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Class III Cultural Resources Inventory Report

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DRAFT
CLASS III CULTURAL RESOURCES INVENTORY REPORT
for the
GLAMIS SPECIFIC PLAN PROJECT, GLAMIS, IMPERIAL COUNTY, CALIFORNIA

TheAltumGroup

Prepared for:

Doug Franklin, P.E.
Vice President
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July 2019
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MANAGEMENT SUMMARY

Altum Group (Altum) plans to develop a specific plan for development in Glamis, Imperial County, California. ASM Affiliates, Inc. (ASM) was contracted by Altum to complete the cultural resources inventory for the proposed project. Since this project encompasses privately owned parcels, the Imperial Valley Planning and Development Services Department is the lead agency providing oversight of the regulatory process.

ASM conducted a Class III cultural resources inventory for the Glamis Specific Plan Project area of potential effects (APE). This inventory was completed to satisfy requirements of the California Environmental Quality Act (CEQA), that require an inventory of cultural resources on lands planned for development.

A total of approximately 141 acres was subject to 100 percent intensive Class III survey. Prior to survey, a cultural resources records search was completed at the South Coastal Information Center (SCIC) of the project APE. In all, ASM identified seven cultural resources within the project APE. Three of these were discovered during survey while the remaining four were previously recorded. A single isolated prehistoric artifact was identified within a disturbed context, while historic cultural resources include refuse deposits, roads, a railroad, and a cemetery. Additional resources may be identified during survey of potential project realignments.

This inventory was not designed or intended to provide formal recommendations of eligibility for sites to be listed on the California Register of Historic Resources (CRHR). However, all resources were assessed for their potential for CRHR listing based on surface inventory data. ASM assessed two cultural resources as potentially eligible for the CRHR, based on surface inventory data alone. These eligibility assessments will help guide Altum in project redesign to achieve avoidance of impacts, or to minimize impacts where avoidance is not feasible.

1. INTRODUCTION

This report documents the results of a Class III cultural resources and historic built environment inventory and evaluation completed by ASM Affiliates, Inc. (ASM) for the Glamis Specific Plan Project in Glamis, California (Figure 1). The project area consists of six discontiguous parcels, totaling approximately 141 acres (Figure 2). All six parcels are located in Section 37 of the Glamis, California USGS topographic quadrangle map, approximately 27 miles east of the City of Brawley. The project area is located adjacent to land managed by the Bureau of Land Management (BLM). The six project parcels within the project area are privately owned and under County of Imperial jurisdiction. The Imperial County Planning and Development Services Department is the lead agency for this project.

This inventory was conducted in support of a specific plan that intends to expand and improve current recreation-supporting land use that includes retail and service development, motel accommodations, recreational vehicle and mobile home parks, and community facilities. The current cultural resources and historic built environment survey included a records search and an intensive pedestrian survey of the six project parcels. Staff at the South Coastal Information Center (SCIC), San Diego State University, conducted the records search on June 18, 2019. ASM Senior Archaeologist Kent Manchen and ASM Associate Archaeologist Thomas Taylor completed the pedestrian survey on June 16, 2019. Native American monitor Larry Holleman from Torres-Martinez Desert Cahuilla accompanied the survey.

During the pedestrian survey, two new historic-era resources and one prehistoric isolated artifact were recorded. The historic-era sites are the Glamis Beach Store building and Ted Kipf Road. The isolated prehistoric artifact is a broken lithic core, likely redeposited within a highly disturbed context in more recent times.

The records search identified four previously recorded resources within the project area. These resources consist of a historic cemetery, the Union Pacific railroad, the foundation remains of the former Glamis train stop, and a historic trash deposit. The four previously recorded resources were identified during the current pedestrian survey and Department of Parks and Recreation (DPR) update forms were prepared for all but the railroad.

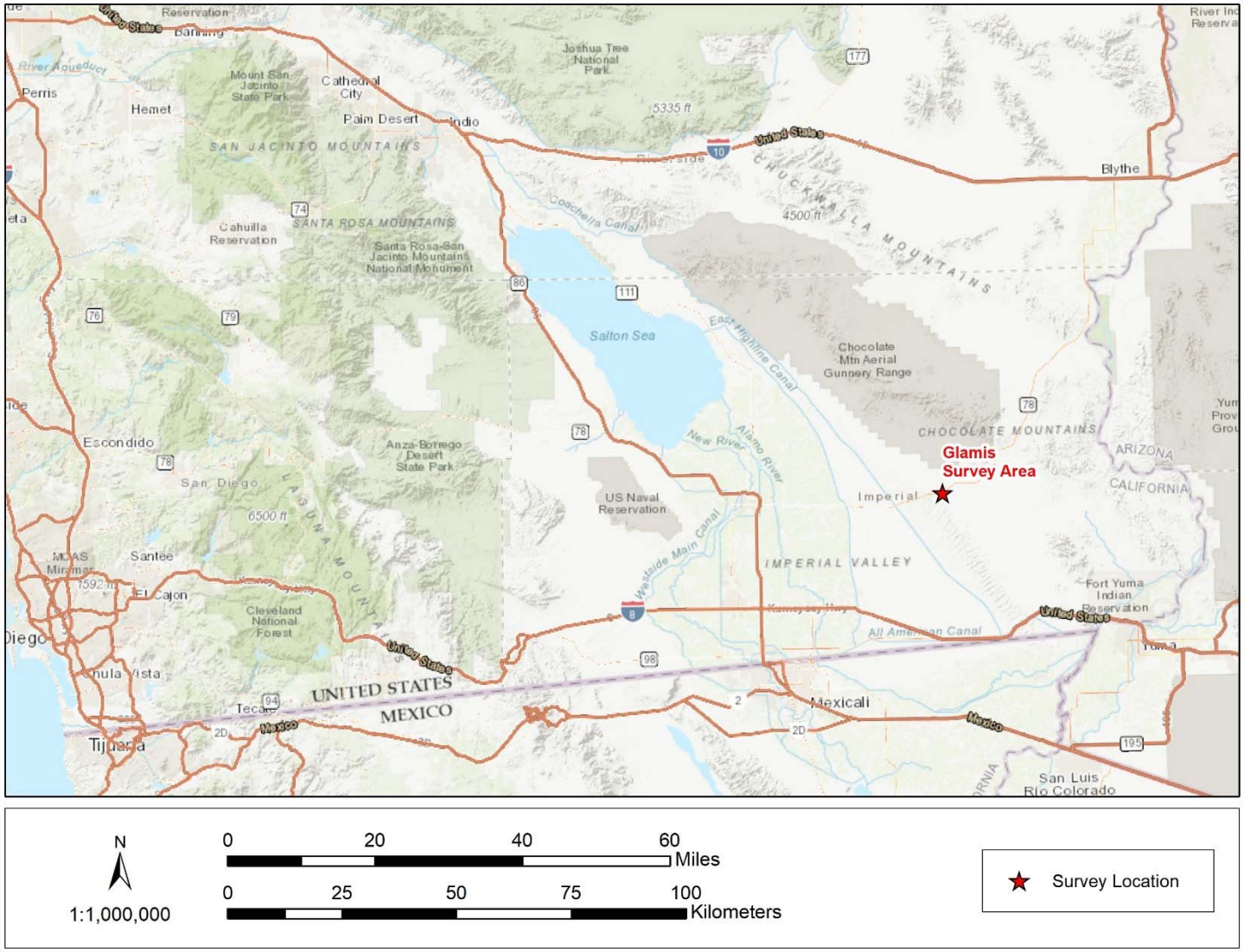

Figure 1. Vicinity map.

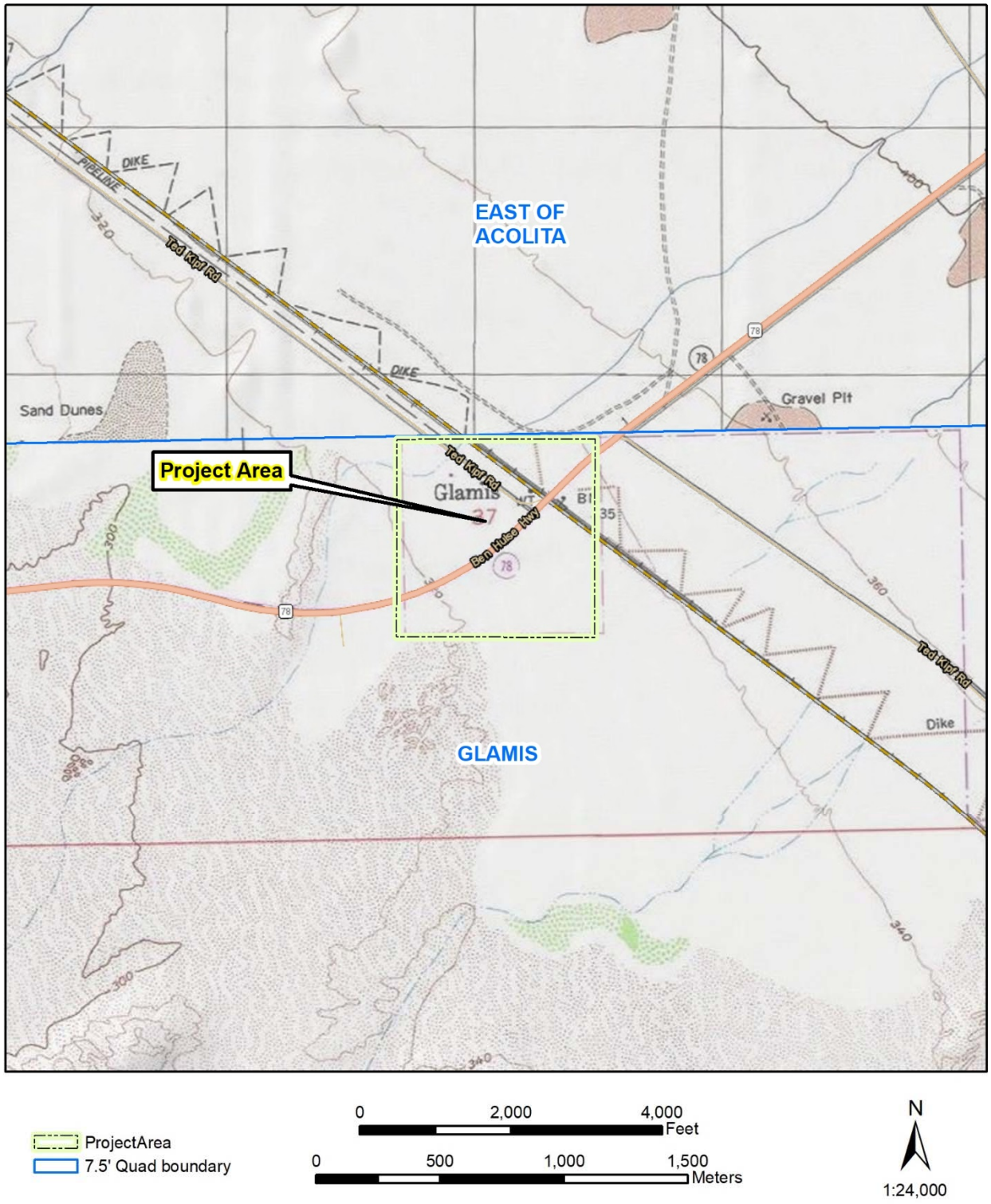

Figure 2. Project location map on the Glamis 7.5-minute USGS quadrangle.

1.1 PROJECT APE

The APE is the geographic area or areas, regardless of land ownership, within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist. For the current proposed project, the APE consists of an approximate 141-acre footprint, including six privately owned parcels.

The current project APE is shown on Figure 2; the APE will act as the survey corridor requiring 100-percent survey coverage except where access in not obtained.

1.2 REGULATORY CONTEXT

The project APE encompasses private land, thus requiring compliance with regulations set forth in CEQA governing the discovery and treatment of cultural resources.

1.2.1 California Environmental Quality Act (CEQA)

CEQA requires that all private and public activities not specifically exempted be evaluated for the potential to impact the environment, including effects to historical resources. Historical resources are recognized as part of the environment under CEQA. It defines historical resources as "any object, building, structure, site, area, or place, which is historically significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (Division I, Public Resources Code, Section 5021.1(b)).

Lead agencies have a responsibility to evaluate historical resources against the CRHR criteria prior to making a finding as to a proposed project's impacts to historical resources. Mitigation of adverse impacts is required if the proposed project will cause substantial adverse change. Substantial adverse change includes demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired. While demolition and destruction are fairly obvious significant impacts, it is more difficult to assess when change, alteration, or relocation crosses the threshold of substantial adverse change. The CEQA guidelines provide that a project that demolishes or alters those physical characteristics of an historical resource that convey its historical significance (i.e., its character-defining features) can be considered to materially impair the resource's significance.

The CRHR is used in the consideration of historic resources relative to significance for purposes of CEQA. The CRHR includes resources listed in, or formally determined eligible for some California State Landmarks and Points of Historical Interest. Properties of local significance that have been designated under a local preservation ordinance (local landmarks or landmark districts), or that have been identified in a local historical resources inventory may be eligible for listing in the CRHR and are presumed to be significant resources for purposes of CEQA unless a preponderance of evidence indicates otherwise.

Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code SS5024.1, Title 14 CCR, Section 4852) consisting of the following:

1) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States; or,
2) It is associated with the lives of persons important to local, California, or national history; or,
3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master, or possesses high artistic values; or,

4) It has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

1.3 REPORT STRUCTURE

This report is organized into several sections: Section 2 provides a natural and cultural context for archaeological research in the Imperial Valley. Section 3 reviews the methods used to conduct this inventory. Section 4 summarizes the results of the records search and pedestrian survey. Section 5 is a discussion of the project results in the context of management considerations. Appendix A contains isolate artifact forms and site updates for previously recorded sites. The records search results are found in Appendix B.

2. PROJECT CONTEXT

The following discussion is excerpted from previous regional summaries prepared by ASM, including Schaefer (2007) and Laylander and Garnsey (2007).

2.1 NATURAL SETTING

Throughout the cultural history of the Colorado Desert, human activities have been closely tied to the distribution of natural resources and other aspects of the natural setting. Water, vegetation, animal habitat, and lithic raw material sources were not evenly distributed across the landscape. Consequently, archaeological evidence of hunters and gatherers is most likely to be encountered in locations where these resources are found. Short-term and long-term climatic fluctuations are also likely to have affected the intensity of land use over time. The natural topography influenced the location of trails and land use patterns. Dynamic alluvial and aeolian forces affected the integrity or preservation of archaeological sites.

The project area is located in the Colorado Desert, a northwestern subregion within the Sonoran Desert. This region is characterized by a series of northwest-southeast trending mountain ranges interspersed with broad, alluvium-filled basins. Some of these mountains form a natural barrier between the Colorado River to the east and the Salton Basin to the west.

Few areas of North America are hotter or drier than the Colorado Desert. Current climatic conditions produce dry, mild winters and dry, hot summers. Mean winter lows of 7° C and a mean summer temperature of 40° C are typical, with record highs of 49° C. Rainfall data from Indio between 1877 and 1987 record an annual average of only 14.1 cm, with annual extremes between .46 and 29.2 cm. Violent summer storms are not unusual, but most precipitation falls in midwinter. The Colorado River was the most reliable and abundant source of water in the region, with only a few widely dispersed springs found outside of the Coachella Valley. Well-watered palm oases also occur at regular intervals along the San Andreas Fault scarp on the north side of the Coachella Valley and along other secondary fault systems at the base of the Peninsular Ranges.

2.1.1 Geomorphology and Geology

The Salton Trough is a very active seismic and geothermal zone because of dynamics at the juncture of the Pacific and North American tectonic plates (Morton 1977; Redlands Institute 2002). The subduction of the ancient Farallon Plate under the North American Plate 30 million years ago raised up the Peninsular Ranges and resulted in the rain shadow effect that created the Colorado Desert. About 10 million years ago, the San Andreas Fault appeared as the Pacific Plate moved northwest, and 4 million years ago the Gulf of California, with the Salton Trough as its landward extension, began to open and spread. The San Andreas Fault and related secondary faults have blocked aquifers and produced a series of springs on the northern and eastern side of the Salton Trough. Some springs also represent locations where sandy aquifers lying between clay layers emerge from under alluvial fans, especially on the western side of the trough. Some of the aquifers are heated by magma that reaches closer to the surface in the rift zone. Springs that are located below the maximal shoreline of Lake Cahuilla (discussed below) would have been available to Native Americans after the lake's final recession or during interlacustral intervals. It should be noted that tectonic movements associated with earthquakes frequently cause old springs to dry up and new ones to emerge, and that there is consequently a high potential for fossil springs in the region.

The project area is located in the Algodones Dunes, an area approximately 45 miles long and 6 miles wide of wind-blown sand dunes. This sand is thought to have been sourced from the alluvial deposits of Lake Cahuilla and transported by wind. To the northwest of the project area lie the Chocolate Mountains, a fault-

ridden group of metamorphic, plutonic, and volcanic rocks variously of Precambrian, Mesozoic, and Tertiary age (Jennings 1967).

Also northwest of the project area is the Salton Sea, formed after October 1905 when a breach occurred in the head gate of the privately constructed Imperial Canal on the Colorado River south of the U.S.-Mexico border. By the time the Southern Pacific Railroad was able the close the breach in February 1907, the water level of the Salton Sea had risen to 60 m below mean sea level (bmsl). The lake's water level rapidly receded to 76 m bmsl by 1921, but it has subsequently risen again to 69 m bmsl because evaporation has been more than offset by agricultural and urban water discharges into the basin.

During the Quaternary, the Salton Trough has been progressively filled by immense quantities of colluvial and alluvial sediments up to 6,000 m thick (Morton 1977). The sequence of great lakes that have filled the Salton Trough, variously referred to as Blake Sea, Lake LeConte, or Lake Cahuilla, are today evidenced by extensive deposits of lacustrine sediments and long stretches of relic shoreline formations. These deposits actually constitute the northern arm of the Colorado River's delta (Sykes 1937).

As the Colorado River emptied into the Gulf of California, it released its sediments onto a vast and growing delta. This gradual accumulation of sediments raised the overall height of the delta, particularly after large flood events, when the receding waters of the Colorado River were unable to find a direct route back through the newly reworked surface of the delta. What followed during certain episodes was the diversion of the river's flow into the Salton Trough, resulting in the formation of a vast freshwater lake. The lake continued to rise until it reached the lip of the impounding delta, currently at 12 m above mean sea level (amsl), and a portion of the waters could again flow south to the Gulf. The low-gradient, deltaic conditions at the lake's input channel were then poised to produce a new shift in the river's course, this time away from the lake and directly south toward the Gulf.

Late Holocene lake stands are marked by extensive beach formations at approximately 12 m amsl, while higher beaches dating from the late Pleistocene lie above 30 m amsl (Waters 1983b). There were at least three major lake stands between A.D. 1000 and 1700, as well as one or more earlier lacustrine phases (Laylander 1997; Waters 1983a). Prehistoric archaeological sites in this area are likely to have been associated with recessional shorelines, ephemeral features produced as the isolated lake gradually evaporated, a process that would have taken a minimum of about 60 years to complete under modern climatic conditions. Evidence of human occupation along the Lake Cahuilla shoreline now extends back more than 3000 years in the upper Coachella Valley (Love and Dahdul 2002).

Due to this project's location within the Algodones Dunes and the fluid nature of the sands there, intact prehistoric archaeological deposits are unlikely to be visible on the surface.

2.1.2 Vegetation

The Sonoran creosote scrub community is mapped for the project area (Redlands Institute 2002:75). Characteristic species include creosote (*Larrea tridentata*) and white bursage or burrobush (*Ambrosia dumosa*). Well-drained alluvial slopes also support encelia (*Encelia farinosa*) and desert trumpet (*Eriogonum inflatum*). Annual grasses that occur throughout this floral community would have been primary food resources for Native Americans.

2.1.3 Vertebrate Fauna

Mammals with the greatest economic importance to aboriginal Colorado Desert peoples included desert cottontail (*Sylvilagus audubonii*), black-tailed jackrabbit (*Lepus californicus*), several rodent species, mule deer (*Odocoileus hemionus*), and Nelson's bighorn sheep (*Ovis canadensis nelsonii*). Predators known to occur in the area include mountain lion (*Felis concolor*), badger (*Taxidea taxus*), kit fox (*Vulpes macrotis*),

and bobcat (*Felis rufus*). Desert cottontail is most abundant in sand dune areas. Black-tailed jackrabbits have a wider distribution on desert floors, floodplains, washes, and rocky slopes. Mule deer were most likely to be encountered in desert washes, while bighorn sheep, the most elusive of prey, could be ambushed at desert tanks or oases when they came down from the mountain slopes for water (Jaeger 1965; Ryan 1968).

A wide variety of fish, reptiles, birds, and mammals are found along the Colorado River and its adjacent deserts, many of which had economic importance to the Colorado River peoples (Castetter and Bell 1951). Fish were the most important source of animal protein and included razorback sucker (*Xyrauchen texanus*), bonytail chub (*Gila elegans*), striped mullet (*Mugil cephalus*), various minnows (*Cyprinidae*), and machete (*Elops affinis*). When the river fed into the Salton Basin, these species also lived in Lake Cahuilla. Many of the species are now extinct on the lower Colorado River, having been replaced by introduced species such as catfish (Gobalet 1994; McGinnis 1984).

Many species of raptors, wading birds, songbirds, and migratory waterfowl inhabited the riparian margins of the Colorado River. Raptors had ceremonial uses for the native peoples, while migratory birds and their eggs were exploited for food. Bird species included bald eagle (*Haliaeetus leucephalus*), golden eagle (*Aquila chrysaetos*), osprey (*Pandion haliaetus*), Wilson's warbler (*Wilsonia pusillus*), American coot (*Fulica americana*), mallard (*Anas platyrhynchos*), great blue heron (*Ardea herodias*), and clapper rail (*Rallus longirostris*), to mention but a few. When Lake Cahuilla existed, these wetland species took up permanent or seasonal residence and were also exploited by the people who established fish camps along the shoreline.

2.2 PALEOENVIRONMENTS

Evidence of earlier environmental conditions is very limited. Pollen-bearing, stratified deposits from caves or lake beds are not as common in the Colorado Desert as they are in the Great Basin, where most of the reconstructions of desert paleoclimates have been made. Evidence indicates that the modern desert conditions were already in existence at the beginning of the Holocene period, at the time of the earliest well-documented cultural occupations (Thompson 1984).

Paleoclimatic reconstructions based on Neotoma sp. (pack rat) midden analysis indicate that at elevations below 300 m there was little climatic change along the Lower Colorado and Gila rivers during the last 13,000 years. The area may have indeed been a refugium for lower Sonoran creosote scrub habitat during the Pleistocene period but containing the frost-resistant Mojavean species (Cole 1986). The area would have resembled Joshua Tree National Park until 9,000-10,000 years ago. At higher elevations in the mountains to the east and north, pack rat midden analyses indicate a juniper woodland habitat in the Late Pleistocene between 22,000 and 11,000 years ago. These xeric woodlands continued through the early Holocene between 11,000 and 8,000 years ago, finally retreating to higher elevations from the Middle Holocene until present times and being replaced with the current creosote scrub and desert riparian habitat (King and Van Devender 1977; Van Devender 1990; Van Devender and Spaulding 1983). The last century has seen some of the hottest and driest conditions in at least the last 400 years (Hastings and Turner 1965:188).

Based on current information, the climatic history of the general region may be summarized as follows (Van Devender and Spaulding 1983):

Late Pleistocene (20,000 to 9000 B.C.): cooler and wetter conditions supporting pinyon-juniper woodlands, extensive deep lakes, and savannah grasslands or creosote scrub at low elevations.

Early Holocene (9000 to 6000 B.C.): gradual warming and drying conditions resulting in the shrinking of lakes and replacement of woodland by creosote scrub at lower elevations.

Middle to Late Holocene (6000 B.C. to present): warm and dry conditions continue, dominated by summer monsoons in the Desert Southwest and winter storms along the Pacific Coast. Lakes in low-lying basins completely dry up or become ephemeral. Locally specific fluctuations in temperature and aridity produce ecological variation of no greater magnitude than that known from historic records. Greater frequency and severity of drought conditions may have existed in the period between 5000 and 2500 B.C.

2.3 PREHISTORY

2.3.1 History of Research

An outline of Colorado Desert culture history has been generally accepted by the archaeological community, but with the realization that it is a superficial construct for which details are not well understood. Ironically, the uncertainties are most acute along the lower Colorado River where prehistoric and ethnohistoric occupations were most intensive. Most of the major occupation sites were on the lower terraces of the Colorado River, but none have been investigated because they are either buried beneath many meters of alluvial deposits, have been destroyed by agricultural development, or are obscured by impenetrable stands of tamarisk and reeds. The culture history is based on the pioneering work of Malcolm J. Rogers in many parts of the Colorado and Sonoran deserts, often relying on evidence from sites that were marginal to the main occupation on the Colorado River (Rogers 1939, 1945, 1966). Subsequently, several overviews and syntheses have been prepared, with each succeeding effort drawing on previous studies and adding new data and interpretations.

Rogers established the first systematic culture history and artifact typologies for the Colorado Desert during the course of more than 40 years of field investigations. Although he was not a prolific writer, his investigations of San Dieguito and Archaic flaked stone tools and settlement patterns (Rogers 1929, 1939, 1958, 1966) and of Yuman ceramics and culture history (Rogers 1936, 1945) remain the foundation of current archaeological research in the region.

Also occurring during this early period of basic archaeological research was Albert H. Schroeder's (1952, 1979) examination of lower Colorado River sites. Schroeder (1961) excavated at the Willow Beach site, one of the few known stratified Late Prehistoric sites on the Colorado River, located just below Boulder Canyon. He developed a cultural sequence that emphasized the similarities of the Colorado River assemblages with the upland areas of western and central Arizona, lumping a number of cultural patterns into the concept of the Hakataya, an expanded version of what Rogers referred to as Yuman (Schroeder 1979). Some scholars have found Schroeder's concept of the Hakataya too inclusive and have also noted conflicts with Rogers' original Yuman ceramic typology (Waters 1982a, 1982b). Schroeder (1957, 1958, 1975) also proposed correlations between ceramic types and tribal/cultural affiliations. This ceramics-equal-people approach has been challenged as underestimating the mobility of groups who may produce different ceramic types depending on the proximity of different clays to seasonal settlements.

Most research during the last 30 years has been mandated by government agencies for compliance with state and federal environmental laws. Independent research has also been conducted for doctoral dissertations and by local institutions such as the Imperial Valley College and University of California, Riverside. Of particular relevance are federal agency overviews and management plans that established cultural contexts, research domains, and management issues for most of the Colorado Desert.

Margaret L. Weide and James P. Barker prepared one of the earliest syntheses of the Yuha Desert in Imperial County for the U.S. Bureau of Land Management (BLM) during their work on the California

Desert Plan (Wilke 1976). This study contained discussions relevant to the culture history of the entire Colorado Desert, including the Colorado River Valley, and in particular addressed the question of the nature of Lake Cahuilla settlement patterns (Weide 1976). A synthesis for the entire Colorado Desert Planning Units was prepared by Elizabeth Warren and her associates (1981). This is a particularly succinct and useful review of environments, prehistory, ethnography, and history that include the Big Maria and Whipple mountains planning units as well as the cultures of the lower Colorado River Valley.

For southwestern Arizona, Randall H. McGuire and Michael B. Schiffer (1982) reviewed over 50 previous research projects and prepared cultural syntheses that are equally applicable to the southern California area. One of the most valuable contributions in that volume was Waters' (1982a, 1982b) study of Patayan ceramics, based largely on the unpublished notes, type series, and field collections of Rogers. Schaefer (1994a) updated and corrected Waters' discussion of the time range and spatial distribution of Patayan ceramic types based on a review of recent excavations in the Colorado Desert. General updates on the state of archaeological research and knowledge have also been prepared by Schaefer (1994b, 1994c) and Schaefer and Laylander (2007).

