

## 3.4 Cultural Resources

Cultural resources include historic-period architectural resources, archaeological resources, and human remains. The cultural resources findings described in this section are based on the cultural resources technical report prepared for this Project by ESA (Baxter, 2012).

### 3.4.1 Environmental Setting

#### Natural Setting

The project area is within flat bottomland of the Sacramento Valley. Elevations in this area generally range from 100 to 110 feet above mean sea level (AMSL). There is little resemblance between today's environmental context and that of 150 years ago. A large proportion of the land has either been leveled or intensively farmed, dredged and channelized (creeks and sloughs), or developed (e.g. Nut Tree Airport). As a result, most of the native vegetation, riparian plant and animal associations, and well as avian and land fauna have been displaced. Prior to Euro-American settlement, natural resources of this area were abundant and supported stable and very substantial Native American populations. These populations were concentrated along waterways and in association with natural levees and other elevated lands.

The geology within the project area consists of Holocene Alluvium. Soil within the project area consists of Holocene Great Valley delta fan deposits and basin deposits, transported via various unnamed drainages.

The climate of the Sacramento Valley is Mediterranean, with hot, dry summers and cool, moist winters. Summer daytime temperatures often exceed 100 degrees Fahrenheit (F), with low humidity and cooler nights. Winter temperatures infrequently fall below freezing. Yearly rainfall is between 15 and 25 inches, with the majority of rain falling during the winter months. The valley receives ample water supply due to high mountains which trap moisture that finds its way down to the valley through numerous creeks and streams. The Sacramento River is the major river of the valley, along with the Yuba, Feather, and American rivers, which eventually feed into the Sacramento.

Riparian and grassland plant communities currently dominate the project area. Riparian habitat is found along three drainages that cross the project area. Vegetation includes native species such as willow and tule, as well as introduced varieties such as eucalyptus and tamarisk. A variety of introduced species cover the grasslands. Most of the grassland is routinely mowed, disked, and/or sprayed. Several stands of eucalyptus, fruit, and nut trees are also present. Fauna associated with this area typically includes coyote, bobcat, deer, ground squirrel, red-tailed hawk, peregrine falcon, ducks, jackrabbit, cottontail rabbit, gopher, and various rodents.

#### Prehistoric Setting

The following section is summarized in large part from the cultural resources section of the Vacaville General Plan (City of Vacaville 2012).

Central California archaeology has been described as a series of cultural manifestations or patterns. Fredrickson (1973) defines pattern as an essentially non-temporal, integrative cultural unit -- the general life way shared by people within a given geographic region. Using a broader view of archaeological material culture, some of which overlap in adjoining areas, three patterns are recognized for central California: Windmill, Berkeley, and Augustine Patterns. The three cultural modes are characterized by similar technology, similar economic practices (production, distribution, consumption), and similar mortuary and ceremonial practices (Fredrickson, 1973). Development of cultures over time can also be described by time segments.

### ***Paleo-Indian Period (12,000 to 8,000 Before Present [BP])***

Humans arrived to California during the terminal Pleistocene. Most known sites from this time were situated along lakeshores and cave sites along the coast. The material culture during this time includes a milling tool technology, although evidence is scarce. Trading occurred on an individual basis and social units were not dependent on the exchange of resources.

The Post Pattern is the earliest known Paleo-Indian presence in the North Coast Ranges, but is only documented at the Borax Lake and Mostin sites (Moratto, 1984). Diagnostic artifacts include fluted projectile points and flake crescent tools. While these representative artifacts have not been recovered from any site in Solano or Yolo counties, they are observed elsewhere in California and throughout North America.

### ***Lower Archaic Period (8,000 to 5,000 BP)***

The beginning of this period coincides with a middle Holocene climatic shift to more arid conditions. This brought about the drying up of the pluvial lakes located in northern and southern California. Subsistence appears to have been focused more on plant foods, although hunting clearly still provided for important food and raw material sources. Settlement was semi-sedentary, with an emphasis on material wealth. Most tools were manufactured of local materials, and exchange remained on an ad-hoc basis. Distinctive artifact types include large projectile points, milling slabs, and handstones.

### ***Middle Archaic Period (5,000 to 3,000 BP)***

The beginning of the Middle Archaic featured weather patterns more similar to present day conditions. The changing climate and accompanying floral and faunal resources likely brought about a cultural change as the local economic systems became more diversified. Plant foods took on more importance, especially with the incorporation of acorn processing technology. Hunting still remained an important method to obtain food and raw materials.

The increasing dependency of plant resources led to more sedentism. This trend appears in the archaeological record as a general growth in population and expansion in land use, although there are few indicators that would suggest the development of regular exchange relations. The bowl mortar and pestle in association with large projectile points are the indicative and technologically significant artifacts of this period.

The Windmill Pattern, which may represent the advent of early Penutian speaking populations, extends from approximately 4,500 to 3,000 BP. This pattern was centralized primarily in the

lower Central Valley and Delta regions, and reflects the influence of a lacustrine or marsh adaption. This economic stance may have pre-adapted local populations for the environment of the lower Sacramento-San Joaquin Valley and Delta and may have entered the region with this adaptation more or less fully developed.

