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Hidden Hills Solar Energy Generating Systems

Ethnographic Report

This Report is subject to the confidentiality restrictions and informed consent provisions provided at:

Section 304 of the National Historic Preservation Act [16 U.S.C. 470w-3(a-c)],

Section 6254.10 of the California Public Records Act,

46 CFR 101 Use of Human Subjects, and

Section 1798.24 of California Civil Code.



**August 2012**

**BY:**

Thomas Gates, Ph.D.  
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**FOR:**

California Energy Commission

## **EXECUTIVE SUMMARY**

This report provides documentation concerning Native American ethnographic resources that could be impacted by the Hidden Hills Solar Electric Generating Systems (HHSEGS) energy generation project, proposed to be developed on 3276 acres of land in the southeastern corner of Inyo County, California. This report provides: 1) a brief description of the project; 2) an explanation of ethnography and the types of resources that ethnographic methods can explain ; 3) a review of the ethnographic methods employed for this study; 4) background information on the Paiute tribal governments and other Native Americans that participated in the study; and 5) analysis, findings of fact, and recommendation for seven broad resource categories (including the Sandy Valley Alternative) that contribute to one or several cultural landscapes.

This report's analysis has divided some of the Pahrump Paiute Tribe life-ways, and how those life-ways are intertwined with the surrounding landscape, into seven attributes: water, plants, animals, horticulture, trails, landforms, and ceremonies.

This analysis leads the report author to conclude that there are three ethnographic landscapes that, to varying proximity, are in the vicinity of the project:

1. Salt Song Landscape
2. Pahrump Paiute Home Landscape
3. Ma-hav Landscape

This report documents each of these landscapes' periods of significance, analysis of integrity, and are all found eligible to the California Register of Historical Resources per various criteria.

The impacts of the proposed Hidden Hills Solar Energy Generating Facility project on the three ethnographic landscapes, should it be approved, are anticipated to not be able to be reduced to less than significant. However, California Energy Commission Staff continue to seek ways to lessen impacts in consultation with Native American Tribes affiliated with the proposed project area and the surrounding landscapes.

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## **INTRODUCTION**

This report provides documentation concerning Native American ethnographic resources that could be impacted by the Hidden Hills Solar Electric Generating Systems Solar energy generation project, proposed to be developed on 3276 acres of land in the southeastern corner of Inyo County, California. This report provides: 1) a brief description of the project; 2) an explanation of ethnography and the types of resources that ethnographic methods can explain; 3) a review of the ethnographic methods employed for this study; 4) background information on the Paiute tribal governments and other Native Americans that participated in the study; and 5) analysis, findings of fact, and recommendation for seven broad resource categories (including the Sandy Valley Alternative) that contribute to one or several ethnographic landscapes.

### **Description of Project**

The following project description is adapted from the Hidden Hills Solar Electric Generating Systems Application for Certification (AFC), Chapter 2.0 Project Description.

The Hidden Hills Solar Electric Generating System (HHSEGS) project (Project) is proposed within Inyo County, California, adjacent to the Nevada border, and approximately 18 miles south of Pahrump, Nevada. Pahrump is located about 45 miles west of Las Vegas, Nevada. The proposed project site is located on privately owned land. The land is owned by The Roland John Wiley Trust, The Mary Wiley Trust, and Section 20 LLC, and is currently under options to lease to BrightSource. Specifically, the Project is located within Township 22 North, Range 10 East, Sections 16, 21, 22, 26, 27, and 28 of the San Bernardino Base Meridian.

The HHSEGS, as proposed, would comprise two solar fields. Each solar field would be operated by a separate subsidiary of BrightSource (Hidden Hills Solar I, LLC and Hidden Hills Solar II, LLC, collectively the “Applicant”), and associated facilities would be shared in common by the two subsidiaries. Each solar plant would generate 270 megawatts (MW) gross (250 MW net), for a total net output of 500 MW. Solar Plant 1, proposed to be located on the northern solar field, would occupy approximately 1,483 acres (or 2.3 square miles), and Solar Plant 2, proposed to be located on the southern solar field, would occupy approximately 1,510 acres (or 2.4 square miles). A 103-acre common area would be established on the southeastern corner of the site to accommodate an administration warehouse, maintenance complex and onsite switchyard substation, a parking area, and miscellaneous landscaped areas. A temporary construction laydown area and parking area is proposed to be located on the west side of the project site and would occupy approximately 180 acres. The total proposed project area is 3276 acres.

Each solar plant would use 85,000 heliostats – elevated mirrors (each mirror approximately 12 feet high by 8.5 feet wide), guided by a tracking system, with two heliostats mounted on one pylon – to focus the sun’s rays on a solar receiver steam generator (SRSG) that is approximately 130 feet tall and placed atop a 620 foot solar power tower (for a total height of 750 Feet) near the center of each solar field. In each solar plant, one Rankine-cycle steam turbine would receive super heated and pressurized steam (1,085 degrees Fahrenheit) from the solar boiler to generate electricity. As the steam makes its way through a

series of turbines, the pressure and temperature are reduced to a level where it can be converted back to water form and then recycled back up to the SRSG. The solar field and power generation equipment would start each morning after sunrise and, unless augmented, would shut down when insolation (solar radiation received) drops below the level required to keep the turbine on-line. Each plant would include a natural gas fired auxiliary boiler, used to augment the solar operation when the solar energy diminishes; a start-up boiler used during the morning start-up cycle; and a night-time preservation boiler, used to maintain system temperatures overnight. During operation, each plant would use a dry-cooling system. Raw water, up to 90 gallons per minute or 140 acre feet per year, would be drawn daily from onsite wells located in each power block and at the administrative complex. However, during construction, 288 acre feet per year would be needed. Each solar field and the common administrative area would have a primary water well and a back-up well, for a total of 6 wells proposed for the entire project. Groundwater would be treated at an on-site treatment system for use as boiler make-up water and to wash the heliostats.

There are two location options for the transmission lines; both options are located in Nevada and outside of the California Energy Commission (Energy Commission) jurisdiction. The project would also require 35.3 miles of 12-16 inch-diameter natural gas pipeline, which will also be located in Nevada and outside of Energy Commission jurisdiction. The transmission and gas lines would be located primarily on Bureau of Land Management (BLM) lands. The BLM is preparing an environmental Impact analysis for those portions of the project proposed within BLM's regulatory jurisdiction.

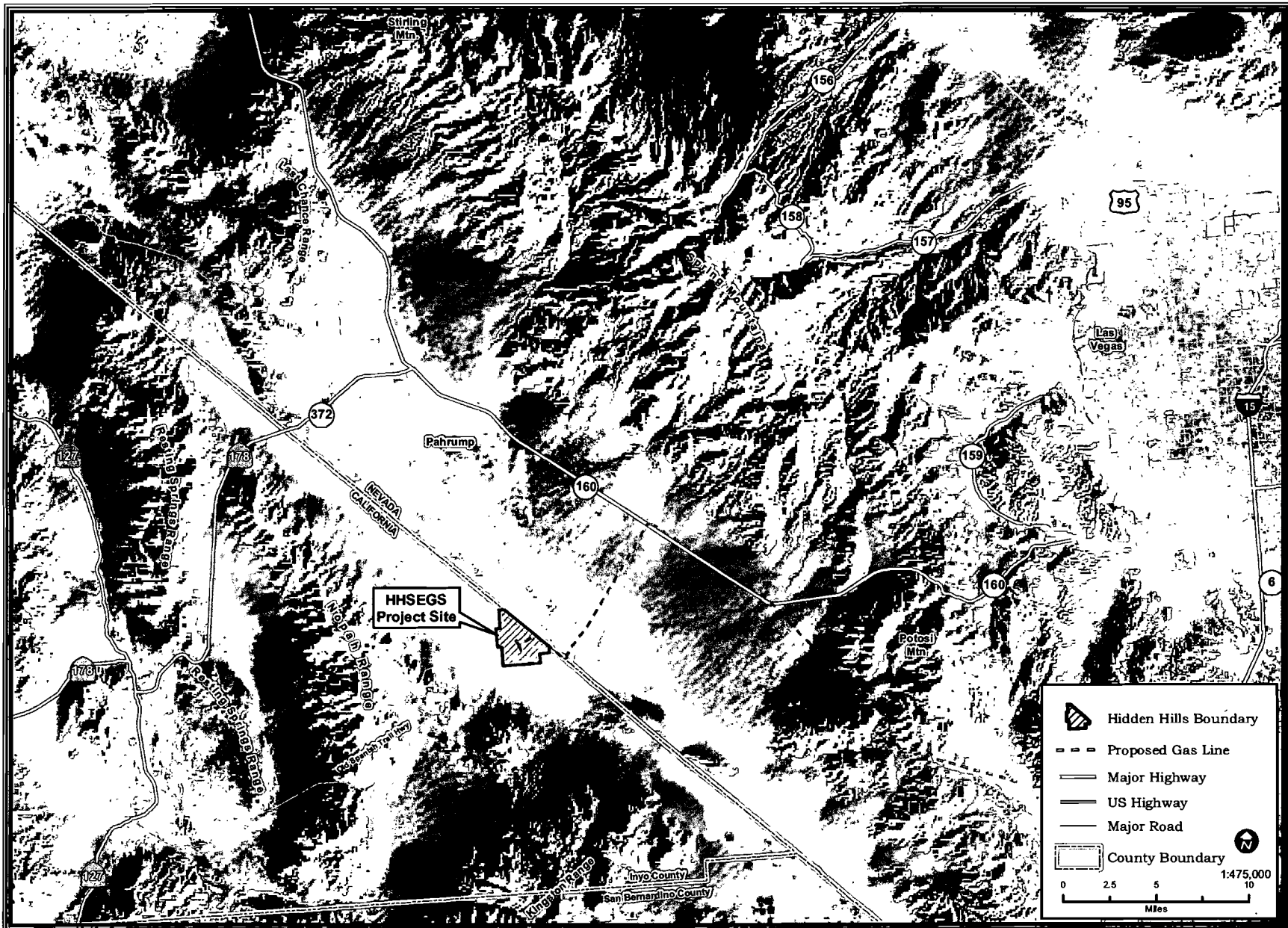
Vegetation clearing, grubbing, and contour smoothing in the heliostat fields would occur where necessary to allow for equipment access and storm-water management. In areas where these activities are not required for access or construction, the vegetation would not be removed, but would be mowed to a height of approximately 12 to 18 inches. Areas for roads and perimeter fencing would also be cleared and graded.

Several project alternative sites have been proposed, with one of those alternatives, Sandy Valley, perhaps the most viable. This report does not aggressively pursue analysis and findings for the Sandy Valley alternative site. However a specific section, entitled Sandy Valley Alternative, can be found in the Analysis section – Landforms subsection and provides cursory information concerning Pahrump and Moapa ethnographic resource areas and values that relate to the Sandy Valley area.

The project, as proposed, would require between 634 and 1033 employees during construction and up to 120 employees for on-going facility operations. Project maps that portray the project vicinity, site plan, and a diagram of a solar power tower are provided on the next three pages as Figure 1, Figure 2 and Figure 3.

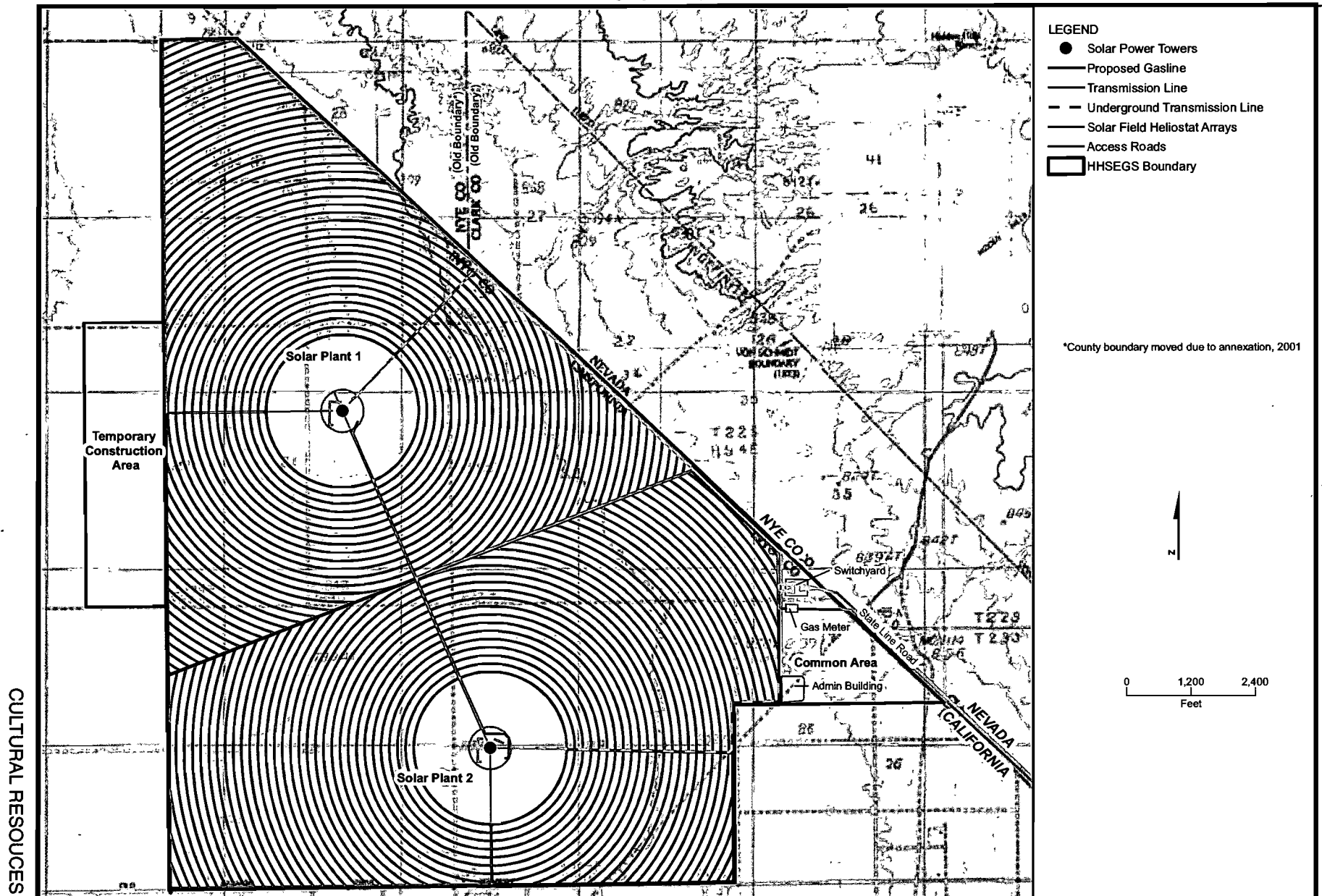


## CULTURAL RESOURCES



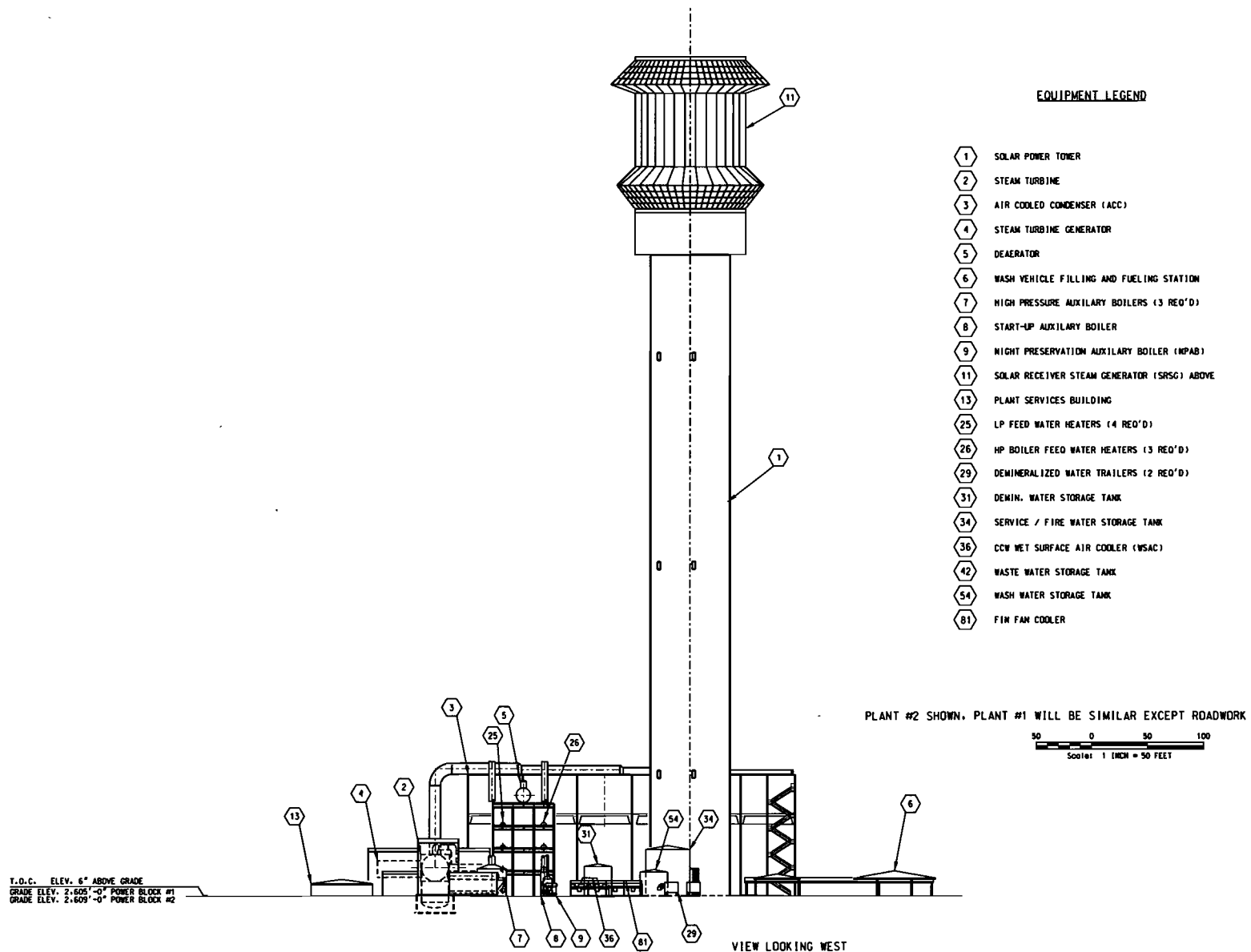
**CALIFORNIA ENERGY COMMISSION, SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION**  
SOURCE: Landsat - NASA (2002), SRTM Shaded Relief - USGS (2005), US Major Highway - Tele Atlas North America, Inc (2010).

**CULTURAL RESOURCES - FIGURE 2**  
**Hidden Hills Solar Electric Generating System (HHSEGS) - Site Plan and Linear Facilities**



**CULTURAL RESOURCES - FIGURE 3**  
Hidden Hills Solar Electric Generating System (HHSEGS) - Solar Plant 2, Elevation

CULTURAL RESOURCES



## What is Ethnography?

Ethnography is a discipline, a method, and a type of document. As a discipline, ethnography is the prime focus of cultural anthropology. As a method, ethnography is an endeavor to understand other cultural groups from their point of view. In order to understand other cultural groups, ethnographers must first understand their own cultural assumptions, biases, and ways of understanding the world. Cultural self-awareness allows an ethnographer to understand other cultures from the other's point of view. Ethnocentrism is the practice of assessing others only in terms of what we know from our own culture. While most human beings are hardwired to think about the world and others in terms of their own cultural experiences, as one conducts ethnographic investigations, ethnocentrism is to be avoided. As a type of document, ethnography provides readers with a written account that presents an understanding of another culture as the ethnographer came to understand that other culture from its people's perspectives or world view. Ethnology is the comparison of multiple ethnographies either of disparate cultures located throughout the world or located in geographic proximity to one another.

Ethnographers employ some of the following methods to understand other cultures:

- **Ethnographic research:** review of previous ethnographies concerning the culture to be understood
- **Historic research:** a review of historic literature about the people, events, and places of cultural importance
- **Kinship charts:** a method for charting human relations among a culture, clan, community, or family
- **Extended interviews:** representative individual and group interviews that seek responses to a number of research questions concerning the culture as a whole or sub areas of the culture
- **Life history interviews:** documentation of the events that chronicle a person's life story as that person presents their personal history within a broader cultural context.
- **Participant observation:** participating in and observing cultural events as if one were from the culture that one is studying.
- **Journalistic witnessing:** witnessing and documenting a cultural event at face value in descriptive terms without interpretation.

Ethnography fulfills a supporting role for other anthropological disciplines as well as contributions on its own merits. Ethnography provides a supporting role to the discipline of archaeology by providing a cultural and historic context for understanding the people that are associated with the material remains of the past. By understanding the cultural milieu in which archaeological sites and artifacts were manufactured, utilized, or cherished, this additional information can provide greater understanding for identification efforts, making significance determinations per the National Historic Preservation Act (NHPA) or the California Environmental Quality Act (CEQA); eligibility determinations for the National Register of Historic Places (NRHR) or California Register of Historical Resources (CRHR); and for assessing if and how artifacts are subject to other cultural resources laws, such as the Native American Graves Protection and Repatriation Act.

In addition, ethnography has merits of its own by providing information concerning ethnographic resources that tend to encompass physical places, areas, or elements or attributes of a place or area. Ethnographic resources have overlap and affinity to historic property types referred to as cultural landscapes, traditional cultural properties, sacred sites, and heritage resources. Studies that focus on specific ethnographic resource types may also take on names such as ethno-geography, ethno-botany, ethno-zoology, ethno-semantics, ethno-musicology, etc. In general, the ethnographic endeavor attempts to minimize human conflict by facilitating an iterative cross cultural understandings and, by extension, self awareness.

## **Ethnographic Resources**

While several definitions of ethnographic resources can be found in historic preservation literature, the National Park Service provides the most succinct and commonly used definition:

Ethnographic resources are variations of natural resources and standard cultural resource types. They are subsistence and ceremonial locales and sites, structures, objects, and rural and urban landscapes assigned cultural significance by traditional users. The decision to call resources "ethnographic" depends on whether associated peoples perceive them as traditionally meaningful to their identity as a group and the survival of their life-ways.

[http://www.cr.nps.gov/history/online\\_books/nps28/28chap10.htm](http://www.cr.nps.gov/history/online_books/nps28/28chap10.htm)

The term ethnographic resources can include resources that are also referred to as traditional cultural properties, sacred sites, cultural landscapes, heritage resources, historic properties, or historical resources that are areas or places.

## **What are Traditional Cultural Properties?**

Traditional Cultural Properties, often referred to as "TCPs", were defined in order to provide a layer of meaning, relevancy, or significance from a communal or localized perspective to the cultural resources profession that is otherwise dominated by archaeology and the knowledge and perspectives that archaeologists promote (King 2003:21-33). Thomas King and Patricia Parker authored an innovative and influential National Park Service Bulletin (NPS Bulletin 38) that defined what TCPs are; how to understand, locate and document TCPS; and how to ethnographically interact with communities that wish to see their special places protected. An explanation of "traditional cultural significance" is provided in the following quote from NPS Bulletin 38:

One kind of cultural significance a property may possess, and that may make it eligible for inclusion in the Register, is traditional cultural significance. "Traditional" in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community's historically rooted beliefs, customs, and practices.

Examples of properties possessing such significance include:

- a location associated with the traditional beliefs of a Native American group about its origins, its cultural history, or the nature of the world;
- a rural community whose organization, buildings and structures, or patterns of land use reflect the cultural traditions valued by its long-term residents;
- an urban neighborhood that is the traditional home of a particular cultural group, and that reflects its beliefs and practices;
- a location where Native American religious practitioners have historically gone, and are known or thought to go today, to perform ceremonial activities in accordance with traditional cultural rules of practice; and
- a location where a community has traditionally carried out economic, artistic, or other cultural practices important in maintaining its historic identity.

NPS Bulletin 38 provides the following definition of a TCP:

A traditional cultural property, then, can be defined generally as one that is eligible for inclusion in the National Register because of its association with cultural practices or beliefs of a living community that (a) are rooted in that community's history, and (b) are important in maintaining the continuing cultural identity of the community. (King 1998: 1)

<http://www.nps.gov/nr/publications/bulletins/nrb38/nrb38%20introduction.htm#tcp>

While the TCP definition provided in NPS Bulletin 38 addresses many types of special places and for diverse communities or ethnicities, some confusion exists with language added during the 1992 amendments to the National Historic Preservation Act at Section 101(d)6 that particularly calls out “properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization may be determined eligible for inclusion on the National Register.” The section further extols agencies to consult with Indian tribes and Native Hawaiians concerning the importance and values that their communities may attach to special places. This has led some to erroneously interpret the Act’s Section 101 language to limit TCPs to only Native Americans and Native Hawaiians. However the specific language of the Act does not prohibit diversity beyond the two specific ethnicities called out; but merely affirms that Native Americans asserting TCPs during the Section 106 process must be considered.

## **What are Sacred Sites?**

The term “Sacred Site” is often used interchangeably and sometimes erroneously with the term Traditional Cultural Property. Sacred Site language stems from the American Indian Religious Freedom Act, the Religious Freedom Restoration Act, and Executive Order 13007. Without providing further information concerning the history and resulting inter-relation of the acts and the order, suffice to say that Executive Order 13007 provides the best guidance and definition. The definition is as follows:

“...any specific, discrete, narrowly delineated location on Federal land that is identified by an Indian tribe, or Indian individual determined to be an appropriately authoritative representative of an Indian religion, as sacred by virtue of its established religious significance to, or ceremonial use by, an Indian religion; provided that the tribe or

appropriately authoritative representative of an Indian religion has informed the agency of the existence of such a site."

Therefore, despite the common practice of failing to differentiate between the two terms, and while there is some overlap between what are called TCPs and what are called sacred sites, the two terms actually have less in common, because sacred sites can only be located on federal lands and the definition calls out the limited geographic extent of sacred sites as "specific, discrete [and] narrowly delineated". However, TCPs are identified as a result of federal undertakings and tend to be geographically more expansive than "specific, discrete and narrowly delineated sacred sites."

Executive Order 13007 calls for the federal government to accommodate access to, and ceremonial use of, sacred sites by Indian religious practitioners and to avoid adversely affecting the integrity of sacred sites through federal land manager actions. (<http://www.achp.gov/eo13007-106.html>)

## **Cultural Landscapes and Ethnographic Landscapes**

TCPs and sacred sites language is often used in overlapping ways that lead to confusion during regulatory processes. Cultural landscapes are another constellation of concepts and historic property types defined prior to the coinage of the term TCP. (See King 2003:39 and Stoffle et al 2005:165-167, for a dialogue on the merits of TCPs versus cultural landscapes as it relates particularly to area size and methods of bounding an area.) The National Park Service Brief 36 provides the following definition of a cultural landscape and its four types. A Cultural Landscape is

"...a geographic area (including both cultural and natural resources and the wildlife or domestic animals therein), associated with a historic event, activity, or person exhibiting other cultural or aesthetic values. There are four general types of cultural landscapes, not mutually exclusive: historic sites, historic designed landscapes, historic vernacular landscapes, and ethnographic landscapes." (NPS Brief 36 1996: 1)

The four types of cultural landscapes are further defined as follows:

*Historic Site:* a landscape significant for its association with a historic event, activity, or person. Examples include battlefields and president's house properties.

*Historic Designed Landscape:* a landscape that was consciously designed or laid out by a landscape architect, master gardener, architect, or horticulturist according to design principles, or an amateur gardener working in a recognized style or tradition. The landscape may be associated with a significant person(s), trend, or event in landscape architecture; or illustrate an important development in the theory and practice of landscape architecture. Aesthetic values play a significant role in designed landscapes. Examples include parks, campuses, and estates.

*Historic vernacular landscape:* a landscape that evolved through use by the people whose activities or occupancy shaped it. Through social or cultural attitudes of an individual, a family, or a community, the landscape reflects the physical, biological, and cultural character of everyday lives. Function plays a significant role in vernacular landscapes. Examples include mining or ranching complexes.

***Ethnographic landscape:*** a landscape containing a variety of natural and cultural resources that associated people define as heritage resources. Examples are contemporary settlements, religious sacred sites and massive geological structures. Small plant communities, animals, subsistence and ceremonial grounds are often components. Examples include a section of a river where a Native American culture lives, travels, and fishes; or an upland mountain area where tribal people hunt, gather, camp and travel extensively during part of the year.

Landscapes are understood and documented by conducting ethnographic research that identifies the contributing elements or attributes of the landscape. Contributing elements can include both cultural and biological resources, climate and landforms, subsistence, religion, economy and the built environment.

For the purposes of this study, the resource focus is with Native American places and areas otherwise referred to as ethnographic resources and how those resources contribute to a cultural or ethnographic landscape located in and around the proposed project area. Having said this and based upon the discussion provided above, the reader should be aware that there are multiple overlaps of terminology: Traditional Cultural Properties, Sacred sites, Cultural or Ethnographic Landscapes, and specific historic property or historical resources types of sites, objects, buildings, structures, districts, areas or places.



## GENERAL TRIBAL GOVERNMENT BACKGROUND

Nine distinct tribal governments were consulted regarding this ethnographic study. Tribes were invited to participate based upon a list of affiliated tribes provided by the Native American Heritage Commission. The nine invited tribal governments represent four different cultural affiliations. From west to east, these affiliations are: Owens Valley Paiute, Timbisha Shoshone, Pahrump Southern Paiute, Las Vegas Southern Paiute, and Moapa Southern Paiute. Of the nine tribal governments, one Tribe participated fully, two tribes participated in supporting roles, and the remaining six tribes provided limited input due to their greater distances and relationships to the project area. Figure 4, located at the end of this section, is a map of the general locations and territories of the participating tribes. The map also includes a historic journey taken by a Pahrump Paiute leader and his son that, in part, helps to define Pahrump Paiute ancestral territory.

Table 1 provides a summary of tribal participation in this ethnographic study.

| <b>Table 1. A Summary of Tribal Participation for this Study</b> |  |                            |
|--|--|----------------------------|
| <b>TRIBE</b>   | <b>CULTURAL AFFILIATION</b>                                | <b>STUDY PARTICIPATION</b> |
| Pahrump Paiute Tribe   | Southern Paiute (Pahrump Band)                             | Full                       |
| Moapa Tribe  | Southern Paiute (Pahrump Band, Las Vegas Band, Moapa Band) | Support                    |
| Las Vegas Paiute Tribe   | Southern Paiute (Pahrump Band, Las Vegas Band, Moapa Band) | Limited                    |
| Timbisha Shoshone Tribe  | Western Shoshone (Panamint and Timbisha)                   | Support                    |
| Lone Pine Paiute and Shoshone                                    | Owens Valley Paiute and Western Shoshone                   | Limited                    |
| Fort Independence Paiute   | Owens Valley Paiute  | Limited                    |
| Big Pine Paiute  | Owens Valley Paiute  | Limited                    |
| Bishop Paiute Tribe  | Owens Valley Paiute  | Limited                    |
| Uta Uta Gwaitu Paiute Tribe (Benton)                             | Owens Valley Paiute  | Limited                    |

### Southern Paiute

The “Southern Paiute” represents a population of people that traditionally reside in a large swath of land that has as its general boundaries the eastern side of the Black Mountains and the eastern Mojave Desert as the western end. The Colorado River and the Grand Canyon form the southern extent of Southern Paiute and the southeastern plateaus of the Rocky Mountains form the eastern extent of the Southern Paiute territory. The northern boundary of Southern Paiute territory takes in the southern third of present day Utah and the lower quarter of present day Nevada. The Pahrump and Moapa Tribes are the Southern Paiute residing in the western extent of Southern Paiute territory. The Chemehuevi people to the immediate south of Pahrump and living along the lower Colorado River are also Southern

Paiute and share many cultural traits with those Southern Paiute to the north and east. Chemehuevi did not participate in this ethnographic study because they were not listed by the Native American Heritage Commission and therefore were not invited to participate in this study. In addition, the more eastern Southern Paiute Tribes located in Utah and Northern Arizona were not invited to participate although they recognize the Spring Mountains as their common place of origin and participate in some of the ceremonial practices in common with the Moapa and Pahrump Southern Paiute.

