PHASE I SURVEY/CLASS III INVENTORY, BVWSD NORTHERN PIPELINE PROJECT, KERN COUNTY, CALIFORNIA

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MANAGEMENT SUMMARY

An intensive Phase I archaeological survey and Class III inventory were conducted for the Buena Vista Water Storage District (BVWSD) Northern Pipeline Project, near Lost Hills, Kern County, California. This study was conducted by ASM Affiliates, Inc., with David S. Whitley, Ph.D., RPA, serving as principal investigator. Background studies and fieldwork for the survey were completed from June-August 2014. The study was undertaken to assist with California Environmental Quality Act (CEQA) compliance and also to provide compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC 470; 36 CFR Part 800), for development of the above locations.

A records search of site files and maps was conducted on June 24, 2014, at the Southern San Joaquin Valley Archaeological Information Center (AIC), California State University, Bakersfield. A search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed on June 25, 2014. These investigations determined that the study area had not been previously surveyed in its entirety but portions of nine historical linear sites, all canals or ditches, were within it. Previous evaluations of these historical sites determined that they were not significant or unique. No sacred sites or traditional cultural places had been identified within or adjacent to the study area.

The Phase I survey/Class III inventory fieldwork was conducted in July and August, 2014, with parallel transects spaced at 15-meter intervals walked along the approximately 25 linear mile pipeline route and buffers of 50 feet on each side of the pipeline route. The total survey area was about 221 acres.

No significant historical resources were discovered within the study area. Based on these findings, the construction of the pipeline does not have the potential to result in adverse impacts to significant historical resources, and no additional archaeological studies are recommended.

1. INTRODUCTION AND REGULATORY CONTEXT

ASM Affiliates was retained by GEI Consultants, Inc., to conduct an intensive Phase I archaeological survey for the Buena Vista Water Storage District (BVWSD) Northern Pipeline Project study area, near Lost Hills, Kern County, California (Figure 1a – 1f). The study area is located in Sections 4, 5, 8, 9, 14, 15, 16, 17, 18, 20, 21, 22, 23, 28, 29, 32 and 33 in Township 27 South, Range 22 East (T27S/R22E); and Sections 4, 5, 9, 10, 14, 15, 16, 22, 27 and 28 in T28S/R22E, Mount Diablo Base and Meridian (MDBM). The pipeline route totals approximately 25 linear miles in length. Including 50 foot buffers on each side of the pipeline, approximately 221 acres were surveyed.

The purpose of this archaeological investigation was to assist with compliance with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended (16 USC 470; 36 CFR Part 800), for development of the above locations. The investigation was undertaken, specifically, to ensure that significant impacts to historical resources do not occur as a result of the construction of the pipeline.

CEQA is applicable to discretionary actions by state or local lead agencies. Under CEQA, lead agencies must analyze impacts to cultural resources. Significant impacts under CEQA occur when "historically significant" or "unique" cultural resources are adversely affected, which occurs when such resources could be altered or destroyed through project implementation. Historically significant cultural resources are defined by eligibility for or by listing in the California Register of Historical Resources (CRHR). In practice, the federal NRHP criteria for significance applied under Section 106 are generally (although not entirely) consistent with CRHR criteria (see PRC § 5024.1, Title 14 CCR, Section 4852 and § 15064.5(a)(3)).

Significant cultural resources are those archaeological resources and historical properties that:

(1) Are associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

(2) Are associated with the lives of persons important in our past;

(3) Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or

(4) Have yielded, or may be likely to yield, information important in prehistory or history.

Unique resources under CEQA, in slight contrast, are those that represent:

> an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:
>
> (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.

(2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.

(3) Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC § 21083.2(g)).

Preservation in place is the preferred approach under CEQA to mitigating adverse impacts to significant or unique cultural resources.

Section 106 of the NHPA is applicable to federal undertakings, including projects financed or permitted by federal agencies, regardless of whether the activities occur on land that is managed by federal agencies, other governmental agencies, or private landowners. Its purpose is to determine whether adverse effects will occur to significant cultural resources, defined as "historic properties" that are listed in or determined eligible for listing in the NRHP. The criteria for NRHP eligibility are defined at 36 CFR §60.4 and include:

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and that:

(a) Are associated with events that have made a significant contribution to the broad patterns of our history; or

(b) Are associated with the lives of persons significant in our past; or

(c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

(d) Have yielded or may be likely to yield, information important in prehistory or history.

Ordinarily cemeteries, birthplaces, or graves of historical figures, properties owned by religious institutions or used for religious purposes, structures that have been moved from their original locations, reconstructed historic buildings, properties primarily commemorative in nature, and properties that have achieved significance within the past 50 years shall not be considered NRHP. However, such properties will qualify either if they are integral parts of districts that otherwise meet the criteria, or if they fall within the following categories:

(a) A religious property deriving primary significance from architectural or artistic distinction or historical importance; or

(b) A building or structure removed from its original location but which is significant primarily for architectural value, or which is the surviving structure most importantly associated with a historic person or event; or

(c) A birthplace or grave of a historical figure of outstanding importance if there is no appropriate site or building directly associated with his productive life.

(d) A cemetery which derives its primary significance from graves of persons of transcendent importance, from age, from distinctive design features, or from association with historic events; or

(e) A reconstructed building when accurately executed in a suitable environment and presented in a dignified manner as part of a restoration master plan, and when no other building or structure with the same association has survived; or

(f) A property primarily commemorative in intent if design, age, tradition, or symbolic value has invested it with its own exceptional significance; or

(g) A property achieving significance within the past 50 years if it is of exceptional importance. (http://www.achp.gov/nrcriteria.html)

This current investigation was intended to:

- Provide a background records search and literature review to determine if any known archaeological sites were present in the project zone and/or whether the area had been previously and systematically studied by archaeologists;
- Provide a search of the NAHC *Sacred Lands File* to determine if any traditional cultural places or cultural landscapes have been identified within the area;
- Conduct an on-foot, intensive inventory of the study area to identify and record previously undiscovered cultural resources and to examine known sites; and
- To undertake a preliminary assessment of such resources, should any be found within the subject property.

This study was conducted by ASM Affiliates, Inc., of Tehachapi, California, during July and August 2014. David S. Whitley, Ph.D., RPA, served as principal investigator, and Peter A. Carey, M.A., RPA and Jena Rizzi, B.A., Associate Archaeologists, conducted the fieldwork with the assistance of Jon Malamma, B.A., and Mike Huerta, A.A.

This manuscript constitutes a report on the Class III Inventory and Phase I survey. Subsequent sections provide background to the investigation; the findings of the archival records search; a summary of the field surveying techniques employed; and the results of the fieldwork. We conclude with management recommendations for the pipeline project area.

