MANAGEMENT SUMMARY

The Gordon Acres Water Company proposes construction and continued maintenance of the Water Systems Improvement Project (Project) in the town of Lucerne Valley in San Bernardino County, California. On behalf of Gordon Acres Water Company, Applied EarthWorks, Inc. (Æ) conducted a Phase I architectural resource investigation for the Water System Improvements Project. The proposed Project requires the approval of the California State Water Resources Control Board and will be funded by the Safe Drinking Water State Revolving Fund, a joint federal-state program; therefore, it is subject to both Section 106 of the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA).

The Area of Potential Effects (APE) per NHPA and the Project Area according to CEQA include approximately 6 miles of proposed pipeline alignments, four pressure-reducing stations, two water tank sites, four potential staging/lay down areas, five well sites, one proposed pump station, and a second pump station to be abandoned or destroyed and replaced with a pressure-reducing station. Since the APE includes the CEQA designated Project Area, "APE" is utilized to refer to both throughout this report.

This architectural investigation included background research and a combination intensive- and reconnaissance-level survey of the APE. The purpose of the investigation was to determine the potential for the proposed Project to impact historic properties/historical resources as defined in the NHPA and CEQA, respectively.

The literature and records search performed at the South Central Coastal Information Center (SCCIC) of the California Historical Resources Information System at California State University, Fullerton, indicated that eight cultural resources have been documented within a 0.5-mile radius of the APE. Two of these are built-environment resources located within the APE.

The survey resulted in the discovery of two previously documented built-environment resources and two newly identified structures within the APE. The previously identified resources are East End Road (CA-SBR-28488H) and a segment of Camp Rock Road (CA-SBR-15185H). The newly identified resources are historic-period water systems. The Gordon Acres Water Company system was installed in 1954, and the Jubilee Mutual Water Company System in 1956. A significance evaluation indicates that the cultural resources are not recommended as eligible for listing on the California Register of Historical Resources (CRHR) or the National Register of Historic Places (NRHP). No further cultural resource management is recommended at this time for the Project.

Field notes and photographs documenting the current investigation are on file at Æ's Hemet office. A copy of the final report will be placed on file at the SCCIC.

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APPENDICES

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1
INTRODUCTION

The Gordon Acres Water Company proposes construction and continued maintenance of the Water Systems Improvement Project (Project) in Lucerne Valley in San Bernardino County, California (Figure 1-1). On behalf of Gordon Acres Water Company, Applied EarthWorks, Inc. (Æ) conducted an architectural resource investigation for the Water System Improvements Project. Æ's Senior Architectural Historian, M. Colleen Hamilton, M.A., served as principal investigator and oversaw the background research, resource identification, and evaluation. Staff Architectural Historian, Annie McCausland, M.A., completed research and identification of the resources. Hamilton and McCausland co-authored this report. Managing Principal, Amy Ollendorf, Ph.D., completed senior review for quality control.

1.1 PROJECT LOCATION AND DESCRIPTION

The Project covers approximately 140.5 acres of land located in the town of Lucerne Valley, San Bernardino County, California. As such the Project is located within Sections 10–16, 21, 22, and 27 in Township 4 North, Range 1 East, San Bernardino Baseline and Meridian, as depicted on the Lucerne Valley and Cougar Buttes, CA 1971 7.5-minute U.S. Geological Survey (USGS) quadrangle maps (USGS 1971a and 1971b) (Figure 1-2). Specifically, the Project includes existing county roads: Camp Rock Road, Clark Street, Joshua Avenue, Foothill Road, Sutter Road, Blackhawk Trail, Anza Trail, Chickasaw Trail, Old Woman Springs Road (State Route 247), East End Road, Dido Avenue, Houston Street, Ables Street, Porter Street, and Dallas Avenue. Elevations range from approximately 2,952 to 3,350 feet above mean sea level.

1.2 AREA OF POTENTIAL EFFECTS (APE)

For the purposes of this investigation, the APE encompasses the full limits of proposed ground-disturbing improvements, including all areas that may require subsurface work, utility relocation, and construction staging (Figure 1-2). Since the APE includes the CEQA designated "Project Area," APE is utilized to refer to both throughout this report. In assessing the APE for built-environment resources, Æ also considered visual, vibratory, and auditory impacts. The APE is three-dimensional and includes any impact above ground, below ground, and indirect impacts to adjacent resources.

As illustrated on Figure 1-1, the Project as presently designed involves the following improvements:

- Installation of approximately 6 miles of new pipeline alignments. These will parallel segments of existing paved main roads in addition to the various roads in each of the residential development tracts of the Gordon Acres Water Company and Jubilee Mutual Water Company service areas.

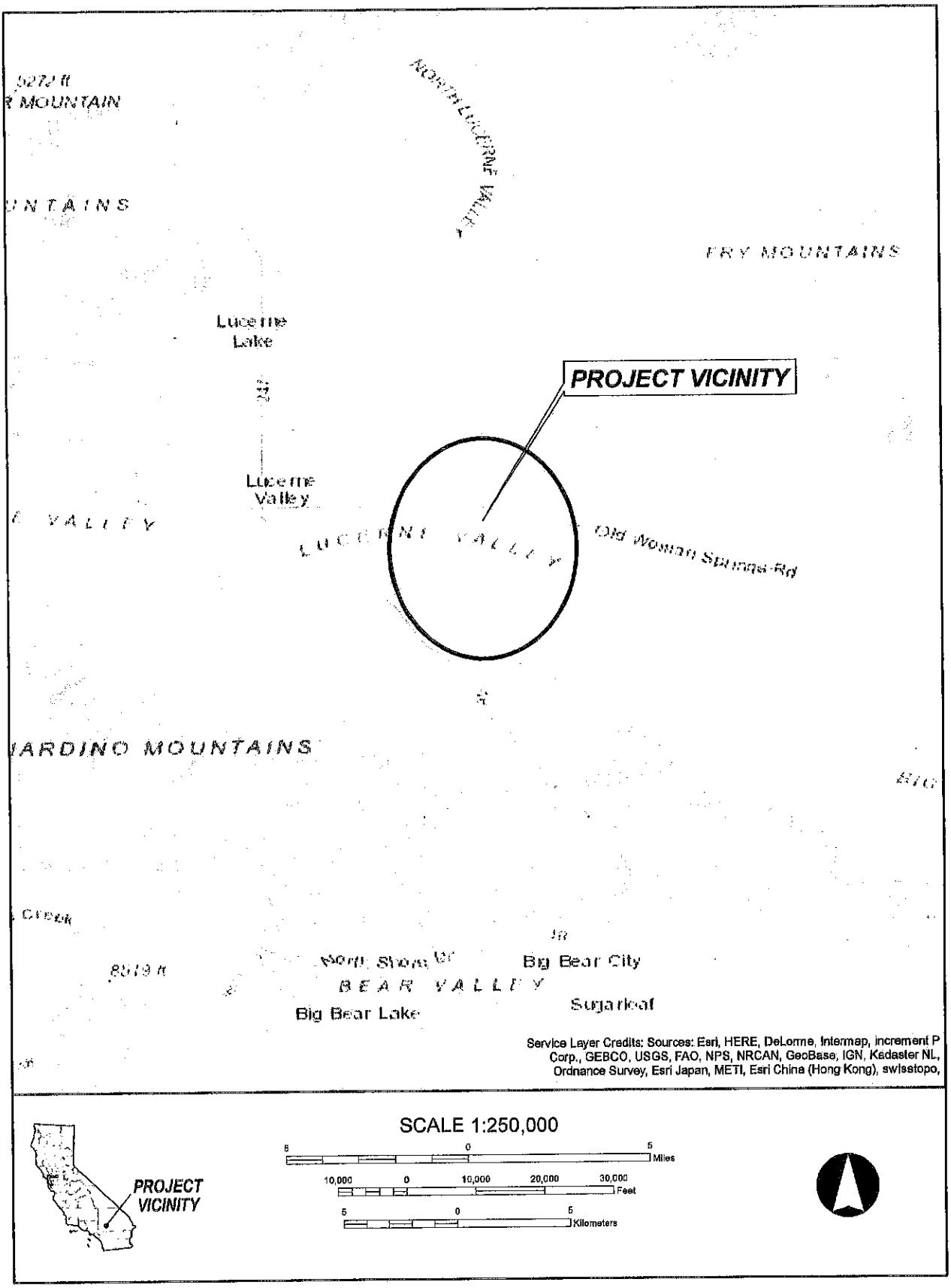


Figure 1-1 Project vicinity in San Bernardino County, California.

- Along some proposed pipeline alignments, signal conduit will be installed within the pipeline trench.
- Construction of four new pressure-reducing stations.
- Well-head improvements at existing Jubilee Well Nos. 3 and 4. Installation of signal conduit from Well Nos. 3 and 4 to Foothill Road, from where the conduit will continue within proposed water-pipeline trenches.
- Construction of one new tank site (Assessor's Parcel No. [APN] 0449-172-55). At the existing tank site (APN 0449-631-57), the tanks' inlet and outlet piping will be modified.
- Use of four staging/lay-down areas (APNs 0449-172-55, 0449-631-57, 0449-104-56, and 0449-053-10) during construction.
- Improvements at five existing well sites, including two at one location (APNs 0449-043-07, 0449-044-03, 0449-10-456, and northeast portion of 0449-071-22).
- Construction of one new pump station (APN 0449-172-55) and abandonment/removal of the existing pump station (southeast portion of APN 0449-701-23).

Generally, the main paved roads will not be impacted during construction. The new pipelines will be installed within road right-of-way but will generally be outside of the paved roadway itself. Where the new lines will cross Camp Rock Road and SR-247, construction will occur by jack and bore methods with no impacts to the road asphalt or changes in the roadway routes.

Within Gordon Acres, almost all of the water infrastructure will be abandoned in place or destroyed. For instance, most pipelines will be abandoned in place and the Houston Well will be destroyed. Only the Dido Well will be rehabilitated.

Within Jubilee subdivision, the existing Anza Pump Station initially will be abandoned and later removed. Jubilee's Well No. 2 will be destroyed. The Anza Pump Station will be replaced with a new pump station located immediately north of the existing storage tanks. New storage tanks will be built south of the existing solar farm. Four pressure-reducing stations will be built at varying locations (J. Owens, personal communication, January 16, 2018).

1.3 REGULATORY CONTEXT

The proposed Project requires the approval of the California State Water Resources Control Board (SWRCB) and will be funded by the Safe Drinking Water State Revolving Fund (SDWSRF), a joint federal-state program. Therefore, the Project is subject to both Section 106 of the National Historic Preservation Act (NHPA) and the California Environmental Quality Act (CEQA). Both the NHPA (Title 54 U.S. Code 307102) and CEQA (Title 14 California Public Resources Code [PRC] 21000[g]) mandate that government agencies consider the effects of their actions on cultural resources.

This report primarily considers built-environment resources defined as a historical building, structure, or object. A separate report was prepared on archaeological resources. Consistent with 36 Code of Federal Regulations [CFR] Section 60.4, the term "historical" applies to standing

buildings, structures, or objects that are 50 years old or older. Among the resources that must be considered are linear features such as trails, roads, highways, and water conveyance systems.

The importance or significance of a cultural resource depends on whether it qualifies (at the federal level) for inclusion in the National Register of Historic Places (NRHP) or (at the state level) for inclusion in the California Register of Historical Resources (CRHR). Resources determined eligible for the federal register are termed "historic properties" (36 CFR 800.16[l]), whereas those eligible for the state register are called "historical resources" (California Code of Regulations [CCR] 15064.5).