In the Coachella Valley, substantial numbers of investigations driven by federal and state mandates have been undertaken over the last 20 years as a result of phenomenal population growth and infrastructure development. No detailed synthesis of the results of this research has yet appeared. The earliest sites date to the early-to-middle Archaic period (5000-3000 B.C), as represented by the lithic complex of the Pinto Basin (Campbell and Campbell 1935) and at ephemeral pans such as are found within the Chuckwalla Valley. Absolute dates for these remains are problematical (Warren 1984). Recently, rare late Archaic sites (3000 B.C.-A.D. 1) have been discovered in earlier Lake Cahuilla contexts (Love and Dahdul 2002) and in a rockshelter at Tahquitz Canyon (Bean et al. 1995). These earlier sites are for the most part obscured by natural deposition within the Coachella Valley basin and by active erosion or debris flows in the surrounding uplands. Late prehistoric and ethnohistoric period sites abound throughout the Coachella Valley and constitute the majority of sites. The largest data recovery project to date, involving both ethnohistoric and archaeological investigations, was undertaken at RIV-45 in Tahquitz Canyon (Bean et al. 1995; Schaefer 1997). That study documented the settlement pattern and archaeological complex of a major village area that was occupied for more than 2,000 years. The most substantial remains date from approximately A.D. 1450-1820. A series of major surveys and smaller test excavations have occurred at the base of most of the canyons that empty onto the Coachella Valley from the San Jacinto Mountains, including Chino Canyon, Tahquitz Canyon, Eagle Canyon, Andreas Canyon, and Murray Canyon. One of the most recent was a data recovery at a portion of the ethnohistoric period Cahuilla village of Rincon that included examination of a rock-lined irrigation ditch (Schaefer et al. 2001).

The other concentration of archaeological studies in the Coachella Valley is along the southern end of the Whitewater River where it empties into Lake Cahuilla. A substantial complex of sites near the cities of Indio, Indian Wells, and La Quinta has been investigated, ranging from residential bases to temporary camps. Both academic studies and ones conducted for CEQA compliance were involved (Hogan et al. 1992; Jertberg and Farrel 1980; Sutton 1993, 1996; Sutton and Wilke 1988; Wilke 1978; Wilke and Lawton 1975; numerous reports on file at the Archaeological Resource Unit, University of California, Riverside).

Specific to the lower Colorado River Valley, Jeanne Swarthout (1981a-c) and Swarthout and Christopher E. Drover (1981) prepared detailed overviews that divide the river into four reaches: Lee's Ferry to Grand Wash Cliffs, the Lower Virgin River, Grand Wash Cliffs to Davis Dam, and Davis Dam to the International Border. These studies emphasized the limitations of previous work because of inconsistent site records and a lack of stratified sites. They provided a careful review of the environment and culture history and presented proposals for future research. The study of Reach 3, Davis Dam to the International Border (Swarthout and Drover 1981) is one of the best in the series. Swarthout and Drover derived two ethnographically based settlement models, one for the Mohave in Mohave Valley and one for the

Halchidhoma and Quechan on the Colorado River. Although the lack of documented sites on the valley floor makes it difficult to test their models, test implications can be developed for the temporary camps and resource extraction sites in desert areas away from the river. Schaefer (1994b) discussed additional research issues that link the treatment of archaeological sites in the desert and river valley zones. In another article, Schaefer (1994c) summarized and critiqued recent data recovery projects in the Colorado Desert with an emphasis on understanding Lake Cahuilla chronology and settlement patterns and recognizing the problems of interpreting sites on desert pavements.

A recent overview of the lower Colorado River by Connie L. Stone (1991) expanded the history of research and review of current research issues. Stone identified the major cultural resource types, from rock rings to rockshelters, and provided summary statements of their potential research values and applicable investigative procedures. She also provided valuable maps of major intaglio and rock art sites, trail systems, and generalized prehistoric land use.

2.3.2 Cultural Periods and Patterns

Six successive periods, each with distinctive cultural patterns, may be defined for the Colorado Desert, extending back in time over a period of more than 12,000 years. They include: (1) Early Man (Malpais); (2) Paleoindian (San Dieguito); (3) Archaic (Pinto and Amargosa); (4) Late Prehistoric (Patayan); (5) Ethnohistoric Native American occupation; and (6) Historic Euro-American occupation.

Early Man Period (Malpais) (prior to 10,000 B.C.)

The Malpais Pattern is represented by a complex of remains that some archaeologists hypothesize to date from 50,000 to 10,000 years B.C. (Begole 1973, 1976; Davis et al. 1980; Hayden 1976). The term was originally used by Rogers (1939, 1966) for ancient-looking cleared circles, tools, and rock alignments that he later classified as San Dieguito I. Malpais continued to be applied to heavily varnished choppers and scrapers found on desert pavements of the Colorado, Mojave, and Sonoran deserts that were thought to predate the Paleoindian period of projectile point makers. Although few archaeologists would contest that most of the artifacts were cultural products, dating methods remain extremely uncertain and have been assailed on several grounds (McGuire and Schiffer 1982:160-164). Arguments in favor of very early settlement of the Colorado Desert were further eroded by the redating of the "Yuha Man." Originally dated as more than 20,000 years old based on radiocarbon analysis of caliche deposits, more reliable dates on actual bone fragments using the accelerator mass spectrometer (AMS) method now place the burial at about 3000 years B.C. (Taylor et al. 1985).

Paleoindian Period (San Dieguito) (10,000-6000 years B.C.)

Most of the aceramic lithic assemblages, rock features, and cleared circles in the general region have been assigned to the third phase of the San Dieguito complex. Indeed, a large proportion of the sites in the Colorado Desert have been assumed to be San Dieguito. Rogers first defined the San Dieguito complex based on surface surveys in coastal San Diego County and in the Colorado and Mojave deserts, but he later refined his constructs with excavated material from the C. W. Harris site in western San Diego County (Rogers 1939, 1966). Rogers distinguished three phases of the San Dieguito complex in the Central Aspect, that is, in the Colorado and Mojave deserts. Each phase was characterized by the addition of new, more sophisticated tool types to the tool kit of the preceding phase.

According to current views, the lithic technology of the San Dieguito complex was based on percussion-flaked cores and the resulting debitage, but with little or no pressure flaking practiced during the first two phases. San Dieguito I and II tools included bifacially and unifacially reduced choppers and chopping tools, concave-edge scrapers (spokeshaves), bilaterally notched pebbles, and scraper planes. Appearing in the San Dieguito II phase were finely made blades, smaller bifacial points, and a larger variety of scraper and chopper types. It appears that the San Dieguito III phase tool kit was appreciably more diverse, with the

introduction of fine pressure flaking. Tools include pressure-flaked blades, leaf-shaped projectile points, scraper planes, plano-convex scrapers, crescentics, and elongated bifacial knives (Rogers 1939, 1958, 1966; Warren and True 1961; Warren 1967). Various attempts have also been made to seriate cleared circles into chronological phases, but no convincing chronological scheme has yet emerged (Pendleton 1984). Because of the surficial character of many desert sites and the scarcity of chronological indicators, it has been difficult to substantiate the validity of Rogers' phase designations as chronologically successive changes in the tool kit of a long-lived culture.

The San Dieguito culture, as reconstructed from known associations, was a hunter-gatherer adaptation based on small mobile bands exploiting small and large game and collecting seasonally available wild plants. An absence of milling tools has been seen as reflecting a lack of hard nuts and seeds in the diet, and as a cultural marker separating the San Dieguito culture from the subsequent Desert Archaic culture (Moratto 1984; Rogers 1966; Warren 1967). However, portable manos and metates are now being increasingly recognized at coastal sites radiocarbon dated to earlier than 8,000 B.P. Arguments have also been made for the presence of a developed grinding tool assemblage in earlier periods, based on finds from the Trans-Pecos area of western Texas (Ezell 1984). In Colorado Desert, Lorann Pendleton (1984:68-74) remarked that most ethnographically documented pounding equipment for processing hard seeds, mesquite, and screwbeans was made out of wood and would not generally have been preserved in the archaeological record. If milling and pounding tools from earlier time periods were also made from wood, they would seldom be preserved at open sites.

Site distributions also indicate some basic elements of San Dieguito settlement patterns. The sites may be located on any flat area, but the largest aggregations occur on mesas and terraces overlooking larger washes, or the margins of lakes. These are areas where a variety of plant and animal resources could be located and where water would be at least seasonally available.

Pendleton (1984) made a strong case, based on ethnographic analogy from the Colorado River cultures, that San Dieguito occupation in the eastern Colorado Desert was focused on the river floodplain. She tested her model with the large array of sites and data sets in the Picacho Basin and argued that desert areas surrounding the river valley were used only to a limited degree for special resource exploitation within a foraging radius of logistically organized collecting groups.

Archaic Period (Pinto and Amargosa) (6000 B.C.-A.D. 500)

The Pinto and Amargosa complexes are considered regional specializations within the hunting and gathering adaptations characterizing the Archaic period. These complexes are more frequently represented in the Great Basin, Mojave Desert, and Sonoran Desert east of the Colorado River. Few Pinto or Amargosa (Elko series) projectile points have been identified on the desert pavements of the Colorado Desert. It has been suggested that the environment in the California deserts was unfavorable during this time period, particularly during the so-called Altithermal period between 5000 and 2000 B.C. which forced the mobile hunter-gatherers into less inhospitable regions (Crabtree 1981; Schaefer 1994c; Weide 1976).

However, some late Archaic sites are known, indicating occupations along the boundary between the low desert and Peninsular Ranges and at more favored habitats at springs and tanks. The most substantial Colorado Desert site is Indian Hill Rockshelter in Anza-Borrego Desert State Park, where 150 cm of Archaic period deposits were excavated below a Late Prehistoric component (McDonald 1992). Most significant were 11 rock-lined cache pits and numerous hearths indicative of either a residential base or temporary camp in which food storage was integral to the hunting and gathering settlement-subsistence strategy. Also recovered were numerous Elko Eared dart points, flaked and milling stone tools, and three inhumations, one of which was radiocarbon dated to 4,070 ±100 years B.P. (ca. 2890-2350 B.C.). Two similar rock-lined pits were excavated at a small rockshelter in Tahquitz Canyon near Palm Springs (Bean et al. 1995). The small quantity of artifacts at the latter site suggested strategically stored food and seed

processing equipment that was used by small, mobile groups. More recently, a late Archaic period campsite was also identified in 8-m-deep dune deposits adjacent to the north shoreline of Lake Cahuilla (Love and Dahdul 2002). Radiocarbon dates of almost 1000 B.C. and associated bird and fish bone confirm a late Archaic period Lake Cahuilla occupational horizon. Additional Archaic sites almost certainly lie buried under alluvial fans and wash deposits, sand dunes, and Lake Cahuilla sediments, as well as under Colorado River Valley alluvium.

Late Prehistoric Period (Patayan) (A.D. 500-1850)

The Late Prehistoric period has been divided into four phases, including a pre-ceramic transitional phase from A.D. 500 to 800. The major innovations of this period were the introduction of pottery making by the paddle-and-anvil technique and bow-and-arrow technology around A.D. 800 and the introduction of floodplain agriculture at about the same time (Rogers 1945). Exact dating of early domesticates is still lacking (Schroeder 1979). Both these technological advancements were introduced either from northwestern Mexico or through the Hohokam culture of the Gila River (McGuire and Schiffer 1982; Rogers 1945; Schroeder 1975, 1979). The formation of Lake Cahuilla, referred to above, has generally been linked to the Patayan II phase, between perhaps A.D. 1000 and 1650. Previous studies had suggested that the final recession of Lake Cahuilla occurred around A.D. 1500, but recent research demonstrates that a late filling occurred between A.D. 1600 and 1700 (Laylander 1997; Schaefer 1994c).

Between A.D. 1000 and 1700, desert peoples of the eastern Colorado Desert shifted their focus somewhat from the Colorado River floodplain to a more mobile, diversified resource procurement pattern involving increased travel between the Colorado River and Lake Cahuilla (Pendleton 1984). Long-range travel to special resource collecting zones and ceremonial locales, trading expeditions, and possibly some warfare are reflected by the numerous trail systems throughout the Colorado Desert. Pot drops, trail-side shrines, and other evidence of transitory activities are associated with these trails (McCarthy 1982, 1993).

Several pottery types appeared during the same time period (Waters 1982a, 1982b). Many of the pictographs, petroglyphs, and bedrock grinding surfaces in the Colorado Desert have also been associated with the Patayan pattern, although the chronology and cultural affiliation of such features are difficult to determine. It was also in this period, and possibly in the Archaic period, that volcanic and sandstone rock outcrops along the Colorado and Gila rivers were exploited for the manufacture of stone pestles and portable milling slabs (Schneider 1993, 1994). With the final recession of Lake Cahuilla, the Patayan III phase emerged, with a renewed reliance on the Colorado River floodplain and some floodplain agriculture along the New and Alamo rivers, in a mixed horticulture/hunter-gatherer economy.

Natural and Cultural History of Lake Cahuilla

The majority of prehistory sites in the present project area evidently derive from Late Prehistoric activities associated with one or more stand of Lake Cahuilla. A detailed review of Lake Cahuilla chronology and cultural history is therefore useful for interpreting and evaluating these sites.

The archaeological sites along the relic maximal shoreline of Lake Cahuilla and its recessional shorelines provide a unique record of hunter-gatherer adaptations to an exceptionally dynamic environment. In one of the hottest and driest deserts in North America, wetland habitats emerged over the course of as little as two decades, as a consequence of the natural diversion of the Colorado River into the Salton Sink. After perhaps lasting for decades or possibly even centuries, the lake would then recede, taking a minimum of 60 years to fade away.

The first serious models of human adaptation to Lake Cahuilla were based on archaeological investigations at a small number of sites, principally along the north shore of the lake (Wilke 1978). Conclusions concerning the patterns of adaptation, seasonality, settlement size, and complexity were based almost exclusively on preserved food remains. Even the chronology of Lake Cahuilla was based on a small number

of radiocarbon dates and untested assumptions about the stability of the lake and its having remained dry after the first Europeans reached the lower Colorado River (see Laylander 1997; Schaefer 1994b, 1994c). The favored scenario was that a large lake had suddenly emerged and that groups living on the periphery of the region moved down to the shoreline to establish permanent, year-round villages of considerable size and complexity. When the lake began to recede, people followed the successive receding seasonal beach strands down to lower elevations, establishing lines of fish traps and short-term camps to extract the lake's bounty for as long as they could. Eventually they were forced to move back to the Peninsular Ranges or Colorado River, raising the population densities in those areas and causing economic and political shifts ranging from resource intensification to increasing warfare.

Subsequent archaeological research along other parts of the shoreline have challenged the initial models of Lake Cahuilla adaptation. They have shown considerable variability in the nature of shoreline habitats, settlement types, seasonal use, and subsistence emphases during high stands, and a much more complex pattern of responses to recessions of the lake. A great range of site types have been found, from fairly large and complex habitation sites to small temporary camps and specialized fish camps. The larger sites tend to be located on the west and north sides of Lake Cahuilla near sand spits, coves, embayments, and marshlands, or where major seasonal washes empty into the lake. Sites are also associated with seasonal pans and mesquite bosques. The exploitation of more diverse lacustrine microhabitats on the west shore may have resulted from the proximity of the lake to the Peninsular Ranges. On the eastern shoreline, which is distant from population centers in the resource-rich Colorado River valley, sites are smaller, less complex, and more diffuse. However, many of the patterned associations between settlement morphology and Lake Cahuilla habitat are yet to be discovered and understood.

The chronology of Lake Cahuilla's lacustrine and interlacustrine phases also continues to be refined. George M. Stanley (1962, 1965) suggested that repeated infillings included at least three major lacustral intervals in the last two millennia. Philip J. Wilke (1978) used 31 radiocarbon dates to attempt to define more precisely three major lacustral intervals during the last 2,000 years. These periods were 100 B.C.-A.D. 600, A.D. 900-1250, and A.D. 1300-1500. He realized that his sample was small and that he did not have the precision to discriminate closely dated successive infillings within the lacustral intervals.

Michael R. Waters (1983a) reconstructed a revised 1,300-year chronology based on 14 additional radiocarbon dates from natural and cultural deposits found in stratigraphic succession at three localities on the north shore, as well as stratigraphic exposures of lacustrine and non-lacustrine sediments. He used both freshwater Anodonta shells and hearth charcoal for the dates. He then critically assessed potential sampling errors in his radiocarbon dates, applied assumed sedimentation rates to the stratigraphy, and incorporated Richard Wayne Thompson's (1968) mudflat accretion dates from the Colorado River Delta to arrive at four lacustral intervals. Waters identified major infillings between A.D. 700 and 900, A.D. 940 and 1210, A.D. 1250 and 1400 (with a partial recession to sea level at A.D. 1300), and, following what may have been a partial but more substantial recession, an infilling between A.D. 1430 to 1530. Waters also accepted Wilke's conclusion that the final recession had begun by the time of the first Spanish navigation of the Colorado River by the Alarcón expedition in A.D. 1540.

Don Laylander (1997) conducted a reappraisal of 85 radiocarbon dates from archaeological investigations over the past 35 years. He organized the dates into those from maximum elevation shoreline sites and those from recessional sites, discerning a minimum of six clusters. T-tests of statistical contemporaneity indicate the probability that the clusters represent a minimum of three infilling periods and three recessional periods over the last 1,000 years. (Laylander did not address the A.D. 700-900 phase.) This conservative analytical approach provided a weighted mean estimate of each phase but did not estimate the duration of each phase or the presence of fluctuations within each phase because of the imprecision inherent in the individual radiocarbon dates. In summary, Laylander's dates indicate a full flooding in the thirteenth century, a recession in the late fourteenth or early fifteenth century, another infilling in the fifteenth century, a

recession in the late fifteenth or early sixteenth century, a final infilling in the seventeenth century, and a final recession by the end of the seventeenth century.

The seventeenth century infilling and recession had not previously been clearly recognized, but it has been confirmed by recent archeological investigations. In fact, almost half of Wilke's dates were less than 400 years B.P., for which he provided alternative explanations (Wilke 1978). They had to be reconciled with historical accounts, beginning in 1540 with Hernando de Alarcón's navigation of the lower Colorado River at least as far as Yuma. Alarcón could not have accomplished that feat if the Colorado River flowed into the Salton Basin instead of directly through the delta to the Gulf of California. From that time on, the longest gap between historical accounts of Colorado River navigations or overland visits was 95 years. Don Juan de Oñate's A.D. 1604-5 overland expedition descended the Bill Williams River and followed the Colorado River down to the delta, observing no diversion to the Salton Basin. Kino was next to reach the confluence of the Colorado and Gila rivers in 1700 and wrote of no great lake to the west. In fact, he observed the river slowing south to the Gulf of California through a telescope perched on a mountaintop. In 1701 and 1702 Kino traveled along the river south through the delta. Wilke cited these visits and inconclusive bead and ceramic assemblage data to discount a protohistoric phase for Lake Cahuilla.

Radiocarbon dates from several recessional fish camps and other habitation sites with abundant lacustrine resource remains have now been recovered that prove Lake Cahuilla existed in the seventeenth century, between the visits of Oñate and Kino (Apple et al. 1997; Laylander 1997; Schaefer 1986, 1994b-c, 2000). Comparable dates have been derived from natural peat deposits at several locations along the Lake Cahuilla shoreline (Gurrola and Rockwell 1996; Thomas and Rockwell 1996). Cahuilla and Kumeyaay stories of fishing at Lake Cahuilla may therefore have been passed down through fewer generations than previously thought (Laylander 2004a).

2.4 ETHNOGRAPHY OF THE COLORADO DESERT

2.4.1 The Desert Cahuilla

Several ethnographic and ethnohistoric studies have documented the lifeways and culture of the Cahuilla (Barrows 1900; Bean 1972, 1978; Bean and Saubel 1972; Curtis 1926; Drucker 1937; Heizer 1974; Hooper 1920; Kroeber 1908; Patencio 1943; Strong 1929).

The ancestors of the Cahuilla, Cupeño, Luiseño, Serrano, and Gabrieleño, speaking a language that belonged to the Takic branch of the Uto-Aztecan linguistic family, apparently migrated from the north into southern California, perhaps during the first millennium B.C. A subsequent expansion of ancestral Cahuilla-speaking people into the Colorado Desert may have been substantially later, during the first millennium A.D. (Golla 2007; Kroeber 1925; Laylander 1985, 2007; Moratto 1984).

Within traditional Cahuilla territory, centered on the Santa Rosa and San Jacinto mountains and the Coachella Valley, a dozen or more independent, politically autonomous land-holding clans owned territories. Ideally, each of these territories extended from the desert or valley floor to mountain areas and crossed several biotic zones. Clans included one or more lineages, each of which had an independent community area that it owned within the larger clan area. Cahuilla oral histories indicate that some clans replaced others, often by force, and that new lineages would bud off from clans to establish new territories. Cahuilla mythology and oral tradition also suggest that when Lake Cahuilla dried up, it was the mountain people who resettled the desert floor. By 1850, at least 17 Cahuilla rancherias were reported in the Coachella Valley, most associated with hand-dug wells, springs, or palm oases. Reservoirs, irrigation ditches, and agricultural fields are documented at least as far back as the early nineteenth century (Wilke and Lawton 1975:21, 30 ff).

In addition to a lineage residential area and locations within a clan territory that the lineage owned in common with other clan members, each lineage had ownership rights to various food collecting, hunting, and other areas. Individuals also owned specific areas or resources, such as food plants, hunting areas, mineral collecting places, and sacred spots used only by shamans, healers, and ritual practitioners.

Although villages were occupied year-round, many inhabitants would leave at specific times to exploit seasonally ripening foods in different environmental zones. Temporary camps would be established in these food-collecting areas, and surpluses would be transported back to the main village. Mountain Cahuilla would move to the upper desert areas and establish temporary camps to process agave in the late winter and early spring, and then move to lower desert areas to harvest mesquite beans in the late spring. Conversely, the Desert Cahuilla ascended the mountains in the fall for the pinyon and acorn harvests. Other springtime resources included yucca, wild onion, barrel cactus and other cactus fruits, goosefoot, and grass seeds. Major upper desert resources collected in summer included manzanita, wild plum, and other berries. Fall was also the occasion to gather grass seeds, chia seeds, saltbush seeds, palm tree fruit, thimbleberry, wild raspberry, juniper berry, and choke berry. Many animal resources were also hunted, with bighorn sheep and deer hunts often coinciding with the pinyon harvest. Rabbits were the most common game animal hunted throughout the year.

Cahuilla clans varied in size from 100 to several thousand people. They were arranged so that each community was placed in an area near significant water and food resources. Communities were generally spaced several kilometers apart, and within communities the houses and structures were placed at some distance from each other. Often a community would extend over a 2-3 kilometers. Each nuclear and extended family had houses and associated structures for storing food, as well as shaded work places for tool manufacturing and food processing. Each community contained a house for the lineage or clan leader, the net. That position was often hereditary within families of high social status. The paxa was another hereditary position with responsibilities for managing ritual events. Other important ceremonial positions included the shaman (pú˙l), singer (háwaynik), and diviner (tetayawiš). There was also a number of ritual practitioners who were not officials.

A ceremonial house (kišámnawet) was placed within each community. Most major religious ceremonies of the clan were held in it, and such ceremonies were held with considerable frequency. The most significant ceremonies focused upon the proper treatment of the deceased members of the linage or clan. In addition to houses and ceremonial structures, storage granaries, sweat houses, and song houses for recreational music were used.

Bean and Saubel (1972:20) estimated that no village was located more than 26 km from all food gathering areas within its territory and that 80 percent of all food resources could be found within an 8-km foraging radius of the village. Such proximity to diverse habitats was made possible by the steep gradient on the eastern side of the San Jacinto and Santa Rosa mountains. Close to each community were many food resources, building materials, minerals, and medicines. Usually an area within 1-4 km contained the bulk of materials needed for daily subsistence, although the territories of a given clan might be larger, and longer distances were traveled to get other precious or necessary resources, usually at higher elevations. While most daily secular and religious activities took place within the community, there were places at some distance from the community where people stayed for extended periods of time, such as the acorn and pinyon groves. Throughout the area there were sacred places used primarily for rituals, inter-clan meetings, caches for sacred materials, and locations for use by shamans. Generally in hilly, rocky areas, cave sites or walled cave sites were used for temporary camping, storage of foods, fasting by shamans, and as hunting blinds.

The Desert Cahuilla became familiar with Europeans as early as 1797. Often their linguistic kinsmen in western Cahuilla areas were baptized and worked among the Spanish, and runaway neophytes sought refuge

among the desert tribes. The impacts of the Spanish mission system and colonization along the coast were less intensive and slower to arise among the isolated desert and mountain groups than for coastal and western foothill groups. More direct influence was not felt until after the establishment of the San Bernardino estancia in 1819 and of a cattle ranch at San Gorgonio subsequently. When the Romero Expedition passed though the area in 1823-1824, it was clear that the Cahuilla were accustomed to seeing vaqueros employed by the rancho driving cattle through the area. Certainly by 1823 they were not only familiar with Hispanic ways but were comfortable in dealing with them, as evidenced by their reaction to the members of the Romero Expedition (Bean and Mason 1962). The expedition also reported that the Cahuilla at Toro were engaged in agricultural pursuits, growing corn and melons, and that they were already familiar with the use of horses and cattle.

Political leadership became more centralized during the Spanish and Mexican periods as high-ranking or charismatic clan leaders were recognized by Europeans as representing entire tribal areas (Strong 1929:149). Emerging as central figures were Juan Antonio among the Mountain Cahuilla and Cabazon in the desert. As early as 1844, Juan Antonio led several mountain clans to the San Gorgonio pass area to provide security for Rancho San Bernardino. His group played a significant role during the Mexican-American War, siding with the Mexicans against the Luiseño who supported the American invasion (Philips 1975).

The 1848 Treaty of Guadalupe Hidalgo obligated the United States to preserve the liberty and property of the inhabitants of California. The U.S. government in 1850 appointed three commissioners to conduct negotiations with tribal leaders throughout California to settle all land rights issues. One of the 18 treaties that were drafted covered the Cahuilla, Serrano, and Luiseño and was signed in Temecula on January 5, 1852. The tribal leaders were promised supplies, food, and technical training in return for accepting specified reservation lands. But as was so often repeated throughout the west, local Euro-Americans lobbied again the treaty and it was never ratified by the U.S. Senate. Consequently, the traditional Cahuilla territorial base continued to be reduced as Euro-Americans entered the region and claimed the best farming and grazing lands.

Introduced diseases were probably beginning to take their toll on the Cahuilla in the early 1800s, but they became particularly severe in the 1860s. The most dramatic was the great smallpox epidemic of 1863 that killed Juan Antonio as well as many bearers of traditional tribal culture. Survivors of previously autonomous clans came together into the remaining villages or founded new settlements in an accelerated pattern of population aggregation and reorganization. This process continued through the following decades.

The Cahuilla land base was substantially reduced in the 1860s and 1870s when the federal government ceded alternate sections near the new transcontinental railroad to the railroad companies. Sections 16 and 36 of every township were also removed from federal control as a tax base for schools. Any de facto Cahuilla control of more extensive areas was eliminated in 1876 when President Ulysses S. Grant issued an executive order to set aside small reservations for the native groups classified as “Mission Indians.” These reservations included the sections or parcels in which the Cahuilla had aggregated in the previous decades and in which they had made improvements for farming. The following year, another executive order by President Rutherford B. Hayes set aside even-numbered sections and certain other unsurveyed portions of townships for Indian reservations. The result was a checkerboard pattern of Indian-controlled land, amounting to 48 sections, spread across the eastern edge of the Santa Rosa and San Jacinto mountains and the Coachella Valley (Cultural Systems Research 1983). With various subsequent additions and withdrawals, this has remained the permanent home of the Desert Cahuilla down to the present.

As traditional lifeways became more difficult to pursue, the Cahuilla adapted to their new social and economic environment by taking jobs in Euro-American ranches, towns, and cities. The 1860s, 1870s, and

1880s were a time of increased acculturation as new technologies, material goods, and practices were incorporated into the traditional lifeways of the reservation. Traditional ceremonial practices remained particularly strong despite Catholic and Protestant influences on the reservations. Ceremonial houses still existed through the 1950s, 1960s, and early 1970s, and many cultural traditions survive as parts of Westernized lifestyles. The Cahuilla retain an acute interest in the cultural heritage and cultural resources of their traditional territories.

2.4.2 The Quechan and Halchidhoma

Although the project area lies outside the traditional territory of the Yuman-speaking groups of the lower Colorado River (Kroeber 1925; Ortiz 1983), they may well have occupied the eastern shore of Lake Cahuilla when the lake was present. The first historical accounts of the traditional inhabitants of the lower Colorado River were made by Spanish and, later, American explorers. Among the earliest professional anthropological accounts of the lower Colorado Yuman groups were ones prepared by Alfred L. Kroeber (1920, 1925), who conducted extensive fieldwork, particularly among the Mohave in the Needles area between 1900 and 1910. Because these groups were generally successful in keeping Spanish missionaries out of their territory, the Colorado River Yumans maintained their traditional language, religion, and cultural practices to a greater degree than most coastal California groups. Early ethnographers in the period between 1900 and 1950 were able to record a rich oral literature and reconstruct pre-contact lifeways to a considerable degree. A River Yuman emphasis on spiritual concerns over material things and a preoccupation with warfare meant that a rich oral tradition of myths, epic stories, and battle narratives was still extant at the beginning of the twentieth century and continues to the present. However, many aspects of traditional technology such as ceramics and the production of flaked and ground stone tools have been lost due to the rapid adoption of Western material culture.

