
Appendix D

Archaeological Resources Inventory Report

ARCHAEOLOGICAL RESOURCES INVENTORY REPORT
for the
DIAMOND SPRINGS COMMUNITY PARK PROJECT,
EL DORADO COUNTY, CALIFORNIA

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Acronyms and Abbreviations

Acronym/Abbreviation	Definition
APE	Direct Area of Potential Effect
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
County	El Dorado County
CRHR	California Register of Historical Resources
DPR	California Department of Parks and Recreation
NAHC	Native American Heritage Commission
NCIC	North Central Information Center
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PRC	California Public Resources Code
Project	Diamond Springs Community Park Project

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Management Summary

El Dorado County (County) is proposing development of the Diamond Springs Community Park (Proposed Project), an approximately 40-acre community park within the community of El Dorado, CA, in west-central El Dorado County. The County contracted Dudek to perform a Phase I cultural resources inventory for the Project. This archaeological inventory report was conducted in compliance with the California Environmental Quality Act (CEQA). Due to potential future federal permitting, the report was also conducted in compliance with Section 106 of the National Historic Preservation Act.

The 39.59-acre Project site (APN 331-400-002 and 331-301-019) is located in the unincorporated community of El Dorado, approximately 4 miles southwest of the city of Placerville, El Dorado County, California. The Project site is located in the western foothills of the Sierra Nevada Mountains. The area is characterized by gently rolling foothills and low-gradient streams that flow southward towards the Consumnes River. Specifically, the Project site is located at 3447 Clemenger Drive, within the western portion of Diamond Springs. The Project site located in Township 10N, Range 10E, and Sections 35 and 36 of the "Placerville, CA" U.S. Geological Survey (USGS) 7.5-minute quadrangles, centered at 38.679422° N and -121.833001° W (Figure 1, Project Location Map).

The Area of Potential Effect (APE) analyzed herein consists of all areas within two parcels, a total area of approximately 40 acres. For the purposes of providing management recommendations, the vertical APE, as represented by the maximum depth of disturbance, is assumed to be 15 feet below the existing ground surface. However, the development area would likely have shallower actual ground disturbance.

This study consisted of a records search of the APE and a 0.5-mile radius, a Native American Heritage Commission Sacred Lands File search, and an intensive pedestrian survey of the APE. A North Central Information Center records search identified 17 previously recorded cultural resources within a 0.5-mile radius, three of which intersect the APE. The resources recorded within the APE consist of a historic-era water conveyance system, a historic-era mining site, and a multicomponent site with historic-era mining features and a prehistoric bedrock milling feature. Recorded resources within the surrounding records search buffer, include prehistoric bedrock milling sites, historic-era mining sites, historic-era structures, and other historic-era resources. The results of the Native American Heritage Commission's Sacred Lands File search did not identify the presence of documented Native American resources within the APE. An intensive-level pedestrian survey was conducted of the entire APE; this survey did result in the identification of one newly recorded historic-era berm or dam. This site was documented and evaluated by Dudek personnel as part of the present study. All of the historic-era sites and components recommended not eligible for California Register of Historical Resources or National Register of Historic Places listing. The prehistoric site component was not evaluated and should be assumed eligible for the California Register of Historical Resources (CRHR) or National Register of Historic Places (NRHP). It is recommended that Project development avoid the unevaluated prehistoric resource and the surrounding area by a minimum distance of 50 ft. Given the recorded prehistoric resource and the sensitivity of the area for supporting the presence of prehistoric archaeological sites, management recommendations for addressing potential impacts related to the inadvertent discovery of cultural resources are provided. With these recommendations appropriately implemented, the Project would result in a less-than-significant impact to cultural resources (No Historic Properties Affected).

1 Introduction

1.1 Project Location and Description

El Dorado County (County) is proposing development of the Diamond Springs Community Park (Proposed Project), an approximately 40-acre community park within the community of El Dorado, CA, in west-central El Dorado County. The Project is proposed to provide recreation for community residents and other local users through the development of two vacant parcels. Park elements may include a combination of recreation elements such as ball fields, tennis/sports courts, indoor recreation/gym buildings, as well as natural preserve and trail areas, interpretive/learning areas, open turf, public restrooms, and seating areas. Walking paths, lighting, and landscaping may also be included as a part of the development, as would a designated parking area.

The 39.59-acre Project site (APN 331-400-002 and 331-301-019) is located in the unincorporated community of El Dorado, approximately 4 miles southwest of the city of Placerville, El Dorado County, California. The Project site is located in the western foothills of the Sierra Nevada Mountains. The area is characterized by gently rolling foothills and low-gradient streams that flow southward towards the Consumnes River. Specifically, the Project site is located at 3447 Clemenger Drive, within the western portion of Diamond Springs. The Project site located in Township 10N, Range 10E, and Sections 35 and 36 of the “Placerville, CA” U.S. Geological Survey (USGS) 7.5-minute quadrangles, centered at 38.679422° N and -121.833001° W (Figure 1, Project Location Map).

The Area of Potential Effect (APE) analyzed herein consists of all areas within the two Project parcels, a total area of approximately 40 acres (Figure 2, Project Area Map). For the purposes of providing management recommendations, the vertical APE, as represented by the maximum depth of disturbance, is assumed to be 15 feet below the existing ground surface. However, the development area would likely have shallower actual ground disturbance.

In preparation for the Project, Dudek was contracted to perform a Phase I cultural resource inventory. This inventory was conducted in compliance with the California Environmental Quality Act (CEQA). In anticipation of possible federal permitting for the Project, this inventory has been completed to standards and requirements meeting compliance with Section 106 of the National Historic Preservation Act (NHPA).

1.2 Report Structure and Key Personnel

This report is divided into five chapters. Following this introduction, Chapter 2 reviews the natural environment and the cultural context, and Chapter 3 provides the methods used to complete the current inventory. The records search, survey results, and tribal correspondence are discussed in Chapter 4. Chapter 5 provides a cultural resources effects analysis and evaluation of the identified sites. Chapter 6 summarizes the cultural resources work completed for this Project to date, and provides recommendations for further management of cultural resources, consistent with CEQA and Section 106 of the NHPA. Chapter 7 provides a list of references cited throughout this report. Several appendices are attached to this report. Appendix A contains confidential maps showing cultural resources overlaid on the APE, Appendix B includes confidential records search results, Appendix C contains the NAHC Sacred Lands File search results, Appendix D contains confidential site records and documentation of newly recorded cultural resources, and Appendix E contains the resumes of key personnel.

Nicholas Hanten acted as field director and drafted the technical report, Elizabeth Sivell assisted with the survey and preparation of the site records. Adam Giacinto acted as principal investigator, prepared management recommendations, and finalized the technical report. All archaeologists meet the Secretary of the Interior’s standards for archaeology and have experience working within local, state, and federal regulatory contexts.

1.3 Regulatory Context

The current cultural resources investigation was completed to satisfy CEQA and Section 106 of the NHPA.

1.3.1 National Historic Preservation Act

The National Register of Historic Places (NRHP) is the United States’ official list of districts, sites, buildings, structures, and objects worthy of preservation. Overseen by the National Park Service under the U.S. Department of the Interior, the NRHP was authorized under the NHPA, as amended. Its listings encompass all National Historic Landmarks and historic areas administered by the National Park Service.

NRHP guidelines for the evaluation of historic significance were developed to be flexible and to recognize the accomplishments of all who have made significant contributions to the nation’s history and heritage. Its criteria are designed to guide state and local governments, federal agencies, and others in evaluating potential entries in the NRHP. For a property to be listed in or determined eligible for listing, it must be demonstrated to possess integrity and to meet at least one of the following criteria:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.

Integrity is defined in NRHP guidance as “the ability of a property to convey its significance. To be listed in the NRHP, a property must not only be shown to be significant under the NRHP criteria, but it also must have integrity” (NPS 2009). NRHP guidance further asserts that properties must have been completed at least 50 years before evaluation to be considered for eligibility. Properties completed fewer than 50 years before evaluation must be proven to be “exceptionally important” (criteria consideration G) to be considered for listing.

A historic property is defined as “any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional

religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the NRHP criteria” (36 CFR Sections 800.16[i][1]).

Effects on historic properties under Section 106 of the NHPA are defined in the assessment of adverse effects in 36 Code of Federal Regulations (CFR) Sections 800.5(a)(1):

An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property’s eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.

Adverse effects on historic properties are clearly defined and include the following (36 CFR 800.5 [2]):

- (i) Physical destruction of or damage to all or part of the property;
- (ii) Alteration of a property, including restoration, rehabilitation, repair, maintenance, stabilization, hazardous material remediation and provision of handicapped access, that is not consistent with the Secretary’s Standards for the Treatment of Historic Properties (36 CFR Part 68) and applicable guidelines;
- (iii) Removal of the property from its historic location;
- (iv) Change of the character of the property’s use or of physical features within the property’s setting that contributes to its historic significance;
- (v) Introduction of visual, atmospheric or audible elements that diminish the integrity of the property’s significant historic features;
- (vi) Neglect of a property which causes its deterioration, except where such neglect and deterioration are recognized qualities of a property of religious and cultural significance to an Indian tribe or Native Hawaiian organization; and
- (vii) Transfer, lease, or sale of property out of Federal ownership or control without adequate and legally enforceable restrictions or conditions to ensure long-term preservation of the property’s historic significance.

To comply with Section 106, the criteria of adverse effects are applied to historic properties, if any exist in the Project’s APE, pursuant to 36 CFR Sections 800.5(a)(1). If no historic properties are identified in the APE, a finding of “no historic properties affected” is made. If there are historic properties in the APE, application of the criteria of adverse effect will result in Project-related findings of either “no adverse effect” or “adverse effect.” A finding of no adverse effect may be appropriate when the undertaking’s effects do not meet the thresholds in criteria of adverse effect found in 36 CFR Sections 800.5(a)(1), in certain cases when the undertaking is modified to avoid or lessen effects, or if conditions were imposed to ensure review of rehabilitation plans for conformance with the Secretary of the Interior’s Standards for the Treatment of Historic Properties (codified in 36 CFR Part 68).

If adverse effects findings are expected to result from a Project, mitigation would be required, as feasible, and resolution of those adverse effects by consultation may occur to avoid, minimize, or mitigate adverse effects on historic properties pursuant to 36 CFR Part 800.6(a).