In the Fall of 1873, Major John Wesley Powell and G. W. Ingalls were commissioned by the United States Department of the Interior to determine the extent of Paiute Indians (Numic) dwelling throughout the Great Basin and that had not yet been moved to reservations (Fowler 1971: 97-120). In all, the two commissioners documented 83 separate tribes. Powell made one trip to as far as Las Vegas where he collected information on the Paiutes of that area. Powell documented a “Chief of Alliance”, named To-ko’-pur (Chief Tecopa) who represented one tribe as well as the alliance of seven additional Tribes. Each of the additional tribes had “Chiefs.” The following table provides Powell’s grouping of seven tribes, into one alliance. Powell suggested that all Southern Paiute of Southeastern California, Southern Nevada, Northwestern Arizona and Southern Utah be relocated to the Moapa Reservation (Ibid:116).

Table 2: Seven Tribes Allied Under Chief Tecopa

| TRIBE                          | LOCALITY             | CHIEF            |
|--------------------------------|----------------------|------------------|
| <i>No-gwats</i>                | Vicinity of Potosi   | To-ko’-pur       |
| <i>Pa-room’-pats</i>           | Pa-room Springs      | Ho-wi’-a-gunt    |
| <i>Mo-quats</i>                | Kingston Mountains   | Hu-nu’-na-wa     |
| <i>Ho-kwaits</i>               | Vicinity of Ivanspaw | Ko-tsi’-an       |
| <i>Tim-pa-shau’-wa-go-tsis</i> | Providence Mountains | Wa-gu’-up        |
| <i>Kau-yai’-chits</i>          | Ash Meadows          | Nu-a’-rung       |
| <i>Ya’-gats</i>                | Armagoza             | Ni-a-pa’-ga-rats |

Powell’ 1873 Las Vegas journey report counted a total of 240 individual Southern Paiute within the alliance lead by Chief Tecopa (Ibid:104-105). Powell provides further clarification by stating that a number of Indians that acknowledge a common authority and encamp together is a “Tribe” (Ibid: 50). Powell also adds that any collection of “tribes” that acknowledge allegiance to a head chief would be designated as a “nation” (Ibid). Hence, all of the seven tribes with allegiance to Chief Tecopa were considered a nation.

Today, the terminology has changed, with the alliance or nation, now called a “Tribe” and each of the contributing localities referred to as “districts.” The entire alliance is now referred to as the Pahrump Tribe. The nomenclature has been partly confused when anthropologist Isabel Kelly chose to combine the above Tecopa alliance with four other localities, (Las Vegas, Colville, Indian Spring, and Cottonwood Island) and then choose to call the entire group the “Las Vegas Tribe” (Kelly 1964). Some ethnographers have then come to falsely associate the currently recognized Las Vegas Tribe with this larger conglomerate or to consider Pahrump Paiute as Las Vegas Paiute.

That the Pahrump and Las Vegas Southern Paiute are two distinct groups is further confirmed by a document produced by the Inter-Tribal Council of Nevada:

Centered around Las Vegas, Red Rock, and Mt. Charleston were the Pegesits who lived as far east as present-day Hoover Dam. On the western edge of Nevada were the Pahrumpits. They lived in Pahrump Valley and on the western slopes of the Spring Mountains (Inter-tribal 1976:11).

### **Pahrump Paiute Tribe**

The Pahrump Paiute Tribe, located in Pahrump, Nevada, is not a federally recognized tribe, but is recognized as an established tribal entity by the State of California and is informally recognized by federal land managing agencies that operate within the Tribe's traditional territory. Over the years, Pahrump Paiute individuals have been intermittently recognized by the federal government. The Tribe currently consists of approximately 100 tribal members. The membership generally resides in the nearby Las Vegas, Pahrump, Charleston View, and Tecopa/Shoshone areas, although some tribal members live considerable distance beyond the tribal territory. The tribe is lead by a chairperson and is based in Pahrump, Nevada. While the Pahrump Paiute Tribe has no reservation, they do assert an ancestral territory. They are the primary tribe affiliated with the area in which the project is proposed. The tribe's primary focuses are maintaining their unique cultural identity, protecting important cultural resources that are in harm's way of various federal, state and local projects and attaining federal recognition. The Tribe's cultural expertise resides within its membership.

### **Moapa Paiute Tribe**

The Moapa Band of Paiute Indians, located in Moapa, Nevada, is a federally recognized tribe. It currently consists of approximately 300 members. Some tribal members are closely related to Pahrump tribal members or are from the Pahrump Valley and continue to bury those members in the Chief Tecopa Cemetery (formerly known of as the Pahrump Indian Cemetery). The tribe occupies a 71,954 acre reservation near Moapa, Nevada. A reservation of 2 million acres was originally established in 1874. However, two years later, the reservation was reduced to 1000 acres. In the 1980s, the reservation was expanded by an additional 70,000 acres. The reservation is located along the lower flood plains of the Muddy River. The tribe governs per a constitution that was adopted in 1942. An elected tribal council presides over several tribal businesses (travel center, fireworks store and a tribal farm) and various tribal departments and committees, including a cultural committee. The Tribe has been impacted by surrounding development, such as the nearby coal fired Reid Gardner Power Station. Tribal elders and cultural staff also assert that decades of bomb testing at Nellis Air Force Range immediately to the west and northwest of the reservation have contaminated their reservation and ancestral lands (Interviewee – Personal Communication).

([http://www.moapapaiutes.com/about\\_us.htm](http://www.moapapaiutes.com/about_us.htm))

## **Las Vegas Paiute Tribe**

The Las Vegas Tribe of Paiute Indians of the Las Vegas Indian Colony is a federally recognized tribe. It consists of approximately 71 members who occupy a 3,800 acre reservation generally referred to as “Snow Mountain” and located several miles north of Las Vegas. Pahrump Paiute and Las Vegas Paiute are closely related to one another and to some of the Moapa Tribe membership. Isabel Kelly identified both Pahrump and Las Vegas under the Las Vegas Paiute Tribe, however, each tribe has continuously maintained their distinct identities and function independently. The tribe’s original reservation was a 10 acre plot of land located in downtown Las Vegas and deeded to the tribe in 1911 by a private ranch owner. The 10 acre plot is still part of the reservation. The tribe has a constitution adopted in 1970, and is governed by a tribal council. The tribe has several businesses, including an extensive golf resort, gas station, and two smoke shops. Recent issues that involve the Tribe concern on-going desecration of tribal cultural sites, including graffiti of sacred sites in the Red Rock area, a popular tourist destination for visitors to Las Vegas. The tribal staff cultural expertise resides within the Tribal Environmental Protection Office. (<http://lvpaiutetribel.com> , [http://en.wikipedia.org/wiki/Las\\_Vegas\\_Tribe\\_of\\_Paiute\\_Indians\\_of\\_the\\_Las\\_Vegas\\_Indian\\_Colony](http://en.wikipedia.org/wiki/Las_Vegas_Tribe_of_Paiute_Indians_of_the_Las_Vegas_Indian_Colony) )

## **Shoshone**

The Shoshone people reside in swath of land as extent as, and immediately north of, the Southern Paiute territory. Their western-most boundaries are in the Coso Mountains and on the eastern slope of the Inyo Mountains in California. The eastern end of their territories is in the areas of northwestern Utah and southern Idaho. The Shoshone in the western side of this swath of land are referred to as Western Shoshone.

## **Timbisha Shoshone Tribe**

The Timbisha Shoshone Tribe, California, is a federally recognized tribe. It currently has approximately 306 tribal members and occupies a 7,914.0 acre reservation, comprised of several parcels in and around Death Valley National Park, including a 314 acre parcel near Furnace Creek, California. Some reservation parcels are located in Nevada near Lida, Scotty’s Junction and Death Valley Junction. The tribe also has several areas that are co-managed with the National Park Service or the Bureau of Land Management. The tribe’s main office is in Bishop, California. The tribe was originally represented in the 1863 treaty of Ruby Valley. However, that treaty did not result in any specific representation for the Timbisha Shoshone, who fought for and eventually achieved federal recognition in 1983. However, the tribe did not receive a land base until 2000 with the passage of the Timbisha Homeland Act. The tribe holds general elections; it is lead by a chairperson and holds monthly meetings. The Tribe’s cultural programs are managed by a Tribal Historic Preservation Office. The Timbisha’s ancestral territory abuts the Pahrump Paiute Tribe’s ancestral territory in the vicinity of Ash Meadows, Eagle Mountain, and the Black Mountains. (Field Directory, 2004, page 156, <http://www.timbisha.org/index.htm> , Interviewee - Personal Communication).

## **Owens Valley Paiute**

The Owens Valley Paiute are a distinct group of Paiute that reside in the Owens Valley and have the Owens Valley as an ancestral territory, including the valley's defining flanks, the eastern flanks of the Sierra Nevada and the western flanks of the Inyo and White Mountains. The Mono Lake area provides the northern boundary of their territory. The Owens Valley Paiute are represented by five separate tribes. All of the tribes are members of the Owens Valley Indian Water Commission. Of the five tribes, two (Lone Pine and Big Pine) have some tribal members with cultural affiliation to the Timbisha Shoshone and Pahrump Paiute people that historically co-existed in the Ash Meadows area.

## **Lone Pine Paiute Shoshone Tribe**

The Lone Pine Paiute Tribe of Lone Pine, California, is a federally recognized tribe. It currently has approximately 425 tribal members and occupies a 237 acre reservation near Lone Pine, California. The tribe is governed by a general council and holds monthly meetings. Some Lone Pine Paiute Tribal members are of Timbisha Shoshone descent. Cultural Resources affairs are provided by the tribal Environmental Protection Program. (Field Directory 2004: 111, <http://lppsr.org/>)

## **Fort Independence Paiute Tribe**

The Fort Independence Paiute Tribe is a federally recognized tribe. It consists of approximately 136 tribal members and occupies a 580 acre reservation near Independence, California. The Tribe has recently attained tribal historic preservation status. (Field Directory 2004: 94, <http://www.fortindependence.com/native.aspx>)

## **Big Pine Paiute Tribe**

The Big Pine Paiute Tribe of the Owens Valley is a federally recognized tribe. It consists of approximately 403 tribal members and occupies a 279 acre reservation near Big Pine, California. The tribe has a constitution and is governed by a Tribal Council and a General Council. The Tribal Council holds monthly meetings; the General Council meets quarterly. At least one Big Pine Paiute Tribe family shares a tribal affiliation with the Pahrump Paiute. The Big Pine Tribe's cultural resources program is maintained through a Tribal Historic Preservation Office (Field Directory, 2004: 66, <http://www.bigpinepaiute.org>, Interviewee - Personal communication).

## **Bishop Paiute Tribe**

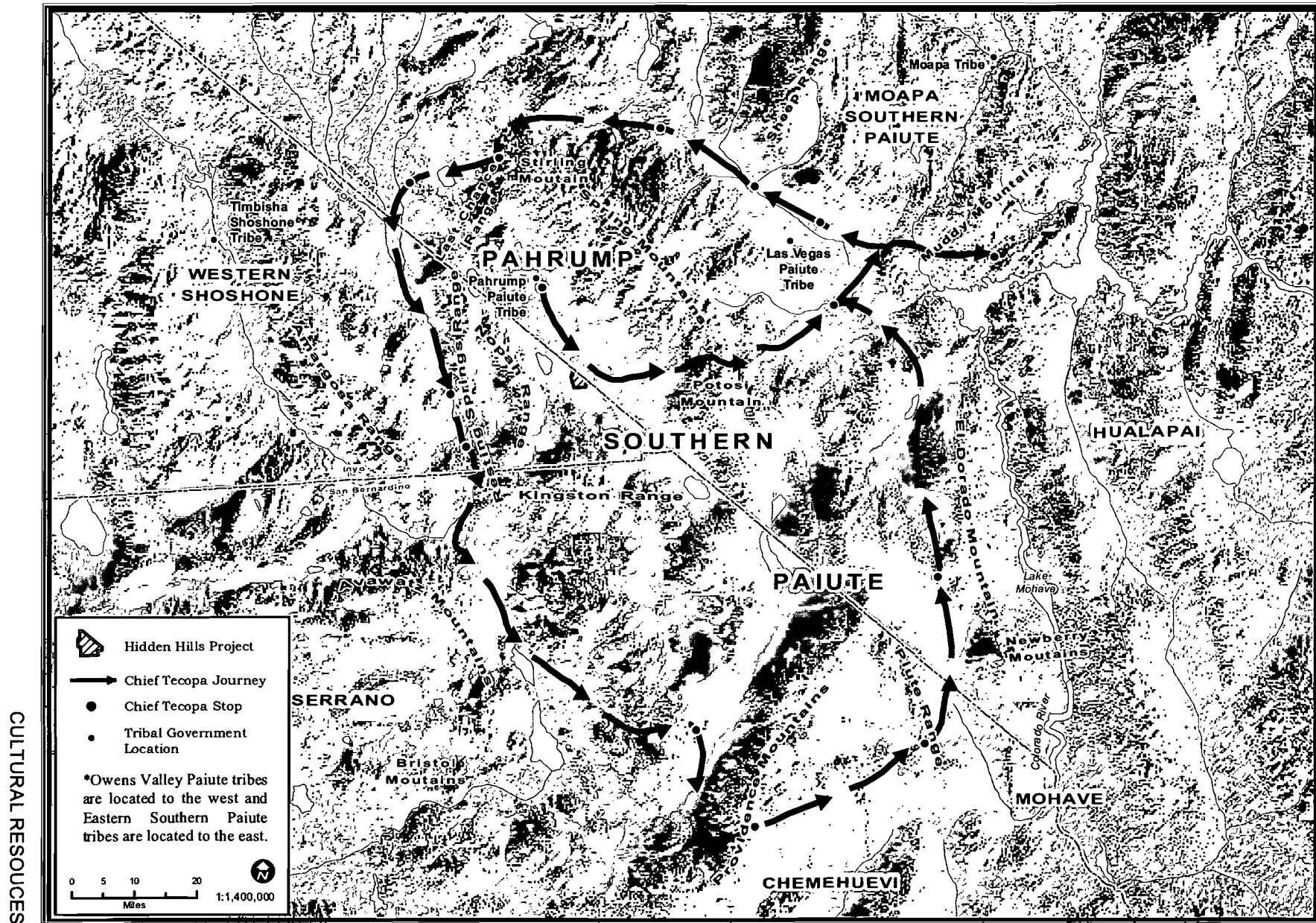
The Paiute-Shoshone Indians of the Bishop Community is a federally recognized tribe. It consists of approximately 1040 tribal members and occupies an 875 acre reservation near Bishop, California. The tribe meets bi-monthly and is governed by the Bishop Indian Tribal Council. The Paiute-Shoshone Indians of the Bishop Community share a tribal affiliation with the Paiute-Shoshone. The Bishop Tribe's cultural resources program is maintained through a Tribal Historic Preservation Office. (Field Directory, 2004: 69, <http://www.bishoppaiutetribes.com/>)

### **Utu Utu Gwaitu Paiute Tribe**

The Utu Utu Gwaitu Paiute Tribe (formerly the Benton Paiute Tribe), is a federally recognized tribe. It consists of approximately 138 tribal members and occupies a 162 acre reservation near Benton, California. The tribe has a constitution and is governed by the Utu Utu Tribal council. The Tribal Council holds monthly meetings; the General Council meets annually. The Utu Utu Gwaitu Paiute shares a tribal affiliation with the Paiute. (Field Directory, 2004, page 63)

## CULTURAL RESOURCES - FIGURE 4

**Hidden Hills Solar Electric Generating System (HHSEGS) - Tribal Ancestral Territories and Tribal Government Locations in and around Pahrump Valley**



**CALIFORNIA ENERGY COMMISSION, SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION**

SOURCE: Adapted from *Handbook of North American Indian* Volumes 8 and 11, and *Chief Tecopa and The Hikos* by Celeste Lowe.

## METHODS

### General Description of Ethnographic Methods and “REAP”

Ethnography at its best takes years to complete. Ethnographers can spend a lifetime studying another culture and still find that their cross-cultural knowledge of their “second” culture is incomplete.

Minimally, it is advised to spend at least one year in studying another culture so that one can learn about the various seasonal variations and adaptations. Academic and self-funded anthropologists may have such luxury. However, the merits of ethnography, when employed to understand project impacts to ethnographic resources, often require less than optimal study durations. One method, called Rapid Cultural Assessment” was developed in the 1930s to assist sociologists’ understanding of American rural agricultural community responses to socioeconomic impacts ensuing from evolving environmental conditions. (<http://www.iisd.org/casl/caslguide/rapidruralappraisal.htm>) The National Park Service (NPS) has developed similar methods for understanding ethnographic resources within the shortened time frames related to project review. The NPS method, called Rapid Ethnographic Assessment Procedures (REAP), was generally followed for this project-related ethnographic study.

REAP consists of a selection of ethnographic methods that relies on interview, observation, and research techniques to describe a way of life common to a group of people, that can include their knowledge, customs, beliefs, social habits, technology, arts, values, and institutions. REAP involves active participation of people in a cultural group to render representations of a way of life from a community’s point of view. Unlike traditional ethnography, REAP focuses investigations and resultant descriptions on solving specific problems or issues that may arise as a result of proceeding with a development project.

REAP’s truncated methods are:

1. Group meetings/interviews where the ethnographer explains the project to the group, answers general questions and solicits immediate responses, fears, apprehensions, benefits, or other general perceptions from the participants concerning the project, the area where the project is being proposed, and the general connections of traditional people to the project area. Often issues of confidentiality are discussed. Surmounting the issues of confidentiality, the ethnographer may be successful in scheduling follow-up activities with specific individuals to increase ethnographic understanding.
2. Areas worth further ethnographic inquiry are identified; a research design, including research/interview questions, is developed; and specific people are scheduled by the ethnographer and the group for follow-up interviews. Follow-up interviews should be conducted according to the protocols of documentation and confidentiality identified during the group meeting/interview. Interview notes, however recorded, should be vetted with the source individuals to verify accuracy and to gather additional nuanced information.
3. Follow-up interviews with the same or additional people often occur while both the ethnographer and the community begin to further think about the project, the project effects,



and additional information that is necessary for fully identifying, evaluating, assessing effects, or otherwise considering impacts to ethnographic resources.

4. As Steps 1 through 3 are being conducted, a parallel archival “search, retrieve, and assess” process should be undertaken to provide supporting or conflicting information to what is being discovered through the interview process. In addition to archive, book store, and other informational repositories (e.g., the internet), the people themselves or other ethnographers with previous experiences with the same people, may provide source materials.
5. Field visits will help the ethnographer triangulate between what people currently say, what people have written in the past, and what is actually or perceived to be in the project area as a potential ethnographic resource.

<http://www.nps.gov/ethnography/training/elcamino/phase1.htm#reap>

### **HHSEGS Ethnographic Study - General Meetings**

Several meetings were held to exchange general information with affiliated tribes and to gauge tribal interest in participating in further project-related ethnographic studies. Specific Tribal government representatives and individual traditional Native American practitioners were contacted for initial invitation, based upon a May 2011 listing provided by the Native American Heritage Commission (NAHC) to Energy Commission staff.

General Meeting 1 was held on January 19, 2012 in Shoshone, California and was attended by various Energy Commission staff technical experts in the areas of water, biology, cultural resources, and planning, as well as representatives of upper management. Participating tribes included: Pahrump Paiute Tribe, Moapa Paiute Tribe, Las Vegas Paiute Tribe, Timbisha Shoshone Tribe, and the Lone Pine Tribe of Paiute and Shoshone. The tribal attendees were a combination of tribal cultural resources and environmental protection staff and several tribal elders. Energy Commission staff provided the tribes with an overview of the proposed project and updates on how various natural and cultural resources studies were proceeding. Tribal attendees asked general and clarifying questions and made statements that expressed their concerns for how the project might impact their life-ways. Specific concerns were expressed regarding the proposed project’s water use, impacts to the water-related biomes, such as the local springs that support plants and animals in the nearby coppice dunes mesquite grove complexes, and mention was made that Paiute ceremonies, generally referred to as “Salt Song Trails,” are in, around, and run through the project area. Additional concern was expressed regarding impacts to Indian trails, including the Old Spanish Trail, and possible impacts to on-site plants, animals, and cultural resources, including possible burial or cremation sites. Energy Commission Cultural Resources staff proposed that an ethnographic study be conducted. Tribes agreed that an ethnographic study would be one desired method to pursue and further identified that the Pahrump Paiute Tribe should be central to that study and that the other tribes could provide support to the Pahrump Paiute Tribe. However,

participating tribes also requested exclusive follow-up meetings with Energy Commission cultural resources staff.

General Meetings 2 was held on February 11, 2012 at the Hidden Hills project site and in Pahrump, Nevada. An ethnographer, who is the author of this report, met with various Pahrump tribal members as a group near the project site. The membership had assembled to get clarification and a better general understanding of the proposed project parameters. The ethnographic study and confidentiality of information that the tribe might provide were two topics discussed. Several off-project cultural resource areas were visited, including a looted Pahrump Paiute cemetery.

General Meeting 3 was held on February 12, 2012 at the Hidden Hills project site and at Sandy Valley (an alternative project site). The Energy Commission ethnographer met with the Moapa Tribe cultural resources staff and committee members. One Moapa tribal council person also attended, as did Pahrump tribal representatives. General project parameters were discussed. Some Moapa participants are descendants of Paiute families that originated from the Pahrump Valley vicinity. Cultural values attached to the Sandy Valley area were discussed. Moapa Tribe staff has reiterated their previous statements that the Moapa Tribe would support the Pahrump Tribe and are interested in reviewing the ethnographic report prior to finalization. They also reiterated concerns voiced at the first general meeting about impacts to water, springs, plants and animals, and the salt song ceremonies.

General Meeting 4 was held on February 14, 2012 with the Owens Valley Indian Water Commission. Representatives from the Utu Utu Gwaitu Paiute Tribe, Bishop Paiute Tribe, Big Pine Paiute Tribe, Fort Independence Paiute Tribe, Lone Pine Paiute and Shoshone Tribe, and Timbisha Shoshone Tribe participated. The general project, as proposed, was discussed and the ethnographic study concept was presented. Participants agreed that the project area was within Southern Paiute Territory (as contrasted with Owens Valley Paiute territory) and that the Pahrump Tribe was the most affiliated tribe to work with, but that some Southern Paiute families had ended up as tribal members in Owens Valley Paiute Tribes. Individual families were identified.

General Meeting 5 was held on May 12, 2012 with the Pahrump Paiute Tribe. A draft of this report was generally reviewed and the CEC project review process was discussed.

General Meeting 6 was held on July 14, 2012 with the Pahrump Paiute Tribe. Issues related to confidentiality of sensitive cultural resources information was discussed and an initial review of the report, to identify proposed redactions, was conducted.

## **Research Design**

Based upon these general meetings, an abbreviated research design was developed that generated various research questions or directives. The following research design provided general guidance for preliminary archival research and allowed the ethnographer to prepare for interviews.

- Research specific Pahrump Valley Native American history and culture beyond what is generally provided in the CH2MHill Cultural Resources report prepared for the HHSEGS AFC.

- Determine what plants and animals that have Southern Paiute cultural significance are or may be located in the project area. Plants and animals determined to have attached Southern Paiute cultural values should be further studied to understand ethno-botanical and ethno-zoological details.
- Research the general Southern Paiute cultural relevance and history of Southern Paiute water knowledge and use in the Pahrump Valley and surrounding mountains.
- Research and understand the importance of springs, mesquite groves, and the surrounding coppice dune environs in the project area for the continuance of Southern Paiute life-ways.
- Research and understand the Round dance, Harvest dance, and Cry ceremonies performed in the Pahrump Valley and specifically the ceremony held in 1933 at Hidden Springs Ranch. Determine to what extent these ceremonies are still practiced today and to what extent the proposed project would impact such ceremonies.
- Research and further understand the history, practices, and meaning of the salt song trail; deer and big horn sheep mourning songs; and Coyote and Wolf legends, with emphasis on ethno-geography and specific attention paid to the nature of the trail aspects of these songs and related ceremonies.
- Research the history of Southern Paiute horticulture in the project area from pre-contact to current times.
- Research and map, to the extent feasible, Native American Trails located in and near the project area that are not necessarily "Salt Song Trails"
- Understand to what extent the Old Spanish Trail is also a Native American trail.
- Particularly research the Native American slave traffic that occurred along the Old Spanish Trail
- Inquire and document the importance of Charleston Peak, Spring Mountains, Kingston Mountains, No Pah Mountains, the Last Chance Mountains, and other surrounding landforms in general and as view/auditory sheds in relation to the project area and to other landforms.
- Research traditional and current Southern Paiute burial practices, including cremation.
- Inquire as to the interrelation of Paiute and Shoshone culture in general and specifically in project area.
- Research the history of tribal governments: Moapa, Las Vegas, Pahrump, Timbisha Shoshone, Lone Pine, Independence, Big Pine, Bishop and Benton.

## Interviews

It was determined by the Energy Commission ethnographer, based upon limited time, budget constraints, and the general attitude of most Native Americans that participated in the general meetings that an opened question/answer dialogue style of interviewing would be more effective than a formal interview style that would require protracted review of the research questions, the possible need to develop a formal questionnaire, and other methods of recordation. Instead, hand-written notes were taken by the ethnographer. These notes were then typed up within a few days and returned to the person interviewed for further review with instructions to make changes including deletions and additions. The ethnographer also asked interviewees to identify what information in the interviews should remain confidential.

Interviews were conducted with the following Southern Paiute and Shoshone individuals:

Clarabelle Jim, Elder Pahrump Paiute Tribe  
Lorraine Jim, Elder Pahrump Paiute Tribe

Cynthia Lynch, Elder Pahrump Paiute Tribe  
Richard Arnold, Traditional Religious Practitioner Pahrump Paiute Tribe  
George Ross, Elder Pahrump Tribal Member  
Vernon Lee, Moapa Tribal Member of Pahrump Paiute ancestry  
Juanita Kinlichine, Elder Moapa Tribal Member of Pahrump Paiute ancestry  
Lalovi Miller, Elder Moapa Tribal Member of Pahrump Paiute ancestry  
Philbert Swain, Elder Moapa Tribal Member  
Barbara Durham, Tribal Historic Preservation Officer for the Timbisha Shoshone Tribe and Timbisha Shoshone Tribal member

Follow-up interviews were conducted with Clarabelle Jim, Cynthia Lynch, and Richard Arnold.

### **Archival Research**

Effort was expended to seek, obtain, and assess culturally relevant information from various archival and other sources.

- Documents were obtained via various internet searches and subsequent downloads.
- Books were obtained from used book stores in the project area and from on-line book purchasing venues.
- Books were purchased from the Shoshone Museum and a Nevada Historical Society Museum located in Tonopah.
- Books and manuscripts on file at the Pahrump Public Library were reviewed.
- Books and manuscripts from the California State Archives were obtained and reviewed.
- Books and manuscripts from the Sacramento State University Library were obtained and reviewed.
- Books and manuscripts from the University of California at Berkeley Bancroft Library were obtained and reviewed.
- Historic Photographs from the University of Nevada Las Vegas were obtained and reviewed.
- Photocopied and original documents were provided by the Pahrump Paiute Tribe.

An interview with Don Hendricks was conducted on May 8, 2012 in Pahrump. Don is a retired nuclear physicist, formerly employed by the Atomic Energy Commission and the Environmental Protection Agency. Mr. Hendricks is also a respected local historian, archaeologist and member of various local and state historic societies and associations. The purpose of this interview was to triangulate among conflicting written and oral history dates, people and events.

### **Ethnographic Method Constraints**

There were identified constraints to the ethnographic methods described above. Five constraints are listed and further described:

1. Confidentiality of Sensitive Information
2. Not enough time to conduct thorough ethnography
3. Language barriers in expressing and understanding information
4. Seasonal prohibitions against divulging certain types of information
5. Some seminal archival information not obtainable (Isabel Kelley's 1934 field notes).

Confidentiality of Native American sensitive cultural information, in the absence of clear Energy Commission policy that is specific to Native American concerns, initially inhibited the author's ability to collect pertinent information.

The Southern Paiute culture, and particularly traditional cultural practices related to epistemology (belief systems), world view, and religion, are too complex to understand within the limits of a three month study. One Pahrump Paiute stated:

Admittedly and with all due respect, the abbreviated ethnographic approach being used in this project appears to be designed to collect only a limited amount of information. The open-ended interviews are good for collecting certain kinds of general data, but cause concern when trying to synthesize the data. (Interviewee - Personal Communication)

Another Moapa Paiute stated a broader concern with language barriers to cross cultural understanding:

English language will never get to the bottom of such things like Salt Song Trails. When we speak our language to one another, we automatically know what the other is saying. Paiute Language gets right to it. In English, we have to say it a bunch of different ways and we still are not sure if the other person understands. With Paiute, it is either yes or no, do or not do. There is no ambiguity. (Interviewee – Personal Communication)

Well documented in the literature and re-stated for this study by various interviewees is a general cultural prohibition against telling culturally significant and traditional stories outside of the winter period (Fowler 1971: 21, Kelly 1964:120, interviewee – Personal Communication, interviewee – Personal Communication). The Pahrump Paiute winter time is generally defined as the months of November, December, and January. Interviews were conducted between the months of February and May of 2012.

Finally, it was determined early in this study that Isabel Kelly conducted ethnographic research among the Southern Paiute in 1932. Her research was partially recorded in her personal field notes. However, only the eastern Southern Paiute, those Paiute residing in Utah and northern Arizona, were discussed in Kelly's seminal work *Southern Paiute Ethnography* published in 1964. While the author was able to incorporate some comparative information from that ethnography into this report; Kelly's information for the western Southern Paiute was not obtainable although effort was expended by Energy Commission staff to obtain copies of her field notes.

Constraints were *surmountable*, *partially surmountable*, or *not surmountable* as described below.

1. A personal confidentiality agreement was struck between the Ethnographer and the Pahrump Paiute Tribe representatives that guaranteed confidentiality of information provided. Confidential information included in this report is marked accordingly. *Constraint Surmounted*.
2. The Rapid Ethnographic Assessment Procedures were adapted to this ethnographic study. While REAP cannot replace the quality of long-term ethnography, it does provide some ability to include ethnographic resources in the Energy Commission facility siting process; a process that

only affords Energy Commission staff with a few months, at most, to conduct independent research. *Constraint Partially Surmounted.*

3. The author does not speak or understand Southern Paiute and there are few other non-Southern Paiute that speak the language. Four of the Southern Paiute interviewees spoke English as a second language. However, their English language skills were proficient enough to convey partial understanding and some interviews were followed up with second interviews to verify previously recorded information. However, information conveyed in this report is provided in the English written language only. *Constraint Not Surmountable.*
4. A prohibition prevents traditional stories, many of the stories holding embedded information sought for this study, from being told in entirety during the months that this research was conducted. Interviewees could tell pieces of stories or otherwise provide specific information without breaking the prohibition. In addition, some literature discovered through archival research further substantiated the fragments that were provided through interview. However, an exhaustive review of significant oral history was not obtainable. *Constraint Partially Surmounted.*
5. While previously recorded seminal ethnographic information was not obtained from Kelly's field notes, similar information was gathered from other sources, including a Southern Paiute section included in the Smithsonian Handbook of North American Indians Volume 11 and written by Kelly and Fowler (Kelly 1982: 368-397) that did rely on the field notes in question. *Constraint Partially Surmounted.*

## ANALYSIS

Based upon the interview responses and what could be found through archival research, the various themes of the research questions were condensed and reduced to seven broad attribute categories as follows:

- Water
- Plants
- Animals
- Horticulture
- Trails
- Landforms
- Ceremonies

An analysis of Pahrump and Moapa cultural areas and related values concerning the Sandy Valley area is located in the Landforms section.

