CULTURAL RESOURCES INVENTORY
for the
DESERT HOT SPRINGS WIND ENERGY REPOWERING PROJECT
CITY OF DESERT HOT SPRINGS
RIVERSIDE COUNTY, CALIFORNIA

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EXECUTIVE SUMMARY

Dudek was retained by Desert Hot Springs Wind LLC (Project Applicant) to conduct a cultural resources study in support of the proposed Desert Hot Springs Wind Energy Repowering Project (Project). The proposed Project would consist of wind energy repowering within the boundaries of existing wind energy facilities owned by affiliates of the Project Applicant. This cultural resources study is intended to characterize and describe cultural resources identified within the Project area that could be affected by ground-disturbing activities. This study is compliant with California Public Resources Code, Section 5024.1; Sections 21083.2 and 21084.1 of the California Environmental Quality Act (CEQA) (California Public Resources Code, Section 21000 et seq.); and Section 15064.5 of the CEQA Guidelines (14 CCR 15000 et seq.). California Public Resources Code, Section 5024.1, requires identification and evaluation of historical resources that may be affected by a proposed project.

The approximately 160-acre Project would involve the decommissioning of approximately 69 existing wind turbines, the construction and operation of up to 4 new wind turbines and ancillary equipment generally located within and adjacent to existing footprints of the current wind turbines, and the future decommissioning of the new wind turbines at the end of their useful life cycle. Many of these wind turbines have been in operation for roughly 30 years and consist of several different models and sizes. While most of these existing wind turbines are still in operation and currently produce energy, the turbines are old, are less efficient than current wind turbine technology, and are generally reaching the end of their intended lifespan.

On January 25, 2018, Dudek requested a cultural records search from the Eastern Information Center. On February 22, 2018, Dudek requested a search of the Sacred Lands Files from the Native American Heritage Commission (NAHC). The response (dated February 23, 2018) stated that the results of the Sacred Lands File search failed to indicate the presence of Native American cultural resources in the immediate Project area. The NAHC also provided a list of 35 Native American groups and individuals who may have knowledge of cultural resources in the Project area. Letters were sent to each representative on March 27, 2018. To date, eight responses have been received: Agua Caliente, Augustine Band of Cahuilla Indians, Cabazon Band of Mission Indians, Cahuilla Band of Indians, Morongo Band of Mission Indians, San Manuel Band of Mission Indians, Soboba Band of Luiseño Indians, and Viejas Band of Kumeyaay Indians.

An intensive pedestrian cultural resources survey was completed on March 15 and 16 and May 8, 2018. One previously recorded resource—the National Register of Historic Places-recommended Colorado River Aqueduct (P-33-011265; CA-RIV-6726H)—was identified, specifically underlying the existing access road that leads to/from the main part of the Project site where the

current and proposed turbines are located. Because the Project would not result in subsurface earthwork activities in this portion of the access road, this resource, which consists of a subsurface water aqueduct, will not be impacted by the Project. For the purposes of this study, impacts to the Colorado River Aqueduct are considered avoided. No other previously or newly recorded cultural or built environment resources have been identified as a result of the records search, NAHC Sacred Lands File search, or intensive pedestrian survey. Due to the steep terrain and existing disturbance caused by the construction of the current wind energy facility, no cultural resources are anticipated and no additional cultural resources work is recommended.

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ACRONYMS AND ABBREVIATIONS

Acronym	Definition
CEQA	California Environmental Quality Act
CRHR	California Register of Historical Resources
MLD	Most Likely Descendant
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places

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1 INTRODUCTION

Dudek was retained by Desert Hot Springs Wind LLC (Project Applicant) to conduct a cultural resources study in support of the proposed Desert Hot Springs Wind Energy Repowering Project (Project). The Project would consist of wind energy repowering within the boundaries of existing wind energy facilities owned by affiliates of the Project Applicant. This cultural resources study is intended to characterize and describe cultural resources identified within the Project area that could be affected by ground-disturbing activities.

1.1 Project Location

The Project site, which consists of an approximately 160-acre area and a 1.2-mile access road, is immediately bounded by undeveloped land to the north, south, and west and by Metropolitan Water District of Southern California facilities to the east. Downtown Desert Hot Springs is located approximately 6 miles east of the Project site, and the Interstate 10/State Route 62 interchange is located approximately 1.7 miles to the south. The Project site is located on Assessor's Parcel Number 667-160-001within Section 31 of Township 2 South, Range 4 East; Section 6 of Township 3 South, Range 4 East; and Section 1 of Township 3 South, Range 3 East in the City of Desert Hot Springs, Riverside County, California, as shown on the U.S. Geological Survey 7.5-minute Desert Hot Springs and White Water quadrangle map (Figure 1).

1.2 Project Description

The proposed Project would involve the decommissioning of approximately 69 existing wind turbines, the construction and operation of up to 4 new wind turbines and ancillary equipment generally located within and adjacent to existing footprints of the current wind turbines, and the future decommissioning of the new wind turbines at the end of their useful life cycle. Many of these wind turbines have been in operation for roughly 30 years and consist of several different models and sizes. While most of these existing wind turbines are still in operation and currently produce energy, the turbines are old, are less efficient than current wind turbine technology, and are generally reaching the end of their intended lifespan. The majority of the Project, including the construction and operation of the new wind turbines, would occur on privately owned lands located within jurisdictional boundaries of the City of Desert Hot Springs (City); ancillary components of the Project—specifically, the access road and electrical interconnection to an existing collection system—will traverse adjacent off-site land under the jurisdiction of the County of Riverside (County).

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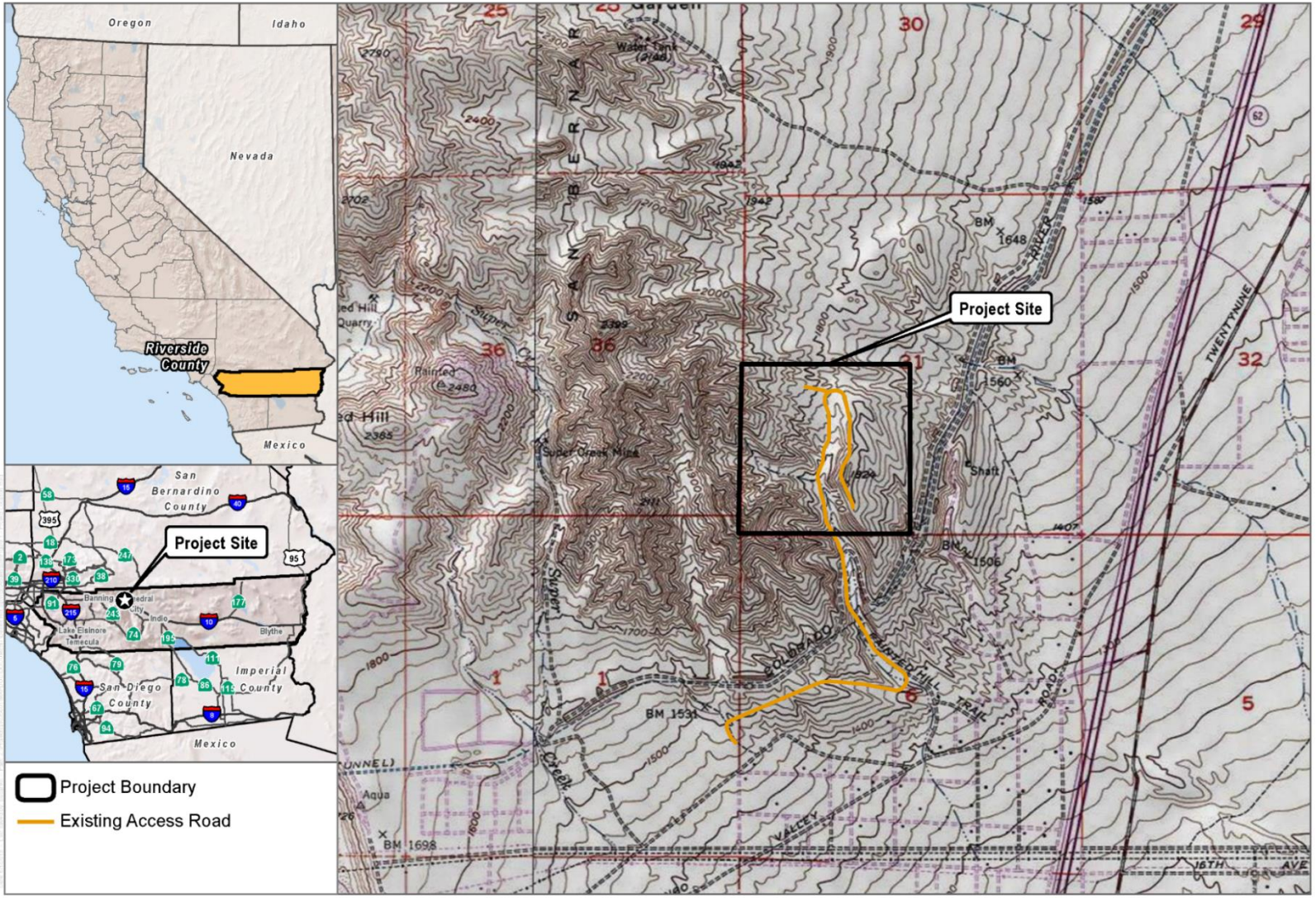