In order to be considered a historic property or historical resource, a resource must possess both historical significance and integrity, according to the criteria defined in the implementing regulations of the two statutes (36 CFR 60.4; CCR 15064.5[3]). Typically, the first step in the Section 106 and CEQA processes is the identification of cultural resources within the APE. If impacts are considered possible the resources must then be evaluated for historic significance and integrity

1.4 REPORT ORGANIZATION

This report documents the results of the cultural resource assessment of the APE. Chapter 1 has introduced the scope of the work and stated the regulatory context. Chapter 2 synthesizes the natural and cultural setting of the APE and surrounding region. Chapter 3 presents the results of the cultural resource literature and records searches conducted at the South Central Coastal Information Center (SCCIC) of the California Historical Resource Information System (CHRIS), housed at the California State University, Fullerton. The field methods employed during this investigation and findings are outlined in Chapter 4. Management recommendations are provided in Chapter 5. This is followed by bibliographic references. Four Appendices include: Appendix A: Résumés, Appendix B: Department of Parks and Recreation Records, Appendix C: Gordon Acres Tract Map (1954), Appendix D: Mutual or Private Water Company Property Statement, and Appendix E: Jubilee Mutual Water Company System Map (1959).

2
SETTING

This chapter describes the environmental and historical setting of the APE to provide a context for understanding the nature and significance of historical resources identified within the region. Historically, the nature and distribution of human activities in the region have been affected by such factors as topography and the availability of water and natural resources. Therefore, prior to a discussion of the historical setting, the environmental setting of the area is summarized below.

2.1 ENVIRONMENTAL SETTING

The Project is in the town of Lucerne Valley directly north of the San Bernardino Mountains in the western Mojave Desert of southern California. This area is characterized by interior-draining basins and ranges. For the most part, the western Mojave Desert is hydrated by a playa system consisting of three primary lakebeds—Rosamond, Rogers, and Buckhorn—surrounded by a number of smaller playas. The three larger playas lie within Edwards Air Force Base 60 miles to the north, northwest. Today these lakebeds and the smaller lakebeds are usually dry, only occasionally covered in water following large winter storms. The principal drainage in Lucerne Valley, as well as the western Mojave Desert, is the Mojave River. The Mojave River drains the San Bernardino Mountains and flows north and east to Soda Lake, near Baker, California (Parsons 2004:15).

The western Mojave Desert lies in the rain shadow of the Sierra Nevada, Tehachapi Mountains, San Gabriel Mountains, and San Bernardino Mountains. The rainfall in Lucerne Valley averages 12.93 inches annually (USA.com 2018), most of which occurs during the months of October through April, while some isolated thunderstorms may occur in July and August. Humidity is generally extremely low, except during the brief period of thunderstorms during the summer months of July and August. Characterized by mid-latitude, desert-type climate with cool, slightly moist winters and dry, hot summers, temperatures range from well below freezing in the winter to 100 to 110 degrees Fahrenheit in the summer.

Historically, the region provided habitat for a variety of animals, including birds, insects, reptiles, rodents, pronghorn and bighorn sheep, coyote, and fox, which may have been hunted by the early inhabitants for both food and materials for clothing, and shelter, (Earle et al. 1997). Mammals include blacktail jackrabbit (*Lepus californicus*), desert cottontail (*Sylvilagus audubonii*), Botta pocket gopher (*Thomomys bottae*), Panamint kangaroo rat (*Dipodomys panamint Mojavensis*), Merriam kangaroo rat (*Dipodomys merriami*), and coyote (*Canis latrans*), while bird species include rock dove (*Columbia livia*), lark (*Eremophila alpestris*), raven (*Corvus corax*), and black-throated sparrow (*Amphispiza bilineata*). In addition, desert tortoise (*Gopherus agassizi*) is found in the Lucerne Valley, as are a variety of snakes and lizards.

2.2 HISTORICAL SETTING

The historical background of the Upper Mojave River and adjacent San Bernardino Mountains is best presented by adhering to the familiar divisions of local history, which have become standardized in the area literature. Beginning with the Spanish in 1771, the progression moves rapidly through the poorly documented Mexican development into American movement into the region. In the following discussion, important historical events during these periods are summarized with a more detailed discussion of the historical developments in the immediate Project vicinity.

2.2.1 Spanish Exploration and Mission Development: 1771–1821

The earliest significant moment in the recorded history of the area was the arrival of Portola's former Lieutenant Pedro Fages who, as military governor, accompanied an expedition from San Diego in pursuit of deserters from the presidio there. Fages kept a journal which recorded that the party traveled along the west side of the San Jacinto Mountains to what is now Riverside, continued north into the San Bernardino Valley, and then crossed into the Mojave Desert by way of the Cajon Pass. The record of Fages' transit across the Mojave Desert in 1772 is the earliest written account of the area to have survived into modern times.

Following Fages, Father Francisco Tomás Hermenegildo Garcés visited the Upper Mojave River region in 1776. Garcés traveled west from the Mojave villages in the Needles area toward the Providence Mountains and the easterly lower end of the Mojave River (Earle 2005:7–8). Seeking a direct land route from Arizona and the Colorado River to Monterey, Garcés was accompanied by Mojave guides who had previously traveled to the coast. To date, Garcés' journal of this expedition stands as the best of the early accounts of crossing the Mojave Desert, and his commentary on the local geography is invaluable in relaying local history (Arnold et al. 1987).

In the early 1800s, the Spanish increased their efforts to draw Native Americans into the mission system. As part of this endeavor, a series of explorations was undertaken into the California interior to identify possible locales for a chain of inland missions, which would run parallel to the coastal mountains (Berger 1941). One of these expeditions, headed by Father Zalvidea, traveled through the Antelope Valley (Beattie and Beattie 1939:4).

2.2.2 Arrival of the Mexican Rancho: 1821–1848

During Mexican rule (1821 to 1848), the Upper Mojave River region appears to have remained relatively outside the Hispanic frontier. The closest Hispanic settlement was the San Bernardino Asistencia mission outpost, which had been established in 1819. In October 1834, the Paiutes attacked the San Bernardino Asistencia, killing Christianized Indians and taking stored grain and altar vessels. They returned in December 1834, burned buildings, and took Father Esteneza hostage. This last attack, coupled with the decree of secularization, dealt the final blow to the San Bernardino Asistencia; it was abandoned shortly thereafter.

In 1826, Jedediah Strong Smith became the first American to enter California via an overland route. The trapper and mountain man reached the San Bernardino Valley by way of the Cajon Pass in 1826. Smith's party left San Gabriel, apparently for his Salt Lake camp, on January 18, 1826 (Morgan 1953:243), with warnings from the Mexican authorities to never return to

California. Despite the warnings, Smith returned to the San Bernardino Valley the following August 1827, again by way of the Cajon Pass. Detained for several months by the Mexican authorities and vowing never to return, Smith was eventually allowed to leave on December 30, 1827.

Beginning in 1829, Mexican traders from New Mexico used Summit Valley and Crowder Canyon as a passageway to the Los Angeles basin and established what is now called the Old Spanish Trail. Anglo-American trappers and traders emanating from Taos, New Mexico (including Kit Carson), also used the route beginning in 1829. This trail served as a major pack train route until the end of Mexican dominance with the culmination of the 1846 War with Mexico (Speer 1980:5).

The unsettled political condition of California during the 1820s and 1830s was in part due to the turmoil in Mexico in the wake of the revolution. Most disturbing in California were the decrees issued by the Mexican authorities for the secularization of the mission system. One decree came in 1826 followed by the expulsion of the Franciscan missionaries from the region (Elliott 1883:27). On August 17, 1833, the Mexican Congress passed the Secularization Act, which placed all mission property into the hands of civil administrators. The former Mission Indians became the most vulnerable victims in the resulting shuffle and land grab, and their numbers were rapidly decimated by disease.

2.2.3 American Intrusion and Subsequent Development: 1848–1950s

Developments in the middle Mojave River Valley during the immigration of Americans are closely tied to its location along a major travel corridor. The area was used as a trade route during early historic times. The Old Spanish Trail became a favored route for Mormon settlers traveling from the Great Salt Lake to the San Bernardino area of southern California. (Stickel and Weinman-Roberts 1980:183).

A great impetus to growth in the area was the arrival of the California Southern Railroad. A subsidiary of the Atchinson, Topeka, and Santa Fe (Santa Fe) Railway, the California Southern Railway Company began construction of a line from San Diego to Barstow in 1881. A rail station was established at Point of Rocks in 1885 to provide water for the steam engine locomotive moving trains across the Mojave Desert. In 1897, the name of the station was changed to Helen in honor of a daughter of a Santa Fe Railroad executive (Stickel and Weinman-Robert 1980:163). The community was subsequently renamed Helendale in 1918.

From 1885 through 1900, the wetter and more southwesterly areas of the Mojave Desert experienced a cycle of boom and bust in pioneer settlement. Following the extension of rail transport to the desert in the 1870s and 1880s, attempts were made to establish agricultural communities in several desert regions. The most important of these were the Antelope Valley and the upper Mojave River Valley (Earle 1992, 1998:43–67; Thompson 1929:290–297, 381–384). In both of these regions, before the 1880s, stock grazing had been the principal agricultural activity. This was in areas where typically fewer than five head of cattle might be grazed per square mile, so that access to open public rangeland was essential to cattlemen (Thompson 1929:41). However, by the late 1880s, both the establishment of organized colony communities and the undertaking of homesteading or desert land entry had become common. The colonies

often emphasized shared political, ethnic, or religious values among participating members, emphasized community cooperation, and often counted on being able to use California's Wright Act to build community-governed gravity-flow irrigation systems in areas down slope from desert-edge mountain ranges. In low-lying areas in the center of desert basins, such as the vicinity of dry lakes, subterranean water with artesian flow characteristics could also sometimes be exploited for at least limited irrigation purposes. In these low-lying areas, alkali-tolerant crops such as alfalfa might be grown, and cattle and other stock grazed (Earle 1998:59–67).

As settlement activity increased in middle Mojave River Valley, lands that had once been used for cattle grazing were transformed for use as farms and orchards. Agrarian, mining, and commercial activities spurred the growth of Victorville and the neighboring communities of Apple Valley, Lucerne Valley, Hesperia, Adelanto, Oro Grande, and Helendale. The discovery of large deposits of limestone and granite in the 1910s and the construction of the Southwestern Portland Cement Company plant in 1917 solidified cement manufacturing as a major industry in Victor Valley.

A further impetus to growth in the middle Mojave River Valley was the paving of the National Trails Highway, which later became U.S. Route 66, in the late 1920s. The highway paralleled the Santa Fe Railway from Victorville to Barstow passing through both Oro Grande and Helendale. Access to the transcontinental highway strengthened the region's industrial and commercial base and brought increased settlement.

2.2.4 Lucerne Valley

Lucerne Valley is a rural town located in the southern Mojave Desert, east of the San Bernardino Mountains, in San Bernardino County. The natural water springs in the valley have always played an important role in the history and development of this rural town. Mining in the local mountains first attracted American settlers to this desolate part of southern California in the mid- to late-nineteenth century (Levet 1896). In 1873, five men laid claim to Rabbit Springs and its surrounding acreage and by 1884 a successful way-station was established there for thirsty miners and travelers (Owen 1988). In 1886, W.W. Brown purchased water rights on a piece of land and founded Box S Ranch. James Goulding acquired Box S Ranch and turned it into a successful and bountiful farm in part due to the artesian well he found on the property. Goulding named the area "Lucerne Valley" (Owen 1988).

The town of Lucerne Valley grew slowly in the early twentieth century. The artesian wells and the agricultural fertility in the area were used as promotional tools to attract new residents (Login 1928:1-4). The Lucerne Valley School District was founded in 1907, the post office in 1912, and the town's first municipal library in 1915. A volunteer fire department was organized during World War II as well as the first beauty shop (Owen 1988). After the war, Lucerne Valley experienced a population and housing boom, as did other areas of California. In 1953–1954, the Gordon Acres subdivision was planned and constructed, featuring modern tract housing with its own independent water source and distribution company (Stewart 1953).

Mutual water companies are not-for-profit businesses that deliver safe drinking water at cost price. As the population grew, so did the need for clean and safe drinking water. Several mutual water companies in the area were established in the late twentieth century and early twenty-first

century (Selby 2013). The Gordon Acres water Company was founded in 1954 to provide clean drinking water. The Jubilee Water Company was found in 1956 to serve the Russell Tract also known as "Lucerne Springs." Both companies were established during the post–World War II housing development boom in San Bernardino County (Day 2016).