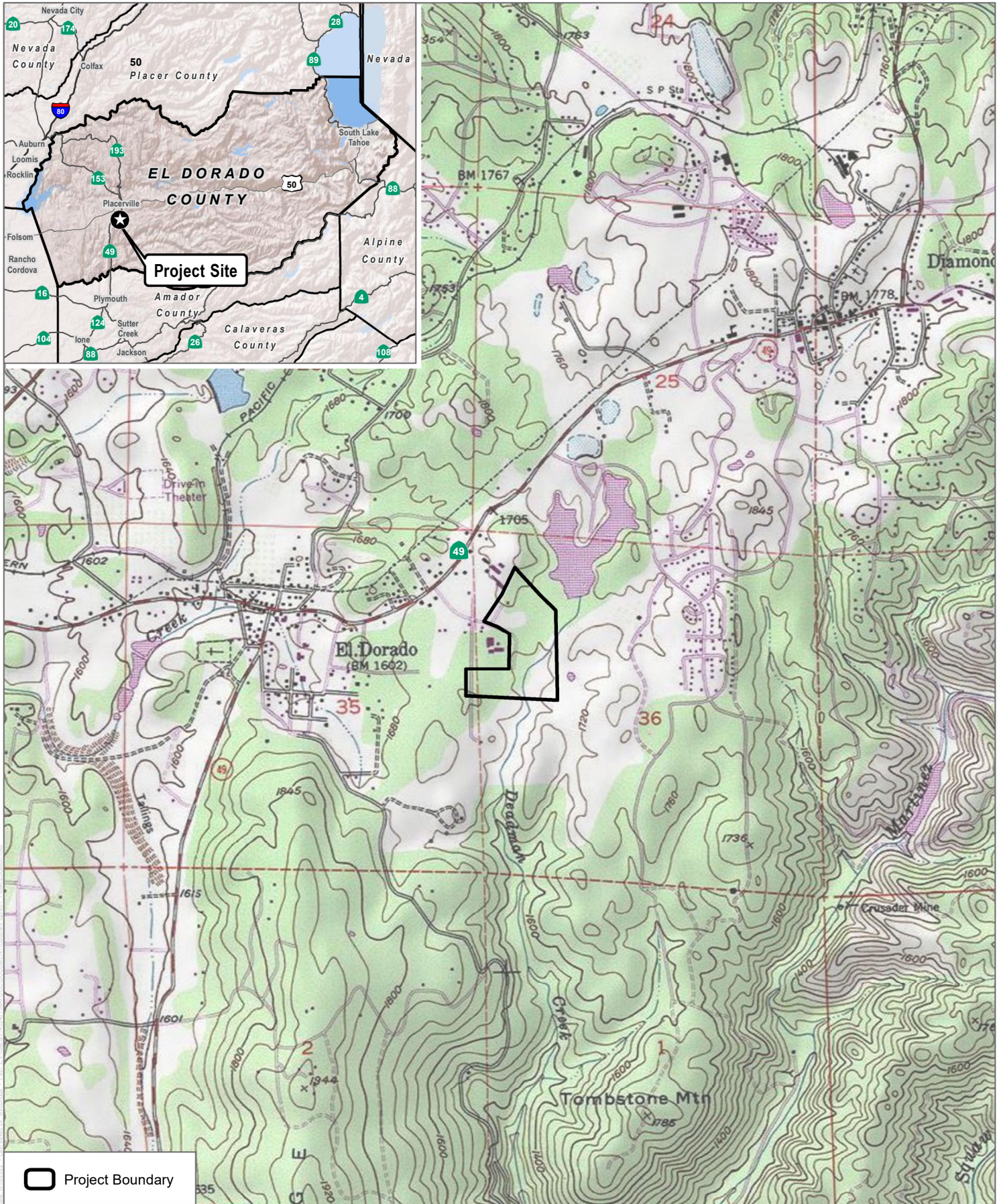
1.3.2 California Register of Historic Resources and CEQA

In California, the term “historical resource” includes “any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California” (PRC Section 5020.1[j]). In 1992, the California legislature established the California Register of Historical Resources (CRHR) “to be used by state and local agencies, private groups, and citizens to identify the state’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC Section 5024.1[a]). The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP. According to California Public Resources Code (PRC) Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains “substantial integrity,” and (ii) meets at least one of the following criteria:

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

To understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (see California Code of Regulations, Title 14, Section 4852[d][2]).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP, and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are State Landmarks and Points of Interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.



SOURCE: USGS 7.5-minute Series Placerville Quadrangle

FIGURE 1

Project Location Map

Diamond Springs Community Park Project

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1.3.2.1 California Environmental Quality Act

As described further in subsequent text, the following CEQA statutes and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC Section 21083.2(g) defines “unique archaeological resource.”
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines “historical resources.” In addition, CEQA Guidelines Section 15064.5(b) defines the phrase “substantial adverse change in the significance of an historical resource.” It also defines the circumstances when a project would materially impair the significance of an historical resource.
- PRC Section 21074(a) defines “tribal cultural resources.”
- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e) set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated cemetery.

PRC Sections 21083.2(b)-(c) and CEQA Guidelines Section 15126.4 provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures. Preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site.

Under CEQA, a project may have a significant effect on the environment if it may cause “a substantial adverse change in the significance of an historical resource” (PRC Section 21084.1; CEQA Guidelines Section 15064.5[b]). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1[q]), it is a “historical resource” and is presumed to be historically or culturally significant for purposes of CEQA (PRC Section 21084.1; CEQA Guidelines Section 15064.5[a]). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC Section 21084.1; CEQA Guidelines Section 15064.5[a]).

A “substantial adverse change in the significance of an historical resource” reflecting a significant effect under CEQA means “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (CEQA Guidelines Section 15064.5[b][1], PRC Section 5020.1[q]). In turn, the significance of a historical resource is materially impaired when a project does any of the following (CEQA Guidelines Section 15064.5[b][2]):

- 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 PRC or its identification in an historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, 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.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site contains any “historical resources,” then evaluates whether that project will cause a substantial adverse change in the significance of a historical resource such that the resource’s historical significance is materially impaired.

If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2[a], [b], and [c]).

Section 21083.2(g) defines a unique archaeological resource as 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 that 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.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (PRC Section 21083.2[a]; CEQA Guidelines Section 15064.5[c][4]). However, if a non-unique archaeological resource qualifies as a tribal cultural resource (PRC 21074[c]; 21083.2[h]), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described in the following section, these procedures are detailed in PRC Section 5097.98.

1.3.2.2 California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of the site or nearby area reasonably suspected to contain human remains can occur until the county coroner has examined the remains (Section 7050.5b). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the California NAHC within 24 hours (Section 7050.5c). The NAHC will notify the most likely descendant. With the permission of the landowner, the most likely descendant may inspect the site of discovery. Recommendations from the most likely decedent should be provided within 48 hours of being provided access to the site.

2 Project Context

2.1 Environmental Context

The Project site consists of two undeveloped contiguous parcels within an urban cluster setting. The Project area is mostly undeveloped, with gentle slopes of grassland, various oaks, and wetlands. A perennial stream, Deadman Creek, flows generally north-south through the eastern portion of the property. Elevation within the Project area varies from approximately 1,670-1,720 feet.

The Project site is bounded by the Lake Oaks Senior Mobile Home Park to the north, which surrounds Patterson Lake, a clinical office, Snowline Hospice, to the northeast, along with two residential properties located off of Farnsworth Lane. Charles F. Brown Elementary School as well as several residential properties are located west of the site, while Union Mine High School and Virtual Academy High School adjoin the Project site to the southwest. A single residence is located on the southern adjoining property, near the southwest corner of the Project site. Other areas that bound the Project site to the south and east consists of vacant/undeveloped property. Surrounding uses within the Project area include academic, residential, office/commercial, and undeveloped uses.

The Project site is broadly within the Sierra Nevada foothills, approximately 14 miles east of the edge of the Central Valley. The region receives approximately 40 inches of precipitation annually, with average monthly high temperatures ranging from approximately 56°F to 93°F and average lows from 35°F to 61°F, with the coolest temperatures in January and warmest temperatures in July (U.S. Climate Data 2022).

2.2 Cultural Context

Various attempts to parse out information provided through recorded archaeological assemblages throughout California for the past 12,000 years have led to the development of numerous cultural chronologies. Some of these are based on geologic time, most are interpreted through temporal trends derived from archaeological assemblages, and others are interpretive reconstructions. The spatial extent and detail of these chronologies is also highly variable, with detail chronologies developed in some areas based on substantial numbers of radiocarbon dates, while other areas rely on cross-dating of stylistically distinct artifact styles or cultural patterns. However, each of these chronologies describes essentially similar trends in assemblage composition and cultural succession, with varying degrees of detail. California's archaeological assemblage composition is generally accepted as falling within the following overarching patterns: Paleoindian Period (11,550–8,550 cal BC), Archaic Period (8550 cal BC–cal AD 1100), Emergent/Prehistoric Period (cal AD 1100–1750), and Ethnohistoric Period (post-AD 1769).

2.2.1 Prehistoric Era

Paleoindian Period (11,550–8,550 cal BC)

Occupation of the Central Valley and Sierra Foothills is likely to have occurred at least 9,000 years ago, but only a handful of Paleoindian Period lithic bifacial points have been recorded. The nearest of these fluted points were found in Sierra Valley (west of Reno, Nevada) (Foster and Betts 1996), Ebbett's Pass (south of Lake Tahoe) (Dillon 2002), and at the Sailor Flat site (in the Tahoe National Forest) (Wohlgemuth 1984). Fluted points from this area have generally been recorded as isolated finds or recovered from contexts of mixed provenience. The primary

examples of the Paleoindian pattern, to which such fluted and stemmed points are generally assigned, have been recorded east of the Sierra Nevada. The typical assemblage includes large-stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and relatively small proportions of groundstone tools. Some of the most pertinent of such sites were studied by Emma Lou Davis (Davis 1978) on China Lake Naval Air Weapons Station, near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679)—a multicomponent fluted point site—and MNO-680—a single component Great Basined Stemmed point site (Basgall et al. 2002). At MNO-679 and MNO-680, groundstone tools were rare but finely made projectile points were common.

While the limited available data relating to the earliest occupation in the region has provided for a relatively broad and consistent interpretation of the Paleoindian Period, subsequent prehistoric temporal sequences are much more geographically defined and variable due to the greater amount of available data. The Tahoe Reach is currently the most commonly applied cultural temporal sequence within the region. This draws from regional syntheses primarily developed by both Heizer and Elsasser (1953) and Elston, Davis, and Townsend (1977). The sequence includes the Washoe Lake Phase, Tahoe Reach Phase, Spooner Phase, Martis Complex, and Kings Beach Complex (Hull 2007; Moratto 1984, 1999). Of these, the Martis Complex and the Kings Beach Complex are most applicable to the current Project area.

Martis Complex (3000 B.C.–A.D. 500)

The Martis complex has been identified to extend from Lassen County to Alpine County (Elsasser 1960). The date range, 3000 B.C. to approximately 500 A.D. has been substantiated by obsidian hydration and radiocarbon dates provided by Elsasser (1960). Subsistence during the Martis Complex was based on hunting and seed collecting economy, with highly mobile populations that exploited both upper and lower regions based on the relative seasonal abundance of resources. Projectile points are variable during this period, and were most commonly heavy with low formality, providing some resemblance to those identified in the Great Basin regions. Temporally representative tools include finger-held drills or punches, retouched volcanic flake scrapers, spokeshave-notched tools, and large biface blades and cores (Hull 2007). During this period, there is a more intensive exploitation of local materials, rather than non-local cherts and obsidian, for the manufacture of formed flaked tools.

Kings Beach Complex (A.D. 500–Historic Contact)

Similar to the Martis Complex, the Kings Beach Complex was characterized by populations that migrated between upper areas in the warmer months and lower elevations during the fall and winter. Subsistence during this period shifted toward a focus on fishing and gathering. A reduction in size and weight of projectile points corresponded with adoption of bow and arrow technology. Typical point forms within this region included Desert Side-notched, Cottonwood, and Rosegate series (CRM 2011). Obsidian and chert replaced volcanic materials such as basalt as the preferred materials for the manufacture of lithic tools. As both high quality cherts and obsidian are not local, the greater presence of such exotic materials suggests that there was an increase in trade with neighboring tribes during this period.

The Kings Beach Complex additionally included a greater reliance on exploitation of acorns. This trend is exemplified by the increased presence of bedrock mortars and pestles formed from local cobbles. It should be noted that while bedrock mortars were predominantly used for crushing and grinding acorns, they were also employed for the

processing of a variety of other foods, including deer meat, camas roots and seeds (CRM 2011). While the creation of mortars indicated a relatively high investment of time and energy, bedrock milling features found as frequently at sites with limited-to-no subsurface cultural deposits as at intensive use occupation areas with well-developed midden soils.