The presence of ventrally extended burials, oriented primarily to the west, is a temporally and regionally unique burial practice, and is a strong indicator of the Windmiller Pattern. Burial goods include charmstones, asbestos splinters, quartz crystals, biotite and abalone ornaments, red ochre, rectangular Olivella shell, as well as large projectile points made from chert, slate, and obsidian. Other artifacts in the assemblage included gorge hooks, bone fish hooks, fish spears, mortars and pestles, milling slabs and handstones, baked clay balls, bone tubes, awls, and pins.

### ***Upper Archaic Period (3,000 to 1,500 BP)***

The Upper Archaic Period marks a dramatic expansion of complex sociopolitical systems with status distinctions based on material wealth. Religious groups emerge and may represent the origins of the Kuksu religious system that appears at the end of the period. The complexity of trade system was marked by evidence of regular, sustained exchanges between various groups. The most important trade item appears to be shell beads, which also served as a possible indicator for status. The large projectile points remained in this period but the bowl mortar and pestle replaced milling stone and handstones.

The Berkeley Pattern extends roughly from 3,000 to 1,500 BP and became more widespread or at least more archaeologically visible than the antecedent complex. The Berkeley Pattern originated from the San Francisco Bay region and has a greater emphasis on the exploitation of the acorn as a staple. The Berkeley Pattern initially may represent the spread of proto-Miwok and Ohlone, collectively known as Utians, from their hypothesized lower Sacramento Valley/Delta homeland. The internment practices of the Berkeley Pattern are defined by tightly flexed burials that are less elaborate and contain fewer artifacts in association with burials compared to the Windmiller pattern. The overall artifact assemblage shows an increase in highly developed bone tools such as whistles, tubes, hairpins, and spatula, as well as an increase in milling tool artifacts. The projectile points of this period include non-stemmed obsidian points and knives.

### ***Emergent Period (1,500 to 150 BP)***

Social changes and the advent of several technological advances (such as the bow and arrow) distinguish the Emergent Period. The territorial boundaries between different groups became well established and were well documented in early ethnographic reports. Social status amongst individuals was increasingly linked to acquired wealth. Trade between groups became more regularized as finished products and more raw materials enter the exchange networks.

The Augustine Pattern is the main cultural group within the Central Valley at this time period. Augustine initially appears to be largely an outgrowth of the Berkeley Pattern but may have become a blend of Berkeley traits with those carried into the state by the migration of Wintuan populations from the north (Moratto, 1984). Pre-burial grave-pit burning, tightly flexed burials,

and cremation are distinguishing characteristics of this culture along with the smaller projectile points for use on arrows. Additional artifacts include harpoons, bone fish hooks, and gorge hooks along with the mortar and pestle as the primary milling technology.

## **Ethnographic Setting**

Patwin Indians historically inhabited the project area. Patwin territory was an extensive region within north-central California and included the lower portion of the west side of the Sacramento Valley west of the Sacramento River from about the location of the town of Princeton in the north to Benicia in the south (Kroeber, 1925). The Patwin were bounded to the north, northeast, and east by other Penutian-speaking peoples (the Nomlaki, Wintu, and Maidu, respectively), and to the west by the Pomo and other coastal groups. Within this large territory, the Patwin have traditionally been divided into River, Hill and Southern Patwin groups, although in actuality a more complex set of linguistic and cultural differences existed than is indicated by these three geographic divisions. Near the project area, the Patwin are believed to have reached the Carquinez/Suisun area by about 1,500 BP (Whistler, 1977; McCarthy, 1985).

As with most of the hunting-gathering groups of California, the “tribelet” represented the basic social and political unit. Typically, a triblet chief would reside in a major village where ceremonial events were also typically held. The status of such individuals was patrilineally inherited among the Patwin, although village elders had considerable power in determining who actually succeeded to particular positions. The chief’s main responsibilities involved administration of ceremonial and economic activities. Such individuals decided when and where various fishing, hunting or gathering expeditions would occur, and similarly made critical decisions concerning the more elaborate ceremonial activities. He also played a central role in resolving conflicts within the community or during wars which occasionally broke out with neighboring groups. Apparently, a Patwin chief had more authority than his counterparts among many of the other central California groups (McKern, 1922; Kroeber, 1925).

The arrival of European Americans negatively impacted Patwin culture and peoples. By 1871–72, when Stephen Powers surveyed the state gathering ethnographic information, the Patwin culture appeared to him to be virtually extinct.

European American influences within Patwin territory increased dramatically as ranching and farming became popular in the area. European American settlers, especially within the Sacramento Valley, quickly made inroads into lands occupied by Native Americans. Conflicts grew in number, and Patwin populations continued to decline from military skirmishes, vigilante raids, and other causes. In 1972, the Bureau of Indian Affairs listed only 11 remaining Patwin descendants (Johnson, 1978:352). Despite the massive decline in population, the Patwin still reside in Solano County and many intermarried with the Wintu (Johnson, 1978:352).

## Historical Setting

### *Regional*

In 1772, Pedro Fages became the first European to lead an expedition to the general area of what is today known as Carquinez Strait. Gabriel Moraga crossed the Strait in 1810 during a raid against the Suisun tribe (Cohen, 1996). In 1823, Mission San Francisco Solano was established (Hoover, et al., 2002), and baptized 67 local Patwins over the next ten years (Milliken, 1995:258).