3
SOURCES CONSULTED

3.1 CULTURAL RESOURCE LITERATURE AND RECORDS SEARCH

Prior to the field investigations, Æ staff conducted a literature and records search at the SCCIC, housed at the California State University, Fullerton, on October 17, 2017. This search included the entire 140.5-acre APE with an additional 0.5-mile radius buffer. The objective of this records search was to determine whether any prehistoric or historic properties/historical resources have been recorded previously. Æ completed the record search for archaeological and architectural resources simultaneously to conserve time. Additional sources included the Office of Historic Preservation Archaeological Determinations of Eligibility list and the Office of Historic Preservation Directory of Properties in the Historic Property Data File.

Results of the records search indicate that six investigations have been conducted previously within a 0.5-mile radius of the APE; all six encompassed the APE (Table 3-1).

Table 3-1
Previous Cultural Studies within 0.5 Mile of the APE

SCCIC Document No.	Date	Author(s)	Title
1060554	1977	Richard A. Bueermann	Archaeological-Historical-Biological Resources Assessment of Parcel Number Two for Big Bear Regional Wastewater Agency
1061121	1981	Michael K. Lerch	Cultural Resources Assessment for Jubilee Mutual Water Company, Proposed Water Mains in Lucerne Springs, Lucerne Valley, California
1061461	1984	Gerald A. Smith	Cultural Resources Assessment of Minor Water Power Project FERC 8283 Lucerne Station, Lucerne Valley Area San Bernardino County, California
1061463	1984	Gerald A. Smith	Cultural Resources Assessment of Waste Water Disposal Site, Lucerne Valley, San Bernardino County
1062515	1992	Michael K. Lerch	Class III Cultural Resources Inventory of the Morongo Basin Pipeline Project, Hesperia to Landers, San Bernardino County, California
1062993	1993	Mark Q. Sutton and Dorothy Fleagle	An Archaeological Survey Report for the Camp Rock Road T/L Survey, Lucerne Valley, San Bernardino County, California

The records search also indicated that eight cultural resources have been identified previously within a 0.5-mile radius of the APE (Table 3-2). Two of these are reported to be located within the APE.

Table 3-2
Cultural Resources within 0.5 Mile of the APE

Primary No.	Trinomial	Description
36-023571	CA-SBR-14874H	Historic-period refuse dump
36-024000	CA-SBR-15185H	Historic-period road (within the APE)
36-024149	CA-SBR-15334H	Historic-period road
36-024186	CA-SBR-15371H	Historic-period road
36-024219	CA-SBR-15404H	Historic-period (1944) US Coastal and Geodetic Survey marker
36-024243	CA-SBR-15428H	Historic-period (1944) US Coastal and Geodetic Survey marker
36-029488	CA-SBR-29468H	Historic-period road (within APE)
36-029489	CA-SBR-29489H	Historic-period refuse dump (within APE)

3.2 ARCHIVAL RESEARCH

To supplement the literature and records search results from the SCCIC, Æ architectural historian, Annie McCausland, conducted online archival research. Sources consulted include historic 7.5-minute topographic quadrangle maps (USGS 1902, 1908, 1947, 1949, 1971a, 1971b) as well as the *Perris' Miners Map* (Levet 1896). Other utilized sources include a historical Gordon Acres Tract map (Stewart 1953), a historical Lucerne Valley promotional pamphlet (Login 1928), articles from the *Daily Press* on the mutual water companies in Lucerne Valley (Day 2016; Selby 2013; Daily Press 2016), and the Lucerne Valley history website, which includes an oral history account on Terry Road, a historic route within the APE. Additional information was provided by James Owens of NV5 from the Gordon Acres Water Company and Raymond M. Gagné, Jr, General Manager of the Jubilee Mutual Water Company. Ms. McCausland also obtained records and building documents from Mr. Gagné during her site visit on March 8, 2018.

4
PHASE I CULTURAL RESOURCE SURVEY

4.1 SURVEY METHODS

The survey was performed by Æ architectural historian, Annie McCausland, M.A., on March 8, 2018. As described in more detail below, fieldwork included a combination of reconnaissance followed by intensive site inspection. All fieldwork occurred under the direct supervision of M. Colleen Hamilton M.A., Æ senior architectural historian and project manager.

Approximately 80 acres of the APE, including all portions not located on private property or covered by built-environment improvements (roads, water company facilities), were subject to intensive survey (see Figure 1-2). A reconnaissance-level survey, which involved driving to the areas and walking around the water facility buildings, walking the graded roads and visually examining the areas of private property (not walking on the private property) occurred in the remaining portions of the APE (60.5 acres). All locations likely to contain or exhibit sensitive cultural resources were inspected carefully to ensure that visible, potentially significant historic resources were discovered and documented, if present. Additionally, the surveyors investigated any unusual landforms, contours, soil changes, and features (e.g., road cuts, drainages). Daily Work Records documenting personnel, hours worked, weather, ground surface visibility, vegetation, soils, topography, natural environments, and identified cultural resources were completed by Evan Mills.

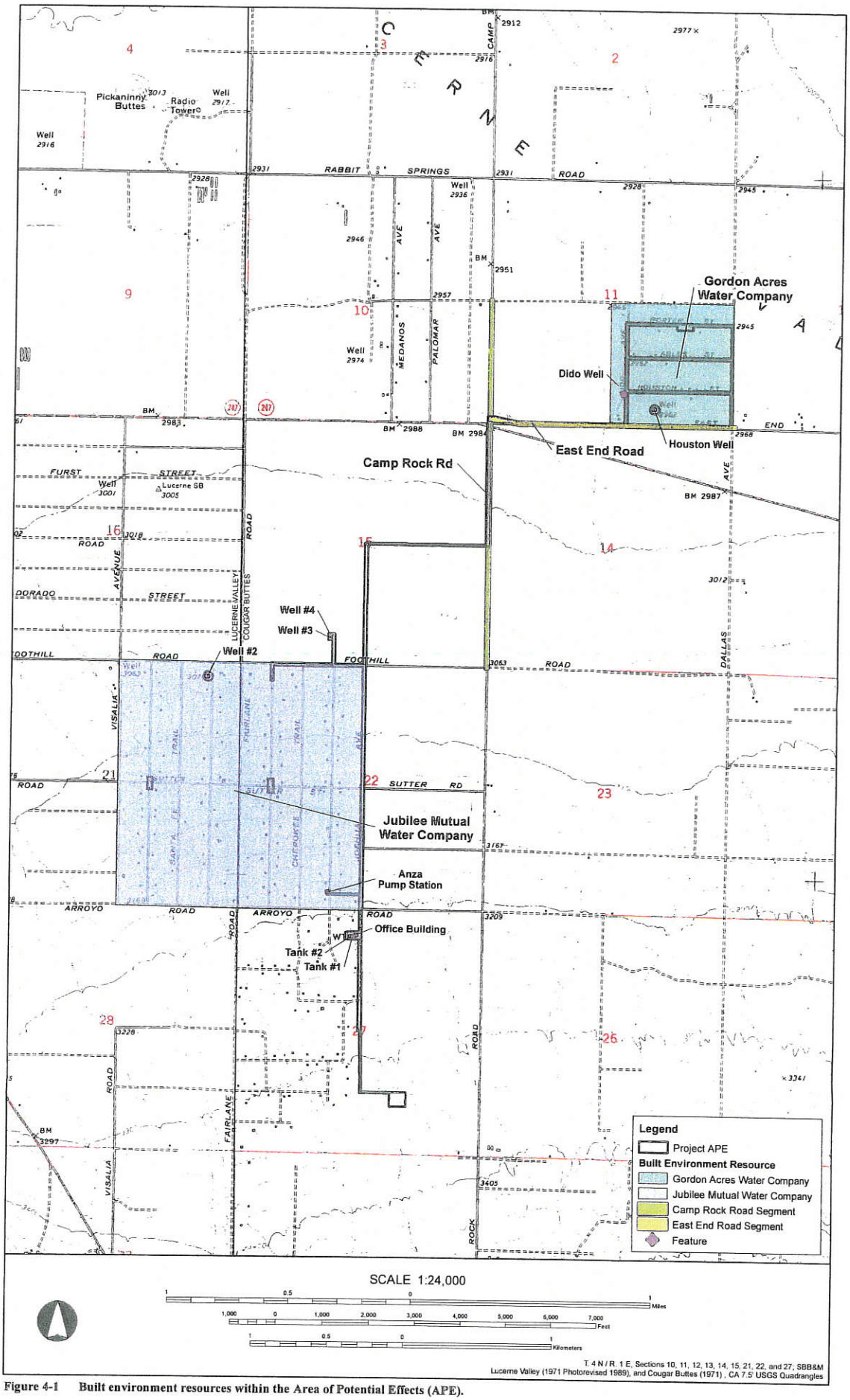
For purposes of this study, historical resources/historic properties are any location that contains buildings or structures greater than 50 years old. In order for the historic building/structures to be considered important and/or significant from a cultural resource management perspective, the buildings/structures have to retain some degree of integrity and association.

4.2 SURVEY RESULTS

The locations of the two previously recorded roadways within the APE were examined, and the roadways were in the same condition as when originally recorded (Table 4-1) in 2016. Æ staff recorded two newly identified built-environment resources (Figure 4-1). These resources are approximately 62 and 64 years old. Details of the previously recorded built-environment resources can be found below in Section 4.3. Details for the new resources can be found in Section 4.4.

Table 4-1
Previously Recorded Resources within the APE

Primary No.	Trinomial	Description
36-024000	CA-SBR-15185H	Historic-period road
36-029488	CA-SBR-29468H	Historic-period road



T. 4 N / R. 1 E, Sections 10, 11, 12, 13, 14, 15, 21, 22, and 27; SBB&M
Lucerne Valley (1971 Photorevised 1989), and Cougar Buttes (1971), CA 7.5' USGS Quadrangles

Figure 4-1 Built environment resources within the Area of Potential Effects (APE).

The notes and maps compiled during the record search and copies of the site records are on file at Æ's Hemet office.

4.2.1 Previously Recorded Resources

CA-SBR-15185H (36-024000)—Camp Rock Road

This resource was documented by California Department of Transportation (Caltrans) District 8 staff and is a segment of Camp Rock Road:

> From Cushenbury Springs, Camp Rock Road stretches north about nine miles, then turns 45 degrees and heads northeast for another 18 miles, eventually snaking through the desert all the way to Daggett.
>
> Camp Rock Road appears to have developed partly as a mining road between Lucerne Valley (Rabbit Springs) and the mines at Clark Diggings, Camp Rock Placer Mine, and Ord Belt Mine. The road also connects this mining district with Daggett, located on the north side of Ord Mountains, and a whistle stop on the Southern Pacific (1883) and later Santa Fe (1884) Railroads. However, there is no evidence that Camp Roach Road connected to Cushenbury Springs as a section line road until sometime after 1930, when local homesteaders cleared a section line corridor between Cushenbury Springs and Old Woman Springs Road [Everson et al. 2016a].

The segment of road within the current APE follows the north-south section line of the Cougar Buttes 7.5-minute quadrangle (USGS 1971b). Figure 4-2 shows this segment. Sections 14 and 11 are east of the segment and Sections 15 and 10 are west of the segment. This section was developed in 1930 by local homesteader, Gilbert H. Tegelberg, who unofficially named the segment "Terry Road" (Tegelberg 1994). Sometime during World War II, San Bernardino County renamed the route Camp Rock Road, connecting it to the original Camp Rock Road to the north (Everson et al. 2016a). The updated California Department of Parks and Recreation (DPR) Primary Record, associated maps, and other selected updates prepared by Caltrans in 2016 as well as Æ's update are provided in Appendix B. Photographs of the resource can be viewed in Figures 4-2 and 4-3.

