Cultural Resources Assessment of the Proposed Indian Canyon Warehouse and Distribution Center, Palm Springs, Riverside County, California

Jeanine M. Hoy and Kenneth M. Becker

Prepared for
David Snider
Snider Interests, LLC
730 Arcady Road
Montecito, CA 93180

Technical Report 23-11
Statistical Research, Inc.
Redlands, California

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LIST OF ACRONYMS AND ABBREVIATIONS

AB	Assembly Bill
ACBCI	Agua Caliente Band of Cahuilla Indians
AMSL	above mean sea level
APN	Assessor's Parcel Number
CEQA	California Environmental Quality Act
CHL	California Historical Landmark
CHRIS	California Historical Resources Information System
City	City of Palm Springs
EIC	Eastern Information Center
GNSS	Global Navigation Satellite System
HSC	*Health and Safety Code*
NAHC	Native American Heritage Commission
PRC	*Public Resources Code*
RPA	Registered Professional Archaeologist
Snider Interests	Snider Interests, LLC
SRI	Statistical Research, Inc.
THPO	Tribal Historic Preservation Officer
USC	*U.S. Code*
USGS	U.S. Geological Survey

Statistical Research, Inc. (SRI), conducted a cultural resource survey in support of the proposed Indian Canyon Warehouse and Distribution Center located within the city of Palm Springs, Riverside County, California. The project is proposing an approximately 700,000-square-foot (65,032.1-m^2) logistics center on the 38-acre (15.4-ha) site. An approximately 20-acre (8.1-ha) area to the west of the site (the southern half of Assessor's Parcel No. 666-320-015) is also included, as an option to increase the size of the logistics center to 1,000,000 square feet (92,903.0 m^2). The cultural resource study discussed in this report covers both of these properties, for a combined total of 58 acres (23.5 ha). The project area is in Section 15 of Township 3 South, Range 4 East, on the 2021 Desert Hot Springs, California, 7.5-minute U.S. Geological Survey topographic map.

The proposed project is entirely on privately owned land and is considered a project under the California Environmental Quality Act (CEQA; *Public Resources Code*, Sections 21000 *et seq.* [PRC 21000 *et seq*.]), and the City of Palm Springs is acting as the CEQA lead agency. The cultural resource study was performed pursuant to PRC 21000–21177, as amended, which mandates that the lead agency consider the potential impacts of the project on historical and archaeological resources.

As part of the project, SRI conducted a records search with the California Historical Resources Information System Eastern Information Center. The goals of the records search were to review any previous archaeological projects that may have been conducted within the project area and to identify any previously recorded archaeological resources located on the property. The records search found no previous studies involving the project area and no previously recorded resources in the project area.

SRI also submitted a request for a Sacred Lands File search to the Native American Heritage Commission (NAHC), and the search produced negative results. The NAHC provided a list of 21 contacts that could provide additional information regarding cultural resources within the project area. SRI reached out to all 21 contacts. Lacy Padilla, Tribal Historic Preservation Officer for the Agua Caliente Band of Cahuilla Indians, responded, stating that although the project area is not within the boundaries of the Agua Caliente Band of Cahuilla Indians Reservation, it is within the Tribe's traditional use area.

SRI surveyed the combined 58-acre (23.5-ha) project area, which is dominated by sandy soils and sparse desert vegetation and afforded good ground visibility. SRI personnel identified one historical-period isolate and one prehistoric isolate during the survey. SRI recommends that an archaeological monitoring plan be prepared and implemented prior to the start of ground-disturbing activities, in order to properly treat any unanticipated discoveries made during project construction.

Introduction and Setting

Snider Interests, LLC (Snider Interests), is proposing construction of the Indian Canyon Warehouse and Distribution Center, Palm Springs, Riverside County, California. The project area includes a 38-acre (15.4-ha) property located on the northwest corner of Indian Canyon Drive and 19th Avenue in Palm Springs (Assessor's Parcel No. [APN] 666-320-018). The proposed project includes an approximately 700,000-square-foot (65,032.1-m^2) logistics center on the 38-acre (15.4-ha) site. An approximately 20-acre (8.1-ha) area to the west of the site (the southern half of APN 666-320-015) is also included, as an option to increase the size of the logistics center to 1,000,000 square feet (92,903.0 m^2). The area of the cultural resource study consisted of both properties, for a combined total of 58 acres (23.5 ha). The project area is in Section 15 of Township 3 South, Range 4 East, as shown on the 2021 Desert Hot Springs, California, 7.5-minute U.S. Geological Survey (USGS) topographic map (Figures 1 and 2).

Snider Interests contracted with Statistical Research, Inc. (SRI), to conduct a Phase I cultural resource study of the entire 58-acre (23.5-ha) project area. The purpose of the study was to provide a cultural resource technical report in support of the California Environmental Quality Act (CEQA; *Public Resources Code*, Sections 21000 *et seq.* [PRC 21000 *et seq*.]) environmental document being prepared for the project. The cultural resource study included (1) a records search via the California Historical Resources Information System (CHRIS) Eastern Information Center (EIC), (2) a Native American Heritage Commission Sacred Lands File search and related coordination with Native American Tribes, (3) archaeological survey, and (4) report preparation.

Regulatory Environment

The proposed project is located entirely on privately owned land and is considered a project under CEQA, and the City of Palm Springs (City) is acting as the CEQA lead agency. The cultural resource study was performed pursuant to PRC 21000–21177, as amended, which mandates that the lead agency consider the potential impacts of the project on historical and archaeological resources.

Changes to CEQA pursuant to Assembly Bill (AB) 52 require lead CEQA agencies to consult with California Native American Tribes and to consider the effects of a project on Tribal cultural resources. A substantial adverse change to a Tribal cultural resource is considered a significant impact. PRC 21074 describes the criteria for what constitutes a Tribal cultural resource. Formal government-to-government consultation regarding the project, as required by AB 52, takes place between the City and affected Tribes. It is our understanding that there is no federal involvement with the project that would require the cultural resource studies to be performed pursuant to either the National Environmental Policy Act of 1969, as amended (*U.S. Code*, Title 42, Section 4321 *et seq.* [42 USC 4321]), or the National Historical Preservation Act of 1966, as amended (54 USC 300101 *et seq*.). Also, because the project is entirely within Palm Springs, it is not subject to the County of Riverside Memorandum of Understanding regarding cultural resource procedures.

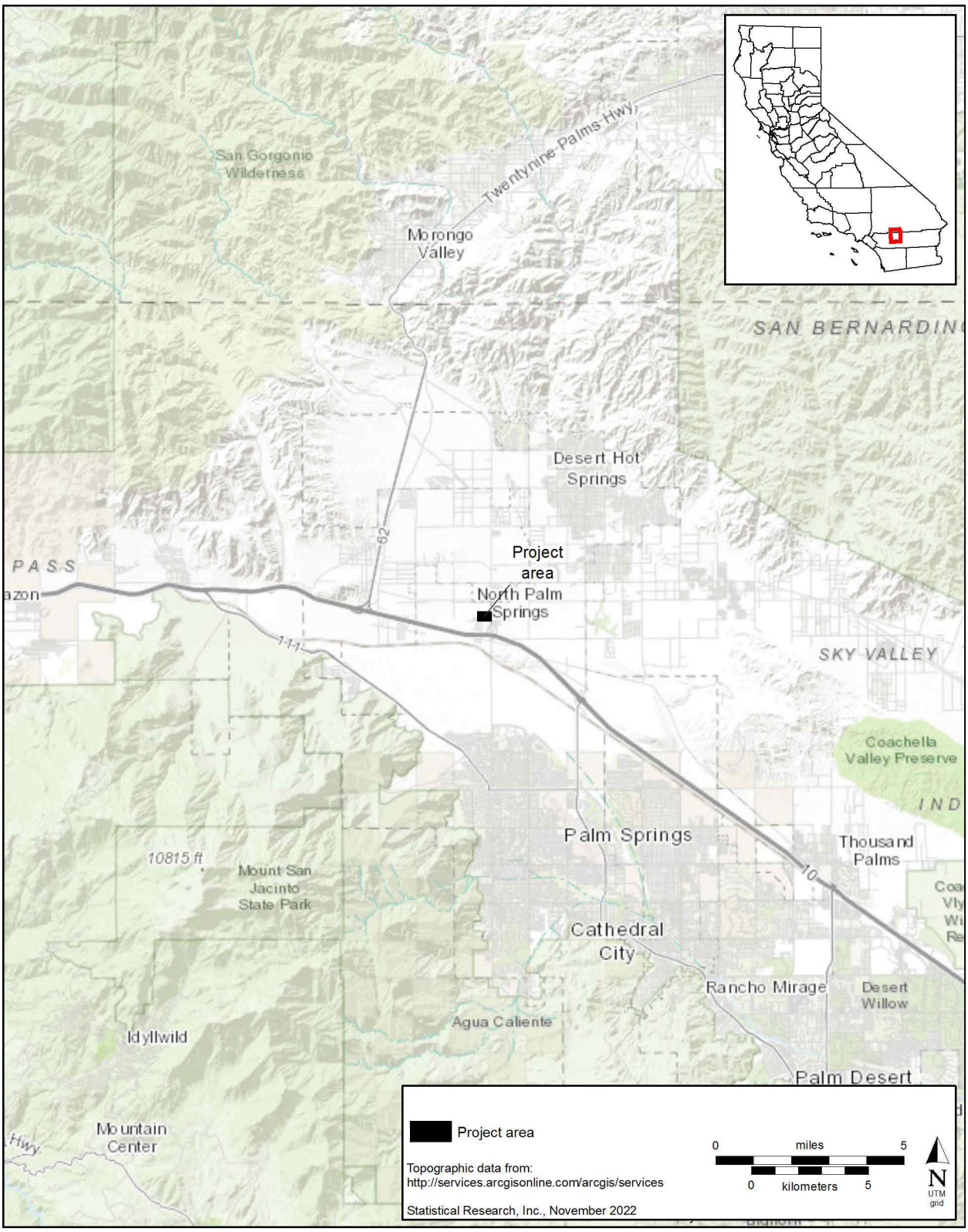

Figure 1. Project area vicinity map.