The following analysis provides what was discovered through archival research and interviews. Document or personal communications citations will cue the reader as to the source that substantiates a statement or assertion.

### Water

Water is critical to all life forms; particularly in the desert. Without water, life would not be possible. In fact, the opening statement of Robert McCracken's *Pahrump; A Valley Waiting to Become a City*, exclaims:

"The availability of water has always determined the possibility of life in the arid American West. For untold thousands of years, the magnificent springs located in the Pahrump Valley of Nevada have formed the basis of a community consisting of numerous plant and animal species. For what might be as much as 12,000 years, the springs have served to sustain a variety of cultures and ways of life."  
(McCracken1992:1).

In a 1909 United States Geological Services (USGS) sponsored survey, 320 desert watering locations were described and mapped throughout southwestern Nevada and southeastern California. The springs of Pahrump Valley – and between Las Vegas and Tecopa - were particularly known for the "remarkable volume and purity of the water they yield" (Mendenhall 1997:92). A second government sponsored water survey expedition was conducted in 1916 to further ascertain the characteristics of water sources in a number of valleys, including Pahrump Valley, along the California – Nevada border (Waring 1920). The John Yount Ranch was documented as having a spring, a deep well, three shallower wells each pumped by a windmill. The depth of water was variable (Ibid: 65, 77). A Pahrump Paiute Elder exclaimed, "Hidden Hills Spring had the best tasting water" (Interviewee – Personal Communication).

Because water is a life-providing force, Southern Paiute attribute more than mere physicality to water. As an Elder of the Pahrump Paiute Tribe states,

“*Pah* means water. Water is everything, it is the main thing. Every living being drinks water. Without it we would not be alive. Water is alive. It is a spirit no matter where it is or how it comes to us.” (Interviewee - Personal Communication)

Prior to mechanically dug wells and pipelines for transporting water, springs, seeps, and “tanks” guided how people traveled and, therefore, how trails traversed the desert and provided connectivity among these vital water locales. The historian Richard Lingenfelter writes:

“Actual boundaries in this barren land were ill-defined at best; all that mattered was who held the springs... and even these distinctions were blurred by inter-tribal marriages.” (Lingenfelter 1986:16)

For newcomers, the priest, trappers, explorers, military, Mormon settlers, and others, water places are wayward markers of trails and places to pass through on a journey. For the Southern Paiute, water places are also locales for long term or seasonal habitation. In fact, the etymology of the word Pahrump is explained by a Pahrump Paiute elder: “the original word for this place was *Pah-thuh-uhmp* which was the name of a little spring that is now dried up. The word got converted by white men to “Pahrump”. When asked where the spring that Pahrump derived its name from was located, participating Pahrump Paiute elders became very animated.

“It was located on the south end of our old family allotment. Hundreds of acres. They took that from us. They got a gas station, a library, banks and a Walgreens, etc... built on it – where Highway 160 and 372 intersection is. The spring doesn’t run anymore – sometimes in the winter you see a little wet come out from under the parking lot.” (Interviewee – Personal Communication).

Springs with long term habitation tend to have occupational features such as mounds that contain numerous artifacts of daily life, including clay pot fragments used for transporting or storing water in earlier times, and abundant lithic “scatters” (Roberts, et.al 2007:vii). For example, Stump Spring was named after a Pahrump Paiute medicine man named John “Stumper” Pete who got his special powers from the resources and grounds of that area (interviewee - Personal Communication). Stumper had a peculiar method of stomping when he made his medicine and doctored people (Interviewee – Personal Communication). He was a respected medicine man – in the time of my grandmother (circa 1840 – 90’s); he was old so his face was all scrunched up. “Looked like he had a pig face so they called him by Paiute name for pig: *ping-eets*” (Interviewee – Personal Communication). Stump Spring was a major stopping place for the travelers of the Old Spanish Trail. When its waters and the surrounding grass were depleted, travelers went northwest to other springs for respite and to gather resources for the next leg of the journey (Pritchett and Smith 2012, Pritchett 2012:44). Springs throughout the Pahrump Valley were known, named, and occupied. For example, “Manse Spring was originally called *Ma-hanse* which translates as bushes” (Interviewee - Personal Communication). Other Pahrump Valley springs noted as



inhabitation sites are Bolling Mound Springs, Pahrump Springs, Mound Spring, Browns Spring, Hidden Hills Spring, and Stump Spring. The last three mentioned springs were collectively referred to as *Ma-hav*, which translates as “tall brushy area”. Other springs in the vicinity and adjacent to the Pahrump Valley and of importance to the Pahrump Paiute Tribe are numerous springs in Ash Meadows area, including Devils Hole, a spring on the north side of Lizard Mountain (Last Chance Range) named *Poo-bit-si* by the Pahrump Paiute; numerous springs along the flanks of the Spring Mountains, including Horseshutem Springs, Crystal Spring, Wood Canyon Spring, Santa Cruz Spring, Horse Spring, Younts Spring, and Mule Springs; Horse Thief Spring and Beck Spring in the Kingston Range; and Tule Springs, Resting Springs and Tecopa Springs located near the No Pah Range and Resting Spring Ranges. A Shoshone person stated, “We are very concerned about the springs, we have been monitoring a spring called Devils Hole, it has some little fish in it that need water to stay there. That place is very important to us” (Interviewee – Personal Communication, Ash Meadows National Wildlife Refuge Visitor Brochure). A list of all springs that are culturally significant to the Pahrump Paiute can be found at Appendix 1 of this report.

The Pahrump Paiute are knowledgeable of where good springs, medicinal springs, hot springs, and poisonous or bitter tasting springs are located. They are also keenly aware of where springs have dried up or diminished since the 1940s, including but not limited to: Six-mile Springs (*Pah suits*), Pahrump Ranch Spring (used to have pool fish), Brown Spring, Mason Spring, Manse Spring (used to have pool fish), (comes back in the winter), Greasy Wood Springs, Kellog Ranch Springs (located above the Hidden Hills Ranch), Chu Chep Springs ( ) (Interviewees - Personal Communication). “We use to swim in some of those springs – not anymore,” said one Pahrump Paiute Elder. The historic trend of springs drying up is attributed by the Pahrump Paiute people to the increased farming, industrial, and residential growth in the valley over the last 70 years.

It is not just springs that are drying up, claim Southern Paiute interviewees, but the entire water cycle. The water cycle is a traditional Southern Paiute concept with words for the various aspects of water. Table 3 provides a list of Southern Paiute words for various forms of water and a translation of the Southern Paiute word into English. The reader should note that the following word list has not been checked for phonetic exactness. Some translations were not provided. This list is derived from Pahrump Paiute personal communications and Powell’s “Las Vegas Vocabulary and Grammatical Notes” located on pages 152 -160 of the Fowlers’ 1971 edited version of Powell’s report.

| <b>Table 3. Ethno-semantics: Paiute Words for the Various Forms of Water</b> |  |
|--|--|
| Capitalized words are from Powell’s collected vocabulary and notes.          |  |
| <b>Southern Paiute Word</b>  | <b>Translation</b>   |
| <i>pah</i>   | means “water” and is used in combination with other Paiute words to convey either Paiute place names or other forms of water |
| <i>pah ce pets</i><br><i>Pa-a-tum-pai-a</i>                                  | means “spring” as in water spring... not “spring time” or “seed germination” and translates as “coming out of the ground”    |
| <i>pah ta bi yah</i>   | means “spring opening” or hole from which water wells up   |
| <i>ta ma nu gwitch</i>   | means “spring” but specifically refers to a spring that is running well  |
| <i>P-ka-vu</i>   | means water pocket or “tank”   |
| <i>Pa-akwi-tu-a</i>  | means Sink but translates as “where water disappears”  |

|   |  |
|---|--|
| <i>pah who weech</i><br><i>Pa-no'-kwint</i> | means "creek" but translates as "water flowing or running".  |
| <i>Pa-a'-na-vat'-so-na'-kwin</i>            | mountain stream junction or confluence   |
| <i>Kaivw-o-nu-kwint</i>                     | mountain stream  |
| <i>ko sah lo wala</i>                       | Steam rising from rocks after a brief rain when the rocks have been warmed by sun  |
| <i>Pa-gu'-na-ka</i>                         | Fog  |
| <i>Hu-u'-nu-vwav-l</i>                      | Frost  |
| <i>Nu wav</i>                               | Snow   |
| <i>pah la ship</i><br><i>Pa-ru'-s-shup</i>  | means "ice" but translates as "water turning to ice" or the act of freezing"   |
| <i>pah homp</i>                             | means "hail"   |
| <i>ho un na va havi</i>                     | means "dew" but translates as "moisture laying"  |
| <i>Hu-u'-nu-vwav-l</i>                      | means "frost"  |
| <i>pah sa ta ga</i>                         | water dripping from roof, tree,  |
| <i>Pa-wu'-mi-ots</i>                        | water that is whirling   |
| <i>owh la</i><br><i>U' wai</i>              | means "rain"   |
| <i>pah uv ceah</i>                          | means "sprinkle"   |
| <i>pah gid</i>                              | means "flood" but translates as "water moving by fast"   |
| <i>Pa-ro-wa'-tsu-wu-nu-ti-l</i>             | Rainbow  |
| <i>o wa pul</i>                             | means "rainbow" but relates to rainbows considered the canes of Wolf and Coyote. When there is a double rainbow, it is thought that the bottom and brighter rainbow is the cane of Wolf. The upper rainbow, somewhat dimmer than the bottom rainbow, is considered the cane of Coyote, Wolf's younger brother. |
| <i>pah ga din</i><br><i>Pa-ka-riv</i>       | means "lake" or "puddle" but refers to water that is still or "resting"  |
| <i>Pa'-pa-gu-ri-nok</i>                     | Marsh  |
| <i>Pai-hu'-yu</i>                           | canyon with water  |
| <i>Kai-va'ho-yu</i>                         | canyon, dry  |
| <i>Pi-ka-vu</i>                             | cave with water  |
| <i>Tun-kon'</i>                             | Cave   |

Since the early 1900s, linguistic anthropologists have understood that there are correlations between language, ways of understanding natural phenomena, and resultant cultural values. Ethno-semantics is one method for assessing another divergent linguistic speaker's cultural world view and associated values. In Western culture and particularly for English speakers, water and its various forms are named as distinct and separate entities. For example 'ice', 'rain', and 'lake' - all words for describing natural variations of water, do not share an etymological linkage, nor do the words have any linkage back to the common factor which is water. Therefore English speakers can easily conceptualize the quantification of water. For example springs are typified as "pool", "barrel" or "bucket" based upon the amount of daily flow. Pool springs can support larger ranches, barrel springs support smaller farms and a bucket spring

may be sufficient for watering a horse or getting a quick drink. Southern Paiute Language tends to preserve the root word '*pah*' in other words that describe watery aspects of the world. The various iterations of watery aspects often take the word '*pah*' and attach a descriptive string of words that often describe the movement or other active qualities of water. Therefore Paiute speakers when conversing or thinking in their own language, often are much more adept at understanding water as an interconnected phenomenon with varying qualities, and have a more difficult ability to conceive of, or describe the quantification of water. Often times, languages that are robust for describing the qualities of the world, tend to be spoken by people that focus less on ownership (which requires quantification) and focus more on the nuances of rights (which are qualifying human behaviors towards one another, and the natural phenomena). Often non-Indian owners, upon acquiring property with a spring set about "improving" it; which means manipulation in order to get more water from the source. "Farmers often screw it up in the attempt to improve [a spring]. They blast it, or dig it out, or try to connect two nearby springs into one," exclaimed a local historian (Interviewee – Personal Communication).

The Southern Paiute right to inhabit a spring is attributed to specific families. Springs tend to cluster at the base, mid slope, and in the upper reaches of mountains. Likewise, Paiute families who clustered around one or several springs tended to act as economic units in coordinated efforts to hunt, gather, and migrate about a territory that encompasses the extents of all three zones. This is a pan-Southern Paiute practice (Kelly 1964:6-7). Often various families that shared a single water source would not camp exactly on the spring but at a polite distance so that other families would be able to have unfettered access to the common source. Paiute "ownership" of a spring is better described as usufructuary rights; rights that are exercised for the benefits of the user, but that do not convey any ownership precedent (Kelly 1982: 380, Roberts 2007: 93, Jim 2012). There are several Southern Paiute stories of people getting too near to water sources due to greed or carelessness and drowning. When family leaders passed away, the rest of the family might avoid frequenting the spring for up to a year. Characteristically, Southern Paiute consider "resources" to be a function of creation and brought about by events of the creator. Sometimes, with the family departure of a spring, either because of seasonal migration or because of a significant family death, during a family absence, other tribal families may respect the departure and anticipate the grieving family's return. However non-Indians often interpreted the family departure to mean that the family had ceded ownership. There is extensive Southern Paiute knowledge about how to maintain a spring or revive a spring should such a place become overgrown or otherwise cease flowing. The Southern Paiute word *Tong-ai*, expresses the act of cleaning out a spring (Fowler 1971: 158).

As agricultural practices were developed by Paiute, spring water became controlled through ditches and intense management. In some tribal areas, such as the Owens Valley, Paiutes coordinated water use through "irrigation chiefs" (Lawton et.al. 1976). With the rise of Paiute horticulture, there was also a rise in clay storage containers. Particularly interesting is the rise of clay water pots used for household storage and for travel (Kelly 1962:77).

In the Pahrump Valley, it is not just a matter of water availability versus water demand that has resulted in less water, but also, as a Pahrump Paiute explains, the disrespectful manner by which the water is taken:

Water is a spirit or being and it is alive throughout its cycle. The being travels through the cycle... the cycle is a journey or travel circuit. Rain to soil or rock, then to seeps, to springs, to creeks, to basins above or below ground, that collect water. The Paiute story of World Creation concerns water. The world was flooded and Charleston Peak was an island where animals congregated. Animal deities were responsible for how waterways are shaped. Some beings are hiding and waiting for water to provide for a re-emergence. All things have spirits that need to be talked to/listened to. Plants and animals, just like humans, have feelings and emotions. Water also has feelings and emotions: One should not be loud when approaching water. Water needs to be awakened. One takes a stick and gently stirs the surface to wake it up. It is important how one approaches and leaves water. These beings are responsible for keeping balance in the environment and can cause havoc if disrespected or if they anticipate impending harm. Further, the beings are identified in certain prayers and songs that cannot be adjusted (Interviewee - Personal Communication).

Further Pahrump Paiute explain that the mountains are responsible for “calling” the rains. Knowledgeable Paiute can also call the rain through prayer. When a calling is successful, the playa comes to life. While playas are considered by non-Paiute to be places devoid of water, the water spirits are considered by Southern Paiute to be ever present, and therefore require similar consideration and respect as Paiute would require of any users of spring areas.

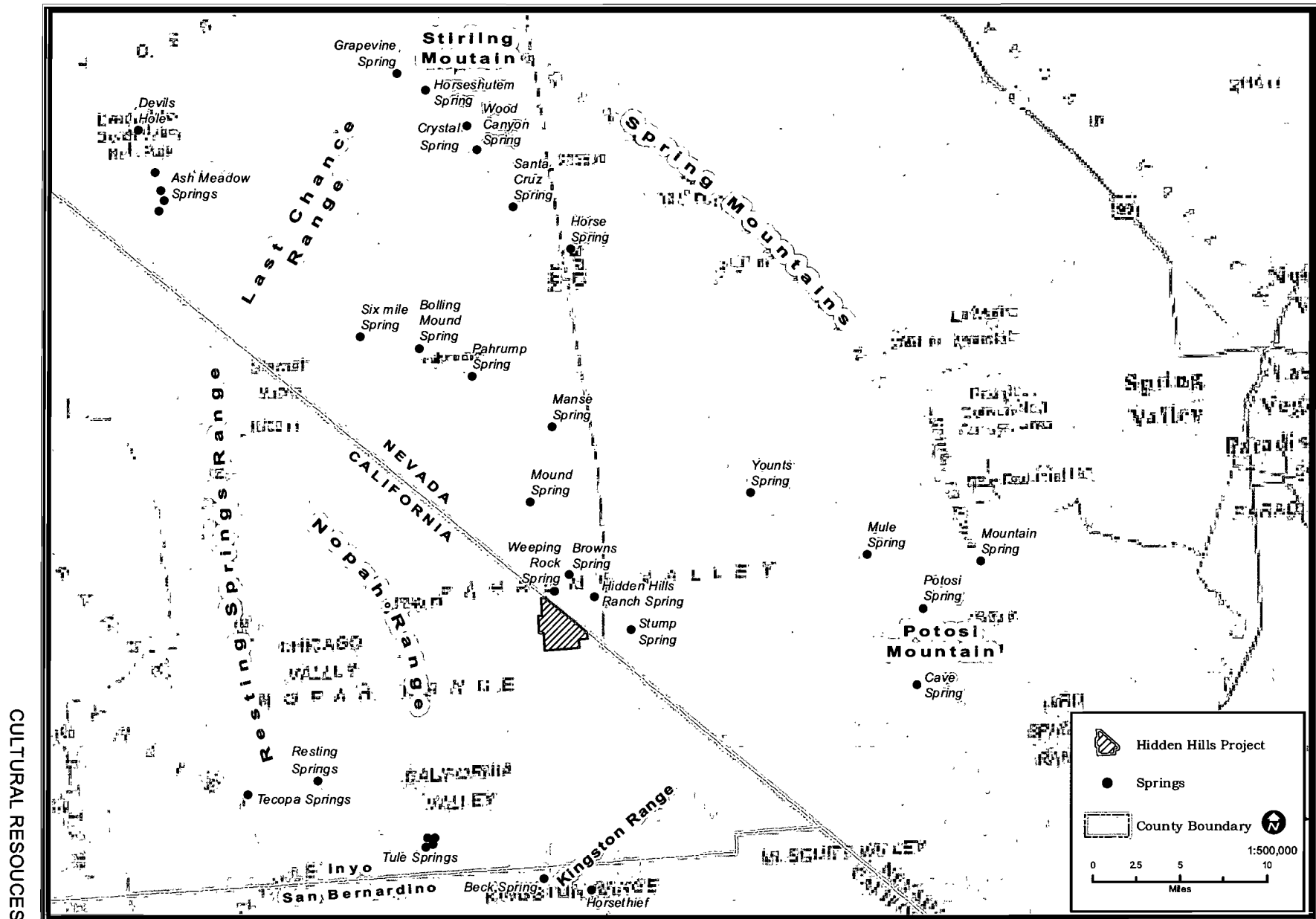
Likewise there are prayers for calling the wind. For example one Pahrump Paiute Elder recounted praying for the wind to blow the mushroom cloud, arising from the first atomic bomb tested at the atomic testing site to the north of Pahrump Valley, to blow away (Interviewee – Personal Communication).

Sufficient ethnographic literature documents that water spirits, are entities deeply entrenched in Paiute springs, (and other places where water can be found or appears), and ways of thinking. Water spirits are small beings that reside in the water ways and can entice careless humans to come too close to springs. Water spirits are thought to pull unwary humans into springs where they are later found drowned (Kelly 1964:138, Interviewee - Personal Communication). Underground water ways are interconnected. This is conveyed with stories of a person who placed a barrel cactus in a spring in Ash Meadows. Some days later the same barrel cactus appeared in a spring in Furnace Creek located some 35 miles away (Interviewee – Personal Communication). A recent substantiation of the Southern Paiute understanding of interconnectivity of distant places, including springs, was documented in a recent Pahrump newspaper article that discussed a 7.4 magnitude earthquake in Oaxaca Mexico that caused significant sloshing of water at Devils Hole in Ash Meadows. The distance between the two places is 1700 miles (Pahrump Valley Times April 13, 2012).

A Moapa Tribal Elder simply stated, “springs are very special places.” (Interviewee – Personal Communication). Another Tribal Elder said, “The project will use water. We people of the desert do not have more water to give, what will we do with less water?” (Interviewee – Personal Communication).

## CULTURAL RESOURCES - FIGURE 5

Hidden Hills Solar Electric Generating System (HHSEGS) - Some Springs in the Pahrump Valley and Vicinity that are Culturally Important to Pahrump Paiute



CALIFORNIA ENERGY COMMISSION, SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: Topographic Maps - USGS, National Geographic (2002), California Atlas & Gazetteer - De Lorme (2010), Nevada Atlas & Gazetteer - De Lorme (2010).

## Plants

The western portion of the project area is comprised of Shadscale Scrub. The eastern portion of the project area is comprised of Mojave Desert Scrub. Within a mile to the east of the project area are mesquite thickets or “groves,” that provide some anchoring for the coppice dunes that parallel the project boundary. While many culturally sensitive plant types are associated with mesquite thickets, this section is not intended to list those plant types. The plant types found on the project site are further analyzed below.

A comparison of the plants documented in the project AFC as “[O]bserved within the HHSEGS Site and 250-foot Buffer during 2011 Surveys” (AFC 5.2-73 – 79) and a list of culturally important plant species of the Southern Paiute, derived from David Rhode’s *Native Plants of Southern Nevada: An Ethnobotany*, and a list of species provided by the Pahrump Paiute Tribe (Jim 2012), has resulted in the following list of cultural use plants known to occur in the project area. Of the 139 plant species identified in the project area, 30 (or approximately one-fifth) of the identified plant types are culturally significant for cultural use. While other tribal representatives have identified more, of the approximately 100 known plant species documented as used by the Southern Paiute people, 30 (or approximately one-fourth) grow in the project area. An exhaustive ethno-botanical study is more likely to identify several hundred plants types that are known by Pahrump Paiute. While many of the plants identified have multiple uses, most informants intentionally chose not to identify those plants that are used for medicinal purposes. Table 4 provides a list of some culturally important plant species in the project area.

| Table 4 Hidden Hills Solar Electric Generating System (HHSEGS)<br>Some Plant Species Occurring in Project Area per the Project Area 2011 surveys that Pahrump Paiute<br>(personal communication) or ethno botanist Rhode (2002) have identified as culturally significant |   |                     |
|---|---|---------------------|
| Common English Name   | Scientific Name                                 | Pahrump Paiute Uses |
| Annual Turtleback   | <i>Psathyrotes</i>                              |                     |
| Ash   | <i>Fraxinus sp.</i>                             |                     |
| Beavertail cactus   | <i>Opuntia basilaris</i> var. <i>basilaris</i>  |                     |
| Broom Snakeweed<br>(resin weed’, ‘turpentine<br>weed’ and ‘matchweed)   | <i>Gutierrezia sarothrae</i>                    |                     |
| Creosote bush   | <i>Larrea tridentata</i>                        |                     |
| Datura, Thornapple, Jimson<br>Weed, Devil’s Trumpet   | <i>Datura Wrightii</i>                          |                     |
| Desert larkspur   | <i>Delphinium parishii</i> var. <i>parishii</i> |                     |
| Desert globe mallow   | <i>Sphaeralcea ambigua</i>                      |                     |
| Desert milkweed   | <i>Asclepias erosa</i>                          |                     |

|  |  |  |
|--|--|--|
|  |  |  |
| Desert needlegrass   | <i>Achnatherum speciosum</i>                     |  |
| Desert paintbrush  | <i>Castilleja angustifolia</i>                   |  |
| Desert trumpet   | <i>Eriogonum inflatum</i> var. <i>inflatum</i>   |  |
| Four wing saltbrush  | <i>Atriplex Canescens</i>                        |  |
| Fiddleneck (Bristly)   | <i>Amsinckia tessellata</i>                      |  |
| Goodding Phacelia  | <i>Phacelia pulchella</i> var. <i>gooddingii</i> |  |
| Honey mesquite   | <i>Prosopis glauca</i> , var. <i>torreyana</i>   |  |
| Indian ricegrass   | <i>Oryzopsis hymenoides</i>                      |  |
| Nevada Ephedra, Jointfir   | <i>Ephedra Nevadensis</i>                        |  |
| Pahrump Valley buckwheat   | <i>Eriogonum bifurcatum</i>                      |  |
| Pima Ratany (Littleleaf ratany)  | <i>Krameria erecta</i>                           |  |
| Primrose (yellow)  | <i>Oenothera primiveras</i>                      |  |
| Princes plume (Cabbage Desert Plume, Indian Cabbage, Sentinel of the Plains) | <i>Stanleya pinnata</i>                          |  |
| Purplenerve springparsley  | <i>Cymopterus multineratus</i>                   |  |
| Rattlesnake weed (White margin Sandmat)                                      | <i>Chamaesyce albomarginata</i>                  |  |
| Rubber rabbitbrush   | <i>Chrysothamnus nauseosus</i>                   |  |
| Shadscale  | <i>Atriplex Confertifolia</i>                    |  |
| Silver Cholla (Golden Cholla)  | <i>Opuntia echinocarpa</i>                       |  |
| Tansy mustard  | <i>Descurainia pinnata</i> ssp. <i>glabra</i>    |  |
| Wire-lettuce   | <i>Stephanomeria pauciflora</i>                  |  |
| Winter fat   | <i>Kraschennikovia lanata</i>                    |  |
| Winding Mariposa Lily  | <i>Calochortus flexuosus</i>                     |  |
| Wooly Plantain   | <i>Plantago ovate</i>                            |  |

The above list represents some of what is known, or used today by the several Pahrump Paiute that participated in this study. Paiutes did not have time to finish the list. Some of the traditional knowledge base has been lost because elders have passed away without passing on the information and some plants are now extinct and, therefore, the knowledge has also been forgotten. While some of the plants in the project area may not have a known use, the plants may still have a Southern Paiute name and some indigenous knowledge may be known about the plant because it is to be avoided, or because a



plant may function in some other ecological way, or because there is a free association between the plant and some otherwise unrelated ecological function.

### **Creosote**

The creosote bush, predominate in the lower desert floors and in the project area, provides numerous uses, such as [REDACTED]

[REDACTED]  
[REDACTED]

[REDACTED] There are many other uses of the creosote sap. For example it can be used as [REDACTED]

[REDACTED]. Creosote branches are used to [REDACTED].

Creosote is also an [REDACTED]

[REDACTED]. There is even more contemporary knowledge of creosote characteristics, such as a warning from one elderly Pahrump Paiute, “do not back-up over creosote. Its branches can poke through the thickest tires just like a nail.” (Interviewee - Personal Communication).

### **Seed, Root, Leaf, and Basketry Material Gathering**

Five listed plants provide seeds as a food source. Seeds are gathered using a fan or wand-shaped seed beater and basket tray. Gathered seeds are winnowed, sometimes parched, and stored. There are various methods and utensils used for storage. Some of these utensils are woven from other plant materials. Seed gathering is very labor intensive and requires in-depth ethno-botanical knowledge, but has been a mainstay of the Southern Paiute diet for thousands of years (Anderson 2005).

Many plants that are not used directly can otherwise be useful to traditional knowledge because the plants are indicator species. When certain plants change (e.g., bloom, emit sap, drop leaves), such plants indicate that something else is likely to occur. For example, when [REDACTED] on the valley floor, the plant indicates [REDACTED] in the mountains. Humans, plants, and animals are interrelated. Plants have feelings and emotions and need to be talked to and listened to in order to live co-harmoniously. Many plants will go dormant or will appear non-existent for years and then will suddenly spring up in an area (Interviewee – Personal Communication).

In addition, some plants may not have specified cultural uses, but are still considered culturally significant because such plants may provide vital ecological roles that support the continuance of culturally used plants and animals.

As one Pahrump tribal representative wrote:

“The fact that we co-existed with plants and have such a deep knowledge of plant uses proves that we have an intimate relationship with the landscape surrounding them. We never exploited this resource or looked to destroy or waste the plants, rather we used only what is needed and are mindful of the future. Plants provided materials for homes, ceremonies, medicines, food, and practical uses. Plants must be collected from particular areas or at specific

times of the season. A system of traditional beliefs and methods attend the collection and use of plants, traditions that involve elements of respect, approach, preparation, dosage, administration, and/or consumption of foods or medicines. We know that plants are found in certain areas for reasons explained in our traditional stories or beliefs. Many plant species are rare and should be protected, not picked. Care should be exercised to avoid damaging plants in certain areas, even though they may appear to be abundant.” (Jim 2012).

Plant knowledge can often come from observing animal relations to plants. Seeds, including gathering, processing, storing, and consumption, are a resource type critical to the Paiute people for desert survival. In fact, the Paiute people call themselves *Pi Yates*, which is the Paiute word for the kangaroo rat. The Paiute people think of themselves as thrifty seed gatherers, similar to the Kangaroo rat that exists almost exclusively on seeds gathered from the desert scrub plant populations (Interviewee - Personal Communication).

For example, a Paiute baby girl’s dried umbilical cord is placed in the hole of an anthill, a gopher hole, or Kangaroo rat hole so that the baby would grow up to be an industrious gatherer like the animals that exhibited similar seed-gathering activities (Kelly and Fowler 1982: 379).

Moapa Paiute mentioned that they cherish gathering in the Pahrump Valley because they feel that the Pahrump Valley environment has not been contaminated as much as Las Vegas Valley and valleys east of Las Vegas. They blame the higher level of environmental contamination in their local area and gathering areas to the north and south of the Moapa Reservation on the testing of bombs at nearby military bases during the Cold War and also the smoke that comes out of a nearby coal power plant (Interviewee – Personal Communication). Very preliminary research indicates that contamination impacts to Moapa lands, plants, animals and membership have never been investigated or mitigated (Titus 1986, Interviewee – Personal Communication). Pahrump Paiute acknowledge that Paiute from other areas gather in Pahrump Valley but do so acknowledging that Pahrump Paiute are hosts, and that permission should be asked and granted before outside gathering commences. Pahrump Paiute also acknowledge that this is placing increased use on their local sources of sustenance and puts them in the role of attempting to balance their needs, their neighboring Southern Paiute’s requests and the sustainability of the plant communities that are traditionally gathered. Plants are very important to many Paiutes and must be protected from threats so they have enough for all to use.

## **Animals**

Insects, birds, reptiles, and mammals, that are considered by Pahrump Paiute as culturally significant animals, occur, inhabit, forage, or otherwise pass through the project area. No threatened or endangered arthropods (what the Pahrump Paiute Tribe calls “insects”) are known to occur on the project site; however, one federally listed species, Carole’s silverspot, may occur within the greater vicinity of the proposed project site. Insect surveys are not required unless a threatened or endangered insect is known to occur on the site, or is reasonably likely to occur on the site. Table 5 provides a list of insect types identified by the Pahrump Tribe as culturally important. It is not known by the author whether or not these insects occur on or near the project site. There are antidotal reports of tarantulas crossing the roads near the project site (Interviewee – Personal Communication).