2.2.2 Ethnohistoric Period

The region surrounding the Project area would have been in Hill Nisenan (also known as the southern Maidu) tribal territory during the ethnohistoric period (Wilson and Towne 1978). This group inhabited the Yuba, Bear, and American river watersheds, extending from the Sierra Nevada summit to the Sacramento River. Ethnographic work, most prominently conducted by Stephen Powers in the 1870s, writes of a relatively high population of indigenous inhabitants in this region (1877). Notably, Powers identified 18 named villages alone along the Bear River, further suggesting that there may have been a larger portion of villages of which he has no knowledge. This was substantiated by interviews conducted by Hugh Littlejohn in 1928, who recorded a number of additional named habitation areas (Carlson 1986). Nisenan village locations were also mapped along the Yuba, American, and Cosumnes Rivers. The earliest of these mapped villages, *Opok*, is centered just west of Diamond Springs, approximately 1 km north of the Project area (Wilson and Towne 1978).

Nisenan habitation areas were most commonly situated near primary drainages and along ridgelines with mild slopes and south-facing exposures (Wilson and Towne 1978). Traditional village features included bedrock milling stations, granaries, conical house structures, as well as sweat and ceremonial houses. The dead were typically cremated and buried within the boundaries of the habitation area. Tribal groups included extended and unmarried relatives. Groups of Hill Nisenan did have defined chiefs, however, these individuals were chosen based on wealth and popularity rather than hereditary descent (Kroeber 1925). Intra-tribal boundaries overlapped, with natural resources being shared relatively freely between tribelets (Carlson 1986). Inter-tribal conflict did occur over resources, and the Hill Nisenan would attack small hunting parties of Washoe that encroached too far into their territory.

The Nisenan subsistence strategy was centered on fishing, hunting, and collecting vegetative resources. This group was highly mobile, with larger central habitation areas and surrounding satellite sites used during hunting excursions and for pre-processing of collected plant resources such as acorns. Common food items included deer, rabbits, birds, bear, rodents, other mammals of small and moderate size, as well as various insects. Deer were sometimes partially processed using mortar and pestle (Kroeber 1925). A ceremony among the Hill Nisenan involved the hunting of a bear during hibernation season. Common tools included the bows and arrow, traps, harpoons, hooks, nets, portable and stationary grinding implements, and pestles and handstones. A number of goods were made using fibrous plants, including canoes constructed tule balsa or logs. Imported items included shell ornaments and beads (particularly disk beads as a monetary unit), green pigment, tobacco, steatite items, and obsidian (Wilson and Towne 1978). Exported items included bows and arrows, animal skins, pine nuts, and other local resources (Kroeber 1925).

Central California indigenous populations derived their linguistic roots from a common Penutian stock. The degree of internal variation among these three decedent language groups (Yokutian, Maidu, and Wintuan) is similar to Indo-European, suggesting a time depth of approximately 6,500 years (Golla 2007). The Nisenan spoke one of four closely related Maidu languages, including Konkow, Chico Maidu, Mountain Maidu, and Nisenan. Shared Hokan phonological and morphological substratal components identified within all Maidu languages indicate past interactions between these two language populations (Hokan time depth is approximately 8,000

years). Maiduan language structure suggests that all four Maiduan languages were descended from the same proto-Maiduan speaking population to the north. The most likely scenario is that these populations spread southward in the last 1,200 years, with the Nisenan encroaching into area previously occupied by Miwok tribal groups sometime in the past few centuries (Golla 2007). This later population movement is further substantiated by the high frequency of Miwok loan words found within Nisenan vocabulary, a trait that is not shared with the other three Maiduan languages.

2.2.3 The Historic Period

Spanish Period (1769–1822)

Gaspar de Portolá entered what is now the San Francisco Bay in 1769. Additional explorations of the San Francisco Bay and the plains to the east were conducted by Father Pedro Fages in 1772 and Juan Bautista De Anza in 1776 (Grunsky 1989). In 1808, Lieutenant Gabriel Moraga led the first Spanish expedition into present-day Sacramento Valley. This group explored areas along the American, Calaveras, Cosumnes, Feather, Merced, Mokelumne, Sacramento, and Stanislaus River watersheds. The most recent Spanish expedition into this region was conducted by Luis Arguello in 1817. This group traveled up what is now the Sacramento River to the mouth of what is now the Feather River (Grunsky 1989).

Spanish missionization of Alta California was initiated in San Diego 1769. A total of 21 missions were constructed by the Dominican and Franciscan orders from 1769 through 1823. Missions in the region included San Francisco de Asís (1776), Santa Clara de Asís (1776), San José de Guadalupe (1797 in Alameda County), San Rafael Arcángel (1817 in Marin County), and San Francisco Solano (1823 in Sonoma County) (Grunsky 1989).

Mexican Period (1822–1848)

Mexico's separation from the Spanish empire in 1821 and the secularization of the California missions in the 1830s caused further disruptions to native populations. Following the establishment of the Mexican republic, the government seized many of the lands belonging to Native Americans, providing them as parts of larger land grants to affluent Mexican citizens and rancheros. Captain John Sutter was granted the two largest areas of land in the Sacramento Valley area. Sutter founded New Helvetia, a trading and agricultural empire, in 1839 (Grunsky 1989). The headquarters was located within Valley Nisenan territory at the confluence of the Sacramento and American Rivers. The 1833 Secularization Act passed by the Mexican Congress ordered half of all mission lands to be transferred to native populations, and the other half to remain in trust and managed by an appointed administrator. These orders were never implemented due to several factors that conspired to prevent Native Americans from regaining their patrimony.

American fur trappers and traders conducted a number of exploratory intrusions into west Sierra Nevada Mexican territory. Notably, in 1826, Jedediah Smith led a small party of trappers in an expedition along the Sierra Nevada range, eventually entering what is now the Sacramento Valley in 1827. This group covered the area along the American and Cosumnes Rivers. From these travels, maps of this terrain were created and disseminated, providing for the waves of European prospectors, ranchers, and settlers who would come in the following decades (Grunsky 1989).

American Period (Post-1848)

The end of the Mexican American war with the Treaty of Guadalupe Hidalgo in 1848 marks the beginning of the American Period in California. The early portion of the American Period is largely shaped by the mining of precious metals and other minerals, prompted in large part by the discovery of gold in January 1848 at Sutter's Mill in Coloma, on the South Fork of the American River. The California Gold Rush led to what has been characterized as "the greatest mass migration in American history" (Costello and Marvin 2002:16), with extensive and enduring changes California's physical and cultural landscape (Bureau of Reclamation 2010). Within months of the initial discovery, gold was being collected in the gravel bars of the north, middle, and south forks of the American River, and extensive placer mining was occurring in nearly every adjacent gulch and ravine. The effects of these activities are still evident in the form of tailings, ditches, and other mining features scattered throughout these areas. Mining can also be credited for the location and names of most of the towns and communities in the region, the placement of early transportation and communication corridors among the western Sierra Nevada, Sacramento, and San Francisco areas, and the subsequent development of agriculture and ranching throughout the foothills (Costello and Marvin 2002; Homer 1988).

As the gold fields swiftly dried up and the allure of gold mining declined, many new arrivals to the area refocused their efforts toward other economic opportunities. Agriculture and ranching became more prominent and productive pursuits in the lower foothills and Central Valley, while the timber industry gained importance at higher elevations (Davis 1975).

The earliest documented landowners in the vicinity of the Project were Bradford and Mary Hammel, who owned and were living on a 160-acre parcel which included the Project area by 1860 (Peak and Associates 1988b). The Hammel property was bounded on the east by Knight's Ranch, on the south by Vaugh's Ranch, on the west by the L. M. Davis Ranch, and on the east by the Robinson and Ellis Ranch. Hammel and all of his neighbors were farmers and fruit growers (Peak and Associates 1988b). El Dorado County Deed records indicate that the Hammel's owned the property until 1916 when it was bought by Joseph Windle who subsequently sold part of the property to Edward Redemske (Peak and Associates 1988b).

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3 Research Methods

The Secretary of the Interior has issued Standards and Guidelines for Archeology and Historic Preservation (48 FR 44720–44726), which are used for the identification and evaluation of historic properties and to ensure that the procedures are adequate and appropriate. The identification and evaluation of historic properties are dependent upon the relationship of individual properties to other similar properties (NPS and ACHP 1998, pp. 18–20). Information about properties regarding their prehistory, history, architecture, and other aspects of culture must be collected and organized to define these relationships (NPS 2009), which is the intent of the current inventory.

This investigation consisted of a records search at the North Central Information Center (NCIC), Sacramento State of the Project site and a 0.5-mile radius around the Project site. Following Bureau of Land Management precedents, which are appropriate for federal projects, survey techniques are loosely grouped into two categories: reconnaissance and intensive (BLM 2004; NPS 2009). The choice of survey category depends on the level of effort required for a particular project, which can vary depending on the nature of the properties or property types, the possible adverse effects on such properties, and agency requirements (NPS and ACHP 1998). The selection of field survey techniques and level of effort must be responsive to the management needs and preservation goals that direct the survey effort. For any survey, it is important to consider the full range of historic properties that may be affected, either directly or indirectly, and consider strategies that will minimize any adverse effects and maximize beneficial effects on those properties (BLM 2004; NPS 2009; NPS and ACHP 1998).

The current survey methods can be classified as intensive because short-interval transect spacing and full documentation of cultural resources were completed. Survey staff exceed the applicable Secretary of Interior’s Professional Qualifications Standards for archaeological survey. Dudek archaeologists surveyed the entire Project site. Survey was conducted with transects spaced no more than 15 meters apart and oriented along the Project alignment. A GPS receiver with sub-meter accuracy and loaded with a shapefile of the Project area boundary was used to verify the accuracy of the survey coverage. Evidence for buried cultural deposits was opportunistically sought through inspection of natural or artificial erosion/excavation exposures and the spoils from rodent burrows. In areas with low visibility to due dense vegetation, periodic boot scrapes were employed to inspect the site surface. Field recording and photo documentation of resources were completed as appropriate.

Historic research was also performed to better understand the history of land use of the Project area. This research consisted of reviewing historic topographic maps and aerials (NETR 2022a, 2022b; UCSB 2022). Documentation of cultural resources complied with the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716–44740), and the California Office of Historic Preservation Planning Bulletin Number 4(a), December 1989, Archaeological Resource Management Reports: Recommended Contents and Format for the Preparation and Review of Archaeological Reports. All cultural resources identified during this inventory were recorded on California Department of Parks and Recreation (DPR) Form DPR 523 (Series 1/95), using the Instructions for Recording Historical Resources (Office of Historic Preservation 1995), including updates to previously recorded resources.

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4 Results

This section presents the results of the records search and the field survey of the current study.

4.1 Records Search Results

A records search was completed for the Project area and a 0.5-mile buffer by staff at the NCIC at California State University Sacramento on April 14, 2022. The records search identified 21 previous studies performed within the records search area, of which three intersect the Project APE (Table 1 and Confidential Appendix A).