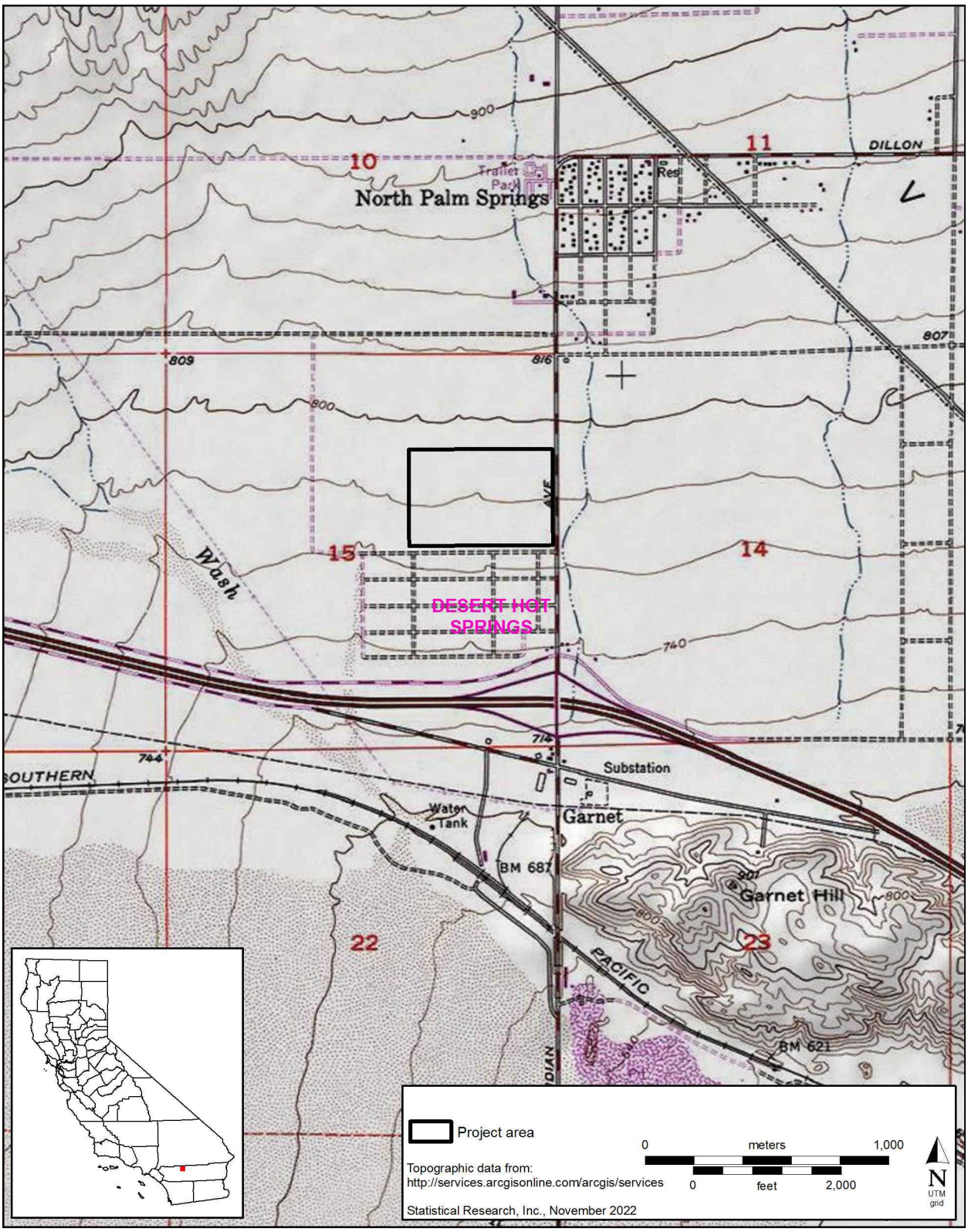

Figure 2. Project area location map.

Project Personnel

All SRI project personnel meet the Secretary of the Interior's Historic Preservation Professional Qualifications Standards (48 *Federal Register* 44738–44739 [September 29, 1983]) in their respective disciplines. The SRI personnel involved with the implementation of the cultural resource study have extensive experience in the region and have worked on a number of cultural resource surveys across southern California. The following are SRI's key project personnel:

- Kenneth M. Becker, M.A., Registered Professional Archaeologist (RPA), project manager;
- Jeanine Hoy, M.A., RPA, project director; and
- Kaitlin Harstine, M.A., RPA, assistant project director.

Environmental Setting

The project area is in the central part of the Coachella Valley, a low valley sandwiched between the Santa Rosa Mountains to the south and southeast and the Little San Bernardino Mountains to the north. The valley is part of the Colorado Desert geomorphic province, an area that includes both sides of the lower Colorado River and the Coachella and Imperial Valleys of California (Jenkins 1980).

High temperatures during the summer months average between 39°C and 42°C (102°F and 108°F). During the winter, the mean temperature falls to about 22°C (71°F) during the day, and lows reach near 7°C (44°F) at night. The average annual precipitation in the area is 12.4 cm (4.9 inches), most of which falls between December and March (WorldClimate.com 2016), although occasional summer thunderstorms in August and September provide additional rainfall.

Geology

The Coachella Valley forms the northern extent of the Salton Trough, a northwest–southeast-trending depression that reaches from the San Gorgonio Pass to the Gulf of California, 280 km (174 miles) to the south. The valley has been heavily shaped by tectonic forces involving interaction of the Pacific Plate and the North American Plate along the San Andreas Fault system (Harden 2004). The valley is a fault-bound depression, and the San Andreas Fault runs along the northern margin of the valley. The Banning Fault, a subordinate fault to the San Andreas Fault, runs east–west through the valley, between the San Andreas Fault and the San Jacinto Fault to the west. Folding in the earth's crust caused by the faults has blocked the flow of underground aquifers and has resulted in numerous springs and pools. These water sources were crucial resources for prehistoric groups (Wilke 1978). The Whitewater River was the other major source of water in the Coachella Valley. The river starts on the flanks of Mount San Gorgonio and enters the Coachella Valley through the Banning Pass. It runs along the southern edge of the valley, approximately 3.8 km (6.1 miles) south of the project area.

The mountain ranges surrounding the Coachella Valley are uplifted blocks of continental crust. The Santa Rosa Mountains are at the northern end of the Peninsular Ranges, a series of mountain ranges running southeastward from the Los Angeles Basin to the tip of the Baja Peninsula (Jahns 1954:3) that forms a natural border between the coastal areas to the west and the deserts to the east. The mountains are composed of plutonic intrusions that have been uplifted through tectonic activity. The highest point is San Jacinto Mountain, which, at 3,307 m (10,849 feet) above mean sea level (AMSL), towers above the present-day Palm Springs. The Little San Bernardino Mountains are part of the Transverse Ranges, a series of east–west-trending mountains that are similar in composition to the Peninsular Ranges and include large masses of Mesozoic-era plutonic rocks. The summits of the Transverse Ranges exceed 3,500 m (11,483 feet) AMSL at San Gorgonio Peak (Bailey and Jahns 1954).

Much of the valley bottom is at or below sea level, with the deepest areas dipping to 80 m (263 feet) below sea level. The project area is situated at an elevation of approximately 76 m (249 feet) AMSL, in the middle of the valley. Both alluvial and aeolian sediments are present within the valley. Geologic mapping of Quaternary sediments in the area by Lundstrom et al. (2001) indicated that alluvial-fan surfaces of probable late Holocene age are extensive and show very weak, nonoxidized soils. Recent aeolian sand is also common in the area and is mapped as dunes and sand ramps forming mantles on slopes in the valley (Lundstrom et al. 2001).

The hot and dry climate of the Coachella Valley would normally place significant restrictions on human activities. However, the valley has been repeatedly inundated in the past as a result of flooding brought on by changes in the course of the Colorado River. Over many episodes, the river left its banks and flooded the Salton Trough, resulting in the creation of ancient Lake Cahuilla, also referred to as Blake's Sea or Lake LaConte (Wilke 1978). At its maximum, the lake reached 184 km (114.3 miles) long, 54 km (33.6 miles) wide, and 96 m (315 feet) in depth, and it inundated a considerable portion of the valley. When the Colorado River resumed its normal course, the lake would begin to dry. Recent studies have suggested that it would have taken approximately 56 years for the lake to be completely dry after having reached the high-water mark (Laylander 1997).

Between 800 and 300 B.P., there were at least three documented cycles of flooding and desiccation, but it is not clear whether the lake during that time was primarily full and experiencing only minor drying episodes, mostly empty and only occasionally inundated, or somewhere in-between (Laylander 1997; Waters 1983; Wilke 1978; see also Schaefer and Laylander 2007). The most-recent stand of Lake Cahuilla may have been brief, occurring between 700 and 500 B.P.

Much of the prehistoric occupation of the Coachella Valley appears to have been correlated to the presence of Lake Cahuilla. The earliest known sites in the valley date to the Late Archaic period, roughly 4000–1500 B.P. (Love and Dahdul 2002). Most of these sites are at or near the ancient lakeshore, as are several sites dating to the Late Prehistoric period (Sutton and Wilke 1988; Wilke 1978). The project area is approximately 9 km (5.6 miles) northwest of the maximum shoreline of Lake Cahuilla. Human use of the project area would have focused primarily on resources available in the desert, at nearby oases, and along the Whitewater River wash, instead of the lacustrine resources available at the lakeside.

Plant Communities

The Coachella Valley is part of the Sonoran Life Zone and is characterized by the Creosote Bush Scrub plant community (Hall and Grinnell 1919; Munz 1974; Schoenherr 1992). This life zone is characterized by the presence of creosote bush (*Larrea tridentata*), mesquite (*Prosopis glandulosa*), brittlebush (*Encelia farinosa*), cholla and pricklypear cacti (*Opuntia* spp.), chuparosa (*Beloperone californica*), desert lavender (*Hyptis emoryi*), sage (*Salvia* spp.), and various grasses. California fan palm (*Washingtonia filifera*), the only species of palm native to California, is present in oases surrounding the valley. Desert oases also provide habitat for a number of other species, including screwbean mesquite (*Prosopis pubescens*) and Fremont cottonwood (*Populus fremontii*). Many of the plants known to the historical-period Cahuilla, the cultural group that occupied the Coachella Valley at the time of European contact, were medicinal or therapeutic in nature (for a detailed discussion, see Bean and Saubel [1972]).