CA-SBR-29488H (36-029488)—East End Road

This resource was reported by Caltrans District 8 staff as the western terminus of East End Road (Everson et al. 2016b). Caltrans found that East End Road did not appear on local maps until sometime after 1906. By 1930, the road ran east to west between the Bar S Ranch in Lucerne Valley and Old Woman Spring Road where Camp Rock Road intersects with State Route 247. By 1945, the unimproved road extended east from Lucerne Valley for over 10 miles and was partly identified as Old Woman Spring Road (Everson et al. 2016b).

As local developments divided Old Woman Spring Road at its intersection with Camp Rock Road, traffic shifted and the need for an easterly extension along section lines grew. A segment of East End Road was utilized along the tract boundaries during the development of Gordon Acres Tract in 1953–1954. Eventually, a 600-foot-long segment of East End Road at this intersection was realigned and the original alignment abandoned. Caltrans suggests this occurred sometime between 1982 and 1991 (Everson et al. 2016b).

Figure 4-2 **Segment of CA-SBR-15185H (Camp Rock Road) within the APE viewed from the intersection with State Route 247, looking south.**

Figure 4-3 **Segment of CA-SBR-15185H (Camp Rock Road) within the APE viewed from the intersection with State Route 247, looking north.**

The East End Road segment within the current APE extends east to west along the section line between Sections 14 and 11 as shown on the Cougar Buttes 7.5-minute topographic quadrangle (USGS 1971b). This segment terminates at the intersection with Camp Rock Road. Figure 4-3 shows this segment of East End Road. The California DPR Primary Record and associated maps prepared by Caltrans in 2016 and Æ's update are provided in Appendix B of this report. Photographs of this segment can be viewed in Figures 4-4 and 4-5.

Figure 4-4 CA-SBR-28488H (East End Road) within the APE viewed from the western terminus at Camp Rock Road, looking east.

4.2.2 Newly Documented Resources

Two resources were identified as built-environment landscape features constructed more than 50 years ago. As such, the resources were documented and evaluated for historical significance and integrity for their eligibility for nomination to the NRHP and CRHR during this study. The Jubilee Mutual Water Company system was designed and installed in 1956 and the Gordon Acres Water Company system was completed in 1954. These resources are described below; DPR recording forms are included in Appendix B.

Gordon Acres Water Company System

The artesian wells and the agricultural fertility in the area first attracted new residents to the area. The town of Lucerne Valley grew slowly in the early twentieth century (Login 1928:1-4). After World War II, Lucerne Valley experienced a modest population increase and housing boom.

Figure 4-5 CA-SBR-28488H (East End Road) within the APE viewed from the eastern end, looking west.

The Gordon Acres Tract subdivision was developed in 1953–1954 as part of this boom (see Appendix C for original Tract Map). A grid system of roads was laid out within the tract formed by Porter Street, Ables Street, Houston Street, Dido Avenue, and Dallas Avenue, and utilized the already existing East End Road as its southern border. The tract features 50 lots ranging from 2.38 acres to 5.04 acres (Gordon 1953). While developed as a subdivision, it does not feature "tract housing." Houses in the subdivision were constructed over a period from the mid-twentieth to early twenty-first centuries. None of the houses will be impacted and are not included in this investigation.

There are approximately 10 mutual water companies in Lucerne Valley, and Gordon Acres is one of the oldest. The Gordon Acres Water Company was founded in 1954 to service the Gordon Acres Tract No. 4271. The water company has provided clean and safe drinking water to the Gordon Acres community for 65 years. The water company consists of underground pipelines and two wells, Houston Well and Dido Well. The system currently provides about 43 water connections to the neighborhood.

The earliest Gordon Acres Water Company records date to 1975. That year, the company did not own other water rights in the county, other than this system, and the water system provided water to an average of 17 customers (Stewart Water Company 1975). By 2001 the company extended its water rights in the county and provided water to an average of 40 customers (Gordon Acres Self-Help Association 2001). Today the Gordon Acres water system consists of two wells, the Houston well and the Dido well. Each well features a tank and a pump (Stewart Water Company 1975).

The Houston well is 10 inches in diameter and 252 feet deep. It is located on a 5,000-square foot single-family residential lot (# 6) within Gordon Acres Tract 4271 (APN 044904307) and is enclosed by a chicken wire and wood fence (Figure 4-6). The lot is owned by the Gordon Acres Water Company. The Houston well was installed in 1954 and is described as a "casso" well (Appendix D); however, most of its features have been replaced over the years including the pump, motor, and column piping. In 2015, the well's hydropneumatic tank failed and was replaced (Owens 2018).

Figure 4-6 Gordon Acres Water Co. Houston well viewed from property looking west.

The Dido well is also a casso-type well that is 10 inches in diameter and 371 feet deep. It is located on a 5,100-square foot single-family residential lot (#50) within Gordon Acres Tract 4271 (APN 044904403) and is surrounded by a chain-link enclosure (Figure 4-7). The lot is owned by the Gordon Acres Water Company. The well was installed in 1973; however most of its features have been replaced over the years including its pump, motor, and column piping (Appendix D). The well's hydropneumatic tank might be original; however, in most cases these types of tanks only last up to 50 years if kept in good condition. The Gordon Acres Water Company does not have any records on file concerning when the tank was installed (Owens 2018). However, due to the harsh desert climate with high winds and daily fluctuating temperatures (extreme cold changing to extreme heat) of Lucerne Valley it is unlikely the tank would have lasted over 50 years.

Within Gordon Acres there have been significant replacement/repairs to the underground pipelines and those that are original are in poor condition.

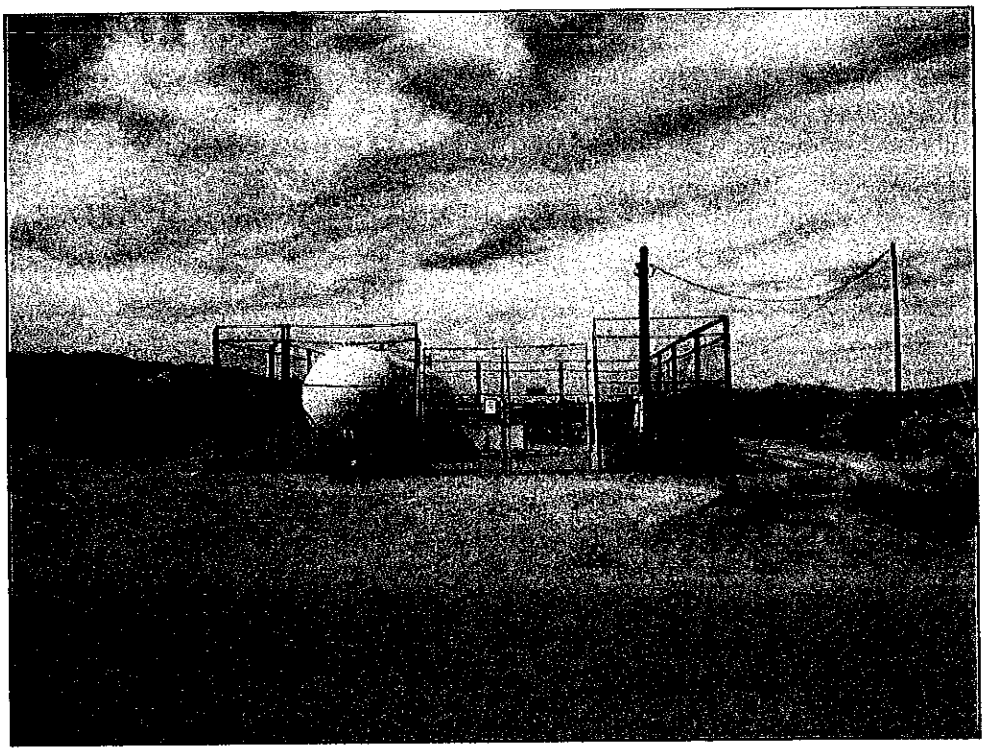


Figure 4-7 Gordon Acres Water Co. Dido well viewed from Dido Street looking west.

The Gordon Acres Self-Help Association property statement prepared in 2001 reported the original water system was installed in 1954 and there "have been repairs and upgrades made over the years ....Since our association took over we have fixed $6,250 in water line leaks" (Appendix D, Gloria Eighme 2001).

Jubilee Mutual Water Company System

The Jubilee Mutual Water Company services a rural residential subdivision known as the Russell Tract. The Russell Tract is a one square mile area of 650 acres bordered by Visalia Avenue to the east, Foothill Road to the south, Joshua Avenue to the west, and Arroyo Road to the north (Jubilee Mutual Water Company Inc. n.d). The Russell Tract originally featured 128 5-acre parcels and one 10-acre parcel. Many of the parcels have been further subdivided over the decades (Dibble 1966).

William M. Russell was granted the land as a homestead in 1913 (United States 1913). His sons, Bill and John, subdivided the land grant in the early 1950s. They persuaded 128 people from the Los Angeles area to purchase the 5 acre lots, each with a small concrete block house, to be used as second homes (Daily Press 2016). The tract was marketed as "Lucerne Springs." John constructed the houses and many are still extant. Most of the original houses have been added onto and altered over the decades and some have been abandoned (Figure 4-8). However, a few within the tract seem to retain historic integrity (Figure 4-9). The individual tract properties and houses of the Russell Tract were not evaluated as part of this investigation because they are outside the APE.

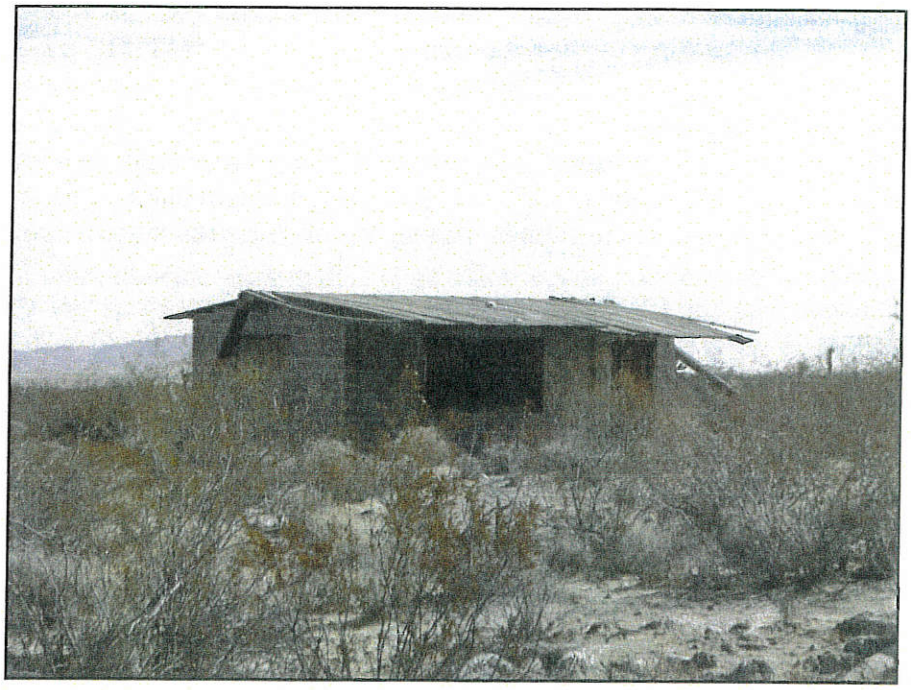


Figure 4-8 Abandoned concrete block house in the Russell Tract viewed from Anza Trail looking east.

