first occurred in appreciable amounts in interior valley sites (Fredrickson 1966, 1968).

Well-entrenched social boundaries have been identified through analysis of burial patterns at sites in Suisun, Fairfield, Vacaville, and Dixon (Rosenthal 1996; Whitaker and Carpenter 2010; Whitaker et al. 2009). Rosenthal (1996) identified a difference between the Green Valley and Dixon aspects during this time: The Green Valley Aspect showed a regimented burial pattern, with north- and west-facing burials interred on their right or left sides, while the Dixon Aspect showed no pattern in burial orientation for interments. Whitaker et al. (2009) and Rosenthal et al. (2009) incorporated data from several sites in Vacaville (CA-SOL-320, CA-SOL-425, CA-SOL-451, and P-48-816) and deduced that the social boundary lies somewhere between Ulatis and Alamo creeks, with Alamo Creek making up the northern boundary of the Green Valley Aspect. The stark delineation of social boundaries is thought to have reduced the ability of people to access distant resource patches, perhaps requiring them to increase the diversity of resources exploited and the intensity of use for lower-ranking resources, and to rely on trade networks for exogenous resources.

**Emergent Period/Late Period (1200–200 B.P.)**

The distinctive cultural pattern of the Emergent Period is marked by the appearance of small, arrow-sized projectile points, beautifully trimmed “show” mortars, flanged pestles, flanged steatite pipes, and chevron-designed bird bone tubes. Emergent Period sites have been excavated at several locations in Solano County:

- CA-SOL-356 in Green Valley (Wiberg 1996),
- CA-SOL-30 in Lagoon Valley,
- the Nakamura and Glasshoff sites in Suisun Valley (Phebus 1990),
Emergent Period deposits are documented in most interior valleys and bayshore locations, and in upland contexts, where habitation and task-specific sites are reported (Atchley 1994; Baker 1987; Banks and Orlins 1979; Bramlette 1989; Fredrickson 1966, 1968; Holson et al. 1993; Lillard et al. 1939; Meyer and Rosenthal 1997; Wills 1994). Buried sites dating to the Emergent Period have been found in some of the interior valleys (Fredrickson 1966; Meyer and Rosenthal 1997; Wiberg 1996), although most of the recorded sites are located at the surface. Typically, these sites are well-developed midden deposits containing both human cremations and standard burials. Residential features, including house floors, are common (Phebus 1990; Wiberg 1996).

It was also during the Emergent Period that bedrock mortar milling stations were first established, beginning in the East Bay area around 1,300 years ago (Meyer and Rosenthal 1997). Portable mortars and pestles continued to be used, although smaller specimens were preferred. Changes in the size of these tools may have occurred in response to the increased use of small-seeded plant resources (Meyer and Rosenthal 1997; Wohlgemuth 1996). Olivella and clam shell disc beads are frequently found with Emergent Period burials and in midden deposits. Manufacturing debris has been found, suggesting that at least some of these beads were made locally (Hartzell 1991; Meyer and Rosenthal 1997; Palumbo 1964; Wiberg 1996).

Large mammals appear to have taken a more prominent role in the diet during this period, as did small-seeded resources. Marine shellfish and marine fishes moved inland in much larger quantities during the Emergent Period (Baker 1987; Fredrickson 1968; Meyer and Rosenthal 1997). Large villages with hundreds of people are thought to have been located in the Delta region, while smaller hamlets composed of one or two extended families were located in some of the smaller valleys (Meyer and Rosenthal 1997).

**Ethnographic Context**

The project area is located primarily within the ethnographic boundaries of the Patwin; however, the Plains Miwok occupied both banks of the Sacramento River from Rio Vista to Freeport. The Montezuma Hills were not the sole domain of any one group, and were used by several Native American groups in recent prehistory and the historic period. It is believed that the Southeastern Patwin, the Plains Miwok, and the Bay Miwok all used the Montezuma Hills and the surrounding regions. The following discussion is summarized from Levy (1978) and Johnson (1978).

The term “Patwin” is a native word for “people” that several tribelets used to describe themselves. Patwin groups speak dialects of the Southern Wintuan language group, which belongs to the Penutian language family, along with Miwok, Maidu, and Costanoan Yokuts.
Patwin territory extends along the southern portion of the Sacramento River Valley, from Princeton (in Colusa County) to San Pablo and Suisun bays. The earliest reports from this area described this territory as being occupied by several different tribes, later referred to as “tribelets”; many distinct dialects were spoken. The Patwin had relatively early contact with explorers and settlers from Spain and elsewhere in Europe. As early as 1800, individuals were taken from Patwin settlements to the Spanish Mission Dolores and Mission San Jose, and later to Mission Sonoma. Other contact came from explorers such as Jedediah Smith and employees of the Hudson’s Bay Company. The Sacramento Valley and lower parts of the Delta were settled by the mid-1800s; and with increasing pressure from the Euro-Americans, the remaining Patwin became partially assimilated into American culture, taking temporary jobs on ranches, or were placed on federal reservations.

Central to the Patwin ritual life was the Kuksu cult, common throughout much of north-central California. Young boys and occasionally high-status women were initiated into one of three secret societies. Shamanism was also important, primarily for curing and ritual healing. The primary political unit was the tribelet: a primary village and satellite villages (Johnson 1978:354). Each tribelet was self-governing and occupied a defined territory. Small cultural differences existed between each group. Subsistence activities consisted of hunting, fishing, and collecting a wide variety of plants and seeds. Acorns were particularly important to the diet and were owned communally by each group.

The Bay Miwok tribelet, Ompin, is known to have had a village approximately 1.5 miles east of the project area; therefore, the Bay Miwok likely used the Montezuma Hills most intensively into the historic period.

Bay Miwok territory extended from the southeastern portion of the Montezuma Hills south to Mount Diablo, and from the present-day city of Walnut Creek east as far as Plains Miwok territory near Sherman Island. The Bay Miwok distributed themselves into tribelet groups that consisted of a village or groups of villages that shared linguistic and/or kinship affinities and are described variously as ranging from 20 to 300 people. Settlements were located on permanent watercourses and intermittent streams (in drier areas) and on high ground in areas near the Delta.

The Bay Miwok were semi-nomadic, employing a hunting and gathering subsistence pattern. Acorns were their principal dietary component; however, fishing in the adjacent San Joaquin and Sacramento rivers was also important. Boats were built from tule bundles. Miwok technology included bone, stone, antler, wood, and textile tools. The Bay Miwok constructed several types of structures, including conical thatch structures and semi-subterranean earth-covered lodges. Contact between the Bay Miwok and Europeans occurred in the second half of the 18th century, when Spanish explorers arrived in the area, leading to a period of hostilities, missionization, and population decline. During the late 19th and early 20th centuries, subsistence through hunting and gathering was increasingly augmented by seasonal wage labor on ranches and farms.
The Bay Miwok tribelet, Ompin, is known to have had a village approximately 1.5 miles east of the project area; therefore, the Bay Miwok likely used the Montezuma Hills most intensively into the historic period.

**Historic Setting**

The following historic context has been extracted from the *Solano Wind Project Historic Resources Inventory and Evaluation Report Update* (SMUD 2010) and the *Cultural Resources Inventory and Evaluation Report Prepared for the Solano 4 Wind Project* (SMUD 2018).