**Table 5. Some Culturally Important Insects and Pahrump Paiute Uses**

|                             |  |
|-----------------------------|--|
| Bumble bee                  |  |
| Butterfly                   |  |
| Centipede                   |  |
| Grasshopper                 |  |
| Inch Worm                   |  |
| Louse                       |  |
| Red Ant                     |  |
| Stink Bug Beetle            |  |
| Tarantula                   |  |
| Tiger Swallowtail Butterfly |  |

Table 6 provides a list of culturally important animal species in the project area

| <b>Table 6 Hidden Hills Solar Electric Generating System (HHSEGS)</b><br><b>Animal Species Occurring in Project Area per the Project Area 2011 surveys that Pahrump Paiute</b><br><b>(personal communication) or ethno- biologist Cornet (2000), anthropologist Kelly (1982) have</b><br><b>identified as culturally significant</b> |                                    |                     |
|--|------------------------------------|---------------------|
| Common English Name  | Scientific Name                    | Pahrump Paiute Uses |
| <b>BIRDS</b>   |                                    |                     |
| American crow  | <i>Corvus brachyrhynchos</i>       |                     |
| Anna's hummingbird   | <i>Calypte anna</i>                |                     |
| Barn owl   | <i>Tyto Alba</i>                   |                     |
| Black phoebe   | <i>Sayornis nigricans</i>          |                     |
| Common raven   | <i>Corvus corax</i>                |                     |
| Common poorwill  | <i>Phalaenoptilus nuttalli</i>     |                     |
| Cooper's hawk  | <i>Accipiter cooperii</i>          |                     |
| Costa's hummingbird  | <i>Calypotecostae</i>              |                     |
| Eurasian collard-dove  | <i>Streptopelia decaocto</i>       |                     |
| Gambel's Quail   | <i>Callipepla gambelli</i>         |                     |
| Greater roadrunner   | <i>Geococcyx californianus</i>     |                     |
| Golden eagle   | <i>Aquila chrysaetos</i>           |                     |
| Mourning dove  | <i>Zenaida macroura</i>            |                     |
| Northern flicker   | <i>Colaptes auratus</i>            |                     |
| Red-tailed hawk  | <i>Buteo jamaicensis</i>           |                     |
| Rock pigeon  | <i>Columba livia</i>               |                     |
| Tree swallow   | <i>Tachycineta bicolor</i>         |                     |
| Turkey vulture   | <i>Cathartes aura</i>              |                     |
| Western burrowing owl  | <i>Athene cunicularia hypugaea</i> |                     |

|                               |   |  |
|-------------------------------|---|--|
| White-crowned sparrow         | <i>Zonotrichia leucophrys</i>             |  |
| <b>REPTILES</b>               |   |  |
| Chuckwalla                    | <i>Sauromalus ater</i>                    |  |
| Common collard lizard         | <i>Crotophytus callarus</i>               |  |
| Desert tortoise               | <i>Gopherus agassizii</i>                 |  |
| Long-nosed leopard lizard     | <i>Gambelia wisiizenii</i>                |  |
| Northern Mojave Rattlesnake   | <i>Crotalus scutulatus scutulatus</i>     |  |
| Side-blotched lizard          | <i>Uta stansburiana stejnegeri</i>        |  |
| Sidewinder                    | <i>Crotalus cerastes</i>                  |  |
| Southern desert horned lizard | <i>Phrynosoma platyrhinos calidiarium</i> |  |
| Speckled rattlesnake          | <i>Crotalus mitchellii</i>                |  |
| Western fence lizard          | <i>Sceloporous occidentalis</i>           |  |
| Western whiptail              | <i>Aspidoscelis tigris ssp. Tigris</i>    |  |
| Zebra-tailed lizard           | <i>Callisaurus draconoides</i>            |  |
| <b>MAMMALS</b>                |   |  |
| American badger               | <i>Taxidea taxus</i>                      |  |
| Audobon's cottontail          | <i>Sylvilagus audobonii</i>               |  |
| Black-tailed deer             | <i>Odocoileus hemionus</i>                |  |
| Black-tailed jackrabbit       | <i>Lepus californicus</i>                 |  |
| Botta pocket gopher           | <i>Thomomys bottae</i>                    |  |
| Coyote                        | <i>Canis latrans</i>                      |  |
| Deer mouse                    | <i>Peromyscus sp. Maniculatus</i>         |  |
| Desert kit-fox                | <i>Vulpes macrotis</i>                    |  |
| Merriam kangaroo rat          | <i>Dipodomys merriami</i>                 |  |
| Nelson's bighorn sheep        | <i>Ovis Canadensis ssp. nelsoni</i>       |  |
| Pocket mouse                  | <i>Perognathus longimembris</i>           |  |
| Whitetail antelope squirrel   | <i>Ammospermophilus leucurus</i>          |  |

Animals provide Pahrump Paiute with nutritional sustenance, materials for utensils, clothes, housing, and other adornment, and also provide mental and spiritual guidance. Some animals provide role models. At the time of creation and immediately afterward, and before humans were introduced by the creator, animals (including insects), played a key role in managing the world, preparing it for Southern Paiute, and providing aboriginal inhabitants with the knowledge of how to live in the desert environment. A few species are highlighted next, to illustrate the extensive symbiotic relationship that Pahrump Paiutes and animals maintain. A more comprehensive list of all culturally important species is provided at Appendix 3.

### **Desert Tortoise**

The Desert Tortoise is [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Interviewee – Personal Communication). However, the tribe has refrained from consuming tortoises since the species has been deemed endangered. The tortoise is a role model for going the long distance, for being capable of a living a long life and therefore is a conveyor of good luck.

### **Flicker**

Flicker brought light to the world. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] (Interviewee – Personal Communication). The Pahrump Tribe finds it ironic that the bird attributed with bringing light to the people may now be harmed by people trying to harness the sunlight.

### **Rabbit, Deer, and Mountain Sheep Hunting**

Sources of animal protein are critical for a diet that otherwise consists of roots, greens, berries, nuts and horticultural produce. Hunting is primarily men's activity and young boys are initiated at an early age to begin to learn to hunt. In the selection of mates, Southern Paiute placed high priority on those males that were proficient hunters. In fact, a baby boy's dried umbilical cord is taken to the mountains by the father and placed on the trail of a mountain big horn sheep to petition for good luck in hunting (Kelly 1982: 379).

Hunters [REDACTED] on the dry lake bed. [REDACTED]  
[REDACTED]  
[REDACTED] (Jim – 2012:3).

While deer and mountain sheep hunting is an individual activity or done with a few male cohorts, rabbit hunting is both an individual and a communal pursuit. There is much description in the literature about how rabbit hunts are communally conducted. Long nets are set up and rabbits are then driven into nets where they are then clubbed. Rabbit furs are utilized to make rabbit blankets and robes. Hunting, although currently conducted by means of a rifle, is an ongoing tribal activity in the project area (Interviewee – Personal Communication, Interviewee– Personal Communication).

## **Horticulture**

Pahrump Paiute were dependent on three broad sources of food: 1) Wild plants that were gathered in their natural condition or with some manipulation, such as pruning; 2) animals that were hunted or gathered; and 3) horticulture. These activities occurred at specific times within a seasonal migration (Kelly 1982: 371).

The anthropological and archaeological literature documents that Southern Paiute, including Pahrump and Las Vegas Paiute, farmed prior to contact with the Spanish (circa 1775). While it is suggested that the eastern Southern Paiute obtained horticultural knowledge from the Pueblo and Hopi people to the east and south; and the Western Southern Paiute are thought to have obtained the knowledge from the Mohave via the Chemehuevi (Kelly 1964: 40, Kelly 1982: 371), Southern Paiute representatives believe their traditional ecological knowledge has been practiced for thousands of years. The Owens Valley Paiute seemed to have adapted a different set of cultigens (cultivated species) and some have suggested that they did this in isolation from their Paiute neighbors to the east (Lawton et al 1976). While some literature suggests that perhaps the spread of horticulture occurred sometime around 1850 and was introduced by Mormon settlers, there are conflicting reports of farming occurring in the lower Colorado Basin at least 25 to 75 years earlier (Inter-Tribal 1976:24, 31).

One Pahrump Paiute informed the author of a Southern Paiute understanding that the Big Horn Sheep provided Paiute with the knowledge and seeds for horticulture. This understanding would place horticultural practices back to the creation and animal instruction times (Interviewee – Personal Communication). A more Eastern Southern Paiute account of the origins of corn seed relate a story of a young Paiute boy who goes on a quest for a better food source for his people. His travels take him to the sky where he encounters the creator who after a series of tests sends him back to his people with corn seeds (Inter-tribal 1976:3-4).

Mexicans traveling along the Old Spanish Trail between Mountain Springs and Good Springs or Resting Springs were aware of a Paiute man that extensively gardened out on the flats below Mule Springs and just north of the present highway. (Interviewee – Personal communication) What is documented is that particularly Mormon settlers usurped Southern Paiute springs and garden plots (Roberts 2007: 89-90). For example, it is not clear how Mormon Charlie's ranch at Manse Spring was acquired by the Jordan brothers, Mormons who sold the ranch to Joseph Yount, after less than a year of ownership. One source says the ranch was "taken over" by the Jordan brothers (McCracken 2009: 4, Lingenfelter 1986: 167).

Corn, squash, gourds, pumpkins, melons, sunflower, amaranth, winter wheat, various beans (including chickpeas - an old world cultigen), and Devil's claw were some of the cultigens (Kelly 1982: 371). George Wheeler, U.S. Army expedition leader, notes in 1872, that the Pahrump Paiute cultivated "corn, melons, squashes, [and] great quantities of wild grapes" around the springs (McCracken 2009:3). Southern Paiute gardens were planted near springs and along the Colorado River floodplain. In the Pahrump Valley, gardens were known to have been planted at most of the springs immediately east of the project area, including Stump Springs. A garden could consist of from one to several acres. Extended or cohort (two or more brothers) families might cultivate several acres. The area was cleared and leveled as best as possible and berms were placed around garden plots. Irrigation ditches were dug from water sources to the nearby plots. Where there were multiple plots, a main ditch was dug and lateral ditches extended off of the main ditch. Where multiple families used the same water sources, a watering schedule was established. Where the spring was too far for a ditch, sometimes the water was carried from the source to the garden plot. Plots were used for several years until productivity diminished and then plots were rotated allowing old plots to go fallow. (Ibid, Roberts 2007: 95).

Garden plots were prepared in early winter and were thoroughly soaked before planting in the early spring. Plants were planted from sprouts and from seed. After planting, most Southern Paiute migrated to higher terrain to avoid the heat and to hunt and gather as the weather permitted. The elderly were left to attend to the gardens. People that had seasonally migrated to higher elevations would periodically return to make sure the garden was progressing through the growing season and to assist the elderly with some of the more physical tasks of gardening. As harvest time approached, most of the families returned from the high country. As the harvest and procurement activities neared completion, some would return to the high country to harvest pine nuts and hunt. This usually occurred in the middle to late fall (Ibid).

The earliest farms in the Pahrump Valley were established by Pahrump Paiute at places such as Hidden Hills Spring, Mound Spring, Manse Spring, Pahrump Springs and Bolling Mound Spring. These farms were taken by the earliest non-Indian settlers that arrived in the valley circa 1875 (McCracken 1992: 11, 31). Pahrump Paiute maintain that the word "taken" is a polite substitute word for "stolen," regardless of whether or not a patent was filed for homestead lands.

Within 50 to 75 years (circa 1925 -1950), the Pahrump Valley area and its lush springs were owned by non-Indians and mass cultivation was the farming method of choice. Cotton, originally a plant domesticated by Native Americans to the south, became a lucrative "cash crop." Wells were established for the watering of vast fields and local Paiute became the laborers. For example, the Manse Ranch had an "Indian Rancheria" for housing Indian laborers (Interviewee – Personal Communication, Interviewee – Personal Communication). A Pahrump Paiute Elder recalled the family's labors:

"My two sisters were the best cotton pickers in the family and would average 400 pounds of cotton per day. One time my sister picked 500 pounds in one day. The hardest part of picking cotton was that the cone where the cotton grew out had sharp stickers on it that would cut up the fingers. They picked cotton at the Pahrump Ranch

that was established by John Hughes in 1936. They picked cotton the next year in 1937.”  
(Interviewees – Personal Communication)

Pahrump Paiute continue to garden today. However, because they have been pushed off of their spring areas, gardening occurs in backyards and often is watered with hoses and municipal or well source water. (Interviewees – Personal Communication)

## **Trails**

Early Spanish explorers, including some of the first to enter Southern Paiute territory, relied on Native American guides to find their way around the southern Great Basin and Mojave Desert (Kessell 2002:273, 279; Steiner: 1999:11, 14, Reeder 1966: 6-7). Inevitably, the routes “discovered” were Indian trails. In the desert, with the crucial role that springs played in long distant travel, it was Indian guides who knew of such locations and who showed where these precious locations were tucked away in an otherwise seemingly barren land. When there were decades of non-use of a previously “discovered” trail, and newcomers arrived to re-discover routes, again it was local Indians that informed recent newcomers that foreigners had previously passed through. While the Old Spanish Trail (Trail) is comprised of various tracks and routes, the general corridor, regardless of how various tracks diverged, converged, or paralleled, led the traveler along a string of essential watering stops. Even though some Indian-White first encounters along the trail were amicable, as the non-Indian traffic increased Southern Paiute retreated from their nearby trails, springs, encampments and garden areas. Certain sections were less travelled by newcomers; and during those months when weather prevented travel, Southern Paiute re-frequented their trail-side places and activities (Inter-Tribal 1976: 39). As the Trail became a standardized route between California and New Mexico, its primary purpose was to move commodities from the California seaport of Los Angeles to the Interior Spanish settlements located in New Mexico.

## **Slave Trails**

A commodity traded towards the west was wool products. Horses and mules were traded towards the east. Unfortunately for the Paiute, they were captured by Ute and Navajo Indians and sold to Mexican travelers as slaves and were also directly pursued by Mexicans and were sold/traded in both directions. Descriptions abound of lines of Paiute tied to pack trains and force marched hundreds of miles along the trail system that was originally their own. After establishment of the Old Spanish Trail as Spanish, then Mexican, and finally a Mormon or American trail, Paiute people continued to travel the trail sometimes against their own volition (Reeder, 1966; Inter-Tribal 1976: 22-33, 36-51, Walker 2009: x-xi). One elderly Pahrump Paiute exclaimed, “Hardship, suffering, and fear between watering holes, that’s what it was for travelers and the Indians that lived nearby.” He also added, “I know this trail, I used to travel it as a boy” (Interviewee – Personal Communication). Suffice to say, the Old Spanish Trail is an Indian trail.

Earlier Old Spanish Trail routes cut either well below or went through the Southern Pahrump Valley. The first documented crossing of the Pahrump Valley along the Old Spanish Trail corridor that intersects the HHSEGS project area, was made by John Fremont. Fremont was travelling from west to east and, while still somewhat south of the northern route, encountered two survivors of a massacre that had



happened at Resting Springs. Indians, perhaps a band of Pahrump Paiute, had killed a large number of Mexican packers and had gone north into the Amargosa Valley with the pack animals. Fremont's men made pursuit and returned with those stolen animals that had not already been butchered by the Indians. Fremont's men killed many of the Indians in the encampment. From Resting Springs, Fremont made his way to Stump Springs and then on to Mountain Springs, just past where the previously followed Armijo route came through the Southern Pahrump Valley. This was in 1844 (Steiner 1999:55, 56). It is suggested that the slave raiding activities forced Paiute that had once resided in proximity to the trail to move to less favorable resource areas which were either of marginal subsistence quality or in neighboring family, band, or tribal areas, creating internal conflict over resource utilization. These events caused tribal people to prey upon the pack trains for trade goods and horse meat (Walker 2009).

At this same time, Chief Tecopa, a famous and early Pahrump Paiute spokesperson, was camping in the Providence Mountains, approximately 100 miles distant, and heard, by means of an Indian "running" messenger, of the massacre. Chief Tecopa made tracks post haste and caught up with the Fremont party at Las Vegas Springs. After ascertaining the facts, Chief Tecopa made his way back to Pahrump where he went about making clear to his people the errors of raiding travel parties (Lowe 1981: 4, 5). Decades later in 1865, despite Chief Tecopa's pleadings, the gold prospector Charles Breyfogle was attacked by Pahrump Paiute at Stump Springs. The attackers were led by Ash Meadow "Mormon" Charlie, the Pahrump Paiute war chief of that time (Lingenfelter 1986: 74). Suffice to say that Pahrump Paiute were well aware of travelers crossing on the Old Spanish Trail network, had a trail network that supported Indian messengers, and could travel expeditiously throughout their traditional trail network.

With increasing pressure on the U.S. military to map and understand the new territories that had been negotiated through the Treaty of Guadalupe Hidalgo and to take stock of what groups were using the Old Spanish Trail and for what purposes, several military mapping expeditions were undertaken. The ensuing journals and related maps make mention of the Pahrump Valley springs and the numerous Paiute Indians residing in the area (McCracken 1990:2; Steiner 1999: 72, 76, 77).

## **Indian Roads**

The Mallory Wood 1877 expedition map shows an expanding network of roads in and around Pahrump Valley. It is likely that these roads are, in part, original Indian trails. For example, Mule Springs is indicated on the Wheeler map of 1869-1873. By 1877, Mule Springs is connected by road to Manse Spring. However, it is documented that the Pahrump Paiute "Ash Meadows" or "Mormon" Charlie was the first (circa 1860) to farm the Manse Spring area (McCracken 1990:11, 2009: 4). Another Pahrump Paiute spring fed garden area had been established at Mule Spring "[S]ince the Mexicans used the Old Spanish Trail" (Interviewee - Personal Communication). Chief Tecopa, possibly born at Manse Spring, established a "rancheria" at Bolling Mound by 1875 (McCracken 1990:11; Interviewee – Personal Communication). It is safe to infer that most, if not all, springs in the Pahrump Valley were connected with an indigenous trail system. Further, it is safe to infer that roads that later connected springs followed Indian trails. The first farmers and ranchers of the valley were Pahrump Paiute and, as the first ranchers began to adapt to the use of the wagon, it is likely that it was Paiute Indians that constructed

the valley's roads, whether or not such roads followed original Indian trails. It is highly likely that the spring areas of the Pahrump Valley that align along the present California-Nevada border were connected by a trail system and that all of these spring areas were connected to other Paiute-occupied springs such as Resting Springs and Tule Springs.

As the agricultural and mineral values of the Pahrump Valley became more apparent and non-Indians began to dominate the Valley, there was a push to remove all Paiute, including Pahrump Paiute, to the Moapa Reservation (established by Executive Order in 1873) located east of Las Vegas. Special Indian Commissioners Wesley Powell and George Ingalls recruited Chief Tecopa to go around Pahrump and Las Vegas Paiute territory to talk his kin and neighbors into participating in the march to Moapa (Lowe 1981). In an article titled *Chief Tecopa and the "Hikos"*, Celesta Lowe documents Chief Tecopa's journey circa 1877. See Figure 4 for a mapping of Chief Tecopa's journey. It takes him from Pahrump, southeast through the villages of the Pahrump Valley Springs, and over Mountain Pass to Las Vegas Springs. From there, the Chief and his son Johnny traveled along the springs north of Las Vegas, Tule Springs, Indian Springs, Johnny, and then Ash Meadows. Talking his fellow Southern Paiute through the inevitable changes to come, the Chief did not reach his first resistance from his own people until after following the Amargosa River south to the area of Shoshone. The Yagats Band felt secure at their springs that provided ample water for acres of vegetable gardens. From there, the Chief and his son continued south into the Mojave desert and to the Providence Mountains and the famous caves that were once occupied by Pahrump Paiute people. From the Providence Mountains, they headed east towards Searchlight and the Newberry Mountains. From the Southern extent of Pahrump Paiute territory, Chief Tecopa traveled north to Las Vegas Springs and then back over Mountain Pass to his home at Pahrump Springs. This journey indicates the extent of Pahrump Paiute territory. It also shows the extent of wagon roads established by the 1870's, since the article describes Chief Tecopa and his son Johnny taking the circular journey in a buckboard wagon. It also indicates a Pahrump Paiute leader's knowledge of his homeland and the people that inhabited Tecopa's circular journey. Subsequently many Pahrump Paiute were forced to leave their homes in Pahrump Valley with the only viable option being to relocate to the Moapa Reservation. Some Pahrump Paiute stayed behind and some Pahrump Paiute returned after a few years in Moapa as conditions were not good due to poor government management (Zanjani 1994: 33-47). Some of those that stayed behind or returned now comprise the Pahrump Paiute Tribe.

A Moapa Tribal member with ancestral ties to the Pahrump Valley recently exclaimed:

"An Indian trail isn't just one or two-track like the wagon roads are. Instead, Indian trails are corridors. When it is decided to go from one place to the next, then Indians simply go. If they are in their own lands, they don't get lost because they know where they are. White people are the ones who need trails so they don't get lost. Local Indians sometimes followed paths because, over time, the trail marked the best way to go... but that isn't the only way that Indians would go. The whole spring area [Stump Springs to Pahrump Springs] is an Indian travel and use area. Indians walked all over that project area [Hidden Hills Solar Generation Systems]. I walked all over the project area. I used to hunt rabbit and quail out there in the 50s" (Interviewee – Personal Communication).

## Sacred Trails

There is physical and epistemological<sup>1</sup> overlap of trails on and through the landscape regardless of the intent and psychological disposition of the Pahrump Paiute traveler. That is to say, that a trail, a traveler, and the knowledge of the trail (usually encapsulated in a song) are not separate and distinct realities. This is hard to articulate in English. In the words of a Pahrump Paiute tribal representative:

Song trails that are connected to the Spring Mountains include the Fox Trail and the Mountain Sheep Song. Each trail is connected to powers, as well as the life of the Southern Paiutes. These trails are sacred because of the elements that can be found by following them, or because of their ultimate destination, such as the afterlife. Even song trails that are used to guide people from place to place are connected to power, in that people travel along paths of power. Groups used traveling songs that told of their seasonal rounds. In each of the songs, places are linked together by a mental and/or physical path. All places along the routes are connected with creation (Jim-2012:2).

## Landforms

According to the literature, the Southern Paiute, including the Pahrump Paiute, have adapted to their environments over at least the last 500 to 3000 years. Archaeologists have competing date claims and lines of evidence to support various dates (Bettinger 1982: 490). More recent dates, most from archaeological sites located in the Las Vegas Valley, provide dates for Southern Paiute ceramics located near springs that are between 1000 and 500 years ago (Roberts et al. 2007: 46-47).

Pahrump Paiute claim that dates supported by archaeological evidence are arbitrary and the musings of experts from an alternate world view than the world view of traditional Southern Paiute. Regardless of origins, Southern Paiute, (or what archaeologist refer to as a southern extension of the “Numic Spread”), adapted to the desert environment in a lifestyle that relied upon multiple sources of food that required intensive food gathering, hunting, processing, procurement, and storage. The diverse food procurement lifestyle attributed to Southern Paiute, required an intense knowledge of specific territories (Bettinger and Baumhoff 1982: 490-493).

An alternate abbreviated version told by Southern Paiute, insists that they were placed in their various homelands by the creator. For the Pahrump Paiute, the story has the Southern Paiute world flooded with only the highest peaks of Mount Charleston poking above the water as an island. All of the animals, at that time with anthropomorphic characteristics, moved down the flanks of the mountain as the water receded. Significant animals, such as the two brothers Wolf and Coyote, Deer and Mountain Bighorn Sheep, Mouse and Kangaroo Rat, and many birds participate with one another to remake the world as it dried out. Mountain Bluejay is sent to check on the receding waters of the “ocean” several ridges to the west (Badwater, Death Valley). Coyote introduces humans into this world by allowing a basket to open up and the various Southern Paiute spring from this basket. Coyote then instructs humans how to

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<sup>1</sup>Epistemology: the branch of philosophy that studies the origin, nature, methods, validity, and limits of human knowledge.

survive within their territories. This story was not provided by Pahrump Paiute to the author due to the seasonal prohibition on telling such stories. However, several Southern Paiute versions of the story exist in the literature and were summarized above. The summarized version above does not provide nuanced meanings and distinctions that are unique to the Pahrump Paiute people who are the Southern Paiute custodians of the Spring Mountains and Mount Charleston where all of the rest of the Southern Paiute attach significance as a common place of creation.

This symbolic, and to the western mind, seemingly fantastic story provides the basis for defining the Pahrump Paiute world as a world that they are entitled to as a birthright and as a pact between them and their creator, somewhat akin to the concept of a “holy land”. Further, Stoffle explicates that:

“For land attachment reasons, most Indian people have two origin places – an origin place for their ethnic group and one for their local group” (Stoffle et al 2009:33).

This explains how two neighboring tribal groups can agree to a common place of origin and simultaneously point to separate places of origin for their own sub-group.

Stoffle goes on to describe that Mount Charleston, *Nuvagantu*, “where snow sits” is one such place of symbolic origin. It is “the” Southern Paiute place of origin, because it is a source of the most abundant water in the entire Southern Great Basin, a place of extreme topography, and a house for numerous animals that figure prominently in Pahrump Paiute story, song, inspiration, and sustenance and that serves to consolidate the various contributing powers that are the Spring Mountain Range (Ibid: 35). It is not the fact that it is the highest peak available within human eyesight that makes the place powerful; rather it is that its body, the mountain in its entirety, holds and is supported by many features that all contribute to its power. As one Pahrump Paiute expressed, “[A] valley is defined from the valley floor up to the tops of mountain ranges and mountain ranges are defined from the tops of mountains down to the valley floor” (Interviewee - Personal Communication).

The interconnections, overlaps, and relations go far beyond what has been documented in the literature or what can be possibly adequately conveyed in one or two interview sessions or in this report. Despite the inadequacies of written English to fully explain the complex relational systems of peoples and places, the following list of mountain ranges are just a few of the places understood, revered, travelled about, or otherwise important in Pahrump life-ways. A complete list of culturally important mountain ranges can be found at Appendix 4.

### **Potosi Mountain**

██████████. It is the head of Ocean woman. (Interviewee – Personal Communication)

### **Sandy Valley**

This landform section provides additional information beyond some of the other landforms described in this section because the Sandy Valley area is considered a proposed project alternative.

The Sandy Valley area is within the Pahrump Paiute Tribe's ancestral territory. The valley rests between two tribal districts. To the east of the alternative site rests the Potosi District traditionally represented by Chief To-ko'-pur. Chief To ko'-pur was widely referred to as Chief Tecopa. Chief Tecopa was also the head Chief for the larger seven district ancestral territory of the Pahrump Paiute tribe. Chief Tecopa passed away in 1904. To the west of the project area is the Mo-quats District that was represented by Chief Hu-nu'na-wa. The Sandy Valley study area was a common use area between the two districts. The Potosi District's center is Potosi Mountain and the Mo-quats District's center is Kingston Peak. Several springs exist around the flanks of each mountain. These springs were centers for family units that seasonally traversed the districts' mountains, lower flanks, valley floors and the washes that drain the mountain slopes and eventually lead to Mesquite Dry Lake. Some of the significant springs that anchored family units in the vicinity of the project study area are Potosi Spring, Cave Spring, Horsethief Spring and Beck Spring. While Pahrump tribal families have since moved away from the springs, with many now residing in Pahrump or Las Vegas, the Sandy Valley area and the mountains to the east and west of the valley are still used by Pahrump Paiute for traditional purposes.

Potosi Mountain sits above Sandy Valley and is a vision questing area. There was a large prehistoric bird that had an egg the size of a house. The bird laid the egg in Sandy Valley [REDACTED]

[REDACTED] (Interviewee – Personal Communication)

Moapa tribal members related that there are village sites on the [REDACTED] of the valley [REDACTED]. These locations were indeterminate (Interviewee – Personal Communication). It is known that Cub Lee, who married a Paiute woman, maintained a well and cattle ranch in the Sandy Valley area (Waring 1920: 70). It is also documented that "Indians dug pits for water" on the east side of the valley in a sandy area (Ibid 78).

The Coyote Trail Song goes through Sandy Valley (Laird 1976).

### **Kingston Mountains**

Home of Owl. A place where pinyon nuts are gathered. Also a hunting area for Bighorn sheep and deer.

### **No Pah Range**

A place where Big Horn sheep are found. There is very little water in this range. [REDACTED]

[REDACTED] Some Paiute lived at the [REDACTED]

### **Resting Springs Range**

Indians live at the [REDACTED]. There were ceremonial bathing places that are now the [REDACTED].

### **Lizard Mountain**

(also referred to as Last Chance Range (middle and eastern portions), Shadow Mountain (southern portion) and Devils Hole Hills (northern portion))

This is a place for [REDACTED] and is described in songs and stories that tell of when the sky opened up during the time of Southern Paiute creation. The southern side of the mountain has the mark of a lizard, similar in color to the chuckwalla lizard, across its flanks. [REDACTED]  
[REDACTED]

### **Stirling Mountain**

This mountain is located at the northern end of the Spring Mountains and is said to be the foot of Ocean Woman. (Interviewee – Personal Communication) It is a place for hunting, gathering, and [REDACTED]  
[REDACTED].

These mountain ranges provide most of the water that supplies the springs listed in the water section and mapped on Figure 5. The southeast side of Mount Charleston, the highest place in the Spring Mountains and the place of Southern Paiute creation, provides the water that emerges from the springs closest to the project area. Specific Springs will not be further described here.

### **Landform Connectivity**

The Southern Paiute People live in a world very alive with spirits and power. Some spirits originate from when the world was new, and some spirits are from a time when animals had power of speech and were defining customs that the people would later follow. Spirits can behave beneficially or malevolently towards people if customs are not followed. Southern Paiute with specific knowledge can interact with spirits by dreaming or singing. The following has been excerpted from a Pahrump Paiute document (Jim 2012: 1).

### **Earth Spirits**

[REDACTED]

## Mountain Spirits

[REDACTED]

## Water Spirits

[REDACTED]

## Other Spirits

[REDACTED]

## Power *Poe-ha-ghun*<sup>2</sup>

A mainstay of Southern Paiute thought and practice, is a “power” or *poe-ha-ghún* that is synonymous with mountain ranges and interconnected landscapes. *Poe-ha-ghun* is a sustaining and reciprocal power that requires human obligations to their place, as much as the place and its contributing attribute have obligations to provide for its people (ibid: 36). Powers are manifest in many attributes; water, plants, and animals are a few of the inter-connecting attributes. It is said that plants that contain curing properties, the animals that instructed humans concerning the plants curing powers, the humans that dream of, know of, and administer the plants curing properties and the person cured, all participate in a resonance of “power” or *poe-ha-ghun* (Interviewee – Personal Communication, Interviewee – Personal Communication). While *poe-ha-ghun* is a concept that is interconnected and therefore is disperse, it can also be concentrated in various places and particularly mountains and springs. For example, Mount Charleston is an origin or holy place for all Southern Paiute, including the Pahrump Paiute. One of the springs feed by these waters is Stump Spring where John “Stumper” Pete received and administered his powers. In addition, Pahrump Paiute relate to additional places throughout their territory and landscape, which stretch this obligation into one that pervades beyond a place to encompass an entire territory.