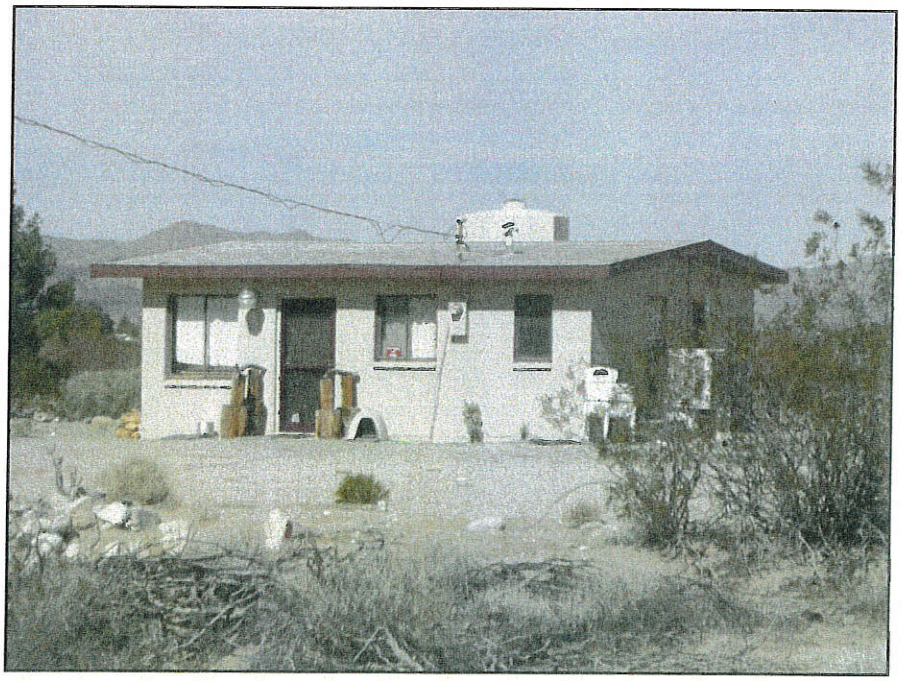


Figure 4-9 Concrete block house in the Russell Tract viewed from Anza Trail looking west.

To provide clean and safe drinking water to this community, a water system was developed in 1956. The Jubilee Mutual Water Company was founded by a group of original home owners and the company is still run by a volunteer board of homeowners within the Russell Tract.

In 1956, the original Jubilee Mutual Water Company water system was constructed on the Russell brothers' 10 acre lot (lot #515) on the west side of Apache Trail. The need for water gradually increased over the years and the system was continually expanded and upgraded to meet the needs of the community (Jubilee Mutual Water Company Inc. n.d). The original system featured a well (well #1) and a system of pipelines under Chickasaw Trail, Blackhawk Trail, Palomar Trail, and Anza Trail roads as well as in lots along Foothill and Highland roads. The original water system is shown in the Jubilee Mutual Water Company system map from 1959 (Appendix E). More pipelines were added in the early 1960s under Apache trail, Santa Fe Trail, Fair Lane, Cherokee Trail and La Quinta Trail roads (Jubilee Mutual Water Co. 1959). In 1962, well #2 was drilled. A water tank was constructed in 1966, known as the old eastern tank. Well #3 was drilled in 1977, and well #4 in 1996. In 1997, wells #1 and #2 were filled with concrete. According to General Manager, Raymond M. Gagné Jr. the Anza pump station was installed in 1985 as well as new pipelines and several stand pipes. The stand pipes are used to flush out the system and as emergency fire hydrants. Mr. Gagné believes that the original water mains from 1956 and the early 1960s might still be in place but are no longer in use.

The Jubilee Mutual Water Company headquarters is located at 8828 Joshua Rd, Lucerne Valley, California 92356 (APN 044917255). Two water tanks and a modular office building sit on a 1,095-acre industrial lot with a concrete foundation and driveway surrounded by a chain-link fence (Figure 4-10). The modular office building was added in 2005 (County of San Bernardino 2005). The company currently provides about 205 water connections to the neighborhood.

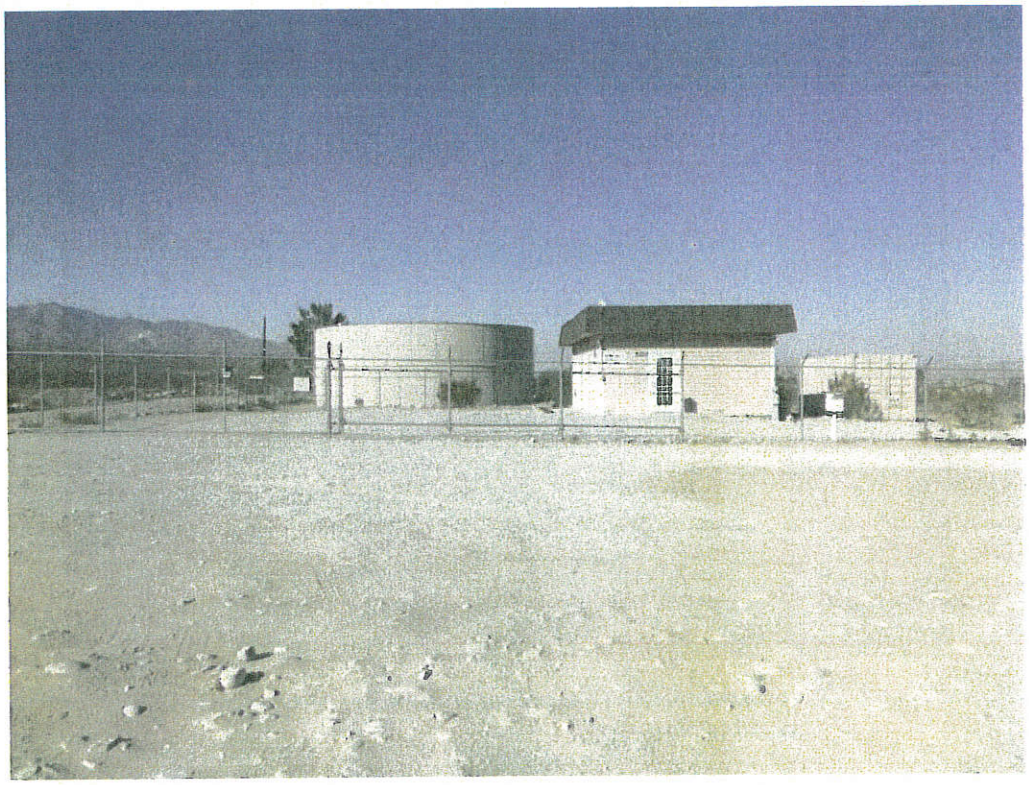


Figure 4-10 Jubilee Mutual Water Co. headquarters, modular building and water tanks viewed from Joshua Avenue looking west.

Water tank #1 (Figure 4-11) was installed in 2008, replacing the older eastern tank that was installed in 1966. The original tank switch from the 1966 tank was moved in 2008 to the new tank and is still in use. The switch monitors the water level and communicates with the wells via a telephone line (Figure 4-12).

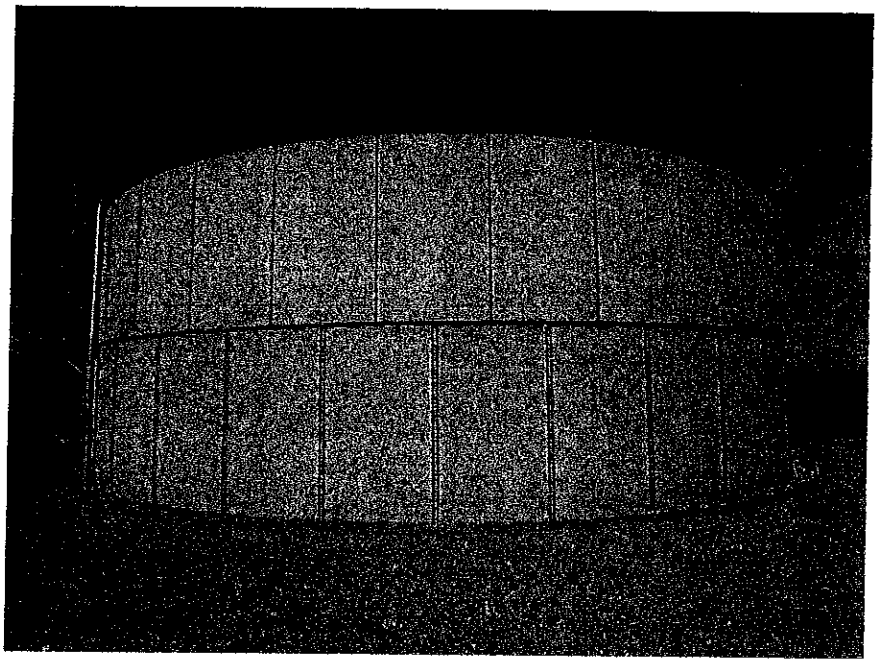


Figure 4-11 Jubilee Mutual Water Co. water tank #1 viewed from property looking west.

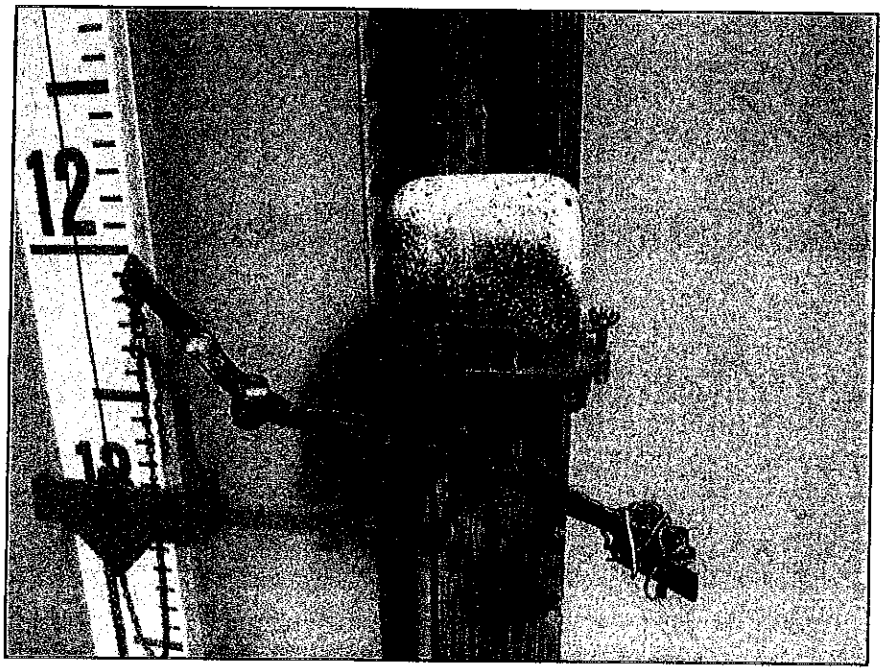


Figure 4-12 Jubilee Mutual Water Co. original tank switch from 1966 installed on newer tank viewed from property looking north.

Water tank #2 (Figure 4-13) was installed in 2010 and features the original tank ring from the 1966 eastern water tank (Figure 4-14) (County of San Bernardino 2009).

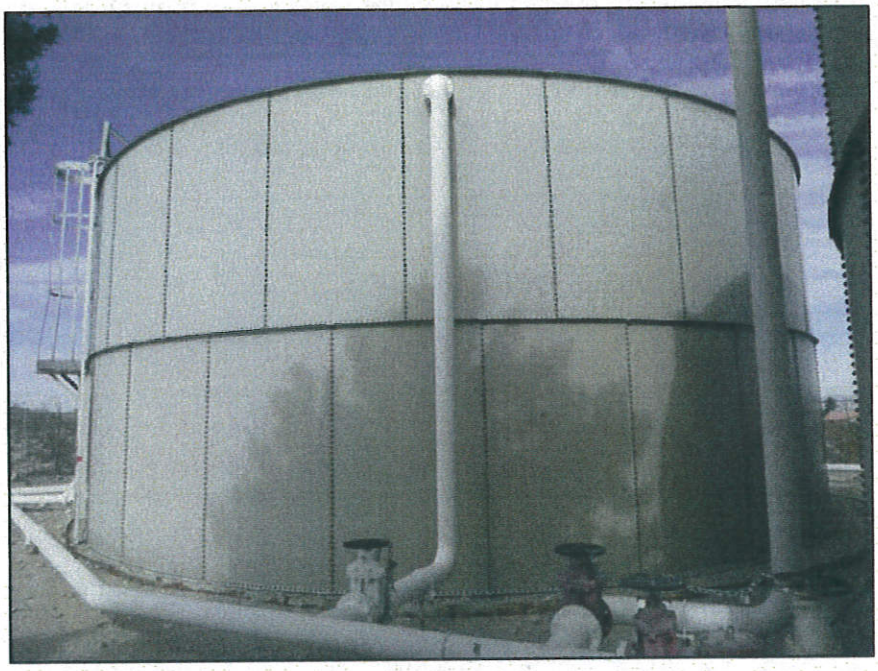


Figure 4-13 Jubilee Mutual Water Co. water tank #2 viewed from property looking northwest.