Table 1. Previous Cultural Resource Studies Within 0.5 Miles of Project Site

Report ID	Year	Author	Title
Reports Intersecting the Project Site			
004299	1988	Peak and Associates, Inc.	Cultural Resource Assessment of an 18-Acre Parcel in the Town of El Dorado, California
004299B	1988	Peak and Associates, Inc.	Addendum to Cultural Resource Assessment of an 18-Acre Parcel in the Town of El Dorado, California
004316	1990	Peak and Associates, Inc.	Cultural Resource Assessment of the Diamond Dorado Project, El Dorado County, California
Reports Within 0.5 Miles of the Project Site			
000142	1984	Peak & Associates, Inc.	Cultural Resource Assessment of the El Dorado Apartment Complex, El Dorado County, California.
000343	1985	Peak & Associates, Inc.	Cultural Resource Assessment of the Proposed Deer Park Estates, Unit III, El Dorado County, California.
000395	1988	Peak & Associates, Inc.	Cultural Resource Assessment of the Oak Knoll Subdivision, El Dorado County, California.
002241	1990	Supernowicz, Dana	Archaeological Survey Report, Parcel B of Parcel Map 3-154, El Dorado County, California.
003562	2002	Derr, Eleanor	El Dorado Irrigation District Reservoir Line, Cover and Tank Project
004255	1987	Patterson, Larry	Negative Declaration of Potential Environmental Impact for the Proposed Expansion of Lake Oaks Mobile Home Community
004258	1984	Snoke, James M.	Archaeological Reconnaissance of the Missouri Flat-Diamond Springs Redevelopment Project
004276	1991	Supernowicz, Dana E.	Archaeological Survey Report Diamond View Estates a Proposed Rural Subdivision El Dorado County, California
004279	1990	Supernowicz, Dana E.	Archaeological Survey Report Tentative Parcel MAP 88-02 El Dorado County, California
004312	1997	Supernowicz, Dana E.	Archaeological Survey Report of Quigley Ranch, Diamond Springs, El Dorado County, California
006361	2005	Historic Resource Associates	Cultural Resources Study of the B & B Equities Project APN 329:290:03 & 329:301:19 Diamond Springs, El Dorado County, California

Table 1. Previous Cultural Resource Studies Within 0.5 Miles of Project Site

Report ID	Year	Author	Title
009326	2008	Laura Leach-Palm, Bryan Larson, Paul Brandy, Jay King, Lindsay Hartman, and Pat Mikkelsen	Cultural Resources Inventory of Caltrans District 3 Rural Conventional Highways in Butte, Colusa, El Dorado, Glenn, Nevada, Placer, Sacramento, Sierra, Sutter, Yolo, and Yuba Counties
009817	2008	Erin Dwyer	State Route 49 Drainage System Improvement Project
010598	2010	Dana E. Supernowicz	Updated Cultural Resources Study of the Diamond View Estates Subdivision Project Assessor's Parcel No. 329-201-65
010940	2011	Robert McCann	Project #749104112G4 Field Office Report of Cultural Resources Ground Survey Findings
011443	2009	North State Resources, Inc.	Pleasant Valley Road (SR 49)/Patterson Drive Intersection Signalization Project
013277	2020	Connor Buitenhuys	Historic and Archaeological Survey Report for the Bike Access Project Along State Route 49 in El Dorado County, California, ED-49-10.70/11.29
013613	2019	Elizabeth Bagwell	Cultural Resources Findings and Protection Measures Implemented During Hazardous Tree Removal along State Routes 49 and 193

The records search identified three cultural resource within the Project APE and an additional 14 cultural resources within 0.5 miles of the Project Site (Table 2 and Confidential Appendix B). Sites intersecting the Project site are summarized below.

Table 2. Previously Recorded Cultural Resources

Primary Number	Trinomial	Name	Type	Age	Attributes
<i>Previously Recorded Sites Intersecting the Project Site</i>					
P-09-001857	CA-ELD-1358H		Site	Historic-era	Water conveyance system
P-09-001882	CA-ELD-1369/H		Site	Prehistoric, Historic-era	Privies/dumps/trash scatters; Mines/quarries/tailings; Bedrock milling feature
P-09-001883			Site	Historic-era	Mines/quarries/tailings
<i>Previously Recorded Sites Within 0.5 Miles of the Project Site</i>					
P-09-001832	CA-ELD-1347H	Bob Nelson Placer Mine	Site	Historic-era	Mines/quarries/tailings
P-09-001833	CA-ELD-1348		Site	Prehistoric	Bedrock milling feature
P-09-001866	CA-ELD-1363H	Quigley-Harrington Ranch	Building	Historic-era	Dam; Lake/river/reservoir; Farm/ranch
P-09-001873			Site	Historic-era	Mines/quarries/tailings
P-09-001874			Site	Historic-era	Mines/quarries/tailings

Table 2. Previously Recorded Cultural Resources

Primary Number	Trinomial	Name	Type	Age	Attributes
P-09-001875			Site	Historic-era	Standing structures
P-09-001876			Site	Historic-era	Mines/quarries/tailings
P-09-001877			Site	Historic-era	Standing structures
P-09-001878			Site	Historic-era	Foundations/structure pads; Standing structures
P-09-001879			Site	Historic-era	Unknown
P-09-001880			Object, Site	Historic-era	Standing structures; Ceramic scatter
P-09-001881			Site	Historic-era	Unknown
P-09-001884			Site	Historic-era	Water conveyance system
P-09-001885			Site	Prehistoric	Bedrock milling feature

P-09-001857

P-09-001857 is a historic-era resource consists of several ditch segments, an earthen berm or “penstock crossing”, mining tailings, and a possible abandoned road. The site initially recorded in 1988 (Peak and Associates 1980a), at which time the two northern ditches and penstock, a low partially washed out earthen berm spanning a small drainage and connecting the two ditch segments, were recorded and mapped. Northeast and upstream of the penstock are the remnants of another berm or mine tailings. In 1990 a second southern ditch segment and the possible roadbed were added to the site (Peak and Associates 1990). Both of the recorded ditch segments extend beyond their recorded limits onto adjacent properties. The ditch segments are between 1-1.5m in width and up to 0.8m deep, with a 2m wide berm on the downslope side. In addition to the features, the 1988 record documents three sections of iron banded wood pipe and section of riveted iron pipe in the penstock area.

Peak and Associates (1988a) concluded that the ditch was constructed relatively recently, given its condition and the lack of fill-in from erosion, deeming it unlikely that the ditch was related to mining but was instead related to water conveyance in support of later agricultural activity, specifically orchards, in the area. Subsequent archival research by Peak and Associates (1988b) found no mention of the ditch or any water conveyance in the deeds and patents for the parcel, nor any mention of the ditch in water rights books, resulting in the conclusion that the ditch was likely used to convey water for the fruit trees, crops, or livestock for the original property owner (Bradford Hammell) and was maintained and used by subsequent owners of the property.

P-09-001882

P-09-001882 is a multi-component site consisting of a bedrock milling feature, cluster of historic-era mining features, and a historic-era trash scatter. The bedrock milling feature is a large bedrock boulder with 14 mortars located on the margin of an ephemeral drainage running west into Deadman Creek. The mortars vary from 8-20cm in diameter and 1-25cm in depth.

North of the bedrock milling feature is a cluster of historic-era mining features consisting of five partially collapsed mine shafts/adits (horizontal passage or shaft leading into a mine for access or drainage) and four prospect pits,

all with associated tailings piles. A historic-era trash scatter is also report approximately 15 meters west of the milling feature, composed of can fragments, crockery, glass fragments of several colors, wire, an aluminum alarm clock, a back plate, a rubber sole, and some modern refuse. A small ditch segment is depicted on the sketch map of the site record, upslope and northeast of the mining features, but is not listed in the site constituents on the site record, nor was a separate site record included in the record search results describing the feature.

P-34-001883

P-09-001883 is a historic-era mining site initially recorded as an isolate in 1990, described as a one-half mile long area of intermittent tailings and prospect pits along Deadman Creek (Peak and Associates 1990). The portion of the site on the McCann property (the parcel south of and adjacent to the current Project area) was updated and recorded with greater detail during a later survey (Windmiller 2006). The southern portion of the site varies from 60 to 100 feet in total width, generally following the course of Deadman Creek. The site is bounded by a combination of mining scarps/cuts into the bank and a ditch remnant, with low eroded tailings piles, stacked cobble concentrations, and small eroded prospect pits along the banks of the creek.

4.2 Historic-Period Map Review

Aerial photographs of the Project area were available for the years 1946, 1952, 1962, 1982, 1984, 1993, 2005, 2009, 2010, 2012, 2014, 2016, 2018 (NETR 2022a; UCSB 2022). Topographic maps including the Project area were available for the years 1950, 191953, 1955, 1956, 1958, 1966, 1976, 1977, 1987, 2012, 2015, 2018 (NETR 2022b). These historical documents indicate that very little change has occurred within most of the Project in the past 75 years.

In the 1946 aerial image, the Project area is undeveloped, with a mix of trees and grasses covering the visible area. The Project area and immediate vicinity appear unchanged on the 1952 and 1962 maps, however Patterson Lake and buildings at Charles F. Brown Elementary School appear on the 1962 image, indicating their construction at some point in the decade between the photographs. The area to the northwest of the Project area also appears to be graded in the 1962 image. A small road is visible running across the Project area is evident to the Project area in the 1984 image, additionally the houses/mobile homes southwest of Patterson Lake now appear on the aerial imagery. No additional changes are depicted within the Project area on any of the later aerial images and by 2009 the area surrounding the Project appears developed to its current condition.

The 1950 topographic map does not show any development within or adjacent to the Project area, with the only Deadman's Creek depicted within the Project area and the nearest development consisting of Pleasant Valley Road and numerous adjacent buildings to the northwest. No changes are evident on the topographic maps from 1953 to 1966. The 1976 topographic map depicts Patterson Lake north of the Project area, several rectangular buildings to the northwest of the Project—at the current location of the Snowline Hospice clinical office—and buildings at the location of Charles F. Brown Elementary School to the west of the Project. The 1976 map also shows a new housing development and roads approximately 500 meters east of the Project area. The 1977 topographic map appears the same as the earlier maps from 1950 to 1966. No differences are evident between the 1987 and 1976 maps. The 2012 map only depicts roads and topography, while the 2015 and 2018 maps depict roads, topography, and public buildings, with Charles F. Brown Elementary School, Virtual Academy High School, and Union Mine High School depicted on the map.

4.3 Review of Geomorphological Context

According to the U.S. Department of Agriculture Natural Resources Conservation Services (USDA 2022), six soil types are mapped in the Project area, the most common of which are Diamond Springs very-fine sandy loam (45%), Sobrante very rocky silt loam (25%) with lesser amounts of Mariposa gravelly silt loam and Boomer-Sites loams. The remainder of the Project soils consist of Mixed alluvial lands (18%) on either side of Deadman Creek which flows through the middle of the Project area. In general, aside from the mixed alluvium, the soils present in the Project site are consistent with residuum weathered from metamorphic and igneous parent material, most of which form on mountain and foothill backslopes.

The two bedrock geologic units underlying the Project area are both Mesozoic volcanic rocks. The western portion of the Project APE is within Mesozoic volcanic rocks, unit 3 which consists of Mesozoic granite, quartz monzonite, granodiorite, and quartz diorite, while the eastern portion of the APE is underlain by Mesozoic volcanic rocks, unit 2, which is undivided Mesozoic volcanic and metavolcanic rocks including andesite and rhyolite flow rocks, greenstone, volcanic breccia and other pyroclastic rocks; in part strongly metamorphosed (Jennings et al 1977).