Animal Communities

A number of desert animals inhabit the greater Coachella Valley. They include mammals such as coyotes (*Canis latrans*), gray foxes (*Urocyon cinereoargenteus*), various mouse species (*Peromyscus* spp. and *Perognathus* spp.), squirrels (*Spermophilus* [*Citellus*] spp.), and lagomorphs (*Lepus californicus* and *Sylvilagus audubonii*); reptiles, including rattlesnakes (*Crotalus* spp.) and a variety of lizards (*Crotaphytus* spp., *Dipsosaurus* spp., *Sceloporus* spp., *Streptosaurus* spp., and *Urosaurus* spp.); and birds, such as turkey vultures (*Cathartes aura*), red-tailed hawks (*Buteo jamaicensis*), mourning doves (*Zenaida*

macroura), and ravens (*Corvus corax*). During prehistoric times and up to the early twentieth century, pronghorn (*Antilocapra americana*) was common in the Coachella Valley but has since been pushed out by modern development (Jaeger 1965). Besides representing sources of food, many animals were important components of Cahuilla rituals, and their bones have been found in ritual contexts at sites in Tahquitz Canyon (see Bean et al. 1995).

Cultural Setting

The following section describes the general chronological sequence of cultural development in the Colorado Desert as it is currently understood.

Prehistoric Background

The prehistory of the Colorado Desert, including the northern Coachella Valley, is poorly understood, although a number of recent studies have greatly improved our knowledge. Treatments of the region include the classic work of Rogers (1945, 1966) and the more-recent works of Schaefer (1994), Love and Dahdul (2002), and Schaefer and Laylander (2007). Schaefer (1994) defined three principal prehistoric periods: the Paleoindian, Archaic, and Late Prehistoric periods (see also Love and Dahdul 2002); that sequence is generally followed below.

The Paleoindian Period (12,000–8000 B.P.)

Paleoindian period groups, probably with Clovis complex technology, occupied much of what is now California beginning about 12,000 years ago. However, there is very little evidence of Paleoindian period occupation of the northern Coachella Valley. The reasons for this are unclear but may be related to a lack of habitat for the large game hunted by Clovis people.

Across much of western North America, the Clovis complex developed into the Western Stemmed Point tradition or Western Pluvial Lakes tradition after 10,000 B.P. (Bedwell 1973), probably in response to the warming and drying climate of the early Holocene. This tradition is characterized by crescents and large stemmed, shouldered, and lanceolate points (Willig and Aikens 1988:3). This cultural assemblage is commonly referred to as San Dieguito in southern California and had an economy presumably based on the exploitation of marsh plants, fish, freshwater shellfish, and large and small game (Rogers 1966). Rogers (1966) had originally defined three distinct phases associated with the San Dieguito cultures, but further excavations at the sites where he worked have failed to find evidence of these distinctions (Vaughan 1982; Warren 1967:171).

There is little evidence of a San Dieguito presence in the northern Coachella Valley, where the occupants were probably just a few "small, mobile bands exploiting small and large game and collecting seasonally available wild plants" (Schaefer 1994:63; see also Schaefer and Laylander 2007). The reasons for this are unclear, but the lack of an early occupation may indicate that Lake Cahuilla was not inundated during that time.

The Archaic Period (8000–1500 B.P.)

Beginning about 8,000 years ago, the climate became hotter and drier, and it appears that the northern Coachella Valley was basically abandoned during that time (Schaefer 1994:64). At best, the record suggests only minor occupation by relatively few people. It appears that the Colorado Desert was reoccupied when

the climate began to cool, after about 4,000 years ago, during the Late Archaic period (Love and Dahdul 2002; Schaefer 1994:64), and several archaeological sites in the northern Coachella Valley are dated to this time. It seems that, as with later occupations, much of the occupation centered on the shores of Lake Cahuilla. However, very little is known about overall Late Archaic period adaptations or social structure.

One of the best-documented Late Archaic period sites in the Colorado Desert is the Indian Hill Rockshelter near Anza-Borrego State Park (McDonald 1992; Wilke et al. 1986), approximately 50 km (31 miles) south of the project area. Excavators found a number of rock-lined storage pits as well as hearths and Elko Eared projectile points. Radiocarbon dates from these levels indicated that they were occupied approximately 4,000 years ago. McDonald (1992) postulated that the rockshelter was a base camp for hunter-gatherers who likely roamed over a large area in search of food. A rockshelter from Tahquitz Canyon also contained rock-lined pits and similar artifacts, but no radiocarbon dates were taken at the site; so, its true age is unclear (Schaefer 2002). Taken together, these sites suggest that people lived in highly mobile bands and took advantage of a variety of resources in the area.

Excavations at two sites (CA-RIV-1827 and CA-RIV-2642) near Desert Hot Springs, 20 km (12.4 miles) northwest of the project area, encountered deposits dating to the transition from the Late Archaic period to the Late Prehistoric period, approximately 1200–1000 B.P. (Dahdul et al. 2008; Drover 1982, 1988; Hogan et al. 2010). These sites contained evidence of habitation, including hearth features; activity surfaces and a variety of artifact types, such as flaked stone debitage; faunal remains; and possible human remains. The sites are adjacent to the ethnohistorically known Seven Palms Rancheria (CA-RIV-154), and it is likely that they represent an early occupation of that village.

The Late Prehistoric Period (1500–200 B.P.)

Beginning about 1500 B.P., Yuman (or Patayan) agricultural groups in the Colorado River area began to influence Colorado Desert groups, particularly in the Coachella Valley. This Patayan pattern included a preceramic phase (Rogers 1945:170; Warren 1984; Waters 1982a, 1982b) and three ceramic phases, Patayan I (ca. 1500–1000 B.P.), II (ca. 1000–500 B.P.), and III (after ca. 500 B.P.). After about 1000 B.P. (Patayan II), a number of cultural traits, including new ceramic types, small triangular points, and cremations, moved westward from the Colorado River, either spreading through diffusion or perhaps carried by some migrating Yuman people. Whichever the case, long-distance trade networks were established between the Coachella Valley and the Colorado River.

Agricultural crops were also probably introduced into the area during this time. Along the Colorado River, domesticated crops constituted up to half of the Yuman diet (Castetter and Bell 1951). Ethnographically (see below), the Cahuilla were known to have large walk-in wells that could have been used in pot irrigation (Bean and Mason 1962), although small check dams and other simple irrigation technologies likely also were used (Wilke and Lawton 1975:28).

The Late Prehistoric period groups that occupied the Coachella Valley were the direct ancestors of the ethnographic Cahuilla. This period represents a significant increase in human occupation of the valley, and several large archaeological sites from the period have been identified (see Bean et al. 1995; Schaefer 1994; Sutton and Wilke 1988; Wilke 1978).

Ethnographic Background

The Aboriginal group that occupied the northern Coachella Valley during the historical period was the Desert Cahuilla, who, along with the Mountain and Pass Cahuilla, constituted the ethnographic Cahuilla. The Cahuilla spoke a language of the Takic branch of Northern Uto-Aztecan (see Goddard 1996:Table 3), and the Desert Cahuilla spoke a distinct dialect of Cahuilla. Descriptions of Cahuilla culture have been presented by Barrows (1900), Hooper (1920), Curtis (1926), Strong (1929), and Bean (1972, 1978). There have been few archaeological studies of the historical-period Cahuilla, but testing at the former Mission Creek Indian Reservation, approximately 42 km (26.1 miles) northwest of the project area, identified

occupations stretching from the Late Prehistoric period into the early twentieth century (Altschul 1986). Similarly, excavations at Tahquitz Canyon (Bean et al. 1995), 20 km (12.4 miles) west of the project area, found a large village complex dating to A.D. 1600–1870.

Villages were in areas with access to a number of resources, either at springs or where wells could be easily dug. As a result, most villages relied on hand-excavated walk-in wells for water. These wells were dug to a depth of about 6 m (20 feet), to reach the water table. Villages were loose clusters of houses spread over an area up to 1 km (0.6 m miles) across. Some of the houses were large (e.g., 6 m [20 feet] in length), and others were smaller; at least one large ceremonial structure was present in each village (Bean 1972:72). Once established, villages were considered permanent (Bean 1972:74) and were occupied by lineages. Villages were connected to each other by a complex system of trails.

The Cahuilla were organized into moieties, tribelets (i.e., clans), and then lineages. The two moieties were the *túktem* (Wildcats) and *'istam* (Coyotes; Bean 1978; Garcia et al. 2011). The lineages were landholding groups, and each occupied its own village. The adjacent lineage, with its own village, would generally belong to the other moiety. This arrangement served to ensure access to different habitats. Each village was economically independent.

The Desert Cahuilla exploited a large number of plant species (Barrows 1900; Bean and Saubel 1972), of which mesquite (*Prosopis* spp.) on the valley floor was the primary staple. Other important resources, such as agave (*Agave deserti*), pinyon (*Pinus* spp.), and acorns (*Quercus* spp.), were obtained in the mountains to the west. More than 150 species of plants were used for food, fibers, medicines, manufacturing, and dyes. The Cahuilla exploited a variety of animals from mountain habitats, including deer (*Odocoileus* sp.), mountain sheep (*Ovis canadensis*), and pronghorn, and smaller animals, such as rabbits and rodents, from desert habitats.

The Desert Cahuilla also grew a few agricultural crops, namely corn, beans, and squash, which were probably obtained from native peoples along the Colorado River to the east. Crops were irrigated from springs (Wilke and Lawton 1975); with the arrival of Europeans, wheat, melons, barley, and fruit trees were added (Bean and Mason 1962; Lawton and Bean 1968). By the late eighteenth century, the Cahuilla had adopted ranching as an important industry and worked as wage laborers on railroads, farms, and ranches.