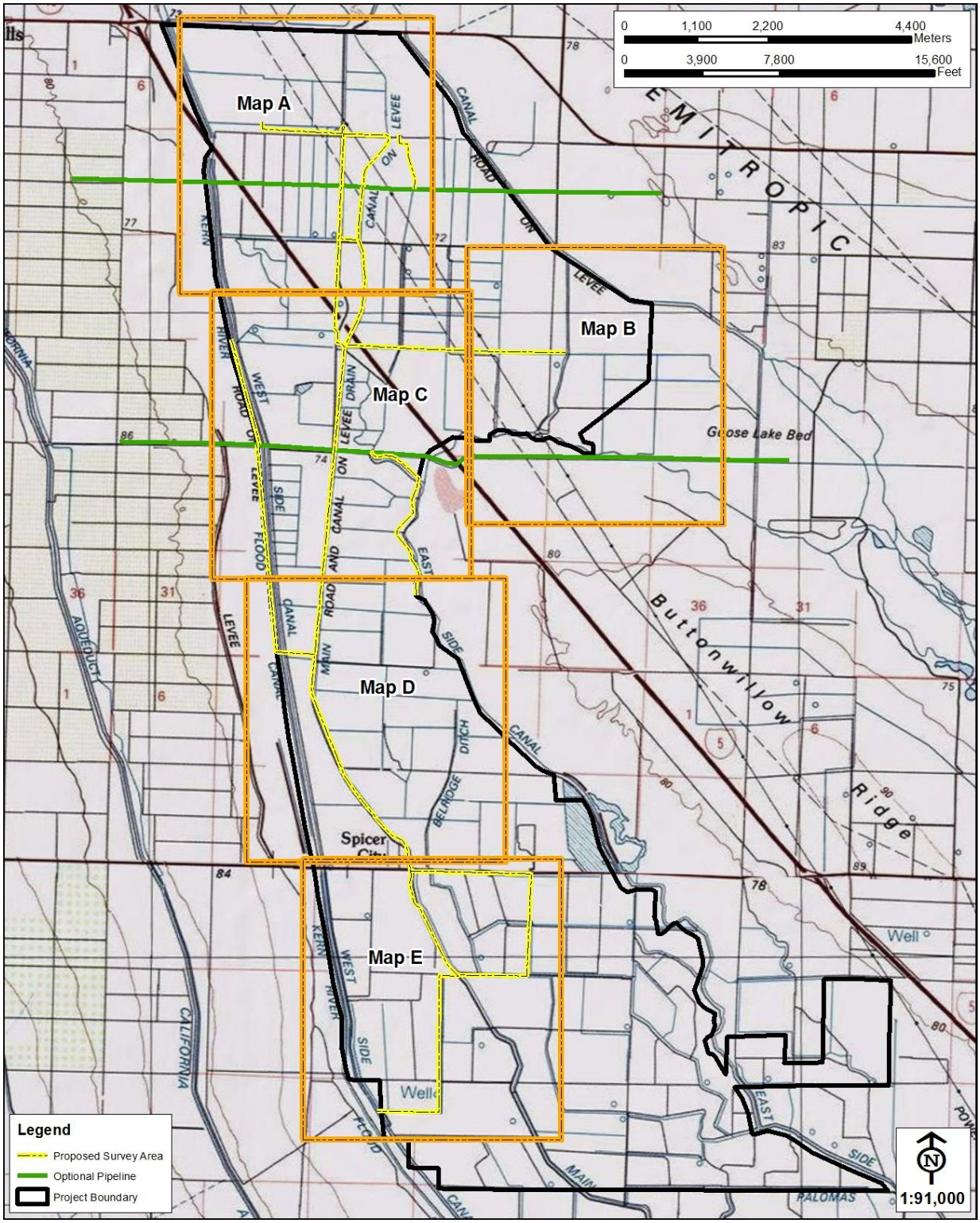

Figure 1.1a. Location of the Northern Pipeline Project study area, Kern County, California. Map Key.

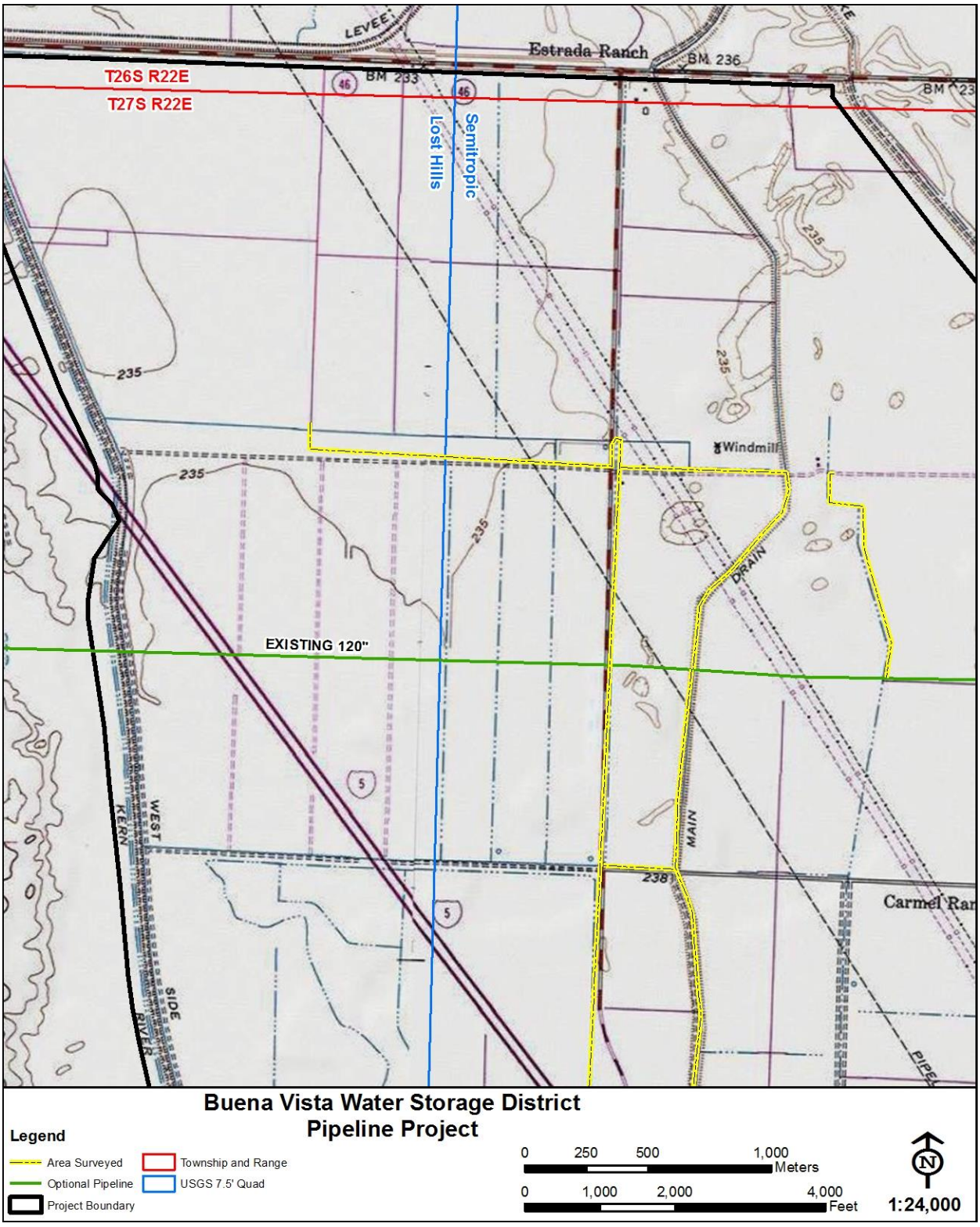

Figure 1.1b. Location of the Northern Pipeline Project study area, Kern County, California. Map A