Sediment formation along the creeks and low areas would likely have occurred primarily since the Holocene, generally relating to increased water flows following Pleistocene glaciation (possibly 5,000–7,000 B.P) (Ritter 1972). While such low-slope locations are characteristically Late Holocene or younger, the distinction between depositional and non-depositional formations are more difficult to discern in the foothills when overlaying bedrock or where glacial deposits are erosional (Meyer, Young, and Rosenthal 2010). Regardless of the age of sediments in this area, reoccurring alluvial action and flooding would serve to support the development and presence of cultural deposits in the area. The creek areas would have been an attractive resource for prehistoric people, and any low-slope areas along these banks would have higher potential for buried deposits. Areas with exposed bedrock would also have been attractive as locations for plant processing.

4.4 Survey Results

Dudek archaeologists Nicholas Hanten and Elizabeth Sivell conducted an intensive-level pedestrian survey of the entire Project site on April 20, 2022. Survey was conducted using standard archaeological procedures and techniques, as outlined in Chapter 3, Research Methods.

Ground surface visibility was low (approximately 5%–10% in most areas) over much of the Project area due to vegetation. Grasses and leaf litter were periodically pushed aside during survey to better inspect surface soils in areas of high probability for supporting the presence of archaeological resources (e.g., areas of gentle slope with suitable soil deposition and/or areas near bedrock, known prehistoric natural resource types, and/or drainages). Subsurface exposures along drainages and erosional features, as well animal burrows, were opportunistically inspected for evidence of subsurface archaeological deposits. Oak woodlands are present in all but the southeastern portion of the site, and along the creek, with scattered trees and dense annual grasses. Oaks and other trees and shrubs, including pine, buckbrush, and poison oak, were most dense in the northern portion of the site. The northern banks of Deadman Creek was covered with dense raspberry bushes resulting in close to 0% visibility (Figure 3, Survey Conditions in Northeastern Portion of Project Area). The southern and southeastern portion of the site were relatively open, however visibility in these areas was still low due to dense annual grasses between 10-30cm high (Figure 4, Survey Conditions in Southeastern Portion of Project Area). Soils away from the

drainages appeared to be relatively undisturbed, however the area surrounding drainages, both permanent and ephemeral, has been substantially disturbed by erosion and/or historic placer mining activities. While remnants of these mining activities are resources unto themselves, they have substantially disturbed soils that may have once contained prehistoric resources.

The three previously recorded resources were relocated during survey and one previously unrecorded historic-era resource was discovered and recorded during pedestrian survey. All of the previously recorded sites were remapped due to misplotted site locations, and additional features were recorded at P-09-001857 and P-09-001882. The previously undiscovered site consists of a historic-era earthen berm or dam. See the following sections for specific discussion of each resource.



Figure 3. Survey Conditions in Northeastern Portion of Project Area



Figure 4. Survey Conditions in Southeastern Portion of Project Area

4.3.1 Previously Recorded Resources

Efforts were made during survey to relocate all previously recorded resources within the Project site and to compare their current conditions against the most recent site records. The results for previously recorded resources are summarized in the following text. Please see Confidential Appendix D for updated DPR forms related to these sites.

P-09-001857

P-09-001857 was relocated during survey. The general condition of the site was as described in the site record and the ditches, penstock, and mine tailings were found in the locations on the site record sketch map. However, the pipe fragments recorded in the penstock area were not relocated. An additional unrecorded berm was also found slightly downslope of the western end of the northern ditch segments. This berm measured approximately 100ft long, 7ft wide, and 4ft tall from its downslope side. Because the site location and extents on the site record location map and locational data from the NCIC were misplotted, all site elements were replotted during survey and new sketch and location maps for the portion of the site within the Project area were created (see Appendix D).

P-09-001882

The all features recorded at P-09-001882 were relocated during survey and found to be in the same general condition as described on its most recent site record update. The site location was found to differ slightly from the location map in the site record and GIS data provided by the NCIC and the site was remapped. The sketch map in the site record was found to be accurate.

All of the historic-era mining features were relocated and mapped, however the historic trash scatter west of the bedrock milling feature referenced in the site record was not relocated. The collapsed mine shafts/adits were excavated vertically into the hillside with, either rectangular or round in cross section, with the exception of shaft 5, which was excavated horizontally into the hillside – an orientation more consistent with a mining adit than a shaft. The shafts varied in depth between 4-6 feet and the area immediately surrounding the shafts contained tailings and spoils from their excavation. The ditch shown on the sketch map for the site but not documented in the site record is located uphill and northeast of the northern mining shafts. The ditch is approximately 6 feet wide and 12 inches deep. The ditch does not appear to continue beyond the site boundary, but may have been used to supply water for the mining activity.

The bedrock milling feature appears in the same general condition as described on the site record, and all of the documented milling elements were identified. The feature has been subject to some erosion from the nearby drainage.

P-09-001883

As originally recorded by Peak and Associates on the 1990 record, no detailed information about specific features and elements of the site was provided beyond a basic description of the resource as “a one-half mile long area of intermittent tailings and prospect pits on both banks of Deadman Creek”. The 2006 site record update provides greater detail for the portion of the site within the McCann property adjacent to the current Project area however no detailed information was available for P-09-001883 for the portion of the site within the current Project area. As such, all of the site components within the Project area were mapped and recorded. As a result of these efforts, the site boundary was altered to more accurately reflect the distribution of mining features relative to the site boundaries supplied from the NCIC shapefiles and site record.

Within the Project area, the site varies from 80-250 feet wide, with recorded features consisting of a series of prospected areas and mining cuts with a several smaller prospect pits and tailings piles on both sides of the creek. In total, 22 individual features were recorded in this portion of the site, including ten prospect pits/excavated areas, nine tailings piles, and an offshoot drain with a small berm forming a check dam. The mining excavations are concentrated along the east bank of the creek and are generally approximately 3ft deep relative to the surrounding area and are oriented perpendicular to the flow of the creek and vary in width and length, in part according to the surrounding topography. The tailings piles are composed of dirt, gravel, and small cobbles and range from 2-4 feet high. All of these features are consistent with small scale placer mining activities common throughout the Sierra Nevada foothills as a low investment means of opportunistically mining surface deposits.

A portion of the site extends approximately 600ft to the east, along an ephemeral drainage that flows into Deadman Creek. A portion of mining scarp along the northern edge of the drainage fell within the Project area, however several additional prospect pits, excavated areas, and tailings piles were observed within the drainage but outside of the current Project area and not recorded.

4.3.2 Newly Recorded Resources

One newly recorded site was documented as a result of inventory efforts. This site is summarized in detail below. Please see Confidential Appendix D for the DPR form related to this site.

DSCP-01

One previously undiscovered resource, DSCP-01, was identified during pedestrian survey. DSCP-01 consists of two segments of an earthen berm or dam on either side of an ephemeral drainage southeast of a wet meadow. The northern segment measures approximately 40ft long, 10ft high, 5ft wide at the top, and 20ft wide at the bottom. The southern segment is approximately 45 feet long, 4 feet high, 9 feet wide at the top, and 16-20 feet wide at the bottom. The southern segment is slightly higher on the slope, such that the tops of the segments are at roughly the same elevation. The two segments are also in line with one another, with a gap of approximately 500 feet between them.

Both berms are constructed from dirt and appear to have been constructed from locally available material. The features are in fair-to poor condition with some erosion evident and dense vegetation growing on the intact portions of the berm. The exact function of the features is unclear but, given their similarity in size and orientation, they are likely part of the same original construction. The segments may have been originally connected as one continuous berm that is now washed out or served as independent segments funneling water toward the center of the drainage. No reservoir or other water feature is evident on any of the historic aerial photographs or topographic maps, indicating that the features probably predate 1946.

4.4 Tribal Coordination

The NAHC was contacted by Dudek on April 11, 2022 to request a search of the Sacred Lands File. The NAHC responded on April 20, 2022 indicating that no Native American resources on file with the NAHC fall within the Project APE (Confidential Appendix B). Because this report may be subject to federal review for Section 106 and Assembly Bill 52, it is anticipated that NAHC-listed tribal representatives will be contacted at a future date by the County as the CEQA lead agency. Similarly, coordination and consultation with the State Historic Preservation Officer will be required to comply with Section 106, it is anticipated that this coordination and consultation will occur at a future date and will be documented as appropriate.

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5 Review of Effects

According to CEQA and the National Environmental Policy Act, a project with an effect that may cause a substantial adverse change in the significance of a historical resource (historic property) is a project that may have a significant effect (adverse effect) on the environment and the cultural resource itself. A substantial adverse change in the significance of a historical resource/historic property would be constituted by physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. Significance, under these conditions, is to be interpreted in terms of the resource's eligibility for listing in the NRHP and/or CRHR. To best mitigate the effects of a project on cultural resources, a reasonable, good faith effort must be applied to determining those resources' archaeological character and eligibility for CRHR/NRHP listing.

5.1 Thresholds of Significance

The significance criteria used to evaluate a project's impacts to cultural resources under CEQA are based on Appendix G of the CEQA Guidelines. According to Appendix G of the CEQA Guidelines, a significant impact related to cultural resources would occur if the project would:

- a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5.
- b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5.
- c. Disturb any human remains, including those interred outside of dedicated cemeteries.

5.2 Effects/Impacts Analysis

Threshold a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

No historic built-environment resources are present within the Project area.

Threshold b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

A records search was completed for the current Project site and a 0.5-mile buffer by staff at the NCIC at California State University Sacramento on April 14, 2022. The NCIC records search identified three cultural resource within Project area boundary, all of which were relocated and revisited during survey. One newly recorded resources was identified within the Project area during Dudek's pedestrian survey. The four resources intersecting the Project area include three historic-era resources including a mining site with numerous placer mining features (P-09-001883), an earthen berm (DSCP-01), and a series of ditches and berms (P-09-001857), as well as a multicomponent site with historic-era mining features and a prehistoric bedrock milling feature (P-09-001882).

The NAHC was contacted by Dudek on April 11, 2022, to request a search of its Sacred Lands File. The NAHC responded on April 20, 2022, indicating that no Native American resources are on file with the NAHC as falling within the APE. Tribal coordination pursuant to Assembly Bill 52 will be completed by the CEQA lead agency.

P-09-001857 consists of three segments of a historic-era ditch, an earthen berm paralleling a portion of the ditch, and a pair of berms spanning a drainage between two of the ditch segments. The recorded segments of ditch extend unrecorded beyond the current Project area. Archival research conducted by Peak and Associates indicate that the ditch is most likely constructed to convey water for agricultural activity in the area, possibly for the orchards and vineyard planted by the earliest documented landowners in the area, Bradford and Mary Hammell, although it continued to be used and maintained by successive land owners (Peak and Associates 1988b). In their evaluation of the significance of the resource, Peak and Associates note that none of the deeds or patents reviewed during archival research mention any ditch or water conveyance systems within the parcels, nor is the ditch mentioned in the county water rights book, concluding that the feature is of minor importance in the history of the region and is neither unique nor associated with any person or event important in the local or statewide history.

To be eligible for listing in the CRHR/NRHP, a site must have “yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation” (PRC Section 5024.1; 14 CCR 4852). The site is not substantially associated with any specific significant events locally, regionally, or nationally (Criterion 1/A); is not directly associated with the lives of any important people locally, regionally, or nationally (Criterion 2/B); does not contain architecture (Criterion 3/C); and, beyond the attributes captured through recordation, does not have the potential to yield information locally, regionally, or nationally (Criterion 4/D). Agricultural ditches and other water conveyance systems are common throughout the region and the site does not represent a “unique” resource as defined under CEQA. Any data potential associated with site intersecting the APE has been exhausted through recordation. As such P-09-001857 is not eligible for listing in the CRHR/NRHP, and impacts/effects that would occur through planned Project disturbances would be less than significant (no adverse effect).