FIGURE 1

Project Location

Desert Hot Springs Wind Energy Repowering Project

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2 REGULATORY SETTING

The treatment of cultural resources located on the Project area is governed by state and local laws and regulations. There are specific criteria for determining whether prehistoric and historic sites or objects are significant and/or protected by law. For instance, federal and state significance criteria generally focus on the resource's integrity and uniqueness, its relationship to similar resources, and its potential to contribute important information to scholarly research. As a whole, the laws and regulations seek to avoid impacts to significant prehistoric or historic resources, and, when avoidance is not feasible, to mitigate those impacts to less than significant levels. In some cases, mitigation can be achieved through "preservation in place" techniques, but when such techniques are infeasible, mitigation can be accomplished via data recovery.

2.1 Federal

2.1.1 National Register of Historic Places

The 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 National Historic Preservation Act of 1966, as amended (16 USC 470 et seq.). Its listings encompass all National Historic Landmarks, as well as 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 in the NRHP, 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, How to Apply the National Register Criteria, 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 2002). Historic properties either retain integrity (convey their significance) or they do not. Within the concept of integrity, the National Register criteria recognizes seven aspects or qualities that define integrity. The seven aspects of integrity are locations, setting, design, materials, workmanship, feeling and association. In order to retain historic integrity "a property will always possess several, and usually most, of the aspects" (NPS 2002).

NRHP guidance further asserts that properties be completed at least 50 years ago 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.

2.2 State

2.2.1 California Environmental Quality Act

2.2.1.1 California Register of Historical Resources

In California, the term "historical resource" includes but is not limited to "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" (California Public Resources Code, 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" (California Public Resources Code, Section 5024.1(a)). A resource is eligible for listing in the CRHR if the State Historical Resources Commission determines that it is a significant resource and that it meets any of the following National Register of Historic Places (NRHP) criteria (California Public Resources Code, Section 5024.1(c)):

1. Associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.

2. Associated with the lives of persons important in our past.
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
4. Has yielded, or may be likely to yield, information important in prehistory or history.

Resources less than 50 years old are not considered for listing in the CRHR, but may be considered if it can be demonstrated that sufficient time has passed to understand the historical importance of the resource (14 CCR 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 on the NRHP are automatically listed on the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys. The State Historic Preservation Officer maintains the CRHR.

2.2.1.2 Native American Historic Cultural Sites

The Native American Historic Resources Protection Act (California Public Resources Code, Section 5097 et seq.) addresses the disposition of Native American burials in archaeological sites and protects such remains from disturbance, vandalism, or inadvertent destruction; establishes procedures to be implemented if Native American skeletal remains are discovered during construction of a project; and establishes the NAHC to resolve disputes regarding the disposition of such remains. In addition, the Native American Historic Resources Protection Act makes it a misdemeanor punishable by up to 1 year in jail to deface or destroy a Native American historic or cultural site that is listed or may be eligible for listing in the CRHR.

2.2.1.3 California Native American Graves Protection and Repatriation Act

The California Native American Graves Protection and Repatriation Act, enacted in 2001, requires all state agencies and museums that receive state funding and that have possession or control over collections of human remains or cultural items, as defined, to complete an inventory and summary of these remains and items on or before January 1, 2003, with certain exceptions. The California Native American Graves Protection and Repatriation Act also provides a process for the identification and repatriation of these items to the appropriate tribes.

2.2.1.4 CEQA Statutes and Guidelines

As described further below, the following CEQA statutes (California Public Resources Code, Section 21000 et seq.) and CEQA Guidelines (14 CCR 15000 et seq.) are relevant to the analysis of archaeological and historic resources:

1. California Public Resources Code, Section 21083.2(g): Defines "unique archaeological resource."
2. California Public Resources Code, Section 21084.1, and 14 CCR 15064.5(a): Define historical resources. In addition, 14 CCR 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource." It also defines the circumstances in which a project would materially impair the significance of a historical resource.
3. California Public Resources Code, Section 5097.98, and 14 CCR 15064.5(e): These statutes set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated cemetery.
4. California Public Resources Code, Sections 21083.2(b) and (c), and 14 CCR 15126.4: These statutes and regulations provide information regarding the mitigation framework for archaeological and historic resources, including options of preservation-in-place mitigation measures, and identify preservation in place as the preferred manner of mitigating impacts to significant archaeological sites.

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" (California Public Resources Code, Section 21084.1; 14 CCR 15064.5(b)). A "historical resource" is any site listed or eligible for listing in the CRHR. The CRHR listing criteria are intended to examine whether the resource in question: (a) is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage; (b) is associated with the lives of persons important in our past; (c) embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or (d) has yielded, or may be likely to yield, information important in pre-history or history.

The term "historical resource" also includes any site described in a local register of historic resources or identified as significant in a historical resources survey (meeting the requirements of California Public Resources Code, Section 5024.1(q)).

CEQA also applies to "unique archaeological resources." California Public Resources Code, Section 21083.2(g), defines a "unique archaeological resource" as any archaeological artifact,

object, or site about which it can be clearly demonstrated that, instead of merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

In 2014, CEQA was amended to apply to tribal culture resources as well, but the amendment did not provide a definition for such resources or identify how they were to be evaluated or mitigated (California Public Resources Code, Sections 21084.2 and 21084.3). Instead, California Public Resources Code, Section 21083.09, required that the Office of Planning and Resources develop and adopt guidelines for analyzing tribal cultural resources by July 1, 2016. As of the date of this cultural resources inventory report, however, those guidelines have not been finalized or adopted. Consequently, this report addresses only historic resources and unique archaeological resources.

All historical resources and unique archaeological resources—as defined by statute—are presumed to be historically or culturally significant for purposes of CEQA (California Public Resources Code, Section 21084.1; 14 CCR 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 (California Public Resources Code, Section 21084.1; 14 CCR 15064.5(a)). A site or resource that does not meet the definition of "historical resource" or "unique archaeological resource" is not considered significant under CEQA and need not be analyzed further (California Public Resources Code, Section 21083.2(a); 14 CCR 15064.5(c)(4)).