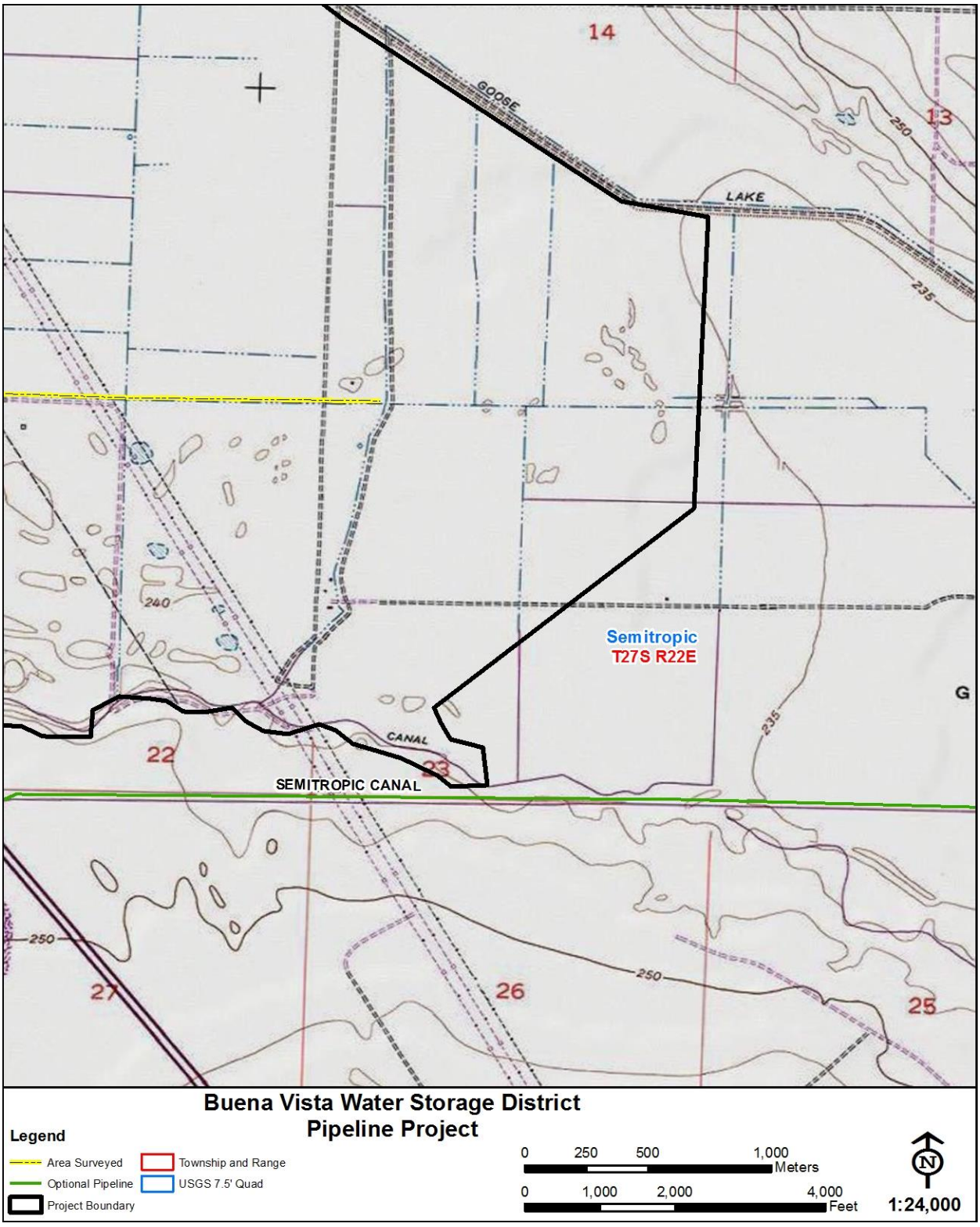

Figure 1.1c. Location of the Northern Pipeline Project study area, Kern County, California. Map B.