P-09-001883 consists of a series of placer mining features extending over an approximately one-mile long stretch of Deadman Creek. Recorded within the Project site are ten prospect pits/excavated areas, nine tailings piles, and an offshoot drain with a small berm forming a check dam. Additional, mining scarps, prospect pits, ditches, and other features are recorded on the adjacent property, south of the current Project area. The mining excavations are shallow, approximately 3ft deep relative to the surrounding area, and the tailings piles are irregularly shaped and spaced, consisting of dirt gravel and small cobbles. These features are characteristic of small scale placer mining activities opportunistically seeking surface deposits along creeks and other tributaries. This practice was common during the throughout the region as a low investment means of opportunistically exploiting surface deposits along the banks of creeks and other small drainages. The exact age and original owner of the mine are unknown, however the 1870 GLO map for the area includes several incidences of “old mines” and “old gold mines” along Deadman Creek in the general vicinity of the site. This suggests that the site dates to the gold rush era mining operation in the region. There are no extant structures at this location, and the site has no known specific associations with significant individuals, important regional applications, or historical trends of note that are apparent or otherwise documented.

The site is not substantially associated with any specific significant events locally, regionally, or nationally (Criterion 1/A); is not directly associated with the lives of any important people locally, regionally, or nationally (Criterion 2/B); does not contain architecture (Criterion 3/C); and, beyond the attributes captured through recordation, does not have the potential to yield information locally, regionally, or nationally (Criterion 4/D). Small scale placer mining sites of this nature are ubiquitous in the Sierra Nevada foothills and the site does not represent a “unique” resource as defined under CEQA. Any data potential associated with site intersecting the APE has been exhausted through

recording. As such P-09-001883 is not eligible for listing in the CRHR/NRHP, and impacts/effects that would occur through planned Project disturbances would be less than significant (no adverse effect).

DSCP-01 consists of two segments of an earthen berm or dam more or less in line with one another. The berms are constructed from locally available material, comprised primarily of dirt with some rock and gravel. The features are in fair condition. The exact function of the features is unknown; however they may have originally formed a small water storage pond or been used to divert water toward Deadman Creek in support of agricultural or mining activities in the area. The exact age of the features is also unknown as they do not appear on any of the available historical maps or aerial imagery. There are no extant structures at this location, and the site has no known specific associations with significant individuals, important regional applications, or historical trends of note that are apparent or otherwise documented.

DSCP-01 is not substantially associated with any specific significant events locally, regionally, or nationally (Criterion 1/A); is not directly associated with the lives of any important people locally, regionally, or nationally (Criterion 2/B); does not contain architecture (Criterion 3/C); and, beyond the attributes captured through recording, does not have the potential to yield information locally, regionally, or nationally (Criterion 4/D). Earthen berms and dams are common in both agricultural and mining contexts and the site does not represent a “unique” resource as defined under CEQA. Any data potential associated with site has been exhausted through recording. As such DSCP-01 is not eligible for listing in the CRHR/NRHP, and impacts/effects that would occur through planned Project disturbances would be less than significant (no adverse effect).

P-09-001882 is a multicomponent site consisting of a single large bedrock milling feature and a cluster of historic-era mining features located on the slope of a small hill. The mining features recorded include four vertical mining shafts, one mining adit, several small prospect pits, and tailings piles associated with each of the excavations. A small section of ditch or roadway is also present upslope of the excavations, but does not extend beyond the limits of the site boundary to any adjacent excavations or water sources. The more distinct shafts vary in depth from 4-6 feet deep, although their original depth is unknown due to their partially collapsed nature. While these excavations would have targeted deeper deposits than the placer mining along Deadman Creek adjacent to the hillside, the size and distribution of the shafts does not indicate substantially greater investment than the adjacent placer mining activities at P-09-001883 and likely dates to the same era. The bedrock milling feature consists of a single large bedrock boulder with fourteen mortars located adjacent to a small, ephemeral drainage running into Deadman Creek.

The historic-era mining component of the site is not substantially associated with any specific significant events locally, regionally, or nationally (Criterion 1/A); is not directly associated with the lives of any important people locally, regionally, or nationally (Criterion 2/B); does not contain architecture (Criterion 3/C); and, beyond the attributes captured through recording, does not have the potential to yield information locally, regionally, or nationally (Criterion 4/D). Small adits and drift mining activity, like placer mining, is common in the region and the site does not represent a “unique” resource as defined under CEQA. Any data potential associated with site intersecting the APE has been exhausted through recording. As such, the historic-era component of P-09-001882 is not eligible for listing in the CRHR/NRHP, and impacts/effects that would occur through planned Project disturbances would be less than significant (no adverse effect).

The prehistoric component of P-09-001882, represented by a single bedrock milling feature has not been formally evaluated here. Because of the extensive evidence for use of the bedrock milling feature at P-09-001882, there

remains the possibility that additional material is present in the vicinity of the features. Additional, more detailed documentation of the bedrock milling features, as well as sub-surface excavation, would be required to appropriately evaluate this site. In addition, input from traditionally cultural affiliated tribes would be recommended. As such, the prehistoric component of P-09-001882 remains unevaluated and should be assumed eligible for listing in the CRHR/NRHP. Avoidance of this site by a minimum distance of 50ft would be appropriate to ensure appropriate preservation in place.

The NCIC records search did identify a number previously recorded sites within 0.5 miles of the Project site, including bedrock milling features. Given these findings, the low visibility during pedestrian survey, and the fact that portions of the APE remain relatively undisturbed, the potential of encountering and impacting unknown archaeological resources during Project implementation is considered moderate.

If such unanticipated discoveries were encountered, impacts to encountered resources could be potentially significant. However, recommended management strategies intended to address potential impacts to unanticipated cultural resources are provided in detail below, and should be added as mitigation measures for the Project. These are summarized in detail within the following section of this report.

Through implementation of recommended management strategies, potentially significant impacts to archaeological resources would be reduced to a less than significant level. Therefore, impacts would be less than significant with the management strategies recommended below incorporated.

Threshold c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

No prehistoric or historic-era burials were identified within the APE as a result of the records search. The Project is not part of a dedicated cemetery. The NCIC records search did not indicate that burials of prehistoric Native American origin have been identified within 0.5 miles of the APE. The recommended management strategies outlined in detail below pertaining to preparing and implementing an archaeological monitoring and discovery plan and Worker Environmental Awareness Program would help ensure that unanticipated human remains would be appropriately respected and treated in compliance with regulatory requirements. Recommended management strategies below also include appropriate implementation of California Health and Safety Code Section 7050.5, PRC Section 5097.98, and other pertinent regulatory requirements. Compliance with applicable state regulations related to the potential disturbance of human remains and remains of potential Native American origin would be adequate to address any potential impacts.

No known human remains have been documented within the APE. The incorporation of the recommended management strategies will ensure that any impacts of the Project remain less than significant even if unanticipated human remains are discovered.

6 Summary and Management Considerations

The current archaeological resources inventory was completed to satisfy the requirements of CEQA and Section 106 of the NHPA. Dudek's cultural resources inventory of the Project area suggests that there is moderate potential for the inadvertent impact to unanticipated cultural resources located on the surface and/or related subsurface deposits. The NCIC records search identified three previously recorded resources within the Project area: a historic-era mining site (P-09-001883), a collection of historic era ditches and related features (P-09-001857), and a multicomponent site with historic-era mining features and prehistoric bedrock milling feature (P-09-001882). One newly recorded historic-era cultural resource was observed and recorded during pedestrian survey (DSCP-01) consisting of two segments of an earthen berm or dam. This newly recorded archaeological site was recorded to practice standards within the present report and using DPR forms. The historic-era sites and historic-era components of P-09-001882 were evaluated and found not to meet the significance criteria under CRHR (criteria 1, 2, 3, or 4) or NRHP (criteria A, B, C, or D). All data potential has been exhausted through the process of recordation. As such, these sites and/or historic-era site components would not represent a specific constraint to the Project. The prehistoric component of P-09-001882 remains unevaluated and should be assumed eligible for the CRHR/NRHP and avoided.

Soil within the APE appears relatively undisturbed and could support the presence of cultural deposits in the area. Waterways and riverine communities were attractive resources for prehistoric people and generally have a higher potential for buried deposits. Based on these considerations, the following management recommendations have been provided to ensure that the Project will not impact unanticipated significant cultural resources.

6.1 Recommendations

As presently designed, the Project would intersect one potentially sensitive archaeological resource. This is the prehistoric component of P-09-001882, which remains unevaluated and, per regulatory requirements, should be assumed to be significant resources considered eligible for the NRHP/CRHR listing. This resource should be avoided by a **minimum of 50 feet**. If the resource cannot be avoided by this distance additional archaeological efforts will be required, including subsurface exploratory testing to assess the presence/absence and general distribution of the resource, and/or evaluation for NRHP/CRHR listing. In addition, given the limited surface visibility during survey and the presence of numerous resources within the Project area and the half-mile record search buffer, there is potential for encountering unanticipated significant cultural resources during Project implementation. As such archaeological monitoring is recommended within specified high-sensitivity areas, including within 300ft of P-09-001882 and 100ft of Deadman Creek (see Confidential Appendix A, Constraints Map). In addition to the recommendations provided below, Assembly Bill 52 require that tribal coordination be completed in support of the Project. Given that the Project is still in the pre-application phase, tribal coordination has not yet been completed.

Monitoring Roles and Responsibilities

The requirement for a Native American monitor shall be determined by the County in consultation with traditionally culturally affiliated tribes. Archaeological monitors shall be present during all initial ground-disturbing activities within 300 feet of the prehistoric component of P-09-001882 and within 100 feet of Deadman Creek, where there is increased potential to encounter cultural resources. An archaeological monitoring and discovery plan shall be developed under the oversight of a qualified archaeological principal investigator meeting Secretary of the Interior's Professional Qualification Standards prior to construction. This plan shall identify areas requiring monitoring, roles and responsibilities, and actions to be taken in the event of an inadvertent discovery. Prior to the initiation of ground-disturbing work, construction crews shall be made aware of the potential to encounter cultural resources and the requirement for cultural monitors to be present during these activities. This may occur as part of a Worker Environmental Awareness Program. Archaeological monitoring may be adjusted (increase, decreased, or discontinued) at the recommendation of the archaeological principal investigator based on inspection of exposed cultural material and the observed potential for soils to contain intact cultural deposits or otherwise significant archaeological material.

The archaeological monitor shall be provided a copy of this technical report and its pertinent appendices to inform their monitoring efforts. The archaeological monitor shall have the authority to temporarily halt work to inspect areas for potential cultural material or deposits. In the event that unanticipated archaeological deposits or features are exposed during construction activities, all construction work occurring within 100 feet of the find shall immediately stop until the archaeological principal investigator can evaluate the significance of the find and determine whether or not additional study is warranted. The work exclusion buffer may be adjusted as appropriate to allow work to feasibly continue at the recommendation of the archaeological principal investigator. Should it be required, temporary flagging shall be installed around this resource in order to avoid any disturbances from construction equipment. The potential for avoidance should be the primary consideration of this initial process. Significance of the find shall be assessed as outlined by CEQA (14 CCR 15064.5[f]; PRC Section 21082). If the archaeological principal investigator observes the discovery to be potentially significant under CEQA or Section 106 of the NHPA, additional efforts, such as preparation of an archaeological treatment plan, testing, and/or data recovery, may be warranted prior to allowing construction to proceed in this area.