After the smallpox and measles epidemic of 1863, the Cahuilla population, originally perhaps as many as 3,000 people, declined rapidly. In addition, the emigration of young people seeking work in the metropolitan areas of southern California caused many Cahuilla to move away from their traditional areas (Harvey 1967). In 1974, approximately 900 people claimed Cahuilla descent, most of whom lived on one of the many Cahuilla reservations in inland southern California (Garcia et al. 2011:21).

The Agua Caliente Indian Reservation was founded in 1876 by an Executive Order of President Ulysses S. Grant and was expanded in 1877 and 1907. The reservation covers roughly 31,420 acres (12,715.2 ha) and consists of all even-numbered sections and all unsurveyed portions of Township 4 South, Ranges 4 and 5 East, and Township 5 South, Range 4 East, on the San Bernardino Meridian, with the exception of sections that already had been given out by the government (Garcia et al. 2011:21). The odd-numbered sections had already been given to railroads as an incentive to develop cross-country rail lines, and so, the reservation appears as a checkerboard pattern on maps. In 1891, Congress passed the Mission Indian Relief Act, which authorized allotments of reservation land to be given to individuals. The allotment elections were finally approved by the Secretary of the Interior as part of the Equalization Act in 1959 (Public Law 86-339), which finalized the individual allotments and set aside certain lands for Tribal use and cemeteries. The Agua Caliente Band of Cahuilla Indians (ACBCI) has a land-exchange agreement with the U.S. Department of the Interior Bureau of Land Management and is actively acquiring other non-reservation land.

Historical-Period Background

The extreme aridity of the Colorado Desert acted as a deterrent to many early explorers. The earliest recorded European visit to the Coachella Valley was in the winter of 1823–1824 by José Romero, the leader

of an expedition attempting to reach the Colorado River by a new route (Bean and Mason 1962). Until the mid-nineteenth century, however, most nonnative forays into the area were confined to the established prehistoric trail systems. A number of those trails passed through the western Coachella Valley, including the important Cocomaricopa Trail, which connected Arizona with the cultures along the southern California coast (Bean and Vane 1995).

In 1853, William P. Blake (1857) described the Coachella Valley during the Pacific Railroad Survey expedition, recording the general environment, noting the locations of Indian villages, describing native agriculture in the valley, and recording some oral traditions of the Indians concerning life around ancient Lake Cahuilla. In 1855 and 1856, the U.S. Land Office Survey surveyed the valley and divided it into townships and sections (Wilke and Lawton 1975).

European settlement of the valley intensified after the completion of the Southern Pacific Railroad in 1877 (Heath 1945). In the 1880s, the Homestead Act and the Desert Land Act opened much of the public land in the area to private development. Farming was the primary economic activity in the valley, supported by a variety of wells that accessed sizable underground water resources. In 1948–1949, construction of the Coachella Canal supplied additional water to the valley. Much of the area to the east of the project area, in the area around the town of Indio, is still an important agricultural center. Vegetables, cotton, citrus, and particularly dates were, and still are, important cash crops.

The development of the state highway system in the early twentieth century opened the valley to further development. State Route 99 (now Varner Road) was completed through the area in 1912. The Coachella Valley became a popular vacation spot for the well-to-do in the Los Angeles Basin. Resorts and hotels, equestrian centers, and, by the mid-twentieth century, country clubs appeared throughout the valley. In particular, the Palm Springs area was made famous by Cary Grant, Bob Hope, and Lucille Ball, among others.

During the late twentieth century, development in the Coachella Valley expanded rapidly, with scores of country clubs and housing developments appearing along U.S. Highway 111 and Interstate 10. The northern and eastern sides of the project area are surrounded by such developments. Native American–led development, with several casino resorts, golf courses, and other developments, has also driven economic expansion in the valley.

Records Search and Literature Review

Records searches and other archival research were conducted at the CHRIS EIC, Department of Anthropology, University of California, Riverside, on September 22, 2022. The goals of the records search were to review any previous archaeological projects that may have been conducted within the project area and to identify any previously recorded archaeological resources located on the property. The records search looked at all reports of archaeological work executed within a 1-mile (1.6-km) radius of the project area. The records search was conducted by examining USGS topographic maps held by the EIC that show the locations of previous cultural resource surveys and known archaeological sites. Survey reports and site records for previously recorded sites were gathered. The records search also included consultation of the catalogs of sites listed in the National Register of Historic Places (NRHP) and/or designated California Historical Landmarks (CHLs). Because of current COVID-19 restrictions, all record searches conducted at the EIC were conducted by EIC staff.

Records-Search Results

The results of the records search indicated that 62 previous cultural resource projects had been conducted within the records-search area (Figure 3; Table 1). No previous studies involving the project area had been completed.

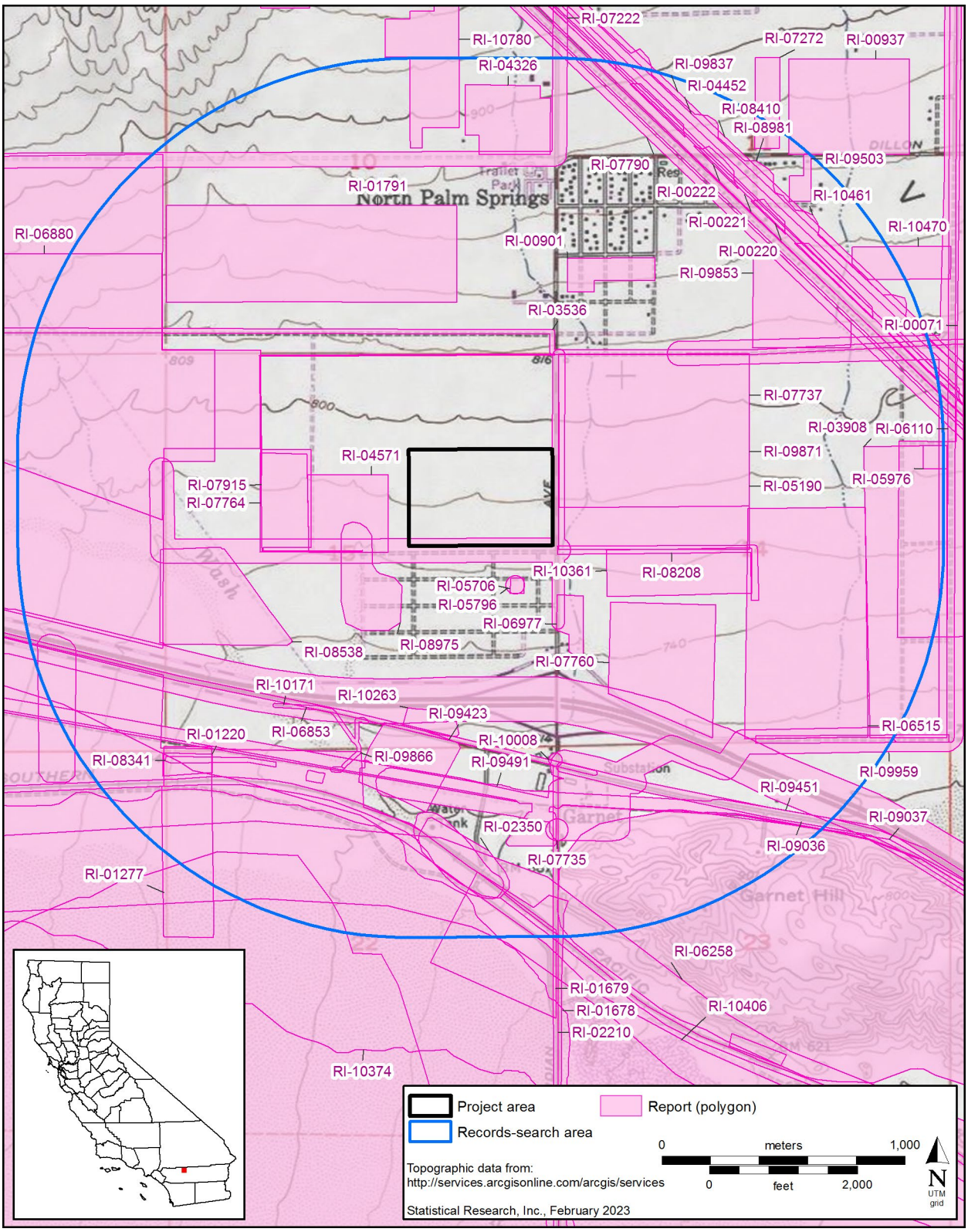

Figure 3. Records-search-results map.

Table 1. Records-Search Results: Previous Projects

Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-00071	Phillip J. Wilke	1972	*Flood Control on Lower Mission Creek: Expected Impact on Archaeological Resources.*	survey	positive	records-search buffer
RI-00220	Richard A. Cowan and Kurt Wallof	1977	*Interim Report Field Work and Data Analysis: Cultural Resource Survey of the Proposed Southern California Edison Palo Verde–Devers 500 kV Transmission Line*	survey	negative	records-search buffer
RI-00221	Richard L. Carrico, Dennis K. Quillen, and Dennis Gallegos	1982	*Cultural Resource Inventory and National Register Assessment of the Southern California Edison Palo Verde to Devers Transmission Line Corridor (California Portion)*	survey	negative	records-search buffer
RI-00222	Kurt Wallof and Richard A. Cowan	1977	*Final Report: Cultural Resource Survey of the Proposed Southern California Edison Palo Verde–Devers 500 kV Power Transmission Line*	survey	negative	records-search buffer
RI-00901	Jean A. Salpas	1980	*An Archaeological Assessment of Tract 15688*	survey	negative	records-search buffer
RI-00937	James Swenson	1980	*An Archaeological Evaluation of a 48.23 Acre Parcel near North Palm Springs, Riverside County, California*	survey	positive	records-search buffer
RI-01220	William Self	2000	*Letter Report: Inspection of Pipeline Relocation Area in Union Pacific Railroad Corridor, Line Section, Riverside, California*	survey	negative	records-search buffer
RI-01277	Eric W. Ritter	1981	*Initial Archaeological Field Investigations for the San Gorgonio Pass Wind Program, California*	survey	positive	records-search buffer
RI-01678	Thomas T. Taylor	1983	*Report of an Intensive Archaeological Survey of Various Private and Public Land Parcels for the San Gorgonio Pass Wind Program, Riverside County, California*	survey	negative	records-search buffer
RI-01679	Brian D. Dillon	1994	*Archaeological Assessment of the City of Palm Springs Railroad Station Project, a 13-Acre Property near Palm Springs, Riverside County, California*	survey	positive	records-search buffer
RI-01791	James D. Swenson	1984	*A Cultural Resources Survey of a Portion of Section 10, T. 3S, R. 4E, North of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-02210	J. Underwood, J. Cleland, C. M. Wood, and R. Apple	1986	*Preliminary Cultural Resources Survey Report for the US Telecom Fiber Optic Cable Project from San Timoteo Canyon to Socorro, Texas: the California Segment*	survey	positive	records-search buffer