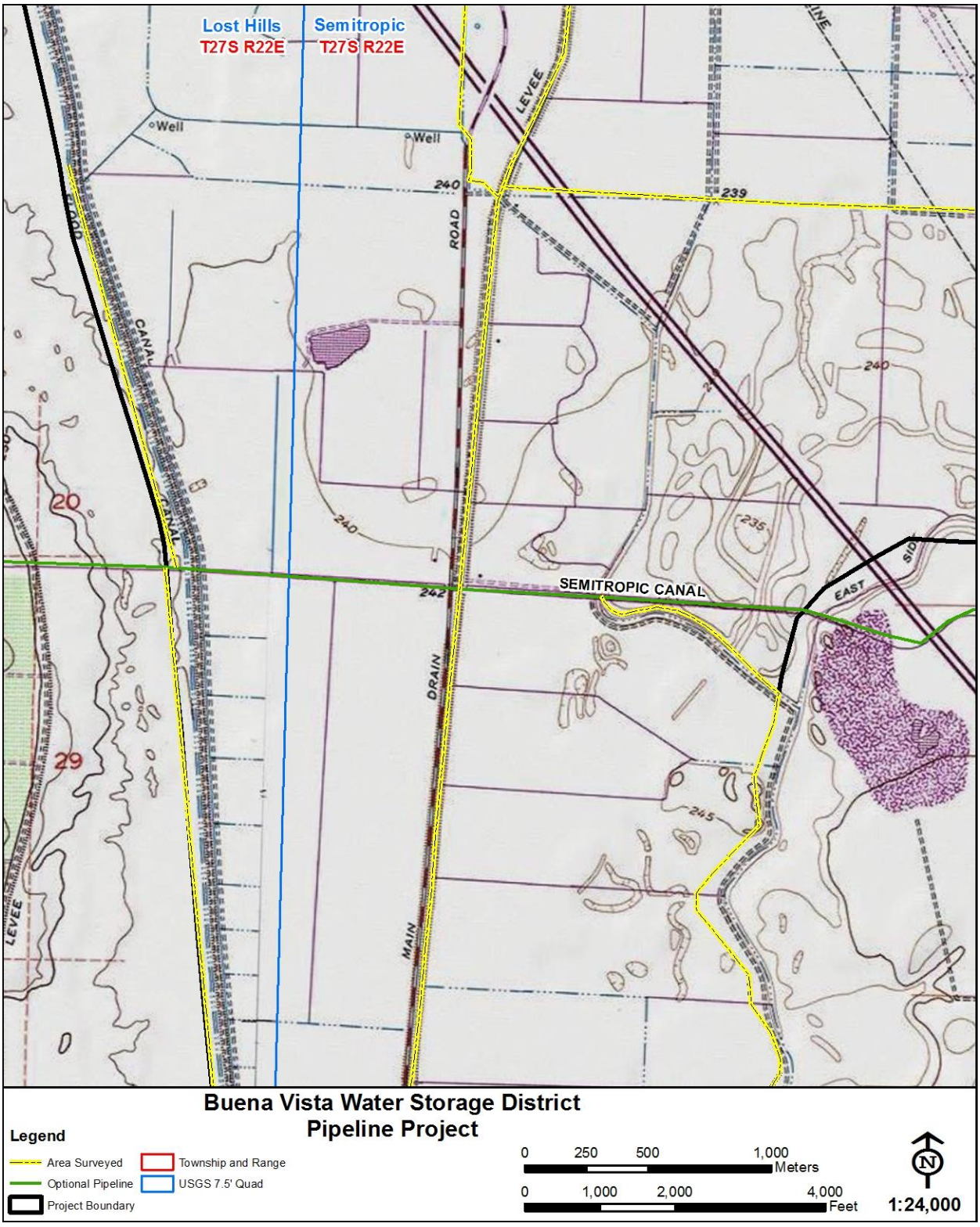

Figure 1.1d. Location of the Northern Pipeline Project study area, Kern County, California. Map C.

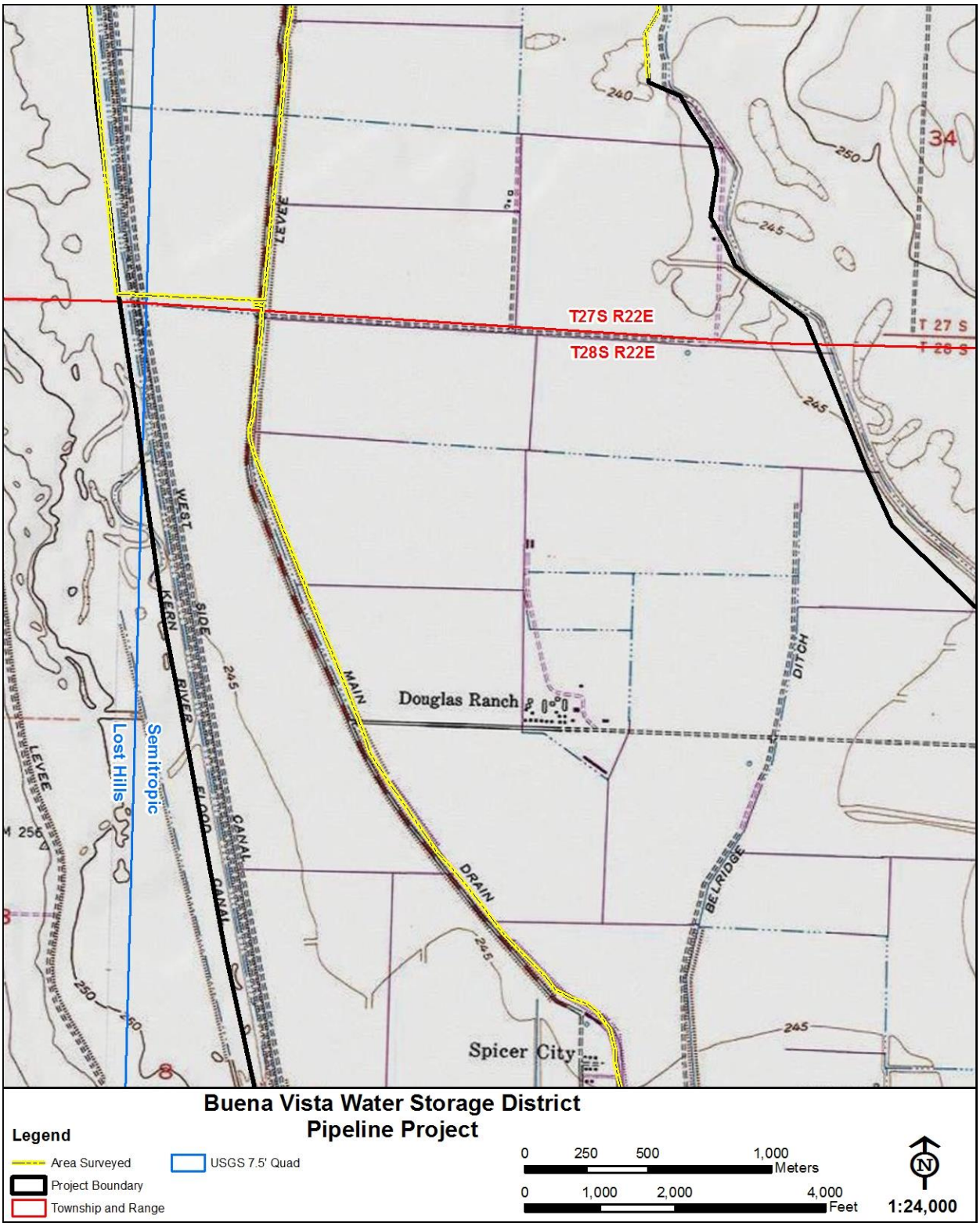

Figure 1.1e. Location of the Northern Pipeline Project study area, Kern County, California. Map D.