In accordance with Section 7050.5 of the California Health and Safety Code, if potential human remains are found, the county coroner shall be immediately notified of the discovery. The coroner shall provide a determination within 48 hours of notification. No further excavation or disturbance of the identified material, or any area reasonably suspected to overlie additional remains, shall occur until a determination has been made regarding if the find is human in origin. If the county coroner determines that the remains are, or are believed to be, Native American, the coroner shall notify the NAHC within 24 hours. In accordance with PRC Section 5097.98, the NAHC must immediately notify those persons it believes to be the most likely descendent from the deceased Native American. Within 48 hours of the notification, the most likely descendent shall recommend to the lead agency their preferred treatment of the remains and associated grave goods.

Reporting Requirements

Daily monitoring logs shall be completed by an on-site archaeological monitor. Within 60 days following completion of construction, the qualified archaeological principal investigator shall provide an archaeological monitoring report to the County. This report shall include the results of the cultural monitoring program (even if negative), including a summary of any findings or evaluation/data recovery efforts, and supporting documentation that demonstrates all

mitigation measures defined in the environmental document were appropriately met. Appendices shall include archaeological monitoring logs and documentation relating to any newly identified or updated cultural resources. This report shall be submitted to the NCIC once considered final.

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Appendix A (Confidential)

Cultural Resources Maps

Appendix B (Confidential)

Records Search Maps and Information

Appendix C (Confidential)

NAHC Sacred Lands File Search

Appendix D (Confidential)

Newly Recorded and Updated Resources

Appendix E

Resumes for Key Cultural Personnel

Adam Giacinto, MA, RPA

Archaeologist

Adam Giacinto is an archaeologist and ethnographic specialist with 15 years' experience preparing cultural resource reports, site records, and managing archaeological survey, evaluation, and data recovery-level investigations. His research interests include prehistoric hunter-gatherer cultures and contemporary conceptions of heritage. His current research focuses on the social, historical, archaeological, and political mechanisms surrounding heritage values. He has gained practical experience in archaeological and ethnographic field methods throughout the southwestern US.



Adam Giacinto

Selected Project Experience

California High Speed Rail, Fresno-Bakersfield, California. As principal investigator, oversees, implements, and reports upon cultural inventory, evaluation, data recovery and compliance efforts under Section 106 of the NHPA, Federal Rail Authority, CEQA, and local Guidelines for Fresno to Bakersfield section. Oversight of Native American monitors, built environment specialists and archaeologists, management of cultural monitoring implementation and site treatment, client reporting, meetings and report preparation. Implementation of mitigation included exploratory archaeological investigations at multiple NAHC-eligible resources.

El Dorado Irrigation District Pacific Tunnel Replacement Project, Riverton, El Dorado County, California. Oversaw background research, survey, resource documentation, tribal consultation, and preparation of a technical report under CEQA and Section 106 regulatory context. An appropriate mitigation strategy was developed for this cultural inventory, including management of historical EID components and segments of the Mormon-Carson Emigrant Trail.

Sacramento International North 16th Street Improvement Project, Sacramento, California. Oversaw ASR preparation, inventory efforts, and other archaeological and tribal resources efforts

SMF Master Plan Support, Sacramento, California. Oversaw background research, survey, effects analysis and preparation of a technical report under CEQA and Section 106 regulatory context.

Glenn County Boat Ramps Project, California. As principal archaeological investigator coordinated records searches, tribal coordination, APE map preparation, fieldwork, resource review, report preparation. Work was performed to meet USACE review for Section 106 compliance.

Eaton Road Overpass Project, Sacramento, California. As principal archaeological investigator coordinated records searches, APE map preparation, fieldwork, resource review, ASR preparation, and management recommendations for this City of Sacramento and Caltrans compliance project.

Chico State University, Butte County, California. As principal investigator, as overseen archaeological research, fieldwork, and reporting on three projects on the university campus.

Vacaville Center Campus Project, Solano Community College District, City of Vacaville, California. As principal archaeological investigator, coordinated a NWIC records search, NAHC and Native American communication,

archaeological survey, and preparation of a technical report. Recommendations were framed in compliance with California Environmental Quality Act (CEQA) regulations and submitted to the lead agency.

Lassen Substation Project EIR, Siskiyou County, California. As cultural resources specialist, integrated results of technical studies into cultural resources section. Facilitated consultation with tribes on behalf of the CPUC.

Auburn Recycled Wastewater Treatment Plant Secondary Process Upgrade Improvement Project, City of Auburn, California. As principal investigator, Mr. Giacinto managed the survey, archival searches, tribal correspondence, and reported management recommendations for a cultural resources inventory. Considerations included compliance under CEQA and Section 106 of the NHPA.

Donner Trail Elementary School Project, Truckee, Placer and Nevada County, California. As archaeologist, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American correspondence, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy meeting state and local standards was developed and provided to the client for this negative cultural inventory.

Placer County Government Center Master Plan Update, North Auburn, California. As principal archaeological investigator, Mr. Giacinto coordinated NCIC records search, NAHC and Native American information outreach, archaeological survey, and preparation of a technical report. Coordinated UAIC consultation and site visit. Documented and evaluated NID ditch segment. An appropriate mitigation strategy was developed meeting CEQA, County, and local requirements for this cultural inventory.

Spectrum Alturas, Modoc County, California. As Principal archaeological investigator, Mr. Giacinto coordinated and completed a Northeastern Information Center (NEIC) records search, Native American Outreach, coordinated archaeological survey, archaeological report preparation. Recorded and updated more than 50 archaeological resources. Drafted PAL Map and report for CEQA and Section 106 compliance.

Dorsey Marketplace Project, City of Grass Valley, California. As Principal archaeological investigator, Mr. Giacinto coordinated a North Central Information Center (NCIC) records search, Native American Heritage Commission (NAHC) and Native American information outreach, archaeological survey, and preparation of a technical report. An appropriate mitigation strategy was developed meeting CEQA and local requirements for this cultural inventory, including recommendations relating to historical mining features.

Martis Creek Restoration Project, Truckee River Watershed Council, Truckee, California. As ethnographic researcher and principal archaeological investigator, managed archaeological monitoring and investigations at Martis Type Site CA-PLA-5, conducted verbal, semi-structured interviews with four elders from the Washoe Tribe of California and Nevada, synthesized transcriptions of themes expressed concerning tribal histories and values within larger investigation

Operations and Maintenance On-Call, Department of Water Resources. As primary Dudek archaeological and tribal resources consultant, Mr Giacinto manages cultural resources projects for DWR. These include the Cultural Resources Inventory for the B.F. Sisk Dam Safety of Dams Modification Project, Delta Dams Raise Project (three reservoirs), MP 230 Project, and Upper Feather River Projects (three dam locations) and preparation of a Programmatic Agreement for Cultural resources for DWR. Mr Giacinto is familiar with the DWR Tribal Engagement and AB 52 processes.

Alameda County Water District Project, California 2019-present. As principal cultural investigator, coordinated a records search, NAHC sacred lands file search, tribal outreach, and preparation of a constraints study, report and monitoring plan, and IS/MND under CEQA and Section 106. Included 100 square mile sensitivity model of known and buried cultural resources by applying a weighted geologic, soils, geotechnical, slope, landscape, and previous technical study information.

Pure Water Plan Constraints Study and PEIR, City of San Diego, California. As Principal investigator and field director, Mr. Giacinto managed preparation of a constraints study for the Pure Water Project. Work involved a records search of over 100 mile linear miles of San Diego. Site record information from more than 1,236 cultural resources was processed, coded, and integrated within a geospatial sensitivity model to identify archaeological and built environment constraints throughout the proposed alignment.

Cloverdale Unified School District On-Call Projects, Sonoma County, California. As Principal archaeological investigator, Mr. Giacinto coordinated NWIC, NAHC, and Native American correspondence, archaeological survey, and preparation of a technical report for 5 Cloverdale unified school district projects. Projects involved CEQA considerations and Section 106 compliance for USACE review.

Yokohl Ranch Development Project, The Yokohl Ranch Company, LLC, Tulare County, California. As co-principal investigator and field director, managed 15 archaeologists in conducting significance evaluation of 118 historical and prehistoric cultural resources throughout the 12,000 acre Yokohl Valley area. Operated as tribal interface, and facilitated the respectful handling and reburial of sensitive cultural material with the tribes, applicant, and NAHC.

City of Rohnert Park On-Call Cultural Resources Services, Sonoma County, California. As Principal archaeological investigator, Mr. Giacinto has provided recommendations, attended AB 52 consultation meetings, and overseen work for more than a half-dozen projects throughout the City of Rohnert Park. Has strong working relationships with the Graton Rancheria Federated Indian Tribe and other tribes in the surrounding region.

City of Saint Helena On-Call, Napa County, CA. On contract to provide cultural support. One project of note, the Hunter Subdivision, included Dudek records search, pedestrian survey, extended Phase I testing, ground penetrating radar, and prepared cultural resources report for residential subdivision project proposed within NRHP eligible archaeological district.

SFO Rental Car Center/Air Train Project/Runway Improvements/Habitat Restoration Projects, San Francisco, California. As Principal archaeological investigator, Mr. Giacinto managed and completed archaeological work for the SFO Rental Car Center/Air Train and Runway Improvements Projects included a NWIC records search, NAHC sacred lands file search, tribal outreach, and preparation of a constraints study, ARMR-style technical report for compliance with CEQA and Section 106. Work included an assessment of known resources and potential for unanticipated buried cultural resources by consulting geologic, soils (including marine resources), historical map, geotechnical, slope, landscape, and previous technical study information. Preparation of a report and maps that met State Historic Preservation Office, FAA and Airport staff needs was completed.

Wildlife Services Program EIR-EIS, CDFA/USDA. Dudek has developed template letters to be used for tribal notification, follow up, and consultation for this project. Dudek drafted, and mailed letters on behalf of CDFA, letters to all 216 NAHC-listed contacts in the state of California. Responses received are tracked, reviewed with the agency, and responded to. In addition, outreach letters prepared by the USDA were reviewed and modified for the purposes of Section 106 consultation.

AB 52 Support. Mr Giacinto has been contracted to prepare dozens of TCR reports. The goal of these investigations is to review the archaeological, historical, academic, and ethnographic record for potential TCR information, then ground contemporary AB 52 consultation information in this context while providing recommendations related to reasonable approaches for Management. In addition, Mr. Giacinto provides on-call support for helping a number of agencies work through challenging AB 52 issues.

Nicholas Hanten

Archaeologist

Nicholas Hanten is an archaeologist with 12 years' experience conducting and leading archaeological projects throughout California, including archaeological survey, evaluation, and data recovery investigations, construction monitoring, and laboratory procedures including artifact cataloging, analysis, and curation preparation. He also has experience with technical report writing for compliance with local, state, and federal regulations.

Mr. Hanten's research interests include prehistoric hunter-gatherer subsistence and settlement systems, prehistoric land use, and human behavioral ecology. His PhD dissertation research focuses on modeling changing subsistence and settlement patterns in the Central Sierra Nevada combining ecological models with spatial data analysis of resource availability and other factors.

Education

University of California, Davis

BS, Anthropology, 2011

MA, Anthropology, 2016

PhD, Anthropology, in progress

Professional Affiliations

Society for California Archaeology

Society for American Archaeology

Selected Project Experience

Wind Energy Project, Santa Barbara County, California. Assisted with testing and data recovery excavations, served as lab director and primary lithic analyst for testing phase. Co-author of technical report..