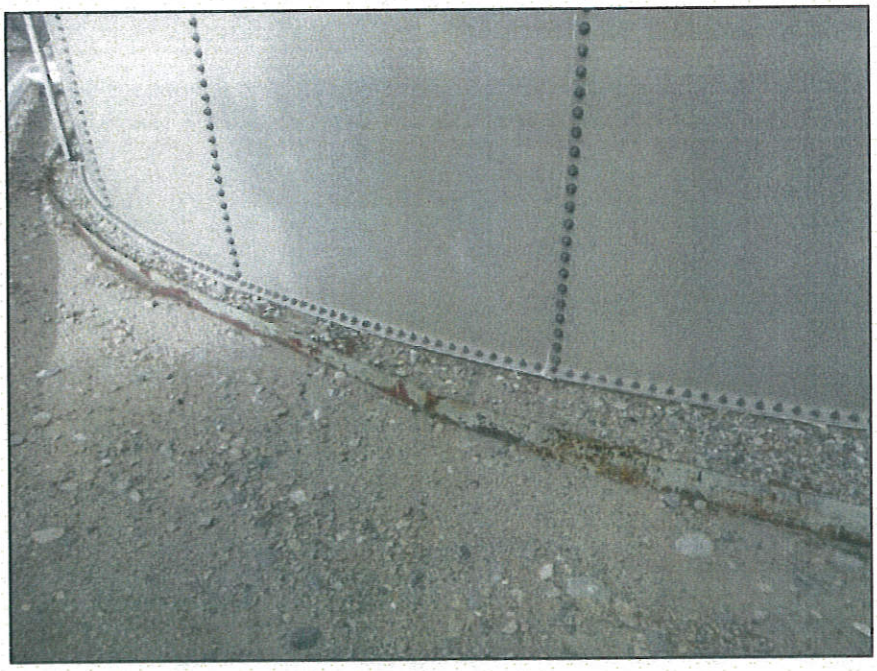


Figure 4-14 Jubilee Mutual Water Co. water tank ring from the 1966 eastern tank, now used on the 2010 western tank, viewed from property looking northwest.

The Anza pump station is located on a 5-acre single-family residential lot (APN 044970123) on the west side of Anza Trail. The pump station is enclosed by a plywood shed that sits on a concrete foundation and features a composite shingled side gabled roof. The shed is surrounded by a chain-link fence (Figure 4-15). The pump station was installed circa 1985, according to General Manager, Mr. Gagné.

Figure 4-15 Jubilee Mutual Water Co. Anza pump station viewed from Anza Trail looking west.

The Jubilee Mutual Water Company features several standpipes throughout the Russell Tract (Figure 4-16). According to Mr. Gagné, they were installed circa 1985 along with the Anza pump station and updated water pipes under the roads.

Well #2 is located on a 5,300-square foot commercial lot on the west side of Blackhawk Trail road. The lot is owned by the Jubilee Mutual Water Company (APN 044910456). This well was disbanded in 2007/2008 and is enclosed inside a corrugated metal shed (Figure 4-17). The well site features a partially exposed, circular concrete foundation where an underground water tank is located (Figure 4-18). The underground tank has not been used for a very long time and at one point was filled with concrete, according to Mr. Gagné.

Well #3 and well #4 are located on a privately owned 10-acre single-family residential property along the west side of Anza Trail road (APN 044907122). The well systems are each enclosed by a resin shed that rests on a concrete foundation. The sheds are surrounded by gravel and then chain-link fences. Well #3 is located north of well #4. The well #3 shed entrance faces north and the well #4 shed entrance faces east (Figures 4-19 and 4-20).

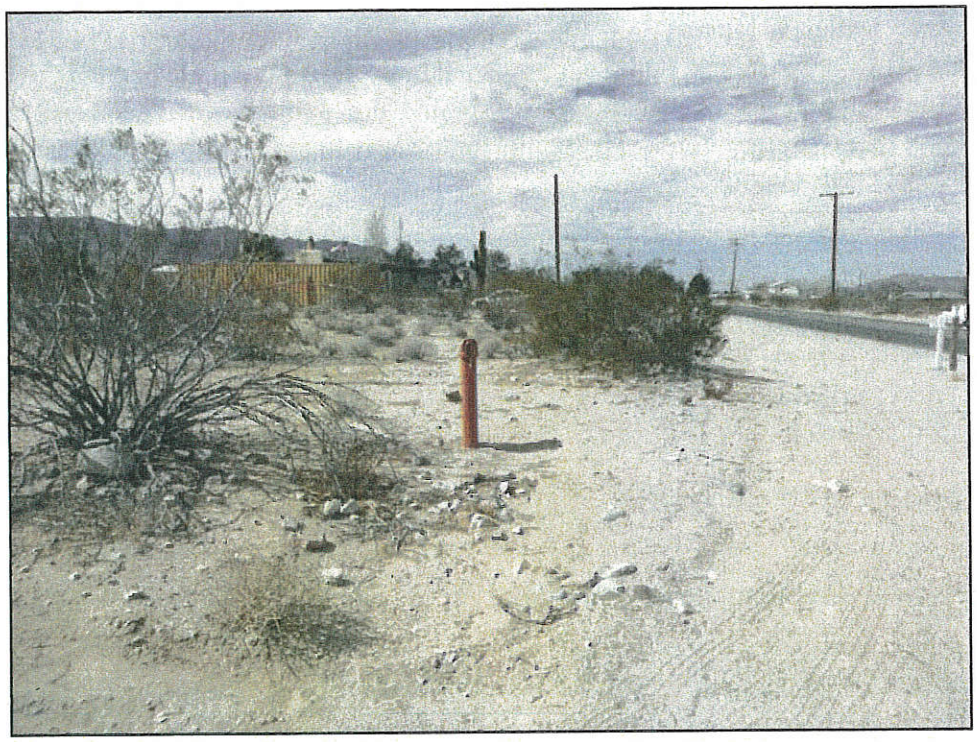


Figure 4-16 **Jubilee Mutual Water Co. standpipe viewed from Anza Trail looking west.**

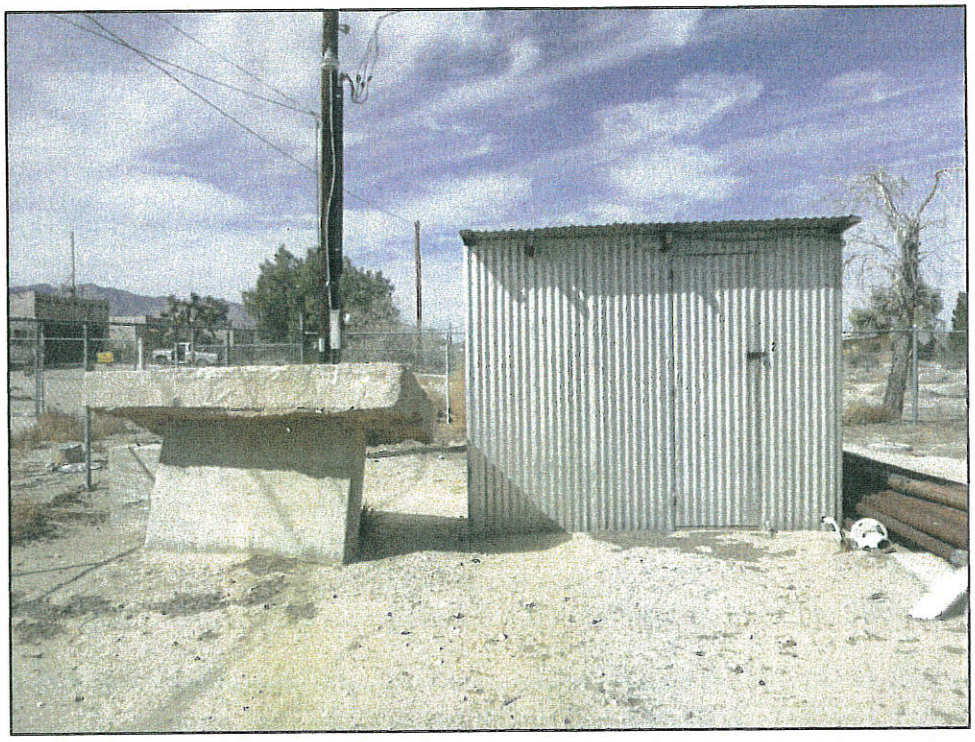


Figure 4-17 **Jubilee Mutual Water Co. well #2 viewed from Blackhawk Trail looking west.**

Figure 4-18 Jubilee Mutual Water Co. old underground water tank viewed from property looking west.

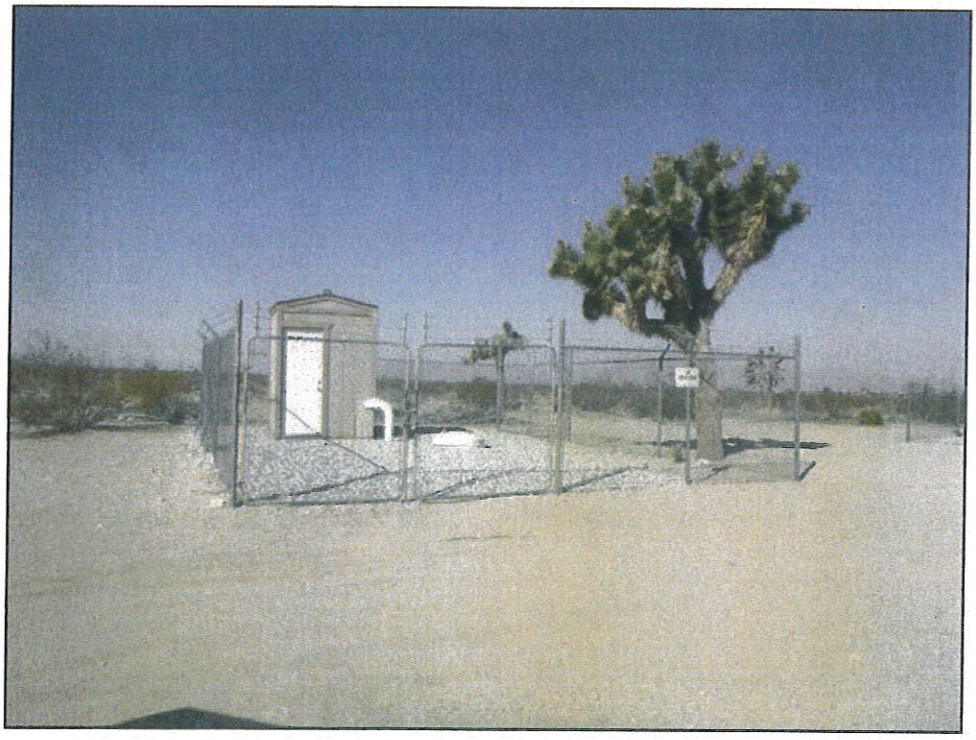


Figure 4-19 Jubilee Mutual Water Co. well #4 viewed from Anza Trail looking west.

Figure 4-20 Jubilee Mutual Water Co. well #3 viewed from Anza Trail looking northwest.

5
SIGNIFICANCE EVALUATION

The proposed Project is subject to compliance with CEQA and Section 106 of the NHPA, as amended. Therefore, cultural resource management work conducted as part of the proposed Project must comply with the CEQA Statute and Guidelines (Title 14 CCR, § 15064.5) and Section 106 regulations (36 CFR 800.16[l]). According to the Statute and Regulations, respectively, the direct lead agencies are to determine whether historically significant resources are present. Generally, a cultural resource shall be considered historically significant if the resource is 50 years old or older and meets the requirements for listing on the NRHP and/or CRHR under any one of the specified criteria. The significance criteria for NHPA are defined in 36 CFR 60.4. In California, the Office of Historic Preservation determined the significance criteria are similar to and parallel those of the NRHP and designated 1 through 4 (OHP 1995) as outlined below.