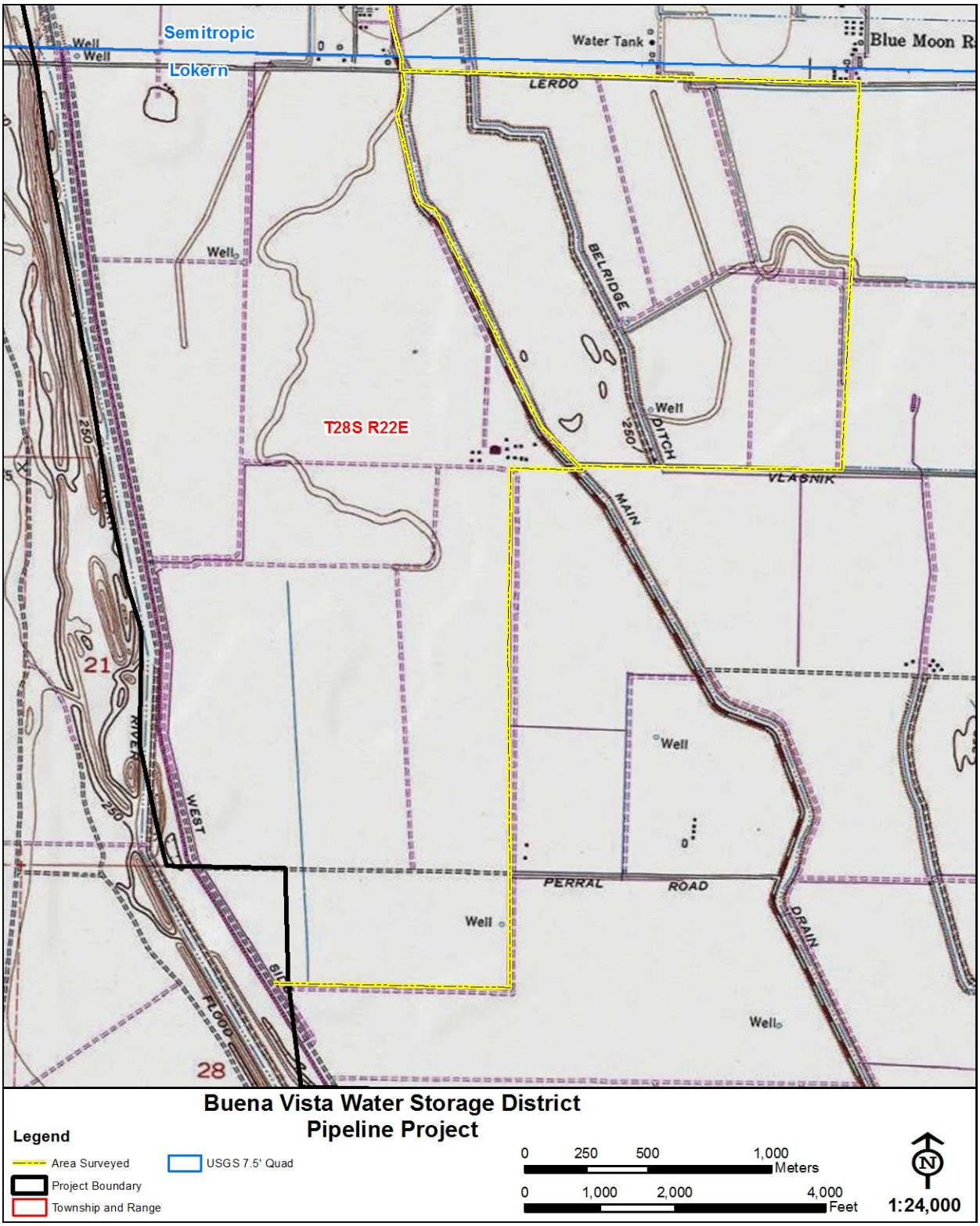

Figure 1.1f. Location of the Northern Pipeline Project study area, Kern County, California. Map E.

2. ENVIRONMENTAL AND CULTUAL BACKGROUND

LOCATION AND ENVIRONMENTAL BACKGROUND

The Northern Pipeline Project study area is located approximately three miles southeast of Lost Hills, Kern County, California. This places it towards the southern end and on the open flats of the San Joaquin Valley; a large interior and relatively low-lying valley that drains northwards to the San Francisco Bay. While the study area is a significant distance from the Pacific Ocean, elevation is only approximately 260 feet above mean seal level (amsl). The proposed pipeline will total approximately 25 miles and will span multiple sections in two different townships (Table 2.1). A majority of the project area is located west of Interstate 5 (I-5) and east of the Kern River Flood Canal. A small portion is also present east of I-5. Construction for the proposed pipeline will occur either within existing canal berms or in canal bottoms.

At the time of the Phase I study, the Northern Pipeline Project study area was surrounded by active farm fields (Figure 2). Although this location currently may be characterized as a dry open valley bottom, the study area is located within the historical Kern River Delta area. Prior to reclamation and channelization, the region would have been a low lying, water rich area characterized by sloughs, marshes and swamps. While occasionally inundated by floodwaters, in most years the region would have been marshy during the winter rainy season.

Historical and recent land-use has thus changed the vegetation that was once present within and near the project area. However, it is likely that Riparian Woodlands were once found along drainages in the general vicinity. Although the project area may have included the Valley Grassland community, depending upon drainage and seasonal storm systems, freshwater marshes may have also been present (see Schoenherr 1992).

Table 2.1 Project Locations by Quadrangle and Township/Range/Section. All Mount Diablo Base Meridian.

Quadrangle	Township/Range	Section(s)
Lost Hills	T27S/R22E	5, 8, 17, 18, 20, 29, 32
Semitropic	T27S/R22E	4, 5, 8, 9, 14, 15, 16, 17, 20, 21, 22, 23, 28, 32, 33
	T28S/R22E	4, 5, 9, 10
Lokern	T28S/R22E	14, 15, 16, 22, 27, 28

Figure 2. Project area overview, looking south.

ETHNOGRAPHIC BACKGROUND

Penutian-speaking Yokuts tribal groups occupied the southern San Joaquin Valley region and much of the nearby Sierra Nevada. Ethnographic information about the Yokuts was collected primarily by Powers (1971, 1976 [originally 1877]), Kroeber (1925), Gayton (1930, 1948), Driver (1937), Latta (1977) and Harrington (n.d.). For a variety of historical reasons, existing research information emphasizes the central Yokuts tribes who occupied both the valley and particularly the foothills of the Sierra. The northernmost tribes suffered from the influx of Euro-Americans during the Gold Rush and their populations were in substantial decline by the time ethnographic studies began in the early twentieth century. In contrast, the southernmost tribes were partially removed by the Spanish to missions and eventually absorbed into multi-tribal communities on the Sebastian Indian Reservation (on Tejon Ranch), and later the Tule River Reservation and Santa Rosa Rancheria to the north. The result is an unfortunate scarcity of ethnographic detail on southern Valley tribes, especially in relation to the rich information collected from the central foothills tribes where native speakers of the Yokuts dialects are still found. Regardless, the general details of indigenous life-ways were similar across the broad expanse of Yokuts territory, particularly in terms of environmentally influenced subsistence and adaptation and with regard to religion and belief, which were similar everywhere.

This scarcity of specific detail is particularly apparent in terms of southern valley tribal group distribution. According to Kroeber (1925:478), the Tulamni occupied the edges of Buena Vista

Lake and the southwestern end of the valley; the Hometwoli lived in and around Kern Lake to the east; the Tuhohi (or Chuxoxi) resided near the mouth of Kern River as it drained north into Tulare Lake; and Yauelmani territory comprised the southeastern side of the valley extending north into Bakersfield proper. The study area lies near the boundaries of these tribes, but its specific territorial affiliation is unclear.

Regardless of tribal affiliation, historical village distribution was similar across the region. Villages were typically located along lakeshores and major stream courses (as these existed circa AD 1850). Given the absence of such hydrographic features within or immediately adjacent to the study area, it is unlikely that it would contain a historical village, and none are known in the immediately surrounding area.

Most Yokuts groups, regardless of specific tribal affiliation, were organized as a recognized and distinct tribelet; a circumstance that almost certainly pertained to the tribal groups noted above. Tribelets were land-owning groups organized around a central village and linked by shared territory and descent from a common ancestor. The population of most tribelets ranged from about 150 to 500 peoples (Kroeber 1925).