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Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-02350	Rebecca McCorkle Apple and Jan E. Wooley	1988	*MCI Rialto to El Paso Fiber Optics Project—Intensive Cultural Resource Survey—San Bernardino and Riverside Counties, California*	survey	positive	records-search buffer
RI-03536	Michael Hogan	1992	*Cultural Resources Assessment, 26+ Mile Segment of the AT&T Fiber-Optics Line Replacement Project, Whitewater to Coachella, Riverside County, California*	survey	positive	records-search buffer
RI-03908	Bruce Love and Bai "Tom" Tang	1995	*Cultural Resources Report: Mission Creek Wastewater Treatment Plant Neat the City of Desert Hot Springs, Riverside County, California*	survey	negative	records-search buffer
RI-04326	Mark C. Robinson	1999	*Cultural Resources Survey and Assessment of Approximately 16 Acres: Mars Construction Project in Indian Avenue & Dillon Road, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-04452	Bruce Love	1993	*Cultural Resources Reconnaissance, Eagle Mountain Pumped Storage Transmission Corridor, Riverside County, California*	survey	negative	records-search buffer
RI-04571	Bryon Bass	2001	*Cultural Resources Technical Report: Indigo Energy Facility*	survey	negative	records-search buffer
RI-05190	Roger D. Mason	2005	*Phase I Archaeological Survey Report for a Property Located on the Southeast Corner of Indian Avenue and 18th Avenue, APN 66-340-004, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-05706	Erika Thal	2005	*Letter Report: Proposed Cellular Tower Project(s) in Riverside County, California, Site Name/Number: CA-7282B/Painted Hills*	survey	negative	records-search buffer
RI-05976	Bai "Tom" Tang, Michael Hogan, Casey Tibbet, and Daniel Ballester	2003	*Historical/Archaeological Resources Survey Report, Mission Springs Water District, Garnet Basin Test Well Project near the City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-06110	Michael Dice and Marnie Vianna	2003	*Phase 1 Cultural Resources Assessment and Paleontological Records Search: Mission Springs Water District Pipeline Project, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-06258	Chambers Group, Inc., Irvine, California	2006	*Cultural Resources Survey Report: Union Pacific Railroad, Fingal-Thermal Phase II Expansion, Riverside County, California*	survey	positive	records-search buffer
RI-06515	Bai "Tom" Tang	2006	*Historical/Archaeological Resources Survey Report, Interstate West Business Park, near the City Desert Hot Springs, Riverside County, California*	survey	negative	records-search buffer

Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-06853	Katherine H. Pollock and Michael K. Lerch	2005	*Archaeological Survey of the Stubby and Townhall Transmission Lines, Banning to Desert Hot Springs, Riverside County, California*	survey	positive	records-search buffer
RI-06880	Tetra Tech EC, Inc.	2006	*A Class III Archaeological Survey of Approximately 1,500 Acres in Portions of S34 T2S, R4E, San Bernardino Base Line Meridian (SBBM), and Sections 3,4,5,8,9,15, and 16 T. 3S., R. 4.E., SBBM, for the Proposed Dillon Wind Farm, Unincorporated Land in the Vicinity*	survey	negative	records-search buffer
RI-06977	Philip de Barros	2007	*Phase 1 Archaeological Assessment of a 4.4-Acre Parcel along Indian Avenue South of North Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-07222	Stacey C. Jordan	2007	*Archaeological Survey Report for Southern California Edison Company Invader 12kV-Devers Jr. Project in Riverside County, California*	survey	negative	records-search buffer
RI-07272	Robert S. White and Laura S. White	2006	*A Cultural Resource Assessment of Plot Plan 22086, A 9.48-Acre Parcel Located Adjacent to Dillon Road Midway between Indian Avenue and Little Morongo Road, North Palm Springs, Unincorporated Riverside County*	survey	negative	records-search buffer
RI-07735	Koji Tsunoda	2008	*Archaeological Survey Report for Southern California Edison Company O&M-Plant Betterment Project on an H-Frame Structure (Pole Nos. 333301S and 2228238E) on the Tram 33KV Circuit, Riverside County, California (WO No. 6279-5491, AI No. 7-5007, JO No. 6361)*	survey	negative	records-search buffer
RI-07737	Clarence Bodmer, Daniel Ballester, and Laura H. Shaker	2008	*Phase 1 Archaeological Assessment: RCI Industrial Park, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-07760	Clarence Bodmer, Daniel Ballester, and Laura H. Shaker	2008	*Phase 1 Archaeological Assessment: Tentative Parcel Map No. 35962, I-10 Distribution Center Project, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-07764	Dierdre Encarnacion, Daniel Ballester, and Laura Shaker	2008	*Historical/Archaeological Resources Survey Report: BP Palm Springs Fuel Logistics Center, City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-07790	Jerry Schaefer	2003	*A Class II Cultural Resources Assessment for the Desert-Southwest Transmission Line, Colorado Desert, Riverside and Imperial Counties, California*	survey	negative	records-search buffer

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Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-07915	Bai "Tom" Tang and Harry M. Quinn	2008	*Letter Report: Addendum to Historical/Archaeological/Paleontological Resources Studies BP Palm Springs Fuel Logistics Center Project, City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-08208	Bai "Tom" Tang	2009	*Letter Report: Addendum to Phase I Archaeological Resources Assessment and Paleontological Resources Assessment Reports, Tentative Parcel Map No. 35962, I-10 Distribution Center Project, North Palm Springs Area, Riverside County, California*	survey	negative	records-search buffer
RI-08341	Bai "Tom" Tang	2009	*Letter Report: Addendum to Historical/Archaeological Resources Survey Mountain Valley IV Windfarm Project (CACA 49286), City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-08410	William T. Eckhardt, Kristen E. Walker, and Richard L. Carrico	2004	*Draft Cultural Resources Inventory of the Proposed Devers to Palo Verde II 500 kV Transmission Line, Riverside County, California*	survey	positive	records-search buffer
RI-08538	Bai "Tom" Tang, Dirdre Encarnacion, Daniel Ballester, and Laura H. Shaker	2010	*North Palm Springs 4 Phase A Solar Power Project*	survey	positive	records-search buffer
RI-08975	James T. Daniels, Jr.	2011	*Additional Intensive Survey for SCE DPV2: Three Additional Helicopter Landing Zones and Two Alternate Construction Yards, Riverside County, California*	survey	positive	records-search buffer
RI-08981	Matthew M. DeCarlo, Scott C. Justus, and William T. Eckhardt	2013	*Summary Class III Cultural Resource Inventory, Proposed Southern California Edison Devers–Palo Verde 2 500kV Transmission Line Project, Riverside County, California*	survey	positive	records-search buffer
RI-09036	Bai "Tom" Tang and Michael Hogan	2012	*Historical/Archaeological Resources Survey Report, Wild Sands I Project (Jones/Sirota Properties and Transmission Line Right-of-Way), City of Palm Springs, Riverside County, California*	survey/ evaluation	positive	records-search buffer
RI-09037	Desireé Reneé Martinez	2013	*Report and Evaluation of Hoon wit ten ca va, "Hills of the Roasted Bear," as a Traditional Cultural Property*	evaluation	negative	records-search buffer
RI-09423	Brian F. Smith	2014	*A Phase I Cultural Resources Survey of the FedEx Ground Distribution Facility Project*	survey	negative	records-search buffer
RI-09451	Christine Ward and Scott H. Kremkau	2015	*Class III Cultural Resources Inventory of the Southern California Gas Company Pipeline Safety Enhancement Plan Line 2000C Hydrotest Project, Riverside County, California*	survey	negative	records-search buffer

Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-09491	Christine Ward and Scott H. Kremkau	2015	*Class III Cultural Resource Inventory of the Southern California Gas Company Pipeline Safety Enhancement Plan Line 2001W-C Hydrotest Project, Riverside County, California*	survey	negative	records-search buffer
RI-09503	Ben Kerridge, Daniel Ballester, and Nina Gallardo	2015	*Angel View Salvage and Recycling Facility, Assessor's Parcel Numbers 666-280-009 through -012, City of Desert Hot Springs, Riverside County, California*	survey	negative	records-search buffer
RI-09837	Douglas W. Mengers and Shannon E. Foglia	2017	*Class III Cultural Resources Inventory Report for the Proposed Southern California Edison Company's Devers–Colorado River No. 1 Transmission Line Rating Remediation Project, Riverside County, California.*	survey	positive	records-search buffer
RI-09853	Ryan Tubbs and Wendy Blumel	2016	*Cultural Resources Investigation of a 27-Acre Parcel in the City of Desert Hot Springs, Riverside County, California*	survey	negative	records-search buffer
RI-09866	Sherri Gust	2011	*Cultural Resources Monitoring Compliance Report AES Seawest Mountainview IV Generation Project in Riverside County, California*	monitoring	negative	records-search buffer
RI-09871	Bai "Tom" Tang	2016	*Update to Historical/Archaeological Resources Survey the Coachillin' Holdings Project; Tentative Parcel Map No. 37158, Assessor's Parcel Numbers (APNs) 666-340-004 and -006, City of Palm Springs, Riverside County, California, CRM TECH, Contract No. 3074*	survey	negative	records-search buffer
RI-09959	Zach Wilson	2017	*Cultural Resources Assessment for Southern California Edison's Garnet Submission Expansion Project, Riverside County, CA*	other research	negative	records-search buffer
RI-10008	Amy Glover, Sherri Gust, Melinda C Horne, and Janell Mort	2012	*Archaeological Survey Report, Palm Springs Signal Synchronize Project, City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer
RI-10171	Amy Glover, Sherri Gust, and Kim Scott	2010	*Paleontological and Archaeological Resources Assessment Report for the AES Seawest Mountainview IV Generation Project in Riverside County, California*	survey	positive	records-search buffer
RI-10263	Terri Jacquemain, Daniel Ballester, and Nina Gallardo	2018	*Historical/Archaeological Resources Survey Report: Garnet Properties 2014 Project, Assessor's Parcel Nos. 666-430-001 to -005, -007, -009, and-012, City of Palm Springs, Riverside County, California*	survey	negative	records-search buffer