Sacramento International Airport Cargo Facility Project, Sacramento County, California. As field lead, coordinated and performed archaeological survey; co-author of technical report

Carson Creek Environmental Impact Report, El Dorado County, CA As archaeologist conducted pedestrian survey.

Cultural Resources Inventory, Extended Phase I and Phase II for the Hunter Subdivision Project. As archaeologist, assisted with field excavations; coauthor of technical report

Rancho Seco Solar II Project, Herald CA, As archaeological monitor, monitored the installation of solar energy facility in collaboration with Native American monitors

Martis Wildlife Area Resoration Project, Truckee, CA. As archaeologist, duties included construction monitoring, assisting with field excavations, laboratory analysis. Co-author of technical report/site impacts assessment

El Dorado Hills Wastewater Collection Facility Relocation Project, El Dorado County, California As archaeologist, conducted pedestrian survey and resource documentation for the project

Cultural Resources Study for Kings Beach Elementary School Modernization, Kings Beach, Placer County, California As field archaeologist, conducted pedestrian survey and resource documentation for archaeological and built environment studies for the project

Cultural Resources Inventory for the City of Woodland Recycled Water Project, Yolo County, California As archaeologist, conducted pedestrian survey and resource documentation for project. Co-author of technical letter report

Truckee High School Track and Field Improvements Project, Truckee, Placer County, CA As archaeologist, conducted pedestrian survey and resource documentation for project. Co-author of technical report

Camp 5 Notice of Emergency Timber Operations Project, El Dorado County, CA As archaeologist, conducted pedestrian survey of the project area. Co-author of technical report

Yokohl Ranch Cultural Resources, The Yokohl Ranch Company, LLC, Tulare County, California. As field director, managed and conducted surface mapping, surface collection, and excavation of 95 prehistoric and historical period sites throughout the Yokohl Valley. As lab director, managed and conducted the cataloging and analysis of all material recovered during excavation and authored laboratory portions of the technical report.

Phase II Evaluation of 85 Archaeological Sites on Edwards Air Force Base, CH2M HILL/JT3, Kern and Los Angeles Counties, California. As crew chief, assisted in test excavations, pedestrian survey, and GPS data collection with a Trimble GPS unit. Also assisted with laboratory analysis and curation preparation.

Phase I Cultural Resources Inventory of 7650 acres on Edwards Air Force Base, CH2M HILL/JT3, Kern County, California. As crew chief, assisted in pedestrian survey and GPS data collection with a Trimble GPS unit, and wrote portions of report.

Winchester 1800 – Saba Property, French Valley Acres LLC, Riverside, California. As field director, conducted pedestrian survey of 40 acres for a proposed housing development; prepared a letter report of findings.

Poseidon Wetland Mitigation Area, Poseidon Water LLC, San Diego, California. As lab director, managed the cataloging and analysis of artifacts recovered from excavations; assisted in authoring final report of findings.

Alessandro Business Park, Western Realco, Riverside, California. As archaeological monitor and crew chief, monitored the excavation of potholes and trenches in collaboration with Native American monitors; recorded and excavated five prehistoric archaeological sites

Evaluation of SDI-13,077H and Data Recovery at SDI-13,078 for the Rhodes Crossing Project, San Diego County, California. As part of crew, assisted in test excavation and pedestrian survey.

St. John Garabed Church Environmental Services, St. John Garabed Apostolic Church Trust, San Diego, California. As crew chief and lab director, assisted in conducting test excavations for one prehistoric site; managed the cataloging and analysis of recovered artifacts; assisted in preparing a report of findings.

Lady of Peace Academy Parking Structure Cultural Monitoring, T.B. Penick & Sons Inc., San Diego, California. As crew chief and lab director, assisted in conducting test excavations for one historic site for during project monitoring. Managed the cataloging and analysis of recovered artifacts.

Cultural Resource Study for the Kearny High School Athletic Field Redevelopment, BRG Consulting, San Diego, California. As crew chief, conducted pedestrian survey and wrote report.

Significance Evaluation of SDI-20363 for the San Marcos High School Expansion Project, San Marcos Unified School District, San Diego County, California. As crew chief, assisted in test excavations and GPS data collection for a buried prehistoric site.

Ocotillo Wind Energy Project, Bureau of Land Management (BLM), Imperial County, California. As third-party monitor, monitored construction activities and archaeological monitors to ensure that all activities were in compliance with BLM regulations.

Block 12 Development, Aera Energy, LLC., Bakersfield, California. As field director, conducted a pedestrian survey of 32 acres for a proposed oil field expansion; prepared a letter report of findings

Solar Site Development Environmental Services, Soitec Solar, San Diego, California. As field director, conducted pedestrian survey of 12 acres for a proposed solar generation facility.

Archaeological Evaluation for the Rugged Solar Project, County of San Diego, California. As crew member, assisted in test excavation, pedestrian survey, and GPS data collection with Trimble GPS unit.

Silurian Valley Wind Project, Iberdrola Renewables, San Bernardino County, California. As monitor, conducted pedestrian survey of access routes and monitored construction activities.

Gold Basin Project Meteorological Mast Construction, LH Renewables, San Diego County, California. As monitor, conducted pedestrian survey of the project area and monitored construction activities.

Significance Evaluation of Four Prehistoric Archaeological Sites for the GCL/Rosendin Sol Focus Project, RBF Consulting, Borrego Springs, California. As crew chief, assisted in test excavations at prehistoric temporary camps.

Phase I Cultural Resources Pedestrian Survey of Various Parcels for the Sol Orchard Solar Project, RBF Consulting, San Diego County, California. Serving as crew chief, conducted intensive pedestrian survey of multiple parcels for solar development.

Class II and Class III Cultural Resources Inventory for the Tule Wind Alternative Energy Project, HDR Engineering for Iberdrola Renewables, San Diego County, California. Serving as field technician, assisted in pedestrian survey and site recordation.

Sunrise-Powerlink Project, San Diego Gas and Electric, San Diego County, California. As crew chief, conducted small pedestrian surveys and monitoring for utility pole replacement.

Cultural Resource Monitoring for the Red Beach Mobile Mount Project, Marine Corps Base (MCB) Camp Pendleton, San Diego County, California. Serving as monitor, conducted small pedestrian survey and monitored construction activities.

Archaeological Investigations at SDI-9824, MCB Camp Pendleton, San Diego County, California. Serving as crew chief, assisted in archaeological excavation, ground-penetrating radar, and X-ray fluorescence study of a late prehistoric archaeological site.

Section 106 Evaluations of Two Prehistoric Sites for Firebreak Maintenance, Vandenberg Air Force Base, Santa Barbara County, California. As student assistant, assisted in test excavations at complex prehistoric habitation sites for the University of California, Davis, Field School.

Carlsbad Desalination Plant Cultural and Biological Monitoring, Poseidon Resources, Carlsbad, California. As archaeological monitor, monitored trenching, grading, and the installation of water lines.

Cultural Resources Testing for the Silver Strand State Beach Project, California State Parks, San Diego County, California. As crew chief, conducted pedestrian survey and test excavations, and assisted in report production.

Archaeological Survey and Evaluations for the Star Ranch Project, County of San Diego Department of Planning and Land Use, San Diego County, California. As lab technician, cataloged and analyzed the assemblage recovered from a previous testing of the project area.

Relevant Previous Experience

Teaching

- 2014-2020: Teaching Assistant, UC Davis; taught discussion sections, labs, and lectures for Human Evolution, Archaeology, and Social Anthropology courses
- 2016: Co-Instructor/Co-Field Director, 2016 UC Davis Archaeological Field School, Excavations in Santa Clara and Solano Counties, California

- 2017: Instructor/Principal Investigator, 2017 UC Davis Archaeological Field School, Excavations and Survey in Mariposa and Mono Counties, California
- 2018: Instructor/Principal Investigator, 2018 UC Davis Archaeological Field School, Excavations in Calaveras County, California

Publications

Hanten, N., and N. Stevens. 2010. "The Reliability of Microscopic Use-Wear Analysis on Monterey Chert Tools." *Proceedings of the Society of California Archaeology* 24.

Elizabeth Sivell

ARCHAEOLOGIST

Elizabeth Sivell is an ARCHAEOLOGIST with 1 year professional experience in cultural resource management. Her field work experience includes survey, monitoring, and excavation in the Western and Eastern Sierra Nevadas, the California Central Valley, and the Great Basin as well as laboratory experience with artifact curation and obsidian hydration dating. In addition to her experience in archaeology, she has a strong passion for working closely with indigenous communities who have ties to archaeological sites so that their concerns and needs can be properly heard, addressed, and met.

Education

University of California,
Davis
B.A. Anthropology, 2021
Sacramento City College
A.A. Anthropology, 2019

Dudek Project Experience

Elkhorn Boulevard Extension Project, Sacramento, California Conducted pedestrian survey for a proposed road expansion project near Sacramento Airport. (November 2021).w

PG&E Vegetation Management Project, Multiple Counties, California Performed archaeological survey and monitoring in support of Pacific Gas and Electric's vegetation management program on lands administered by multiple agencies, including BLM and USFS. Duties include survey and monitoring duties, completion of site records, daily monitoring logs, and assistance with survey and monitoring reports. Over 40 individual projects completed to date in Amador, Calaveras, Fresno, Mariposa, Madera, Stanislaus, San Joaquin, and Santa Clara counties. (October 2021-ongoing)

Solar Project, Sacramento County. Assisted with survey and site recording for a large solar project in Sacramento county. Duties included recordation of sites related to a large historic mining district. (March 2022)

Relevant Previous Experience

Paleowest – As-Needed Archaeological Field Technician (Oct - Dec 2021)

Stockton CarMax Construction Project, Stockton, California. Conducted archaeological monitoring for a construction project with Paleowest

Berry Brush Creek, Plumas National Forest. Conducted pedestrian survey project with Paleowest

Claremont Resiliency: Rotation 1 and 2. Conducted pedestrian survey with Paleowest

UC Davis Department of Anthropology Museum: Davis CA (Jan 2020 – Oct 2021)

Volunteer/Intern. Duties included photographing and handling of the Clinton Hart Merriam Ethnographic Basketry Collection. Assisting in various stages of moving the museum collection into its new off campus location. Organization of the museum's ethnographic collection. Training in basic artifact analyses, proper curation methods for artifacts, assemblages, and collections for museum preparation.

Specialized Training

UC Davis Field School: Eastern Sierra Nevadas, CA and Great Basin, NV. - Conducted pedestrian survey in both desert and forest environments, including surface mapping and drone mapping of site features including drift fences, hunting corrals, and rock rings. Excavation skills developed and put into practice as setting up trench units, dry screening, and drawing of stratigraphic profiles. Artifact collection during both survey and excavation. GNSS artifact recording through use of apps such as GPS Status and Reach View. On site data collection and analysis (August 2021)

Maya Exploration Center – Study Abroad Short Course. study abroad course relating to both archaeology and anthropology in the highlands of Guatemala and Honduras. “BEYOND THE 13TH BAK’TUN: ANCIENT AND MODERN MAYA CULTURE IN THE HIGHLANDS OF GUATEMALA AND COPAN, HONDURAS” (Dec 2012 – Jan 2013)

Awards

U.C. Davis Dean's Honors List, Spring 2021

U.C. Davis Dean's Honors List, Spring 2020