Under CEQA, a significant cultural impact results from a "substantial adverse change in the significance of an historical resource [including a unique archaeological resource]" due to the "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" (14 CCR 15064.5(b)(1); California Public Resources Code, Section 5020.1(q)). In turn, the significance of a historical resource is materially impaired when a project (14 CCR 15064.5(b)(2)):

1. 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
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the Project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
3. 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, a CEQA document for a proposed project should first evaluate whether a project site contains any historical resources, then assess whether the project will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

When a project significantly affects a unique archaeological resource, CEQA imposes special mitigation requirements. Specifically, according to California Public Resources Code, Section 21083.2(b)(1)–(4):

> If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:
>
> 1. Planning construction to avoid archaeological sites.
> 2. Deeding archaeological sites into permanent conservation easements.
> 3. Capping or covering archaeological sites with a layer of soil before building on the sites.
> 4. Planning parks, greenspace, or other open space to incorporate archaeological sites.

If these preservation-in-place options are not feasible, mitigation may be accomplished through data recovery (California Public Resources Code, Section 21083.2(d); 14 CCR 15126.4(b)(3)(C)).

California Public Resources Code, Section 21083.2(d), states that "[e]xcavation as mitigation shall be restricted to those parts of the unique archaeological resource that would be damaged or destroyed by the project. Excavation as mitigation shall not be required for a unique archaeological resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the resource, if this determination is documented in the environmental impact report."

These same requirements are set forth in slightly greater detail in CEQA Guidelines, Section 15126.4(b)(3), as follows:

(A) Preservation in place is the preferred manner of mitigating impacts to archaeological sites. Preservation in place maintains the relationship between artifacts and the archaeological context. Preservation may also avoid conflict with religious or cultural values of groups associated with the site.

(B) Preservation in place may be accomplished by, but is not limited to, the following:

1. Planning construction to avoid archaeological sites;
2. Incorporation of sites within parks, greenspace, or other open space;
3. Covering the archaeological sites with a layer of chemically stable soil before building tennis courts, parking lots, or similar facilities on the site[; and]
4. Deeding the site into a permanent conservation easement.

(C) When data recovery through excavation is the only feasible mitigation, a data recovery plan, which makes provision for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken.

Note that, when conducting data recovery, "[i]f an artifact must be removed during project excavation or testing, curation may be an appropriate mitigation" (14 CCR 15126.4(b)(3)). However, "[d]ata recovery shall not be required for an historical resource if the lead agency determines that testing or studies already completed have adequately recovered the scientifically consequential information from and about the archaeological or historic resource, provided that determination is documented in the EIR and that the studies are deposited with the California Historical Resources Regional Information Center" (14 CCR 15126.4(b)(3)(D)).

2.2.2 California Health and Safety Code

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 below, these procedures are detailed in California Public Resources Code, Section 5097.98.

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. California 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 shall occur until the County coroner has examined the remains (California Health and Safety Code, Section 7050.5b). California Public Resources Code, 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 NAHC within 24 hours (California Health and Safety Code, Section 7050.5c). NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

2.3 Local

Desert Hot Springs General Plan: Archaeological and Historic Resources Element

The Archaeological and Historic Resources Element of the General Plan (City of Desert Hot Springs 2000) provides a summary of the cultural and historical traditions of the City of Desert Hot Springs and its vicinity. It also provides the basis for the identification of and planning for present-day cultural activities and traditions. The Archaeological and Historic Resources Element is intended to briefly describe the documented pre-history and history of Desert Hot Springs, and set forth goals, policies, and programs that preserve this heritage and help perpetuate it for future generations.

GOAL: Preservation and maintenance of cultural heritage and resources, including historic and prehistoric cultural artifacts and traditions.

Policy 1: The City shall exercise its responsibility to locate, identify and evaluate archaeological, historical and cultural sites, and assure that appropriate action is taken to protect these resources.

Policy 2: Development or land use proposals, which have the potential to disturb or destroy sensitive cultural resources, shall be evaluated by a qualified professional and, if necessary, appropriate mitigation measures shall be incorporated into Project approvals.

Policy 3: Make every effort to ensure the protection of sensitive archaeological and historic resources from vandalism and illegal collection.

Policy 4: The City shall support the listing of eligible properties, structures or sites as potential historic landmarks and their inclusion in the National Register of Historic Places.

3 SETTING

3.1 Environmental and Geological Setting

The Project site is located within the northern portion of Coachella Valley, at the eastern edge of the San Bernardino Mountain Range. Topography within the Project area slopes southward towards San Gorgonio Pass, which separates the San Bernardino Mountain Range from the San Jacinto Mountain Range. Elevations within the Project area range from approximately 1,490 to 1,740 feet (454–527 meters) above mean sea level. Temperature within the area is punctuated by extremely hot summers reaching up to 110°F (43°C) in the summer months, and cool winters with lows reaching down to the 40s (4°C–10°C). The climate is extremely arid and there is on average only a few inches of rain a year, although the Project area is subject to flash floods during the rainy months. Vegetation within the Project area and surrounding vicinity is characterized by desert plants, primarily creosote bush (*Larrea tridentata*) and saltbush (*Atriplex* spp.) scrub. The Project is underlain by Quaternary alluvium and marine deposits (map unit Q), with pre-Cenozoic metasedimentary and metavolcanic rock (map unit m) and pre-Cenozoic granitic and metamorphic rocks (map unit gr-m) within the San Jacinto Mountains to the southwest.

3.2 Prehistoric Context

While it is likely that long-term trends in prehistoric subsistence/settlement adaptations, and the timing of major changes in them, were largely similar across the Mojave Desert region, the many attempts to summarize them during the last 30 years of archaeological research have often produced differing results. In particular, the character of Late Pleistocene/Early Holocene adaptations is still unclear and strongly debated, due in part to the persistence of long-standing notions of Paleoindian lifeways, but due also to the continued scarcity of archaeological data from ancient sites in good, dateable contexts. The following summary of early prehistoric culture history, therefore, contains some assertions that are largely inferred and many that are highly debatable. Other important, more detailed syntheses can be found elsewhere (Basgall 1993, 2000; Giambastiani and Basgall 2000; Grayson 1993; Warren 1984; Warren and Crabtree 1986), and the interested reader is referred to those sources to become more familiar with the number of different and often better-substantiated opinions about the nature of ancient human adaptations in the Mojave Desert. For this study, the following discussion uses generally accepted culture-historical terminology.

3.2.1 Paleoindian (Pre-10,000 BP)

Although much has been written about the Paleoindian period in western North America, it remains poorly understood. This is especially true in the Mojave Desert, where organic materials associated with Paleoindian toolkits and suitable for radiocarbon assays are virtually nonexistent. The problem is made worse by the vagaries of obsidian hydration from specimens that date to this period (due largely to weathered or sandblasted specimens) (see Basgall and Overly 2004). The hallmark artifacts of the Paleoindian period—fluted concave-base projectile points—are not an uncommon occurrence throughout the Mojave, particularly on the China Lake Naval Air Weapons Station, where Emma Lou Davis documented a robust Paleoindian component (Davis 1975; Davis and Panlaqui 1978). Malcolm Rogers (1929) documented a similar component at Pleistocene Lake Mojave. Since then, discoveries of fluted concave-base points have become more common, especially on military installations where most systematic archaeological work has occurred (see Basgall 2007; Basgall and Hall 1991, 1993, and 1994).

Fluted concave-base points remain the hallmark of Paleoindian occupation because they are technologically distinctive and their morphological correlates are well dated to 12,000–10,000 BP (late Pleistocene) in the Great Plains (Meltzer 1993; Tuohy 1974; Willig and Aikens 1988). The best case for late Pleistocene occupation of the Mojave Desert comes from the China Lake assemblages, where Emma Lou Davis reported fluted concave-base points in strong association with burned bone from extinct late Pleistocene fauna (Davis and Panlaqui 1978; see also Basgall 2007). When found with other tools, fluted points tend to be associated with a highly formalized lithic tool kit consisting of shaped scraping and cutting tools and crescents, with groundstone being essentially absent.