*Poe-ha-ghun* not only emanates from power places like mountains, but also, similar to electricity, resonates between places through conveyances called *poe-ha-ghun* trails. Such trails are physically manifest on and in the land, in the creatures that move about the land, and in human travel that occurs

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<sup>2</sup> Some literary sources on the subject of Southern Paiute power refer to power as *puha*. The complete Pahrump Paiute word is *poe-ha-ghun* and is used in this document rather than the abbreviated word *puha*.

by walking, running, dreaming, or singing. These trails are of a religious nature and are further discussed in the next section. A Pahrump Paiute attempts to express this complex:

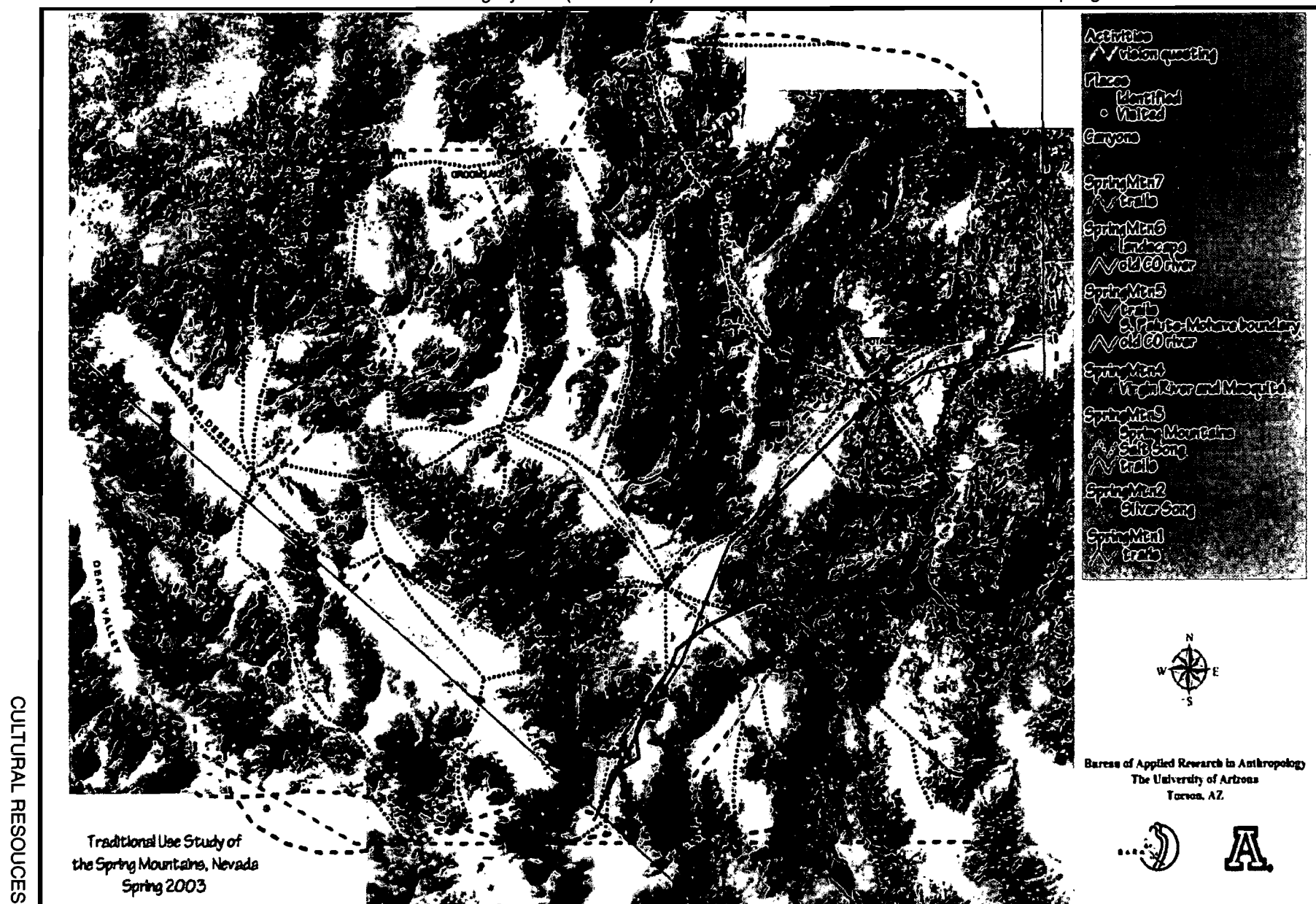
“This is Paiute “Holy Land”. The Mountain is a holy place and it extends from the top all the way to the flats. Potosi is the head, Mt. Sterling is the tail. Woman helped create people. You can see her silhouette as she is laying down. Once the land was covered with flood. Then the waters went down and sky opened up. A big bird came down and seized lizard. The bird then threw up lizard. There are three green marks on the mountain up by Lizard Mountain. The Woman is watching over all of this. She will be the one to know of the havoc created.” (Interviewee - Personal Communication).

Figure 6 is a map that provides a visual two-dimensional image of how extensively *poe-ha-ghun* trails circulate and emanate from the Spring Mountains. This map is not included to show where precise trails are and by extension are not. Rather it is intended to show how extensive a holy place is for a people’s inhabitation of their birthright lands.



# CULTURAL RESOURCES - FIGURE 6

Hidden Hills Solar Electric Generating System (HHSEGS) - Puha trails that circulate or emanate from the Spring Mountains



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SOURCE: Publication: Landscapes of Origin in the Americas, Edited by Jessica Joyce Christie, 2009, Fig. 3.2

## Ma-hav (Hidden Hills) Landscape

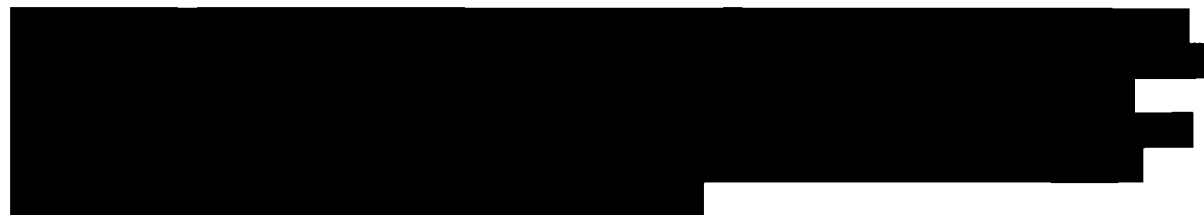
The Hidden Hills area, because of its proximal and encompassing relation with the proposed project site, is culturally described further. Numerous places, stories, and Pahrump practices abound throughout the landscape which will be referred to as Ma-hav, the Pahrump Paiute place name for what is referred to in currently as Hidden Hills. Pahrump Paiute tend to use either place name inter-changeably but in conversation with non-Paiute tend to refer to the place by its more current name.

The Ma-hav Landscape, specifically refers to several springs, an intermittent set of creeks that, flowing all of the way from the flanks of Mount Charleston, cut through a coppice dune mesquite bosquet zone and includes the valley floor and the edge of a dry lake bed. This area is rich in prehistoric archaeology, historic archaeology, includes a historic ranch complex and is replete with historic events involving local Pahrump Paiute and later newcomers. Ma-hav is an area of approximately 35 square miles that takes in the southeastern margins of the Pahrump Dry Lake bed, the washes that extend from the alluvial toes of Mt. Charleston down to the Pahrump Dry Lake bed, the spring areas in between that include Browns Spring, Hidden Hills Ranch Spring, Stump Spring, several unnamed spring discharge areas (including Weeping Rock Seep), the various vegetations including the Mojave Scrub, Shadscale Scrub, and the coppice dune mesquite grove areas. The proposed project site, taking its name from the dude ranch established by Roland Wiley, is wholly within the Ma-hav Landscape. It is a place where Pahrump Paiute lived, hunted, gathered, worshipped, were born, gardened, died, and were buried. Figure 7, located at the end of this section, is a vicinity map of the Ma-hav Landscape.

A Pahrump Paiute person provided the following synopsis.

Many types of clay for pottery come from the Hidden Hills area. Hidden Hills was a caching area. This entire area is extremely important and was the site where Indian families lived. The entire area is a known desert tortoise habitat that was, and is, currently used for the traditional collection/preparation of medicines and foods. This particular location is considered unique and is the home of these resources that can only come from this special area (Interviewee – Personal Communication).

Ma-hav is particularly where females become woman, learn of menstruation, birthing and menopause. Set in the time just after creation when animals were anthropomorphic, it relates the connection between mountains, valleys, springs, creeks, travel and procreation and the role of the creator in teaching humans how to be.



While some of the exact course of events and specific meanings are lost to translation and because of gender specific descriptions that are taboo for mixed audiences, the story attempts to convey that Hidden Hills is a place designated by the creator (coyote) as a place where girls learn to become women.

Before Owl switched the course of the Colorado River, [REDACTED]  
[REDACTED]

(Interviewee – Personal Communication).

There are several burials located throughout Ma-hav, some marked and some no longer locatable due to shifting sand. One such cemetery has some evidence of grave looting. When the Pahrump Paiute took the author to one such cemetery, [REDACTED], it was noted that within the last month someone had stole the cemetery gate. Two graves sites showed signs of digging, leading some to wonder if the bodies had been taken and who would do such despicable things. Another Pahrump Paiute source suggested that one of the burials was simply a grave dug, but the internment was cancelled for that cemetery and the potential grave was never backfilled (Interviewee – Personal Communication). A local historian suggested that one of the open graves sites was that of John B. Yount, who was buried in the cemetery, but later was moved to the Chief Tecopa Cemetery located in Pahrump where he was buried in the Indian part of the cemetery (Interviewee – Personal Communication, Pahrump Nevada Genealogical Society 1998: 7). Another suggestion is that the open grave was where the Indian Queho was buried by Roland Wiley and then later exhumed by local tribes (MacDonald 2012:1). The Pahrump Paiute vehemently deny these last two suggestions and provide their version of the Queho story.

One Pahrump Paiute relayed the Queho story as follows.

“Queho Burial/monument – The burial is located [REDACTED]. In very broad terms, Queho’s remains were found in a rock shelter and exhumed circa 1920. The remains were possessed by the El Dorado Elks Club. The Elks had a parade float that had a simulated rock shelter with the actual remains entombed. The float was used in an annual parade into the 1960s. The float commemorated “The Last Indian Renegade.” When it was decided that it was not politically correct to parade bones in public, the remains were stored in an Elk member’s garage. Roland Wiley (a non-Indian owner of the Hidden Hills area) discovered the bones and took possession of them and then reburied them [REDACTED]. He wrapped the remains in chain link, encased the remains and chain link in concrete and then buried the entire package under a concrete slab with a memorial plaque that continued the “last renegade” language. The burial sits on [REDACTED] overlooking the project area” (Interviewee – Personal Communication).

The full story is more telling of a century of Indian and white relations and is pieced together from several sources that include two Pahrump Paiute interviewees, O.J. Fisk Photographic Collection: 0221 0434, and Donna Andress 1997.

Queho was born circa 1880 of a Cocopah mother. His father was a white soldier stationed at Fort Mojave. The mother and child were banished from the tribe and they both moved north to Southern Paiute territory where they were taken in by Moapa Southern Paiute. As a young man, Queho had a

Moapa half brother, Athocwa and was also related to a Moapa Paiute named Archie Kay. Queho's other close Southern Paiute friends were Joe Rudloff, and Jim and Tweed Wilson. The notorious Moapa Paiute "Mouse" was Quehos' mentor and protector. Queho worked as a miner, was a boatman along the Colorado River, was adept at mechanical skills and was known for his hunting and general desert skills. Mouse was legendary for similar skills, considered a "renegade", and routinely evaded law enforcement.

Queho was accused of killing another Paiute in 1910 over a dispute involving a firewood transaction. Apparently this led to lengthy spree of thievery, killings and miraculous escapes. Much of this happened in the Searchlight area. Mouse led a similar lifestyle. However both Indian men were said to have been blamed for more acts than they were physically capable of committing. Poses were established and manhunts were periodically conducted.

In February 1940, two prospectors were exploring the Colorado River five miles upriver from the El Dorado Canyon. They noticed a cave at the foot of a cliff and noticed that the cave opening seemed to be unnaturally chinked with rock. Fulfilling their curiosity they made their way up and into the cave and found the mummified remains of Queho. A loaded rifle lay nearby, as well as a bow and arrows. Cans of food were lying about. The cave had been wired with trip lines attached to a bell. Also found were stolen items from Searchlight including a Gold Bug Mine watchman's badge. One of Queho's legs was deformed from what was speculated to be a snake bite. It was surmised that he died of the snakebite and starvation. Others later mentioned that some Southern Paiute knew of Queho's hideout and delivered groceries to him.

Las Vegas Chief of police, Frank Wait, who had led some of manhunts over the years, claimed the remains as his own property to compensate for all of the times that Queho had eluded him. However the Clark County Sheriff ruled that the remains were the property of the County. Wait, undeterred located Archie Kay, Queho's Moapa relative, and supplying Kay with groceries and money, convinced Kay to claim Queho's body. However by the time the pair had arrived to claim the remains, Sheriff Ward had transferred the body to the Anna and Gene Park's funeral home. A dispute ensued because the Parks would not release the remains unless someone paid the mortuary fees. As Ward and Wait both balked at paying the accumulating bill, the United States Government intervened and made a claim for the remains since the cave was located on federal land. The government refused to pay the bill. This led to a three year stall in determining disposition. In the meantime, the Parks allowed people to view the remains of "The Last Indian Renegade of Nevada". After three years, Wait finally paid the bill and transferred the remains to the Benevolent and Protective Order of Elks, who wished to add the remains to their "Helldorado Collection". The elks built a simulated cave, entombed in glass and placed the remains in the cave and charged admission for viewings. Some of the items found with Queho were also displayed. The exhibit was paraded through the streets of Las Vegas during annual Helldorado Days. A thief shattered the glass and stole the remains in 1956. Another posse was formed by James Cashman, Sr. Because they were thwarted in their search, the posse offered a cash reward. The remains were returned without the thief being exposed. Dick Senever became the guardian of the remains. The remains were stolen and returned a second time. In 1974, Senever donated the remains to the University of Nevada, Las Vegas Museum. Another account states that Senever placed the remains in a

building owned by Dobie Doc Caudill. During the time that Queho's was variously possessed by the Order of Elks, Roland Wiley was the Clark County District Attorney. In 1975, it is said that Wiley purchased the remains from Caudill for \$100 dollars. He then reburied the remains near [REDACTED]. It is said that he felt Queho's journey among the white people should come to a rest. The remains were wrapped in wire, encased in concrete and entombed under a cement block. He was buried with popcorn to "accompany him on his journey," but was commemorated with a placard that labeled Queho "Nevada's Last Renegade Indian - He Survived Alone." However, an alternative story claims that after the 1956 thievery, Cashman was duped and was sold the wrong remains. In 1962, a work crew building the Bonanza Road, discovered the remains which were identified as Queho. However the upper limbs were missing. This version of the story does not provide the rest of the story as to what happened to the roadside discovery remains. One Southern Paiute man from Indian Springs, a place that Mouse and Queho sometimes frequented, claimed that the remains were not Queho's because the mummy's stature was too small. Queho was over six feet tall and had limp because of a deformed broken leg or ankle that had never been properly set. The Pahrump Paiute Tribe asserts that the remains the Elks had named Queho are indeed buried at [REDACTED]. Some Southern Paiute relatives and friends of Queho, have stated that the Elks did not have the real Queho remains. See Appendix 6.

Formal Traditional Ceremonies and burials are held at Hidden Hills. They may continue to be held here in the future. The cemetery and the ceremonial areas are still visited by members of the Pahrump Paiute Tribe. Another burial was located [REDACTED] (Jim – Personal Communication). The tribe says there are other burials in the area for which the exact locations are not known. Yet another burial of a young Pahrump Paiute girl was reported buried at the [REDACTED] (Interviewee – Personal Communication).

Two Pahrump elders recalled an "Indian Powwow" or religious ceremony held at Hidden Hills Ranch in 1933 for Susie Yount, (Wa-sid-ai) a Pahrump Paiute woman who had passed away in 1932. John Yount was reported to have "allowed" this ceremony as Susie was his first wife. The ceremony was hosted by Nancy Johnson, a Pahrump Paiute relative. The two elders were children at the time. They recalled hundreds of people who camped along the creek who had come from long distances to participate in the ceremony. They recall that the ceremony was held near large gardens of corn, pumpkins, and watermelons. They recall the orchard that still stands today. They assert that the creek flowed all the way from Mount Charleston (Interviewees – Personal communication). One source suggests that Chief Tecopa's cry ceremony was held in 1905 somewhere at Ma-hav (McCracken 2009: 27).

Table 7 provides a Ma-hav Landscape chronology of Pahrump Paiute – Non-Indian events and people.

| <b>Table 7. Ma-hav Landscape Chronology</b> |  |
|---|--|
| <b>Time</b>                                 | <b>Specific Places, People and Events</b>  |
| Beginning of Time                           | The area is flooded. Primordial animals abide on Mount Charleston to wait out the residing waters. Coyote releases first humans from a basket.   |
| Time of Animal Instruction to First Humans  | Coyote provides instruction to his adopted daughter concerning menses, childbirth and becoming a woman at Ma-hav.  |
| Period of Pahrump Paiute occupation         | Pahrump Paiute occupy the Springs area as a part of a permanent or seasonal encampment and horticultural place.  |
| 1776 - 1830                                 | Pahrump Paiute hear of Spanish, Mexican and early American traders (Escalante, Garces, Armijo, Jedidiah Smith, Peg-leg Smith) that travel, trade, and raid along some of the Paiute trade routes closer to the Colorado River.   |
| 1815  | Chief Tecopa born at Manse Spring. He will become a leader of various tribes or “districts” that today collectively identify as the Pahrump Paiute.  |
| 1829 - 1848                                 | Mexican traders move goods between New Mexico and California and engage in the Indian slave trade. Some travel the old Spanish Trail between Resting Springs and Mountain Springs.   |
| 1840s - 1890?                               | John “Stomper” Pete, a Southern Paiute Medicine Man occupies Stump Springs. There is also anecdotal information of a Southern Paiute family with the last name of Stump that occupied the Stump Springs in subsequent years.   |
| 1844  | John C. Fremont travels between Resting Springs and Mountain Springs and overnights at or near Stump Springs. Fremont retaliates upon possible Pahrump Paiute for the killing of most of the Hernandez Party.  |
| 1849 – 1875                                 | Many emigrants including, gold miners, Mormons and military personnel travel through Stump and other nearby springs, en route to Utah or California. Early homesteaders begin to settle the various valleys by establishing homesteads on or near springs Including springs in Pahrump Valley. |
| 1849 -1930s                                 | Several diseases are introduced into Pahrump Paiutes well as other Native American populations. Many young and old die. Alcohol is introduced to the Pahrump Paiute causing social disarray. There is a time of famine. This   |

|             |   |
|-------------|---|
|             | happens throughout the Pahrump Valley, including Ma-hav.  |
| 1860s       | Miners pass through the area to begin harvesting timber in the Spring Mountains to be used for the development of mining infrastructure. The first reported mill is established in the Spring Mountains in 1875 by the Brown brothers.  |
| 1860 - 72   | Charlie, a Pahrump Paiute man and the Tribal War Chief, establishes one of the first Indian Ranches in Pahrump Valley, the Ma-hanse (now named Manse Ranch). He is sometimes referred to as “Mormon Charlie” or “Ash Meadows Charlie”. Chief Tecopa also establishes a ranch at Bolling Mound Spring. John B. Yount is born in Oregon. Charlie is involved in the 1865 assault and robbery of gold prospector Charles Breyfogle at Stump Springs.   |
| 1872        | Wagon roads connect Stump Springs, Mountain Springs, Charlie’s Ranch and other Pahrump Valley Springs. One road runs through the Hidden Hills area. Other ranches become established by Indians and whites at some of the larger springs such as Ash meadows, Pahrump, and Manse.   |
| 1873        | Chief Tecopa is encouraged by the US government to make his circular journey to convince his and neighboring tribes to move to the newly established Moapa Reservation. The Paiute and Shoshone from the Armagosa River refuse to go. Many Pahrump Paiute are enticed or force marched to Moapa reservation. Some hid and remain, others escape and return.   |
| 1874 - 1915 | Lee brothers move to area and Phi Lee buys the Resting Spring Ranch. Phi marries a Sally “Mopats,” Paiute woman and has several children including Dora, Robert, Robert “Bob”, Dick, Clara, Gus, Bert and Cub. Phi and Sally have a seasonal camp at Ma-hav. “Bob” Lee resides at an area of Hidden Hills near Weeping Rock Springs and raises his son Robert (1910?). Cub Lee homesteads in Mesquite (Sandy) Valley. Bob Lee is at Hidden Hills as a small boy and sees two Indian-constructed fireplaces at Hidden Hills. |
| 1877        | Joseph Yount purchases Manse Ranch from the Jordan brothers.  |
| 1880        | Queho is born.  |
| 1900?       | Albert Howell, Pahrump Paiute, and later informant to anthropologist Julian Steward, lives with his Pahrump Paiute wife Mary at Ma-hav where they maintain a small farm. Howell’s have a daughter-in-law named Anna Tecopa. Albert is the son of John Howell, the first black to live in the area   |

|             |   |
|-------------|---|
|             | and is a free slave from North Carolina. John works in the mines and marries a Southern Paiute from Las Vegas.  |
| 1904        | Chief Tecopa dies, the Chief's son, Tecopa Johnny inherits his father's leadership role.  |
| 1905        | Chief Tecopa's Cry ceremony held at either the Pahrump cemetery or Ma-hav or at both places.  |
| 1910's?     | Dora marries Gallant Brown and they live at Ma-hav near Dora's brother, Bob Lee's place. Dora and Gallant have several children, (Steve, Earnest, William and Gallant Jr.), who are raised in the Ma-hav area.  |
| 1900 - 1920 | <p>Many more ranchers and farmers move into the Pahrump Valley and begin to develop large crop lands, which require greater amounts of water. Many Pahrump Paiute provide the labor required for the flourishing ranches of the Valley. Chief Tecopa's son Charlie is killed in 1911 by another ranch hand, Joe Lake while both are working for the Manse Ranch.</p> <p>Pahrump Paiutes claim that Charlie Tecopa (Paiute) was shot by John Yount (east of Manse Ranch) and is buried [REDACTED]. And John Smith (Paiute) was shot by John Yount [REDACTED] and was buried where he was shot.</p> |
| 1911        | Las Vegas Reservation established through a 10-acre land donation made by Helen Stewart.  |
| 1915        | John Yount, son of Joseph Yount, sells his Trout Creek Property to Phi Lee, and he and his Pahrump Paiute wife Sally "Mopats," move to Ma-hav and rename the place Charleston View (not the Charleston View of today). John makes improvements.   |
| 1916        | It is reported that the Yount Ranch (at Ma-hav) was irrigated by means of windmills that pumped from three shallow wells. Water was within 6 to 15 feet below surface.  |
| 1921        | George Rose receives patent on 179 acres to the east of the Bob Lee homestead and north of the Yount Ranch.   |
| 1922        | John Yount files fee patent and becomes owner of Yount Ranch at Ma-hav.   |



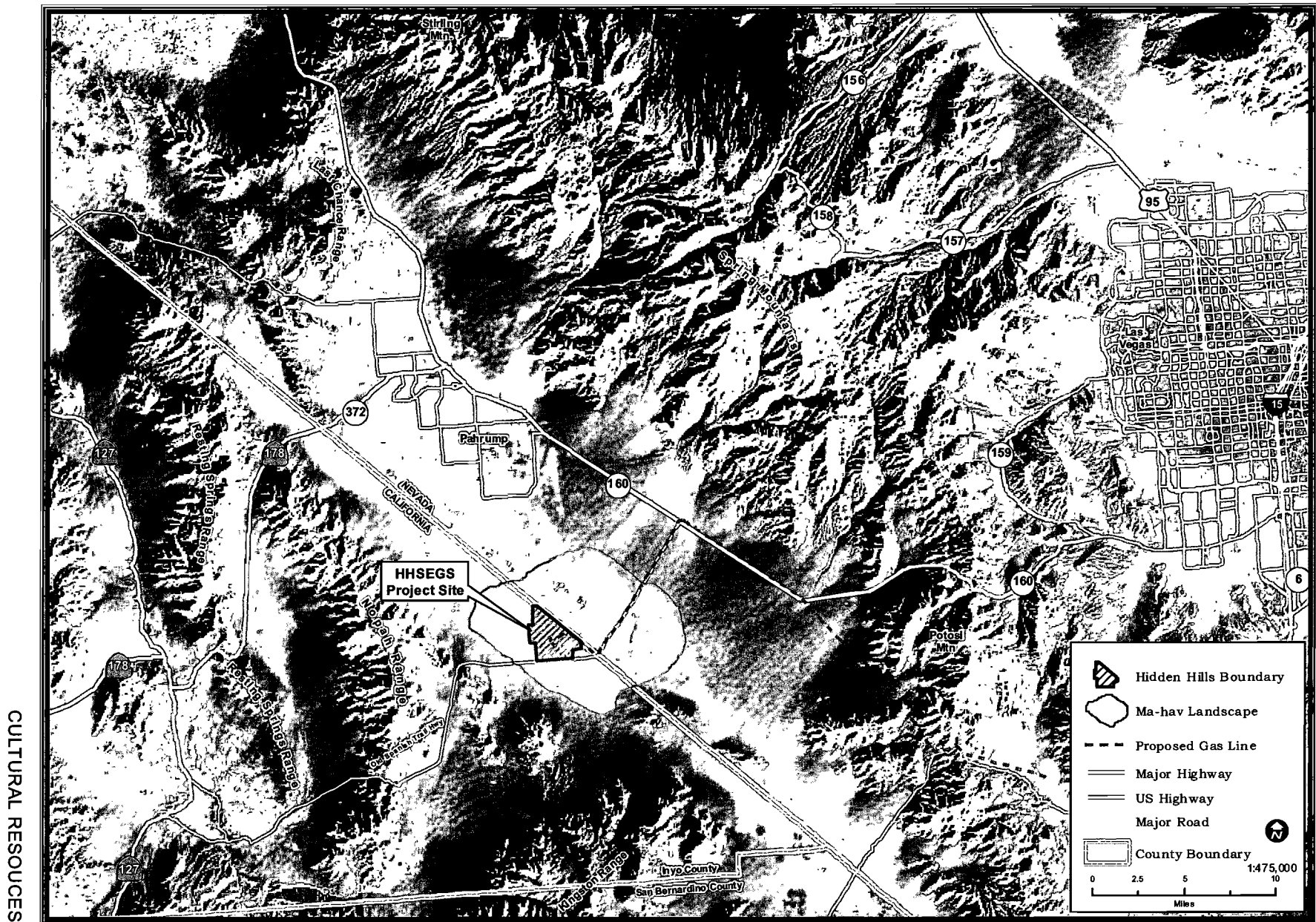
|                   |   |
|-------------------|---|
| 1920-31           | “Tank” Sharp (Libby Scott’s son), whose family is from Mound Spring and Manse Ranch area is ¼ Pahrump Paiute and friend of John Yount. Tank operates a still and bootlegs alcohol from the hills around Yount Ranch. Joe Hudson, a non-Indian killed Tank, and Oscar Bruce a Pahrump Paiute from Mound Spring and perhaps living near Bob Lees place, retaliates by killing Joe Hudson. The still area can still be found at [REDACTED]. Other bootleggers operate out of the Ma-hav area.  |
| 1926              | William Wilson receives patent for 160 acres immediately south of the Yount Ranch.  |
| 1920’s            | John Yount purchases Wilson and Roses’ properties.  |
| 1932-33           | Susie Yount, John Yount’s first wife dies and a Cry Ceremony is held at Yount Ranch. John Yount allows the ceremony. Hundreds of Indians attend ceremony and camp out at the Yount Ranch near the orchard.  |
| 1930’s?           | Bob Bruce and Susie Howell die and are buried at the Ma-hav cemetery.   |
| 1930’s to Present | Archaeologists accumulate evidence of southern Great basin/Mojave desert occupations that reach back to 12,000 years B.P. When inland seas covered some of the area. There are numerous archaeological sites throughout the Mesquite dunes including at Hidden Hills Ranch.   |
| 1935 – 1940       | John Yount has a second common-law wife named Sally Belle, who is white. John dies. Belle attempts to sell property to Roland Wiley and becomes embroiled in estate heir-ship problems with Younts. Eventually Wiley buys out heirs. Before Wiley arrives at property Sally Belle illegally sells property to Louise Kellog. Wiley and Kellogg have a legal battle and Wiley wins. Wiley evicts Kellog.   |
| 1940-1990         | Wiley buys additional property. Wiley evicts numerous Pahrump Paiute families from his properties. Including Dora Brown. Dora establishes Dora’s Place at Browns Spring In 1941. Wiley holdings become the largest private property holdings in Pahrump Valley. Wiley establishes the Hidden Hills Ranch (dude ranch), has guests living in teepees and digging for Indian artifacts, constructs an airplane runway, attempts to grow crops, taps springs and messes up water flow, builds Cathedral Canyon tourist attraction. Wiley hires Al Carpenter as the Hidden Hills caretaker. |
| 1940s to Present  | Pahrump Paiute families, Lees, Browns, Weeds, Howells, Bruces and Toms and their descendents continue to live near Hidden Hills after being forced out. These are some of the families that are tribal members of the   |

|                 |   |
|-----------------|---|
|                 | unrecognized Pahrump Paiute Tribe. The Ma-hav Pahrump Paiute Cemetery continues to be used and maintained by Pahrump Paiute.  |
| 1951            | The mushroom cloud from the detonation of an atomic bomb can be seen from the Hidden Hills ranch.   |
| 1975            | Queho is buried at Hidden Hills Ranch.  |
| 1987 to Present | Pahrump Tribe files for federal recognition with the U.S. Department of Interior. The filing was posted in the Federal Register on Dec 10 1987. The petition for federal recognition remains pending. |
| 1989            | Roland Wiley dies and Wiley estate is established   |
| 2006            | Hidden Hills Caretaker, Al Carpenter dies. Hidden Hills Ranch is vandalized and looted.   |
| 2006            | Stump Spring ACEC, established by the BLM for protection of the associated cultural resources located at and near the spring.   |
| 2011            | Bright Source proposes Hidden Hills Solar Energy Generating Systems on Wiley Property and has lease option with Wiley Estate.   |

Appendix 6 provides a selection of historic photographs of the Ma-hav Landscape.

Figure 7 provides a vicinity map of the Ma-hav landscape.

**CULTURAL RESOURCES - FIGURE 7**  
**Hidden Hills Solar Electric Generating System (HHSEGS) - Ma-hav Landscape Vicinity Map**



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**SOURCE: Landsat - NASA (2002), SRTM Shaded Relief - USGS (2005), US Major Highway - Tele Atlas North America, Inc (2010).**

## Burials

The following burial practice description is a combined effort that was provided by Pahrump Tribal representatives.

"Native Americans are buried in different areas. In the desert, sometimes the deceased were not able to return to villages or their areas to have proper burials. It just depended on the situation. After the person died, they stayed with the body all night, singing the various songs for them and preparing the body for burial. A relative cleansed the body with herbs and soapy water and dressed the body. A long time ago, when the body is buried, it was sometimes [REDACTED]

[REDACTED] This practice is still observed. Sometimes the body was put in [REDACTED]. Burned creosote bush was placed on top, which left an oily film, to keep away the animals. [REDACTED]

[REDACTED] People would come from long distances to participate in the traditional religious funeral ceremony. Many time people would speak during the ceremony as they came and encircled it clockwise. Singers would come from all around to sing for days and describe the spiritual journey the deceased would travel. This is different than the Cry Ceremony that is held one year after the death. This ceremony reminds the soul how to travel to get to that place. [REDACTED]

[REDACTED] Some property is burned separately. They do this right away. A long time ago, if the man had dogs or horses, they were taken out and shot by a non-relative. If it was a woman who died, they broke her metate, and destroyed her personal things. Mourners trimmed their hair a little, if distant, or cut their hair short to their neck or ears if close relative, like mom, dad, spouse, child, etc... the day after funeral. The name of deceased is not mentioned again as it will call the spirit back of the deceased. This important ceremony allows the grieving to sing songs and dance.