**Spanish and Mexican Periods**

The Delta region was first visited in historic times by Spanish explorers, including Pedro Fages and Juan Bautista de Anza, in the 1770s. Exploration of the region by the Spanish continued into the 1800s, and in 1815, Spanish missionaries made a concerted effort to bolster native populations in their mission system after an epidemic devastated the neophyte population at Mission San Francisco de Asís (in San Francisco) in 1795, and in anticipation of founding another mission: San Francisco Solano (in Sonoma), which opened in 1823 (California Mission Resource Center 2018).

In 1817, a military expedition ventured into what is now Solano County from the Carquinez Strait to explore the countryside and recruit natives into Christianity (Munro Fraser 1879:2-3). The subsequent confrontation was hard-fought by the natives, who were eventually overcome by the Spanish, leaving the region less protected and available for settlement by Euro-Americans from the east.

Early Euro-American settlement of the project vicinity began in 1844 when the Mexican government granted John Bidwell the 17,726-acre *Rancho Los Ulpinos*, located along the Sacramento River to the east of the area of potential effects (APE). The rancho took its name from the Julpun, a subtribe of Miwok Indians who occupied the western banks of the Sacramento River.

Individual settlers like Lansford W. Hastings also trickled into the Montezuma Hills. The area was so named by Hastings, who arrived in 1846. Lansford W. Hastings laid out Montezuma City at the head of Suisun Bay in 1847, with plans to subdivide and develop the area to establish his own republic (Gudde 1998:246). When Hastings' plan to develop a Mormon settlement unraveled because of the United States' annexation of California, he left his adobe home at the head of Suisun Bay and headed to Sacramento. Hastings then participated in California's entry into the United States, serving as a representative of the Sacramento District at California's First Constitutional Convention.

**American Period**

Lindsay Power Marshall and his sons purchased Hastings' land in 1854 and subsequently reoccupied Hastings' land grant. They developed the first agricultural operation in the hills and later began selling portions of the large landholding they had acquired to other
pioneers like John Kierce, Edward Jenkins, and Samuel Stratton. Settlement along the Sacramento River increased as swamp reclamation projects created fertile and available farmland. Emery Upham, one of the more successful early pioneers of the area, owned 8,100 acres in the Montezuma Hills by 1880. Upham’s lands were divided and sold upon his death in 1897.

An 1878 directory lists 23 ranches in the Montezuma Hills area, and census records indicate that immigrants came from such diverse places as England, Ireland, and Chile, and from a variety of U.S. locations, such as Pennsylvania, Maine, South Carolina, Kentucky, and Massachusetts. Area ranches distributed products via Birds Landing to San Francisco and Sacramento. Collinsville, founded by C. J. Collins in 1861, was developed as a port along the Sacramento River near the southwestern edge of the project area.

The principal economic activities in the Montezuma Hills during the late 19th and 20th centuries were wheat (dry) farming and ranching (JRP 2007). Independent farms and ranches began to grow along watercourses and in the low valleys during the first quarter of the 20th century, as shown in the 1906 Birds Landing 7.5-minute topographic quadrangle map (USGS 1906). These farms and ranches were linked by a road system that followed well-established routes that were in place by the late 19th century, many of which are still in use today.

In the first quarter of the 20th century, the open range of the Montezuma Hills, located on the outskirts of the ever-expanding California population, became the focus of planned industrial and energy production. In the 1920s, Pacific Gas and Electric Company (PG&E) began to prospect in the area for a new supply of natural gas. This exploration was unsuccessful but did not deter PG&E from returning 40 years later with a proposal for a nuclear power plant near Collinsville. The plan was not adopted, but during the 1970s, Dow Chemical Company purchased large tracts of agricultural land in hopes of establishing a multimillion-dollar industrial development. At the same time, ARCO Chemical Company attempted to develop a billion-dollar petrochemical plant near Toland Landing, but this proposal was ultimately rejected as well.

Instead, in the late 1980s, wind farms were established in the Montezuma Hills to exploit the strong winds on the area’s hilltops and ridges (Righter 1996:240,280). SMUD purchased land in the early 1990s and established wind facilities in the Montezuma Hills by the late 1990s (Cutting, pers. comm., 2018). Today, the area’s economic activities continue to be both ranching and wind energy production, with multiple companies producing wind energy.

**Cultural Resources Study Methodology and Findings**

Cultural resources investigations for the proposed project consisted of a staged approach that included pre-field research, field surveys, resource documentation, and Native American consultation. All aspects of the cultural resources study were conducted in accordance with the federal *Secretary of the Interior’s Guidelines for Identification of*
Cultural Resources (48 CFR 44720–44723) and the California Office of Historic Preservation’s Instructions for Recording Historical Resources.

Records Searches

An updated records search was conducted for the project site on May 14, 2018, by AECOM archaeologist and historian Karin G. Beck at the Northwest Information Center (NWIC) of the California Historical Resources Information System, Sonoma State University, Rohnert Park (NWIC File No. 17-2697). The NWIC, an affiliate of the California Office of Historic Preservation, is the official state repository of cultural resources records and studies for Solano County. Site records and previous studies were accessed for the APE and a 0.5-mile radius as shown on the Antioch North, Birds Landing, and Jersey Island, California, U.S. Geological Survey 7.5-minute topographic quadrangle maps. The following references also were reviewed:

- The NRHP
- The CRHR
- Historic Property Data File for Solano County (OHP 2012)
- California State Historical Landmarks (OHP 1996)
- California Inventory of Historic Resources (State Parks 1976)
- California Points of Historical Interest (OHP 1992)
- Antioch North, California 7.5-minute topographic quadrangle maps (USGS 1953a, 1978a)
- Birds Landing, California 7.5-minute topographic quadrangle maps (USGS 1906, 1953b, 1978b)
- Jersey Island, California 7.5-minute topographic quadrangle maps (USGS 1952, 1978c)
- Rio Vista, California 7.5-minute topographic quadrangle map (USGS 1953c)
- Antioch, California 15-minute topographic quadrangle map (USGS 1907)
- Jersey Island, California 15-minute topographic quadrangle map (USGS 1910a)
- Rio Vista, California 15-minute topographic quadrangle map (USGS 1910b)
- Five Views: An Ethnic Historic Site Survey for California (OHP 1988)
- California Place Names (Gudde 1998)
The records search, coupled with additional background research conducted by AECOM in 2018, identified a total of 15 studies previously conducted within portions of the project site (Table 3.4-1), covering the entire project site, which includes the direct APE. The majority of these studies were conducted more than 10 years ago; therefore, three additional investigations were conducted by Far Western Anthropological Research Group, Inc. (FWARG) (2010, 2016) and AECOM (SMUD 2018) within the direct APE. These studies resulted in the identification of 17 resources within the project site, six of which are within the direct APE (Table 3.4-2). An additional seven cultural sites are within 0.5 mile of the project site (Table 3.4-3).