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Report No.	Author(s)	Report Year	Report Title	Project Type	Results	Location
RI-10361	Fred Lange, Matthew Stever, and Benjamin Scherzer	2016	*Cultural and Paleontological Resources Assessment, Blackstar DHS Project, City of Desert Hot Springs, Riverside County, California*	survey	negative	records-search buffer
RI-10374	Joan George and Venessa Mirro	2013	*Phase 1 Cultural Resources Assessment for the Coachella Valley Water District's Whitewater River–Coachella Valley Stormwater Channel Project, Riverside County, California*	survey	positive	records-search buffer
RI-10406	Michael Mirro	2012	*Archaeological Sensitivity Model for the Whitewater River Stormwater Channel, Riverside County, California*	evaluation	negative	records-search buffer
RI-10461	William T. Eckhardt, Matthew M. DeCarlo, Doug Mengers, Sherri Andrews, Don Laylander, and Tony Quach	2015	*Archaeological Investigations and Monitoring for the Construction of the Devers-Palo Verde No. 2 Transmission Line Project, Riverside County, California*	survey/ monitoring	positive	records-search buffer
RI-10470	Robert Cunningham and Wendy Blumel	2017	*Cultural Resources Investigation, 13-Acre Parcel in the City of Desert Hot Springs*	survey	positive	records-search buffer
RI-10780	Scott M. Hudlow	2019	*A Phase I Cultural Resource Survey for Three Properties North of Dillon Road, Desert Hot Springs, Riverside County, California*	survey	positive	records-search buffer

[a] Site location not shown on the records-search-results map (Figure 3).

The records search identified 37 previously recorded cultural resources within the records-search area (Table 2). No previously recorded resources were identified within the project area. The 37 previously recorded resources identified within the 1-mile (1.6-km) records-search buffer consisted of 33 historical period resources and 4 prehistoric resources. The historical period resources are 10 sites (7 refuse scatters; 1 site with foundations, a reservoir, footings for a water tank, and a refuse scatter; 1 transmission corridor; and 1 electrical substation), 4 roads/highways, 1 railroad structure, and 18 isolates (hole-in-top cans, glass bottles/fragments, porcelain insulators, and a ceramic doll head). The prehistoric resources are a ceramic-scatter site, 2 debitage isolates, and 1 percussion-tool isolate. None of the resources was found to be listed in the NRHP or the catalog of CHLs.

Native American Heritage Commission Sacred Lands File Search

Part of the records search and literature review involved contacting the Native American Heritage Commission (NAHC) for a list of traditional use areas or sacred sites within the project area and a list of specific Native American groups or individuals who could provide additional information regarding cultural resources within the project area. SRI submitted a Sacred Lands File search request on September 20, 2022, and on November 3, 2022, the results came back negative. The NAHC provided a list of 21 contacts that could provide additional information regarding cultural resources within the project area (Appendix A), and SRI began informal discussions with the contacts provided by the NAHC at that time.

On November 10, 2022, SRI sent a letter to all 21 contacts, describing the proposed project and requesting any information that they could provide. The letters arrived between November 14 and 18, 2022. SRI also attempted to contact by phone and/or e-mail any individuals who did not respond to the letter. The contact letter and documentation of the contact efforts are presented in Appendix A.

On November 28, 2022, the Quechan Tribe of the Fort Yuma Reservation indicated that they did not wish to comment. On December 5, 2022, the San Manuel Band of Mission Indians indicated that they would defer to local Tribes. On December 8, 2022, the Augustine Band of Cahuilla Indians responded that they have no specific archival information on the project area that would indicate sacred/religious or other Native American cultural importance. On December 6, 2022, the Los Coyotes Band of Cahuilla and Cupeño Indians, the Santa Rosa Band of Cahuilla Indians, and the Soboba Band of Luiseño Indians stated that their lack of response meant that they did not wish to comment and requested that comments be deferred to the ACBCI.

On January 3, 2023, Lacy Padilla, Tribal Historic Preservation Officer (THPO) for the ACBCI, responded by letter stating that although the project area is not within the boundaries of the ACBCI Reservation, it is within the Tribe's traditional use area. For this reason, the ACBCI THPO requests the following:

- a copy of the records search, with associated survey reports and site records, from the CHRIS EIC;
- a cultural resource inventory of the project area by a qualified archaeologist before any development activities are conducted in the area;
- copies of any cultural resource documentation (report and site records) generated in connection with this project; and
- the presence of an approved ACBCI Native American cultural resource monitor or monitors during any ground-disturbing activities (including archaeological testing and surveys). Should buried cultural deposits be encountered, the monitor may request that the destructive construction halt and shall notify a qualified archaeologist (qualified per the Secretary of the Interior's Standards and Guidelines) to investigate and, if necessary, prepare a mitigation plan for submission to the State Historic Preservation Officer and the ACBCI THPO.

Table 2. Records-Search Results: Previously Recorded Cultural Resources

Primary No.	Trinomial	Resource Type	Age	Description	Location
P-33-001808	CA-RIV-001808	site	prehistoric	ceramic scatter	records-search buffer
P-33-003441	CA-RIV-003441	site	historical period	site: foundations, a reservoir, footings for a water tank, and a refuse scatter	records-search buffer
P-33-008410	CA-RIV-013015	structure	historical period	highway/road	records-search buffer
P-33-009498	CA-RIV-006381	structure	historical period	railroad	records-search buffer
P-33-015035	CA-RIV-013001	site	historical period	transmission corridor with refuse	records-search buffer
P-33-015298		isolate	historical period	1 amethyst-glass bottle neck	records-search buffer
P-33-018094		isolate	prehistoric	1 piece of jasper shatter	records-search buffer
P-33-018665		isolate	historical period	2 porcelain insulators	records-search buffer
P-33-018666		isolate	historical period	1 ceramic doll head	records-search buffer
P-33-024705	CA-RIV-012230	other	historical period	road	records-search buffer
P-33-024713	CA-RIV-012237	other	historical period	road	records-search buffer
P-33-024714		other	historical period	road	records-search buffer
P-33-024715	CA-RIV-012238	site	historical period	refuse scatter	records-search buffer
P-33-024716	CA-RIV-012239	structure, site	historical period	electrical substation	records-search buffer
P-33-024717		isolate	historical period	four isolates:1 church key–opened sanitary can, 1 amber-glass bottle base, 1 amethyst glass fragment and 1 church key–opened beer can, and 1 sanitary can	records-search buffer
P-33-026872		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-026873		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-026874		isolate	historical period	steel flat-top beverage can	records-search buffer
P-33-026875		isolate	historical period	2 steel flat-top beverage cans	records-search buffer
P-33-028014		isolate	prehistoric	1 piece of obsidian debitage	records-search buffer
P-33-028015		site	historical period	refuse scatter	records-search buffer
P-33-028574	CA-RIV-012874	site	historical period	refuse scatter	records-search buffer
P-33-028585		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028586		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028587		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028591	CA-RIV-012879	site	historical period	refuse scatter	records-search buffer
P-33-028592	CA-RIV-012880	site	historical period	refuse scatter	records-search buffer
P-33-028593		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028594		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028595	CA-RIV-012881	site	historical period	refuse scatter	records-search buffer
P-33-028596		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028597		isolate	historical period	2 hole-in-top cans	records-search buffer
P-33-028598	CA-RIV-012882	site	historical period	refuse scatter	records-search buffer
P-33-028599		isolate	historical period	1 amethyst-glass beverage bottle	records-search buffer
P-33-028600		isolate	historical period	1 hole-in-top can and 1 aqua-glass bottle fragment	records-search buffer

Primary No.	Trinomial	Resource Type	Age	Description	Location
P-33-028601		isolate	historical period	1 hole-in-top can	records-search buffer
P-33-028969		isolate	prehistoric	1 metavolcanic percussion tool	records-search buffer

Survey Methods

A pedestrian survey of the project area was conducted on October 31, 2022, by two SRI field archaeologists: Jeanine Hoy and Kaitlin Harstine. The survey was completed by walking north–south-oriented transects spaced at 15-m (49.2-foot) intervals across the project site. The progress of the survey was monitored using a Global Navigation Satellite System (GNSS) unit and high-resolution aerial photographs. During the survey, transect starting and stopping points were guided using the GNSS technology. The field crew also used the GNSS unit to record and map all identified cultural resources encountered within each transect and photographed each artifact with a digital camera. Photographs documented the artifacts within their geologic and locational contexts as well as the surrounding area. Field observations were made at each site and included relevant data such as measurements and a detailed description of each artifact encountered.

Survey Results

SRI surveyed the entirety of the 38-acre (15.4-ha) main project area as well as the 20-acre (8.1-ha) expansion area. Soils within the combined project area consist of sandy sediments that support sparse desert vegetation, primarily creosote bush, brittlebush, and various desert grasses. Ground visibility is excellent across all portions of the project area, which was ideal for the cultural resource survey. A series of off-highway-vehicle trails cross the landscape, and as a result, much of the project area exhibits some degree of surface disturbance. Modern refuse litters the ground surface throughout the project area.

The 20-acre (8.1-ha) expansion area is entirely fenced. Stacked wooden utility poles and hay bales are stored in this area. Several large mechanically disturbed areas are also present. Aerial photographs from 2020 (Historic Aerials 2020) show two windmills in the 20-acre (8.1-ha) area at that time, but those are no longer present and were reportedly removed on July 15, 2022 (Spiglanin 2023). The mechanically disturbed areas are likely results of the windmill removal. Additionally, in the southwestern portion of the 20-acre (8.1-ha) expansion area is an 800-square-foot (74.3-m^2) AT&T telecommunications facility consisting of a 100-foot (30-5-m) monopole and associated equipment, enclosed by a gated fence (Figure 4).