The Lower Colorado River area was one of shifting tribal territory and tribal boundaries in ethnohistoric times due to inter-tribal warfare (Forbes 1965). When Alarcón sailed up the lower Colorado River in 1540 he described a situation of incessant warfare. During Juan de Oñate's 1604-1605 expedition, he found the Halchidhoma living south of the Gila River confluence, along with the Kahwan and Halyikwamai (Laylander 2004b). Oñate encountered the Ocaras (Ozares or Oseres) at the junction of the Gila River. They were described as people of a different language who made cotton mantas. These may have been a Piman-speaking group. Oñate failed to mention the Quechan, who may have been living exclusively on the west side of the river or may have been the "Bahacecha" encountered farther north on the river. North of the Bahacecha, Oñate encountered the Mohave near the juncture of the Colorado River and the Bill Williams River, in their subsequent traditional territory.

Almost a century passed before the 1700-1702 visits of the Jesuit missionary Eusebio Francisco Kino to the juncture of the Gila and Colorado rivers. The Yuma crossing area was again visited in the 1740s by another Jesuit missionary, Jacobo Sedelmayr, and in the 1770s by the Anza expeditions bringing settlers from Sonora to coastal California. During the second Anza expedition of 1775-1776, the Franciscan missionary Francisco Garcés left the expedition at Yuma and explored the Colorado River as far north and east as the Hopi mesas. Garcés was the first to be guided along the so-called Mojave trail that proceeds north from Pilot Knob on the western side of the Cargo Muchacho Mountains and the Big Maria Mountains, as well as routes along the river. His are some of the first detailed descriptions of the Halchidhoma and the Mohave.

By the time of the Anza expeditions in 1774-1776, the Halchidhoma had moved north into the area where Oñate had found the Bahacecha, between Quechan and Mohave territories, from the Palo Verde Valley to just below Parker. North of the Halchidhoma were the Mohave with their major population center in the Mohave Valley. It appears from historical accounts and Yuman oral histories that the Halchidhoma were in an almost constant state of war with the Quechan and Mohave who were united in an alliance against

them. The Halchidhoma, in turn, were allied with the Cocopa, Maricopa, and Cahuilla, among others. Eventually the Halchidhoma could no longer withstand the two-front attacks from the north and south. They gradually moved off the river to join the Maricopa on the middle Gila River. By around 1825-1830 most Halchidhoma had left the Colorado River, with the last families leaving by 1840. The Numic-speaking Chemehuevi from the southern Great Basin subsequently occupied the vacated stretch of the river.

No detailed ethnography exists for Halchidhoma lifeways as they were lived on the Colorado River, because the Halchidhoma had become largely assimilated into the Maricopa more than half a century before any detailed study could be prepared. Today the Halchidhoma are most closely associated with the Laveen community on the Salt River Reservation in Arizona, although descendants are distributed over several reservations (Harwell and Kelly 1983:74). Leslie Spier (1933) had an Halchidhoma elder as the principal informant for his landmark study of Gila River Yumans. By this time, many elements of Piman and Maricopa culture had been adopted, but some valuable information could be derived concerning oral traditions. It is likely that Halchidhoma culture was very much like the Quechan, Mohave, and other Yuman-speaking groups when they occupied the Colorado River.

Spanish-Quechan interactions increased after Kino's first visit in 1700 and the passage of the Anza expeditions in 1774-1776. Two Hispanic settlements with attached Franciscan missions were established in 1780 near the Gila River confluence. These efforts at colonizaton reflected Spanish awareness of the strategic importance of the Colorado River crossing and the need to cultivate Quechan goodwill. However, conflicts between the Quechan and the settlers over land use led to an uprising in 1781 during which both settlements were destroyed. Except for a few military and civilian interactions, direct outside influence on the Quechan ceased until the U.S. period.

Large numbers of Euro-Americans came into contact with the Yumans with the advent of the Gold Rush after 1848. Hostilities ensued, resulting in the establishment of Fort Yuma by the U.S. government in 1852. Fort Mohave was built in 1859 after an attack on the Beale's Road immigrant trail that had been established through Mohave territory two years earlier. In 1860, the much better armed U.S. Army defeated the Mohave, who had been substantially weakened by the previous defeat at the hands of the Maricopa in 1857 as well as by extended periods of famine on the river. The 1860 episode proved to be the last major conflict between Indians and Euro-Americans in the region (Sherer 1994). The Quechan were restricted to a small reservation near Yuma, and the Mohave returned to their traditional lands in the Mohave Valley. In 1865, the government established the Colorado River Indian Reservation for the Mohave, as well as the upland Yuman groups, the Yavapai and Walapai. Other Mohave were relocated to the Fort Mohave Reservation in 1870 under extremely poor conditions.

The Yumans' focus on riverine subsistence resources encouraged a mixed foraging way of life, with small-scale agricultural practices supplementing foods procured by seasonal rounds of hunting, fishing, and gathering. According to Bee (1983), the Mohave relied more heavily on agriculture than did the Quechan or the Cocopa in the delta. In their study of Yuman agricultural strategies, Edward F. Castetter and William H. Bell (1951) estimated that about half of the Mohave diet derived from farming. They estimated that the Cocopa, by contrast, derived only about 30 percent of their diet from agriculture because of greater access to a diversity of habitats; Quechan and presumably Halchidhoma diet was somewhere between these two groups.

It appears that agricultural strategies were designed to optimize use of floodwater to bring moisture to the fields, which tended to be quite small in size (1 ha). Cultivated crops included maize, beans, squash, melon, and various wild grasses. Seeds were planted in newly deposited sediments after the floodwater had receded. The River Yumans used more than 75 wild plant foods as food sources, the most important being mesquite and screwbean. The primary source of dietary protein came from fish caught in the Colorado River. Among the more important species were the razorback sucker and Colorado pike minnow. This

emphasis on fishing the same species that entered Lake Cahuilla may have pre-adapted the Colorado River peoples to the Lake Cahuilla lacustrine habitats.

Regularly hunted game included small mammals such as rabbits, squirrels, and packrats. Larger game that figured in the diet included deer and bighorn sheep, which were probably hunted with less frequency and were less abundant than small game. However, their meat was highly regarded by the River Yumans, particularly in winter, when reliable sources of dietary fat were in especially short supply.

Swarthout and Drover's (1981) Model II characterized the Quechan and Halchidhoma settlement and subsistence strategy on the Colorado River below Topock. This model presumed a lower reliance on cultigens, accounting for no more than 30 to 40 percent of the annual dietary intake (Castetter and Bell 1951:74). Residential bases were also centered on the Colorado River but conformed to a bimodal pattern. Spring and summer houses were located near each field, but on the mesas, safe from floods (Kelly n.d.:55), while open-air ramadas were constructed on the floodplains adjacent to the fields. During this time, small parties sought out wild vegetal resources along the floodplain and adjacent washes. Mesquite and screwbean were also relied upon as stored staples during the winter months, especially if domestic crop harvests were inadequate. The winter season was a time to move to residential bases on upper river terraces, lower bajadas, and lower mountain slopes. Winter homes were more substantial, earth-covered lodges (Kelly n.d.:55). The population subsisted on stored domestic and wild foods, in addition to what wild game could be had. Additional temporary camps would be established in outlying areas for extracting specific animal, vegetal, or lithic resources. The population would move back to their lower terrace residences as soon as the spring floods had subsided.

Yuman groups were organized into patrilineal, exogamous, totemic clans (referred to as sibs in the early literature). Each clan or šimul was named after a plant, animal, or natural object, and this name was borne only by female members of the clan (Gifford 1918). There were no clan leaders and the clan did not have special ceremonial or sociopolitical functions. Clans were not localized at specific rancherias, which contained members of several clans. Each rancheria or band recognized a leader (pi'pa taxa'n) who was called upon to settle disputes, be responsible for the social and economic welfare of his people, decide on seasonal moves, and determine when to move the entire rancheria if necessary. His power was quite restricted, and he had limited influence. His position was achieved through dreaming, force of character, and demonstrated ability. Each tribal group also recognized a paramount chief (kwoxot) who might rise from the ranks of the rancheria leaders. This position may have become more important in historical times as a result of contact with Euro-American political and military institutions. Prowess in warfare was not required, and indeed the chief was expected to remain in the village or refrain from battle. Special war leaders (kwanami) were recognized.

Unlike other southern California groups in which the primary political allegiance and identity was with the localized band, members of each of the tribal groups on the Colorado River (Quechan, Halchidhoma, Mohave, etc.) thought of themselves as belonging to a consolidated people who lived as a true nation. Julian H. Steward (1955:159-161) postulated that Yuman clans had evolved from localized patrilineal lineages (like those found among the Cahuilla) which became dislocated and clustered into larger settlements. This resulted from the higher population densities afforded by the introduction of horticulture. Growing population size in other areas of southern California brought about increased localization of bands, but instead of increased band size there was shrinking of band territories. This was not so on the river, where people moved freely from one settlement to another. Entire settlements also shifted within the confines of the Colorado River floodplain depending on the location of arable land after each flood season. Steward identified warfare as a factor inhibiting the localization of clans and promoting increases in band size. This afforded greater protection against raids and ensured a unified military response to enemy attacks.

The apparent emphasis on warfare in Colorado River Yuman culture has lead to considerable discussion of its causes. Chris White (1974) emphasized the ecological reasons for warfare due to environmental circumscription, high population densities, and periodic environmental perturbations. Edward W. Gifford (1931:161), Clifton B. Kroeber (1980), and Kroeber and Bernard L. Fontana (1986) stressed the deeply ingrained ideological and cultural values attached to personal battle in Yuman culture. They argued that fighting was seen by its participants as a necessary means to enhance the spiritual power of the entire tribe without regard to material benefits. In fact, probably both aspects operated to shape the Yuman warrior tradition over time. Both ecological and cultural/ideological factors are intertwined in a complex and dynamic system, much as Roy A. Rappaport (1968) demonstrated for the role of warfare among New Guinea tribes.

It is difficult to faithfully portray the complexity and esoteric nature of Yuman spirituality. It is a dynamic belief system in which dreaming, adherence to traditional learning, personal experiences, and varying patterns of acculturation affect its expression. This world view stresses the interconnection of daily life with religion, unlike Western industrial society where the sacred and secular are more clearly segregated. The spiritual world exists concurrently with the secular world for traditional River Yumans, and the spiritual world can be experienced through dreams, vision quests, song cycles, the telling of the creation narrative, and many other oral traditions (Hinton and Watahomigie 1984; Kroeber 1925, 1948). Within that world view, the River Yumans see themselves as timeless occupiers and present custodians of their traditional territories after migrations from their creation place, usually identified with Spirit Mountain (Newberry Mountain) above Needles on the Colorado River. In this respect, the metaphysical Native American interpretations of the archaeological record may be quite different from the conclusions of scientific archaeology. Both have relevance when making decisions about the treatment of archaeological sites.

2.4.3 The Kamia of Imperial Valley

The principal ethnographic source for the Kamia is Gifford (1918, 1931) but considerable additional information can be gleaned from A. L. Kroeber (1920, 1925) and C. Daryll Forde (1931), given the close association between the Kamia and Quechan, and from Spier (1923) and William D. Hohenthal (2001) with regard to the Kamia's Tipai/Kumeyaay affinities. Synthetic overviews and interpretations of merit have been prepared by Frederic N. Hicks (1963), Barker (1976), Martha Knack (1981), and John C. Russell, Clyde M. Woods, and Jackson Underwood (2002).

The Kamia, also termed the eastern or desert Kumeyaay, were directly related by language and culture to the western Ipai, Kumeyaay, and Tipai groups of the mountains and coastal areas of San Diego County and northern Baja California, and a little more remotely to the Cocopa and other delta Yumans. The Kamia occupied areas along the New and Alamo rivers, and at springs and walk-in wells in Imperial Valley. During the ethnohistoric period, they were politically and militarily associated with the Quechan-Mohave alliance in opposition to the Cocopa and Halchidhoma. They maintained particularly close relations with the Quechan at the confluence of the Colorado and Gila rivers and were permitted a farming rancheria at the large Quechan settlement of Xuksil (Quechan: "sandstone"), located a few km south of the modern Mexican town of Algodones and north of the course with the Alamo River near the southern tip of the Imperial Dunes (Russell et al. 2002:84). These people were collectively known as the Kavely cadom or "south dwellers" and were known to the early Spanish expeditions as the rancherias of San Pablo, whose leader was also named Captain Pablo. They were estimated to number 800 people when the Anza expedition passed through in 1774 (Bolton 1930:2:51; Forde 1931:101). The Sonora Franciscans established the mission of San Pedro y San Pablo de Bicuñer near this location in 1776, along with another mission at La Purisíma Concepción, later to become Fort Yuma. Both were destroyed in a Quechan uprising on July 17, 1781, six months after their founding (Forbes 1965:191-204).

Two other Kamia encampments in Quechan territory were Espayau and Michul, located 13 km south of Pilot Knob near the modern town of San Luis in Sonora. Gifford's Kamia consultants did not recognize the names of four or five other settlements that are listed in Hodge (1907:330). The Kamia also used the Quechan occupation area of Cactus Lake (E-ce-mon), located 2-3 km southwest of the Cactus railroad stop, 1.6 km east of the dunes, and some 10 km north of the All-American Canal. This was an area where seasonal runoff from Pilot Knob Mesa would accumulate to form a large pan. The USGS maps show a zone of denser vegetation indicating shallow ground water. Quechan consultants identify this area as a cremation and burial ground (Russell et al. 2002:33, 84). A Kamia hunting and gathering territory (Xakwinimis) extended to the northern portion of the Imperial San Dunes and extending south past Highway 78 and across Pilot Knob Mesa to the Chocolate Mountains. This area figures in Kamia, Quechan, Kumeyaay, and Maricopa mythology (Russell et al. 2002:32, 84).

An 1849 census counted 254 Kamia people on the New River in Imperial Valley under Chief Fernando. They included 118 men, 82 women, and 54 children (Heintzelman 1857:53). By 1860, the County of San Diego Census recorded 105 Kamia people at New River (Indian Wells or Xachupai), distributed among 11 households or rancherias and lead by a Captain Zacariah (San Diego Genealogical Society n.d.:120-122). This record is especially valuable because it lists each household member by name, sex, and age. Presumably their numbers were much greater before the advent of European diseases and probably dropped even more drastically with the rampant smallpox and measles epidemics of the 1860s. A series of prolonged droughts or floodwater failures in the nineteenth century also took their toll on the population and eventually drove most Kamia in Imperial Valley to live at the rancheria of Xatopet, possibly on an east-west portion of the Alamo River south of the Imperial Dunes near the village of Huerta, Baja California. This was an emergency planting place that the Quechan also used as when the Colorado River failed to flood in the summer of 1851 (Kroeber 1980:190). The Kamia suffered additional casualties during conflicts with the Mexican military at Huerta and ultimately fled to live primarily with the Quechan.

The Kamia were organized into 10-11 non-localized exogamous patrilineages. Many Kumeyaay living to the west were also members of these same lineages, leading Gifford (1918; 1931:301) to conclude that the Kamia were, in essence, desert Kumeyaay who had assimilated may aspects of River Yuman culture. The identification of lineages with specific locations was probably more related to the settlement preferences of individual families that moved as lineage segments, rather than of any lineage territoriality. Gifford (1931:14) does suggest that some greater degree of lineage localization may have occurred in the past but was inhibited by mobility requirements of shifting arable lands. As most of the totemic associations of the lineages are either to the Wildcat or the Coyote, the Kamia may have some elements of a moiety system like that of the Cahuilla, although the Kamia are exogamous by lineage and not by totemic association. The economic unit was the extended family household consisting of a man and his wife (or wives), children, and grandparents. The 1860 census suggests households included additional adults. Probably as a result of River Yuman contact, the Kamia maintained a greater degree of "tribal" identification than their Kumeyaay kinsmen to the west, recognizing a tribal "chief" over all the lineages, an achieved rather than ascribed status functioning in the organization of economic activities, warfare, and diplomacy. It is not clear if this position may reflect a Euro-American effort to identify a responsible "captain."

Like their Yuman neighbors, the Kamia lived in rectangular, semi-subterranean structures of post-and-beam construction, with thatch and earthen roofs. They also built ramadas, lean-tos, and conical sweat houses. They dispersed their dwellings on or adjacent to arable alluvial terraces as close as possible to running water, hand-dug walk-in wells, or sloughs. There were no permanent villages, and their moves were conditioned by the availability of floodwater farming areas and the ripening of wild plants. The Kamia would move to higher terraces if flooding occurred. Seasonal overflow from the Colorado River that fed the New and Alamo river sloughs periodically failed, and the Kamia would move to other locations, including the Colorado River, during these stressful times.

The Kamia practiced a mixed economy of horticulture and hunting and gathering. Mesquite (Prosopis juliflora) was the most important wild staple crop, as it was for other groups in the Colorado Desert. Seed pods were ready in July and were readily collected at Espayau, south of Pilot Knob, where the Kamia would make camp but where agriculture was not feasible. Acorns were either obtained directly in the Peninsular Range or through trade with the Kumeyaay in exchange for cultigens, especially watermelons. The Kamia also procured baked and dried agave cakes from the Kumeyaay but otherwise did not participate in the early spring agave harvest. Tule pollen and roots were gathered from sloughs, one favorite spot being Seven Wells on the east-west portion of the Alamo River south of the International Border. Gifford (1931:24) reports on another marsh plant called wāró. The seed capsules were pulled off by hand over a ceramic pot and the capsules were rubbed until the seeds were freed. The pods were then winnowed away with a ceramic dish. The seeds were ground on a metate and eaten dry. Either wooden mortars or stone metate were used on many wild seeds, followed by cooking. Gifford's (1931:27) consultants apparently had no knowledge of the widespread practice of parching seeds prior to grinding. Among the seeds exploited were saltbush (Atriplex sp.), yerba mansa (Anemopsis californica), and sedge (*Cyperus erythrorrhizos*).

The Imperial Dunes also provided several plant foods. These included the black stems of a short plant called yidut, which were boiled in a pot and then peeled (Gifford 1931:24). This was most likely the "sand food" (*Pholisma sonorae*) that Castetter and Bell (1951:209) note the Cocopa called oyt and which they and the Quechan were observed collecting as late as 1895. The ball-shaped root of a plant called nyus was boiled and eaten. Although not mentioned by Gifford, it is very likely that sand food, discussed above, was also dug out of the sand dunes. In fact, Gifford's list of exploited plants is very slim, and in all likelihood the Kamia gathered as diverse an array of plants as other Colorado River peoples and the Kumeyaay (Castetter and Bell 1951).

The Kamia fished for all the native species, applying the same methods as the River Yumans, except that they did not use the dip net. Also like other River Yumans, hunting was a minor activity, but prey included migratory waterfowl, squirrel, gopher, lagomorphs, deer, beaver, and bighorn sheep.

Clay for making ceramics was dug from Colorado River alluvial deposits (Gifford 1931:42). One of Clyde Wood's Quechan consultants also identified the Imperial Dunes as an area to obtain clay (Russell et al. 2002:85).

The Kamia applied the same system of floodplain agriculture as the river and delta Yumans (Castetter and Bell 1951). Their fields extended along the lower alluvial terraces of the New and Alamo rivers, their locations shifting with each seasonal flood cycle. As previously mentioned, the Quechan also afforded them arable land on the Colorado River near Algodones. Irrigation after planting was not practiced, but they did build earthen dams at Xatopet (Kamia: "dam") and elsewhere to channel water into higher terrace areas to saturate the soil before planting. The River Yumans also used brush weirs to divert floodwaters in order to soak specific terraces more thoroughly. The Kamia may have practiced actual irrigation agriculture in the Jacumba Valley, just south of the Mexican border near the crest of the Peninsular Range at the western extreme of Kamia occupation. Here several Kamia lineages shared the area with one Tipai lineage who did not venture into Imperial Valley. This is the only place that, at least during the early nineteenth century, sustained irrigation ditches from a spring were maintained to water crops, as contrasted with the soak-and-plant method of floodplain agriculture on the Colorado River and in Imperial Valley (Gifford 1931:22).

A 2 kg seed cache was found in a ceramic cooking pot in a dry cave at Jacumba that may shed some additional light on Kamia agriculture (Treganza 1947). It contained nine different species of seeds, each wrapped in a historic-period twined bicolor textile. The seeds include native maize (*Zea mays*), tepary beans (Phaseolus acutifolius), butternut squash (Cucurbita mochata), pumpkin squash (*C. pepo*), and introduced watermelon (*Citrulus vulgaris*), muskmelon (Cucumis melo), sorghum (*Sorghum vulgare*), wheat (*Triticum compactum*), and barley (*Hordium vulgare*). Two other maize cob caches were previously discovered by

Adan Treganza. Even though the textile suggests a date after 1850, the cache has been frequently cited to support arguments for prehistoric agriculture west of the Colorado River (Bean and Lawton 1973; Forbes 1963; Treganza 1947). The seed complex matches that known for the early historic period Oo'dham (Pimans) who did practice irrigation agriculture like the prehistoric Hohokam who preceded them; it also matches the River Yumans after Kino had introduced the European and Asian species in the late seventeenth century. The find may therefore suggest, as Treganza argues that Kamia agricultural practices, including irrigation, derived from Native American sources rather than the missions. However, the introduced species and the associated textiles that Treganza dates to after 1850 without confirmation from a textiles expert (and which Jack Forbes [1963:7] only assumes to date from some time after 1769) do not provide proof of prehistoric agriculture among the Kamia west of the Colorado River. Schaefer and Huckleberry (1995) and Laylander (1995) provide additional rebuttals to the arguments for prehistoric agriculture west of the Colorado River.

Lake Cahuilla (also referred to as Blake's Sea) figures notably in the Kamia's origin myth (Gifford 1931:75-83); except among the Cahuilla, this represents the only other major recorded oral tradition regarding the prehistoric lake. The Kamia trace their origins to the north at Wikami (Mohave: Avikwame) near Needles, as do most River and Delta Yuman groups, as well as the southern Kumeyaay. The Mojave were said to have settled closest to Avikwame, and all the other groups migrated south to their respective territories. As related to Gifford (1931:79-80):

The Kamia came part way with the Yuma, then left them and went to the eastern shore of the Salton Sea. The sea (probably Blake's Sea) was large then and where El Centro is now there was sea. Later they moved to Indian Wells (Xachupai) and to Saxnuwai (near Holtville). There were ten men of each tribe. The ten Kamia men were the ancestors of ten lineages. Some of the Kamia passed through Imperial Valley into the mountains of San Diego County and became the Diegueño. There they had no seeds to plant, but found wild plant foods, deer, and mountain sheep. The tribes of Mission Indians were also near the (presumably present) southern end of Salton Sea. They became afraid of the Kamia, hence the Cahuilla and other Shoshonean tribes fled north-westward.

Later there came from the mountain Wikami three persons who were to be the Kamia leaders. They were a hermaphrodite (described by the informant as half man, half woman) call Warharmi (cf. Mohave hwami) and her twin "sons" (not really her sons, Narpai said), both called Madkwahomai. These three had learned much at Wikami. They came south along the Colorado River. They found the feathers of birds which had died, as they traveled along day after day. The features were of the birds kak (crow), tokwil, and kusaul. The three travelers made headdresses of these feathers and painted their faces as for war. They brought bows, arrows, and clubs. From the Colorado River at Yuma they crossed over to Imperial Valley. Their appearance so frightened the Kamia that they fled in all directions. One Kamia woman did not flee before the three. She was married by one of the Madkwahomai twins. Then the three newcomers and the woman settled at Saxnuwai. The seeds of maize and beans had been given them by Mastamho. These the three travelers brought from Wikami and planted at Saxnuwai, thus introducing cultivation in the Imperial Valley. Those Diegueño who had gone to the mountains to live failed to receive the seeds. The three travelers brought the seeds of certain wild plants as well. At Saxnuwai, Warharmi and the twins planted, for they found wet ground there. Before their departure from Wikami Mastamho had explained how everything was to be done. He had said that Warharmi and the two Madkwahomai were to be farmers and that they should go to dwell among the Kamia, whom Mastamho had sent to live on the shores of the Salton Sea.

Gifford considers the question of the phase of Lake Cahuilla to which the Kamia tradition may have been referring. He first weighs the argument that the final recession occurred before 1540 when Alarcón and Díaz sailed up the lower Colorado River. This was the prevailing view up until the 1980s. He then suggests that there certainly was enough time between Spanish entradas into the area for an additional infilling phase. A seventeenth-century infilling has now been substantiated archaeologically, as previously discussed

above. Gifford indicated that the high degree of observed acculturation to Yuman culture does not provide a clear index to the length of time the Kamia had been in Imperial Valley and the Colorado River Valley. The acculturation could have taken place even in the nineteenth century, after a late phase of Lake Cahuilla, he suggests. The occurrence of some western Kumeyaay lineages among the Kamia might also indicate movements into Imperial Valley by people escaping the missions or their influence. However, Gifford does not rule out the possibility that the Kamia population and cultural form may have been well established for a millennium (Gifford 1931:83, 86). In that case, many different prehistoric cultural trajectories could well have arisen from the multiple infillings and recessions of Lake Cahuilla during the late Holocene.

Trade relations were an important means of getting items not found within a tribal territory and of cementing social and political ties between different groups. Lying near the ethnohistoric boundaries between different linguistic groups, the project area may have been on or near a corridor for the exchange of goods and knowledge. The Kamia were very favorably positioned to trade with the Quechan because they enjoyed a close social relationship with them and they had access to the resources in the mountains of the Peninsular Range into which their territory extended. They were closely related to the other Kumeyaay groups of the mountains and coast and could act as trading middlemen with the Quechan. Both directly and indirectly, the Cahuilla of the Coachella Valley, the Paipai in Baja California, and the O'otam in Sonora may have also participated in this network. White (1974) postulates that some of the alliance patterns were linked to east-west trade relationships, across which the greatest differential distribution of natural resources was present, as opposed to north-south relationships between groups that shared the same environmental zones.

Prior to the ethnohistoric period, trade dynamics may well have been quite different; archaeological data would be the primary source for reconstructing these earlier patterns. Ceramics may have themselves been trade items, or they may have served more often as containers for trade items. From the mountain Kumeyaay, the Kamia received wild tobacco, acorns, baked agave hearts, yucca fiber sandals, baskets, eagle feathers, and cordage carrying nets. In return the Kamia exported vegetal foods of the desert, probably mesquite cake foremost among them, and salt obtained from Imperial Valley. The Kamia also passed on tobacco, an important ritual item, as well as receiving it from the Quechan. No doubt acorns and agave hearts, restricted to upper elevations, were Kumeyaay foods that would be in demand to the lowland Colorado River Yumans. The Colorado River Yumans, in return, exchanged cultigens such as dried pumpkin and corn, as well as gourds and seeds for rattles. The Cocopa, living near the Gulf of California, traded shell beads and pendants to the Kamia (Davis 1961). Archaeological evidence indicates regular movement of obsidian for arrow points from Obsidian Butte at the southern end of the Salton Sea and soapstone arrowshaft straighteners from the Peninsular Range. Wonderstone for making flaked tools may also have had some trade value. It was obtained from the Rainbow Rock source at the southeast edge of the Santa Rosa Mountains and from Cerro Pinto, west of Mexicali and just south of the Mexican border. Not only utilitarian goods but esoteric objects, knowledge, and songs were also exchanged. Eagle feathers and even live eagles for the eagle-killing ceremony were much valued. For example, the Cahuilla received gourd rattles and red pigment from the Colorado River Yumans. As another example of cultural exchange, very late in their history (ca. 1890), the Quechan incorporated the specific style of image from the Kamia into their karúk (mourning) ceremony (Forde 1931:221).

2.5 HISTORIC-ERA EURO-AMERICAN PATTERNS

The following discussion of the last two centuries of Euro-American history in the region focuses extensively on those periods and activities for which cultural resources are represented in the vicinity of the project area. These includes mining sites, transportation routes, water systems, and World War II era military training sites.

2.5.1 Mining

The first mining efforts took place in the Cargo Muchacho Mountains (hardrock) and Potholes (placer) areas in 1780-1781, contemporaneously with the first short-lived missionary efforts at the confluence of the Gila and Colorado rivers. Extensive mineral exploration began in the early 1860s when miners sought new discoveries as the Mother Lode country in the Sierra Nevada was played out. One of the first and largest mining booms in the region occurred in the La Paz and Castle Dome districts on the Arizona side of the river opposite Blythe. Miners from California and Sonora, Mexico, poured into the area in the 1860s and 1870s. The period of greatest activity extended from the 1870s through the 1890s and was facilitated when the Southern Pacific Railroad (SPRR) reaching Yuma in 1877 and by commercial boat traffic on the Colorado River (Vredenburgh et al. 1981:8).