Table 3.4-1. Cultural Resources Studies within the Project Site

<table>
<thead>
<tr>
<th>Citation</th>
<th>Survey Year</th>
<th>NWIC Study Number</th>
<th>Project Location(s)</th>
<th>Resource(s) Identified within the Project Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holman, Miley. Archaeological Field Inspection of the Montezuma Hills Proposed Wind Farm Area, Solano County, California. Holman &amp; Associates, San Francisco, CA.</td>
<td>1987</td>
<td>10481</td>
<td>Northern home run, southern home run</td>
<td>None</td>
</tr>
<tr>
<td>Holman, Miley. Archaeological Literature Review and Field Inspection of Areas 1 through 9, Montezuma Hills, Solano County, California. Holman &amp; Associates, San Francisco, CA.</td>
<td>1989</td>
<td>11766</td>
<td>Solano 4 East, northern home run, Solano 4 West</td>
<td>None</td>
</tr>
</tbody>
</table>
### Table 3.4-1. Cultural Resources Studies within the Project Site

<table>
<thead>
<tr>
<th>Citation</th>
<th>Survey Year</th>
<th>NWIC Study Number</th>
<th>Project Location(s)</th>
<th>Resource(s) Identified within the Project Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>AECOM. Final Cultural Resources Inventory and Evaluation Report, Sacramento Municipal Utility District, Solano 4 Wind Project, Montezuma Hills, Solano County, California. Sacramento, CA</td>
<td>2018</td>
<td>–</td>
<td>Home run and Solano 4 East</td>
<td>P-48-0524, SMUD-1, SMUD-2, SMUD-3, SMUD-4, SMUD-5, SMUD-6</td>
</tr>
</tbody>
</table>

Note: NWIC = Northwest Information Center
Sources: Scher and Whitaker 2016; SMUD 2018; data compiled by AECOM in 2019 based on records search at the Northwest Information Center, Sonoma State University.
Table 3.4-2. Cultural Resources Identified within the Project Site

<table>
<thead>
<tr>
<th>Resource</th>
<th>Project Location</th>
<th>Description</th>
<th>NRHP/CRHR Eligibility/Significance</th>
<th>Proximity to Direct Area of Potential Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMUD-1</td>
<td>Solano 4 East</td>
<td>Livestock watering feature (remnant)</td>
<td>Recommended not eligible</td>
<td>Within</td>
</tr>
<tr>
<td>SMUD-2</td>
<td>Solano 4 East</td>
<td>Basalt biface (isolate)</td>
<td>Recommended not eligible</td>
<td>140 feet east</td>
</tr>
<tr>
<td>SMUD-3</td>
<td>Solano 4 East</td>
<td>Concentration of habitation debris</td>
<td>Recommended not eligible</td>
<td>Within</td>
</tr>
<tr>
<td>SMUD-4</td>
<td>Solano 4 East</td>
<td>Livestock watering feature (extant)</td>
<td>Recommended not eligible</td>
<td>Within</td>
</tr>
<tr>
<td>SMUD-5</td>
<td>Solano 4 West</td>
<td>Fenceline (abandoned remnant)</td>
<td>Recommended not eligible</td>
<td>Within</td>
</tr>
<tr>
<td>SMUD-6</td>
<td>Solano 4 West</td>
<td>Ceramic plate fragments (isolate)</td>
<td>Recommended not eligible</td>
<td>Within</td>
</tr>
<tr>
<td>C-56</td>
<td>Solano 4 West</td>
<td>No site description provided</td>
<td>Not relocated during 2010 survey by FWARG</td>
<td>Approximately 0.75 mile west</td>
</tr>
<tr>
<td>P-48-41/CA-SOL-33</td>
<td>Solano 4 West</td>
<td>Hastings’ Adobe</td>
<td>Nominated for inclusion in the NRHP under Criteria B and C</td>
<td>Approximately 0.25 mile southwest</td>
</tr>
<tr>
<td>P-48-124/CA-SOL-283H</td>
<td>Solano 4 West</td>
<td>Remnant historic-era homestead (possibly Knox Marshall), with extant barn, several depressions, collapsed water tower, and artifact scatter</td>
<td>Unevaluated; testing recommended to determine NRHP eligibility (Whitaker and Kaijankoski 2010)</td>
<td>Approximately 1,000 feet west</td>
</tr>
<tr>
<td>P-48-125/CA-SOL-284H</td>
<td>Solano 4 West</td>
<td>Remnant historic-era homestead (possibly Charles Dadami), with old well, modern well, and artifact scatter</td>
<td>Unevaluated; testing recommended to determine NRHP eligibility (Whitaker and Kaijankoski 2010)</td>
<td>More than 0.25 mile west</td>
</tr>
<tr>
<td>P-48-126/CA-SOL-285H</td>
<td>Solano 4 West</td>
<td>Historic-era structural debris and several depressions; recorded as the former site of the Catholic church and a school</td>
<td>Unevaluated</td>
<td>More than 0.75 mile west</td>
</tr>
<tr>
<td>P-48-128/CA-SOL-287H</td>
<td>Solano 4 West</td>
<td>Recorded (based on ethnographic accounts) as a historic-era homeste with very little surface evidence remaining; site revisited and found no evidence of archaeological remains</td>
<td>Recommended not eligible (Whitaker and Kaijankoski 2010)</td>
<td>Approximately 0.5 mile southwest</td>
</tr>
<tr>
<td>P-48-139/CA-SOL-298H</td>
<td>Solano 4 West</td>
<td>Remnant historic-era vegetation and fenceline that represent the remains of the Simpson homestead; site disturbed by illegal off-road motorcyclists</td>
<td>Unevaluated; testing recommended to determine NRHP eligibility (Whitaker and Kaijankoski 2010)</td>
<td>Approximately 0.25 mile southwest</td>
</tr>
</tbody>
</table>
### Table 3.4-2. Cultural Resources Identified within the Project Site

<table>
<thead>
<tr>
<th>Resource</th>
<th>Project Location</th>
<th>Description</th>
<th>NRHP/CRHR Eligibility/Significance</th>
<th>Proximity to Direct Area of Potential Effects</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-48-140/CA-SOL-299H</td>
<td>Solano 4 West</td>
<td>Remnant historic-era vegetation that represents the remains of the Whitman homesite; site severely disturbed by illegal off-road motorcyclists</td>
<td>Unevaluated; testing recommended to determine NRHP eligibility (Whitaker and Kaijankoski 2010)</td>
<td>Approximately 0.25 mile southwest</td>
</tr>
<tr>
<td>P-48-415/CA-SOL-399H</td>
<td>Solano 4 West</td>
<td>Remnant historic-era homesite (possibly Esperson), with structural debris, a possible privy location, and artifact scatter</td>
<td>Unevaluated</td>
<td>More than 0.5 mile west</td>
</tr>
<tr>
<td>P-48-416/CA-SOL-400H</td>
<td>Solano 4 West</td>
<td>Remnant historic-era homesite (possibly Charles Rice), with structural debris and a radio tower and gravel road on-site</td>
<td>Unevaluated</td>
<td>Approximately 0.75 mile west</td>
</tr>
<tr>
<td>P-48-524</td>
<td>Home run</td>
<td>Historic ranch complex</td>
<td>Within</td>
<td></td>
</tr>
</tbody>
</table>

Notes: CRHR = California Register of Historical Resources; FWARG = Far Western Anthropological Research Group, Inc.; NRHP = National Register of Historic Places
Source: Data compiled by AECOM in 2018 based on records search at the Northwest Information Center, Sonoma State University and a review of previous investigations