After the mind leaves the body it turns into the soul. It travels and goes away, but still remains within the homelands. [REDACTED]

[REDACTED] to a good place where everything was lush and they saw their relatives who had previously took the journey but they were well again. They saw the land how it once was. All said they had to cross a wash, and if they were bad, they would experience making the journey. Elders scold children for whistling at night because it could call back or confuse the deceased. Today, we still feed the land and spirits by throwing food away at the first meal. It was thrown in all directions, so that they would not get sick from the spirits that might still be in the area." (Jim 2012: 10; Interviewee- Personal Communication)

One elder from Moapa stated, "Suicide was a no-no. That is not right to do that. The Creator has a plan for everyone, so those people are going against the will of the creator; they do not get a Salt Song Ceremony. Their souls wander." (Interviewee – Personal Communication)

Pahrump Paiutes also consider Suicide taboo. (Interviewee – Personal Communication).

There is some uncertainty in the literature as to whether Pahrump Paiute cremated their dead (Kelly and Fowler Vol. 11: 380). Most Pahrump Paiute today say that cremation was not a traditional practice. Others suggest that cremations were rare and conducted when there was strange sickness or the deceased was considered a practitioner of “bad medicine” (Interviewee - Personal Communication). Sometimes, when the ground was too hard to dig, the deceased was [REDACTED], then creosote was burned on top to cover with an oily film to keep animals away, and only their possessions were burned. [REDACTED] (Interviewee – Personal Communication)

One local archaeologist reports that he has seen Southern Paiute burials in the local area discovered at the bottom of [REDACTED] (Interviewee – Personal Communication).

Suffice to say that a homeland is a place that one’s people are created in, inhabit, die, and are buried in.

### **Ceremonies and Trail Songs**

Pahrump Paiute hosted their own and participated in their neighbors’ ceremonial cycles (Kelly and Fowler Vol 11: 383-385). Many and various Paiute from Pahrump, Las Vegas, Moapa, Paiute Springs, Lone Pine, Independence, Big Pine, Bishop, Benton, Needles, and elsewhere still believe in, practice, understand, and educate others concerning their traditional religion. The song trails are for all Southern Paiute. It can be argued that Salt Song trails are the most important of all trails for Southern Paiute because, sooner or later, all Southern Paiute will travel that trail (Stoffle 2009:40).

The various Southern Paiute trail songs and related ceremonies are listed and described. This list was provided by the Pahrump Tribe (Jim 2012: 2-5).

### **Southern Fox Trail Song**

The Paiute stories of the journey of the Southern Fox include references to several places within Pahrump Ancestral Homeland Territory. Southern Fox sets out to visit his brother Blue Jay to the north, meeting various others along the way. He had several adventures with Flicker, Bear, Wasp, and Crow. He starts from [REDACTED]  
[REDACTED]  
[REDACTED]. Ultimately, he ends his journey at Fire Valley, before returning to his home.

The Fox Trail is a spiritual trail that comes into the vicinity of the Spring Mountains, Nevada Nuclear security site (formerly Nevada test site), Pahrump, etc... It moves in leaps from spring to spring, traveling south. That was Fox’s journey down to the southern end. He made the water holes with his arrow. Indians travel this route in ceremony through song to check on the water and bless the water and give thanks for the spring, and this keeps them alive.

### **Salt Trail Song**

This is an important song. It is mostly sung today at Annual Morning Ceremony or Cry Ceremony. The Song is about travels from place to place, naming everything they saw. [REDACTED]  
[REDACTED] Each place they stopped has its own story and named as you go along [REDACTED]  
[REDACTED] This song describes where to go and then how to get there and what to do. Paiute people travel on these trails physically across the land, mentally in a dream state, and spiritually after death.

### **Coyote Trail Song**

This is a traveling song. Coyote started in [REDACTED], went place to place, walking around, telling everything he did, even stealing cantaloupes. [REDACTED]  
[REDACTED]  
[REDACTED] then back to where he started.

### **Bear Trail Song**

This is done in the spring time to show respect for bears emerging from hibernation. [REDACTED]  
[REDACTED]  
[REDACTED]

### **Bird Trail Song**

The Bird Song, [REDACTED]  
[REDACTED]  
[REDACTED] This is sung at harvest time and at Mourning Ceremonies.

### **Deer Trail Song**

The Deer Song tells of the deer's travels around [REDACTED]  
[REDACTED] naming every place that he stops and everything that he eats.

### **Mountain Sheep Trail Song**

These songs were dreamed and ran in the family [REDACTED]  
[REDACTED] The song names every place you can find sheep, his travels. Many songs, maybe 200 total. [REDACTED]  
[REDACTED]

### **Prophecy Trail Song**

Use of a split-stick cane rattle instrument. [REDACTED]  
[REDACTED]  
[REDACTED], he tells what is happening far away.

**Prophecy Ceremony**

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] Dance is held outside in the evening at social occasions.

**Circle/Round Dance Ceremony**

This dance is usually done at any time, social, sometimes funeral, night, harvest time, for rain, and when there is enough food for up to a week. [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

**Bear Dance**

A Woman's Choice dance [REDACTED]  
[REDACTED]  
[REDACTED] Ceremony and/or Social Dance.

**War Dance**

This is an enemy dance to show solidarity during war efforts [REDACTED]  
[REDACTED]

**Bird Dance**

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

**Salt Song Dance**

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

**Mountain Sheep Dance**

[REDACTED]  
[REDACTED] Dance version  
was sung at Mourning ceremonies and again for a person who had owned it.

### Coyote Dance

[REDACTED]

### Deer Dance

[REDACTED]

### Hunting Deer Dance

Used before a hunt, sung by the man who owned it for the hunters alone, and on their request.

[REDACTED] After that, they went hunting for game.

The following additional information was provided by a Pahrump Paiute traditional singer. This information is provided to summarize what Salt Song trails mean and how they function in the Pahrump Paiute world today.

Various trail songs are vocal snapshots of the landscape. Various places and geographic features are covered, but that does not mean that a song has less significance for a particular area because a place is not mentioned in a song. However, playas and flat desert areas are mentioned in songs... not just prominent landscape features, such as springs or mountain ranges/peaks. There are 364 plants and 170 animals mentioned in the songs. The vocal snapshot is a total experience; not just a visual experience. It is sung and therefore it is an auditory experience. Therefore, there is a reverberation, resonance quality that rings throughout valley/mountains. For example, Fox songs really hone in on springs/water sources. This is not to say that the other songs ignore water sources.

When something is taken that was not properly requested, then traditional Southern Paiute believe that physical and spiritual imbalance results. Imbalance causes sickness and that increased imbalance places a burden on singers and healers. It is not a matter of whether a traditional system works in the face of incompatible change, but rather the difficulty or additional burden to continue adapting and adjusting to incompatible change.

When singing, the traditional system is very complex and requires cognizance of ten directions: cardinal directions (4), up/down (2), past, present and future (3), and self (1)



Songs follow a tradition, but also are individual expressions that resonate, reverberate with the land, the songs both re-make the land and are made by the land. Because of individual singers with multiple directions, there are multiple landscape iterations. Songs do not follow linear trails, but fill/make space. Prayers/Songs respond to the land and the land speaks back. This is two way “memory lane.” Weather and climate are part of this memory.

Singing requires a visual, auditory, and spiritual solitude. Large land developments in the midst of these song scapes cause havoc or chaos ... not just for the singer, not just for what the singer seeks to balance, but also the entire Paiute world...and the entire world ...cosmos.

Havoc or chaos confuses and angers spirits who are the environment and its constituent plants and animals. Water spirits are one such spirit. Magma is a type of water spirit... just from a lower world. It can be angered.

The land has emotions just like humans: joy, anger, jealousy, confusion, clarity etc. The songs are an antidote to harm. (Interviewee – Personal Communication)

The following information concerning the Salt Song trails is provided by a Moapa Tribal Elder.

The proposed Power Plant outside of Mesquite, the Toquop Power plant, had Salt Song ceremony issues. Every tribe and practitioner has a different version of the songs so it can be confusing.

Performing the Salt Song ceremony is an obligation.

The grieving family is the host. The singers meet in a common area before entering into the host's place. The host sends a runner to meet the ceremonial singers, who are then ushered into the funeral/ceremonial area. The host then announces to the assembled group who the singers are.

The funeral ceremony can go on for days and in the past it was expected that all attendees were required to stay for the entire duration of the ceremony. Now-a-days, the people come and go to pay respect. But the singers still stay for the whole ceremony. The bird songs and ceremony are for the one-year memorial. Some other tribes sing the bird songs for entertainment. All of these ceremonies are serious matters and should be taken seriously. These are not things to be played with. [this phrase: “the Salt Song trails are very sacred and are to be taken seriously and are not to be played with”, was repeated several times throughout the interview]. Larry Eddy is a traditional singer and is related to people in the area. (Interviewee – Personal Communication)

The Salt Songs trails continue to be sung and travelled into the present. The following summary information comes from a publication of the Storyscape Project of The Cultural Conservancy.

The Salt Songs are the sacred songs of the Nuwuvi people and describe a physical and spiritual landscape spanning ocean and desert, mountains and rivers, life and death. The landmarks

identified on the map, [see Figure 7], are described by the songs and represent ancient villages, gathering sites for salt and medicinal herbs, including routes, historic events, sacred areas, and cultural landscapes. At memorial ceremonies, Salt Song singers “throwing the gourd” are accompanied by dancers as they perform the 142 song cycle from sunset to sunrise to assist the deceased in their sacred journey. The Salt Songs begin their journey at *AviNava/Ting-ai-ay* (Rock House), a sacred cave at the confluence of the Bill Williams and Colorado Rivers. The songs travel north along the Colorado River to the Kaibab and Colorado Plateau, into Southern Utah, and then west to the great mountain *Nuva Kaiv* (Mt. Charleston) – the place of origination of the *Nuwuvi* People – and then further west to rise above the Pacific Ocean before arcing back east through the Mojave desert to their origin at *Avi Nava*.

At memorials it is the responsibility of the lead singer to guide the singers across the spiritual landscape to gather at *Nuva Kiav* [Mt. Charleston] at midnight when the mourners assist the deceased in their spiritual crossing. (Klasky 2009: 1-2)

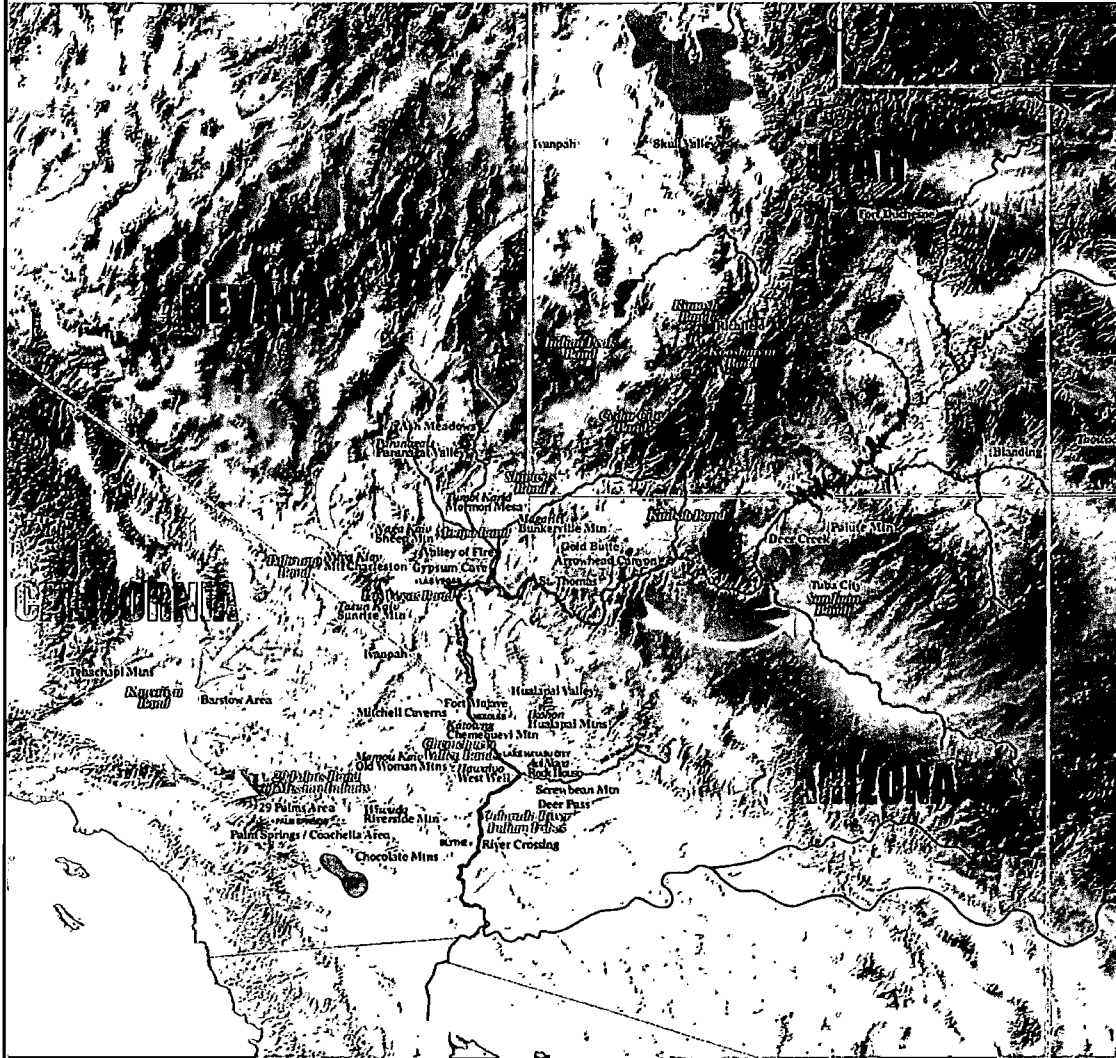
“I am like a bus driver ... making sure that the singers visit all the right stops at the right times along the way,” said a lead Salt Song Singer. (Larry Eddy quoted in Klasky: *ibid*)

The Salt Songs cross, reverberate and provide passage for deceased Southern Paiute in the vicinity of Pahrump Valley including the project site.

# CULTURAL RESOURCES - FIGURE 8

Hidden Hills Solar Generating System (HHSEGS) - Salt Song Trail Map of Nuwuvi (Southern Paiute)  
Sacred Landscapes, Culture Areas and Bands

## Salt Song Trail Map of Nuwuvi (Southern Paiute) Sacred Landscapes, Culture Areas and Bands



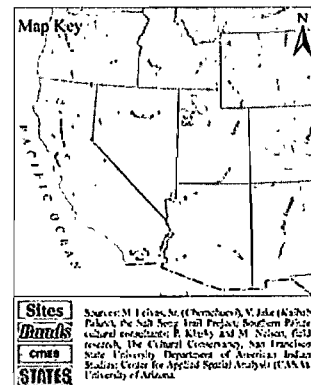
This map shows Nuwuvi (Southern Paiute) holy lands spanning ocean and desert, mountains and rivers and across four states. These landmarks are described in the *Nuwuvi Salt Songs* and represent ancient villages, gathering sites for salt and medicinal herbs, trading routes, historic sites, sacred areas, ancestral lands and pilgrimages in a physical and spiritual landscape of stories and songs. The Salt Songs are a cultural and spiritual bond between the Nuwuvi and the land, and represent a renewal and healing of a Nuwuvi's spiritual journey.

The Salt Songs are sung at memorial ceremonies and follow a trail that begins at *Avi Nava/Ting-ai-ay* (Rock House), the sacred cave at the Bill Williams River, and travels to the Colorado River north to the Colorado Plateau, west to *Nuva Kaiv* (Mt. Charleston), through mountain passes to the Pacific Ocean and then back east through the desert to the Colorado River and to its place of origin.

The trail visits the fourteen bands of Nuwuvi people including: Cedar City, Chemehuevi Valley, Colorado River Indian Tribes, Indian Peak, Kaibab, Kanosh, Kawaiisu, Kaiparowits, Las Vegas, Moapa, Koosharem, Pahrump, San Juan, Shivwits, and Twentynine Palms Band of Mission Indians.

For more information, copies of this poster and the film *The Salt Song Trail* contact Philip M. Klasky, director of The Storyscape Project of The Cultural Conservancy at [www.nativeand.org](http://www.nativeand.org), (415) 561-6591, Salt Song Trail directors Matthew Leivas (760) 854-4019 and Vivienne Jake (928) 643-7210.

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Design by Dana F. Smith and Philip M. Klasky



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SOURCE The Salt Song Trail Project (c) 2009 all rights reserved. Design by Dana F. Smith and Philip M. Klasky

CULTURAL RESOURCES

[Figure 8 Salt Song Trail inserted here]

## **Analysis Summary**

This report's analysis has divided some of the Pahrump life-ways, and how those life-ways are intertwined with a landscape, into seven attributes: water, plants, animals, horticulture, trails, landforms, and ceremonies. The reader will note that there is crossover between categories. For example trails are waterways, trails are songs, trails are ceremony, trails are for hunting and gathering, and trails run through all of the landforms that allow Southern Paiute (and others), to travel between the mountains, valleys, gardens, plants and animals and homes and camps. Likewise any of the other attributes can be explained in terms of, or have overlaps with, the other attributes. The Pahrump Paiute world is one holistic phenomenon. This whole is segmented into attributes so that non-Paiute can understand something about the life-ways of a different people.

Paiute and Shoshone people from the various tribes consulted for this study, continue to practice their traditional ways as best they can against the backdrop of modern dominant society and the various developments that come with modern society.

This area is comprised of several overlapping ethnographic landscapes which have as their contributing attributes or elements: water, plants, animals, horticultural gardens, trails, landforms and religious practices. These landscapes encompass the project area.

The following section will evaluate the eligibility of these landscapes to the National or State Registers, per what criteria, for what periods of significance and with what levels of integrity.

## **PROPOSED FINDINGS OF FACT**

### **Ethnographic Landscapes**

Ethnographic landscapes are defined generally in this document's Introduction. Ethnographic landscapes can have considerable overlap with what are called traditional cultural properties. Traditional cultural properties are synonymous with the term "place." Places and areas are types of historical resources that can be synonymous with traditional cultural properties and ethnographic landscapes. The term ethnographic landscape will be used to generally refer to the types of resources that are considered in this report; however the author, by using the term ethnographic landscape also intends that usage to also mean an "area" or "place" per the definition of historical resources.

### **Southern Paiute, Pahrump Paiute and Ma-hav Ethnographic Landscapes Generally Described**

There are three ethnographic landscapes that this report describes and that, to varying proximity, are in the vicinity of the project:

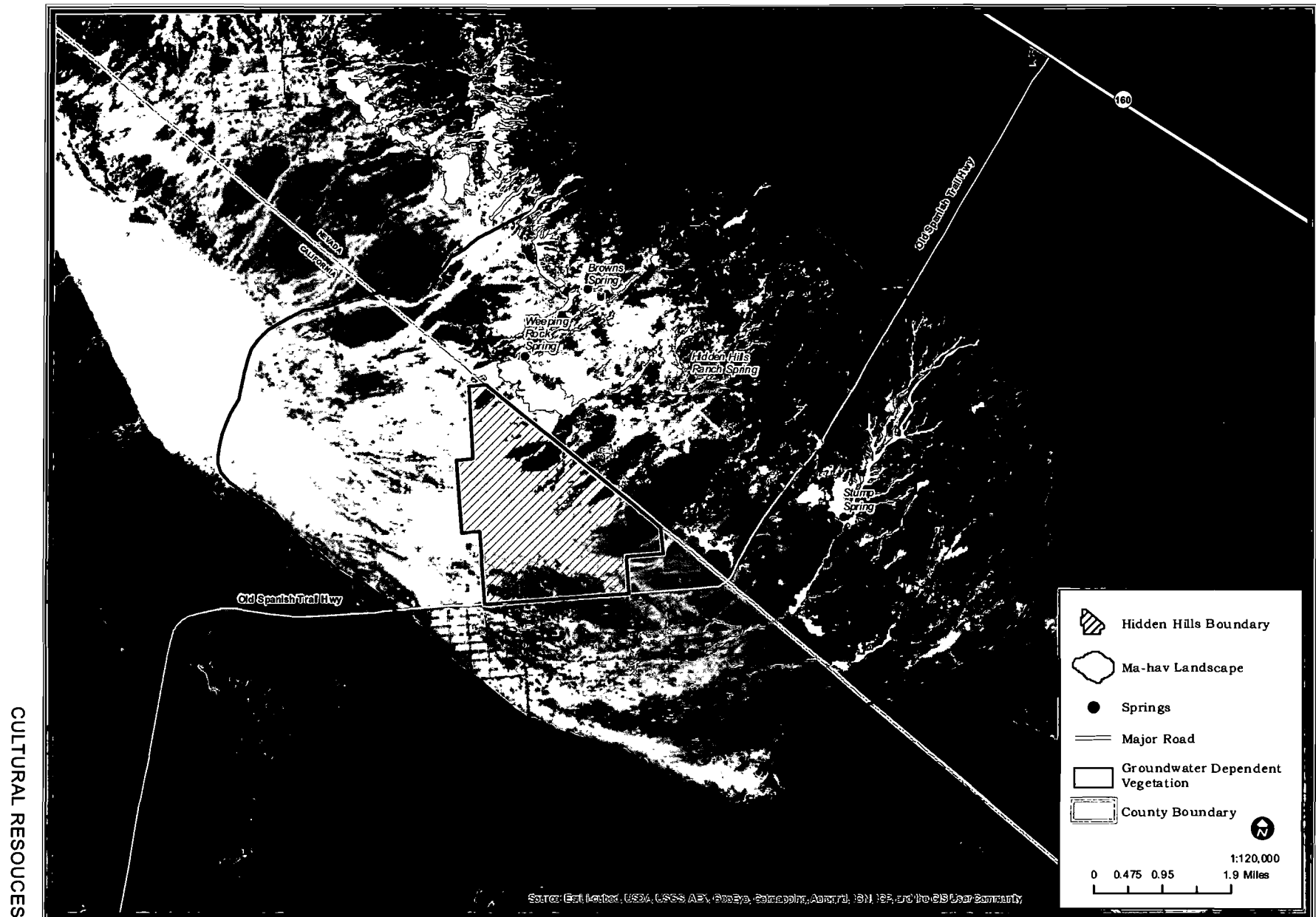
1. Salt Song Landscape
2. Pahrump Paiute Home Landscape
3. Ma-hav Landscape

The Salt Song Landscape is generally described and mapped in the previous section (Figure 8), and encompasses portions of current day Southern California, Southern Nevada, Northeastern Arizona and Southwestern Utah and within which numerous bands of Southern Paiute participate. This ethnographic study does not attempt to fully describe this song and landscape except as such description is relevant for the purposes of assessing affects of the project on the Salt Song Landscape. The Pahrump Paiute Home Landscape is a part of the Salt Song Landscape.

The Pahrump Paiute Home Landscape ensues from and radiates out from and around the Spring Mountains. Its largest extent is slightly larger than the area encircled by Chief Tecopa's 1873 homeland journey. It can be easily asserted that some portion of the eastern side of the Spring Mountains is more directly affiliated with the Las Vegas Southern Paiute. This report does not attempt to specifically delineate the boundaries of the Pahrump Paiute Home Landscape, nor is it necessary that such boundaries are defined. Because the project is on the west side of the Spring Mountains and the west side is more directly affiliated with the Pahrump Paiute homeland. The Pahrump Paiute Home Landscape consists of numerous component landscape areas with multiple contributing attributes. It is not necessary, for the purposes of this document, to further describe and delineate all of the component landscapes and delineated boundaries. However one component landscape, the Ma-hav Landscape is fully described and delineated in a previous section of this report. The proposed project is within the Ma-hav Landscape. See Figure 9 for the extent of the Ma-hav landscape.

# CULTURAL RESOURCES - FIGURE 9

Hidden Hills Solar Electric Generating System (HHSEGS) - Ma-hav Landscape Vicinity Map



CALIFORNIA ENERGY COMMISSION, SITING, TRANSMISSION AND ENVIRONMENTAL PROTECTION DIVISION

SOURCE: US Major Highway - USDA National Agriculture Imagery Program (NAIP) imagery and USGS Digital Ortho Quarter, Quad, CH2M HILL, Tele Atlas North America, Inc (2010).

## Contributing Attributes, Elements or Features

The National Park Service Cultural Landscape guidelines provide various terms for the smallest units that collectively define any landscape. These units are called synonymously, “attributes”, “elements” or “features”. The following tables, (Tables 8, 9 and 10), provide a features listing, description and other relevant information for understanding the natural and cultural make-up of the three landscapes discussed in this report.

| <b>Table 8. Contributing Features of the Salt Song Landscape Related to the Hidden Hills Solar Energy Generating Systems Project Vicinity</b> |   |  |
|---|---|--|
| <b>FEATURE</b>  | <b>DESCRIPTION</b>  | <b>ADDITIONAL INFORMATION</b>  |
| Water   | <i>Poe-ha-ghun</i> , Spirits, Springs, Creeks, Flats, Washes, Creeks                | Refer to Table 3   |
| Plants  | <i>Poe-ha-ghun</i> , Spirits, Plants along the trail and in project vicinity,       | Refer to Table 4, There are 364 plants related to the Salt Song Trail  |
| Animals   | <i>Poe-ha-ghun</i> , Spirits, Animals, Insects                                      | Refer to Table 5 and 6, there are 174 animals related to the Salt Song Trail   |
| Horticulture  | <i>Poe-ha-ghun</i> , Spirits, Springs   | Horticulture is a secondary aspect of the primary aspect of water, specifically springs and the activities that occur near springs.  |
| Trails  | <i>Poe-ha-ghun</i> , Spirits, Humans, Animals                                       | All Southern Paiute living and deceased participate in the Salt Song Trail. The trail is a path on the ground, a corridor on and above the ground, and an auditory sound-scape.                                      |
| Ceremony  | <i>Poe-ha-ghun</i> , various types of ceremonies related to funerals and memorials. | Refer to Ceremony section for list of ceremonies, Ceremonies require aesthetically compatible view-sheds, noise free space and foreign-odor free space. See Figures 6 and 7 for maps of some Salt Song Trail routes. |

| <b>Table 9. Contributing Features of the Pahrump Home Landscape Related to the Hidden Hills Solar Energy Generating Systems Project Vicinity</b> |   |   |
|--|---|---|
| <b>FEATURE</b>   | <b>DESCRIPTION</b>  | <b>ADDITIONAL INFORMATION</b>   |
| Water  | From Valley to Mountain Crest: Playa (Pahrump Dry Lake Bed), Washes, Springs and Seeps of the Hidden Hills Landscape, Alluvial washes including creek bed of Trout Canyon Creek and Pahrump Valley Creek, Springs that contribute to the aforementioned Creeks, Rain, Dew, Mist, and the Snow of Mount Charleston | Refer to the Water Section  |
| Plants   | Some of the plants listed at Table 4  | There are other plants that are not listed at Table 4 that may be dormant, that may have been forgotten |



|              |  |  |
|--------------|--|--|
|              |  | or not documented in the references used for this report.  |
| Animals      | All of the arthropods and animals listed at Tables 5 and 6   | Arthropod types at or near the project site are not known.   |
| Horticulture | Corn, squash, gourds, pumpkins, melons, sunflower, amaranth, winter wheat, various beans, and Devil's claw.<br>Irrigation systems<br>Garden plots  |  |
| Trails       | Lateral trails along the valley floor<br>Lateral trails along the valley spring escarpments<br>Lateral trails along the mountain side<br>Vertical trails that connect the valley floor with the high elevations of the Spring Mountains<br>Trails that connect various districts/tribes and the larger Southern Paiute Nations | These trails include the Old Spanish Trail and the later and overlapping Mormon Road.  |
| Ceremony     | All of the ceremonies listed at in this report's Ceremony section  | Some ceremonies are site specific and some ceremonies can be held based upon a consensus of the involved practitioners and affiliated families |

| <b>Table 10. Contributing Features of the Ma-have Landscape Related to the Hidden Hills Solar Energy Generating Systems Project Vicinity</b> |   |  |
|--|---|--|
| <b>FEATURE</b>   | <b>DESCRIPTION</b>  | <b>ADDITIONAL INFORMATION</b>  |
| Water  | Stump Spring, Hidden Hills Ranch Spring, Browns Spring, Weeping Rock Seep, and other unnamed springs within the Ma-hav Landscape boundaries as depicted on Figure 8. Edge of the Playa (Pahrump Dry lake Bed, washes and creeks within the boundaries of the Hidden Hills landscape |  |
| Plants   | Some of the Plants listed at Table 3  |  |
| Animals  | Arthropods and animals listed at Table 6  |  |
| Horticulture   | Horticulture gardens at Weeping Rock, Browns, Hidden Hills and Stumps Springs   | The garden area at Hidden Hills can still be discerned today. The exact garden locations at the other springs would require further historic and archaeological investigation to determine exact locations |
| Trails   | Trails that connected the springs, and connected the spring areas to other destination points such as the springs to the north (Mound, Manse, Pahrump), Sandy Valley to the south, the playa, Mule Springs to   | Tribal members assert that the project area is a traditional hunting and gathering area and that procurement activities do   |

|             |   |   |
|-------------|---|---|
|             | the east, the Trout Canyon, and Resting Springs to the west. smaller paths in and around each of the spring areas   | not necessarily follow pre-established routes   |
| Ceremony    | Hidden Hills Cry ceremony and Salt Song memorial Burials and Pahrump Paiute Cemetery  | It is highly probable that similar ceremonies occurred at the other Springs. Also John Stumper, being a renowned medicine man, conducted personal religious activities at or near Stump Spring. |
| Archaeology | Various resource procurement locations, seasonal occupation, village and homestead sites, including historic sites such as Tank Sharp's still are located throughout the Mo have landscape. | The CEC archaeological report provides additional parameters for considering an archaeological district that encompasses the Mo hav Landscape.  |

## Boundary Justifications

### Salt Song Landscape

A precise delineation and boundary justification for the Salt Song Landscape is not necessary for this project because the landscape, extending over a large swath of the Southwest and California, far exceeds the area of the project. Research project time constraints also prohibit such a robust delineation. Figure 8 provides the general parameters of the Salt Song Landscape. Figure 6 provides more precise Salt Song trail areas for the Spring Mountain area. However, suffice to say that the boundaries permeate the Pahrump Valley, and surrounding mountain ranges that collectively form the Pahrump Valley. The Salt Song landscape is ubiquitous throughout, saturates and exceeds the Project Area.

### Pahrump Paiute Home Landscape

A precise delineation and boundary justification for the Pahrump Paiute Home Landscape is not necessary for this project because the landscape, extending from the western side of the Spring Mountain Range and including Pahrump Valley, Last Chance Range, No Pah Range and the Kingston Mountains and areas further to the north, west and south, far exceeds the area of the project. Research project time restraints also prohibit such robust delineation. Figure 4 provides a general sense of some of the area mentioned above. However, suffice to say that the boundaries permeate the Pahrump Valley, and surrounding mountain ranges that collectively form the Pahrump Valley. The Pahrump Paiute Home Landscape is ubiquitous throughout, saturates and exceeds the Project Area.