Construction of Laguna Dam in 1908 put an end to the steamboat connection with Yuma, but prospects and mines continued to be developed through the early twentieth century as the growing railway network and the automobile provided access to more remote areas and made for more economical transporting of supplies and partially processed ores. Large and small operations were particularly numerous during the depression years. Most gold and silver mining ceased at the end of 1942 because of the World War II ban on non-strategic mineral mining. Mines that extracted iron, zinc, manganese, and gypsum flourished during the war period. When mining of precious metals began again after the war, it was on a larger industrial scale and with the application of improved chemical extraction methods. Some of the older hardrock and dry placering operations were transformed into heavily capitalized open-pit operations with vast cyanide leaching fields. Examples can be found at Mesquite Mine, Tumco/Hedges, and the American Girl mines that replaced late nineteenth century mining towns. Major archaeological studies derived from the environmental assessments at these sites have demonstrated the historical and research values of such cultural resources (Burney and Van Wormer 1993; Hector 1988).

In the southeastern Chocolate Mountains area, placer mining of gold, silver, lead, and copper goes back to the Spanish and Mexican periods, but almost all physical traces date from the late nineteenth and twentieth centuries, when the SPRR and then the automobile improved accessibility. It was in this period that hardrock mining was initiated on a larger scale in the Cargo Muchacho and Chocolate mountains (Vredenburgh et al. 1981:12). Many of the small placer mine claims on Pilot Knob Mesa (Mesquite Mining District) were worked at the turn of the twentieth century by residents of the mining town of Hedges on the eastern side of the Cargo Muchacho Mountains. Water was piped from Glamis for wet placering. Remnants of some of these operations, dating between 1910 and 1917, were excavated by M. Steven Shackley and Steven Van Wormer (1989). Mining ceased between 1917 and 1938, after which the Desert Gold and Aluminum Company initiated large-scale placer mining using well water for gravity separation. Small-scale dry placering was also undertaken, with minimal success. Beginning in the 1980s, the Gold Field Mining Corporation started the large Mesquite Mine, a hardrock cyanide heap leach operation.

Glamis also provided supplies and a rail connection for a number of mines in the surrounding hills, including the American Girl mine in the Cargo Muchacho Mountains that was active between 1892 and 1939, and the Whedon Magnesium Mine to the north which produced magnesium during World War I (Allen 1969, 106; Miller 1969, 237). The Paymaster group of mines, located about 20 miles northeast of Glamis, produced silver in the late 1920s and early 1930s, and eventually installed a cyanide treatment plant for extraction (Allen 1969:109). The Mary Lode Mine was active in the Chocolate Mountains north of Glamis in the 1930s (Sorenson 1987). During the Great Depression in the 1930s, some individuals who had suffered financial misfortunes elsewhere sought to start anew in the desert, with some attempting to prospect in older, abandoned mines in the area. The successful extracted enough ore to purchase groceries and gasoline in Glamis, while others were “grubstaked” on the expectations of their future success. It was estimated there were about 300 people living in tents and half-heartedly prospecting for gold in the area around Glamis (Allen 1983). The Mesquite Diggins or Mesquite Mine, about 6 miles northeast of Glamis,

was active between 1957 and 1980, and was subsequently operated by Gold Fields Mining Corporation and New Gold.

2.5.2 Transportation

Two of the most important routes of travel within the study area were the Bradshaw Trail and the SPRR. They represent the nexus between transportation and the opening of the American West for capitalist ventures and settlement (Warren and Roske 1981). Some of the forty-niners followed the Southern Emigrant Trail, which paralleled the Anza expedition route, which itself followed a Native American trail. Other native trail systems and new routes were developed for Euro-American access into the Colorado Desert as the lure of mineral resources overcame general perceptions of the desert as a hostile and barren place, to be crossed but not inhabited. Many of these earliest routes were mapped by the U.S. Government Land Office surveys of townships in the most accessible areas, beginning in 1853.

A gold rush on the Colorado River caused the development of the Bradshaw Trail (Gunther 1984:70-71, 431-2; Johnston 1972, 1987). One important discovery was made by Powell Weaver on January 12, 1862, on the eastern bank of the Colorado River north of what is now Ehrenberg, Arizona. A gold rush ensued that created the boom town of La Paz (previously Potholes). No good overland route to the gold field from the Pacific Coast existed at the time, and William D. Bradshaw, another forty-niner working in San Bernardino County, took it upon himself to find a reliable route in the spring of 1862. Relying on information provided to him by the Desert Cahuilla leader Cabazon and an unnamed Maricopa Indian who had joined Cabazon, Bradshaw mapped a route that followed an ancient Indian trail across the Colorado Desert, from one water hole to the next. From San Gorgonio Pass, the route passed through Palm Springs, Cathedral City, and Indian Wells, south through Toro and Martinez, across the north side of the Salton Sink to Dos Palmas, and then through passes between the Orocopia Mountains to the north and the Chocolate Mountains to the south. Following the south side of the Little Chuckwalla Mountains, past Chuckwalla Well and Mule Spring, the route crossed through the Mule Mountains and up Palo Verde Mesa near Blythe to the Colorado River.

Bradshaw published his report in the Los Angeles Star on June 14, 1862. Late that year, Hubert Howe Bancroft published a map of the route in his *A Guide to the Colorado Mines* and dubbed the eastern half past Dos Palmas "The Bradshaw Trail." Within two weeks of Bradshaw's 1862 report, a succession of pack trains was following the trail, and regular stagecoach service was also in place that same year. Smallpox and/or measles epidemics were already claiming many Cahuilla lives by the time the Bradshaw Trail opened, but the trail may have exacerbated the problem by bringing many Euro-Americans into direct contact with the native population.

A stage line continued to operate along the Bradshaw Trail until the end of 1879, several years after service had begun on the SPRR. The Bradshaw Trail remained an important east-west route across the desert until 1908, when the road that would become Interstate 10 was constructed. It continues today as a graded road maintained by Riverside County and the BLM. The Trail is popular with campers and four-wheeler enthusiasts who are interested in desert history.

The Coachella Canal parallels the right-of-way of the SPRR line, which hugs the shore of the Salton Sea. The SPRR was part of the transcontinental railroad system. The transcendent historical significance of the railroad in western American history is recognized (Bancroft 1890 vii; Fickewirth 1992; Myrick 1992). Congress authorized the Southern Pacific to establish a western link in 1866, the same year the railroad was incorporated. Work began in 1870 within a context of scandalous political maneuvering and competition among the railroad monopolies. Beginning in the Los Angeles area and progressing through the San Gorgonio Pass, construction crews reached Whitewater on January 1, 1876. Continuing through the

Coachella Valley and skirting the western side of the Algondones Dunes, the railroad finally reached Yuma in May 1877 (Brown 1985:70).

The railroad spurred a population and land boom throughout southern California that lasted more than a decade. Locally, numerous communities sprang up along the route. Euro-American settlement soon began in what would become Palm Springs due to the reasonably short wagon ride between the railroad station and the Cahuilla village of Sec he (Agua Caliente). Lumber and mining activities in the nearby desert and mountains became much more feasible with the railroad, including the Cargo Muchacho, Southeastern Chocolate Mountains, Picacho, and Paymaster mining districts (Vredenburgh et al. 1981). Several branch lines of the SPRR serviced mining camps and agricultural communities. On a regional basis, the competing railroads offered cheap fares from the East to entice new immigrants to western cities and towns. The federal government had awarded the railroad alternate sections of land in compensation for building the lines. The railroads needed people to buy and develop these holdings. Throughout the region, the burgeoning economies created a demand for consumer goods to be shipped west on the railroads. At the same time, local agricultural produce was shipped east. The railroad has continued to have a major impact on southern California through periodic boom-and-bust cycles into the twentieth century. The Union Pacific Railroad purchased the Southern Pacific in 1996 and continues to operate on the same route. The rail line adjacent to the project area, however, has been replaced and improved over the years, and little evidence of the original ballast or construction activities remain.

2.5.3 World War II Military Activities

The southern California and western Arizona desert regions became the focus of important training exercises during World War II, leaving abundant physical remains. The Desert Training Center (DTC) was opened on April 30, 1942. The normally serene desert gave way to the rumble of tanks and staccato of machine guns over the next two years. The largest military training installation ever to have existed (approximately 46,000 km^2), the facility had George S. Patton, Jr., as its first commanding officer (Bischoff 2000; Meller 1946; Henley 1989). Patton had proclaimed the DTC to be "probably the largest and best training ground in the United States" (Meller 1946:35). It served the vital purpose of conditioning troops to desert warfare conditions and tactics in preparation for the North African campaign. The center was also used to field test numerous pieces of equipment and supplies. The original facility extended from the Colorado River on the east to a point slightly west of Desert Center on the west, and from Searchlight, Nevada, on the north to Yuma on the south. This area was ideal in that it contained a variety of terrain types and had no large population centers (Howard 1985:273-274).

The Desert Training Center was located to the east and north of the project area. However, Camp Dunlap Aerial Gunnery Range, located adjacent to Siphon 7 on the Coachella Canal, was established by 1940 to serve as a base for the Marine Corps aerial gunnery range in the Chocolate Mountains.

2.5.4 Coachella Canal

Bids for construction of the first 70 km of the Coachella Branch of the All-American Canal were opened in Yuma in 1938, and construction was completed in 1939. A year later, the contract to construct Section 2 was awarded. Bids for the third section were rejected in 1941 because they exceeded estimates due to inability to ensure that materials would be available during World War II. Bids were again opened and construction resumed in 1944 and continued until 1948. By 1946, some water was being released into the canal to test the system and to estimate the amount of seepage. Water service commenced in 1949.

The original, or "Old Coachella Canal" (OCC), began as a monumental turnout gate at Drop 1 on the All-American Canal, located 61 km downstream from Imperial Dam. It then proceeded at a rate of 2,500 $feet^2$ per second for a total distance of 199 km, beginning at 49 m amsl and terminating at about sea level. It first proceeded northwest along the base of the Imperial Sand Dunes, passing along the base of the Chocolate

and Orocopia mountains, then past the Mecca Hills to Indio where it curved south to terminate near Avenue 57 on the west side of the Coachella Valley at the artificial reservoir known as Lake Cahuilla, constructed in 1969. Through a series of six turnouts, the final flow rate at the terminal end of the OCC was 1,300 feet[2] per second. The original canal was earth-lined except for the last 60 km, which was a concrete-lined, 12-m-wide and 3.7-m-deep aqueduct. The canal transported by gravity flow approximately 315,000 acre-feet of water annually, and irrigated more than 32,000 ha (U.S. Bureau of Reclamation 1934, 1948, 1949, 1984:1). Two detention dikes and three wasteways constituted the protective flood works that protected the system. Six siphons facilitated the water's flow under larger washes. Electrical generation occurred at two drop structures along the route. Among more recent improvements are electronic telemetering control systems and 10 debris screens, half of which were installed in 1957 and 1967 (Coachella Valley Water District 1978:42-43). The Imperial Irrigation District operated and maintained the portion of the OCC between the All-American Canal and Niland where some lands at the northernmost end of Imperial Valley were irrigated with OCC water. The remainder of the OCC north of Niland was operated by Coachella Valley Water District.

The need for water conservation became clear as the other participants of the Colorado River Compact, particularly the upper basin states and Arizona, made more use of their share of the river's flow, for instance through the Central Arizona Project. An estimated 132,000 acre-feet of water was lost annually to seepage in the loose sands and silts along the Coachella Canal. A new concrete-lined canal was therefore constructed in 1980-1981, directly east of the old canal alignment for the first 77 km between the All-American Canal and Niland. A project has recently been developed to line other portions of the Coachella Canal.

2.5.5 Glamis Community Development

When the Southern Pacific Railroad line to Yuma was completed in 1877, small section towns were established every 15 to 20 miles along the railroad in remote areas to maintain the line, some with water tanks to provide steam-powered locomotives with boiler water. Niland, Amos, Glamis, and Ogilby were the locations of such facilities on this line between the Salton Sea and Yuma. At Amos, "helper" engines that had been added to trains to assist them in climbing the Iris hill grade east of Niland, were removed and routed back to Niland (Billie Allen [1969:35] notes that the station between Niland and Glamis was originally named Mammouth, with its name changed to Sterling in 1915, and to Amos in 1916). Each of these stations had a section house and bunk house for the railroad maintenance crews, and small communities developed around them. Although documentation of the earliest development of Glamis has not been identified, its cemetery was an early component, with the first grave noted to be from 1878.

The discovery of gold near Ogilby in the late 1880s spurred that town's development, and by 1895 Ogilby had a post office, express office, grocery store, school teacher's house, and a cemetery, as well as a section house, freight house, bunk house (probably for railroad maintenance workers), and a cook house. The extent of Glamis' development in the 1890s has not been determined; however, its station had an underground tank that served as the community's well, with its water supplies brought by rail from Mecca on the north side of the Salton Sea (Miller 1969:240-241). In 1909, a well was dug in Glamis (Imperial Valley Press 1909, Jan. 23). A 1920 guidebook to desert watering places noted that water was available from Glamis' railway cistern, and gasoline and meals could be obtained at a store (Brown 1920:23).

The 1862 Homestead Act had encouraged the settlement of undeveloped land across the American West. The Enlarged Homestead Act in 1909, which increased the size of homestead claims for non-irrigable land in some states, responded to a dryland farming movement in the early twentieth century, and the Homestead Act of 1912 reduced the number of years' occupancy on the land to fulfill the requirements of a homestead claim on undeveloped public land, resulting in an increase in homesteads being started in California's deserts in this period (Bradsher 2012:35; Peirson 1970:147-148). Higher-than-normal rainfall during the 1910s encouraged the use of desert land for agriculture, although a return of the drier climate led to the

subsequent abandonment of many homesteads (Ausmus 1989:121). When the Palo Verde Valley near the Colorado River was opened to homesteading in the 1910s, Glamis was the closest rail shipping location, and arriving homesteaders could find overnight accommodations there, as well as supplies and transportation to their property (Miller 1969:232). A railroad station building was constructed at Glamis after 1909 (Imperial Valley Press 1909, Jan. 23).

As noted in the Mining section above, Glamis was the center for community, supplies and a rail connection for a number of mines in the hills surrounding Glamis. During the Great Depression in the 1930s, approximately 300 people were living in tents and half-heartedly prospecting for gold in the mining areas around Glamis, and they came to town for groceries, gasoline, and to pick up mail (Allen 1983). In the early 1930s, Paul Lowe, who operated a guest ranch 25 miles north of Ogilby, sold small mine properties in the Chocolate Mountains to people who had suffered financial losses in the Depression. Lowe also built a ranch house that those who bought the properties from him could use as a community clubhouse; it was reported to have been called the Gold Diggers Club. During World War II, this clubhouse was commandeered by Army officers from the Desert Training Center who used it as an officers' club (Allen 1983).

The Algodones Dunes to the west of Glamis, the largest dune field in California, were a natural barrier to east-west transportation. Vehicles traveling to Arizona from the Imperial Valley drove north to Niland, through the Mammouth Wash, and then southeast to Yuma following the Southern Pacific rail line (Bates 1970). In preparation for the 1915 Panama-Pacific Exhibition in San Diego, a plank road for vehicular traffic was constructed across the dune field in 1912 some miles to the south of Glamis (Bates 1970; Dolan 2005:85). In 1915, due to the plank road's deterioration and the need for more turnouts, a new plank road was built, with the lumber shipped to and staged in Ogilby. In 1927 the construction of a two-lane asphalt-paved road between Holtville (25 miles southwest of Glamis) and Yuma was the beginning of Highway 80 (Bates 1970). However, as shown in a 1920 Department of the Interior map of *Routes to Desert Watering Places in the Salton Sea Region*, there was no improved road from Glamis to the Imperial Valley communities to the west; a Sand Hills Road between Glamis and Brawley is known to have existed, but its date and type of construction have not been identified (Reilly 2019). Therefore, Glamis relied on its railroad connection (Brown 1920).

In 1937, the Glamis Store was built by the former owner of a similar store in Ogilby, Al Allen. Located on the Niland-Glamis county road (present-day Ted Kipf Road) facing the rail line, it was approximately 900 feet northwest of the road's present- day intersection with Highway 78. The building had a grocery in the front and a kitchen in the back, and by 1940 it also served as the community's post office; a 1950 photo's caption indicates they were separate buildings that shared a continuous front porch (Allen 1969:118, 1983). Two gasoline pumps were located in front of the store. A 1942 photograph of a vehicle modified for driving on sand, taken at the side of the building, shows that the building had a gabled roof and a false-front main façade. The Glamis store became a community gathering place for railroad crew members, for the miners and others who came in from the surrounding area (some seeking to recover their health from respiratory diseases such as tuberculosis) to pick up their mail (Allen 1983).

A crew or gang of railroad workers based in Glamis was responsible for the section of rail line to the halfway point toward Ogilby. A group of these railroad workers' houses were sited on the west side of the rail line within the railroad right-of-way. These buildings were composed of two converted boxcars sited parallel to each other, with a covered concrete slab between them. A number of these railroad worker families were noted to be of Mexican descent (Crawford in Allen 1969:231). A school for their children was constructed from two boxcars and was noted to be opposite the Glamis Store. The teacher's quarters were also adapted from a boxcar (Allen 1983). Glamis did not have a church; however, some of its residents held prayer meetings in the residences (Crawford 1969:231).

During World War II, Glamis was at the southern end of the vast Desert Training Center. Under the War Powers Act, the military acquired titled to the northern part of the Chocolate Mountain range; the area was used by the army for artillery firing, tank training, and aerial gunnery exercises (Sorenson 1987). Glamis does not appear to have had any direct involvement in the training exercises preparing troops for combat in North Africa, but saw trains passing en route to the divisional Camp Pilot Knob, approximately 10 miles east of Ogilby in 1943 and 1944 (Desert Training Center n.d.). Some of the soldiers involved in the desert training mailed their letters from the post office at the Glamis store (History of Glamis, Allen 1983).

With the development of diesel-powered locomotives, trains no longer needed frequent stops for fuel and water, and by 1946 Southern Pacific trains no longer made scheduled stops at the section towns. The school district was suspended at Ogilby, and in 1961 Automobile Club noted that town was abandoned (Dolan 2005:87). At Amos, all of the buildings had been removed by 1969 as part of railroad modernization, leaving only the community's cemetery (Allen 1969:34). In Glamis, a 1972 aerial image shows a linear arrangement of structures on the both sides of the rail line straddling Highway 78, and a 1969 article mentions several railroad maintenance buildings were extant at that time (Showalter 1969:37). The date of these buildings' demolition has not been identified, but all of the buildings adjacent to the rail line at Glamis were removed prior to the mid-1990s.

A 1949 agreement between the U.S. Navy and the Imperial County Board of Supervisors established an aerial gunnery range in the Chocolate Mountains. The boundaries of the range necessitated the closure of a section of the Niland-Blythe county road, part of the route between Glamis and the Imperial Valley. A new road was proposed to traverse the Algodones sand dune field, linking Brawley with Glamis, and continuing north from Glamis to the Palo Verde Valley (San Bernardino County Sun, May 5, 1953). Also known as the Glamis Road and the Glamis Cutoff, the new route was promoted for routing travelers from U.S. Highways 60 and 70 at the Arizona border to the San Diego area instead of Los Angeles, as well as an artery for military travel (Chula Vista Star, May 25, 1950; Los Angeles Times, Jan. 18, 1952). The road was completed in 1958 and became part of Highway 78; it was dedicated in 1964 as the Ben Hulse Highway in honor of the state senator who championed its construction (San Bernardino County Star, Aug. 15, 1958; Henderson 1968:101). In 1966, the Imperial Sand Hills, part of the Algodones Dunes that Highway 78 crosses, were designated a National Natural Landmark (National Park Service n.d.; Bureau of Land Management n.d.). The North Algodones Dunes Wildness on the north side of the highway became part of the National Wilderness Preservation System in 1994, prohibiting the uses of motorized vehicles within its boundaries (Bureau of Land Management n.d.).

After Al Allen's death in 1958, the Glamis Store was bequeathed to his wife Carol (Allen 1983). The Glamis Store was subsequently operated by Betty Bluntach, Everette Van Derpoel, Bob Newton, Bill Smith, and Bill and Judy Boyd (Everette Van Derpoel was at one time the owner of the nearby Mary Lode Mine, Allen 1969:118). By 1969, a bar that served beer had been added to the store's food service.

A new store was built by Gene LeBlanc on the south side of Highway 78 in 1979 and named the Glamis Beach Store (Allen 1969:116, 230; Glick 1979). The store was noted to contain pool tables and pinball machines and to be recreation oriented (Allen 1983). In 1987, a classified ad described it as a general store with gas, a pizza parlor with bar, and three separate living quarters (San Francisco Examiner 1987:48). The date of the demolition of the earlier Glamis Store and other older buildings on the north side of Highway 78 has not been identified.

Although a 1958 newspaper article stated that Glamis had only 11 residents, by the beginning in the 1960s this number was swelled on weekends and holidays by four-wheel-drive and dune buggy enthusiasts (Allen 1969:116). Motorcycle racing in Southern California's deserts had been popular in the 1920s and 1930s. After World War II, a large surplus of military lightweight four-wheel-drive vehicles (e.g., Jeeps) led to their use for recreational activities including camping and back-country exploring. Civilian versions were

also manufactured and four-wheel-drive clubs were formed beginning in the late 1940s. In 1963, Bruce Meyers modified a Volkswagen chassis with a lightweight fiberglass body to produce the prototype of a dune buggy in Newport Beach, California. Kits were sold as Meyers Manx, and the vehicles won numerous desert races in the following years (Hale 2014:14). In the late 1960s, the development and production of three-wheeled all-terrain vehicles (ATV) and all-terrain cycles (ATC) expanded the range of recreational vehicles in use in dune areas.

Enthusiasm for dune buggies and other sand vehicles increased in the Algodones Dunes area, bringing 30,000 people to the Glamis area during the 1979 Thanksgiving weekend. Also in 1979, the Glamis International Sandway – a 100-yard sand racetrack, operations tower, and timing equipment were constructed approximately 500 feet south-southwest of the current Glamis Beach Store, and inaugurated with the Molly Mate Supernationals sand racing event (Glick 1979; Reilly 2019). The track was used for the 1982 Winter SandNationals, but subsequently closed (Allen 1983).

Four-wheeled ATVs were developed in the mid-1980s, joined by lightweight utility task and unlimited-terrain vehicles (UTV) beginning in the late 1980s. By the 2010s, tens of thousands of off-road enthusiasts were visiting the Imperial Sand Hills during holidays in the autumn, winter, and early spring months, many of them camping in RVs near Glamis (Smith 2016). Glamis has become known as the Sand Toy Capital of the World.

2.6 RECORDS SEARCH RESULTS

ASM completed a records search and literature review for the Glamis Specific Plan Project in June 2019. This records search, conducted at the SCIC at San Diego State University, covered 100 percent of the current project APE.

ASM's records search covered a 0.5-mile buffer around the project APE. The records search identified five previously recorded cultural resources within the 0.5-mile buffer, and four previously recorded cultural resources within the project APE. The results of ASM's records search, including a tabulation of previous cultural resource studies and previously recorded cultural resources, are provided in Appendix B.

3. SURVEY DESIGN AND METHODS

This section reviews the regulatory framework and field methods of the Class III inventory of the project footprint.

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

The current Class III inventory is classified as intensive to ensure that cultural resources identified in the field were adequately documented to support subsequent evaluation and treatment plans. Intensive surveys entail the documentation of the types of properties that are present, the precise locations and boundaries of all identified properties, the method of survey (including the extent of survey coverage), and data on the appearance, significance, and integrity of each property (NPS 2009). For the current Class III inventories, full coverage (100 percent), systematic pedestrian surveys with 5-m transect intervals were performed.

The APE for the project has been defined as encompassing six parcels located at the intersection of State Highway 78 and the Union Pacific Railroad in Glamis. Together, the six parcels within the APE encompass 141 acres.

3.1 RESEARCH METHODS

The archival research effort for this project has centered on establishing the extent and timing of development of the community of Glamis; determining the timing of railroad use, mines and mining claims, and the history of the Imperial Sand Dunes Recreation Area. Research was also completed in an effort to provide a context for evaluating the resources for potential listing on the CRHR.

Sources reviewed include mining records; historic maps; land records; mine location records, mining deed records; various state and local government records; census records; newspapers; historic photographs; and existing histories of the region.

3.2 FIELD METHODS

For the current Class III intensive inventory, the survey crew consisted of a field director/crew chief plus one crewmember. A local Native American monitor was invited to accompany ASM personnel during the survey. Standard transect spacing was 5 m, although spacing was reduced significantly within identified archaeological sites in order to adequately define the site character. The systematic 5-m transects were interrupted to do judgmental inspections of locations such as potential artifact scatters within the APE. The survey transects generally began at the outer edge of the APE and followed its orientation, working inward, to maintain survey efficiency.

Areas with a low potential for cultural resources due to development or other disturbances were addressed by a mixed strategy survey. This focused more on areas of less ground disturbance and closer inspection of historic to modern features. Areas covered by standard systematic 20-m transects and those covered using

a mixed strategy were distinguished on project maps. The interiors of fenced, private businesses were not surveyed.

A daily survey form on the progress, condition, and findings of the survey was completed. This form included a description of vegetation cover (including contextual photos), as well as estimates of ground surface visibility, rated as poor (0-25 percent), fair (26-50 percent), good (51-75 percent), or excellent (76-100 percent).

Evidence for buried cultural deposits was opportunistically sought through inspection of natural or artificial erosion exposures and grading cuts. In the daily survey notes, the field director assessed the potential for buried sites on the basis of geomorphology. For instance, large alluvial valleys tend to have higher potential for buried sites, and areas with shallow bedrock have lower potential for buried sites.

Standard global positioning systems (GPS) aided navigation. Together with hard-copy field maps, GPS was used to keep the field crew aware at all times of the limits of the APE. GPS was also used to record the positions of archaeological resources. A GIS specialist created digital maps to accompany the site forms and report.

This was a non-collection survey. ASM archaeologists recorded artifacts in the field, using appropriate descriptions and photos, to facilitate interpretations of site character. One new prehistoric resource was recorded and three previously recorded resources within the APE were updated, confirming or correcting information on their locations, spatial extent, general characteristics, and likely eligibility status. Sites were defined as any concentration of three or more artifacts, with at least two different artifact classes represented (i.e., debitage and ground stone, or debitage and a biface), in a 25-m^2 area. Site boundaries were defined when over 50 m of space separated cultural materials. Isolated artifacts were defined as three or fewer artifacts (two artifacts if different classes were present, three artifacts of the same class—i.e., three pieces of debitage) in a 25-m^2 area. The isolated artifact was recorded and given a temporary identification until a permanent primary number is assigned by the SCIC. Site recording included definition of site boundaries, features, and formed artifacts. Detailed sketch maps demonstrated the relationship of the location of each site to topographic features and other landmarks. Digital photographs documented the environmental associations and the specific features of all sites, as well as the general character of the survey area. No resources were found to extend beyond the boundary of the APE.

3.3 SITE CLASSIFICATION

The primary objective of the survey was to provide descriptive information on the resources present, while at the same time, providing enough information to consider the potential significance of any archaeological sites in relation to one another in terms of settlement and subsistence. To this end, a basic typological framework was used to characterize sites.

Possible prehistoric site types would include:

- Habitation Sites. These are relatively substantial deposits, typically including at least three different types of cultural evidence, such as multiple bedrock milling features, flaked lithics, ground stone, ceramics, faunal remains, features, and midden. These sites are thought to represent more substantial occupations, whether resulting from serial occupation or from sedentary year-round occupation.
- Artifact Scatter. These consist of at least two different kinds of artifacts (i.e., lithics and ground stone), but tend to lack evidence of more extensive habitation, such as faunal material and substantial midden deposits. Artifact scatters typically result from

a variety of daily economic tasks performed at a single location for a limited duration. Artifact scatters can also have milling features.

- Bedrock Milling Stations. These consist primarily of bedrock milling features (mortars, basins, and/or slicks). They are interpreted as work stations used to process a variety of foods and other materials, probably in most cases plant materials (i.e., seeds, roots, nuts), but also including animals. These stationary features can be incipient and include a limited number of ephemeral milling surfaces, or they can be representative of planned reoccupation. The latter typically include mortars that are difficult and time consuming to manufacture. In an intensively occupied landscape, it is common to find solitary milling features deriving from opportunistic processing needs.
- Lithic Scatters. These consist exclusively of flaked lithic materials, such as debitage, cores, and tools. They represent areas where tools were manufactured or reworked, ranging from heavily used workshops to flaking stations where activity was more casual and transient.
- Ceramic Scatters. These consist exclusively of ceramic potsherds. They may range from pot drops, where pieces from a single vessel were discarded or found at the point of original breakage, to extensive, multiple-vessel scatters that may represent habitation, resource processing, or pottery manufacturing.
- Isolates. Occurrences of three or fewer artifacts of the same kind (i.e., three pieces of debitage), or two or fewer artifacts of different type within a 25-m^2 area will be classified as isolates.