No archaeological sites or historical-period built-environment resources were identified during the survey, but the SRI field crew recorded two isolates within the combined 58-acre (23.5-ha) survey area (Appendix B). The first isolate (ISO 1) was discovered in the 38-acre (15.4-ha) main project area, near the eastern boundary. ISO 1 is an amber-glass bottle base with an Owens-Illinois Glass Company manufacturer's mark. The upper area of the base is embossed with an "I" inside an "O" with the factory number "21" to the left of the mark and the year code "70" to the right, indicating that the bottle was manufactured in Portland, Oregon, in 1970 (Lockhart and Hoenig 2018:7). The lower area of the base is embossed with "15419-6B 2·MM", which could potentially include liquor-permit and/or mold numbers, but records of such features are incomplete (Lockhart and Hoenig 2018; Figures 5 and 6).

Figure 4. AT&T telecommunications facility.

Figure 5. ISO 1, an Owens-Illinois Glass Company amber-glass bottle base.

Figure 6. Close-up of ISO 1, the Owens-Illinois Glass Company amber-glass bottle base.

The second isolate, ISO 2, consists of two ceramic sherds found within approximately 6 m (19.7 feet) of each other in the southwestern corner of the 20-acre (8.1-ha) expansion area (near 19th Avenue). Both are Lower Colorado Buff Ware sherds. One sherd was found as three pieces that all refit (Figure 7) and appears to have been recently broken. This refitted sherd is an indeterminate body sherd with some black staining, either from the firing process or from burning. The other sherd is an indeterminate body sherd exhibiting a slightly curved cross section. This sherd appears to have faded dark-red paint on the exterior side (Figure 8). The paint is too deteriorated to distinguish any design. Both sherds are similar enough in appearance that they may be from the same vessel, but only one appears painted. Both sherds were found on the ground surface, among modern refuse.

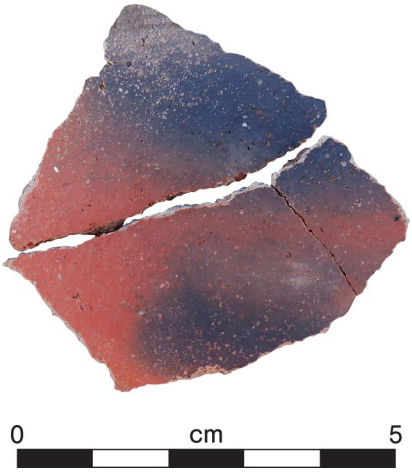

Figure 7. Refitted ceramic sherd from ISO 2.

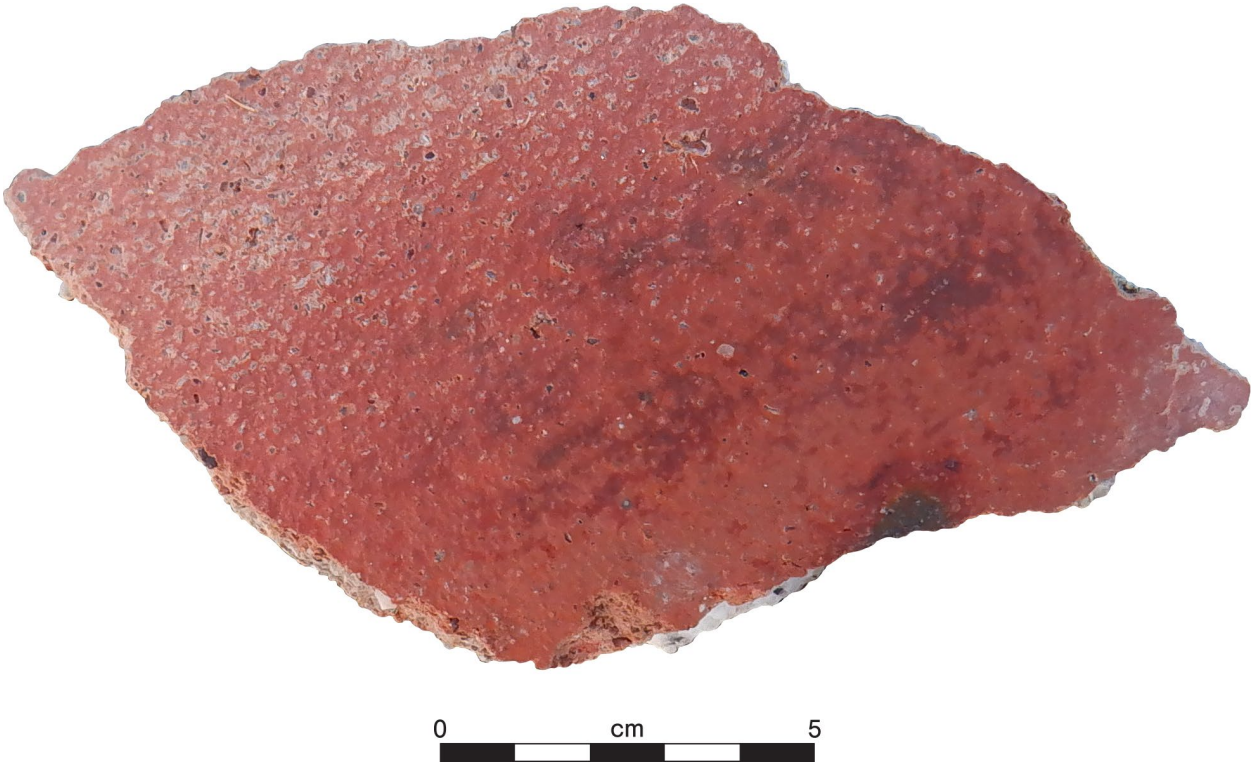

Figure 8. Painted ceramic sherd from ISO 2.

Summary and Management Recommendations

SRI's project survey resulted in the recording of two isolates. ISO 1 consists of a historical-period bottle base, and ISO 2 consists of two prehistoric ceramic sherds. SRI did not identify any prehistoric or historical-period archaeological sites or features within the project area. The two isolates are recommended not eligible for listing in the California Register of Historical Resources (CRHR). The surface of the project area exhibits general disturbance from off-highway-vehicle traffic and past construction activities, and modern trash is found across the project area. The area where the isolates were found was closely examined, and no indications of an archaeological deposit were found to be present. However, the prehistoric ceramic sherds found in the project area and the isolated prehistoric artifacts previously documented in the records-search area suggest that the project area may be sensitive for buried archaeological resources. Furthermore, the ACBCI has requested that a cultural resource monitor from the Tribe be present during ground-disturbing activities related to the project. SRI recommends that an archaeological monitoring plan be developed and implemented to ensure that any unanticipated discoveries made during project-related ground-disturbing activities are properly treated. The monitoring plan shall include provisions for a qualified archaeologist and a Tribe-approved Native American cultural resource monitor to be present during ground-disturbing activities. The monitoring plan should also be flexible and allow for the archaeologist, in consultation with the ACBCI, to reduce or terminate monitoring when it is indicated by field conditions that doing so would be appropriate.

Unanticipated Discoveries

If any prehistoric or historical-period artifact or feature is found during project activities, work near the discovery should cease, and a qualified archaeologist should be brought in to examine the find. Additional fieldwork may be required to evaluate the resource for eligibility for listing in the CRHR.

Human Remains

If human remains are identified during construction, all construction near the remains must cease immediately, and the area must be secured. The Riverside County Coroner's Office must be contacted immediately, in accordance with Section 7050.5(b) of the California *Health and Safety Code* (HSC 7050.5[b]). If the determination is made by the coroner that the remains are those of a Native American, HSC 7050.5(c) requires that the coroner contact the NAHC by telephone within 24 hours. The NAHC will then select the Most Likely Descendant and will coordinate with that individual regarding the treatment and final disposition (repatriation) of the human remains, according to the provisions of PRC 5097.98 and any other legal requirements. Human remains will be treated with the proper dignity and respect.

REFERENCES CITED

Altschul, Jeffrey H.
1986 *Significance Evaluations for Three Cultural Resources on the Ditz-Crane Mission Creek Property, Riverside County, California*. Technical Series 5. Statistical Research, Tucson.

Bailey, Thomas L., and Richard H. Jahns
1954 Geology of the Transverse Range Province, Southern California. In *Geology of Southern California*, edited by Richard H. Jahns, pp. 83–106. Bulletin 170. California Division of Mines, San Francisco.

Barrows, David Prescott
1900 *The Ethno-botany of the Cahuilla Indians of Southern California*. University of Chicago Press, Chicago.

Bean, Lowell John
1972 *Mukat's People: The Cahuilla Indians of Southern California*. University of California Press, Berkeley.

1978 Cahuilla. In *California*, edited by Robert F. Heizer, pp. 575–587. Handbook of North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Bean, Lowell John, and William M. Mason
1962 *Diaries & Accounts of the Romero Expeditions in Arizona and California, 1823–1826.* Palm Springs Desert Museum, Palm Springs, California.

Bean, Lowell John, and Katherine S. Saubel
1972 Temalpakh *(from the Earth): Cahuilla Indian Knowledge and Usage of Plants*. Malki Museum Press, Banning, California.

Bean, Lowell John, Jerry D. Schaefer, and Silvia Brakke Vane
1995 *Archaeological, Ethnographic, and Ethnohistoric Investigations at Tahquitz Canyon, Palm Springs, California*, vol. 1. Cultural Systems Research, Menlo Park, California. Prepared for Riverside County Flood Control and Water Conservation District. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Bean, Lowell John, and Sylvia Brakke Vane
1995 Ethnography and Ethnohistory. In *Archaeological, Ethnographic, and Ethnohistoric Investigations at Tahquitz Canyon, Palm Springs, California,* edited by Lowell John Bean and Sylvia Brakke Vane, pp. V10–V19. Cultural Systems Research, Menlo Park, California. Prepared for Riverside County Flood Control and Water Conservation District. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Bedwell, Stephen F.
1973 *Fort Rock Basin: Prehistory and Environment*. University of Oregon, Eugene.