Following the end of Spanish rule in California around 1832, the Mexican government began dividing formally Spanish held land into large tracts of land called “ranchos.” In 1835, the Mexican government ordered General Mariano Guadalupe Vallejo to colonize the area around today’s Fairfield/Suisun City to prevent the Russians from Fort Ross moving into the interior. The land grants from the Mexican government allowed the rapid settling of the ranchos within lower Sacramento Valley and Delta (Keegan, 1989). These ranchos were used primarily for cattle grazing as well as farming of vineyards, fruits, and vegetables (Beck and Haase, 1974).

After an epoch of exploration and colonization by the Spanish, Russians, and, later, Mexicans, the missionization of the indigenous population and the development of presidios and civilian ranchos and pueblos throughout California created unprecedented landscape and social change. Later more secular influence on the political affairs of California in the nineteenth century led to the sale of lands to non-Hispanics by the early 1830s. Among these early settlers were Pena and Manuel Cabeza Vaca. In 1843, they acquired a grant of 44,380 acres from the Mexican government. Known as Rancho Las Putas, it was on the west side of the Sacramento Valley in what is now part of Solano and Yuba Counties. Like their compatriots, they erected adobe ranchos on their land and ran huge herds of cattle and sheep (Thompson and West 1878:9).

Following the Treaty of Guadalupe Hidalgo in 1848, Mexico ceded California to the United States (Hoover, et al., 2002). John Marshall found gold days prior to the treaty signing, and while it was not the first gold discovery in California, it had the greatest effect. The allure of gold caused a massive influx of settlers from the rest of the country and around the world. This demographic change had a detrimental effect on aboriginal populations, including the groups in the Central Valley.

Solano County was established as one of the original counties when California entered the United States in 1850. During the Gold Rush, the migration influx did not enter Yolo County, as the Sacramento River was a difficult barrier to cross and there was little reason to cross the river. When Solano County was formed, General Mariano Vallejo suggested the County be named after both the missionary Francis Solano of Peru and Chief Sem Yeto (baptized Francis Solano) of the Suisun Patwin Indians. During the early 1850s, both Vallejo and Benicia acted as the state capitol before the capitol’s permanent move to Sacramento in 1854 (Hoover, et. al., 2002).

During the Gold Rush, Solano County ranchers and farmers quickly realized they could make a profit selling crops and livestock to miners. The largest towns were close to the San Pablo and Suisun bays, and convenient for shipping out goods. Similarly, the Sacramento Valley remained relatively isolated and sparsely populated until the advent of the Gold Rush period. Sacramento’s

proximity to mining areas, and its accessibility, quickly made the area a trading and economic center. As a result Solano County became a major thoroughfare for would be miners heading from San Francisco to Sacramento and the mines further east.

The first few decades of ranching in American California was an open range affair, with ranchers taking advantage of the dense growth of naturally occurring grasses that covered the valley and foothill areas. As more and more people sought to till the soil the open range situation became increasingly problematic. Unlike the dramatic shootouts often portrayed in movies, the conflict between ranchers and farmers was largely fought out in the courts. This culminated in the Trespass Law of 1870, which essentially mandated that ranchers were required to keep their cattle off of land they did not own. It did not sound a death knell for the cattle industry, but forced some major changes. Ranchers began running more cattle on less land, requiring irrigation, and the raising of more feed (Cabezut-Ortiz 1987:36-37). This dovetailed well with the pursuit of the farmers who were now producing more and more grain.

Grains, primarily wheat and barley, were the first major crop in California. The large flat plain of the Central Valley provided ideal growing conditions, and by 1880 California was exporting \$15 million worth of grain abroad. The vast landholdings of many Valley farmers allowed for immense tracts of land to be under cultivation at one time. This was also a period of rapid mechanization of farming, with increasingly complex machinery allowing farmers to put larger and larger tracts of land under cultivation. A farm of 5,000 acres was considered small; some wheat farms reached upwards of 40,000 acres. The authors (Elliot and Miller 1881:94-95) of a period history describe the operation at Mr. M. D. Atwater's farm, typical of the large early farms:

During the rainy season (November to April) Atwater used an enormous gang plow to till and plant the soil. The equipment plowed a swath 18 feet wide, was drawn by 16 horses, and operated by one man. A seeder was attached as well, allowing one man to plow and sow 50 acres in a single day. In late summer the grain was harvested. This was done with a relatively new machine known as a combine. Combines were so named because they combined the operation of a header, a thresher, and a mill into one device. This particular farmer used a combine that cut a swath 24 feet wide. It was operated by five men and 24 horses. This mechanism could harvest 50 acres a day, leaving the grain sacked and ready to go to market at the end of the day. While Solano County's economy remained agricultural based, roads in the county also served as major transportation corridors.

As Solano County matured, its economy has diversified. Today, the regional economy is still largely based on agriculture, but with a much more elaborate base. Some cattle are still grazed on the range, but many more are raised in feed lots. Dairies have also become increasingly important in the county. The biggest shift was away from grains towards a more diversified suite of horticultural products.