Historic period sites are likely to be both functionally more diverse and more readily interpretable. Among the types that may occur in the study area are residential sites, commercial sites, refuse scatters, transportation routes and facilities, water facilities, and historic isolates. Remains that are not recognizably more than 45 years old will not normally be treated as cultural resources.

3.4 DOCUMENTATION

Documentation of sites complies with the reporting specifications outlined in the BLM 8100 Manual, as stipulated in the BLM Cultural Resources Use Permit and Field Authorizations for this Undertaking, and to every reasonable extent with the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44740), and the *California Office of Historic Preservation Planning Bulletin Number 4(a)*, December 1989, *Archaeological Resource Management Reports (ARMR): Recommended Contents and Format (ARMR Guidelines) for the Preparation and Review of Archaeological Reports*. All prehistoric and historic sites identified during this inventory were recorded on California Department of Parks and Recreation Form DPR 523 (Series 1/95), using the *Instructions for Recording Historical Resources* (Office of Historic Preservation 1995).

3.5 NATIVE AMERICAN PARTICIPATION

As noted, a local Native American from Torrez-Martinez Desert Cahuilla participated in the field survey. With his consent, Native American input during the survey was documented in the daily survey log. The participating Native American monitor walked along with the crew during the pedestrian survey and was requested to provide ASM with information regarding any possible Tribal Cultural Resources (TCR) or specific areas of tribal concern encountered during survey. The Native American monitor did not identify any specific information on TCRs or other areas of Native American interest within, or immediately adjacent to, the project APE.

3.6 TREATMENT OF HUMAN REMAINS

It is typically very difficult to positively identify human bone located on the ground surface since weathering and other taphonomic processes greatly reduce bone size and the chances of locating diagnostic bone elements. Nonetheless, the presence of bone was recorded, and a tentative assessment of the bone origin was made. One piece of unweathered, butchered bone with cut marks was identified and assessed to be non-human. No identifications of any possible human bone were made that would have warranted notification of the Imperial County Medical Examiner.

3.7 TRIBAL OUTREACH

The California Native American Heritage Commission (NAHC) was contacted on June 11, 2019, to conduct a search of their files for any recorded Sacred Lands or Native American heritage sites located within the project APE. The NAHC responded to ASM with a letter indicating that the results of the Sacred Lands File search was negative within the project area. Additionally, the NAHC response letter provided a listing of all Native American tribal representatives that may have further knowledge of such sites within the project area. ASM provided the Native American tribal contacts listed with a mailed consultation initiation letter. No responses have been collected to date.

4. SURVEY RESULTS: PROJECT FOOTPRINT

This chapter documents the results of the Class III cultural resources inventory of the project Area of Potential Effects (APE). The Class III inventory identified six archaeological sites and one isolate (Table 1 – [See Appendix A]).

Table 1. Cultural Resources Identified in the Class III Inventory

Site	Survey	New or Existing?	Age	Site Type	Potential Eligibility
Class 3 Eligible Sites (*n* = 2)					
IMP-3424	Class 3	Record Search	Historic	Railroad	Recommended eligible
IMP-4621	Class 3	Record Search	Historic	Cemetery	Recommended eligible
Class 3 Ineligible Sites and Sites with Uncertain Eligibility (*n* = 3)					
IMP-8214	Class 3	Record Search	Historic	Refuse Scatter	Likely ineligible
IMP-8634	Class 3	Record Search	Historic	Railroad Depot	Likely ineligible
GSP-KM-S-1	Class 3	New	Historic	Road	Likely ineligible
GSP-KM-S-2	Class 3	New	Historic	Highway	Likely ineligible
GSP-TRT-I-1	Class 3	New	Prehistoric	Artifact Isolate	Likely ineligible

Within the Class III footprint, a total of four identified sites were previously recorded while two historic sites and the isolated artifact were newly documented.

The search conducted for this project provided details on previously recorded archaeological sites within a 0.5-mile radius of the project area. All four previously recorded sites within the APE were relocated and three were updated (an update was not prepared for the Union Pacific Railroad).

The following sections describe general field conditions and survey constraints, followed by brief descriptions of each site. More detailed information on each site is available on the site forms provided in Appendix A. Cultural resources inventories are not designed to provide formal evaluations of archaeological sites. However, it is possible to estimate a site's potential eligibility for listing on the CRHR based on surface evidence. To this end, each site description includes a statement about its potential CRHR eligibility. Of the five archaeological sites and isolated finds within the Class III inventory, two have the potential to meet the criteria for CRHR eligibility—the historic-era Glamis Cemetery and Union Pacific Railroad (see Table 1).

4.1 SURVEY CONDITIONS

Due to access limitations, some areas within the APE were not surveyed. In particular, the fenced area of the Glamis Dunes Storage business and the interior, paved areas of the Glamis Beach Store property were not surveyed because crews did not have permission to access those areas.

Survey conditions often pose unique constraints on an archaeologist's ability to identify and record archaeological materials. Vegetation cover is often one of the most limiting factors on the discovery of archaeological deposits and features. Figures 4.1a and 4.1b characterize ground visibility throughout the APE. The following scale was used to rate visibility: poor (0-25 percent), fair (26-50 percent), good (51-75 percent), or excellent (76-100 percent). This scale is not absolute but is intended to adequately characterize relative ground visibility to aid management considerations for areas that are heavily vegetated and that may contain undetected archaeological deposits. Ground visibility was excellent throughout the survey area

except in areas of development and dumping. Small, dark grey crushed-stone gravel has been imported and spread over the ground surface on the north and west sides of the fenced Glamis Dunes Storage facility. On the west side of the facility, the gravel has been graded into a motorcycle track with turns and jumps. To the north of the storage facility, the gravel has been spread evenly over the ground surface although two large piles have been created close to the facility. Ground visibility east of CA-78 was virtually 100 percent except where developed. This survey area, around the Glamis Beach Store, is highly disturbed by grading, natural erosion, and decades of use by campers and off-road vehicle enthusiasts. A dirt road that runs behind the Glamis Beach Store has been graded to 18-24 inches below the ground surface, leaving a profile wall that was inspected for cultural deposits and natural stratigraphy. No cultural deposits were observed; however, a uniform mixture of sand and small-size gravel was noted to begin just below the surface. The project area is surrounded by wind-blown, shifting sand dunes. While the entire project APE is highly disturbed, the possibility of wind-blown sand being deposited over additional, unknown archaeological deposits is difficult to assess.

Figure 3. Example of ground visibility southeast of State Highway 78.

Figure 4. Example of ground visibility north of State Highway 78 and south of Glamis Dunes Storage.

4.2 SITE DESCRIPTIONS

The Class III inventory resulted in the documentation of six archaeological sites and one isolate. The six archaeological sites are historical in nature and four were recorded prior to the project. Two historical resources and one isolated prehistoric artifact were newly identified and recorded during the current survey.

Figure 5 contains confidential cultural information and is not available public review. Figure 5 is available for review by contacting the County of Imperial Planning and Development Services Department.

4.2.1 Previously Recorded Archaeological Sites

IMP-3424

This linear resource is a segment of the railroad line between Los Angeles and Yuma, with a subsequent connection to the Imperial Valley, built by the Southern Pacific Railroad in 1877. The siting of section towns along its line, including Glamis, to provide fuel and water to its steam-powered locomotives affected the settlement and development of the area between Niland and Yuma by providing transportation for settlers and homesteaders as well as for mining equipment and ore destined for processing. During World War II, the rail lines were heavily used for transporting military personnel, including those stationed in the Desert Training Center's camps, but the decrease in rail service after the war contributed to the decline of the former section towns, and the abandonment of a number of them by the 1960s. Since the merger of the Southern Pacific with the Union Pacific in 1996, this rail route has been operated by the Union Pacific Railroad (Union Pacific n.d.).

The railroad has remained in operation since its construction, with components of the rail line periodically maintained and upgraded. At this location the rail berm is approximately 30 feet wide, bearing two standard narrow-gauge tracks with updated rails, ties, and ballast. There is one mid-twentieth century crossing signal with a boom barrier on each side of the rail line's intersection with Highway 78. To the west of the rail line is Ted Kipf Road, the Glamis Cemetery, and the Glamis Dunes Storage facility. The desert area to the east of the rail line appears to be used for off-highway vehicle recreation.

Figure 6. Overview of IMP-3424 facing southeast toward State Highway 78.

IMP-4621H

The resource is the small Glamis Cemetery. The cemetery measures approximately 40 x 65 feet, and it is located approximately 110 feet northwest of Highway 78. As Ted Kipf Road approaches Highway 78 from the northwest, it splits into a Y, with the cemetery located in the triangular center section of the Y. It was sited to the rear of the railroad section house and the row of residential buildings for railroad workers and for the community's schoolteacher that were located on the west side of the Southern Pacific Railroad line through the 1960s.

The cemetery was surrounded by a wood fence when it was first documented in 1979, and 12 graves were noted (although information about the type of fence and grave markers was not recorded). When a 2005

update was conducted by ASM, a chain link fence had been installed around the cemetery, as the cemetery's wood perimeter fence had partially collapsed. Photographs show approximately half of the upright fence members of weathered wood were extent, some supporting a single rail. Within the fenced area, six graves were noted in 2005, including two marked by a covering of stones, two marked with wooden crosses, and a small grave surrounded by an interior fence of pointed wooden pickets. A similar marking of graves with a small wooden cross at the head and the outline of the grave defined with stones can be seen in desert cemeteries in Daggett, California, and Tombstone, Arizona. However, the theft of old wood cross grave markers as souvenirs and the moving or removal of stones for maintenance or visual organization has been noted at remote cemeteries. At the time of the current site visit in 2019, two sides of the interior picket fence around the small grave had collapsed, and a single wooden cross, the two graves covered with stones, and one small flat rock were visible as grave markers.

The Glamis Cemetery is in overall fair condition. In the past, cemetery security and maintenance for the area's former railroad section towns was performed by a representative of the Imperial County sheriff's office who also served as the director of the Central Valley Cemetery District (Reilly 2019). It cannot be determined whether the progressing deterioration noted at the Glamis Cemetery was caused weathering and the accumulation of desert sand, or if it was also a result of vandalism, theft, or vehicular accidents. Off-road vehicle activity on the roads surrounding the cemetery was noted in both the 1979 and 2005 recordations, as well as in 2019.

Figure 7. IMP-4621H overview facing southeast.

IMP-8214H

This resource is an historic trash scatter recorded by Smallwood in 2001. It consists of three distinct bottle dumps with tin can fragments and 100+ glass shards (amber, clear, sun-colored [amethyst], aqua, and olive) with fragments of large Bishop bottle glass, thick amber bottle, window glass, and various bottles with screw, crown, and cork tops. Few bottle bottoms had maker's marks. ASM revisited this site location during

the current survey and found that the three scatters have now been bulldozed, further fragmented, and evenly spread out over the site area. The original site recording measured the site at 110 x 56 m; however, the mapped location at the South Coastal Information Center (SCIC) was represented by a smaller circle. A DPR site record update was prepared that included a new GIS site boundary submittal to the SCIC that showed a more accurate boundary. The site is unlikely to meet the criteria for CRHR listing.

Figure 8. Example of artifacts at IMP-8214H.

IMP-8634H

This historic resource is the remains of the former Glamis train station. It was recorded by Jay Sander in 2007 and consists of several concrete foundations and a sparse scatter of historic trash (ceramics). ASM relocated the concrete foundations during the current survey and found that one foundation has been damaged and partially removed. An additional set of concrete foundations is located east of these features; however, they appear to be more recent in origin. No historic artifacts/refuse were identified. This site is recorded to cover an area measuring 1,200 x 400 feet. This site is unlikely to meet the criteria for CRHR listing.

Figure 9. IMP-8634H overview facing northwest.

4.2.2 Newly Discovered Archaeological Resources

GSP-KM-S-1: Ted Kipf Road

North of Highway 78, this unpaved road parallels the Union Pacific Railroad (UPRR) on its west side; south of Highway 78, Ted Kipf Road is on the east side of the rail line, but the east side is outside of the project area. At its intersection with Highway 78, the north segment of the road splits to form a Y, passing on either side of the Glamis Cemetery. This segment of the road shares the alignment of the circa 1910s Niland-Glamis county road, which was closed to through traffic in the 1950s when the Chocolate Mountains Aerial Gunnery Range was established. It has not been determined when it was renamed for E. Ted Kipf, who was the manager of Imperial Hardware in Brawley and head of the local Scout Council in the 1950s (Calexico Chronicle 1954).

The packed-earth road has been bladed and has some gravel paving, however its frequent use by off-road vehicles has dispersed much of the gravel beyond its intersection with Highway 78. There also appear to be some accumulations of sand from the neighboring dunes. It is in overall fair to good condition.

Figure 10. GSP-KM-S-1 overview of road from State Highway 78 facing northwest.

GSP-KM-S-2: Glamis Beach Store

The current Glamis Beach Store complex was built about 1979. At the time of this survey, it was composed of a one-story retail store with an expansive covered seating area in front, facing Highway 78. At the rear of the store, exterior stairs lead to an upper level food service or bar area. Another two-story wing extends perpendicularly to the southwest, also with exterior stairs to an upper level, and a banner reading "Pizza" on its southwest façade.

On the northeast side of the store, a two-story building located behind a privacy fence appears to be a private residence or multi-family dwelling. On the northeast side of the residential building is a tall storage building with two roll-up doors, with a sign advertising dune buggy repair and customization. Two large above-ground metal storage tanks are located in a fenced area to the east-northeast of the garage building.

The buildings are utilitarian in form and are clad with corrugated metal panels. The panels on the northwest façade of the Glamis Beach Storage are decoratively painted with faux finishes and depictions of Wild West-themed characters and businesses; this façade includes a roll-up door and a large opening that has been partially closed with wood panels around an operable personnel door. There are a variety of windows in the complex's buildings, most appearing to be metal-framed fixed and sliding units. The buildings are in overall good condition.

Figure 11. Glamis Beach Store and covered seating facing Highway 78, northwest and southwest facades, view to east.

Figure 12. Glamis Beach Store residential building, northwest façade, view to southeast.

Figure 13. Glamis Fab facility, northwest and northeast facades, view to southeast.

Figure 14. Glamis Beach Storage decorative painting at front porch, view to east.

GSP-KM-S-3 State Highway 78 (Ben Hulse Highway)

The resource is the 0.5-mile section of Highway 78 lying to the southwest of the highway's intersection with the Union Pacific Railroad line in the unincorporated community of Glamis. The area is relatively level and located at the northeastern corner of the Imperial Sand Dunes Recreation Area.

Prior to the 1958 construction of the highway from Brawley to Glamis, and its continuation to the Palo Verde Valley, the shifting dune field between Brawley and Glamis had been a natural obstacle to transportation. Innovative construction methods of filling and stabilizing the terrain were utilized in the dune field; however, the segment of the road in Glamis was built on solid ground using conventional methods of road construction. When it was dedicated in 1964, this section of Highway 78 was named the

Ben Hulse Highway in honor of the former California state senator who championed its construction (Henderson 1968:101).

In Glamis, the 20-acre paved Glamis Dunes Storage facility is sited on the north side of the highway, with the terrain sloping toward the Chocolate Mountains beyond. The Glamis Beach Store complex is located on the south side of the highway, with open space toward the dunes to the south and west. The Union Pacific Railroad line and its at-grade crossing form the eastern boundary of the project area.

In the project area the highway is a two-lane, asphalt-paved road, with lanes 12 feet in width, a paved shoulder of approximately 8 feet, and an additional unpaved shoulder area of varying widths composed of packed earth topped with loose gravel and sand beyond. Some surface cracks are visible, but the road surface is well maintained and in overall good condition; it is periodically covered with a light layer of sand blown from the neighboring dune area.

Figure 15. GSP-KM-S-3/Highway 78 at Ted Kipf Road, view to southwest.

Figure 16. GSP-KM-S-3/Highway 78 at Glamis Beach Store complex, surface cracks, view to east.

4.3 ISOLATED FINDS

4.3.1 GSP-TRT-I-1

This isolated prehistoric artifact is a single piece of red-brown chert with at least three negative flake scars. Approximately 30 percent of the surface remains cortex and it also appears to have recent breaks. This artifact was identified within a highly disturbed campground and off-road vehicle area. The general area has been graded and imported gravel has been spread over the surface. Therefore, it seems likely that this isolate was transported from elsewhere and damaged more recently by vehicles. The negative flake scars do appear intentional and have a patina that the other breaks lack, indicating a greater length of time since removal. This resource does not meet any criteria for CRHR listing.

4.4 SUMMARY

In all, the pedestrian surveys of the Class III APE resulted in the documentation of three new cultural resources and the update of four previously recorded resources. Preliminary eligibility assessments for each resource were provided in the site descriptions. Two of the resources within the project APE are likely to meet the criteria for CRHR listing.

5. SUMMARY AND CONCLUSIONS

The current Class III inventory was conducted to satisfy the requirements of CEQA. Important in such an endeavor is the development of an understanding of each identified resource in such a way that its historical significance can be assessed. CEQA mandates the consideration of the historical significance of a resource in an effort to gauge whether it has the potential to be listed on the CRHR. As discussed in section 1.4 of Chapter 1, criteria 1-4 of CEQA set standards for determining the eligibility of a resource for CRHR listing. The following sections discuss how survey-level data from the Class III inventory is integrated to develop eligibility assessments for each resource. These assessments, however, are not to be construed as formal eligibility recommendations but are provided to facilitate a project design that will eliminate or minimize impacts to the identified cultural resources.

It is the intent of the specific plan to design facilities associated with land use recreation in such a way that project construction and maintenance will have no significant impact on known cultural resources. Should complete avoidance of impacts be achieved, no formal evaluation of these properties needs to occur. In the event that project construction cannot avoid impacts to cultural resources, formal evaluation of the potentially impacted resources will have to occur to make determinations of CRHR eligibility. Eligible cultural resources will then have to be avoided or subject to data recovery/ offsite mitigation.

5.1 PRELIMINARY CRHR ELIGIBILITY ASSESSMENTS AND RESEARCH THEMES

The main goal of the current Class III inventory was to identify cultural resources located within the project APE, thereby facilitating efforts by Altum Group to achieve avoidance of impacts through project design. Efforts to avoid all impacts to cultural resources treat each cultural resource as potentially eligible for CRHR listing. However, in the event that impacts to some cultural resources cannot be avoided, ASM's survey was also designed to generate detailed information from surface deposits that could be used to provide preliminary assessments of CRHR eligibility, with the idea that impacts to potentially eligible sites would be avoided.

Preliminary eligibility assessments were based solely on Criterion 4 of CEQA, since the inventory generated data that could be used to judge whether a particular cultural resource has yielded or may be likely to yield information important in prehistory or history. To date, no information has been generated through Native American consultation that could tie any aboriginal archaeological sites, place names, or sacred sites to the APE. Thus, each cultural resource was assessed for eligibility based on the data potential of its general archaeological characteristics—i.e., assemblage integrity, size, diversity, defined chronology, and the potential for buried deposits.

The value of individual archaeological sites must be understood in a regional context wherein large numbers of small assemblages that are limited in size and diversity can inform on broad land use patterns. Some individual sites have large, diverse assemblages with buried, datable deposits and these typically hold enough data potential to be considered eligible for CRHR listing in that they can refine local and regional occupational patterns. Sites that are generally not considered eligible are those with low data potential, typically offering information that is redundant within local and regional contexts. Physical integrity of a site is a major factor in determining data potential of an archaeological deposit. Sites with compromised integrity make it difficult to draw associations between assemblage constituents and complicate the chronology of site occupation. In this sense, sites that lack strong physical integrity are typically ineligible for CRHR listing unless the cultural deposit is robust and diverse enough that salvage work would produce a particularly unique dataset.

While it is not possible to prepare formal, substantive eligibility recommendations based on surface inventory data alone, preliminary assessments from survey-level data are often effective in assessing eligibility where resources offer redundant data, have little to no potential for dating or for the presence of buried components, and have poor physical integrity. Essentially, it is often obvious from the surface if a resource is not likely to be eligible for CRHR listing. Examples of such resources include sites with a low density and/or diversity of artifacts spread over areas that lack deposition. Even when some subsurface deposits exist, it is often easy to determine whether formal evaluation would exhaust the data potential of those deposits, rendering the site ineligible.

Table 2 lists sites identified in the current Class III inventory that are considered potentially eligible for CRHR listing.

Table 2. Resources Assessed as Potentially Eligible

Site	Survey	New or Existing?	Age	Site Type	Potential Eligibility
Potentially Eligible Sites (*n* = 2)					
IMP-3424	Class III	Existing	Historic	Railroad	Recommended eligible
IMP-4621	Class III	Existing	Historic	Cemetery	Recommended eligible
Sites For Which Preliminary Eligibility Could Not Be Ascertained (*n* = 5)					
IMP-8214	Class 3	Record Search	Historic	Refuse Scatter	Likely ineligible
IMP-8634	Class 3	Record	Historic	Railroad Depot	Likely ineligible
GSP-KM-S-1	Class 3	Search	Historic	Road	Likely ineligible
GSP-KM-S-3	Class 3	New	Historic	Highway	Likely ineligible
GSP-TRT-I-1	Class 3	New	Prehistoric	Isolated artifact	Likely ineligible
		New			

The Union Pacific Railroad (IMP-3424) had previously been recommended as eligible for the National Register of Historic Places (NRHP) listing under Criterion A. The Glamis Cemetery (IMP-4621) is recommended here as eligible for CRHR listing under Criterion 1. All other sites were assessed as likely ineligible because they could not be associated with significant events or persons. Likewise, they do not embody distinctive characteristics of a period, type of engineering, method of construction, or represent the work of a master. These remaining sites lack research potential to yield further information about the region's history or prehistory.

5.2 ARCHITECTURAL EVALUATION

5.2.1 IMP-3424 Union Pacific Railroad

The resource has previously been recorded, including an update by ASM in 2005. It has been determined eligible for the NRHP under Criterion A for the theme/area of significance of Transportation. The period of significance for this segment is 1877-1946, beginning with its construction and extending through the discontinuation of stops at the section towns in 1946. The section documented appears to have some alterations of materials; however, such modifications are expected of this property type for its continued use. Under Criterion A, integrity of materials and workmanship are not as critical as the other areas of integrity. The railroad retains high integrity of location, setting, design, feeling, association; as such it retains sufficient overall integrity for eligibility.

5.2.2 IMP-4621H Glamis Cemetery

This resource has previously been recorded as an archaeological site but does not appear to have been evaluated as a built environment resource. The cemetery is in its original location, and it is noted in numerous sources to be a historic landmark with an interment dating to 1878 (Reilly 2019 [Henderson 1968:101 states the Glamis Cemetery dates to 1877]). As a result of the demolition of all of the railroad-related residences and support buildings adjacent to the rail line, as well as the earlier Glamis Store to the northwest of the cemetery, only the Glamis Cemetery and the rail line survive from the community's founding as a section town for the Southern Pacific Railroad route to Yuma built in 1877. The establishment of a cemetery was customary in frontier towns, and the Glamis Cemetery's use of natural materials and simple wood and stone monuments express the funerary traditions in contemporary small desert communities (Griffith and Sullivan 2013:4). Its rustic character is consistent with the spartan circumstances and meager livelihoods of many of the Glamis' early residents. Therefore, ASM recommends it is eligible for the CRHR under Criterion 4 at the local level.

The Glamis Cemetery does not belong to a religious institution. Its few extant grave markers were noted in 1968 to be lacking legible inscriptions; there is no church or administration center for the small community, and documentation of those interred has not been identified. In the absence of information about the interments in the cemetery, it is recommended not eligible under Criterion B or Special Requirements Criteria Consideration C. The cemetery does not embody distinctive characteristics of a period, type of engineering, or method of construction, possess high artistic values, or represent the work of a master. It is not recommended eligible for the NRHP under Criterion C. The 1877-1878 creation of a cemetery in Glamis is contemporary with the building of the Southern Pacific railroad and the section towns to support it; this was the first permanent Euro-American settlement in this area, pre-dating the development of the Imperial Valley beginning in the 1890s. As an element of this early phase of development, ASM recommends the Glamis Cemetery is also eligible for the NRHP under Criterion D at the local level.

It is further recommended that a cemetery preservation plan be developed, to include appropriate fencing to protect the grave markers from vandalism or theft; the installation of bollards to protect the cemetery from vehicular accidents (particularly in light of the increasing volume of off-highway vehicles on the adjacent roads); and signage to interpret the cemetery's expression of the community's history.

5.2.3 GSP-KM-S-1 Ted Kipf Road

This road has not previously been evaluated. Although the segment of the road in the APE is in the same location as the earlier Niland-Glamis Road, the function of the Ted Kipf Road is now as a local access road. With the 1958 opening of Highway 78 as the primary road connection to Glamis, Ted Kipf Road has not made a significant contribution to the settlement or development of the project area. ASM recommends that it is not eligible for the CRHR under Criterion 1. It is not associated with lives of persons significant in the past, and also recommended as not eligible under Criterion 2. The road does not embody distinctive characteristics of a period, type of engineering, or method of construction, or represent the work of a master. Due to wear from off-road vehicles and the deposition of sand from the dunes, its materials have been substantively changed from the earlier road's physical composition. As a result, ASM recommends this segment of Ted Kipf Road as not eligible for the CRHR under Criterion 3. It is not expected to yield important information about the area's history or prehistory, and it is also recommended as not eligible under Criterion 4.

5.2.4 GSP-KM-S-2 Glamis Beach Store

The Glamis Beach Store complex of buildings have not attained 50 years of age and have not yet reached the threshold for eligibility for the CRHR.

5.2.5 GSP-KM-S-3 State Highway 78 (Ben Hulse Highway)

This section of Highway 78 has not previously been evaluated. Built in 1958, it is part of a new transportation route between Brawley and the Palo Verde Valley that replaced an earlier road connection through Niland that was closed with the establishment of the Naval Aerial Gunnery Range in the Chocolate Mountains in the 1950s. In the following decade, neighboring towns that were established contemporary with Glamis became abandoned, and Glamis' full-time population was fewer than 20 persons. Therefore, the highway has not had a significant effect on settlement in the project area. ASM recommends that it is not eligible for the CRHR under Criterion 1. It is not associated with lives of persons significant in the past, and it is recommended as not eligible under Criterion 2. The road does not embody distinctive characteristics of a period, type of engineering, or method of construction, or represent the work of a master. As such, ASM also recommends this segment of Highway 78 as not CRHR-eligible under Criterion 3. It is not expected to yield important information about the area's history or prehistory, and it is also recommended as not eligible under Criterion 4.

5.3 ADDITIONAL MANAGEMENT CONSIDERATIONS

As previously stated, the CRHR eligibility assessments provided in this chapter are not formal eligibility recommendations. If an identified cultural resource will be impacted by project construction or maintenance activities, formal evaluation of that resource must occur. For resources with archaeological deposits, evaluation typically includes some combination of surface collection, excavation, mapping and special analyses that are designed to understand site formation and human habitation of that resource in a regional context. For historic sites that include standing structures and other evidence of a built environment, additional archival research is necessary to determine chain-of-title, a history of residents, and other such information. For this reason, if it is determined that project construction and/or maintenance will impact identified cultural resources, then each resource must be formally evaluated. If project construction will impact the margin of a known cultural resource, limited boundaries testing may be an option to determine the extent of subsurface cultural deposits, potentially reducing the overall site boundary—absent stationary surface features (i.e., rock shelters, bedrock milling stations, etc.), and allowing construction to proceed without evaluation of the entire resource. An archaeological and Native American monitor should be present during all ground-disturbing activities.

If it can be determined that project construction and maintenance will not impact identified cultural resources, it is recommended that one archaeological monitor and one Native American monitor be present for each construction crew during project construction when activities are within 50 feet of a known cultural resource and that exclusionary fencing be established, where applicable, to provide protection for unanticipated discoveries.

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APPENDICES

A Site Records and Maps

This Appendix contains confidential cultural information and is not circulated for general public review. It is available for review by qualified individuals by contacting the County of Imperial for an appointment:

David Black, Planner IV, Imperial County Planning and Development Services Department, 801 Main Street, El Centro, California 92243
davidblack@co.imperial.ca.us.

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B Record Search Confidential

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C Site Records and Maps

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D Record Search Confidential

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davidblack@co.imperial.ca.us.