Most early discoveries of fluted points have occurred along the margins of Pleistocene dry lake beds, leading to an obvious assumption that Paleoindian groups were adapted to lacustrine environments for targeting large game, and the definition of the Western Pluvial Lakes Tradition (Bedwell 1970). However, research in the last 40 years has since demonstrated that fluted-point sites occur in a variety of environments, indicating that inhabitants were likely generalized foragers rather than specialized big-game hunters. However, much debate surrounds this interpretation because of the specialized nature of fluted-point technology (Bettinger 1999; Dincauze and Curran 1983). Regardless, there is little, if any, debate that Paleoindian groups were highly mobile. This is inferred from the wide range of lithic raw materials reflected in fluted-point assemblages, indicating that the points traveled far from the stone sources (Basgall 1988; Giambastiani 2008; Goodyear 1979).

Basgall's (2007) work on China Lake, investigating areas targeted by Emma Lou Davis such as Basalt Ridge and the Lakebed Locality, has teased apart some patterning, finding some success in obsidian hydration dating of related artifacts as early as 12,000 years ago. Additionally, spatial patterning in artifact types recognized by Basgall (2007) provides additional reason to separate Great Basin stemmed points as a later variant than fluted concave-base points.

3.2.2 Lake Mojave and Silver Lake (10,000–7000 BP)

In the western Great Basin, various stemmed projectile point forms have been fairly well dated to the Early Holocene, roughly between 10,000 and 7500 BP. The "Great Basin stemmed" label is used to describe a relatively wide range of stemmed points characterized by relatively long lanceolate blades with obtuse stem-to-shoulder angles that are often rounded (Justice 2002). In the Mojave Desert, Great Basin stemmed varieties are represented by relatively slender Lake Mojave (unshouldered) and Silver Lake (slightly shouldered) forms. Associated toolkits are similar to those found with fluted points, and include various shaped scraping and cutting tools, bifaces, and crescents. The formal shape of these items is a product of both initial shaping and rejuvenation over time. Also like fluted points, Lake Mojave and Silver Lake points were at first thought to be associated with extant Pleistocene lakes, due to their discovery in such contexts; however, recent research has shown that they occur in a wide range of contexts outside of lacustrine settings. Lake Mojave and Silver Lake are generally thought to reflect the same socioeconomic pattern as San Dieguito (Rogers 1939; Warren 1967) and Death Valley I (Hunt 1975). This similarity is borne out by the discovery of Lake Mojave and Silver Lake point forms located in archaeological sites in the San Diego region (Hale 2011; see also Warren 1967). More interesting is that there are indications at some Lake Mojave and Silver Lake sites that grinding implements increase in frequency and signify the growing importance of vegetal processing, although this inference is not well substantiated. Regardless, Basgall (1993) suggests that preservation bias (including preservation of grinding tools in erosional contexts) likely contributes to a misunderstanding of the role of plant foods in Early Holocene contexts.

The contribution of different foods to the diet of people inhabiting the Mojave Desert during Lake Mojave and Silver Lake periods is largely inferred from subsistence technology. A consensus is developing that suggests the variability in the form and use of subsistence technology of these periods is indicative of a generalized diet with regionally variable manifestations. Despite such regional variability, faunal profiles from Lake Mojave and Silver Lake sites appear stable (Basgall 1991, 1993; Douglas et al. 1988; Hall 1991; Jenkins 1985; Warren et al. 1986). Small game seems to predominate in these assemblages, although medium- and large-bodied prey are not rare (Basgall and Hall 1992; Douglas et al. 1988).

3.2.3 Pinto (7000–4000 BP)

Archaeological assemblages dating to this period are typified by Pinto points, projectiles bearing weak shoulders and indented or split-stem bases (Basgall and Hall 2000). Associated flaked-stone assemblages include leaf-shaped bifaces, formal unifaces, simple flake tools, and large quantities of groundstone and core-cobble implements (Basgall 1993, 2000; Campbell and Campbell 1935; Hale 2001; Hunt 1960; Rogers 1939). The stark abundance of groundstone in Pinto assemblages signals a fundamental shift in subsistence and settlement, leading most researchers to speculate that seed processing was an socioeconomic response to the Altithermal—a period of marked aridity for the desert west (Antevs 1953). Early research continued to be site specific in approach, producing a biased record that, on the surface, indicates the Mojave Desert was all but abandoned during the Altithermal of the Middle Holocene (Rogers 1939; Wallace 1962). However, ongoing research has documented an abundance of Pinto period sites in the Mojave—large and small—indicating instead very regular, serial occupation of sites with access to predictable resources (Basgall and Hall 1993). Moreover, additional research indicates that the Altithermal was variable in its onset, magnitude, and consistency, likely being regionally variable in the degree of aridity (Grayson 1993; Mehringer 1986).

Regardless, the pattern of serial site occupation during Pinto times generated vast, relatively homogeneous assemblages. In areas of raw material abundance, Pinto toolkits appear more expedient in nature, taking advantage of easily exploitable local materials for use as grinding stones and for lithic tool production, while smaller or more task-specific sites have higher proportions of shaped tools, including shaped grinding stones (Basgall and Hall 1993; Hale 2001). Indeed, the high visibility of large Pinto habitation sites would appear at first glance to signify larger, more stable populations. However, serial site occupation is a more likely scenario for the robustness of these assemblages, and population densities during Pinto times probably remained similar to those during the Silver Lake period, if not slightly denser.

The large numbers of grinding stones have been taken to signify a widening of diet breadth to exploit lower-ranked seeds with higher processing costs (Grayson 1993; Warren 1980, 1984; Warren and Crabtree 1986). Small animals continue to dominate Pinto period faunal profiles, as they did during the Silver Lake period, lending support to such a scenario. Additionally, Pinto period midden deposits seem more abundant or least more recognizable than during the Lake Mojave/Silver Lake period (see Basgall et al. 2002). However, the trend of increasing diet breadth probably began during the Lake Mojave/Silver Lake period, as indicated by morphological characteristics of subsistence tools and the presence of groundstone implements therein.

3.2.4 Gypsum (4500–1500 BP)

Diagnostic artifacts at Gypsum period sites include Gypsum contracting-stem projectile points, Elko eared and corner-notched points, and Humboldt basal-notched points. Lithic assemblages are typified by bifaces, formal scrapers, a large number and variety of other flake-based tools, and millingstones and handstones, but also contain mortars and pestles as evidence of expanded plant processing (including mesquite, pine nuts, yucca, and agave). Sutton (1988, 1996) speculates that the presence of some large villages or village complexes that appear during Gypsum times reflect a transition from seasonal transhumance to year-round sedentary occupation, although this pattern may have been limited to the southwestern Mojave Desert, particularly within the Antelope Valley. Regardless, the Gypsum period appears to be defined by subsistence intensification and the development of large-scale regional trade relations. Warren et al. (1986) suggest that the terminus of the Altithermal between 5,000 and 4,000 years BP produced widespread improvement in environmental conditions, including the availability of water and stable resource communities. Further support of environmental improvements is provided by Gardner (2007), who analyzed data from a slew of sites in the western Mojave to assess the socioeconomic impact of the Medieval Climatic Anomaly and in so doing, suggested a revision in the terminus of the Gypsum period to about 2000 BP. Gardner (2007, p. 241) based this revision on the early appearance of the bow and arrow within the Rose Spring Complex in conjunction with an increase in effective moisture at 2000 BP. In any case, the effect of these environmental changes on human subsistence is inferred from an apparent increase in large-game hunting and the intensive exploitation of high-value seed and nut crops, mainly pinyon, mesquite, and acorn (Warren 1984; Warren et al. 1986).

Marked subsistence intensification beginning during Gypsum times is supported by a sharp increase in the frequency of milling tools at Gypsum period sites on Fort Irwin (Basgall 1993); a pattern paralleled at Twentynine Palms Marine Corps Air Ground Combat Center (Basgall and Giambastiani 2000), as well as on Edwards Air Force Base (Bupp et al. 1998; Byrd et al. 1994; Giambastiani and Basgall 1999).