### ***Local History***

***Vacaville.*** On August 21, 1850 Manuel Cabeza Vaca deeded nine square miles of Ranchos Los Putas to William McDaniel. In compensation, McDaniel gave Vaca \$3,000 and certain lots within the as yet developed community of Vacaville, which Vaca defined to be one mile square. McDaniel sold a half interest in the non-existent town to L.B. Minzer. They selected a location in

the middle of the township, and had it surveyed by E.E. Rowe. In anticipation of his new venture McDaniel erected the town's first building in 1850. On December 13, 1851 McDaniel and Minzer filed the town plat for Vacaville. As delineated in the original purchase from Vaca, 200 lots were deeded to him. From there the town began a slow progression of development, providing services for local farmers and ranchers (Thompson and West 1878:9-15; Wood, Alley, & Co. 1879:317-318). The town thrived, and by 1860 Vacaville had become the most populated town in Solano County with over 1,800 residents.

Vacaville was strategically located along a major east-west transportation corridor between San Francisco Bay and Sacramento, providing travelers a route which largely skirted above the notorious tule marshes in the lowlands. An established road was developed that eventually became known as County Road 79.

In 1869, the Vaca Valley Railroad was constructed between Elmira and Vacaville, with the purpose of transporting locally produced fruits and vegetables. In Elmira the new railroad connected with the Central Pacific Railroad, connecting Vacaville with both the San Francisco Bay and markets in the Eastern U.S. Thus Vacaville became a railroad hub. Over the years the railroad was expanded, reaching Madison in Yolo County in 1877. That same year the railroad was incorporated as the Vaca Valley and Clear Lake Railroad Company (Thompson and West 1878:9-15, Wood, Alley, & Co. 1879:317-318). Vacaville's connection to the railroad was of key importance, serving as a connector for the Vaca Valley and vast national and international markets for its agricultural products. By the 1920s there were more than half a dozen large fruit shipping companies (Gunn 1926:244).

Changes in Vacaville were primarily driven by outside forces. While the surrounding area remained largely devoted to agricultural purposes, the town itself became increasingly devoted to servicing travelers through the region, especially with the development of automobiles in the 20th century. Service stations, restaurants, motels, and the famous Nut Tree were erected to feed and house passersby before they went on their way. As traffic on old County Road 79 increased a more substantial thoroughfare was needed. In 1926, Highway 40 was established connecting San Francisco to Atlantic City, New Jersey. In 1964, most of Highway 40 in California was re-designated as part of Interstate 80, which it remains today.

**Nut Tree.** Nut Tree has a long history dating back to 1855 when Josiah Allison settled his family here. He quickly set out a fruit orchard. In 1860, he planted the famous "Nut Tree" with a nut collected along the Gila River by his niece Sally Fox. The ranch and the tree stayed in the family into the 20th century. In 1921, Allison's granddaughter, Helen Harbison and her husband, Edwin Power, ran into a predicament when a heat wave caused their entire fig crop to ripen at once. To dispense with the sudden glut of figs they opened a road side fruit stand under the Nut Tree. The business was so successful they soon added a restaurant. The location rapidly became a regional landmark, and continued to expand. In 1952, a narrow gage tourist railroad was added to take visitors through the Nut Tree's orchards. In 1955 the Nut Tree Airport was constructed by Ed Power Jr., owner of Nut Tree and a descendant of Josiah Allison (Solano Pilots Association 2012). The airport was situated to adjacent to the north side of Nut Tree, and the railroad was extended to bring flyers from their new airport to the Nut Tree complex of shops and restaurants (Nut Tree n.d.). Power

was a fan of aviation and sponsored many “fly ins” and other events at the airport. Over the years the runway was lengthened and support facilities and services added for flyers. In 1970, the airport was donated to Solano County.

### 3.4.2 Regulatory Setting

Numerous laws and regulations require state, and local agencies to consider the effects a Proposed Project may have on cultural resources. These laws and regulations stipulate a process for compliance, define the responsibilities of the various agencies proposing the action, and prescribe the relationship among other involved agencies, such as the State Historic Preservation Office. CEQA, the California Register of Historical Resources (California Register), and Public Resources Code (PRC) 5024, are the primary State laws governing and affecting preservation of cultural resources of State, regional, and local significance.

#### State

##### ***California Environmental Quality Act***

CEQA (PCR section 21000 et seq.) is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a project would have a significant effect on historical or unique archaeological resources. The Guidelines recognize that a historical resource includes: (1) a resource in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC section 5024.1(g); and (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 by the lead agency, provided the lead agency’s determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is an historical resource, the provisions of section 21084.1 of CEQA and section 15064.5 of the CEQA Guidelines apply. If an archaeological site does not meet the criteria for an historical resource contained in the CEQA Guidelines, then the site may be treated in accordance with the provisions of CEQA section 21083, which is a unique archaeological resource. As defined in section 21083.2 of CEQA a “unique” archaeological resource is 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:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information;
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or,
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the Proposed Project on those resources shall not be considered a significant effect on the environment (section 15064.5(c)(4)).