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AB-52 Consultation Letters and Responses

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Imperial County Planning & Development Services
Planning / Building

Jim Minnick
DIRECTOR

February 7, 2020

Certified Mail No.
7016 2140 0000 2121 8683

Jordan D. Joaquin, President
Fort Yuma – Quechan Indian Tribe
P. O. Box 1899
Yuma AZ 85366

RE: Notice of Opportunity to Consult for the Polaris Experience, LLC Project in Imperial County APN#039-310-029-000 et all

Dear

The County of Imperial (County) has initiated environmental review under the California Environmental Quality Act (CEQA) for the Polaris Experience Project, which is proposing to develop a specific plan (SP) on approximately 142 acres of land in Imperial County. The Project is located approximately 24 miles east of Brawley, Ca. The Project the site is characterized as an open sandy, disturbed desert land. The uses proposed for the SP are predominately recreational. A project location map is enclosed for your information.

In accordance with Assembly Bill 52 (AB 52) and Section 21080.3.1(d) of the California Public Resources Code (PRC), we are responding to your request to be notified of projects in our jurisdiction that will be reviewed under CEQA. Your name was provided to us as the point of contact for your tribe. We are hereby notifying you of an opportunity to consult with the County regarding the potential for this project to impact Tribal Cultural Resources, as defined in Section 21074 of the PRC. The purposes of tribal consultation under AB 52 are to determine, as part of the CEQA review process, whether or not Tribal Cultural Resources are present within the project area, and if so, whether or not those resources will be significantly impacted by the project. If Tribal Cultural Resources may be significantly impacted, then consultation will also help to determine the most appropriate way to avoid or mitigate those impacts.

In accordance with Section 21080.3.1(d) of the PRC, you have 30 days from the receipt of this letter to either request or decline consultation in writing for this project. Please send your written response before July 5, 2018 to Patricia Valenzuela, Planner IV or by email to patriciavalenzuela@co.imperial.ca.us. If the County does not receive a response within 30 days, the County will proceed with the project. Thank you and we look forward to your response.

Sincerely,

Jim Minnick, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
Planner IV

Attachment: Location Map

Cc Jim Minnick, Director, ICPDS
Michael Abraham, AICP, Asst. Director of ICPDS
Patricia Valenzuela, Planner IV, ICPDS
Jurg Heuberger, Consultant
File 10.107, SP19-0001

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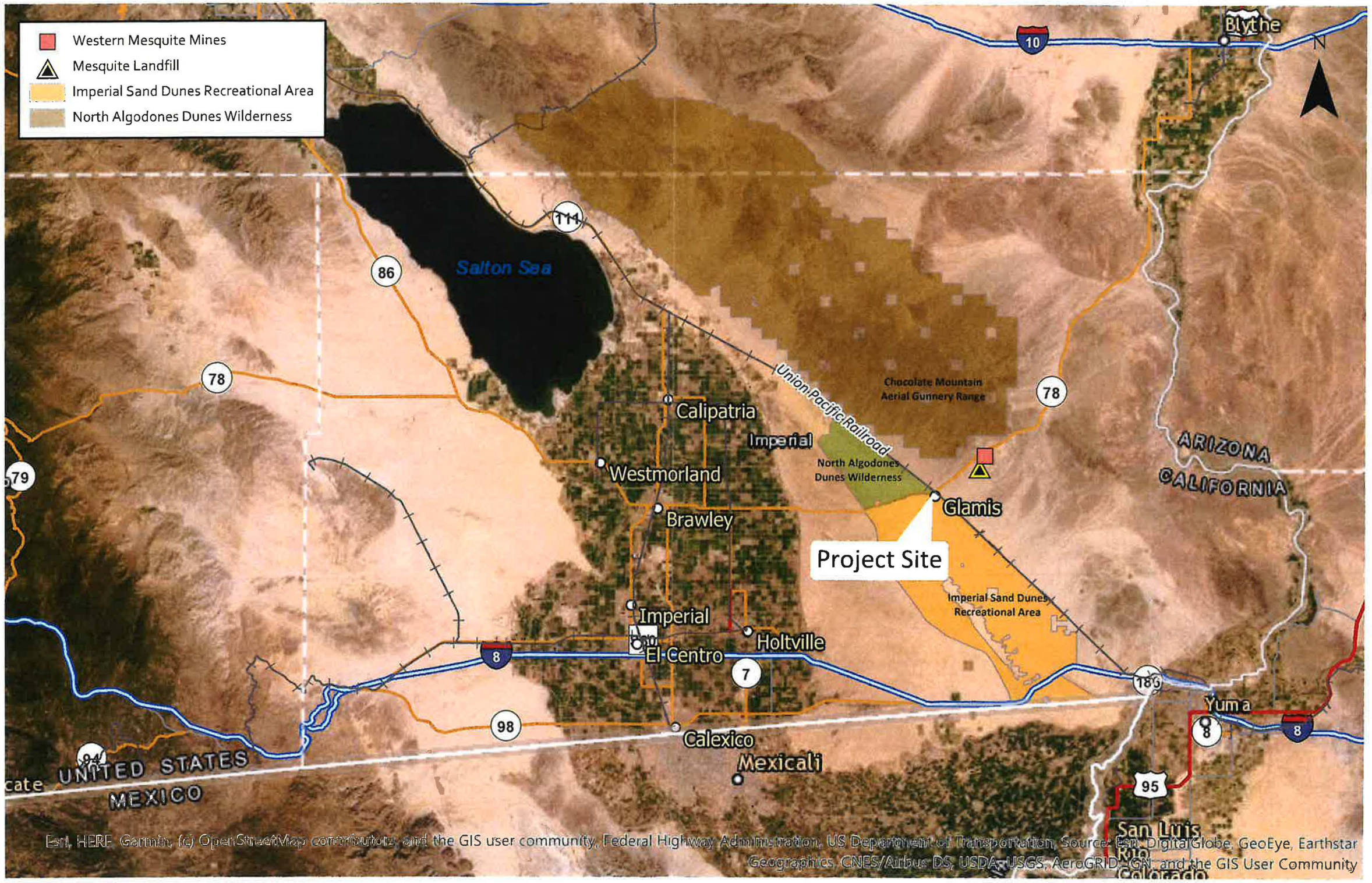
Exhibit 1 - Regional Location Map



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SB-18 Consultation Letters and Responses

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Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8829

Jim Minnick
DIRECTOR

Sycuan Band of the Kumeyaay Nation
Cody Martinez
1 Kwaaypaay Court
El Cajon, CA 92019

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Cody Martinez,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the SYCUAN BAND OF THE KUMEYAAY NATION for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

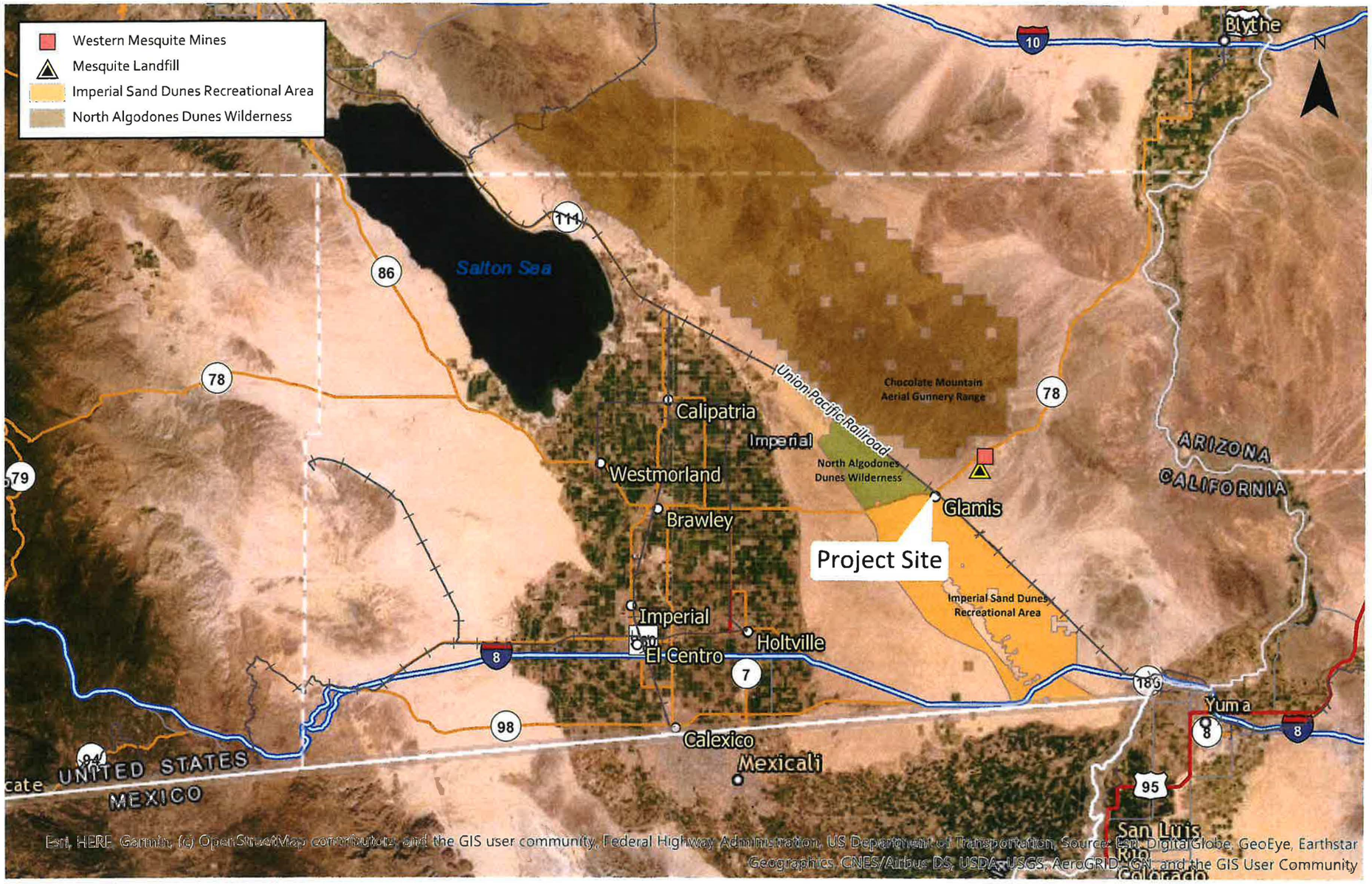
JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8706

Jim Minnick
DIRECTOR

Inaja-Cosmit Band of Indians
Rebecca Osuna
2005 S. Escondido Blvd.
Escondido, CA 92025

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Rebecca Osuna,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the INAJA-COSMIT BAND OF INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

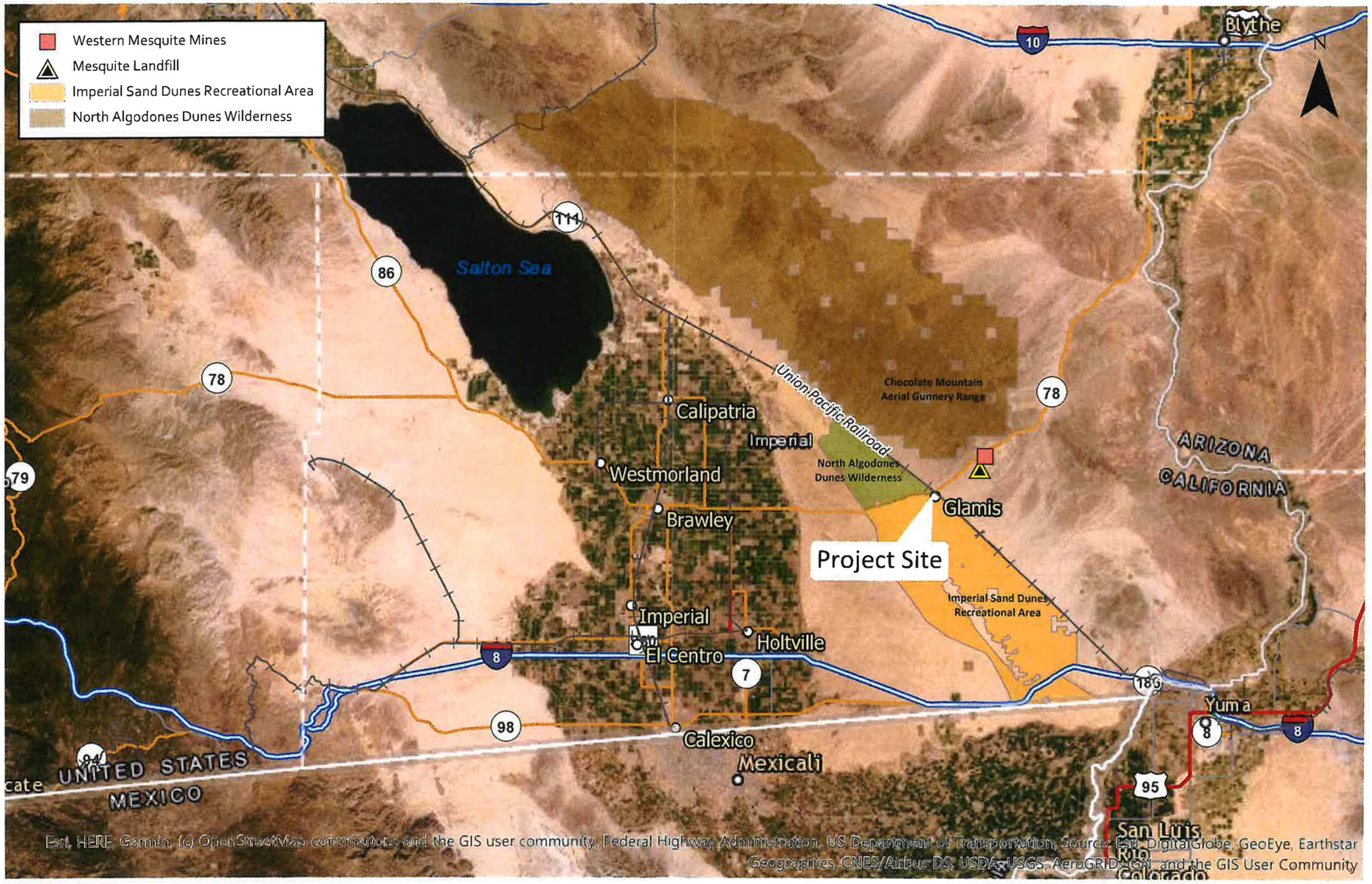
By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8836

Jim Minnick
DIRECTOR

Quechan Tribe of the Fort Yuma Reservation
Michael Jackson
P.O. Box 1899
Yuma, AZ 85366

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Michael Jackson,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the QUECHAN TRIBE OF THE FORT YUMA RESERVATION for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

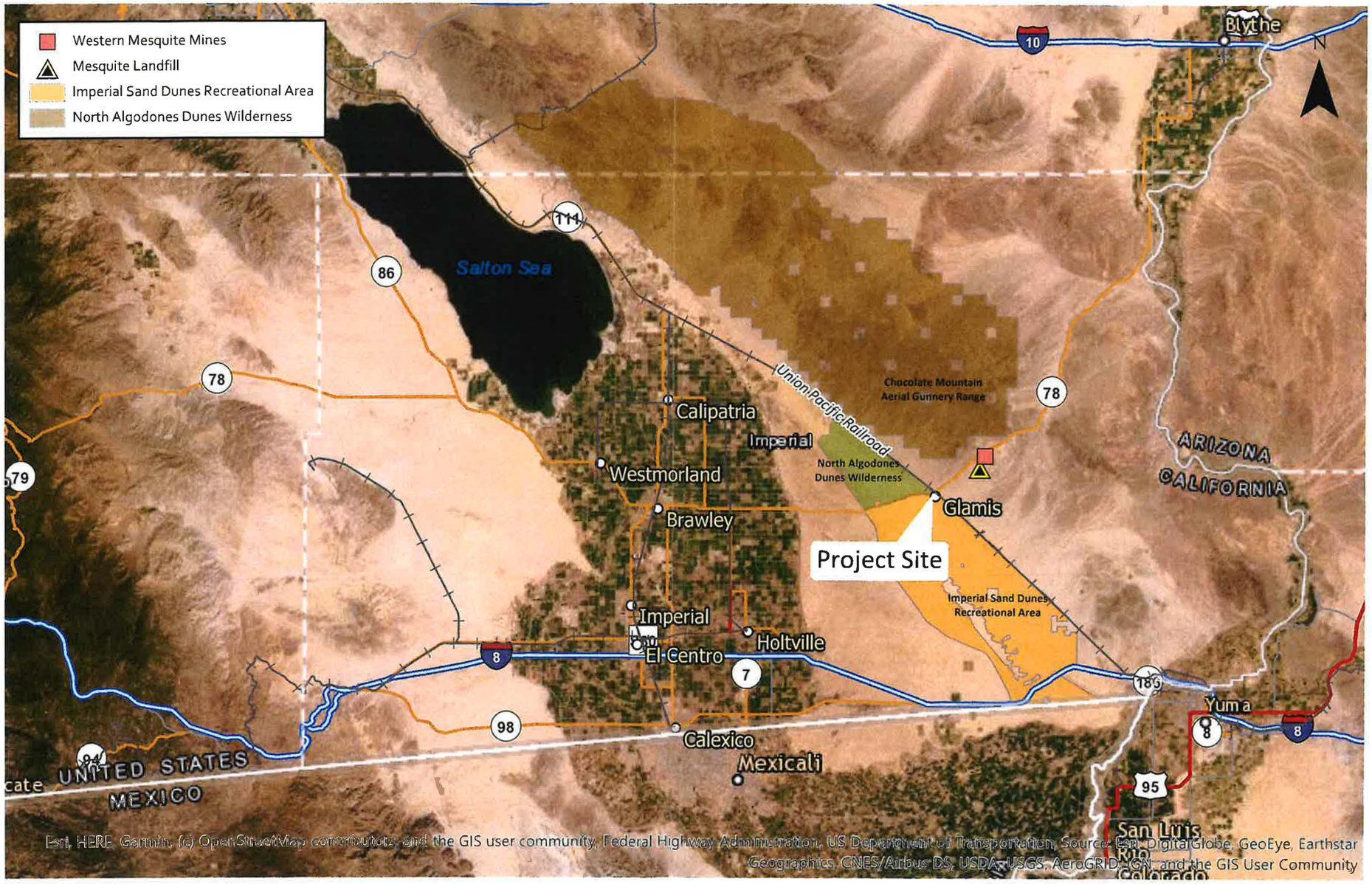
By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8812

Jim Minnick
DIRECTOR

Mesa Grande Band of Diegueno Mission Indians
Michael Linton
P.O. Box 270
Santa Ysabel, CA 92070

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Michael Linton,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the MESA GRANDE BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

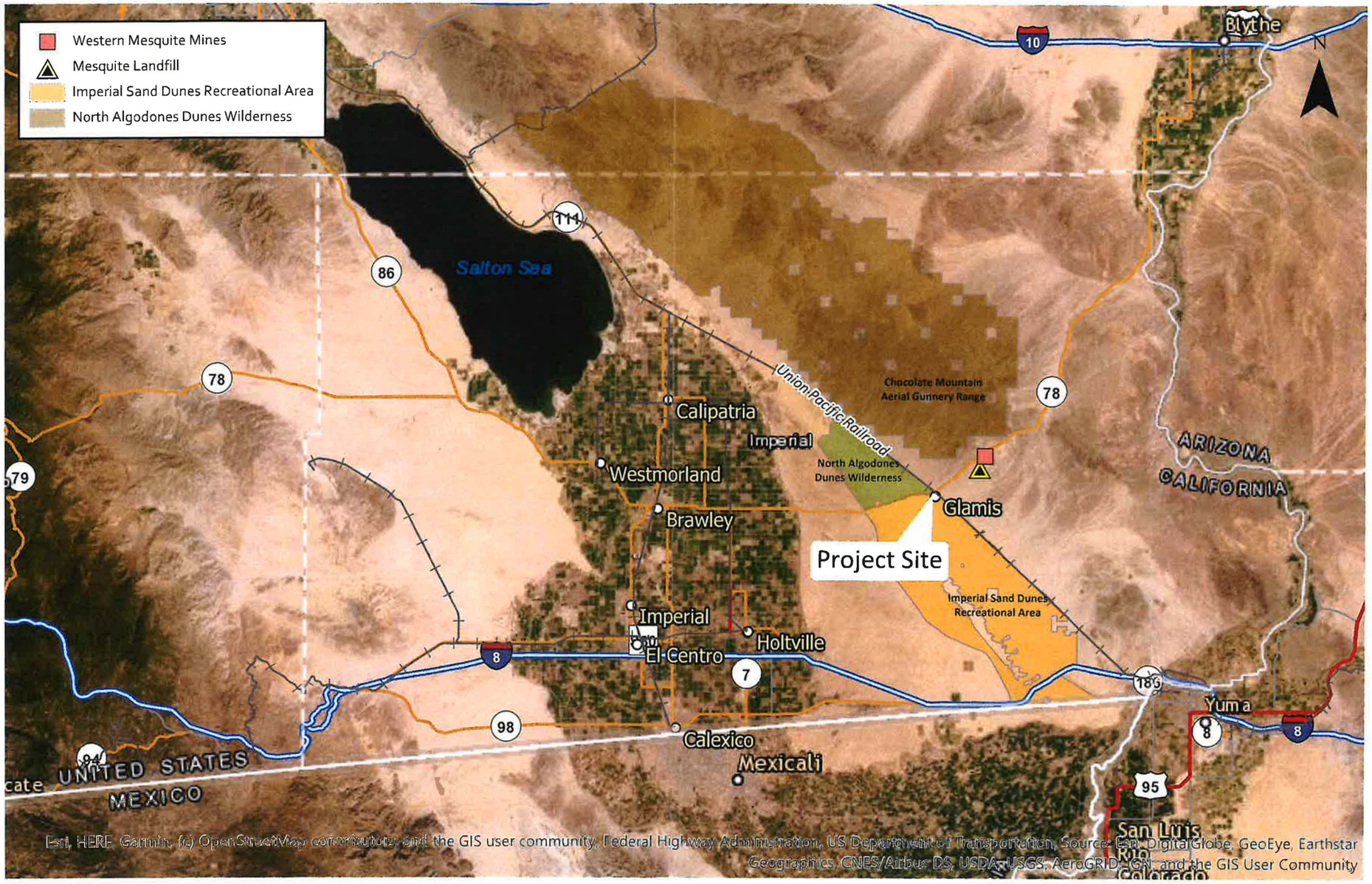
By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\020\SB18_2019\POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8799

Jim Minnick
DIRECTOR

Iipay Nation of Santa Ysabel
Virgil Perez
P.O. Box 130
Santa Ysabel, CA 92070

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Virgil Perez,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the IIPAY NATION OF SANTA YSABEL for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

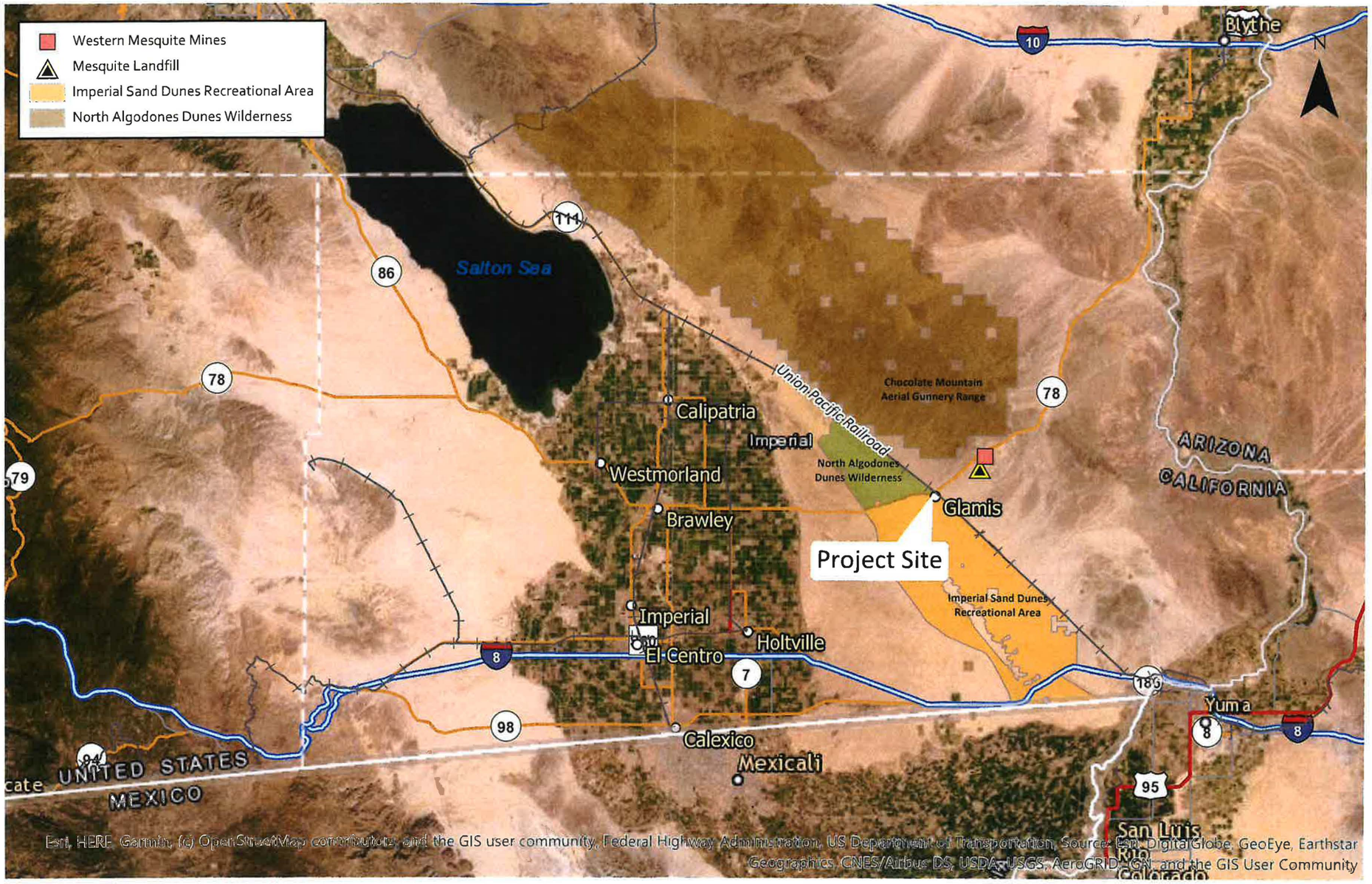
JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8805

Jim Minnick
DIRECTOR

Manazanita Band of Kumeyaay Nation
Angela Elliot Santos
P.O. Box 1302
Boulevard, CA 91905

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Angela Elliot Santos,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the MANAZANITA BAND OF KUMEYAAY NATION for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

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Sincerely,

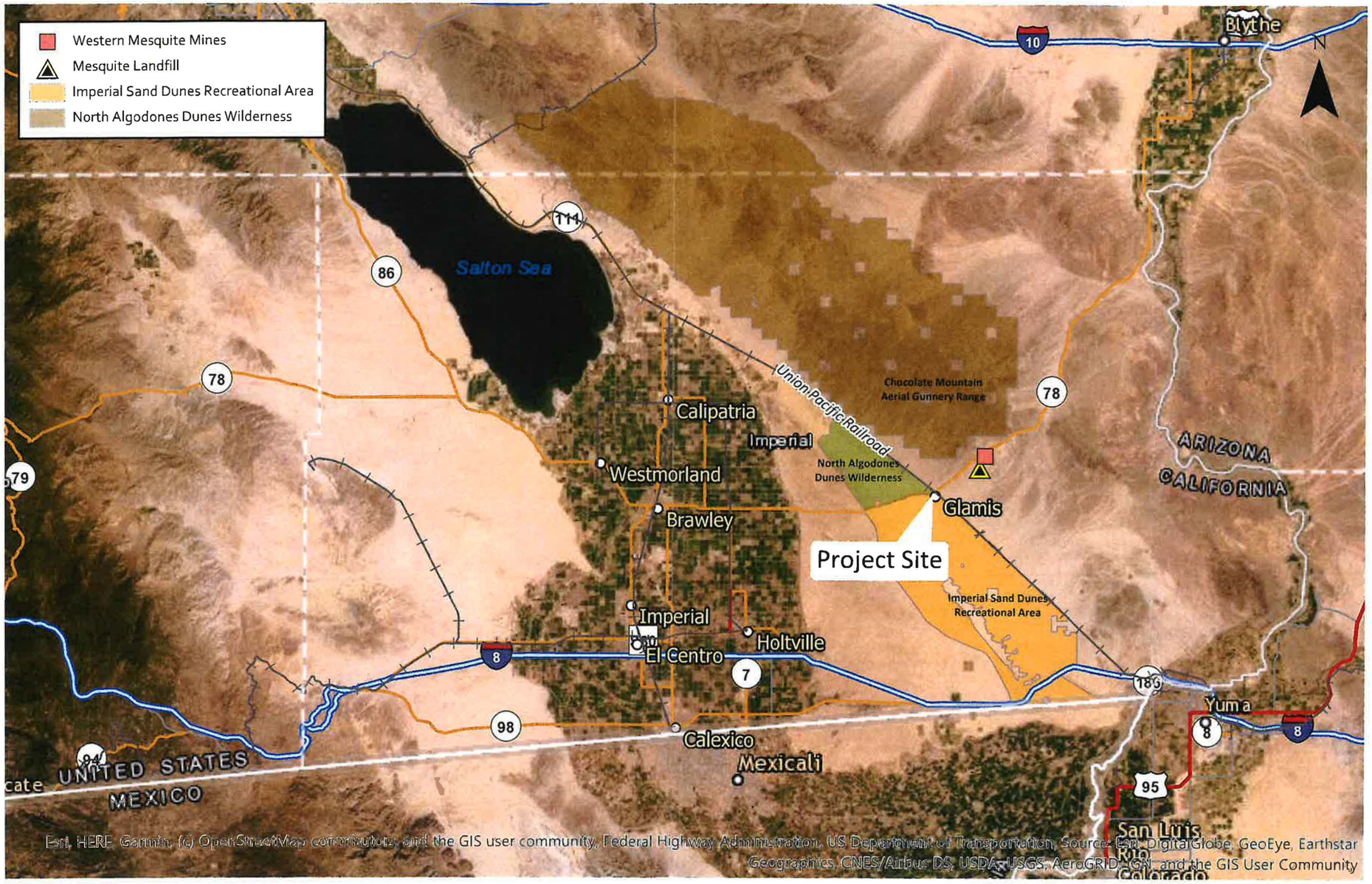
JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8782