## **Ma-hav Landscape**

Figure 9 provides a precise delineation of the Ma-hav Landscape. There are four specific justifications for the boundary delineations:

1. **Geology:** The area represents a unique geological surface covering of clay that has uplifted, eroded and flows towards and contributes to the Pahrump Valley Dry Lake bed. The Playa itself is not included because it is formed from other eroded deposits that surround the Playa on all sides. This surface provided for specific plant and animal communities that are hunted and gathered by Pahrump Paiute affiliated with the Ma-hav area.
2. **Watershed:** The area represents a specific lower portion of the watersheds of the Trout Canyon Creek and its main tributary the Pahrump Valley Creek. These two creeks collectively drain the Southwestern portion of Mount Charleston. These watersheds are separate and distinct from watersheds that drain the northwestern slopes of Mount Charleston and that flow towards the springs north of the Hidden Hills Landscape such as Mound, Manse and Pahrump Springs. These watersheds provided a corridor for travel from the valley floor to the heights of Mount Charleston.
3. **People:** The area represents the closely related Pahrump Paiute families of the Lees, Weeds, Browns, Howells, Bruces, and Toms. While these families are inter-related to other Pahrump Paiute families, and other none Pahrump Paiute people, they tended to reside, or frequent, in and around the Ma-hav, Hidden Hills, and Charleston View areas.
4. **Unique Character:** The Hidden Hills springs and surrounding hills tend to have a unique character in that the springs flow less and attracted non-indian development more recently. The larger Pahrump Valley ranches were first established to the north around Ash Meadows, Pahrump Spring, Manse Spring and Mound Spring. As a result the Hidden Hills area was known to have a more unique set of people that differentiated themselves from the larger valley population to the north and near the city of Pahrump. In addition, specific esoteric cultural and religious knowledge was formulated, instructed and practiced within this delineated landscape and nowhere else in the Paiute landscape. Finally this landscape and the Pahrump Paiute people that occupied it during the Spanish Trail and Mormon road periods were subjected to the some of the first contacts and related hostilities ensuing from trail side encounters.

Given that the land is a contiguous whole, this delineation is conservative. The Ma-hav Landscape boundaries could be drawn up to the crest of Mount Charleston by including the Trout Canyon and Pahrump Valley Creeks. However the upper reaches of the aforementioned creeks are included in the Pahrump Paiute Home Landscape.

The Pahrump Paiute Home Landscape is ubiquitous throughout, saturates and exceeds the Project Area.

## **Periods of Significance**

### **Salt Song Landscape**

The period of significance for the Salt Song Landscape spans from the time of primordial instruction, just after the great flood and Coyote's creation of Paiute up to the Present.

### **Pahrump Paiute Home Landscape**

The period of significance for the Pahrump Paiute Home Landscape spans from the time of Coyote's creation of Southern Paiute up to the Present.

From an archaeological perspective the earliest dates would liberally be sometime between 10,000 Before Present to the ethnographic present. A conservative archaeological perspective would be from 600 years before present up to the ethnographic present. A historically documented time period of significance would be from the time of Chief Tecopa's leadership (circa 1840s) to the present. It can be assumed that Chief Tecopa inherited his leadership from one of his male relatives.

### **Ma-hav Landscape**

The period of significance for the Ma-hav Landscape is provided in the timetable found at Table 7.

Archaeological evidence that provides dates for material remains (including dating of artifacts from sites within the Ma-hav landscape) has not been conducted.

A historic time period that can be documented in the literature, including oral histories collected for this ethnographic study, starts with John "Stomper" Pete's occupation of Stump Springs, circa 1840 – 1890, up to the present.

## **Eligibility Criteria**

The California Register maintains four criteria for eligibility to the California Register of Historical Resources. These are provided below.

1. Is associated with the events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important to our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

These criteria are applied to the three landscapes described above.

## **Salt Song Landscape**

This landscape is eligible under Criteria 1 at the regional level for its broad contributions to the unique historic events that shape Southern Paiute understanding of the landscape, its mapping through song and movement and the conveyance of the deep oral tradition through the generations for the unborn, living and deceased.

This landscape is eligible under Criteria 3 for its contributions to the production of the salt songs for which, without the salt songs, the high artistic value of the songs would fall flat. Songs sung during a ceremony that moves a group of living people and the deceased through a landscape is most aesthetic and culturally appropriate when the songs are sung in the landscape, as contrasted with being sung for a studio recording or transcribed into musical notation and then heard, read or duplicated by others.

## **Pahrump Paiute Home Landscape**

This landscape is eligible under criteria 1 at the regional level for the broad contributions to the unique historic events that shape Pahrump understanding of their homeland and their ongoing traditions and history that have allowed them to survive, and during particular periods of their existence, flourish in a place that many non-Pahrump would consider harsh, inhospitable, or vastly in need of improvements.

This landscape is eligible under criteria 2 at the regional level for its association with the life and times of Chief Tecopa the first Pahrump Paiute chief that withstood, translated and guided his people through the pressures of a rapidly changing world brought on by the intrusions of other cultures. This association of a leader, his homeland and his fellow people to endure into modern times was passed on generation to generation and endures into the present.

## **Ma-hav Landscape**

This landscape is eligible under Criteria 1 at the local level for the broad contributions to the unique historic events that this landscape provides to the Pahrump Paiute Home landscape in that it provides a unique marginal cultural milieu that spanned the interaction of the first contacts between Pahrump Paiute and non-Pahrump Paiute foreigners such as the Mexican traders, American explores, trappers, and traders; the American and Mormon miners, homesteaders and later American ranchers and business men that came to call the Pahrump Valley either a wayside curiosity or new home.

This landscape is eligible under Criteria 4 at the local level of significance for the potential to yield ethnographic information important to the prehistory and history of the Ma-hav area and specifically the prehistoric archaeological potential that lays beneath and on the surface of the Ma-hav area including the archaeological remains known to exists or that potentially exist in the Ma-hav Landscape.

The Ma-hav landscape contains burials and at least one known cemetery. Normally cemeteries are not eligible to the National Register. However, the burials and cemetery are considered as contributing features of the Ma-hav landscape and lend a sense of longevity to the landscape and rather than render the landscape ineligible actually increase the merits for eligibility.

## **Integrity**

### **Salt Song Landscape**

The Salt Song Landscape has been visually and physically compromised by significant modern developments such as the presence of numerous large cities, towns, military installations, energy generating facilities, mining infrastructure, and other infrastructure such as transportation and transmission corridors. In addition, auditory, olfactory and nightscape experiences have been compromised. The Spring Mountains are surrounded on several sides with incompatible intrusions to traditional religious and cultural practices. To the east/southeast lies the sprawling Las Vegas metropolis. To the north lies Nellis Air Force base. And to the east/northeast lies the town of Pahrump. Across and through this terrain are several major highway corridors and transmission lines. However one major area, lying to the south/southeast, and where the proposed-project and its alternative site are proposed, the landscape is remarkably not marred.

In addition Southern Paiute traditional singers have an obligation to continue this tradition least they void their obligations to the deceased and ultimately to themselves, their yet to be born, and ultimately to their very identity and continuance as a people. No amount of landscape alteration can prevent them from continuing this tradition. However, increased infrastructural intrusions increase the burden and challenges to traditional practitioners to continue traditions vital to their community and related heritage. They consider their landscape to remain aesthetically pleasing despite intrusions due to the beauty, balance and sustenance by which they are provided a unique identity, handed down through generations and originally provided to them in a pact with their creator.

The Salt Song Landscapes maintain integrity of Association, Feeling, Setting, and Location.

### **Pahrump Paiute Home Landscape**

The Pahrump Paiute Home landscape has been compromised by the same modern developments such as the sprawling town of Pahrump. Water from agriculture has significantly lowered the water table resulting in declines of associated plant communities and related animal habitat and population viability. Private property rights have restricted access to important hunting and gathering grounds. The Tribe does not have a land base in order to preserve intact their cultural traditions, and for which they would otherwise be able to take their cultural destiny into their own hands. However sufficient land is in federal ownership, such as the US Forest Service lands in the Spring Mountains, the US Fish and Wildlife Ash Meadows Wildlife Area and designated Bureau of Land Management wilderness areas in the No Pah and Kingston Mountain Ranges, as well as Bureau of Land Management front-country lands that encircle the Pahrump Valley. Because this homeland is intricately tied to Pahrump Paiute identity as a distinct people, no amount of environmental alteration of their lands will deter them from protecting and maintaining their landscape the best that they can. Indeed, one main reason for Pahrump Paiute application for federal recognition is to attain greater leverage in protecting what is their perceived birthright to exist in their homelands, including standing in issues related to the Native American Graves Protection and Repatriation Act.

The Pahrump Paiute Home Landscape maintains integrity of Association, Feeling, Setting, and Location.

### **Ma-hav Landscape**

The Ma-hav landscape has been primarily compromised by the establishment and workings of the Wiley estate and perhaps marginally by the operations of the Front Site Gun Range which sets in the north east portion of the landscape. However these historic and recent alterations are minimal compared to other component landscapes that contribute to the Pahrump Paiute Home Landscape. Areas of the Ma-hav landscape are in Bureau of Land Management ownership and subject to federal management. And one specific area (Stump Springs) is protected as an area of Critical Environmental Concern for its association with Pahrump Paiute cultural values. The Pahrump Paiute People affiliated with the Ma-hav landscape live as close to the property as is possible given that the land is in private ownership by non-Pahrump Paiute people. The Ma-hav Landscape maintains integrity of Association, Feeling, Setting, and Location.

## **PROJECT MITIGATIONS**

Pahrump Paiute feel that their life-ways have been walked upon, stolen, lost, forgotten, rejected, belittled, infringed upon, and otherwise dismissed. In the face of this treatment, Pahrump Paiute also continue to practice as much of their traditional ways as is possible within the current society. They feel like it is still within their reach to maintain their cultural identities and ensuing obligations as traditional Pahrump Paiute while participating in the dominant society. The Pahrump Paiute Tribe continues to seek federal recognition and a tribal land base, including at a minimum, greater tribal involvement in land management planning process, as critical steps to ensure their tribal longevity.

## **Quotes from recent tribal interviews concerning perceived impacts**

The project impact is huge. That does not mean that a traditional ceremony can be held and then the land and spirits will understand once and for all. Confusion will increase and multiply over time and that will accumulate in the burden that the singers and other people will take on year after year.

(Interviewee – Personal Communication)

Bomb testing in the area has contaminated a lot of the desert around Moapa. We are at risk if we go gather plants. There is also the local coal plant that causes environmental problems. So we go to Pahrump Valley (and other areas where Southern Paiute are from) to gather because we think that it is a cleaner environment. (Interviewee – Personal Communication)

Area is also important for fox trail songs. Which is a song that follows the fox, who travels from spring to spring. Putting a high tech facility in the midst of the ceremonial song trail is an invasion of Indian religion. The project area is a religious area. There is not only what the project mirrors and towers will do to the salt song prayers and people but also there will be long term impacts from more people and activity over the course of the project. What actual impacts would be to the Salt Song Trail and if those impacts can be mitigated are something that only certain practitioners can answer. Those answers can only be provided by medicine men or song practitioners. It is suggested that the ethnographer talk with Larry Eddy (Chemehuevi Elder) or Richard Arnold (Pahrump Paiute Singer). (Interviewee – Personal Communication)

There is a real concern about environmental justice and how Southern Paiute people are being disproportionately and adversely impacted by the proposed project. When our cultural landscape is impacted significantly such as will happen with the proposed solar project, life-ways are changed forever and does not allow our people to complete their journey to the afterlife as described in our Salt Songs. (Interviewee – Personal Communication)

Clearly, the Commission must give serious consideration to the timing of the ethnographic interviews and our inability to discuss certain things out of season or during the right time of year. A request to



share this information out of season further compounds the environmental justice concerns of our people. (Interviewee – Personal Communication)

An impact to the song trails would impact all Southern Paiute that need or rely on the Salt Songs trails and related ceremonies (Interviewee – Personal Communication).

### **CEC Staff Preliminary Impact and Mitigation Conclusion**

The impacts of the proposed Hidden Hills Solar Energy Generating Facility project on the three ethnographic landscapes, should it be approved, are anticipated to not be able to be reduced to less than significant. However, California Energy Commission Staff continue to seek ways to lessen impacts in consultation with Native American Tribes affiliated with the proposed project area and the surrounding landscapes.

## REFERENCES

- Anderson, Kat M. 2005. *Tending the Wild: Native American Knowledge and the Management of California's Natural Resources*. University of California Press, Berkeley, California.
- Andress, Donna. 1997. *Eldorado Canyon and Nelson Nevada: Historical Documents, Reminiscences, and Commentary*.
- Apple, Rebecca M. 2005. "Pathways to the Past". *Proceedings of the Society for California Archaeology, Volume 18*. Society for California Archaeology, Riverside, California.
- Arnold, Richard. 2012. Hidden Hills Solar Electric Generating System Ethnographic Study – Pahrump Tribe - Confidential Interview Notes.
- Arnold, Richard, Richard Stoffle, Kathleen Van Vlack, Larry Eddy, Betty Cornelius. 2009. "Nuvagantu, 'Where Snow Sits': Origin Mountains of the Southern Paiutes". *Landscapes of Origin in the Americas: Creation Narratives Linking Ancient Places and Present Communities*. Jessica J. Christie. The University of Alabama Press, Tuscaloosa, Alabama.
- Bettinger, Robert L., Martin A. Baumhoff. 1982. *The Numic Spread: Great Basin Cultures Competition*. The Society for American Archaeology.
- California Indian Assistance Program. 2004. *Field Directory of the California Indian Community*. Department of Housing and Community Development. State of California.
- Cleland, James H. 2004. "Ethnographic Trail Systems and Large-Scale Cultural Landscapes: Preservation and Management Issues". *Exploring the Boundaries of Historic Landscape Preservation: Proceedings of the Twenty-ninth Annual Meeting of the Alliance for Historic Landscape Preservation, Athens*. Cari Goetcheus and Eric MacDonald. Clemson University Digital Press, Clemson, South Carolina.
- Cornett, James W. 2000. *Indians and Desert Animals*. Nature Trails Press, Palm Springs, California.
- Durham, Barabara 2012. Hidden Hills Solar Electric Generating System Ethnographic Study – Timbisha Shoshone Tribe - Confidential Interview Notes
- Fowler, Don D. and Cathrine S. Fowler. 1971. *Anthropology of the Numa: John Wesley Powell's manuscripts on the Numic Peoples of Western North America, 1868-1880*. Smithsonian Contributions to Anthropology Number 14. Smithsonian Institution Press. Washington D.C.
- Guidelines for Evaluation and Documents Traditional Cultural Properties. 1998. National Register Bulletin. U.S. Department of the Interior.
- Hendricks, Don. 2012. Hidden Hills Solar Electric Generating System Ethnographic Study - Pahrump Tribe- Confidential Interview Notes.

[http://en.wikipedia.org/wiki/Las\\_Vegas\\_Tribe\\_of\\_Paiute\\_Indians\\_of\\_the\\_Las\\_Vegas\\_Indian\\_Colony](http://en.wikipedia.org/wiki/Las_Vegas_Tribe_of_Paiute_Indians_of_the_Las_Vegas_Indian_Colony)

<http://lvpaiutetribe.com>

[http://www.cr.nps.gov/history/online\\_books/nps28/28chap10.htm](http://www.cr.nps.gov/history/online_books/nps28/28chap10.htm)

<http://www.fortindependence.com/native.aspx>

<http://www.iisd.org/casl/caslguide/rapidruralappraisal.htm>

[http://www.moapapaiutes.com/about\\_us.htm](http://www.moapapaiutes.com/about_us.htm)

<http://www.nps.gov/ethnography/training/elcamino/phase1.htm#reap>

<http://www.nps.gov/hps/tps/briefs/brief36.htm>

<http://www.nps.gov/nr/publications/bulletins/nrb38/nrb38%20introduction.htm#tcp>

<http://www.timbisha.org/index.htm>

Inter-Tribal Council of Nevada. 1976. *Nuwuvi: A Southern Paiute History*. Published by the Inter-Tribal Council of Nevada.

Jim. 2012. *Pahrump Paiute Tribe General Natural and Cultural Information*. Confidential manuscript in possession of ENERGY COMMISSION Staff.

Jim, Clarabelle, Lorraine Jim and Cynthia Jim Lynch. 2012. Hidden Hills Solar Electric Generating System Ethnographic Study - Pahrump Tribe- Confidential Interview Notes.

Kelly, Isabel T. 1964. *Southern Paiute Ethnography*. University of Utah Press, Salt Lake City, Utah.

Kelly, Isabel T. and Catherine S. Fowler. 1982. *Southern Paiute*. Handbook of North American Indians, Volume 8. Robert F. Heizer. Smithsonian Institution, Washington.

Kessell, John L. 2002. *Spain in the Southwest: A Narrative History of Colonial New Mexico, Arizona, Texas, and California*. University of Oklahoma Press, Norman, Oklahoma.

King, Thomas F. 2003. *Places That Count: Traditional Cultural Properties in Cultural Resource Management*. AltaMira Press, Walnut Creek, California.

Kinlichine, Juantia B. 2012. *Hidden Hills Solar Electric Generating System Ethnographic Study - Moapa Tribe- Confidential Interview Notes*.

Klasky, Philip M. 2009. *The Salt Song Trail Map: The Sacred Landscape of the Nuwuvi People*. The Storyscape Project of the Cultural Conservatory.

From <http://www.nativeland.org/storyscape.html>

- Kroeber, A. L. 1925. *Handbook of the Indians of California*. Dover Publications, Inc., New York.
- Laird, Carobeth. 1976. *The Chemhuevis*. Banning, CA. Malki Press.
- Lawton, Harry W., Philip J. Wilke, Mary DeDecker and William M. Mason. 1976. "Agriculture Among the Paiute of Owens Valley". *The Journal of California Anthropology, Volume 3. Malki Museum Inc., Banning, California*.
- Lee, Vernon. 2012. Hidden Hills Solar Electric Generating System Ethnographic Study – Moapa Tribe- Confidential Interview Notes.
- Lingenfelter, Richard E. 1986. *Death Valley & The Amargosa: A Land of Illusion*. University of California Press, Berkeley, California.
- Lowe, Celeste. 1981. *Chief Tecopa and the "Hikios"*. Article in Old West Magazine.
- MacDonald, Cindy. 2012. *Native American Cultural Resources*. (11-AFC-2, received April 2, 2012).
- McCracken, Robert D. 1992. *Pahrump: A Valley Waiting to Become a City*. Nye County Press, Tonopah, Nevada.
- McCracken, Robert D. 2009. *Manse Ranch: Gateway to the Future*. Nye County Press, Tonopah, Nevada.
- Mendenhall, W. C. 1997. *320 Desert Watering Places in Southeastern California and Southwestern Nevada*. Second edition. Nevada Publications, Las Vegas, Nevada.
- Miller, Lalovi. 2012. Hidden Hills Solar Electric Generating System Ethnographic Study – Moapa Tribe – Confidential Interview Notes.
- Nevada Road & Recreation Atlas*. 2011. Third Edition. Benchmark Maps, Medford, Oregon.
- Pahrump Nevada Genealogical Society. 1998. *Chief Tecopa Cemetery*
- Pahrump Valley Times. April 13, 2012) *Mexico quakes makes waves at Devil's Hole*.
- Prichett, Jack. 2012. The Old Spanish National Historic Trail: A Report on Cultural and Visual Resources in the Near Vicinity of the Proposed Hidden Hills Solar Energy System Plant, Inyo County, California (DOCKET 11-AFC-2).
- Prichett, Jack, Scott Smith. 2012. *The Old Spanish Trail*. Article in Desert Report. Sierra Club of California/Nevada Desert Committee.
- Reeder, Ray M. 1966. *The Mormon Trail: A History of the Salt Lake to Los Angeles Route to 1869*. University Microfilms, Inc., Ann Arbor, Michigan.

- Rhode, David. 2002. *Native Plants of Southern Nevada: An Ethnobotany*. Third edition. The University of Utah Press, Salt Lake City, Utah.
- Roberts, Heidi, Elizabeth von Till Warrne, Suzanne Eskenazi. 2007. *Coyote Named This Place Pakonapanti*. U.S. Fish and Wildlife Service, Desert National Wildlife Refuge.
- Ross, George A. 2012. *Hidden Hills Solar Electric Generating System Ethnographic Study -Pahrump Tribe- Confidential Interview Notes*
- Ross, George A. 2004. Interview with Harry Ford. *George Andrews Ross: Oral History*. Pahrump Valley Museum and Historical Society.
- Southern & Central California Atlas & Gazette*. 2000. Fifth Edition. DeLorme, Yarmouth, Maine.
- Steiner, Harold A. 1999. *The Old Spanish Trail Across the Mojave Desert*. The Haldor Company, Las Vegas, Nevada.
- Stoffle, Richard W., Kathleen Van Vlack, Alex K. Carol, Fletcher Chmara-Huff, and Aja Martinez. 2005. *Yanawant Paiute Places and Landscapes in the Arizona Strip: Volume One of the Arizona Landscapes and Place Name Study*. Bureau of Applied Research in Anthropology, University of Arizona, Tuscon, Arizona.
- Swain, Philbert. 2012. *Hidden Hills Solar Electric Generating System Ethnographic Study - Moapa Tribe- Confidential Interview Notes*.
- Titus, Constandina A. 1986. *Bombs in the Backyard: Atomic Testing and American Politics*. Second Edition. University of Nevada Press, Reno and Las Vegas.
- Toquop Energy 2003 Environmental Impact Statement*. 2003. Bureau of Land Management, U.S. Department of the Interior.
- U.S. Fish & Wildlife Service. 2011. *Ash Meadows: National Wildlife Refuge*.
- Walker, Clifford J. 2009. *Gone the Way of the Earth: Indian Slave Trade in the Old Southwest*. Mojave River Valley Museum Association, Barstow, CA.
- Waring, G.A. 1920. *Ground Water in Pahrump, Mesquite, and Ivanpah Valleys, Nevada, and California*. In: *Contributions to the Hydrology of the United States, Water-supply Paper 450*. 1921, United States Geological Survey Department of the Interior. Washington Government Printing Office. Washington DC.
- Wheeler, George M. 1876. *Annual Report on the Geographical Surveys West of the One Hundredth Meridian in California, Nevada, Utah, Colorado, Wyoming, New Mexico, Arizona, and Montana: Being Appendix (sp) JJ of the Annual Report of the Chief Engineer, Atlas Sheet No. 66*. U.S. Government Printing Office, Washington.
- Zanjani, Sally S. 1994. *Jack Longstreet: Last of the Desert Frontiersmen*. Nevada Publications, Nevada.

## **APPENDICES**

### **Appendix 1 - Acronym List**

- **AFC**                      Application for Certification
- **BLM**                     Bureau of Land Management
- **ENERGY COMMISSION**                      California Energy Commission
- **CFR**                     Code of Federal Regulations
- **HHSEGS**                Hidden Hills Solar Electric Generating System
- **MW**                     Megawatts
- **NAHC**                  Native American Heritage Commission
- **NPS**                    National Park Service
- **REAP**                  Rapid Ethnographic Assessment Procedures
- **SMSG**                 Solar Receiver Steam Generator
- **TCP**                    Traditional Cultural Properties

## **Appendix 2 - List of Springs Culturally Important to the Pahrump Paiute Tribe**

- Appaloosa Spring
- Ash Meadows (Kooitsi)
- Aztec Tank
- Big Spring
- Big Timber Spring
- Bill Smith Springs
- Bird Spring
- Bitter Springs [Auqa deTomaso by Fremont]
- Bole Spring
- Browns Spring
- Buck Spring
- Cave Spring
- CC Spring
- Chappo Spring
- Coal Spring
- Cold Creek Spring
- Cougar Spring
- Crystal Spring
- Debert Spring
- Deer Creek Spring
- Devil's Hole (Poobitsi)
- Fairbanks Spring
- Gold Spring
- Grapevine Spring
- Greasewood Spring
- Harris Spring
- Horseshutem Spring
- Horse Spring (Padapunitsi)
- Horsethief Spring
- Jack Rabbit Springs
- Jaybird Spring
- Kiup Spring
- Kwichup spring
- Last Cabin Spring
- Last Chance Spring
- Lee Spring
- Longstreet Spring
- Mammy Spring
- Manse Spring
- Mason Spring
- Mazie Spring
- Mexican Spring
- Mound Spring
- Mountain Spring

- Mud Spring
- Mule Spring (Pavis)
- Ninety-nine Spring
- Pahump Spring
- Peak Springs
- Point of Rock Spring
- Potosi Spring
- Prospect Springs
- Rainbow Spring
- Resting Spring (Yaga)
- Rock Spring
- Rogers Spring
- Rose Spring
- Rosebud Spring
- Santa Cruz Spring
- Saratoga Springs
- Shoshone Springs
- Six Mile Spring
- Stanley Springs
- Stump Spring (Tsapingpisa)
- Trout Spring
- Tule Spring (Tisivasi)
- Twelvemile Spring
- Warner Spring
- Wheeler Wells
- Whiskey Spring
- Willow Spring
- Wilson Tank
- Wood Canyon Spring
- Yount Spring



## **Appendix 3 - List of Plants Culturally Important to the Pahrump Paiute Tribe**

### Trees

- Curlleaf Mountain Mahogany (*Cercocarpus Ledifolius*) [dunumbe]
- Gambel's Oak (*Quercus Gambelii*)
- Goodding's Willow (*Salix Gooddingii*)
- Sandbar Willow (*Salix Exigua*) [sa-ga-ve]
- Screwbean Mesquite (*Prosopis Pubescens*)
- Singleleaf Ash (*Fraxinus Anomala*) [ya-peep-a]
- Singlelead Pinyon Pine (*Pinus Monophylla*)
- Utah Juniper (*Juniperus Osteosperma*)
- Velvet Ash (*Fraxinus Velutina*)
- Western Honey Mesquite (*Prosopis Glandulosa*) [o-pimb]

### Large Shrubs and Woody Vines

- Anderson's Wolfberry (*Lycium Andersonii*) [bush-hoop-pi-ve, berries-hupoo]
- Arrowweed (*Pluchea Sericea*) [sah-wape]
- Big Sagebrush (*Artemisia Tridentata*) [sa-wa-ve]
- Blue Elderberry (*Sambucus Cerulea-Cerulea*) [kon-vee]
- Canyon Grape (*Vitis Arizonica*)
- Creosote Bush (*Larrea Tridentata*) [yatumbi]
- Desert Bitterbrush (*Purshia Glandulosa*) [hunupi]
- Desert Snowberry (*Symphoricarpos Longiflorus*)
- Fourwing Saltbush (*Atriplex Canescens*) [cha-upive]
- Fremont's Dalea (*Psorothamnus Fremontii*)
- Gooseberry (*Ribes*)
- Greasewood (*Sarcobatus Vermiculatus*)
- Green Mormon Tea (*Ephedra Viridis*)
- Lemonade Berry (*Rhus Trilobata*)
- Nevada Smokebush (*Psorothamnus Polydenius*)
- Nevada Jointfir (*Ephedra Nevadensis*)
- Rubber Rabbitbrush (*Ericameria Nauseosa*)
- Shadscale (*Atriplex Confertifolia*) [kakumba]
- Skunkbush Sumac (*Rhus Trilobata*) [bush-suh-vamp, berries-eissia]
- Stansbury Cliffrose (*Purshia Stansburiana*)
- Utah Serviceberry (*Amelanchier Utahensis*)
- Woods' Rose (*Rosa Woodsii*, *Ultramontana*)

### Small Shrubs and Subshrubs

- Brittlebush (*Encelia Farinosa*)
- Broom Snakeweed (*Gutierrezia Sarothrae*)
- Brownplume Wirelettuce (*Stephanomeria Paucifloar*)
- Desert Globe Mallow (*Sphaeralcea Ambigua*) [kuku-pa-ni-ve]
- Desert Prince's Plume (*Stanleya Pinnata*) [tumani] [tumar]
- Devil's Claw
- Littleleaf Ratany (*Krameria Erecta*) [nagavarodam]

- Mojave Seablite (*Suaeda Moquinii*)
- Mountain Sagewort (*Artemisia Ludoviciana*)
- Purple Sage (*Salvia Dorrii*) [se-gwe-yan]
- Threadleaf Snakeweed (*Gutierrezia Microcephala*)
- Turpentine Broom (*Thamnosma Montana*) [moo-ga-hu-pe]
- Winterfat (*Krascheninnikovia Lanata*)

#### Yuccas and Agaves

- Banana Yucca (*Yucca Baccata*) [ochive]
- Joshua Tree (*Yucca Brevifolia*)
- Mojave Yucca (*Yucca Schidigera*) [chumba]
- Utah Agave (*Agave Utahensis*) [yan-da]

#### Cacti

- Beavertail Pricklypear (*Opuntia Basilaris*) [navumb]
- Cottontop Cactus (*Echinocactus Polycephalus*) [thamave]
- Golden Cholla (*Opuntia Echinocarpa*)
- Hedgehog Cactus (*Echinocereus Engelmannii*) [hu-siv-vich]
- Mojave Pricklypear (*Opuntia Erinacea*)

#### Herbaceous Plants

- Annual Turtleback (*Psathyrotes Annua*)
- Bristly Fiddleneck (*Amsinckia Tessellata*) [tho-wa-wi-ve]
- Chia (*Salvia Columbariae*) (pasits)
- Clustered Broomrape (*Orobanche Fasciculata*)
- Coyote Green Tobacco (*Nicotiana Attenuate*) [ko-a-pe] [saxwaxoapi]
- Crimson Columbine (*Aquilegia Formosa*)
- Desert Broomrape (*Orobanche Cooperi*)
- Desert Larspur (*Delphinium Parishii*)
- Desert Milkweed (*Asclepias Erosa*)
- Desert Rockcress (*Arabis Pulchra*)
- Desert Sand Verbena (*Abronia Villosa*)
- Desert Tobacco (*Nicotiana Obtusifolia*)
- Desert Trumpet (*Eriogonum Indlatum*) [papa-kumba]
- Earth Tobacco (*Nicotiana Trigonophylla*) [tinkoapi]
- Entireleaved Thelypody (*Entireleaved Thelypody*) [na-bitā]
- Evening Primrose (*Oenothera*)
- Firecracker Penstemon (*Penstemon Eatonii*)
- Flatbud Prickly Poppy (*Argemone munita*) [tu-vi-kai-ve]
- Goosefoot (*Chenopodium*)
- Hearleaf Twistflower (*Streptanthus Cordatus*)
- Indian Hemp (*Apocynum Cannabinum*)
- Indian Paintbrush (*Castilleja Angustifolia*) [inip-ma-tho-rup]
- Longleaf Phlox (*Phlox Longifolia*)
- Mexican Whorled Milkweed (*Asclepias Fascicularis*)

- Mojave Prickly Poppy (*Argemone corymbosa*)
- Mojave Thistle (*Chamaesyce Albomarginata*) [chuvia]
- Mojave Woodyaster (*Xylorhiza Torifolia*)
- New Mexico Thistle (*Cirsium Mohavense*)
- Palmer's Penstemon (*Penstemon Palmeri*)
- Peace Tobacco (*Nicotiana Quadrialvis*)
- Prairie Flax (*Linum Lewisii*)
- Showy Milkweed (*Asclepias Speciosa*)
- Silver Rockcress (*Arabis Puberula*)
- Skyrocket Gilia (*Ipomopsis Aggregata*) [shovia navayuna]
- Stinging Nettle (*Urtica Dioica*)
- Tansy Mustard (*Descurainia Pinnata*) [akive]
- Thorn Apple (*Datura Wrightii*)
- Transmontane Sand Verbena (*Abronia Turbinata*)
- Travel Tobacco (*Eriogonum Inflatum*) [papakuarimpi]
- Velvet Trutleback (*Psathyrotes Ramosissima*)
- Whitemargin Sandmat (*Chamaesyce albomarginata*)
- Whitestem Blazingstar (*Mentzelia Albicaulis*) [ko-ka]
- Willow Dock (*Rumex Salicifolius*)
- Woolly Bluestar (*Amsonia Tomentosa*)
- Yerba Mansa (*Anemopsis Californica*)

#### Grasses and Grasslike Plants

- Baltic Rush (*Juncus Balticus*) [pai'sive]
- Basin Wild Rye (*Leymus Cinereus*)
- Broadleaf Cattail (*Typha Latifolia*) [to'awve]
- Common Reed (*Phragmites Australis*) [pa-wy-um-ba]
- Desert Needlegrass (*Achnatherum Speciosum*) [howuve]
- Indian Ricegrass (*Achnatherum Hymenoides*) [wai'wave]
- Inland Saltgrass (*Distichlis Spicata*)
- Southern Cattail (*Typha Latifolia*)