### Table 3.4-3. Cultural Resources Identified within 0.5 Mile of the Project Site

<table>
<thead>
<tr>
<th>Resource</th>
<th>Project Location</th>
<th>Description</th>
<th>NRHP/CRHR Eligibility/Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-48-142</td>
<td>Solano 4 West</td>
<td>Historic glass and debris, and outhouse; site of the Episcopal church near Collinsville</td>
<td>Unevaluated</td>
</tr>
<tr>
<td>P-48-981</td>
<td>Solano 4 West</td>
<td>Grizzly Island Road, Collinsville Road, and Chadbourne Road, which provide access to the interior islands of Suisun Marsh</td>
<td>Recommended not eligible.</td>
</tr>
<tr>
<td>P-48-518</td>
<td>Northern home run, southern home run</td>
<td>Remnant historic-era ranching- or farming-related buildings or structures and vegetation</td>
<td>Contributing element of the potentially eligible Montezuma Hills Rural Historic Landscape.</td>
</tr>
<tr>
<td>P-48-519</td>
<td>Northern home run</td>
<td>Historic-era ranch buildings and residence</td>
<td>Contributing element of the potentially eligible Montezuma Hills Rural Historic Landscape.</td>
</tr>
<tr>
<td>P-48-521</td>
<td>Solano 4 West</td>
<td>Historic-era ranch buildings and residence</td>
<td>Contributing element of the potentially eligible Montezuma Hills Rural Historic Landscape.</td>
</tr>
<tr>
<td>P-48-523</td>
<td>Northern home run</td>
<td>Historic-era ranch buildings and residence</td>
<td>Contributing element of the potentially eligible Montezuma Hills Rural Historic Landscape.</td>
</tr>
<tr>
<td>P-48-949</td>
<td>Solano 4 West</td>
<td>Isolated handstone</td>
<td>Not eligible.</td>
</tr>
</tbody>
</table>

Notes: CRHR = California Register of Historical Resources; NRHP = National Register of Historic Places
Source: Data compiled by AECOM in 2018 based on records search at the Northwest Information Center, Sonoma State University
One archaeological study of the APE (not filed at the NWIC) that is of particular interest is the geoarchaeological sensitivity assessment by FWARG (Scher and Whitaker 2016) of most of the project site south of Montezuma Hills Road. That assessment concluded that the majority of the project site is not sensitive for buried archaeological sites. However, Scher and Whitaker (2016) suggested that areas of creeks and drainages, such as the unnamed creek east of Talbert Lane in Solano 4 West and along Montezuma Hills Road, have the high or highest potential for encountering buried archaeological sites (Exhibit 3.4-1).

Several built-environment historical resource studies (not filed at the NWIC) include information regarding previously identified and recorded historic-era resources in the Montezuma Hills region, including the following reports all prepared by JRP Historical Consulting, LLC:

- **Solano Wind Project, Solano County, California, Historic Resources Inventory and Evaluation Report (SMUD 2007)**
- **Solano Wind Project, Solano County, California, Historic Resources Inventory and Evaluation Report Update (SMUD 2009)**
- **Collinsville Wind Project CEQA Analysis: Hastings Adobe (PG&E 2010)**

The 2007 and 2009 reports recorded two historic-era ranch clusters that are located within the boundaries of the Solano 4 West project subarea, and the 2010 report analyzed impacts on the historic-era adobe residence listed in the NRHP (P-48-41). All three resources are located outside of the APE but within the project boundary.

The 2009 report also included an evaluation of a potential rural historic landscape within the larger Montezuma Hills region, using National Register Bulletin Number 30, “Guidelines for Evaluating and Documenting Rural Historic Landscapes,” to determine whether the area could be considered a rural historical landscape under CRHR criteria. The 2009 report concluded that the project study area and surrounding area are unlikely to be a considered a rural historic landscape because of their overall loss of historic integrity caused by wind turbine generators (WTGs), power lines, and other features that interrupt the continuity of the historic scene and introduce ahistorical characteristics.

**Known Cultural Resources**

NRHP and CRHR criteria were used to evaluate the significance of the historic features and archaeological sites. The NRHP criteria for eligibility are codified in 36 CFR 60 and explained in guidelines published by the Keeper of the NRHP. The NRHP and CRHR are discussed in more detail above in Section 3.4.1, “Regulatory Setting.” Eligibility for listing in the NRHP and the CRHR rests on twin factors of significance and integrity. A resource must have both significance and integrity to be considered eligible. Loss of integrity, if sufficiently great, will become more important than the historical significance a resource
Exhibit 3.4-1 Buried Archaeological Sensitivity
may possess and render it ineligible. Likewise, a resource can have complete integrity, but if it lacks significance, it must also be considered ineligible.

**Historic-Era Built Environment**

**Hastings Adobe (P-48-41)**

The Hastings Adobe is formally listed in the NRHP (Reference No. 72000260) and listed in the CRHR. The property is significant under NRHP Criterion B and CRHR Criterion 2 for its association with Lansford W. Hastings, an early California pioneer and land promoter perhaps most notable for his *Emigrants’ Guide to Oregon and California*, an overland guide for would-be settlers (including the ill-fated Donner Party). The Hastings Adobe is also significant under NRHP Criterion C and CRHR Criterion 3 as a significant example of 19th century adobe construction. The period of significance for the Hastings Adobe is 1846, the year of the adobe’s original construction, and the area of significance is the theme of community planning and development, and architecture (PG&E 2010).

The adobe is located within the Solano 4 West project boundary but outside the APE for project improvements, and is approximately 0.25 mile from the site of the nearest potential WTG. This property is considered a historical resource for the purposes of CEQA.

**P-48-524**

The 2001 recordation of this historic-era ranch complex described the property as a contributing element to the potentially eligible Montezuma Hills Rural Historic Landscape, but neither the landscape nor the property as an individual resource was evaluated for listing in the NHRP or CRHR. This ranch property does not appear eligible for listing under NRHP Criterion A and CRHR Criterion 1 because it is not associated with events that have made a significant contribution to broad patterns of history. It also is not associated with individuals significant at the local, regional, or national level (Criteria B/2). The site does not imbue those distinctive characteristics of a type, period, or method of construction, nor does it reflect the work of a master craftsman or reflect high artistic value (Criteria C/3). It is not likely to yield any additional important information about our history (Criteria D/4). In addition, the site does not retain historical integrity based on review of historic aerial imagery.

**Ranch Complex 1**

The 2007 and 2009 recordation and evaluations of this ranch complex flanking Talbert Lane did not meet any of the NRHP or CRHR criteria. In addition to lacking historic significance, the property was found to have suffered a loss of historic integrity. Since 2009, buildings and structures have been removed from the complex, which has left the barn and two small sheds as the property’s only extant built-environment resources, resulting in a further loss of historic integrity (SMUD 2007, 2009).
Ranch Complex 2

The 2007 and 2009 recordation and evaluations of this abandoned ranch complex did not meet any of the NRHP or CRHR criteria. In addition to lacking historic significance, the property was found to have suffered a loss of historic integrity. Since 2009, buildings and structures have been removed from the complex, which has left the barn and two small sheds as the property’s only extant built-environment resources, resulting in a further loss of historic integrity (SMUD 2007, 2009).

Montezuma Hills Rural Historic Landscape

A 2009 historic resources study of the Montezuma Hills region concluded that the surrounding area is unlikely to be considered a rural historic landscape, because of the overall loss of integrity caused by WTGs, power lines, and other features that interrupted the continuity of the historic scene and introduced ahistorical characteristics. Since 2009, additional WTGs have been installed throughout the Montezuma Hills region, including east of Solano 4 West and south of Solano 4 East, further affecting the setting (SMUD 2009).

Archaeological and Historic-Era Resources

The following discussion summarizes documented resources by project element within the project site. Temporary site numbers SMUD-1, SMUD-2, SMUD-3, SMUD-4, SMUD-5, and SMUD-6 were documented by AECOM cultural resources staff in 2018. SMUD-4 is an actively used watering location for livestock and consists of a metal cattle water trough, galvanized steel water tank, and concrete pad with modern pump and electrical service. Historic-era aerial photographs and topographic quadrangle maps revealed that SMUD-4 is a modern feature erected after 1993 (NETR 1993); therefore, this resource will not be discussed further.