Jim Minnick
DIRECTOR

La Posta Band of Diegueno Mission Indians
Javaughn Miller
8 Crestwood Rd.
Boulevard, CA 91905

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Javaughn Miller,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the LA POSTA BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

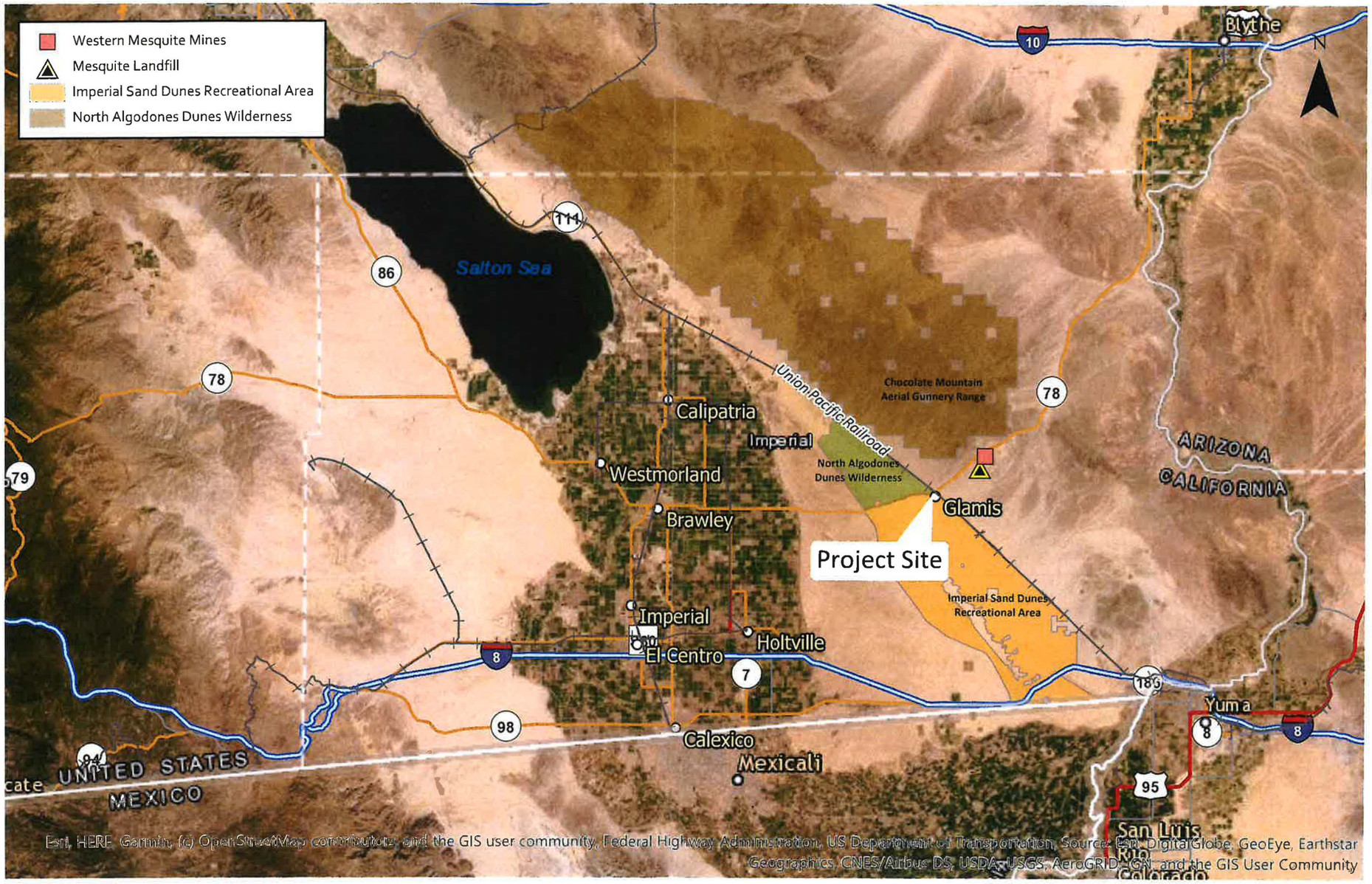
JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8775

Jim Minnick
DIRECTOR

Iipay Nation of Santa Ysabel
Clint Linton
P.O. Box 507
Santa Ysabel, CA 92070

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Clint Linton,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the IIPAY NATION OF SANTA YSABEL for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

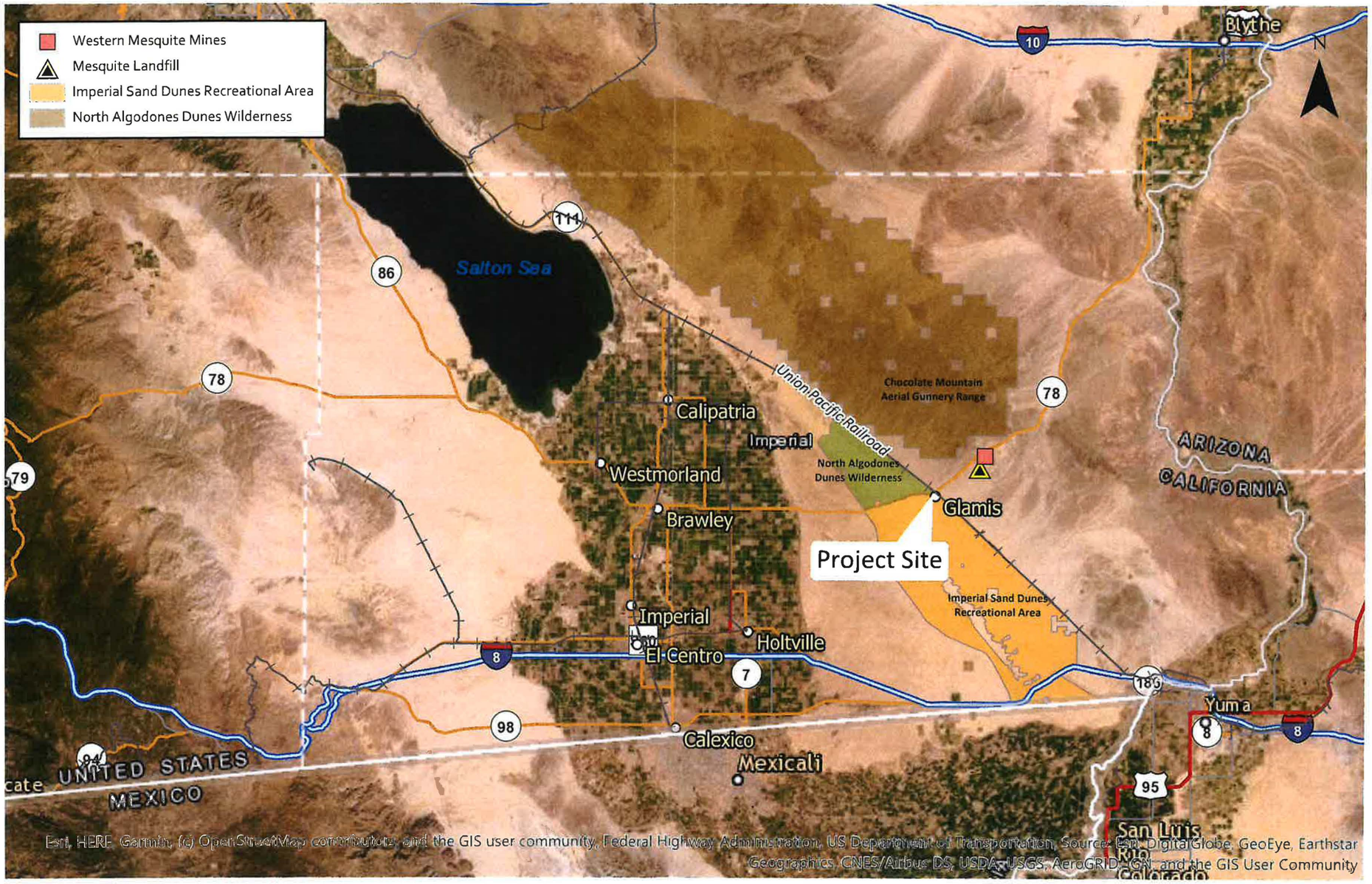
By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8768

Jim Minnick
DIRECTOR

La Posta Band of Diegueno Mission Indians
Gwendolyn Parada
8 Crestwood Rd.
Boulevard, CA 91905

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Gwendolyn Parada,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the LA POSTA BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

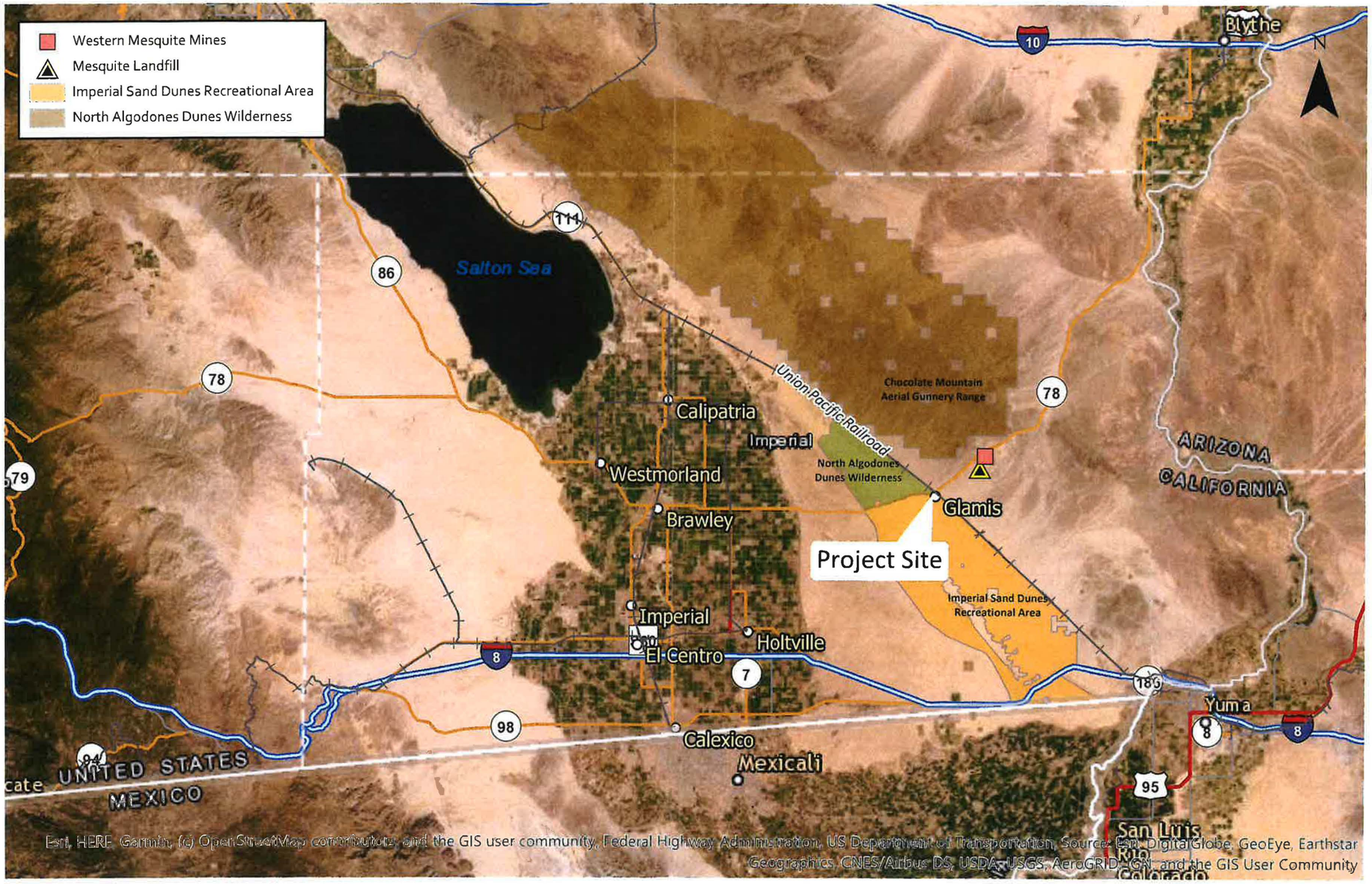
JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

Jim Minnick
DIRECTOR

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8751

Ewiiaapaayp Band of Kumeyaay Indians
Michael Garcia
4054 Willows Rd.
Alpine, CA 91901

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Michael Garcia,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the EWIIAAPAAYP BAND OF KUMEYAAY INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

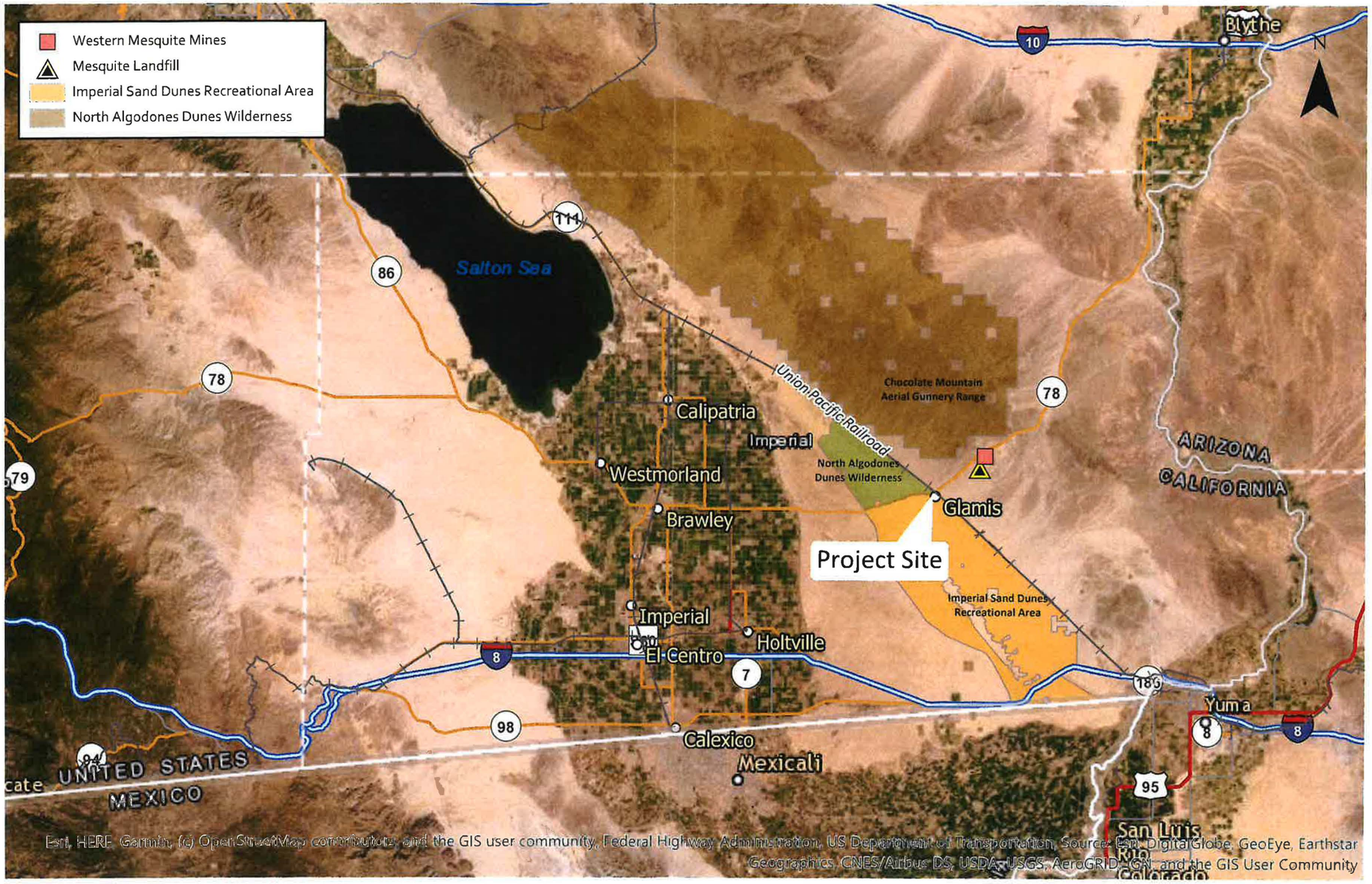
JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Jim Minnick
DIRECTOR

Certified Mail No.
7016 2140 0000 2121 8744

Kwaaymii Laguna Band of Mission Indians
Carmen Lucas
P.O. Box 775
Pine Valley, CA 91962

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Carmen Lucas,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the KWAAYMII LAGUNA BAND OF MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

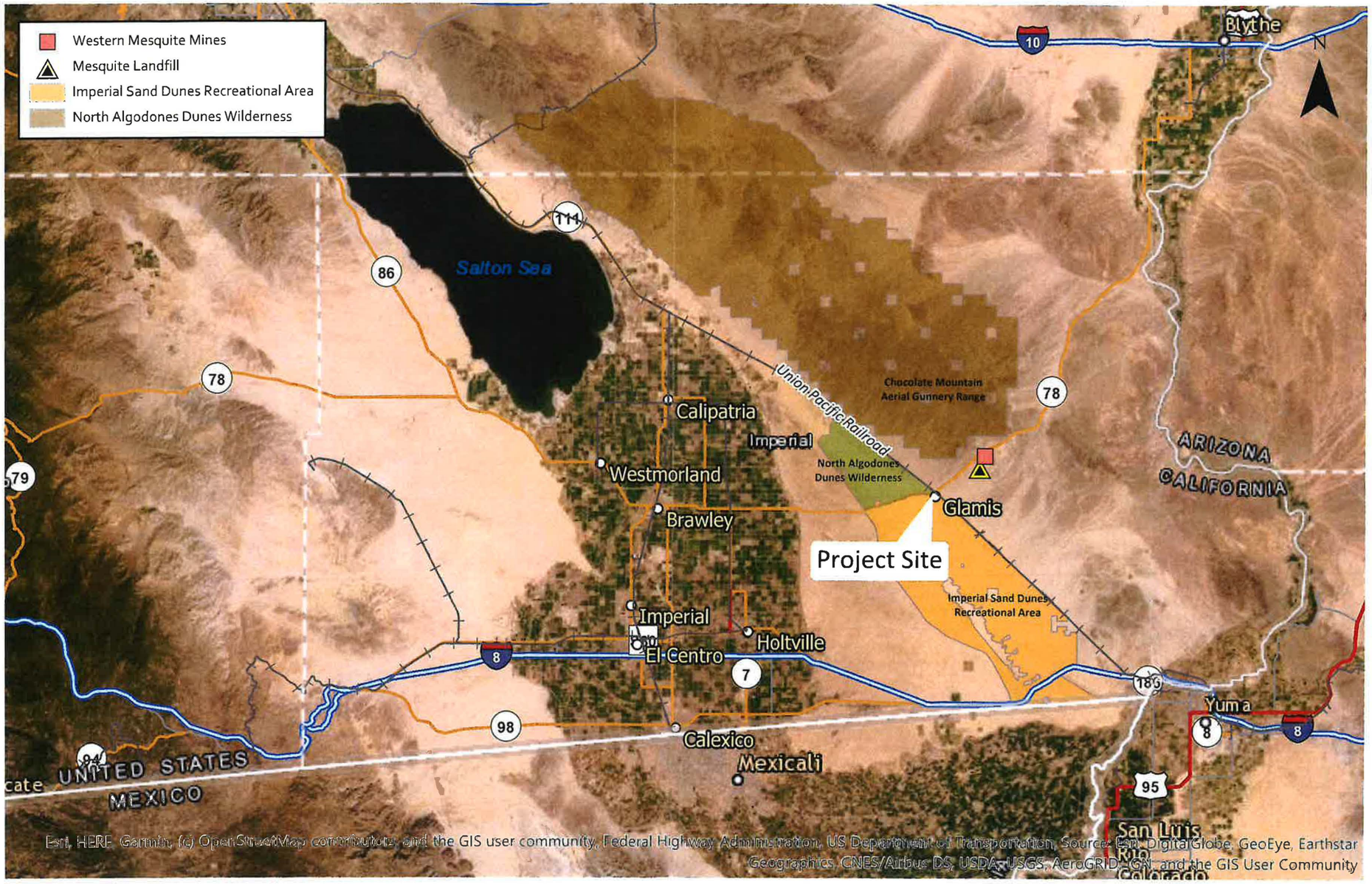
JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8737

Jim Minnick
DIRECTOR

Ewiiaapaayp Band of Kumeyay Indians
Robert Pinto
4054 Willows Rd.
Alpine, CA 91901

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Robert Pinto,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the EWIIAAPAAYP BAND OF KUMEYAY INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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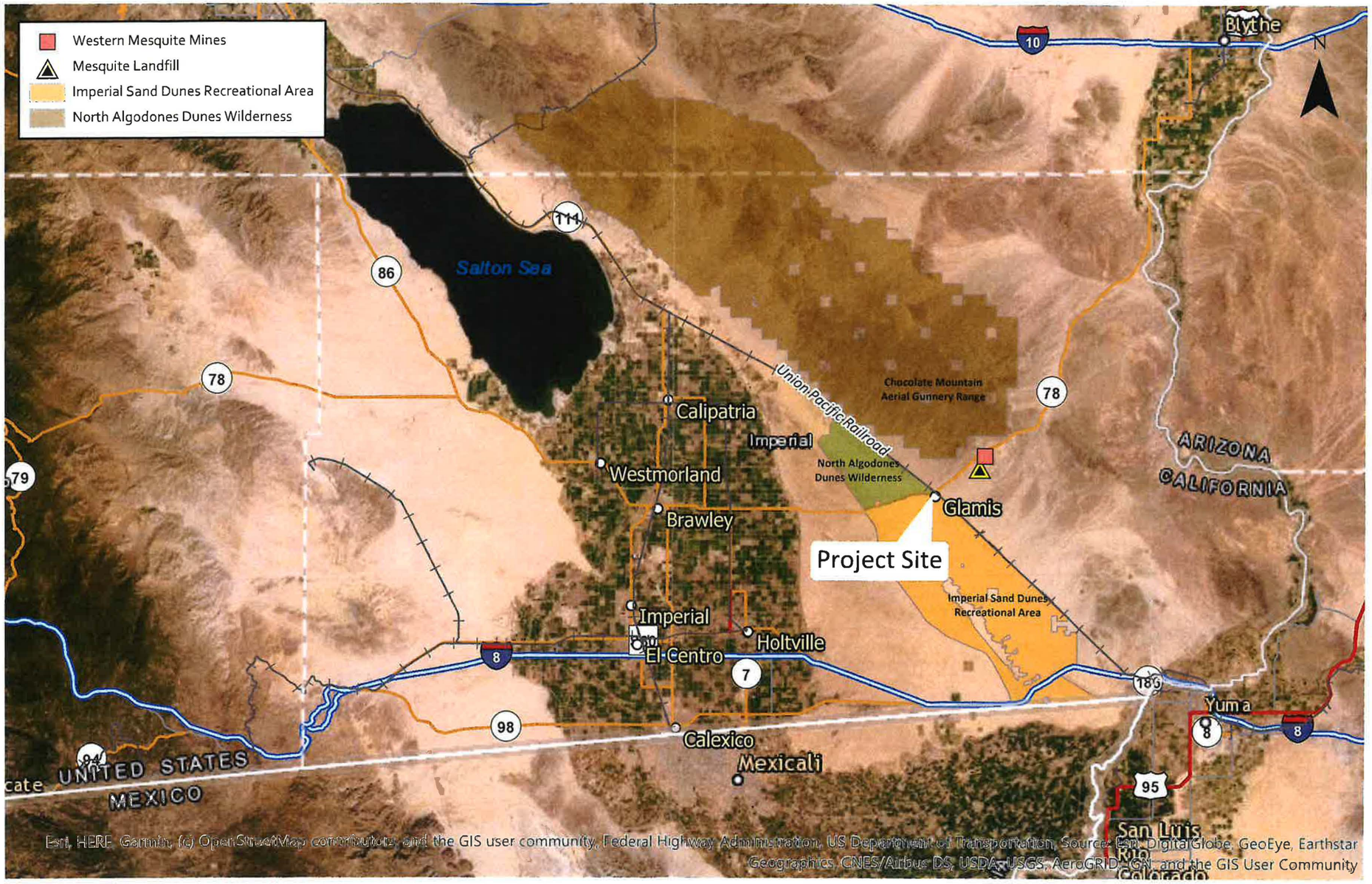

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8720

Jim Minnick
DIRECTOR

Jamul Indian Village
Erica Pinto
P.O. Box 612
Jamul, CA 91935

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Erica Pinto,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the JAMUL INDIAN VILLAGE for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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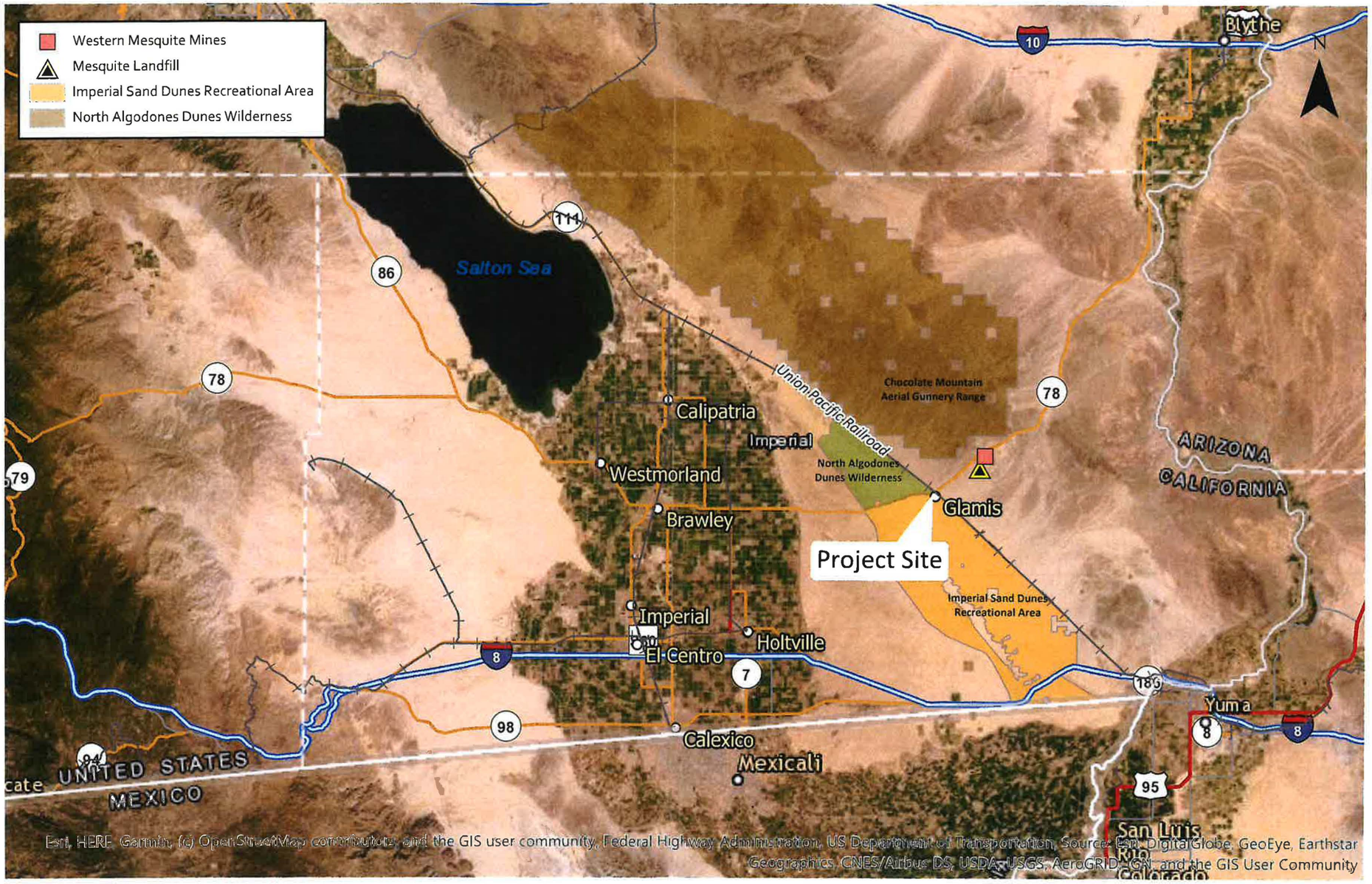

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8713

Jim Minnick
DIRECTOR

Campo Band of Diegueno Mission Indians
Ralph Goff
36190 Church Rd. Suite 1
Campo, CA 91906

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Ralph Goff,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

Applicant proposes a Specific Plan #19-0001, Zone Change (ZC) 19-0006 and General Plan Amendment (GPA) 20-0001 to APN: 039-310-017, 039-310-022, 039-310-023, 039-310-026, 039-310-310-030, 039-310-027, and 039-310-029 in an effort to form a community to County standards. Currently the property hosts seasonal vendors, special events and RV storage.