#### Bulb Plants

- Desert Hyacinth (*Dichelostemma Pulchellum*)
- Nevada Onion (*Allium Nevadense*) [nin-young]
- Winding Mariposa Lily (*Calochortus Flexuosus*) [se-go-a]

## **Appendix 4 - List of Animals Culturally Important to the Pahrump Paiute Tribe**

### **Mammals**

- American Badger (Taxidea Taxus) [huni]
- Antelope Ground Squirrel (Ammospermophilus Leucurus) [tavats]
- Audubon's Desert Cottontail (Sylvilagus Audubonii) (Tavuts)
- Badger (Taxidea) (Tukuputs)
- Black-tailed Deer (Odocoileus Hemionus) (Tuhuee)
- Black-tailed Jack Rabbit (Lepus Californicus) (Kaam)
- Bobcat (Lynx Rufus) [tuki]
- Botta Pocket Gopher (Thomomys Bottae)
- Coyote (Canis Latrans) [Shin-nav] (Sacred)
- Deer Mouse (Peromyscus)
- Desert Big Horn Sheep (Ovis Canadensis Nelsoni)
- Desert Kit Fox (Vulpes Macrotis) [yipats]
- Desert Tortoise
- Desert Woodrat (Neotoma Lepida) [kaatsi]
- Golden Mantled Ground Squirrel (Spermophilus Lateralis) [oitsats]
- Gray Fox (Urocyon) [honsi]
- Kangaroo Rat (Dipodomys) [paii]
- Merriam Kangaroo Rat (Dipodomys Merriami)
- Mountain Lion (Felis Concolor) [tukumumunts]
- Mule Deer
- Muskrat (Ondatra Zibethicus)
- Pocket Gopher (Thomomys) [mii]
- Pocket Mouse (Perognathus Longimembris) [puintcats]
- Porcupine (Erethizon Dorsatum) [yingi]
- Pronghorn, Bear
- Raccoon (Procyon Lotor) [yamasi]
- Red Fox
- Rock Squirrel (Spermophilus Variegatus) [sikuts]
- Skunk (Mephitis) [ponia]
- White-tailed Antelope Squirrel (Ammospermophilus Leucurus)
- Wolf (Canis lupus) [tiwats] (Sacred) (Indian Legend)
- Woodrat

### **Birds**

- American Crow (Corvus Brachyrhynchos)
- American Kestrel (Falco Sparverius)
- Anna's Hummingbird (Calypte Anna)
- Ash-throated Flycatcher (Myiarchus Cinerascens)
- Bats (Microtus) [patsatsi]
- Barn Owl (Tyto Alba)
- Barn Swallow (Hirundo Rustica)
- Bendire's Thrasher (Toxostoma Bendirei)

- Black-headed Grosbeak (*Pheucticus Melonoccephalus*)
- Black Phoebe (*Sayornis Nigricans*)
- Black-tailed Gnatcatcher (*Poliophtila Melaneura*)
- Black-throated Sparrow (*Amphispiza Bilineata*)
- Blue-gray Gnatcatcher (*Poliophtila Caerulea*)
- Brewer's Sparrow (*Spizella Breweri*)
- Bullock's Oriole (*Icterus Bullockii*)
- Burrowing Owl (*Athene Cunicularia*)
- Cactus Wren (*Campylorhynchus Brunneicapillus*)
- Chipping Sparrow (*Spizella Passerina*)
- Common Poorwill (*Phalaenoptilus Nuttalli*)
- Common Raven (*Corvus Corax*)
- Cooper's Hawk (*Accipiter Cooperii*)
- Costa's Hummingbird (*Calypte Costae*)
- Dusky Flycatcher (*Empidonax Oberholseri*)
- Eurasian Collared-Dove (*Streptopelia Decaocto*)
- European Starling (*Sturnus Vulgaris*)
- Ferruginous Hawk (*Buteo Regalis*)
- Gambel's Quail (*Callipepla Gambelii*)
- Golden Eagle (*Aquila Chrysaetos*)
- Gray Flycatcher (*Empidonax Oberholseri*)
- Great Blue Heron
- Great Horned Owl
- Greater Roadrunner (*Geococcyx Californianus*) (uh-ss)
- Horned Lark (*Eremophila Alpestris*)
- House Finch (*Carpodacus Mexicanus*)
- Killdeer
- Lark Sparrow (*Chondestes Grammacus*)
- LeConte's Thrasher (*Toxostoma Lecontei*)
- Lesser Goldfinch (*Spinus Psaltria*)
- Lesser Nighthawk (*Chordeiles Acutipennis*)
- Loggerhead Kingbird
- Loggerhead Shrike (*Lanius Ludovicianus*)
- Mountain Bluebird (*Sialia Currucoides*)
- Mourning Dove (*Zenaida Macroura*)
- Northern Flicker (*Colaptes Auratus*)
- Northern Harrier (*Circus Cyaneus*)
- Northern Mockingbird (*Mimus Polyglottos*)
- Northern Rough-winged Swallow (*Stelgidopteryx Serripennis*)
- Pinyon Jay (ahung)
- Phainopepla (*Phainopepla Nitens*)
- Prairie Falcon (*Falco Mexicanus*)
- Purple Martin (*Progne Subis*)
- Red-tailed Hawk (*Buteo Jamaicensis*)
- Rock Pigeon (*Columba Livia*)

- Rock Wren (*Salpinctes Obsoletus*)
- Sage Sparrow (*Amphispiza Belli*)
- Sage Thrasher (*Oreoscoptes Montanus*)
- Say's Phoebe (*Sayornis Saya*)
- Scott's Oriole (*Icterus Parisorum*)
- Tree Swallow (*Tachycineta Bicolor*)
- Turkey Vulture (*Cathartes Aura*)
- Violet-green Swallow (*Tachycineta Thalassina*)
- Western Kingbird (*Tyrannus Verticalis*)
- Western Meadowlark (*Sturnella Neglecta*)
- White-crowned Sparrow (*Zonotrichia Leucophrys*)
- White-throated Sparrow (*Zonotrichia Albicollis*)
- White-throated Swift (*Aeronautes Saxatalis*)
- Yellow-headed Blackbird (*Xanthocephalus Xanthocephalus*)
- Yellow-rumped Warbler (*Dendroica Coronata*)

#### Reptiles

- Chuckwalla (*Sauromalus Ater?* or *Obesus?*) [tsawadi]
- Coachwhip Snake (*Masticophis Flagellum*)
- Common Collared Lizard (*Crotophytus Callarus*)
- Desert Iguana (*Dipsosaurus Dorsalis*)
- Desert Tortoise (*Gopherus Agassizii*) [aiya]
- Glossy Snake (*Arizona Elegans*)
- Great Basin Gopher Snake (*Pituophis Catenifer*)
- Horney Toad
- Lizards
- Long-nosed leopard Lizard (*Gambelia Wislizenii*)
- Long-nosed Snake (*Rhinocheilus Lecontei*)
- Mojave Western Patch-nosed Snake (*Salvadora Hexalepis Mojavensis*)
- Northern Mojave Rattlesnake (*Crotalus Scutulatus Scutulatus*)
- Side-blotched Lizard (*Uta Stansburiana Stejnegeri*)
- Sidewinder (*Crotalus Cerastes*)
- Speckled Rattlesnake (*Crotalus Mitchellii*)
- Southern Desert Horned Lizard (*Phrynosoma Platyrhinos Califarium*)
- Western Fence Lizard (*Sceloporus Occidentalis*)
- Western Whiptail (*Aspidoscelis Tigris*)
- Zebra-tailed Lizard (*Callisaurus Draconoides*)

## **Appendix 5 - List of Mountains Culturally Important to the Pahrump Paiute Tribe**

- Avawats Mountains
- Bare Mountains
- Black Mountain South (Tigimi)
- Eagle Mountain (Puuwin)
- Funeral Mountain South (Isigumpi)
- Greenwater Range
- Ivanpah
- Kingston Mountain (Mogwa)
- La Madre Mountain (Soneuwa)
- Lee Canyon (Tinainabi)
- Lizard Mountain
- McCullough Range North (tiniuhubi)
- Mount Charleston Peak (Nivaganti)
- Mount Potosi
- Mount Stirling
- New York Mountain
- Nopah Mountain (Tsongkwapi)
- North Mesquite Mountains
- Old Woman Mountains (Mamapukaib)
- Paiute Range (Ampanikaiva)
- Providence Mountain (Timpisagwats)
- Providence Mountain Middle (Agaisavantakaibi)
- Providence Mountain North (Asoatunukwitsi)
- Resting Spring Mountains
- Sheep Range (Tuhuti)
- Spring Mountain Range
- Sunrise Mountain (Tasiakaib)
- Turtle Mountains (Nantapiaganti)

## **Appendix 6 – Historic Photographs of Hidden Hills Area**

All photo descriptions from University of Nevada Las Vegas Special Collections.

1. Hidden Ranch Camp. n.d.
2. Summer Camp - Man and Woman Standing in front of a brush house, shade shelter at one end. Man probably Chief Tecopa n.d.
3. Two Indian Women seated in wicker chairs. Manse or Hidden Hills. n.d.
4. Four Indian children in front of cottonwood tree, Manse of Hidden Ranch. n.d.
5. Three Indian children, Manse or Hidden Ranch. n.d.
6. Chief Tecopa. n.d.
7. Page 6 of Pahrump Valley Times, "Me Chief Tecopa..." January 1971.
8. John Yount's home on the Hidden Ranch, now known as the Hidden Hills Ranch, about 1917
9. Homestead house constructed on John Yount's homestead located at the south end of Pahrump Valley. The house looked pretty much as it does here when Roland Wiley acquired John Yount's ranch in 1936.
10. In 1941, Roland constructed the airstrip pictured here near his ranch in Pahrump Valley.
11. Aerial view of the Hidden Hills Ranch. 1980.
12. Willow trees bordering both sides of the first road that led to the old Yount Ranch, also known as the Hidden Ranch or Hidden Hills Ranch. 1937.
13. Hoot Gibson, a western cowboy actor, and Mrs. Elderbrook, then crowned Mrs. America, landing on Roland Wiley's Hidden Hills Ranch airstrip, early 1950s.
14. Visitors at the Hidden Hills Ranch. Hoot Gibson is standing behind the hitching post shaking hands with Murdell Earl, owner of the ENT Drug Store in North Las Vegas. 1950s
15. Hidden Hills Ranch, Pahrump Valley, Nevada. The remains of a fireplace believed to have been constructed by the Indians. Left to right: Ruth Elderbrook; unidentified; unidentified; Frank Elderbrook. Bob Lee remembered seeing these two fireplaces when he was a child. Circa 1950.
16. Cathedral Canyon in Hidden Hills Ranch. Roland Wiley is on left in white shirt; Mr. Elderbrook, from Palm Springs, is in the foreground in the white hat. Mrs. Elderbrook and Hoot Gibson's wife are also pictured. Between 1950 and 1960.
17. Fred Kennedy, riding a gaited horse owned by Roland Wiley at Cathedral Canyon Hidden Hills Ranch. Approximately 1939.
18. Mummified remains of an Indian renegade known as Queho. Standing second from left is Frank White, a member of the posse that initially searched for Queho. 1940s.
19. A view of a truck, farm workers, and melons grown on the Roland Wiley's Hidden Hills Ranch. 1967
20. 15 acres of Roland Wiley's land holdings on the California side of the Pahrump Valley were planted in melons. Part of the irrigation system and the crop from that enterprise are shown. 1967.
21. Unidentified persons and melons grown on the California side of Roland Wiley's Ranch. 1967
22. Dora Lee Brown and her granddaughter at Dora's place on the Yount (Hidden Hills) Ranch, Circa 1940.
23. Granddaughter of Dora Lee Brown near spring at Dora's place on the Yount (Hidden Hills) Ranch. Circa 1940





Hedden Ranch Camp

*Summer Camp*











"...YOU GOT TWO-BITS?"

## "Me Chief Tecopa" 99

by  
Stanley W. Puhar  
Author of  
"Nevada Ghost Towns  
& Mining Camps"

Pahrump Valley's oldest ranch is the Manse, located near the Nye-Clark County line, alongside the paved road. In the accompanying picture, the son of the founder of the Manse, San Yount, is engaged in a game of pool with another well-known desert character of this area, Chief Tecopa, at right.

He is attired in his habitual dress — shoeless, but with top hat and vest. He begged his way through life and it is said that he bathed only annually.

Around the turn of the century, Chief Tecopa frequently hung out around the station of the California Eastern Railway at Manvel, Calif., about 40 miles south of Pahrump and 15 miles west of Searchlight. He used to meet the trains coming in from Goffs, near Needles, on the Santa Fe Railroad main line. There he liked to beg for change to buy food or whiskey.

Capt. Ray Gibson, now 85 and retired from the desert, saw Chief Tecopa in action, and relates the following description: "I saw a man with a pair of high boots, he knew that he was an engineer and would have a lot of money. Tecopa liked three buckled boots better than two buckled boots, believing that the richer engineers had more buckles.

So he would walk up to an engineer and say, 'Me Chief Tecopa, Palate Indian. Great friend of '49ers. Me fight Shoshone. Doctor say got tuberculosis. Me 106 years old. Pretty soon die. You got two bits?' In this way he was able to sustain himself.

Every fall he would go to Los Angeles where he met a banker friend who used to take him to a good Turkish bath. His clothes would be stiff with dirt.

He would return to the desert the happiest man alive because he would have a new outfit on. He wore a swallow-tailed coat, a hat with a big rosette on the side, a white tie, a white shirt and striped pants.

The last year Gibson saw Tecopa, around 1904, he had gone into Los Angeles to see his old banker friend, but the banker had gone to Europe. Tecopa went into the bank as usual, and the other tellers all knew him, but none of them had any authority to give him anything. So he continued to hang around the bank.

This was during the time of the year when the bank was counting its money.

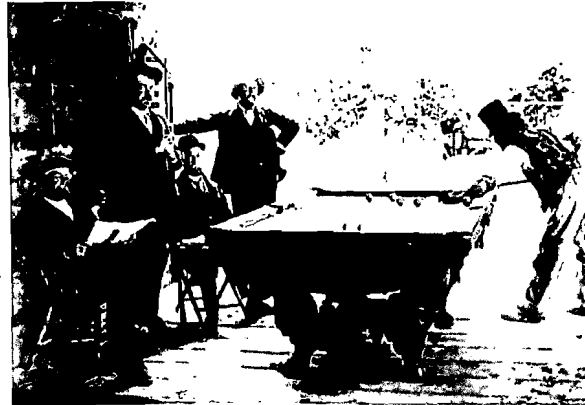
Gold coins were stuck all over the place.

Tecopa kept asking about the whereabouts of his friend, and the bankers ignored him.

fast. Bacon, egg, good bread, nice coffee. All fine.

That was Chief Tecopa's idea of a jail. He reportedly died about 1905, at age of over 100. Gibson said he

looked about 200. He had millions of wrinkles and squinted. You could hardly see what color his eyes were. He had a face you'd never forget.



"Where Mr. Dutton?" he would ask.

"He's in Europe."

"Where Europe?"

"Maybe 30 days east."

"When he come back?"

"I don't know."

And so the old Chief kept waiting around and getting in the way. Finally the cashier took \$2.50 out of his own pocket and sent it across the counter to Tecopa, hoping he would leave.

But Tecopa wasn't satisfied. He said, "Big money store! You keep 'em."

Because Tecopa would not leave, the cashier then called the police.

When Tecopa returned to the desert, here's the story he told Gibson:

"Police came...big strong man...take me to fine hotel. Bars. No one get you. Fine grub...fine dinner...break-

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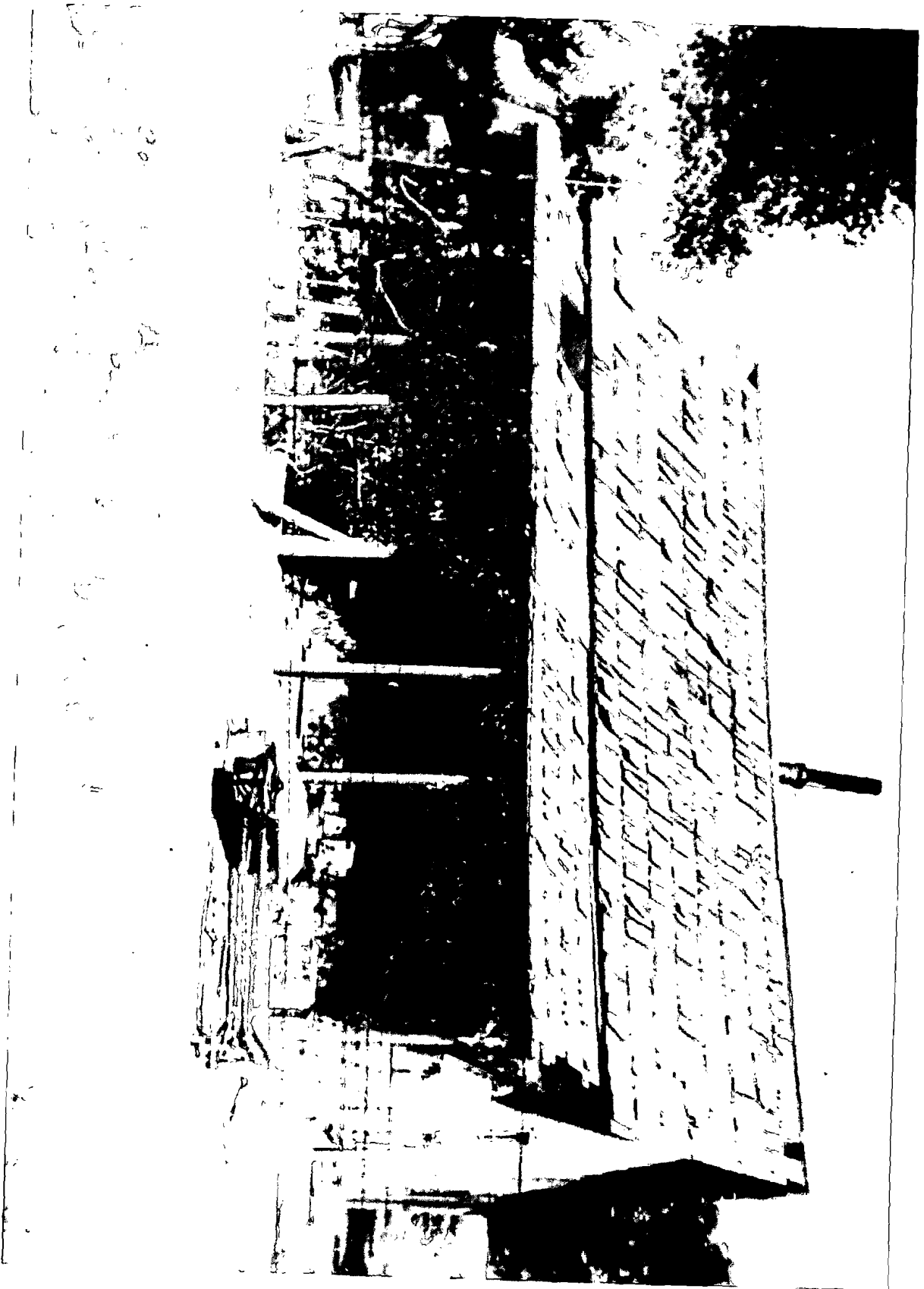
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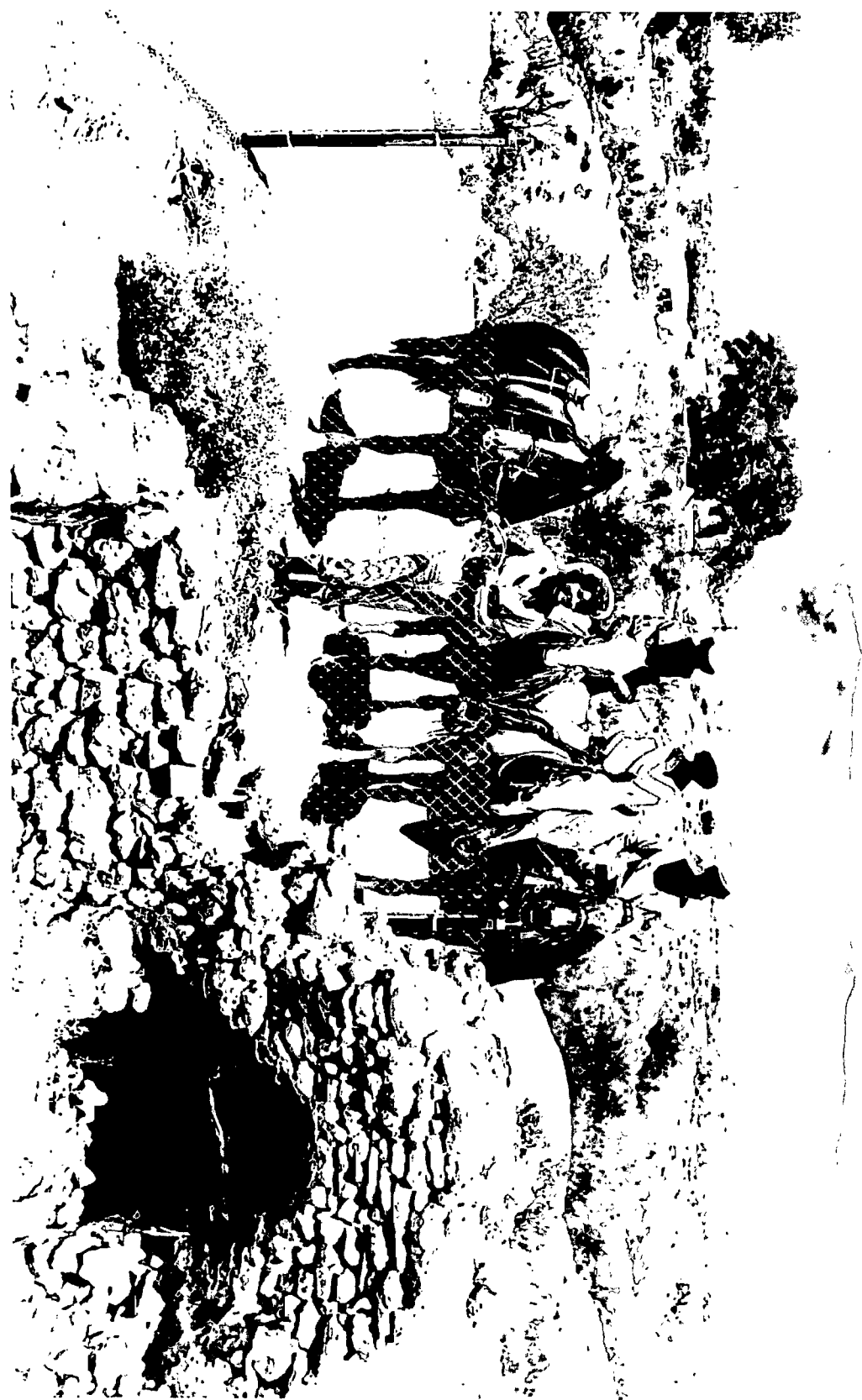












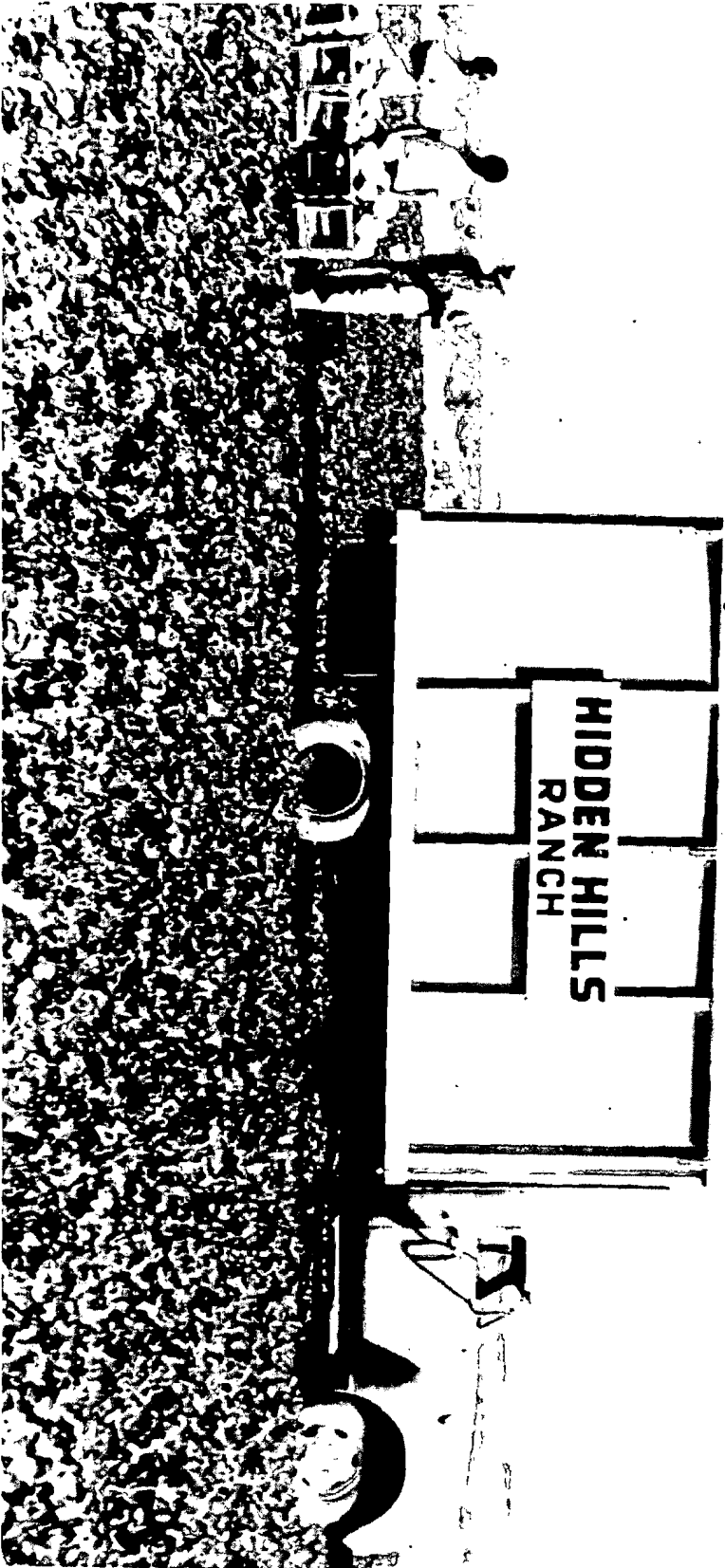
Hidden Hills Ranch Cottages.  
located 150' from entrance to famous  
because of many similarities to the old  
natural fireplaces etc. recently found  
now lighted and preserved with lights, entrance  
hidden Hills Ranch Cottages.

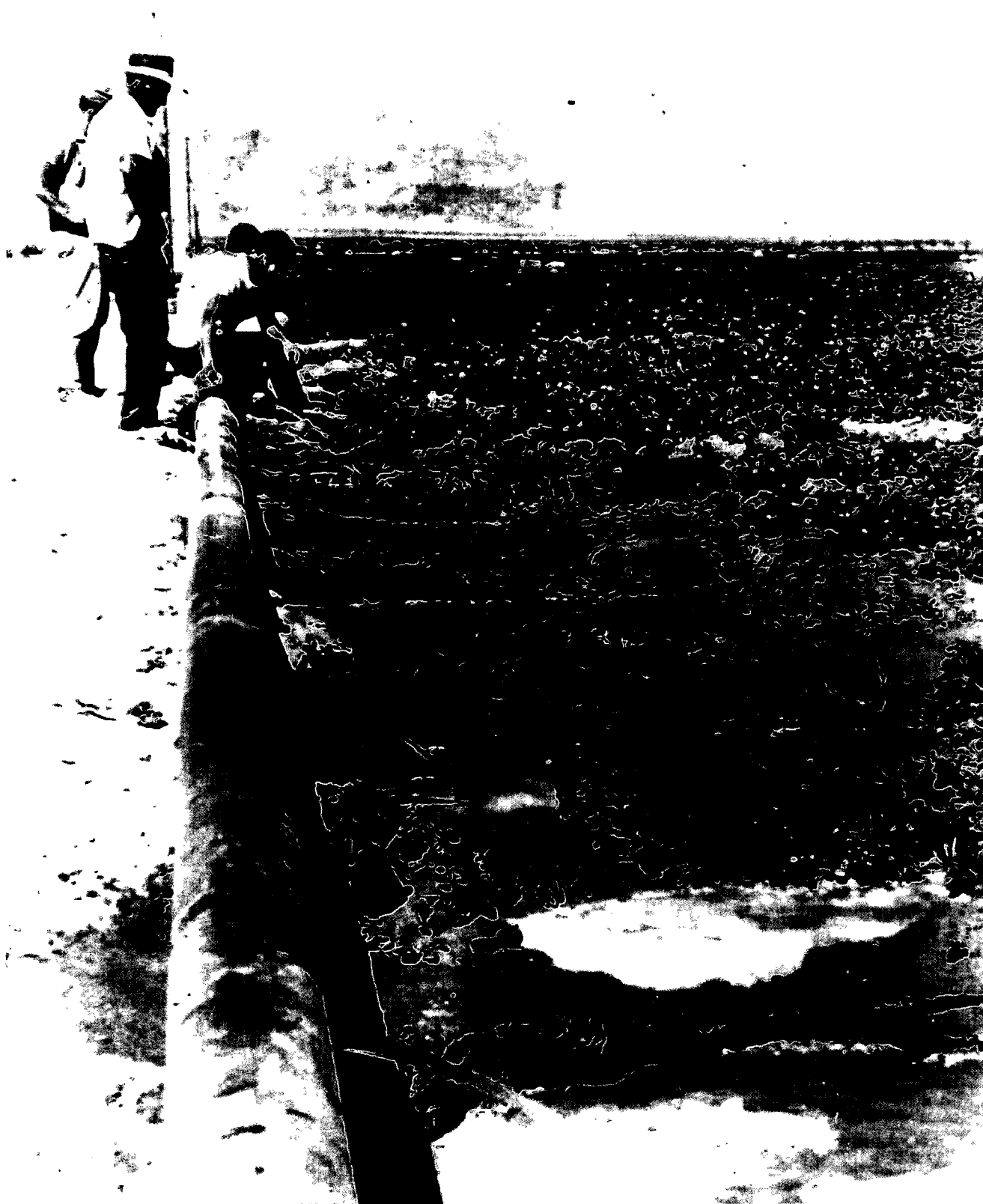




















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**APPLICATION FOR CERTIFICATION FOR THE  
HIDDEN HILLS SOLAR ELECTRIC  
GENERATING SYSTEM**

**DOCKET NO. 11-AFC-02  
PROOF OF SERVICE  
(Revised 8/14/12)**

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### **DECLARATION OF SERVICE**

I, Raquel Rodriguez, declare that on August 17, 2012, I served and filed copies of the attached Hidden Hills Solar Electric Generating Systems – California Energy Commission Ethnographic Report with New Redacted Appendix A, dated August, 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at: [www.energy.ca.gov/sitingcases/hiddenhills/index.html](http://www.energy.ca.gov/sitingcases/hiddenhills/index.html).

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit or Chief Counsel, as appropriate, in the following manner:

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***OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:***

       Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission

Michael J. Levy, Chief Counsel

1516 Ninth Street MS-14

Sacramento, CA 95814

[michael.levy@energy.ca.gov](mailto:michael.levy@energy.ca.gov)

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

**Originally Signed**

Raquel Rodriguez

Siting, Transmission and Environmental Protection Division