### ***California Register of Historical Resources***

The California Register is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC section 5024.1[a]). The criteria for eligibility for the California Register are based upon National Register of Historic Places criteria (PRC section 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a prehistoric or historic-period property must be significant at the local, State, and/or federal level under one or more of the following four criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. 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; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

A resource eligible for the California Register must meet one of the criteria of significance described above, and retain enough of its historic character or appearance (integrity) to be recognizable as a historical resource and to convey the reason for its significance.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally determined to be eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and,
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historic resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historic resources;

- Historic resources contributing to historic districts; and,
- Historic resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

## Local

### ***Solano County General Plan***

The Solano County General Plan Resources Element includes goals, policies and implementation programs (IP) relating to the protection and preservation of cultural resources (Solano County, 2008). These goals and policies focus on the preservation of cultural resources through the identification and consideration of structures, features, communities, and cultural places in land use planning and development (Policies RS.P-38 and RS.P-40, and Implementing Program RS.I-25) and the implementation of mitigation measures where resources would potentially be affected by project design or during development (IP RS.I-25).

### ***Vacaville General Plan***

The City of Vacaville's current General Plan contains guiding and implementing policies that are relevant to the cultural resources in the study area. These guiding and implementing policies occur in the Conservation Element and are presented below.

**Policy 8.5-G 1:** Continue to protect historic sites and archaeological resources for their aesthetic, scientific, educational, and cultural values.

**Policy 8.5-G 2:** Continue to protect the historic value of the Downtown area.

**Policy 8.5-I 1:** Working in conjunction with the California Archaeological Inventory, review each proposed development project to determine whether the site contains known prehistoric or historic cultural resources and/or to determine their potential for as-yet undiscovered cultural resources.

**Policy 8.5-I 2:** Require that areas found to contain significant historic or prehistoric artifacts be examined by a qualified consulting archaeologist or historian for appropriate protection and preservation, if feasible.

**Policy 8.5-I 3:** Continue to encourage the renovation of designated historic structures in the Downtown historic district to preserve the architectural, historical, and cultural significance of those buildings; continue to require new buildings in the Downtown historic district to be complementary to the character of the existing buildings.

**Policy 8.5-I 4:** Consider the creation of a Historic Preservation District for the residential areas west of Downtown.

**Policy 8.5-I 5:** Encourage property owners to rehabilitate historic buildings, consistent with regulations which allow such properties, with densities that exceed General Plan standards or are residential uses in a commercial district to be legally conforming (City of Vacaville 2012).

The Vacaville Land Use and Development Code established a Historic Preservation Overlay District that identifies historically significant buildings and areas, and has adopted standards to ensure the preservation of these resources. The Historic Preservation Overlay District includes individual sites that contain historic buildings, as designated by the City of Vacaville, as well as multiple sites designated by the City of Vacaville as a historic district. The City's criteria for designating historic buildings and districts pertain to the historical and cultural significance of the structure or district; the historic, architectural, and engineering significance of the structure or district; and the neighborhood and geographic setting of the structure or district.

The Land Use and Development Code also establishes design standards for exterior alterations to designated historic buildings and sites, and prohibits the demolition of historic buildings unless specific findings are made by the Planning Commission (City of Vacaville 2012).

### 3.4.3 Analysis, Impacts, and Mitigation

#### Significance Criteria

To assess the significance of impacts associated with the Proposed Project, the State CEQA Guidelines (Appendix G) and standard professional practice were used to determine whether the Proposed Project would have a significant environmental effect. Accordingly, the Proposed Project would result in a significant effect if it would:

- Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5;
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5;
- Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or
- Disturb any human remains, including those interred outside of formal cemeteries.

CEQA provides that a project may cause a significant environmental effect where the project could result in a substantial adverse change in the significance of a historical resource (Public Resources Code, Section 21084.1). *CEQA Guidelines* Section 15064.5 defines a “substantial adverse change” in the significance of a historical resource to mean physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be “materially impaired” (*CEQA Guidelines*, Section 15064.5[b][1]).

*CEQA Guidelines*, Section 15064.5(b)(2), defines “materially impaired” for purposes of the definition of “substantial adverse change” as follows:

The significance of a historical resource is materially impaired when a project:

- Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register; or

- Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Historic resources are usually 50 years old or older and must meet at least one of the criteria for listing in the California Register (such as association with historical events, important people, or architectural significance), in addition to maintaining a sufficient level of physical integrity (*CEQA Guidelines* Section 15064.5[a][3]).

## **Methodology and Assumptions**

### ***Native American Contact***

ESA requested a Sacred Lands File Search from the NAHC on August 23, 2012. NAHC provided the results of this search on August 28, 2012, noting that there were no known Native American cultural resources within a half-mile of the project area. The NAHC further cautioned that there are Native American cultural resources in close proximity to the project area, although no specific location information was provided.

ESA staff sent follow-up contact letters via certified mail service on August 29, 2012 to all individuals and groups indicated by the NAHC as having affiliation with the area to solicit information on resources in the project vicinity. Recipients were requested to reply with any information they are able to share about Native American resources that might be affected by the Proposed Project. As of October 1, 2012 ESA had received a single response from Daniel Fonseca, Cultural Resource Director for the Shingle Springs Rancheria. Mr. Fonseca requested "...any and all completed record searches and or surveys that were done in or around the project area...", and to be informed if human remains were found during the course of the project.