Subsistence intensification and consequent shifts in settlement were accompanied by enhanced cultural relationships between various Mojave Desert groups. Given the high mobility of Mojave Desert groups for much of the Holocene, trans-desert trade relationships had likely been in place and somewhat complex for a long period of time. These trade relationships are evidenced by Lake Mojave and Silver Lake points (likely occupations) at coastal sites in San Diego County (see Hale 2011; Warren 1967), as well as marine shell items in Mojave Desert sites that date to the Early Holocene. Additional evidence of early trans-desert relationships also come from Newberry Cave, where split-twig figurines were identified that appear similar to those in the

Grand Canyon (Davis and Smith 1981; Jennings 1978; Schwartz et al. 1958). Hale et al. (2009), Hunt (1960), Leonard and Drover (1980), Lyneis (1982), and a host of others report Anasazi ceramics in Mojave Desert sites. Halloran Springs provided evidence not only of Anasazi ceramics, but also of turquoise quarrying that was used by prehistoric and ethnohistoric aboriginal groups for trade (Drover 1980; Leonard and Drover 1980; Rogers 1929).

3.2.5 Saratoga Springs (1500–800 BP)

By at least 1500 BP (or 2000 BP, using Gardner's (2007) chronological scheme), the aboriginal people of the Mojave Desert had replaced the atl (or spear-thrower) with the bow and arrow (Yohe 1992, 1998). This change brought about a shift toward the use of smaller projectile points, including various corner-notched and side-notched Saratoga Springs types and the corner-notched Rose Spring and Eastgate types. Anasazi ceramics are more common in the southern Mojave around 1200–1100 BP, coinciding with the westward spread of the Virgin Anasazi into southern Nevada. Influence from the cultures of the Colorado River eventually grew stronger than those from the west, allowing for an influx of buffware ceramics and other goods that persisted until the historic present. The intensification of plant use initiated during the Gypsum period continued in the Saratoga Springs period, as diet breadth was expanded to include a wide range of plant foods that required high-cost/high-return procurement and processing strategies. This is indicated by a general increase in milling equipment from Gypsum times through the Saratoga Springs period (see Gardner 2007, pp. 225–228). Warren et al. (1986) speculate that an increase in plant use might have continued until about 700 BP, when artiodactyl overexploitation necessitated the further expansion of native diets and vegetal resources first assumed a dominant economic role (Warren et al. 1986). However, the appearance of mortars and pestles—by all accounts, a costly processing technology—during earlier Gypsum times suggests that plant processing was already taking a dietary lead.

3.2.6 Protohistoric (800–300 BP)

Social and economic adaptations during this final prehistoric interval were largely an extension of patterns that developed during the Saratoga Springs period. Trade along the Mojave River continued to provide the people of eastern Antelope Valley with a variety of exotic goods and materials, although it appears that relationships with groups in coastal California eventually grew stronger than those with groups inhabiting the arid interior, suggested by acorns and shell beads becoming more common. Projectile points also shifted in form, with unnotched Cottonwood triangular and Desert side-notched points being even smaller than their predecessors. Mortars and pestles also appear in significant quantities, probably an indication of increased emphasis on high-cost/high-yield processing.

3.3 Ethnographic Overview

Cahuilla

The Project area is located in the territory known ethnographically to have been occupied predominantly by the Cahuilla Native American group prior to contact with Europeans in the late eighteenth century. Cahuilla territory was bounded on the north by the San Bernardino Mountains; on the east by the Orocopia Mountains; on the west by the Santa Ana River, the San Jacinto Plain, and the eastern slope of the Palomar Mountains; and on the south by Borrego Springs and the Chocolate Mountains (Bean 1978).

The name "Cahuilla" is possibly derived from a native word meaning "a master, boss" (Bean 1978, p. 575). 'Ivi'lyu'atam is the traditional term for the linguistically and culturally defined Cahuilla cultural nationality, and "refers to persons speaking the Cahuilla language and recognizing a commonly shared cultural heritage" (Bean 1972, p. 85). It is thought that the Cahuilla migrated to Southern California about 2,000 to 3,000 years ago, most likely from the southern Sierra Nevada of east–central California with other related sociolinguistic groups (Takic speakers) (Moratto 1984, p. 559). The Cahuilla settled in a territory that extended west to east from the present-day City of Riverside to the central portion of the Salton Sea in the Colorado Desert, and south to north from the San Jacinto Valley to the San Bernardino Mountains. While 60% of Cahuilla territory was located in the Lower Sonoran Desert environment, 75% of their diet from plant resources was acquired in the Upper Sonoran and Transition environmental zones (Bean 1978, p. 576).

The Cahuilla had three primary levels of sociopolitical organization (Bean 1978, p. 580). The highest level was the cultural nationality, encompassing everyone speaking a common language. Next were the two patrimoieties of the Wildcats (tuktum) and the Coyotes ('istam). Every clan of the Cahuilla fell into one or the other of these moieties. The third basic level consisted of the numerous political–ritual–corporate units called sibs, or a patrilineal clan (Bean 1978, p. 580). While anthropologists have designated groups of Cahuilla clans by their geographical location into Pass, Desert, and Mountain, suggesting dialect and ceremonial differences between these groupings, these social and linguistic areas were more a result of proximity than actual social connections. In reality, there was a continuum of minor differences from one clan to the next. Lineages within a clan cooperated in defense, in community subsistence activities, and in religious ceremonies. While most lineages owned their own village site and particular resource area, much of the territory was open to all Cahuilla people.

Cahuilla villages were usually located in canyons or on alluvial fans near a source of accessible water, such as springs or where large wells could be dug. Each family and lineage had their houses

(kish) and granaries for the storage of food, and ramadas for work and cooking. There would often be sweat houses and song houses (for non-religious music). Each community also had a separate house for the lineage or clan leader. There was a ceremonial house, or kíš ámnawet, associated with the clan leader, where major religious ceremonies were held. Houses and ancillary structures were often spaced apart, and a "village" could spread out over a mile or two.

A wide variety of tools and implements were employed by the Cahuilla to gather and collect food resources. For the hunt, these included the bow and arrow, traps, nets, slings, and blinds for hunting land mammals and birds, and nets for fish in Holocene-epoch Lake Cahuilla. Rabbits and hares were commonly brought down by the throwing stick, but communal hunts for these animals used tremendously large nets and clubs. Foods were processed with a variety of tools, including portable stone mortars, bedrock mortars and pestles, basket hopper mortars, manos and metates, bedrock grinding slicks, hammerstones and anvils, woven strainers and winnowers, leaching baskets and bowls, woven parching trays, knives, bone saws, and wooden drying racks. Food was consumed from a number of woven and carved wood vessels and pottery vessels. The ground meal and unprocessed hard seeds were stored in large finely woven baskets, and the unprocessed mesquite beans were stored in large granaries woven of willow branches and raised off the ground on platforms to keep it from vermin. Pottery vessels were made by the Cahuilla and also traded from the Yuman-speaking groups across the Colorado River and to the south.

By 1819, several Spanish mission outposts, known as assistencias, were established near Cahuilla territory at San Bernardino and San Jacinto, but interaction with Europeans was not as intense in the Cahuilla region as it was for coastal groups. The topography and lack of water also made the area less attractive to colonists than the coastal valley regions. By the 1820s, however, the Pass Cahuilla were experiencing consistent contact with the ranchos of Mission San Gabriel, while the individuals and families of the Mountain branch of the Cahuilla were frequently employed by private rancheros and were also recruited to Mission San Luis Rey.