Each tribelet was headed by a chief who was assisted by a variety of assistants, the most important of whom was the *winatum*, a herald or messenger and assistant chief. A shaman also served as religious officer. While shamans did not have any direct political authority, as Gayton (1930) has illustrated, they maintained substantial influence within their tribelet.

Shamanism is a religious system common to most Native American tribes. It involves a direct and personal relationship between the individual and the supernatural world enacted by entering a trance or hallucinatory state (usually based on the ingestion of psychotropic plants, such as jimsonweed or more typically native tobacco). Shamans were considered individuals with an unusual degree of supernatural power, serving as healers or curers, diviners, and controllers of natural phenomena (such as rain or thunder). Shamans also produced the rock art of this region, depicting the visions they experienced in vision quests believed to represent their spirit helpers and events in the supernatural realm (Whitley 1992, 2000).

The centrality of shamanism to the religious and spiritual life of the Yokuts was demonstrated by the role of shamans in the yearly ceremonial round. The ritual round, performed the same each year, started in the spring with the jimsonweed ceremony, followed by rattlesnake dance and (where appropriate) first salmon ceremony. After returning from seed camps, fall rituals began in the late summer with the mourning ceremony, followed by first seed and acorn rites and then bear dance (Gayton 1930:379). In each case, shamans served as ceremonial officials responsible for specific dances involving a display of their supernatural powers (Kroeber 1925).

Subsistence practices varied from tribelet to tribelet based on the environment of residence. Throughout Native California, and Yokuts territory in general, the acorn was a primary dietary component, along with a variety of gathered seeds. Valley tribes augmented this resource with lacustrine and riverine foods, especially fish and wildfowl.

Although population estimates vary and population size was greatly affected by the advancement of Euro-American introduced diseases and social disruption, the Yokuts were one of the largest, most successful groups in Native California. Cook (1978) estimates that the Yokuts region contained 27 percent of the aboriginal population in the state at the time of contact; other estimates are even higher.

ARCHAEOLOGICAL BACKGROUND

The southern San Joaquin Valley region has received minimal archaeological attention compared to other areas of the state. In part, this is because the majority of California archaeological work has concentrated in the Sacramento Delta, Santa Barbara Channel and central Mojave Desert areas (see Moratto 1984). Although knowledge of the region's prehistory is limited, enough is known to determine that the archaeological record is broadly similar to south-central California as a whole (see Gifford and Schenk 1926; Hewes 1941; Wedel 1941; Fenenga 1952; Elsasser 1962; Fredrickson and Grossman 1977; Schiffman and Garfinkel 1981). Based on these sources, the general prehistory of the region can be outlined as follows.

Initial occupation of the region occurred at least as early as the *Paleoindian Period*, or prior to about 10,000 YBP (years before present). Evidence of early use of the region is indicated by characteristic fluted and stemmed points found around the margin of Tulare Lake, in the foothills of the Sierra, and in the Mojave Desert proper. (In each case, these are locations many miles distant from the study area.)

Both fluted and stemmed points are particularly common around lake margins, suggesting a terminal Pleistocene/early Holocene lakeshore adaptation similar to that found throughout the far west at the same time; little else is known about these earliest peoples. Additional finds consist of a Clovis-like projectile point discovered in a flash-flood cut-bank near White Oak Lodge in 1953 on Tejon Ranch (Glennan 1987a, 1987b). More recently, a similar fluted point was found near Bakersfield (Zimmerman et al. 1989), and a number are known from the Edwards Air Force Base and Boron area of the western Mojave Desert. Although human occupation of the state is well-established during the Late Pleistocene, relatively little can be inferred about the nature and distribution of this occupation with a few exceptions. First, little evidence exists to support the idea that these Paleo-Indians peoples were big-game hunters, similar to those found on the Great Plains. Second, the western Mojave Desert evidence suggests small, very mobile populations that left a minimal archaeological signature.

Substantial evidence for human occupation of California first occurs during the middle Holocene, roughly 7500 to 4000 YBP. This period is known as the *Early Horizon*, or alternatively as the Early Millingstone along the Santa Barbara Channel. In the south, populations concentrated along the coast with minimal visible use of inland areas. Adaptation emphasized hard seeds and nuts with tool-kits dominated by mullers and grindstones (manos and metates). Additionally, little evidence for Early Horizon occupation exists in most inland portions of the state, partly due to a severe cold and dry paleoclimatic period occurring at this time. Regardless of specifics, Early Horizon population density was low with a subsistence adaptation more likely tied to plant food gathering than hunting.

Environmental conditions improved dramatically after about 4000 YBP during the *Middle Horizon* (or Intermediate Period). This period known climatically as the Holocene Maximum (circa 3800 YBP) and was characterized by significantly warmer and wetter conditions than previously experienced. Archaeologically, it was marked by large population increase and radiation into new environments along coastal and interior south-central California and the Mojave Desert (Whitley 2000). In the Delta region to the north, this same period of favorable environmental conditions was characterized by the appearance of the Windmiller culture which exhibited a high degree of ritual elaboration (especially in burial practices) and perhaps even rudimentary mound-building tradition (Meighan, personal communication, 1985). Along with ritual elaboration, Middle Horizon times experienced increasing subsistence specialization, perhaps correlating with the appearance of acorn processing technology. Penutian speaking peoples (including the Yokuts) are also posited to have entered the state roughly at the beginning of this period and, perhaps to have brought this technology with them (cf. Moratto 1984). Likewise it appears the so-called "Shoshonean Wedge" in southern California or the Takic speaking groups that include the Gabrielino/Fernandeño, Tataviam and Kitanemuk, may have moved into the region at this time, rather than at about 1500 BP as first suggested by Kroeber (1925).

Evidence for Middle Horizon occupation of interior south-central California is substantial. For example, in northern Los Angeles County along the upper Santa Clara River, the Agua Dulce village complex indicates occupation extending back to the Intermediate Period, when the population of the village may have been 50 or more people (King et al n.d.). Similarly, inhabitation of the Hathaway Ranch region near Lake Piru, and the Newhall Ranch near Valencia, appears to date to the Intermediate Period (W & S Consultants 1994). To the west, little or no evidence exists for pre-Middle Horizon occupation in the upper Sisquoc and Cuyama River drainages; populations first appear there at roughly 3500 YBP (Horne 1981). The Carrizo Plain experienced a major population expansion during the Middle Horizon (W & S Consultants 2004; Whitley et al. 2005), and recently collected data indicates the Tehachapi Mountains region was first significantly occupied during the Middle Horizon (W&S Consultants 2006). A parallel can be drawn to the inland Ventura County region where a similar pattern has been identified (Whitley and Beaudry 1991), as well as the western Mojave Desert (Sutton 1988a, 1988b), the southern Sierra Nevada (W & S Consultants 1999), and the Coso Range region (Whitley et al. 1988). In all of these areas a major expansion in settlement, the establishment of large site complexes and an increase in the range of environments exploited appear to have occurred sometime roughly around 4,000 years ago. Although, most efforts to explain this expansion have focused on local circumstances and events, it is increasingly apparent this was a major southern California-wide occurrence and any explanation must be sought at a larger level of analysis (Whitley 2000). Additionally, evidence from the Carrizo Plain suggests the origins of the tribelet level of political organization developed during this period (W & S Consultants 2004; Whitley et al. 2005). Whether this same demographic process holds for the southern San Joaquin Valley, including the study area, is yet to be determined.