### ***Records Search Results***

#### **Previous Studies**

ESA conducted a cultural resources literature and records search at the California Historical Resources Information System (CHRIS) Northwest Information Center (NWIC) on August 27, 2012. The records search included an examination of previous cultural resources survey coverage and reports, and known cultural resources within a half-mile radius of the project area (records search study area). ESA staff compiled additional information for this section from a number of sources, including the California Department of Parks and Recreation's California Inventory of Historic Resources (1976) and the Office of Historic Preservation's Historic Properties Directory (updated October 23, 2011), to identify California Historical Landmarks, California Points of Historic Interest, and California historic resources that are listed in or determined eligible for listing in the NRHP. ESA staff reviewed the following current and historic topographic maps: USGS 7.5-minute Elmira (1917, 1953, Photo revised 1980); Allendale (2222). Study of USGS

15-minute California topographic maps, including: Vacaville (1908, 1953); Courtland (1908, 1952); and Davis (1907, 1954).

The records search identified 13 previously conducted cultural resources investigations within a half-mile radius of the project area (**Table 3.4-1**). Of the 13 previous investigations, five overlap portions of the project area. With the exception of the Fairfield Train Station Specific Plan cultural resources survey, all previous work was conducted more than five years prior to the cultural resources investigation for the Proposed Project.

**TABLE 3.4-1  
PREVIOUS CULTURAL RESOURCES INVESTIGATIONS CONDUCTED  
WITHIN HALF-MILE OF THE PROJECT AREA**

<b>Author</b>	<b>NADB #</b>	<b>Title</b>	<b>Date</b>
Fredrickson, David	S-106*	An Archaeological Reconnaissance of the Nut Tree Airport, Vacaville, Solano County, California	1974
Treganza, Adan E., Robert L. Edwards, and Thomas F. King	S-5156	Archaeological Survey and Excavation along the Tehama-Colusa Canal, Central California	1977
Holman & Associations	S-5162	Archaeological Reconnaissance of 352 ac	1977
Chavez, David	S-5166	Literature Search for EIP Corporation	1981
McGowan, Dana	S-7675	A Preliminary Archaeological Survey of the Northeast Sector, Vacaville, Solano County, California	1985
Gause, Seana	S-18930	An Archaeological Study of Centennial Park, Browns Valley Parkway, Vacaville, Solano County, California	1997
William Self Associates, Inc.	S-26300*	Historic Property Survey Report, I-80 Nut Tree Overcrossing Project, City of Vacaville, Solano County, California	2002
William Self Associates, Inc.	S-27651	Historic Property Survey Report, I-80 Nut Tree Overcrossing Project, City of Vacaville, Solano County, California	2003
William Self Associates, Inc	S-27652	Finding of No Adverse Effect I-80 Nut Tree Overcrossing Project, City of Vacaville, Solano County, California	2003
Brown & Mills, Inc.	S-32810*	Historic Cultural Resources Assessment of Existing Telecommunications Facility, Nut Tree & Highway 80, Site No. SF-371	1998
McKale, George, Beccah Landman, and Andy Grass	S-34108*	A Cultural and Paleontological Resources Study for the Nut Tree Airport Project	2007
Whitaker, Adrian, and Phil Kaijankoski	S-36141	Archaeological Survey Report for the PG&E Vacaville Grid Control Center Allison Road Line, Vacaville, Solano County, California	2009
Michael Brandman Associates	S-37488*	Cultural Resources Records Search and Site Visit for T-MOBILE WEST CORPORATION a Delaware Corporation Candidate BA00371-A (Vacaville), 301 County Airport Road, Vacaville, Solano County, California	2010

\*Indicates study overlapping project area

SOURCE: NWIC, 2012

### ***Previously Recorded Cultural Resources***

The records search indicated one previously recorded cultural resource within a half-mile of the project area. This resource is P-48-000560, the Harbison House/Nut Tree property on Monte

Vista Avenue south of the airport. This site is a historic farm complex within the Nut Tree Plaza. Nut Tree Plaza, which was constructed in 2006, now occupies the majority of this site.

McKale et al. (2007) noted several cultural resources within the project area. These included concrete foundations, eucalyptus trees, and an obsidian projectile point. Apparently these resources were not formally recorded, no locational information was provided, and the NWIC does not identify these resources as sites/isolates.

### ***Archival Research***

In addition to the record search, archival research was conducted to provide contextual information and site specific data. ESA staff reviewed materials at the following facilities: Vacaville Museum, Vacaville; Vacaville Heritage Council, Vacaville; and the California State Library, Sacramento. ESA staff reviewed census, birth and death records, and immigration records available online.

### ***Survey Methodology***

ESA performed a cultural resources survey September 7-17, 2012. The goal of the survey was to identify surface evidence of archaeological materials and historic built features. Archaeologists systematically surveyed the project area in 15-meter transects.

Visibility of the land within the project area was highly variable. A substantial portion of the project area is paved for the airport runway, taxiway, tarmac, parking, and access routes. The airport terminal, hangars, and support facilities also cover a large portion of the project area. The property was covered with grasses and shrubs, although much of this had been disked, mowed, or sprayed, leaving some areas devoid of vegetation. Dense vegetation bordered several water courses that cross the project area. Overall, ground visibility was poor.