By the 1830s, Mexican ranchos were located near Cahuilla territory along the Upper Santa Ana and San Jacinto Rivers, thus introducing the Cahuilla to ranching and an extension of traditional agricultural techniques. The Bradshaw Trail was established in 1862 and was the first major east–west stage and freight route through the Coachella Valley. Traversing the San Gorgonio Pass, the trail connected gold mines on the Colorado River with the coast. Bradshaw based his trail on the Cocomaricopa trail, with maps and guidance provided by local Native Americans. Journals by early travelers along the Bradshaw Trail told of encountering Cahuilla villages and walk-in wells during their journey through the Coachella Valley.

The continuing expansion of immigrants into the region introduced the Cahuilla to European diseases. The single worst recorded event was a smallpox epidemic in 1862–63. By 1891, only

1,160 Cahuilla remained within what was left of their territory, down from an aboriginal population of 6,000–10,000 (Bean 1978, pp. 583–584). By 1974, approximately 900 people, most of whom resided on reservations, claimed Cahuilla descent.

Between 1875 and 1891, the United States established 10 reservations for the Cahuilla within their territory (Agua Caliente, Augustine, Cabazon, Cahuilla, Los Coyotes, Morongo, Ramona, Santa Rosa, Soboba, and Torres-Martinez) (Bean 1978, p. 585). Four of the reservations are shared with other groups, including the Chemehuevi, Cupeño, and Serrano.

3.4 Historic Period Overview

Post-Contact history for the State of California is generally divided into three periods: the Spanish Period (1769–1821), Mexican Period (1821–1848), and American Period (1846–present). Although Spanish, Russian, and British explorers visited the area for brief periods between 1529 and 1769, the Spanish Period in California begins with the establishment in 1769 of a settlement at San Diego and the founding of Mission San Diego de Alcalá, the first of 21 missions constructed between 1769 and 1823. Independence from Spain in 1821 marks the beginning of the Mexican Period, and the signing of the Treaty of Guadalupe Hidalgo in 1848, ending the Mexican–American War, signals the beginning of the American Period, when California became a territory of the United States.

3.4.1 Spanish Period (1769–1821)

Spanish explorers made sailing expeditions along the coast of Southern California between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríquez Cabríllo stopped in 1542 at present-day San Diego Bay. With his crew, Cabríllo explored the shorelines of present-day Santa Catalina Island as well as San Pedro and Santa Monica Bays. Much of the present California and Oregon coastline was mapped and recorded in the next half-century by Spanish naval officer Sebastián Vizcaíno. Vizcaíno's crew also landed on Santa Catalina Island and at San Pedro and Santa Monica Bays, giving each location its long-standing name. The Spanish crown laid claim to California based on the surveys conducted by Cabríllo and Vizcaíno (Bancroft 1885; Gumprecht 1999).

More than 200 years passed before Spain began the colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's historic period, occurring just after the King of Spain installed the Franciscan Order to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement

in Alta California. In July of 1769, while Portolá was exploring Southern California, Franciscan Friar Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823.

The Portolá expedition first reached the present-day boundaries of Los Angeles in August 1769, thereby becoming the first Europeans to visit the area. Father Crespi named the campsite by the river "Nuestra Señora la Reina de los Angeles de la Porciúncula" or "Our Lady the Queen of the Angeles of the Porciúncula." Two years later, Friar Junípero Serra returned to the valley to establish a Catholic mission, the Mission San Gabriel Arcángel, on September 8, 1771 (Kyle 2002). Mission San Fernando Rey de España was established 26 years later on September 8, 1797.

3.4.2 Mexican Period (1821–1848)

A major emphasis during the Spanish Period in California was the construction of missions and associated presidios to integrate the Native American population into Christianity and communal enterprise. Incentives were also provided to bring settlers to pueblos or towns, but just three pueblos were established during the Spanish Period, only two of which were successful and remain as California cities (San José and Los Angeles). Several factors kept growth within Alta California to a minimum, including the threat of foreign invasion, political dissatisfaction, and unrest among the indigenous population. After more than a decade of intermittent rebellion and warfare, New Spain (Mexico and the California Territory) won independence from Spain in 1821. In 1822, the Mexican legislative body in California ended isolationist policies designed to protect the Spanish monopoly on trade, and decreed California ports open to foreign merchants (Dallas 1955).

Extensive land grants were established in the interior during the Mexican Period, in part to increase the population inland from the more settled coastal areas where the Spanish had first concentrated their colonization efforts. Nine ranchos were granted between 1837 and 1846 in the future Orange County. Among the first ranchos deeded within the future Orange County were Manuel Nieto's Rancho Las Bolsas (partially in future Los Angeles County), granted by Spanish Governor Pedro Fages in 1784, and the Rancho Santiago de Santa Ana, granted by Governor José Joaquín Arrillaga to José Antonio Yorba and Juan Pablo Peralta in 1810 (Hallan-Gibson 1986). The secularization of the missions (enacted 1833) following Mexico's independence from Spain resulted in the subdivision of former mission lands and establishment of many additional ranchos.

During the supremacy of the ranchos (1834–1848), landowners largely focused on the cattle industry and devoted large tracts to grazing. Cattle hides became a primary Southern California export, providing a commodity to trade for goods from the east and other areas in the United

States and Mexico. The number of nonnative inhabitants increased during this period because of the influx of explorers, trappers, and ranchers associated with the land grants. The rising California population contributed to the introduction and rise of diseases foreign to the Native American population, who had no associated immunities.

3.4.3 American Period (1846–Present)

War in 1846 between Mexico and the United States precipitated the Battle of Chino, a clash between resident Californios and Americans in the San Bernardino area. The Mexican-American War ended with the Treaty of Guadalupe Hidalgo in 1848, ushering California into its American Period.

California officially became a state with the Compromise of 1850, which also designated Utah and New Mexico (with present-day Arizona) as U.S. Territories (Waugh 2003). Horticulture and livestock, based primarily on cattle as the currency and staple of the rancho system, continued to dominate the Southern California economy through 1850s. The Gold Rush began in 1848, and with the influx of people seeking gold, cattle were no longer desired mainly for their hides but also as a source of meat and other goods. During the cattle boom of the 1850s, rancho vaqueros drove large herds from Southern to Northern California to feed that region's burgeoning mining and commercial boom. Cattle were at first driven along major trails or roads such as the Gila Trail or Southern Overland Trail, then were transported by trains when available. The cattle boom ended for Southern California as neighbor states and territories drove herds to Northern California at reduced prices. Operation of the huge ranchos became increasingly difficult, and droughts severely reduced their productivity (Cleland 2005).

3.4.4 Local History of the Project Area

By the 1860s, people were regularly traveling through the Coachella Valley via the Bradshaw Trail. With the establishment of the Southern Pacific Railroad line in 1876, however, use of the Bradshaw Trail for travel declined (Lech 2004). Due to the increased travel brought by the railway, the name "Palm Springs" was fully established by 1885 (Wild 2007). Around this time, San Francisco attorney John Guthrie McCallum brought his son to the dry climate of Palm Springs for health reasons, and by the 1900s, the city of Palm Springs became an oasis for those whose doctors had prescribed a dry-heat environment for their health (Palm Valley Land Co. 1888).

Palm Springs and the Coachella Valley became important locations during World War II. General Patton's Desert Training Center was headquartered at the Chiriaco Summit and existing airfields became training and staging areas. The Palm Springs El Mirador Hotel was purchased by the US government and converted into the Torney General Hospital. At the facility, Italian

prisoners of war served as kitchen help and orderlies. Through the war, it was staffed with 1,500 personnel and treated some 19,000 patients (California State Military Museum 2016).

At the close of the war, Palm Springs again flourished and between 1947 and 1965, approximately 2,200 houses were built, essentially doubling the housing capacity. The 1973 recession forced many of the wealthy residents to cut their spending, slowing growth of the area (St. Petersburg Independent 1972). Today, the majority of the city's economy is generated through tourism, much of which is driven by the visually unique San Gorgonio Pass wind energy facilities.