Blake, William P.
1857 Geological Report. In *Reports of Explorations in California for Railroad Routes to Connect with Routes near the 35th and 32nd Parallels of North Latitude*, by Lt. R. S. Williamson, Corps of Topographical Engineers. Reports of Explorations and Surveys, to Ascertain the Most Practicable and Economical Route for a Railroad from the Mississippi River to the Pacific Ocean, Made under the Direction of the Secretary of War in 1853–4, According to Acts of Congress of March 3, 1985, May 31, 1854, and August 5, 1854, vol. 5, pt. 2, by the U.S. War Department. Senate Executive Document, 33rd Cong., 2nd sess., no. 78, pt. 5. U.S. Congress, Senate. U.S. Congressional Serial Set No. 762. Beverly Tucker, Washington, D.C.

Castetter, Edward F., and Willis H. Bell
1951 *Yuman Indian Agriculture: Primitive Subsistence on the Lower Colorado and Gila Rivers*. University of New Mexico School of Inter-American Affairs, Inter-American Series, Studies 2. University of New Mexico Press, Albuquerque.

Curtis, Edward S.
1926 *The North American Indian*, vol. 15. Cambridge University Press, Cambridge, England.

Dahdul, Mariam, Harry M. Quinn, and Zachary X. Hruby
2008 *Final Report, Archaeological Testing and Evaluation Program at Sites CA-RIV-2642, -2643, and a Portion of -2646, near the City of Desert Hot Springs, Riverside County, California*. CRM TECH, Colton, California. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Dahdul, Mariam, Harry M. Quinn, and Adrián Sánchez Moreno
2003 *Final Cultural Resources Report: Archaeological Testing and Evaluation at CA-RIV-1530 and a Portion of CA-RIV-5876, City of Indian Wells, Riverside County, California*. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Drover, Christopher E.
1982 *An Environmental Test Phase of RIV-1825 and -1827, Seven Palms Ranch, Desert Hot Springs, California*. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

1988 *An Environmental Impact Evaluation, Mitigation by Data Collection: RIV-1825; -1827; -2645 and -2648, Seven Palms Ranch, Desert Hot Springs, California*. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Garcia, Patricia, Kim Maeyama, and Rachael Nixon
2011 *Agua Caliente Band of Cahuilla Indians Historic Preservation Management Plan*. Agua Caliente Band of Cahuilla Indians, Palm Springs, California, and URS Corporation, La Jolla, California.

Goddard, Ives
1996 Introduction. In *Languages*, edited by Ives Goddard, pp. 1–16. Handbook of North American Indians, vol. 17, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Hall, Harvey Monroe, and Joseph Grinnell
1919 Life-Zone Indicators in California. *Proceedings of the California Academy of Science,* 4th series 9:37–67.

Harden, Deborah R.
2004 *California Geology*. 2nd ed. Prentice Hall, Upper Saddle River, New Jersey.

Harvey, Herbert R.
1967 Population of the Cahuilla Indians: Decline and Causes. *Eugenics Quarterly* 14:185–198.

Heath, Erle
1945 *Seventy-Five Years of Progress: Historical Sketch of the Southern Pacific, 1869–1944*. Southern Pacific Bureau of News, San Francisco.

Historic Aerials
2020 Indian Canyon Drive and 19th Avenue, Palm Springs, California. Aerial image. Available online from Historic Aerials by NETROnline, Nationwide Environmental Title Research, Tempe, Arizona, https://www.historicaerials.com/viewer.com, accessed November 3, 2022.

Hogan, Michael, Mariam Dahdul, John D. Goodman II, Zachary X. Hruby, and Harry M. Quinn
2010 *Report on the Findings: Archaeological Investigations on a Portion of Locus 1, Site CA-RIV-2642, near the City of Desert Hot Springs, Riverside County, California*. CRM TECH, Colton, California. On file, California Historical Resources Information System Eastern Information Center, University of California, Riverside.

Hooper, Lucile
1920 *The Cahuilla Indians*. University of California Publications in American Archaeology and Ethnology, vol. 16, no. 6. University of California Press, Berkeley.

Jaeger, Edmund C.
1965 *The California Deserts*. 4th ed. Stanford University Press, Palo Alto, California.

Jahns, Richard H.
1954 *Northern Part of the Peninsular Range Province*. Geology of Southern California, Geologic Guide No. 5. Bulletin 170, vol. 2, pt. 5. California Division of Mines, San Francisco.

Jenkins, Olaf P.
1980 Geomorphic Provinces Map of California. *California Geology* 32:40–41.

Lawton, Harry W., and Lowell John Bean
1968 A Preliminary Reconstruction of Aboriginal Agricultural Technology among the Cahuilla. *The Indian Historian* 1(5):18–24, 29.

Laylander, Don
1997 The Last Days of Lake Cahuilla: The Elmore Site. *Pacific Coast Archeological Society Quarterly* 33(1–2):1–138.

Lockhart, Bill, and Russ Hoenig
2018 The Bewildering Array of Owens-Illinois Glass Co. Logos and Codes. Society for Historical Archaeology. Electronic document, https://sha.org/bottle/pdffiles/OwensIll_BLockhart.pdf, November 3, 2022.

Love, Bruce, and Mariam Dahdul
2002 Desert Chronologies and the Archaic Period in the Coachella Valley. *Pacific Coast Archaeological Society Quarterly* 38(2–3):65–86.

Lundstrom, Scott C., Ralph R. Shroba, and Jonathan C. Matti
2001 Quaternary Geologic Mapping in the Desert Hot Springs Area, Riverside County, California: Data to Address the Societal Needs and Geoscience Issues. Abstract 3982. Paper presented at the 97th Annual Meeting of the Geological Society of America, Cordilleran Section, and American Association of Petroleum Geologists, Pacific Section, Universal City, California.

McDonald, Alison M.
1992 Indian Hill Rockshelter and Aboriginal Cultural Adaptation in Anza-Borrego Desert State Park, Southeastern California. Ph.D. dissertation, Department of Anthropology, University of California, Riverside.

Munz, Philip A.
1974 *A Flora of Southern California*. University of California Press, Berkeley.

Rogers, Malcolm J.
1945 An Outline of Yuman Prehistory. *Southwestern Journal of Anthropology* 1:167–198.

1966 *Ancient Hunters of the Far West*. Edited by Richard F. Pourade. Union-Tribune and San Diego Museum of Man, San Diego.

Schaefer, Jerry (Jerome) D.
1994 The Challenge of Archaeological Research in the Colorado Desert: Recent Approaches and Discoveries. *Journal of California and Great Basin Anthropology* 16:60–80.

2002 The Chronology and Distribution of Site Types at Tahquitz Canyon. Paper presented at the Annual Meeting of the Society of California Archaeology, Pasadena.

Schaefer, Jerry D., and Don Laylander
2007 The Colorado Desert: Ancient Adaptations to Wetlands and Wastelands. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp. 247–257. AltaMira, Lanham, Maryland.

Schoenherr, Allan A.
1992 *A Natural History of California*. University of California Press, Berkeley.

Spiglanin, Tom
2023 Disappearing Windmills. Palm Springs Windmill Tours, Palm Springs, California. Electronic document, https://www.windmilltours.com/blog/disappearing-windmills/, accessed November 3, 2022.

Strong, William D.
1929 *Aboriginal Society in Southern California*. University of California Publications in American Archaeology and Ethnology, vol. 26. University of California Press, Berkeley.

Sutton, Mark Q., and Philip J. Wilke (editors)
1988 *Archaeological Investigations at CA-RIV-1179, CA-RIV-2823, and CA-RIV-2827, La Quinta, Riverside County, California*. Archives of California Prehistory No. 20. Coyote Press, Salinas, California.

Vaughan, Sheila J.
1982 A Replicative Systems Analysis of the San Dieguito Component at the C. W. Harris Site. Master's thesis, Department of Anthropology, University of Nevada, Las Vegas.

Warren, Claude N.
1967 The San Dieguito Complex: A Review and Hypothesis. *American Antiquity* 32:168–185.

1984 The Desert Region. In *California Archaeology*, by Michael J. Moratto, pp. 339–430. Academic Press, Orlando, Florida.

Waters, Michael R.
1982a The Lowland Patayan Ceramic Tradition. In *Hohokam and Patayan: Prehistory of Southwestern Arizona*, edited by Randall H. McGuire and Michael B. Schiffer, pp. 275–297. Academic Press, New York.

1982b The Lowland Patayan Ceramic Typology. In *Hohokam and Patayan: Prehistory of Southwestern Arizona*, edited by Randall. H. McGuire and Michael B. Schiffer, pp. 537–570. Academic Press, New York.

1983 Late Holocene Lacustrine Chronology and Archaeology of Ancient Lake Cahuilla, California. *Quaternary Research* 19:373–387.

Wilke, Philip J.
1978 *Late Prehistoric Human Ecology at Lake Cahuilla, Coachella Valley, California*. Contributions of the University of California Archaeological Research Facility No. 38. Department of Anthropology, University of California, Berkeley.

Wilke, Philip J., and Harry W. Lawton
1975 Early Observations on the Cultural Geography of Coachella Valley. In *The Cahuilla Indians of the Colorado Desert: Ethnohistory and Prehistory*, edited by Philip J. Wilke, pp. 9–43. Anthropological Papers No. 3. Ballena Press, Ramona, California.

Wilke, Philip J., Alison M. McDonald, and L. A. Payen
1986 *Excavations at Indian Hill Rockshelter, Anza-Borrego Desert State Park, California, 1984–1985.* Archaeological Research Unit, University of California, Riverside.

Willig, Judith A., and C. Melvin Aikens
1988 The Clovis-Archaic Interface in Far Western North America. In *Early Human Occupation in Far Western North America: The Clovis-Archaic Interface*, edited by Judith A. Willig, C. Melvin Aikens, and John L. Fagan, pp. 1–40. Anthropological Papers No. 21. Nevada State Museum, Carson City.

WorldClimate.com
2016 Average Weather Data for Palm Springs, California. Electronic document, http://www.worldclimate.com/climate/us/california/palm-springs, accessed November 3, 2022.