The beginning of the *Late Horizon* set variously at 1500 and 800 YBP, with a consensus for the shorter chronology. Increasing evidence suggests the importance of the Middle-Late Horizons transition (AD 800 to 1200) in the understanding of south-central California. This corresponds to

the so-called Medieval Climatic Anomaly, a period of climatic instability that included major droughts and resulted in demographic disturbances across much of the west (Jones et al. 1999). It is also believed to have resulted in major population decline and abandonments across south-central California, involving as much as 90 percent of the interior populations in some regions including the Carrizo Plain (Whitley et al. 2007). It is not clear whether site abandonment was accompanied by a true reduction in population or an agglomeration of the same numbers of peoples into fewer but larger villages. What is clear is that Middle Period villages and settlements were widely dispersed across the landscape; many at locations that lack contemporary evidence of fresh water sources. Late Horizon sites, in contrast, are typically located where fresh water was available during the historical period, if not currently.

The subsequent Late Horizon can be best understood as a period of recovery from a major demographic collapse. One result is the development of regional archaeological cultures as the precursors to ethnographic Native California; suggesting that ethnographic life-ways recorded by anthropologists extend roughly 800 years into the past.

The position of southern San Joaquin Valley prehistory relative to patterns seen in surrounding areas is still somewhat unknown. The presence of large lake systems in the valley bottoms can be expected to have mediated some of the desiccation seen elsewhere. But, as the reconstruction of Soda Lake in the nearby Carrizo Plain demonstrates (see Whitley et al. 2007) environmental perturbations had serious impacts on lake systems too. Identifying certain of the prehistoric demographic trends for the southern San Joaquin Valley and determining how these trends (if present) correlate with those seen elsewhere, is a current important research objective.

HISTORICAL BACKGROUND

Spanish explorers first visited the southern end of the San Joaquin Valley in 1772, but its lengthy distance from the missions and presidios along the Pacific Coast delayed permanent settlement for many years, including during the Mexican period of control over the Californian region. In the 1840s, Mexican rancho owners along the Pacific Coast allowed their cattle to wander and graze in the San Joaquin Valley (JRP Historical Consulting 2009). The Mexican government granted the first ranchos in the southern part of the San Joaquin Valley in the early 1840s, but these did not result in permanent settlement. It was not until the annexation of California in 1848 that the exploitation of the southern San Joaquin Valley began (Pacific Legacy 2006).

The discovery of gold in northern California in 1848 resulted in a dramatic increase of population, consisting in good part of fortune seekers and gold miners, who began to scour other parts of the state. After 1851, when gold was discovered in the Sierra Nevada Mountains in eastern Kern County, the population of the area grew rapidly. Some new immigrants began ranching in the San Joaquin Valley to supply the miners and mining towns. Ranchers grazed cattle and sheep, and farmers dry-farmed or used limited irrigation to grow grain crops, leading to the creation of small agricultural communities throughout the valley (JRP Historical Consulting 2009).

After the American annexation of California, the southern San Joaquin Valley became significant as a center of food production for this new influx of people in California. The

expansive unfenced and principally public foothill spaces were well suited for grazing both sheep and cattle (Boyd 1997). As the Sierra Nevada gold rush presented extensive financial opportunities, ranchers introduced new breeds of livestock, consisting of cattle, sheep and pig (Boyd 1997).

With the dramatic increase of ranching in the southern San Joaquin came the dramatic change in the landscape, as non-native grasses more beneficial for grazing and pasture replaced native flora (Preston 1981). After the passing of the Arkansas Act in 1850, efforts were made to reclaim small tracts of land in order to create more usable spaces for ranching. Eventually, as farming supplanted ranching as a more profitable enterprise, large tracts of land began to be reclaimed for agricultural use, aided in part by the extension of the railroad in the 1870s (Pacific Legacy 2006).

Following the passage of state wide 'No-Fence' laws in 1874, ranching practices began to decline, while farming expanded in the San Joaquin Valley in both large land holdings and smaller, subdivided properties. As the farming population grew, so did the demand for irrigation. Settlers began reclamation of swampland in 1866, and built small dams across the Kern River to divert water into the fields. By 1880, 86 different groups were taking water from the Kern River. Ten years later, 15 major canals provided water to thousands of acres in Kern County.

During the period of reclaiming unproductive land in the southern San Joaquin Valley, grants were given to individuals who had both the resources and the finances to undertake the operation alone. One small agricultural settlement, founded by Colonel Thomas Baker in 1861 after procuring one such grant, took advantage of reclaimed swampland along the Kern River. This settlement became the City of Bakersfield in 1869, and quickly became the center of activity in the southern San Joaquin Valley, and in the newly formed Kern County. Located on the main stage road through the San Joaquin Valley, the town became a primary market and transportation hub for stock and crops, as well as a popular stopping point for travelers on the Los Angeles and Stockton Road. The Southern Pacific Railroad reached the Bakersfield area in 1873, connecting it with important market towns elsewhere in the state, dramatically impacting both agriculture and oil production (Pacific Legacy 2006).

The San Joaquin Valley was dominated by agricultural pursuits until the oil boom of the early 1900s, which saw a shift in the region, as some reclaimed lands previously used for farming were leased to oil companies. Nonetheless, the shift of the San Joaquin Valley towards oil production did not halt the continued growth of agriculture (Pacific Legacy 2006). The Great Depression of the 1930s brought with it the arrival of great number of migrants from the drought-affected Dust Bowl region, looking for agricultural labor. These migrants established temporary camps in the valley, staying on long past the end of the drought and the Great Depression, eventually settling in towns such as Bakersfield where their descendants live today (Boyd 1997).

The community of Lost Hills, the closest population center to the study area, has its origins in the 1910 discovery of oil in the nearby Lost Hills Oil Field. Most of its residents, however, are employed in agriculture signaling the fact that farming and oil production continue to be the primary economic activities in this portion of western Kern County, into the twenty-first century.

3. ARCHIVAL RECORDS SEARCH

An archival records search was conducted at the California State University, Bakersfield, Southern San Joaquin Valley Archaeological Information Center (AIC), by AIC staff members to determine: (i) if prehistoric or historical archaeological sites had previously been recorded within the Northern Pipeline Project study area; (ii) if the project area had been systematically surveyed by archaeologists prior to the initiation of this field study; and/or (iii) whether the region of the field project was known to contain archaeological sites and to thereby be archaeologically sensitive. Additionally, a search of the NAHC *Sacred Lands File* was conducted in order to ascertain whether traditional cultural places or cultural landscapes had been identified within the APE. The results of this archival records search are summarized here.