### ***Survey Results***

ESA staff identified no pre-historic period resources and eight historic period resources within the project area. Most were clustered around the eastern portion of the Airport and are related to agricultural endeavors. None of the resources identified during survey were determined eligible for listing in the California Register. **Table 3.4-2** summarizes these resources and their eligibility for listing in the California Register. More detailed descriptions can be found in the Cultural Resources Study and Evaluation completed for this project (**Appendix H**).

**TABLE 3.4-2  
RESOURCE DESCRIPTIONS AND ELIGIBILITY DETERMINATIONS**

<b>Resource Identifier</b>	<b>Description</b>	<b>Eligibility Determination</b>
NT-1 (English Walnuts)	NT-1 is a pair of English walnut ( <i>Juglans regia</i> ) trees located in a manicured lawn adjacent to the northeast side of the Solano County Airport terminal.	
NT-2 (Black Walnut Orchard)	This site is the remains of what is likely a black walnut ( <i>Juglans</i> sp.) orchard. The orchard is in a small clearing adjacent to the north bank of Pine Tree Creek which forms the southern boundary of the site.	These trees and single foundation are only a vestige of what remains of the once extensive Allison Ranch orchards. These remaining trees are isolates. In their setting adjacent to the Airport, and in their isolated nature, they have lost integrity needed to convey their historical association. As such, they do not appear to meet criteria set forth in the California Register.
NT-3 (Eucalyptus Trees and Concrete Footing)	NT-3 is a stand of four eucalyptus ( <i>Eucalyptus</i> sp.) trees and a concrete footing. The site is just east of a series of airport hangars, and covers an area 240 ft. x 140 ft.	
NT-4 (Palm Tree)	This location is a single palm tree, immediately adjacent to the northeast side of a series of Airport hangars.	
NT-5 (Horse Creek)	This location is Horse Creek, a natural drainage that has been channelized into a ditch. It crosses the entire width of the project area (east-west) in a zigzag fashion.	
NT-6 (Steiner Dairy)	This location is reportedly the remains of the Steiner Dairy. Archaeologically, all that remains of the dairy is a series of concrete floors and foundations.	Very little of the Steiner dairy remains today: NT-6 is a series of concrete floors and foundations; NT-5 (Horse Creek ditch); and NT-8 (Pine Creek ditch). These remnants are only vestiges of what was once a larger concern. There are insufficient remnants to reflect qualities required for meeting the criteria of listing in the California Register
NT-8 (Pine Creek)	NT-8 is Pine Creek, a natural drainage that has been channelized into a ditch at the southwest end of the airport runway.	
NT-9 (Runway)	NT-9 is the original Nut Tree runway, with a current configuration of 75 x 4,700 feet.	NT-9 is a fragment of the original alignment (orientation) of the runway. Since that time, the runway has been remodeled, repaved, and lengthened to its current configuration of 75 x 4700 feet. As such, the runway retains insufficient physical integrity, and integrity of setting, to convey its association with the original Nut Tree airport. The runway does not appear to meet requirements of the California Register.

SOURCE: ESA, 2012.

## Impacts and Mitigation Measures

**Impact 3.4-1: Would construction of the Proposed Project components would not cause a substantial adverse change in the significance of a historical resource as defined in §15064.5? (No Impact)**

### ***Phase I and Project Build-out***

No historic period structures were identified during the course of analysis for the Proposed Project, therefore no impacts to historical resource are anticipated under either the construction or operation of Phase I or under project Build Out. No further analysis of historical resources is included.

**Mitigation Measures:** None required.

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**Impact 3.4-2: Would construction activities associated with the Proposed Project cause substantial adverse effects to significant archaeological resources? (No Impact)**

### ***Phase I Projects***

Field reconnaissance identified six historic period cultural resources (described in **Table 3.4-2**) potentially impacted by activities associated with Phase I actions. These resources included NT-5 (Horse Creek), NT-8 (Pine Creek), NT-9 (Nut Tree Runway), NT-1 (English Walnut Trees), NT-6 (Steiner Dairy), and NT-2 (Orchard). These resources would be demolished or otherwise altered by construction or operation activities. Evaluation by ESA staff determined that these resources do not appear to meet the criteria for listing in the California Register, and would not be considered significant cultural resources under CEQA. The demolition or alteration of these resources would result in no impact under CEQA. No additional mitigation or analysis is required for Phase I projects.

### ***Project Build-out***

Field reconnaissance identified three historic period cultural resources (described in **Table 3.4-2**) potentially impacted by activities associated with actions associated with project build out. These resources included NT-6 (Steiner Dairy), NT-3 (Eucalyptus Trees), and NT-4 (Palm Tree). These resources would be demolished or otherwise altered by construction or operation activities. Evaluation by ESA staff determined that these resources do not appear to meet the criteria for listing in the California Register, and would not be considered significant cultural resources under CEQA. The demolition or alteration of these resources would result in no impact under CEQA. No additional mitigation or analysis is required for project build out.