An isolated basalt projectile point (SMUD-2) was identified within Solano 4 East approximately 140 feet outside the direct APE. However, none of the identified historic-era resources embody a distinctive type of construction, and they do not appear to have the potential to yield information important in history. In addition to lacking historic significance, the historic-era resources lack integrity, given their deterioration and alteration. Thus, no historic properties (NRHP) or historical resources (CRHR) were identified within the direct APE.

Solano 4 East

SMUD-1

SMUD-1 consists of the structural remains of an old water pump/cistern and a low-density artifact scatter, located on the south bank of an unnamed waterway on the north side of Toland Lane. The structural remains consist of finished lumber, two concrete slabs/foundation fragments, corrugated metal, one red (common) brick and one fire brick, and one fragment of flat, aqua-colored glass. A 1-inch-diameter threaded pipe was
observed among the structural remains. The pipe appeared to be oriented toward the creek and likely acted as part of a water-delivery system. A length of an approximately 6-inch-diameter flexible polyvinyl chloride (PVC) pipe was also observed near the metal pipe. Two “Square D,” 60-ampere breaker boxes were observed within the structural remains. The structural remains appear to be similar to those in other nearby areas where cattle are watered (see SMUD-4). The electrical breaker boxes would have been used to pump water into a tank or cistern. Schneider Electric has listed the trademark “Square D” on conduit boxes and switches since 1917, and the trademark is still in use today (Schneider Electric 2018).

Several artifacts were identified in the vicinity of the structural remains: three fragments of cobalt-colored glass (less than 1 inch); one fragment of curved, aqua-colored glass; and two curved, colorless glass fragments. Two 21-inch-diameter, ferrous metal, concave “disks” with 6-inch openings in the center were also observed. These are likely the remains of worn-out tilling equipment used to disk the fields.

In addition to the artifact deposit and structural remains, two 12-inch-diameter fragments of concrete post foundations were identified approximately 15 feet southeast of the location of the structural remains. The materials at SMUD-1 appear to be a mixture of mid-20th-century and modern materials associated with farming and ranching.

**SMUD-3**

SMUD-3 is a moderately dense historic-era artifact deposit located on a disked, east-facing hillside, approximately 68 feet upslope from Montezuma Hills Road. The artifact deposit consists of highly fragmentary ceramics, glass (vessel) fragments, and metal hardware. Ceramics include 15 fragments of nondiagnostic white improved earthenware and two fragments of brown glazed earthenware. The glass fragments include three green, eight aqua, and three amethyst-colored sherds. The metal fragments include two railroad spikes, 10 cast iron brackets/hooks, and several fragments of miscellaneous scrap metal. Although diagnostic artifacts are largely absent, the materials identified suggest an age range from the late 19th to early 20th century.

Because the field has been disked, it is unlikely that the artifacts are in situ. However, the artifacts were found concentrated in one primary location, intermixed and even embedded in the disked dirt, as opposed to just overlying the dirt. This finding indicates that the artifacts were likely in this general location when the field was disked. Sparse artifacts were identified as far as 145 feet north of the primary deposit. These artifacts may have been relocated across the landscape during disking. A review of historic-era maps and aerial photographs does not indicate that a structure was ever recorded in this location; thus, determining association is difficult.
SMUD-5

SMUD-5 is an abandoned northeast-southwest trending fence line. Only a small portion of the fence lies within the APE. The fence consists of upright square posts generally 4 feet high; some posts have been augmented by and stabilized using standard two-by-fours. The barbed wire connecting the posts has mostly been removed. All visible nails are wire cut. A concrete fence pier was found in a dry swale on the east edge of Solano 4 West. In aerial photographs, it appears that this feature is in line with SMUD-5, so it was included as part of this resource.

The fence line, located in the southeast quarter of the northwest quarter of Section 25, is likely associated with the ranch property acquired by John Kierce from Lindsay Powell Marshall Sr. in 1880, when Marshall divested some of his lands to Kierce and Edward Jenkins (Gregory 1912; Theodoratus et al. 1980:131). John and his wife Ann (O'Loughlin) Kierce (also Kerce, Kearce), were natives of Ireland who emigrated to the United States sometime in the early 1860s (U.S. Census Office 1900). John and Ann appear in the 1870 U.S. Census as residents of Denerton, northwest of the APE, in Solano County; John is listed as a farmer with real estate valued at $3,600 (U.S. Census Office 1870). When John drowned in Collinsville in January 1893 (Solano County 1915) while tending to his business interests in the area (San Francisco Call 1893a), this property passed to Ann and her four remaining living children, Francis, Mary (Griffin), Veronica, and Theresa. The eldest daughter, Mary, and her husband Stephen Griffin were Collinsville residents at the time of John’s death (San Francisco Call 1893a; Woodland Daily Democrat 1893), while Francis (Frank) was a patent attorney living in Oakland (San Francisco Call 1893b). The remaining members of the Kierce family were residents of San Francisco (San Francisco Call 1893a).

This property has maintained (roughly) its 1890 borders and acreage into the 21st century. In about 1912, the U.S. government acquired a small portion of the parcel in the south through eminent domain, for the purpose of widening the mouth of the Sacramento River to improve navigation (Herbert and Kennedy 2007; San Francisco Call 1911; Solano County 1890, 1915, 2018).

SMUD-6

SMUD-6 is a broken, 9-inch-diameter, white improved earthenware dinner plate. Two pieces were identified. The rim is scalloped and the brim is decorated with a blue floral and geometric decal pattern. The base of the plate has a green mark reading “中国唐山 [China Tangshan]/Made in China,” surrounded by a green ribbon. Tangshan was a major center of ceramics in China in the 20th century (Koh 2014). This mark may date to the 1960s or 1970s (eBid 2018; Nillson 2018). The plate was found in a dry swale within what was once Edward Jenkins’ property, more recently belonging to James W. Roberts (Herbert and Kennedy 2007). No other artifacts were found in the vicinity.
Historic-era archaeological site CA-SOL-283H was originally recorded by Crist and Peeler (1980) as part of the larger survey by Theodoratus et al. (1980). As recorded, the site includes a barn with a footprint of 65 feet by 65 feet; a row of eucalyptus trees; a scattering of pepper and fruit trees; three depressions, two of which may be privies and the third a cellar; and the remains of a water storage tank. Recorded artifacts associated with the site include cut nails, porcelain fragments, metal hoops for a wooden water tank, and other fragments of glass and metal. Local informants told Crist and Peeler (1980) that a two-story house had previously stood over the largest of the three depressions noted at the site. The site’s location matches a home marked on the Thompson and West 1877 map of the area. Whether the reported house represented this original structure is unclear, but it is possible that artifacts from the late 19th century are buried in and around the site.

The site was revisited for the study by Whitaker and Kaijankoski (2010). The site appeared to be as originally recorded. The eucalyptus windbreak was intact and the barn standing. The barn was found to be in a state of disrepair and the rest of the site was being used as part of a larger parcel to graze sheep. Water tower debris and the southernmost depression were relocated; a small depression that might represent the privy was recorded, but was obscured by weeds during the current field effort. Bricks, ceramics, metal, and glass debris were spread over the area, particularly around the pepper tree recorded on the site map. An axle, likely related to agricultural activities, was under the pepper tree as well.