Under both, the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects and must meet one of the following criteria:

> (A/1) that are associated with events that have made a significant contribution to the broad patterns of our history and cultural heritage; or
>
> (B/2) that are associated with the lives of persons significant in our past; or
>
> (C/3) that embody the distinctive characteristics of a type, period, region, or method of construction, or that represent the work of a master, or that posses high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (D/4) that have yielded or may be likely to yield, information important in prehistory or history.

Further, the NRHP and the CRHR recognize resource integrity through seven aspects or qualities including location, design, setting, materials, workmanship, feeling, and association.

The windshield survey undertaken by Æ resulted in the identification and documentation of four historical resources, CA-SBR-15185H (36-024000), CA-SBR-29488H (36-029488), Gordon Acres Water Company system, and Jubilee Mutual Water Company system, within the APE. To evaluate the significance of these cultural resources, data obtained during the fieldwork effort were supplemented with archival research and an interview with the Jubilee General Manager on March 8, 2018.

5.1 CA-SBR-15185H (36-024000)—PORTION OF CAMP ROCK ROAD (TERRY ROAD)

This evaluation is applicable to the portion of Camp Rock Road south of Rabbit Springs that connects to Cushenbury Springs. This portion was developed in 1930 by local homesteader, Gilbert H. Tegelberg (Tegelberg 1994). This evaluation does not include the original Camp Rock Road which originated in the nineteenth century, north of Rabbit Spring Road, as this segment is not in the APE.

This paved portion of Camp Rock Road, originally known as Terry Road, has a direct association with road development in Lucerne Valley by a homesteader during the early twentieth century. However many roads in Lucerne Valley and San Bernardino County were developed in the early twentieth century under similar circumstances making this resource insignificant and not individually eligible for listing under NRHP Criterion A/CRHR Criterion 1.

The road is not associated with any important person or persons as required for eligibility under NRHP Criterion B/CRHR Criterion 2.

The road does not embody distinctive characteristics of a type, period or method of construction; represent the work of a master; possess high artistic value; or represent a significant and distinguishable property as required for eligibility under NRHP Criterion C/CRHR Criterion 3.

Furthermore, this road has not yielded nor is it likely to yield information important in the study of local, state, or national history as required to meet eligibility under NRHP Criterion D/CRHR Criterion 4. The road represents local road development in Lucerne Valley during the early twentieth century. Such roads are well documented and represented in the vicinity. There is little potential for this road to yield new information relating to the history of Lucerne Valley; therefore, this portion of Camp Rock Road is not eligible individually for listing on the NRHP or the CRHR, and is not a historical resource for the purpose of CEQA. The segment was later incorporated into Camp Rock Road and may be important to the development of the larger resource.

5.2 CA-SBR-29488H (36-029488)—EAST END ROAD

This paved road has a direct association with road development in Lucerne Valley during the early twentieth century. However the road was realigned and no longer retains integrity. The NRHP and the CRHR recognize integrity through seven aspects or qualities as stated above. In this instance, East End Road has been altered and no longer represents the original route dating from the early twentieth century. Therefore, East End Road no longer retains integrity and is not eligible for listing under NRHP Criterion A/CRHR Criterion 1.

East End Road is not associated with any important person or persons as required for eligibility under NRHP Criterion B/CRHR Criterion 2.

The road does not embody distinctive characteristics of a type, period or method of construction; represent the work of a master; possess high artistic value; or represent a significant and distinguishable property as required for eligibility under NRHP Criterion C/CRHR Criterion 3.

Furthermore, East End Road has not yielded nor is it likely to yield information important in the study of local, state, or national history as required to meet eligibility under NRHP Criterion D/CRHR Criterion 4. The road represents local road development in Lucerne Valley during the early twentieth century. Such roads are well documented/represented in the vicinity. There is little potential for this road to yield new information relating to the history of Lucerne Valley, therefore East End Road is not eligible for listing on the NRHP or the CRHR, and is not a historical resource for the purpose of CEQA.

5.3 GORDON ACRES WATER COMPANY SYSTEM

The Gordon Acres Water Company was developed in 1954 and has a direct association with the Gordon Acres Tract and the post-World War II development of Lucerne Valley, with a period of significance beginning in 1954. The original infrastructure is over 50 years old, including Houston Well, Dido Well, and the underground pipelines. However, this infrastructure does not retain historic integrity having undergone changes in materials, design, and operational components. Therefore, the water company no longer retains integrity and is not eligible for listing under NRHP Criterion A/ CRHR Criterion 1.

The water company is not associated with any important person or persons as required for eligibility under NRHP Criterion B/CRHR Criterion 2.

The water company does not embody distinctive characteristics of a type, period or method of construction; represent the work of a master; possess high artistic value; or represent a significant and distinguishable property as required for eligibility under NRHP Criterion C/CRHR Criterion 3.

Furthermore, this water company has not yielded nor is it likely to yield information important in the study of local, state, or national history as required to meet eligibility under NRHP Criterion D/CRHR Criterion 4. Therefore, the Gordon Acres Water Company is not eligible for listing on the NRHP or the CRHR, and is not a historical resource for the purpose of CEQA.

5.4 JUBILEE MUTUAL WATER COMPANY SYSTEM

The Jubilee Mutual Water Company was developed in 1956 and has a direct association with the Russell Tract and its post-World War II development, with a period of significance from 1956–1966. However, most of the original infrastructure of the water system from this period has been replaced and only a few original remnants remain. The original infrastructure is over 50 years old, including the old tank switch, the tank ring, well #1, well #2, and possibly pipelines still extant underground. This infrastructure does not retain historic integrity with changes in location, design, setting, and material. In this instance, the historic infrastructure elements over 50 years old have been moved, repurposed, and in some cases destroyed. Therefore, the water system no longer retains integrity and is not eligible for listing under NRHP Criterion A/CRHR Criterion 1.

The water company is not associated with any important person or persons as required for eligibility under NRHP Criterion B/CRHR Criterion 2.

The water company does not embody distinctive characteristics of a type, period or method of construction; represent the work of a master; possess high artistic value; or represent a significant

and distinguishable property as required for eligibility under NRHP Criterion C/CRHR Criterion 3.

Furthermore, this tract and water company have not yielded nor are they likely to yield information considered important in the study of local, state, or national history as required to meet eligibility under NRHP Criterion D/CRHR Criterion 4. Therefore, the Jubilee Mutual Water Company is not eligible for listing on the NRHP or the CRHR, and is not a historical resource for the purpose of CEQA.

6
MANAGEMENT RECOMMENDATIONS

The Project proposed is subject to compliance with NHPA and CEQA. The intensive- and reconnaissance-level surveys conducted by Æ did not identify any potentially significant and intact historic built-environment resources within the APE. Therefore, Æ recommends a Finding of Historic Properties Affected. As a result, no further cultural resource management is recommended for the Project as presently designed.

7
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United States of America
1913 Land Grant to William M. Russell.

APPENDIX A

Résumés

Applied EARTHWORKS Inc.

ANNIE L. MCCAUSLAND

Associate Architectural Historian

Areas of Expertise

- Architectural history
- California history
- Archival research
- Public history
- Oral history
- Project management
- Technical writing

Years of Experience

- 5 years

Education

M.A., Arts in Public History, California State University, Sacramento, 2015

B.A., Arts in History, Chapman University, Orange, California, 2010

Permits/Licensure

- Meets Secretary of the Interior Professional Qualification Standards (36 CFR Part 61)—Architectural History and History

Professional Affiliations

- California Council for the Promotion of History
- American Association for State and Local History
- National Council on Public History
- California Preservation Foundation
- Society of Architectural Historians

Professional Experience

2017–	Associate Architectural Historian, Applied EarthWorks, Inc., Hemet, California.
2016–2017	Archivist and Collections Registrar, Sonoma Valley Historical Society, Sonoma, California.
2016	Park Aide, California State Parks, Bodie State Historic Park, California.
2015–2016	Architectural Historian, Sapphos Environmental, Inc., Pasadena, California.
2015	Museum Registration and Collections Management Intern, Academy of Motion Picture Arts and Sciences, Los Angeles, California.
2014	Corporate Archives and Production Collections Intern, NBCUniversal, Universal City, California.
2013–2014	Archives and Museum Collections Intern, Placer County Museum Archives and Research Center, Auburn, California.
2010–2013	Volunteer Historian, California State Parks, Orange Coast District, San Clemente, California.

Technical Qualifications

Ms. McCausland specializes in California history and architecture and has served as architectural historian for projects in California. Her expertise includes inventory, research, and significance evaluations. She has prepared technical reports for historical built environment resources to satisfy compliance requirements under National Historic Preservation Act (NHPA) Section 106 and the California Environmental Quality Act (CEQA) and to support preparation of both programmatic and project-specific environmental impact reports (EIR). Ms. McCausland has completed numerous studies of residential, agricultural, commercial, and industrial properties. She is familiar with federal and state laws and regulations, and she has performed architectural surveys and evaluations on eligible properties on behalf of Los Angeles County Department of Parks and Recreation as well as other federal, state, and local agencies. Ms. McCausland meets the Secretary of the Interior Professional Qualification Standards (36 CFR Part 61) for Architectural History and History. Additional skills include archives and collections management, oral history, Historic American Buildings Survey/Historic American Engineering Record (HABS/HAER) documentation, agency consultation, exhibit curation, interpretation, and heritage tourism.

Applied EARTHWORKS Inc.

M. COLLEEN HAMILTON

Senior Historical Archaeologist/Architectural Historian

Areas of Expertise

- Cultural resource management and legal compliance
- Historical archaeology and historic landscape assessment
- Architectural history and built-environment assessment

Years of Experience

- 32

Education

M.A., History, University of Missouri, St. Louis, 1990

B.A., Anthropology, Wright State University, Dayton, 1977

Registrations/Certifications

- Register of Professional Archaeologists

Permits/Licensure

- Principal Investigator, California BLM Statewide Cultural Resources Use Permit CA-14-33
- Principal Investigator, Nevada BLM Statewide Cultural Resources Use Permit N-85878