**Mitigation Measures:** None required.

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**Impact 3.4-3: Would construction-related activities associated with the Proposed Project cause a substantial adverse change in the significance of an unknown unique paleontological, geological, or archaeological resource as defined in Section 15064.5? (Potentially Significant)**

***Phase I Projects and Project Build Out***

Neither the archival search nor the field reconnaissance resulted in the identification of prehistoric archaeological resources within the Phase I or Project Build-out areas. As the Project Build-out area is larger than the Phase I area, it has additional possibility for the accidental discovery of subsurface archaeological resources. Regardless, the possibility still exists for the discovery of such resources as a result of Proposed Project construction activities. Prehistoric materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs), as well as battered stone tools, such as hammerstones and pitted stones. Inadvertent damage to significant and unique archaeological or paleontological resources during construction would be a potentially significant impact. Implementation of Mitigation Measure 3.4-1, however, would reduce potential impacts to a less-than-significant level.

**Mitigation Measure**

Implementation of the following mitigation measure would reduce this impact to a less-than-significant level:

**Measure 3.4-1: Discovery of Archaeological Resources.** In the event that previously unidentified archaeological, Native American, or paleontological resources are uncovered during project implementation, all work should cease within 100 feet of the find until it can be evaluated by a qualified archaeologist, as defined as one meeting the Secretary of the Interior’s Professional Qualification Standards for archaeology, or paleontologist (U.S. Department of the Interior, 2012). If the find is determined to be potentially significant, the archaeologist, in consultation with the lead agency and appropriate Native American group(s) (if the find is prehistoric or Native American in nature) or paleontologist should develop a treatment plan with an emphasis towards preservation in place. If resources are encountered, avoidance, or preservation in an undisturbed state is the preferable course of action. CEQA §21083.2(b).provides that preservation methods may include:

- Planning construction to avoid archaeological sites.
- Deeding sites into permanent conservation easements.
- Capping or covering sites with a layer of soil before building on the sites.
- Planning parks, green space, or other open space to incorporate archaeological sites.

**Impact Significance after Mitigation:** Cessation of work within 100 feet of a discovered subsurface archaeological/paleontological resource shall prevent potential damage to the resource, and allow for a qualified archeologist/paleontologist to evaluate and make recommendations for the protection and recovery of the resource. Implementation of this measure will ensure that potential impacts to subsurface archaeological/paleontological resources are less than significant.

**Impact 3.4-4: Would construction-related activities associated with the Proposed Project disturb any human remains, including those interred outside of formal cemeteries? (Potentially Significant)**

***Phase I Projects and Project Build Out***

There is no indication, either from the archival research results or the archaeological survey, that any particular location in the Phase I or Project Build-out areas was used for human burial purposes in the recent or distant past. Therefore, it is unlikely that human remains would be encountered during construction of the Proposed Project. However, in the unlikely event that human remains were discovered during subsurface activities, including those interred outside of formal cemeteries, the human remains could be inadvertently damaged, which could be a significant impact. However, this impact would be minimized by implementation of Mitigation Measure 3.4-2.

**Mitigation Measure**

Implementation of the following mitigation measure would reduce this impact to a less-than-significant level:

**Measure 3.4-2: Accidental Discovery of Human Remains.** If human remains are encountered unexpectedly during construction excavation and grading activities, State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 24 hours to notify the Native American Heritage Commission. The NAHC will then identify the person(s) thought to be the Most Likely Descendent of the deceased Native American, who will then participate in consultation with the landowner to determine the appropriate future disposition of the remains.

**Impact Significance after Mitigation:** Implementation of this measure shall ensure that all applicable government regulations (as identified above) are adhered to in the event of the discovery of human remains. Potential impacts to human remains, with the implementation of this measure, are considered less than significant.

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## **Cumulative Impacts**

**Impact 3.4-5: Would implementation of the Proposed Project result in a cumulatively considerable impact to cultural resources? (Potentially Significant)**

Due to the lack of any known cultural resources within the immediate vicinity of the Proposed Project site, potential direct impacts to cultural resources are considered less than significant. Similarly, cumulative projects in the vicinity of Nut Tree Airport, as identified in **Table 2-7**, would not likely affect known cultural resources. Therefore, cumulative impacts to known cultural resources would not occur. However, as described under Impacts 3.4-3 and 3.4-4, the Proposed Project does have the potential to significantly impact unknown archaeological resources and human remains should they be encountered during any excavation or other construction activities. Implementation of Mitigation Measures 3.4-1 and 3.4-2, in addition to

similar measures undertaken through CEQA guidelines and standards in projects in the vicinity, would mitigate cumulative impacts to cultural resources. Development of past, present, and future projects in the vicinity of Nut Tree Airport would be required to adhere to all applicable guidelines and policies related to the preservation of cultural resources, and would likely employ similar BMPs as those proposed above to avoid impacting unknown cultural resources. Therefore, potential cumulative impacts to unknown cultural resources, with implementation of the above-identified mitigation measures, is considered less than significant.

### Mitigation Measure

#### Implement Measures 3.4-1 and 3.4-2

**Impact Significance after Mitigation:** Implementation of this measure will ensure that potential impacts to subsurface archaeological/paleontological resources are avoided to the greatest extent possible and that all applicable government regulations (as identified above) are adhered to in the event of the discovery of human remains. Adherence to these measures will ensure that the Proposed Project would not result in a cumulatively considerable impact to unknown archaeological/paleontological resources; therefore, cumulative impacts to cultural resources would be less than significant.

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