Archaeological site CA-SOL-284H was recorded by Crist and Peeler (1980) as consisting of a scattering of crockery fragments, the remains of a septic tank, and a light scatter of brick and glass fragments within a small grove of eucalyptus trees. Features recorded at the site included a “wood covered hole” and a septic tank depression. The site is recorded as the “possible Charles Dadami homesite” as recorded on the Thompson and West 1877 map (Crist and Peeler 1980).

The site was visited by FWARG archaeologists in 2010 (Whitaker and Kaijankoski 2010). The pipe and wood-covered hole recorded on the site map were relocated and photographed. The location of the septic tank was not recorded on the original site map and could not be located during the current field effort. The artifacts recorded by Crist and Peeler (1980) could not be found, either, although visibility on the site was poor because of overgrown grass and debris from the eucalyptus trees.

Site CA-SOL-285H was recorded by Maniery et al. (1980a) as the former site of a Catholic church and school present on historical maps, located on a knoll at the intersection of Collinsville Road and Stratton Lane. Maniery et al. (1980a) noted four depressions, one
of which was a privy that contained remnant plumbing and considerable scattered wooden debris. Additional debris was found in the vicinity, including lumber planks and arches, round and square nails, metal drain pipes, ceramic drainage pipes, concrete, glass, and ceramic fragments.

**CA-SOL-298H, P-48-000139**

Site CA-SOL-298H was recorded as a historic-era homesite characterized by numerous objects such as various porcelain fragments, glass fragments, and a rectangular concrete slab (Gebhardt et al. 1980). Other artifacts recorded in 1980 included cast iron fragments, a pen knife fragment, a door hinge, and tin cans and bottles that postdate 1930. Gebhardt et al. (1980) refer to the homestead as the Simpson House.

FWARG archaeologists visited the site in 2010 (Whitaker and Kaijankoski 2010). The only features recorded in 1980 that could be relocated were the eucalyptus and pepper trees and the north-south trending fence line. Several pieces of concrete were found within the recorded site boundaries and may represent the recorded concrete slab. Some posts from an east-west trending fence line were noted, but the fence is no longer standing. A conversation with a local rancher who leases the property revealed that a large amount of disturbance and possible modification of the site area had occurred during the prior 5 years when the property was used illegally by off-road motorcyclists. A large number of recent shotgun shells were also noted in and around the site, indicating impacts from hunting or target practice in recent years. It is not surprising, therefore, that historic-era artifacts could not be relocated.

**CA-SOL-299H, P-48-000140**

Site CA-SOL-299H was recorded by Maniery et al. (1980b) as a historic-era homesite characterized by several features including a possible well, and historic-era artifacts including bottle glass, porcelain, metal, tin, and aluminum fragments. In addition, a narrow, rectangular plank-lined subsurface pit with sewer pipe was found surrounded by four vertical 4-inch by 4-inch boards. The site was recorded as the Whitman house site.

FWARG archaeologists visited the site in 2010 (Whitaker and Kaijankoski 2010). Only the pepper trees noted on the site record could be relocated. It appears that large-scale earthmoving has heavily affected the site since it was initially recorded in 1980. Impacts included three large excavations, consistent with the information provided by a local rancher regarding off-road motorcycle damage on the property. The depression mapped in 1980 was not apparent and may have been filled in with earth from the excavated areas. It appears that little of the original site deposit is left, although some subsurface artifacts may be present.

**CA-SOL-33, P-48-000041, Hastings Adobe**

Site CA-SOL-33 is the only prehistoric site identified in the records search area, at the southwest margin of the APE. Although it seems that CA-SOL-33 and the Hastings Adobe
do not overlap, the NWIC has associated the two, and it seems that the location of the Hastings Adobe is used to approximate the location of CA-SOL-33. These sites are located outside of the 2010 survey area (Whitaker and Kaijankoski 2010).

Site CA-SOL-33 was recorded by Elsasser (1956) based on an account by a local resident who stated that people “used to collect arrowheads there.” However, Elsasser notes that the site may have already been destroyed, as he could find no evidence of prehistoric occupation in the sandy soil in the purported location. The location plotted for this site is an “approximate location” and the site is not mentioned in any subsequent studies, nor are there any site record updates.

**P-48-128/CA-SOL-287H**

Site P-48-128/CA-SOL-287H was recorded by Maniery et al. (1980a) as a historic-period homesite with very little surface evidence remaining. The site was recorded based on oral history accounts of a house on the location. All that was recorded in 1980 were three fragments of ceramics, some cut nails, and burned boards.

FWARG archaeologists visited the site on August 31, 2010. No evidence of archaeological remains was found at the site, which had recently been disked. The area is flat, and therefore could have served as a homestead site; however, there does not appear to be any archaeological evidence to support the historical accounts. Because the resource was minimal in the first place, and subsequent farming activity apparently removed the sparse evidence of possible historic-era occupation, FWARG concluded that the site is not eligible for inclusion in the NRHP and CRHR. No further management of this resource was recommended.

**P-48-415/CA-SOL-399H**

Site P-48-415/CA-SOL-399H was documented in 1980 by G. Maniery, C. Peeler, and R. Ambro, and was described as possibly being the remains of the Esperson homesite. The site was described as consisting of a eucalyptus tree, a palm tree stump, a wooden gate on Stratton Lane, a privy location, a scattering of lumber, and two possible refuse deposits. Observed artifacts consist of green, brown, and blue glass fragments; brick fragments; tin cans; a car tire; crockery fragments; two metal tea kettles; and a wagon wheel hoop.

**P-48-416/CA-SOL-400H**

Site P-48-416/CA-SOL-400H was documented in 1980 by G. Maniery, C. Peeler, and R. Ambro, and was described as possibly being the remains of the Charles Rice homesite. Observed features consist of a cellar hole and three depressions, one of which has a considerable scatter of bricks within and surrounding the depression. Observed artifacts consist of lumber planks with square nails, and a metal pipe segment.
Tribal Cultural Resources

On behalf of SMUD, AECOM requested a search of the Sacred Lands File database for the project site. In a letter dated May 15, 2018, the NAHC indicated that its files do not include records of any sacred lands or other Native American traditional cultural properties in the immediate project vicinity. The NAHC stated that local tribes and individuals should be consulted regarding the presence of traditional cultural resources within or near the project site.

As stated previously in Section 3.4.1, “Regulatory Setting,” AB 52 applies to those projects for which a lead agency issued an NOP of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration on or after July 1, 2015. The specific details of the consultations are confidential under California law; however, communication between the tribes and SMUD for this project is summarized below.

In accordance with PRC Section 21080.3.1(b), SMUD sent letters to the lone Band of Miwok Indians, United Auburn Indian Community of the Auburn Rancheria (UAIC), Cortina Band of Indians, Yocha Dehe Wintun, and Wilton Rancheria on March 29, 2018. This letter also requested that the groups contact SMUD if they desired to consult in accordance with AB 52. Letters to the Cortina Band of Indians and the Yocha Dehe Wintun were re-sent to the correct post office box address on April 5, 2018. To date, these two groups have not responded.

SMUD received a letter from the UAIC dated April 24, 2018, requesting consultation on the Solano 4 Wind Project, including a conference call to discuss the project. SMUD proposed various meeting dates in an e-mail message to the U.S. Army Corps of Engineers on May 16, 2018. As requested, SMUD provided the UAIC with an electronic copy of the Archaeological Survey and Geoarchaeological Sensitivity Report for the Proposed Solano Phase 4 Wind Project, Solano County, CA on May 24, 2018, and e-mailed the UAIC a request to indicate its meeting availability. A follow-up e-mail message was sent to the UAIC on June 20, 2018, requesting availability for a conference call.