Since their development in 1982, the San Gorgonio Pass wind energy facilities have become an integral part of the Palm Springs landscape. With a stable wind flow caused by warm desert air mixing with cooler coastal air, the San Gorgonio Pass has proven to be a reliable location for wind energy production (Solaripedia 2018). Together with the nearby Tehachapi Pass and Altamont Pass wind energy facilities, San Gorgonio accounts for nearly 95% of all commercial wind power generation in California, and approximately 11% of the world's wind-generated electricity (CEC 2018).

4 METHODS

4.1 Records Search Methods

On January 25, 2018, Dudek requested a search of the California Historical Resources Information System at the Eastern Information Center, located on the campus of University of California, Riverside. This search included mapped prehistoric, historical, and built-environment resources; Department of Parks and Recreation site records; technical reports; archival resources; and ethnographic references. Additional consulted sources included historical maps of the Project area, the NRHP, the CRHR, the California Historic Property Data File, and the lists of California State Historical Landmarks, California Points of Historical Interest, and the Archaeological Determinations of Eligibility. The records search results are provided in Confidential Appendix A.

4.2 Native American Heritage Outreach

On February 22, 2018, Dudek requested a search of the Sacred Lands Files from NAHC. A response letter from NAHC was received via email on February 23, 2018, stating that the results of the Sacred Lands File search failed to indicate the presence of Native American cultural resources in the immediate Project area. NAHC also provided a list of 35 Native American groups and individuals who may have knowledge of cultural resources in the Project area. A letter was sent to each representative on March 27, 2018. This coordination was conducted for informational purposes only and does not constitute formal government-to-government consultation. To date, eight responses have been received. Documentation of coordination with Native American groups and individuals is provided in Confidential Appendix B.

- Agua Caliente requested a copy of the records search with associated survey reports and site records, a cultural resources inventory prior to development, copies of any cultural resource documentation generated in connection with the project, and the presence of an approved Agua Caliente Native American Cultural Resource Monitor during any ground-disturbing activities.
- Augustine Band of Cahuilla Indians were unaware of specific cultural resources that may be affected. They encouraged that a qualified Native American cultural monitor be present on site full time during pre-construction and construction phases of the Project and requested notification in the event that any cultural resources are discovered.
- Cabazon Band of Mission Indians stated that the Project area is located outside the Tribe's current boundaries and that they have no specific archival information on the site.

- Cahuilla Band of Indians stated that they do not have any knowledge of cultural resources or sites within or near the Project area, although they noted that the Project area was within the Cahuilla traditional land use area and requested to be notified of all updates and changes associated with the Project.
- Morongo Band of Mission Indians requested the results of the California Historical Resources Information System search, a copy of the cultural resources survey report, and consultation with the lead agency.
- San Manuel Band of Mission Indians stated that the Project is outside Serrano ancestral territory and they will not be requesting consulting party status.
- Soboba Band of Luiseño Indians requested initiation of consultation with the Project proponents and lead agency, the transfer of information regarding the progress of the Project, continued consultation with the Tribe, and the presence of a Native American Monitor from the Soboba Band of Luiseño Indians during any ground-disturbing activities.
- Viejas Band of Kumeyaay Indians determined that the Project site has little cultural significance or ties to the Tribe and deferred to tribe(s) closer to the Project area. They also requested to be informed of any inadvertent discoveries, cremation sites, or human remains in order to reevaluate their participation in the consultation process.

4.3 Assembly Bill 52 Consultation

The Project is subject to compliance with Assembly Bill (AB) 52 (PRC 21074), which requires consideration of impacts to "tribal cultural resources" as part of the CEQA process, and requires the City of Desert Hot Springs, as the CEQA Lead Agency, to notify any groups who have requested notification of proposed projects and who are traditionally or culturally affiliated with the geographic area of the project. In compliance with AB 52, the City initiated consultation with interested Native American tribes on February 27, 2018, after completing an initial assessment as to whether the available materials for the Project were sufficient to begin the consultation process. In response to the City's AB 52 notification letters, the following Tribes replied to the City's invitation to consult on the Project:

- In a letter dated March 12, 2018, the Morongo Band of Mission Indians indicated that the Project site is located within the Tribe's aboriginal territory and/or within an area considered to be a traditional use area for the Tribe. The Tribe recommended that a records search be conducted at CHRIS Archaeological Information Centers and the search results be provided to the Tribe. In addition, the Tribe requests that a Tribal monitor be present during an initial pedestrian field survey, and, if the survey has already occurred, that a copy of the Cultural Resources Inventory be sent to them.

- In a letter dated March 21, 2018, the Soboba Band of Luiseno Indians requested to initiate formal consultation with the City pursuant to AB 52.
- In a letter dated March 27, 2018, the Twenty-Nine Palms Band of Mission Indians requested that a copy of the Cultural Resources Inventory be sent to them prior to making their final recommendations.

4.4 Cultural Resources Pedestrian Survey

Dudek archaeologists conducted an intensive-level pedestrian survey of the Project area on March 15 and 16 and May 8, 2018. All field practices met the Secretary of the Interior's standards and guidelines for a cultural resources inventory. The intensive-level survey methods consisted of a pedestrian survey conducted in parallel transects spaced no more than 15 meters (50 feet) apart. Deviations from transects only occurred in areas containing steep slopes, dense vegetation, or impassible natural features. Within each transect, the ground surface was examined for prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, features indicative of the current or former presence of structures or buildings (e.g., standing exterior walls, post holes, foundations), and historic artifacts (e.g., metal, glass, ceramics, building materials). Ground disturbances such as burrows, cut banks, and drainages were also visually inspected for exposed subsurface materials. No artifacts were collected during the survey.

All fieldwork was documented using field notes and iPad technology with close-scale field maps, and aerial photographs. Location-specific photographs were taken using an Apple third-generation iPad equipped with 8 megapixel resolution and georeferenced PDF maps of the Project area. Accuracy of this device ranged between 3 and 10 meters (between 10 and 33 feet). All field notes, photographs, and records related to the current study are on file at Dudek's Pasadena, California office. Groups of three or more artifacts within a 50-meter-diameter (165-foot-diameter) area were classified as prehistoric or historic period sites, while finds of one or two artifacts were recorded as isolates.

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5 RESULTS

5.1 Records Search Results

5.1.1 Previously Conducted Cultural Resource Studies

The Eastern Information Center records indicate that between 1982 and 2010, five previous cultural resources technical investigations were conducted within 0.5 miles (804 meters) of the Project site. Of these, two overlap the Project site (RI-01529 and RI-6374) and the remaining three are within the records search buffer. RI-01529 describes the initial survey conducted to support the construction of the original wind turbines (Wilkie 1982) and RI-06374 describes the cultural survey conducted to support an expansion of the wind farm (Tang et al. 2005). Neither study identified any cultural resources. All five technical investigations are summarized in Table 1.

Table 1
Previous Technical Studies in the Project Site

Report Number (RI-)	Authors	Date	Title	Position Relative to Project Site
RI-01473	Wagstaff and Brady and Robert Odland Associates	1982	San Gorgonio Wind Resource Study: Environmental Impact Report/Environmental Impact Statement (Cultural Resources portion only)	Outside
RI-01529	Wilkie, P.J.	1982	A Cultural Resources Evaluation of a Quarter-Section near Painted Hill at the Eastern Entrance to San Gorgonio Pass	Within
RI-01915	Swenson, J.D.	1984	A Cultural Resource Survey of a Portion of Section 31, Township 2 South, Range 4 East, near Whitewater Hill, Riverside County, California	Outside
RI-06374	Tang, B., M. Hogan, M. Wetherbee, and D. Ballester	2005	Historical/Archaeological Resources Survey Report: Windfarm Expansion Project, City of Desert Hot Springs, Riverside County, California	Within
RI-08342	Jacquemain, T., D. Ballester, and L.H. Shaker	2010	Identification and Evaluation of Historic Properties: Painted Hills Meteorological Tower Project Northwestern Coachella Valley Riverside County, California	Outside

5.1.2 Previously Recorded Cultural Resources

The Eastern Information Center records indicate that the existing access road that serves the Project site currently intersects the NRHP-recommended Colorado River Aqueduct (P-33-011265; CA-RIV-6726H). Five additional cultural resources have been recorded within 0.5 mile

of the Project site. These five resources consist of three prehistoric lithic scatters and two rock cairns. Details pertaining to all five of these resources, as well as the Colorado River Aqueduct, are provided in Table 2. In addition, the Colorado River Aqueduct is further described following the table.