SB 18 Notification

The County would like to initiate government-to-government consultation with the CAMPO BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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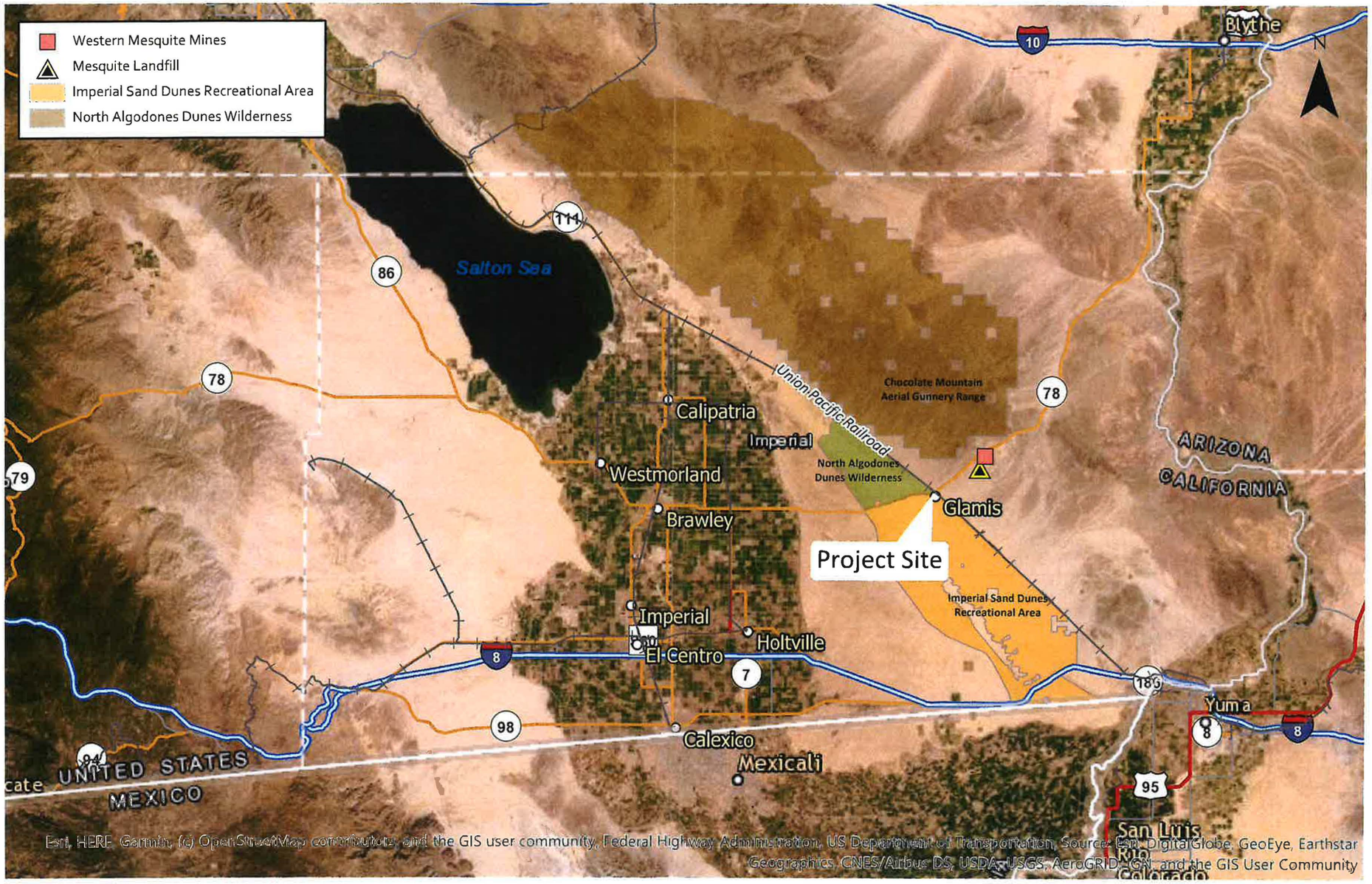

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8690

Jim Minnick
DIRECTOR

Barona Group of the Captain Grande
Edwin Romero
1095 Barona Rd.
Lakeside, CA 92040

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Edwin Romero,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

The proposed Polaris Experience, LLC is currently situated on 142 acres of sandy desert and located within the County of Imperial; about 24 miles east of Brawley (please see **Exhibit 1**). Highway 78 currently divides the property. Refer to Exhibits 2 through 7.

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SB 18 Notification

The County would like to initiate government-to-government consultation with the BARONA GROUP OF THE CAPTAIN GRANDE for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

Should you have any questions about this project, you may contact Patricia Valenzuela, Planner IV, at (442) 265-1746 or via e-mail at patriciavalenzuela@co.imperial.ca.us.

Sincerely,

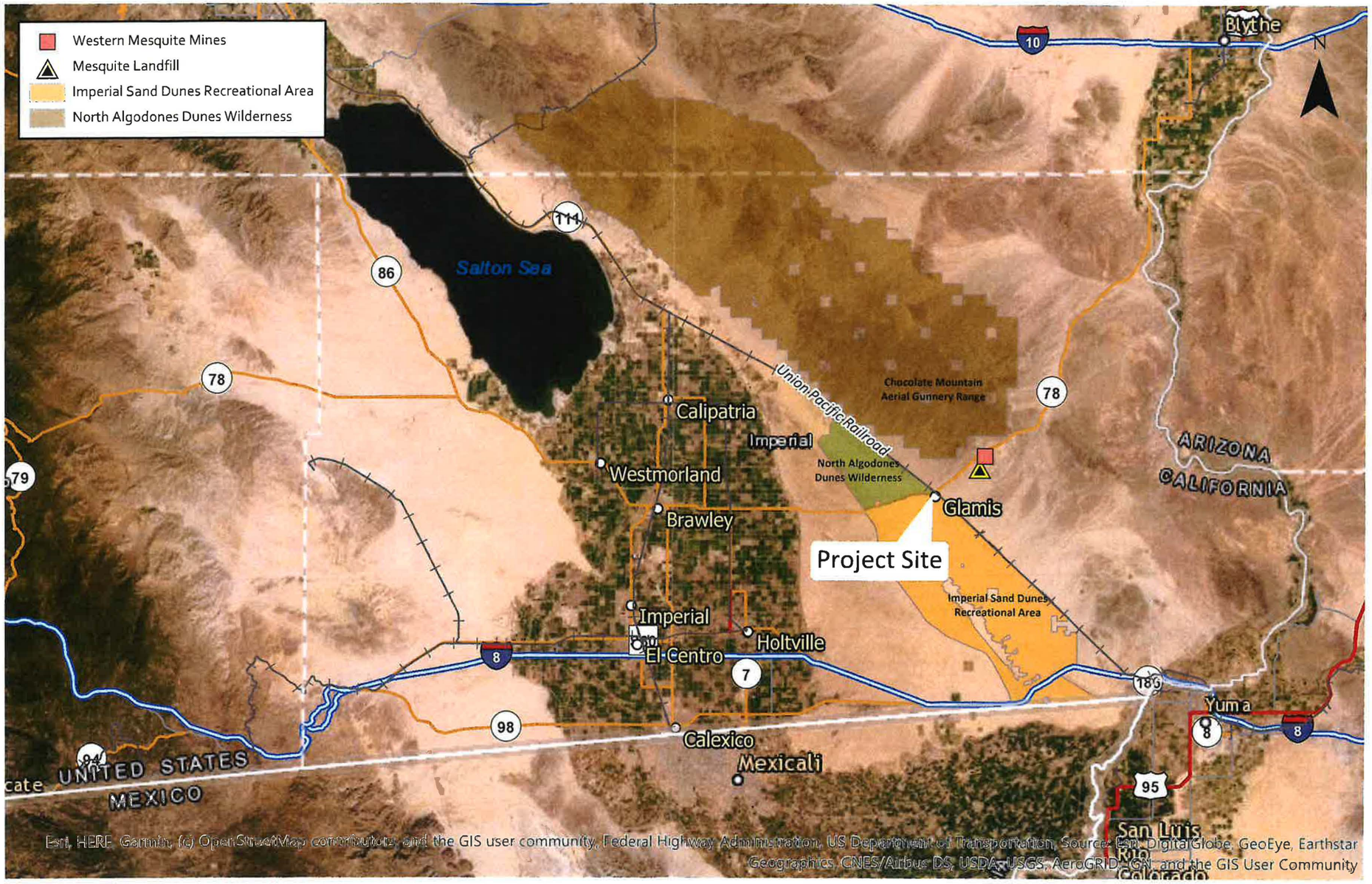
JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

Exhibit 1 - Regional Location Map



Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Jim Minnick
DIRECTOR

Certified Mail No.
7016 2140 0000 2121 8850

San Pasqual Band of Diegueno Mission Indians
Allen Lawson
P.O. Box 365
Valley Center, CA 92082

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Allen Lawson,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the SAN PASQUAL BAND OF DIEGUENO MISSION INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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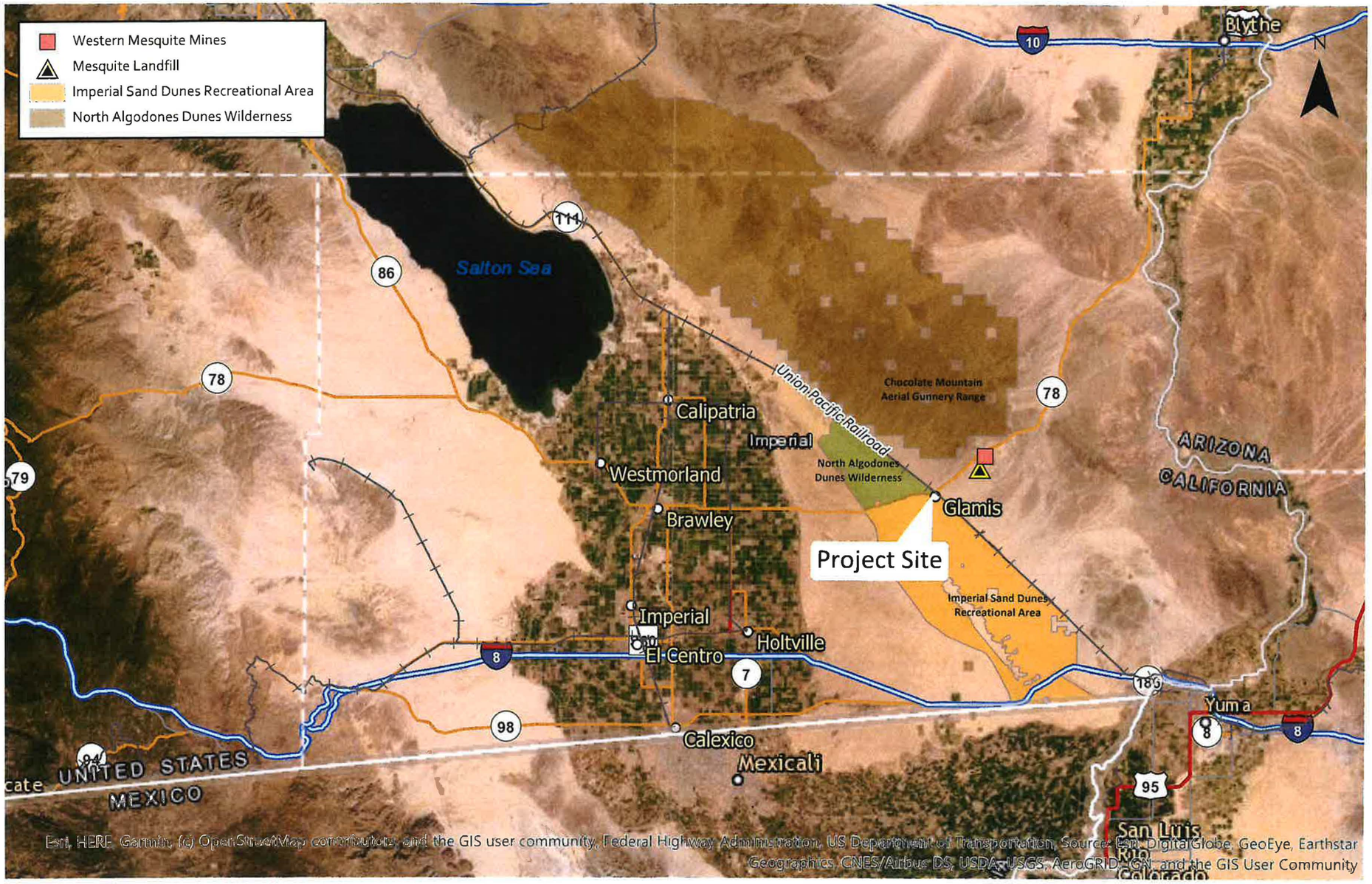

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Jim Minnick
DIRECTOR

Certified Mail No.
7016 2140 0000 2121 9000

Viejas Band of Kumeyaay Indians
Ernest Pingleton
1 Viejas Grade Rd.
Alpine, CA 91901

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Ernest Pingleton,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the VIEJAS BAND OF KUMEYAAY INDIANS for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela

Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

S:\AllUsers\APN\039\310\029\SP19-0001POLARIS GLAMIS\AB52 SB18\SB-18 Letter.docx

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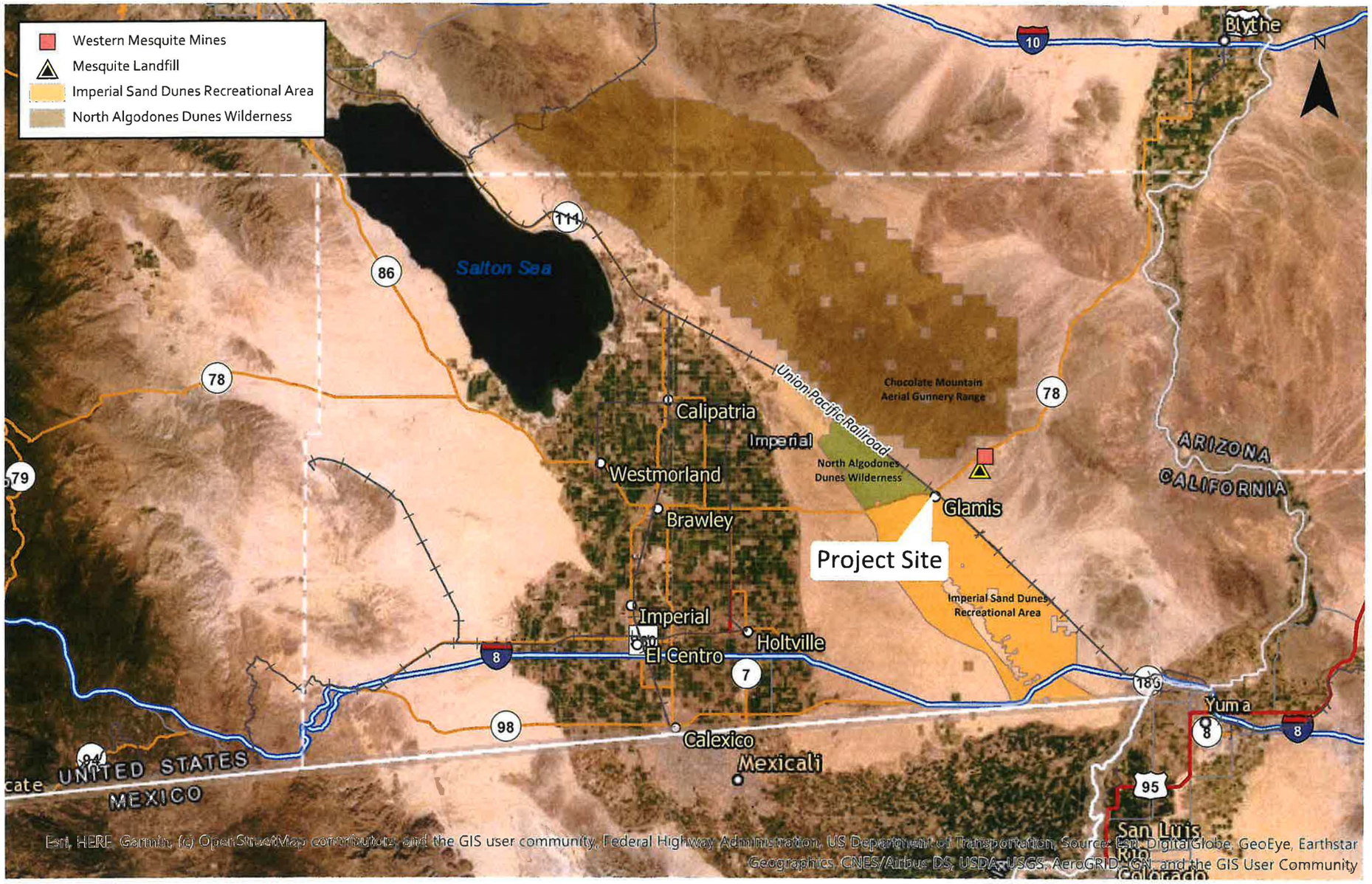

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Jim Minnick
DIRECTOR

Certified Mail No.
7016 2140 0000 2121 8867

San Pasqual Band of Diegueno Mission Indians
John Flores
P.O. Box 365
Valley Center, CA 92082

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear John Flores,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

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SB 18 Notification

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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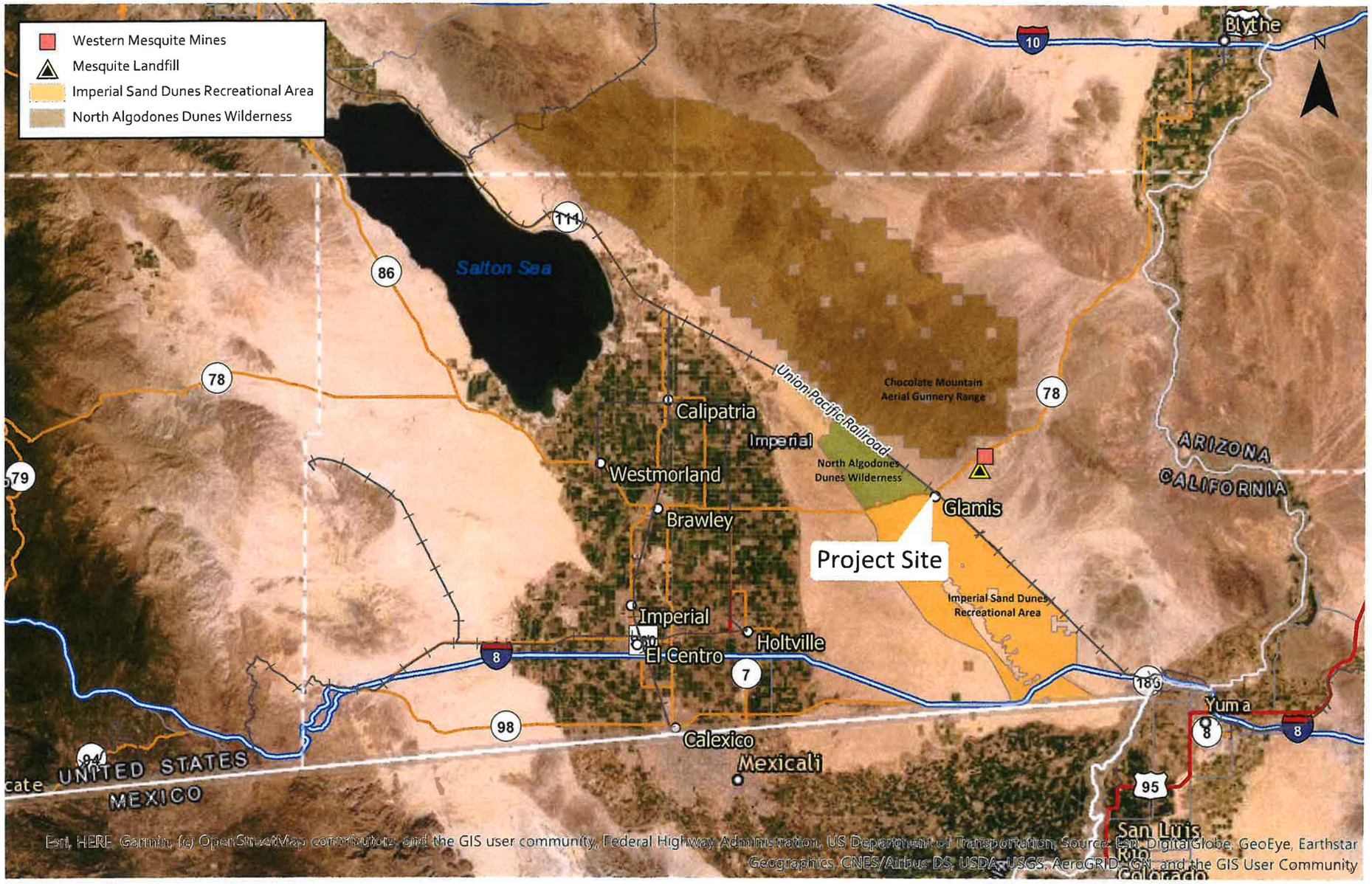

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Jim Minnick
DIRECTOR

Certified Mail No.
7016 2140 0000 2121 8874

Sycuan Band of the Kumeyaay
Kristie Orosco
1 Kwaaypaay Court
El Cajon, CA 92019

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear Kristie Orosco,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

Project Description

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SB 18 Notification

The County would like to initiate government-to-government consultation with the SYCUAN BAND OF THE KUMEYAAY for this project. Your response to this letter, acknowledging your interest in participating in this undertaking as a consulting party, in identifying any historic properties, including Traditional Cultural Properties that may exist within the project's APE, and providing any key tribal contacts, is greatly appreciated. We are also inviting comments regarding any other tribal concerns the proposed project may raise. Please provide a response no later than May 7, 2020 so that we may discuss this project and any of those identified areas of interest.

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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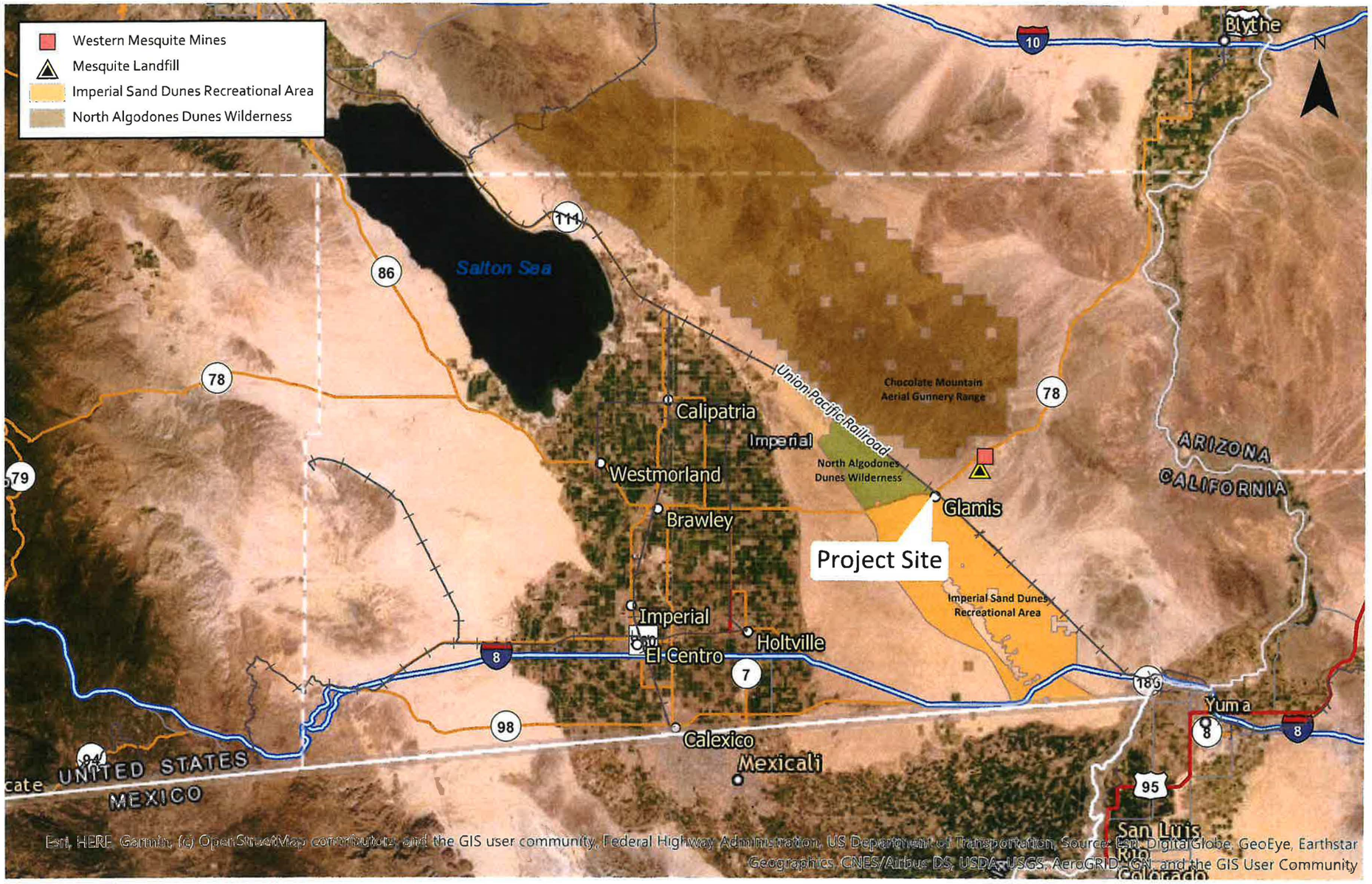

Imperial County Planning & Development Services
Planning / Building

February 11, 2020

Certified Mail No.
7016 2140 0000 2121 8843

Jim Minnick
DIRECTOR

Viejas Band of Kumeyaay Indians
John Christman
1 Viejas Grade Rd.
Alpine, CA 91901

Re: Project Notification Pursuant to Senate Bill 18 for the Polaris Experience, LLC Project in Imperial County, California

Dear John Christman,

Pursuant to the provisions of Senate Bill 18, as the lead agency under the California Environmental Quality Act (CEQA), the County of Imperial (County) hereby extends an invitation to consult on the CEQA review of the Polaris Experience, LLC Project.

To assist in your evaluation the County has conducted a Sacred Land File search through the Native American Heritage Commission, which was completed with negative results.

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SB 18 Notification

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Sincerely,

JIM MINNICK, Director
Imperial County

By: Patricia Valenzuela
Patricia Valenzuela
ICPDS, Planner IV

Attachment: Project Location Maps

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