On July 20, 2018, the UAIC responded in an e-mail message stating that it would like to close consultation for this project, provided that the UAIC-recommended mitigation measures are incorporated into the environmental and planning documents. These measures address worker awareness training, a post–ground disturbance site visit, and inadvertent discoveries. In addition, the UAIC asked SMUD to notify Tribal Historic Preservation Officer Matthew Moore (THPO@auburnrancheria.com) should an inadvertent discovery of TCRs occur, and to confirm that the mitigation measures will be included in the environmental document and the adopted mitigation monitoring and reporting program. The UAIC also requested that this correspondence become a part of the project record and that SMUD provide the UAIC with a copy of the final environmental document. SMUD confirmed the mitigation language with the UAIC and closed consultation on February 21, 2019.
The Wilton Rancheria did not reply to the request letter sent in March; however, SMUD met with Wilton Rancheria representative Ed Silva on December 18, 2018, at a reoccurring monthly meeting to discuss SMUD projects. Ammon Rice of SMUD informed Mr. Silva of the Solano 4 Wind Project, stated that a letter inquiring about AB 52 consultation had been sent, and noted that SMUD had not received a reply from the Wilton Rancheria. Mr. Silva stated that the Wilton Rancheria would be interested in consulting on the project.

SMUD met with Antonio Ruiz and Troy Hatch from the Wilton Rancheria on January 24, 2019, during a reoccurring monthly meeting to discuss SMUD projects. Ammon Rice of SMUD informed Mr. Ruiz and Mr. Hatch of the Solano 4 Wind Project and provided a copy of the NOP for the project. An NOP had also been sent via regular mail. A copy of the NOP and correspondence received in response to the NOP is found in the scoping report (Appendix A). Mr. Ruiz stated that TCRs are present near the river and that the Wilton Rancheria was interested in consulting on the project. Subsequently, Ammon Rice, SMUD representative, conducted a site visit with Antonio Ruiz of Wilton Rancheria. Mr. Ruiz asked that the EIR include a description of the Ompin site located south of the Solano 4 West site. Due to the concentration of sensitive sites around the project area, and the longevity of habitation, and the dynamic nature of that habitation, Wilton Rancheria requested to be kept apprised of any discoveries made during the life of the proposed project.

3.4.3. Environmental Impacts and Mitigation Measures

Methods and Assumptions

The analysis is also informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources.

Section 21083.2 of the State CEQA Guidelines defines “unique archaeological resource” as an archeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following CRHR-related criteria:

(1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality, such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

An impact on a “nonunique resource” is not a significant environmental impact under CEQA (State CEQA Guidelines, Section 15064.5[c][4]). If an archaeological resource qualifies as a resource under CRHR criteria, then the resource is treated as a unique archaeological resource for the purposes of CEQA.
PRC Section 21074 defines TCRs as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are listed or determined eligible for CRHR listing, listed in a local register of historical resources, or otherwise determined by the lead agency to be a tribal cultural resource.

Thresholds of Significance

Based on Appendix G of the State CEQA Guidelines, the project would result in a potentially significant impact on archaeological, historical, and TCRs if it would:

- cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;
- cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;
- disturb any human remains, including those interred outside of dedicated cemeteries; or
- cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC Section 21074.

Issues Not Discussed Further

The “Impact Analysis” section will not further analyze the proposed project against thresholds of significance for which no significant impacts have been identified. Therefore, the following issue will not be discussed further in the impact analysis.

Substantial adverse change in the significance of a historical resource within the direct area of potential effects

As described above, no historical resources were identified in the direct APE. Four historic-era archaeological resources were identified during the field survey:

- SMUD-5 (abandoned fence line)
- SMUD-6 (isolate ceramic plate)
- SMUD-3 (concentration of habitation debris)
- SMUD-1 (remnant livestock watering feature)

All of these historic-era resources, identified within the direct APE, date to the 20th century and do not appear to be associated with any significant events or individuals important in the history of the Montezuma Hills, Solano County, or California. Similarly, none of the identified historic-era resources embody a distinctive type of construction, and they do not appear to have the potential to yield information important in history. In addition to
lacking historic significance, the historic-era resources lack integrity, given their deterioration and alteration. Thus, no historic properties (NRHP) or historical resources (CRHR) were identified within the direct APE.

Resource P-48-524, Ranch Complex 1, Ranch Complex 2, and the potential Montezuma Hills Rural Historic Landscape were evaluated and found ineligible for listing in the CRHR or NRHP. As a result, these resources would not be considered significant for the purposes of CEQA.

Therefore, project construction and operation would have no direct impact on historical resources within the direct APE. For these reasons, this issue will not be discussed further. Potential indirect effects on the Hastings Adobe, a historical resource located outside of the direct APE, are discussed in Impact 3.4-4, below.

Impact Analysis

**Impact 3.4-1: Impacts on unique archaeological resources.**

Previous investigations resulted in the documentation of four archaeological resources, a ranch complex, and the potential Montezuma Hills Rural Historic Landscape. These resources have been evaluated for the NRHP and CRHR but do not appear to be eligible; therefore, they are not considered unique archaeological resources. However, project-related ground-disturbing activities could result in the discovery of or damage to as-yet undiscovered archaeological resources as defined in Section 15064.5 of the State CEQA Guidelines. This impact would be **potentially significant**.

A geoarchaeological sensitivity assessment for most of the project site south of Montezuma Hills Road concluded that sensitivity for buried archaeological sites on the site is limited to very narrow areas along creeks and drainages, such as the unnamed creek east of and parallel to Talbert Lane in Solano 4 West, and along the Montezuma Hills.

Therefore, preconstruction activities or ground disturbance during the construction period could encounter previously undiscovered or unrecorded archaeological sites and materials. These activities could damage or destroy previously undiscovered archaeological resources. This impact would be **potentially significant**.

**Mitigation Measure 3.4-1a: Avoid or conduct subsurface testing and/or monitoring during construction in areas with high potential for the presence of buried archaeological sites.**

The construction contractor shall avoid conducting ground-disturbing activities in the few locations within the direct APE that have high or the highest potential for buried archaeological sites. If these areas cannot be avoided and project-related ground disturbance in those areas would be sufficiently deep that they could encounter buried archaeological resources, then additional actions may be necessary to mitigate any
impacts on as-yet unidentified buried resources. These minimization efforts could include conducting subsurface testing before project construction and/or monitoring during the construction period.

Mitigation Measure 3.4-1b: Prior to the start of construction, SMUD shall provide worker awareness training to the construction contractor and SMUD’s project superintendent regarding the potential for cultural and tribal cultural resources that could be encountered during ground disturbance, the regulatory protections afforded to such finds, and the procedures to follow in the event of discovery of a previously unknown resource, including notifying SMUD representatives. SMUD shall invite representatives of UAIC to periodically inspect the active areas of the project, including any soil piles, trenches, or other disturbed areas. UAIC shall be notified at least 48 hours prior to start of construction. In the event that tribal representatives or construction workers find evidence of potential tribal cultural resources, the procedures identified in Mitigation Measure 3.4-1c and 3.4-2 shall be implemented.