Table 2
Previously Recorded Resources in the Project Site

Primary Number (P-33-)	Trinomial (CA-RIV-)	Period	NRHP/CRHR Status	Recorded By/Year	Description	Position Relative to Project Site
001388	001388	Prehistoric	Not evaluated	Lithic scatter	1976 (Morin, M., P. Welch, G. Toren, and D. Schummer)	Outside
001389	001389	Prehistoric	Not evaluated	Two flakes	1976 (Morin, M., and G. Toren)	Outside
001390	001390	Prehistoric	Not evaluated	Rock cairn	1976 (Morin, M.)	Outside
001391	001391	Prehistoric, unknown	Not evaluated	One andesite bifacial scraper and one flake	1976 (Morin, M., and G. Toren)	Outside
001392	001392	Historic	Not evaluated	Rock cairn and modern refuse scatter	1976 (Schummer, D.); 1984 (Swenson, J., and R. Milanovich)	Outside
011265	006726H	Historic	Appears eligible for listing on the individual property through survey evaluation	Colorado River Aqueduct	2000 (Goodman, J. and J. Neves); 2001 (Dice, M.); 2003 (Boggs, B., G. Austerman, and L. Lee); 2005 (Wilson, S., A. Craft, and M. Wise); 2005 (Beedle, P.); 2005 (Beedle, P.); 2009 (DeGiovine, M., T. Martin, S. Wilson, and K. Chimel); 2011 (Kremkau, S.); 2016 (Loftus, S.)	Intersects

P-33-011265; CA-RIV-6726H

This resource consists of the historical Colorado River Aqueduct, which carries water from the Parker Dam on the Colorado River to Lake Mathews in western Riverside County. The approximately 242-mile-long resource was constructed starting in 1933, opened in 1939, and now provides water to the greater Los Angeles area. This resource includes open-air canals, subsurface tunnels, and other associated facilities such as pumping plants and operational facilities. The resource also includes archaeological sites from the original workers' camps and other construction facilities. As listed in Table 2, many previous studies have recommended this resource as eligible for listing on the NRHP. The Project includes the existing access road that intersects the Colorado River Aqueduct (see Confidential Appendix C); however, this portion of the aqueduct consists of a subsurface pipe located below any proposed Project construction activities.

5.1.3 Map and Historic Aerial Photography Research

Additional archival research for this Project included review of historic topographic and aerial maps. Historic topographic maps consulted include U.S. Geological Survey maps from 1944, 1955, 1956, 1960, 1961, 1963, and 1972 (USGS 2018). Aerial maps from 1972 and 1996 (NETROnline 2018) were available.

The aerial maps show that the Project area was undeveloped for much of the twentieth century. Interstate 10 and State Route 62 are visible on the earliest historic map, dating to 1944. There are also several unimproved roads in the area to the south and east of the Project area. By 1960 the Colorado River Aqueduct was built directly east of the Project area—this was the first major development in the direct vicinity of the Project area. The roads associated with the present wind energy facility appear on topographic maps in 1988. By 1996, construction of the wind energy facility is visible on aerial photographs; this has been the only development within the Project area (NETR 2018).

5.2 Cultural Resources Survey

A cultural resources survey of the Project area was conducted on March 15 and 16 and May 8, 2018. The conditions during survey included winds up to 20 miles per hour, partially cloudy skies, and moderate temperatures. The terrain is hilly with steep slopes and ridges throughout. Soils in the area are light grey/pale brown coarse sand with large gravel and cobble inclusions. Ground visibility throughout the survey area was good and vegetation consisted primarily of sparse desert shrubs (Exhibits 1 through 3). Disturbances within the area are associated with the existing wind energy facility, including the wind turbines themselves, access roads, and graded laydown yards. The area appears to be subject to natural wind and water erosion. The survey team examined the area where the Colorado River Aqueduct (P-33-011265; CA-RIV-

6726H) intersects the existing Project access road. Although there is evidence of the installation of the Colorado River Aqueduct in the form of extensive earthmoving, this subterranean portion of the resource is not visible on the ground surface and would not be encountered during Project activities. No new resources were observed during the intensive pedestrian survey of the Project area.

Exhibit 1. Project area overview – view to north.

Exhibit 2. Project area overview – view to south.

Exhibit 3. Project area overview – view to south.

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6 FINDINGS AND RECOMMENDATIONS

The records search and intensive pedestrian survey of the Project site identified one resource—the NRHP-recommended Colorado River Aqueduct (P-33-011265; CA-RIV-6726H)—underlying the existing access road that leads to/from the main part of the Project site where the current and planned turbines are located. The path of this linear resource is intersected by the Project access road. This portion of the resource consists of a subsurface water pipe that would not be impacted by Project construction activities, nor would it be impacted by ongoing use or continued maintenance of the access road. For the purposes of this study, impacts to the Colorado River Aqueduct are considered avoided.

No other previously or newly recorded cultural or built environment resources have been identified as a result of the records search, the NAHC Sacred Lands File search, or the intensive pedestrian survey. Due to the steep terrain and existing disturbance caused by the construction of the current wind energy facility, Dudek does not anticipate that construction will encounter cultural resources during ground disturbance. However, following AB 52 consultation, the City of Desert Hot Springs has determined that there is always a possibility that construction activities can encounter buried resources that may underlie the Project site. The City of Desert Hot Springs is requiring a Tribal monitoring program for the Project and the implementation of mitigation measures to minimize the Project's potential impacts to cultural resources.

6.1 Mitigation Measures

The Project would be required to comply with the following applicable cultural resources mitigation measures (MM) adopted by the City of Desert Hot Springs:

MM-CUL-1 An approved Tribal Cultural Resource Monitor shall be present during any survey and/or any ground-disturbing activities. Should buried cultural deposits be encountered, the Monitor may request that destructive construction halt and the Monitor shall notify a Qualified (Secretary of the Interior's Standards and Guidelines) Archaeologist to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer, the Agua Caliente Tribal Historic Preservation Office, the Morongo Band of Mission Indians, the Twenty-Nine Palms Band of Mission Indians, and the Soboba Band of Luiseño Indians.

MM-CUL-2 If buried cultural materials are discovered during any earth-moving operation associated with the Project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds. The archaeologist shall be empowered to temporarily stop or redirect grading activities to allow removal of abundant or

large artifacts. The archaeologist shall also be required to curate specimens in a repository with permanent retrievable storage and submit a written report to the City's Community Development Director for review and approval prior to the issuance of the first building permit on the site.

MM-CUL-3 Once artifact analysis is completed, a final written report detailing the results of all research procedures and interpretation of the site shall be submitted to the City's Community Development Director for review and approval prior to the issuance of the first building permit on the site.

MM-CUL-4 If human remains are encountered at the Project site during construction, the Riverside County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the County Coroner has determined, within two working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the County Coroner determines that the remains are, or are believed to be, Native American, she or he shall notify Native American Heritage Commission (NAHC) in Sacramento within 48 hours. In accordance with California Public Resources Code, Section 5097.98, NAHC must immediately notify those persons it believes to be the Most Likely Descendant (MLD) of the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

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APPENDIX A

EIC Records Search Results

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APPENDIX B
Informational Native American Coordination

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APPENDIX C
Resources in Project Area