Professional Affiliations

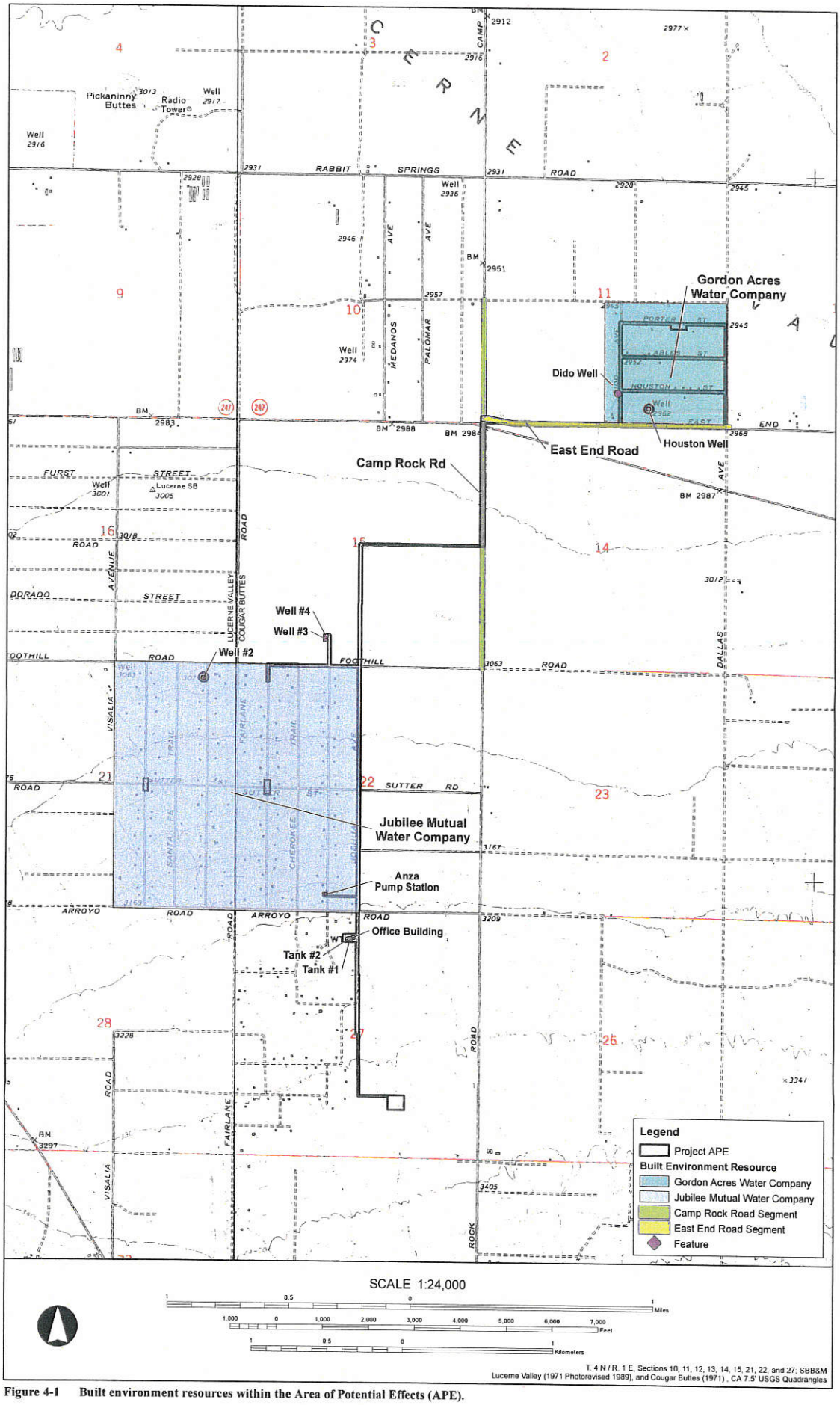
- Society for Historical Archaeology
- Society for Industrial Archaeology
- California Historical Society

Professional Experience

1998–	Senior Historical Archaeologist/Architectural Historian, Applied EarthWorks, Inc., Hemet, California
1997–1998	Historic Archaeologist/Architectural Historian, White Oak Environmental Alliance, Inc., Springfield, Illinois
1993–1997	Program Manager/Architectural Historian, Facilities Management Program, Navajo Nation Historic Preservation Department, Window Rock, Arizona
1982–1992	Senior Archaeologist, Archaeological Survey, University of Missouri, St. Louis
1979–1981	Archaeologist, American Resources Group, Ltd., Carbondale, Illinois
1977–1979	Asst. Field Director, Center for Archaeological Investigations, Southern Illinois University, Carbondale

Technical Qualifications

Ms. Hamilton experience in historic preservation encompasses both planning and cultural resource management. Since beginning her career, she has participated in cultural resource projects throughout the Midwestern, southwestern, and western United States. Ms. Hamilton meets and exceeds the Secretary of the Interior's Professional Qualification Standards as Historical Archaeologist, Architectural Historian, and Historian. Her architectural experience includes building inventory, National Register significance assessments, preparation of National Register nominations, and compiling Historic American Buildings Survey (HABS) and Historic American Engineering Record (HAER) documentation. As senior historical archaeologist, she has designed, organized, and directed significance evaluation and implemented treatment plans involving both prehistoric and historical resources. Her expertise includes site significance assessments and determination of project effects pursuant to Section 106 of the National Historic Preservation Act. Ms. Hamilton has managed a variety of historical resource projects in California and is familiar with the requirements of the California Environmental Quality Act (CEQA). As program manager for the historical archaeology program, Ms. Hamilton advises all other Æ offices in California including those in Hemet, Pasadena, Lompoc, San Luis Obispo, and Fresno. She has directed multiple task orders under the California Department of Transportation (Caltrans) District 8 on-call services contract for San Bernardino and Riverside counties.



T. 4 N / R. 1 E, Sections 10, 11, 12, 13, 14, 15, 21, 22, and 27; SBB&M
Lucerne Valley (1971 Photorevised 1989), and Cougar Buttes (1971) , CA 7.5' USGS Quadrangles

Figure 4-1 Built environment resources within the Area of Potential Effects (APE).

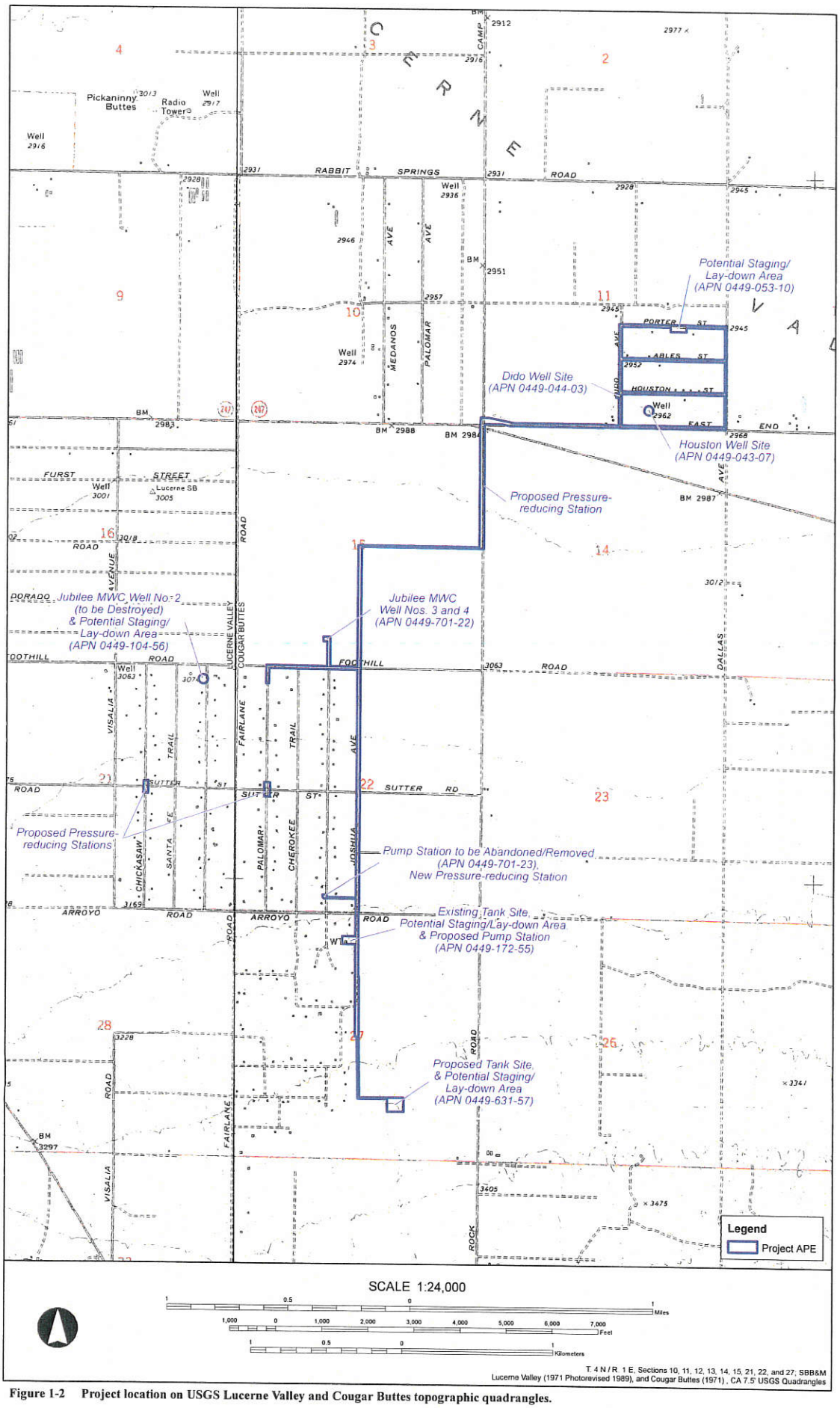


Figure 1-2 Project location on USGS Lucerne Valley and Cougar Buttes topographic quadrangles.

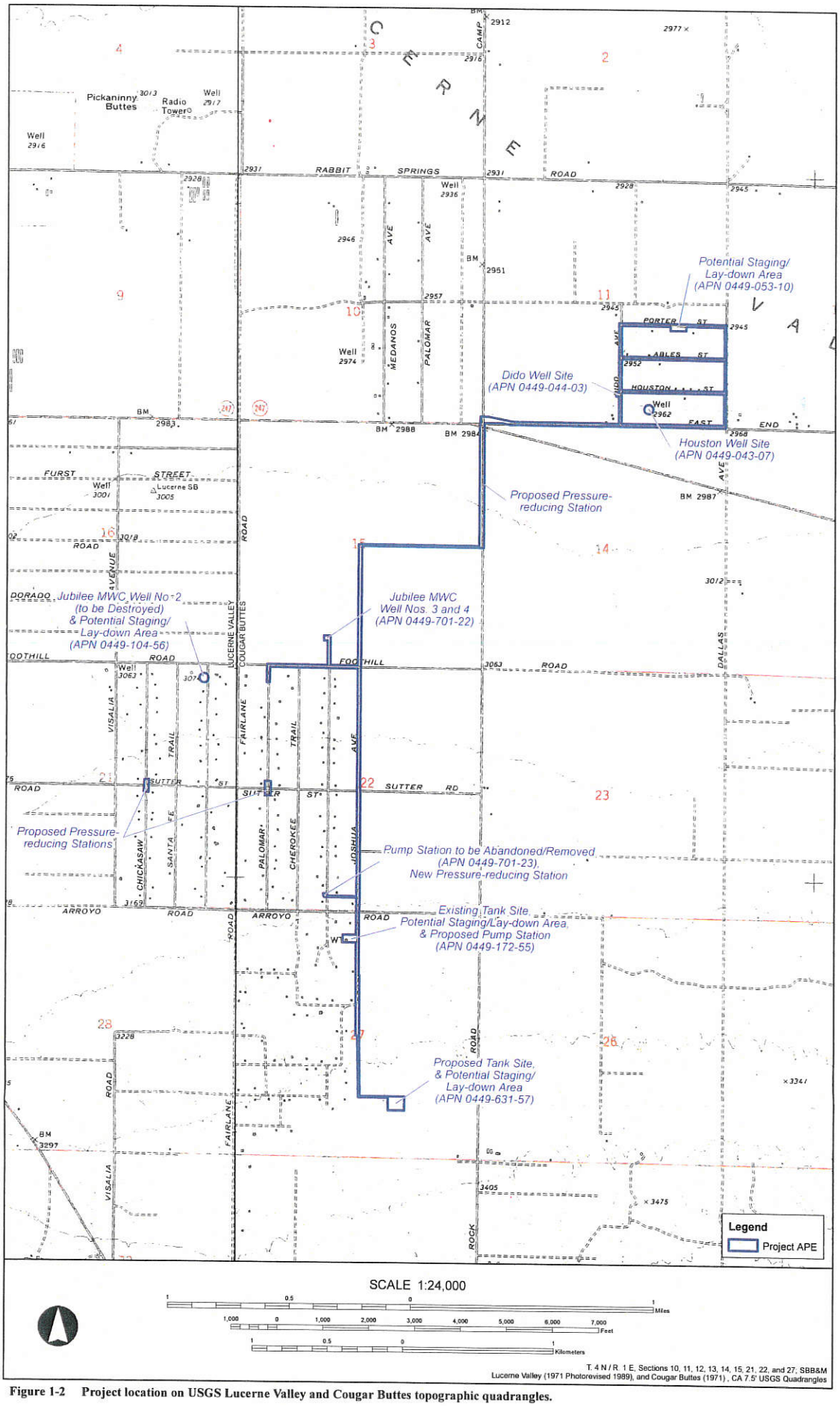


Figure 1-2 Project location on USGS Lucerne Valley and Cougar Buttes topographic quadrangles.