**Mitigation Measure 3.4-1c: Halt ground-disturbing activity upon discovery of subsurface archaeological features.**

If any prehistoric or historic-era subsurface archaeological features or deposits, including locally darkened soil (“midden”), that could conceal cultural deposits are discovered during construction, all ground-disturbing activity shall cease within 100 feet of the resource(s) discovered. A qualified cultural resources specialist and Native American representatives and monitors from culturally affiliated Native American Tribes shall assess the significance of the find and make recommendations for further evaluation and treatment as necessary. These recommendations shall be documented in the project record. For any recommendations made by interested Native American Tribes that are not implemented, the project record shall provide a justification explaining why the recommendation was not followed. If the qualified archaeologist determines the find to be significant (because the find constitutes either a historical resource, a unique archaeological resource, or a tribal cultural resource), and if an adverse impact on a TCR, unique archaeology, or other cultural resource occurs, then SMUD shall consult with interested Native American groups and individuals regarding mitigation contained in PRC Sections 21084.3(a) and 21084.3(b) and State CEQA Guidelines Section 15370. Potential mitigation measures developed in coordination with interested Native American groups may include:

- preservation in place (the preferred manner of mitigating impacts on archaeological sites),
- archival research,
- replacement of cultural items for educational or cultural purposes,
- preservation of substitute TCRs or environments and/or subsurface testing, or
- contiguous block unit excavation and data recovery (when it is the only feasible mitigation, and pursuant to a data recovery plan).
Significance after Mitigation

Mitigation Measure 3.4-1a requires identification of buried archaeological resources before project implementation and/or monitoring of such resources during construction, which would minimize the impacts and potential for destruction of the resources during project implementation. Mitigation Measure 3.4-1b requires that professionally accepted and legally compliant procedures be followed in case previously undocumented significant archaeological resources are discovered. Therefore, implementing these mitigation measures would reduce impacts on buried archaeological resources to a less-than-significant level.

Impact 3.4-2: Impacts on tribal cultural resources.

Consultation with the Wilton Rancheria is ongoing and could result in the identification of TCRs as described under AB 52 and PRC Section 21074. Because consultation has not yet been completed, this impact would be potentially significant.

During reoccurring monthly meetings, SMUD held discussions with the Wilton Rancheria regarding the potential for the presence of tribal cultural resources on and around the project site. Wilton Rancheria is aware of several highly sensitive areas within the projects general location. Due to the concentration of sensitive sites around the project area, and the longevity of habitation, and the dynamic nature of that habitation, Wilton Rancheria requested to be kept apprised of any discoveries made during the life of the proposed project.

No unique archaeological resources have been identified on the project site and the NAHC Sacred Lands Database search was negative. However, AB 52 consultation has not yet been completed. Therefore, TCRs may exist at the project site and could be affected by the project. This impact would be potentially significant.

Mitigation Measure 3.4-2: Native American consultation.

SMUD concluded consultation with the UAIC and Wilton Rancheria under AB 52.

If TCRs are identified that have the potential to be adversely affected by the project, SMUD shall notify Tribal Historic Preservation Officers Matthew Moore (THPO@auburnrancheria.com) and Ralph Hatch (rhatch@wiltonrancheria-nsn.gov), and SMUD will develop mitigation measures in consultation with interested Native American groups and individuals to minimize those impacts. These mitigation measures could include the following or equally effective mitigation measures (as identified in PRC Section 21084.3):

(1) Avoidance and preservation of the resources in place, including but not limited to planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
(2) Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including but not limited to the following:

(A) protecting the cultural character and integrity of the resource;

(B) protecting the traditional use of the resource; or

(C) protecting the confidentiality of the resource.

(3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.

(4) Protecting the resource.

(5) Preserving substitute TCRs, resources, or environments.

Significance after Mitigation

Mitigation Measure 3.4-2 requires that tribal consultation be completed, and that mitigation measures be developed and implemented for any TCRs identified during consultation that have the potential to be adversely affected by the project. Therefore, implementing this mitigation measure would reduce impacts on TCRs to a less-than-significant level.

Impact 3.4-3: Impacts on previously unidentified human remains.

Excavation during project construction could disturb previously undiscovered human remains. This impact would be potentially significant.

Project construction would involve grading, trenching, excavation, soil stockpiling, and other earthmoving activities. There has been no indication that the area has been used for human burials in the recent or distant past; therefore, human remains are unlikely to be encountered. However, in the unlikely event that human remains are discovered during subsurface activities, they could be inadvertently damaged. Therefore, this impact would be potentially significant.

Mitigation Measure 3.4-3: Halt ground-disturbing activity upon discovery of human remains.

If human remains are discovered during any demolition/construction activities, potentially damaging ground-disturbing activities within 100 feet of the remains shall be halted immediately, and SMUD will notify the Solano County coroner and the NAHC immediately, according to PRC Section 5097.98 and Section 7050.5 of the California Health and Safety Code. If the remains are determined by the NAHC to be Native American, the guidelines of the NAHC shall be followed during the treatment and
disposition of the remains. SMUD will also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant, if any, identified by the NAHC. Following the coroner’s and NAHC’s findings, the archaeologist and the NAHC-designated Most Likely Descendant shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. PRC Section 5097.94 identifies the responsibilities for acting upon notification of a discovery of Native American human remains.

Significance after Mitigation

Mitigation Measure 3.4-3 requires the performance of professionally accepted and legally compliant procedures in case of the discovery of human remains. Therefore, implementing this mitigation measure would reduce impacts associated with human remains to a less-than-significant level.

**Impact 3.4-4: Indirect impacts on a historical resource.**

The Hastings Adobe (a historical resource listed in the NRHP and CRHR) is located outside of the project’s direct APE. Project-related construction vibration and visual effects would not result in an indirect substantial adverse change. This impact would be less than significant.

The project would involve constructing new gravel access roads and WTGs at sites at least 0.25 mile northeast and less than 0.75 mile northwest of the Hastings Adobe, a historical resource listed in the NRHP and CRHR. At these distances, these project activities have no potential to cause a direct adverse change to the Hastings Adobe because they would not result in the physical destruction or material alteration of the historical resource. Because of its general proximity to the historical resource, however, the project does have the potential to cause indirect adverse changes to the building. These indirect adverse changes include potential changes caused by construction or operational vibration and the introduction of visual changes to the setting of the historical resource.

Constructing a new gravel access road would not cause a substantial adverse change to the resource. The approximately 20-foot-wide road would not introduce new visual elements to the immediate viewshed of the resource because it would be at grade and similar to the existing gravel corridors throughout the area.

The rural setting of the Montezuma Hills surrounding the Hastings Adobe is a character-defining feature of the property (PG&E 2010); however, this setting has already been compromised by the placement of WTGs in the general vicinity to the north, northeast, and northwest of the historical resource (see Exhibit 3.1-1 in Section 3.1, “Aesthetics,” for existing conditions from the Hastings Adobe). The proposed project would diminish this rural setting further with the construction of additional WTGs at Solano 4 West and Solano 4 East. Solano 4 West includes strings of WTGs in the southern portion of the project.
area along the crest of the hillside 0.25 mile north of the historical resource. WTGs are currently visible from the Hastings Adobe; however, the WTGs that are proposed by the project would be closer and taller, and therefore far more intrusive to the visual setting (see Exhibit 3.1-1 in Section 3.1 of this EIR for simulated conditions from the Hastings Adobe). Still, the integrity of the historic setting in the vicinity of the Hastings Adobe has already been diminished with the construction of WTGs throughout the viewshed. Therefore, the indirect visual impact of the project on the Hastings Adobe would be **less than significant**.

**Mitigation Measures**

No mitigation is required.