The records search at the AIC indicated that six previous archaeological surveys had been completed that covered portions of the study area (Table 3.1). Nine linear historical sites and three isolated prehistoric artifacts had been identified (Table 3.2) within or, in the case of the linear historical sites, that continued into, the study area. The NAHC *Sacred Lands File* did not indicate the presence of any cultural places within the project area.

Table 3.1 Survey reports within the APE.

Report No	Year	Author (s)/Affiliation	Title
KE-00058	1994	Richard Osborne and Dominique Comeyne	Negative Archaeological Survey Report. Highway Project Description: District 06, Kern County, Route 5, Post Mile 68.00, Charge Unit 169, Expenditure Authorization 37630K
KE-00063	1994	Richard Osborne and Dominique Comeyne	Negative Archaeological Survey Report. Highway Project Description: District 06, Kern County, Route 5, Post Mile 69.55, Charge Unit 169, Expenditure Authorization 37630K
KE-02873	2001	Aspen Environmental Group	Los Banos-Gates 500 kV Transmission Project: Draft Supplemental Environmental Impact Report (Cultural Resources Section)
KE-03214	2006	Kevin Bartoy, Kari Jones, and Thomas Jackson/Pacific Legacy (Berkeley)	Archaeological Survey Report for the Semitropic Water Storage District (SWSD) East-West Pipeline Project, Kern County, California
KE-03434	2006	Eric Wohlgemuth/Far Western Anthropological Research Group, Inc.	Cultural Resources Inventory for the Wetlands Reserve Program of 632 Acres at the Double G Farm, Kern County, CA
KE-03837	2006	John F Romani/Compass Rose Archaeological Inc.	Improvements to Lerdo Highway from State Route 33 East to Interstate 5 (approximately 11.5 miles), Lost Hills Area, Kern County, California
N/A	2013	ArchaeoPaleo Resource Management Inc.	Paleontological Resources and Cultural Resources Phase I Assessment for the Buena Vista Water Storage District Northern Area Project, Kern County, California

PREVIOUS SURVEY

A survey conducted by ArchaeoPaleo Resource Management Inc. (2013) for CEQA compliance covered portions of the current study area. These portions included a section of the Cox Canal that was involved in the current survey. A resurvey was not undertaken during the current study

as ArchaeoPaleo Resource Management Inc. reported no cultural resources along the canal in 2012.

PREVIOUSLY RECORDED SITES

The previous survey and evaluations by ArchaeoPaleo Resource management Inc. resulted in the recording of nine linear historical sites, all canals or ditches, either within or that continued into the Northern Pipeline study area. It also resulted in the recording of three isolated artifacts within the study area. These resources were evaluated for significance at that time, with the resulting recommendations summarized below and in Table 3.2.

P-15-016988/17 Extension

The 17 Extension is an earthen canal in Section 21 of T27S/R22E that connects Cox Canal to the Main Drain. The canal extends for approximately 2600 feet, averages 20 feet wide (expanding to 50 feet wide at roads), and is approximately 8 feet deep. A Kern County Land Company (1897) map shows that the Section 21 was owned by G.N. Cornwell in 1896, and a Randall and Denne (1901) map shows Miller and Lux had become owners by 1901. A road and a tenant-farmer created ditch run parallel on the south side of the 17 Extension and were recorded as associated features to the 17 Extension. The site was deemed not eligible for the CRHR based on a lack of association with historic events or persons and lack of research potential.

P-15-016992/Segments of Canal 17

Portions of the recorded Canal 17 are present within the Northern Pipeline Project study area. Canal 17 is found in Sections 22, 23, 25, 26, T28S/R22E and connects the southern end of the current Belridge Ditch/Canal 17 Drain with the East Side Canal. The previous investigation surveyed two portions of Canal 17:

> A portion begins at the western end of Vlasnik Road and ends where Canal 17 crosses Vlasnik Road (this portion includes two small segments and a long one) and a 50-foot segment at Canal 17's connection with Canal 18. The longest segment recorded—at 3500 feet long—was the more recently added portion along Vlasnik Road. The survey length of the other three segments (east and west ends along Vlasnik Road and the crossing with Canal 18) were only 50 feet long because of survey area limitations. Areas observed were approximately 15 feet wide with roads 20 feet wide on either side, with ditches approx. 8 feet deep (ArchaeoPaleo Resource Management Inc. 2013:83-84).

Canal 17 does not appear on any maps prior to the 1954 Lokern quadrangle where the portion at Canal 18 is mapped. The site was deemed not eligible for the CRHR based on a lack of association with the period of significance or with historically significant individuals, as well as a lack of any further research potential.

P-15-016995/CA-KER-9371H/Segments of Cox Canal

Segments of the Cox Canal, an earthen canal, are present in the current project area. The canal lies in portions of Sections 4, 9, 16, 21, and 28 of T27S/R22E. Length of the canal is not reported due to the nature of the discontinuous recording, but it is approximately 30 feet wide and 10 to 15 feet deep,

with approximately 20-foot wide levees/roads on either side of it. The portion surveyed extended from its southern end north to Kurt Road, one mile south of California State Route 46. The portions in Section 9 and Section 4 were not surveyed previously because they were outside of the previous project boundary. With the exception of the northern portion, the Cox Canal has been in place since 1927 and is present on the 1927 Semitropic Quadrangle. The northern portion, which crosses Carmel Road and terminates at Kurt Road, appears to have been constructed between 1931 and 1954. "It is named for Frederick Cox, a figure in California irrigation/landownership (associated with Miller and Lux) and a former landowner (in 1901) of some of the sections in which the canal is located." (ArchaeoPaleo Resource Management Inc. 2013:86) Though the canal is associated with a historical figure, it was deemed not significant enough to warrant eligibility, and therefore, the site was deemed not eligible for the CRHR based on a lack of association with historic events or persons and lack of research potential.

P-15-016996/Segments of Cox Canal-Associated Ditches

There are five surveyed ditches connected to the Cox Canal that are historic in age. "The ditches appear in Sections 16 or 21 of T 27S/R 22E on the 1954 Semitropic Quadrangle and are therefore pre-1954 in age at the very least. They are road- or section/section-portion-line-associated ditches, on either side of the accompanying roads, and are approximately 4 feet wide and 2 feet deep. Segments run the span of the fields, but only 50-foot-long portions within the survey area were recorded." (ArchaeoPaleo Resource Management Inc. 2013:87) Maps show that Section 16 belonged to Frederick Cox from at least 1897 to 1901. Section 21 belonged to G.N. Cornwell in 1897 but by 1901 had switched ownership to Miller and Lux (Kern County Water Company 1897, Randall and Denne 1901). The ditches are not present on these early maps. The ditches were deemed not eligible for the CRHR based on a lack of association with historic events or persons and lack of research potential.

P-15-017000/CA-KER-9373H/Segments of the Kern River Flood Canal/Channel

Some portions of the Kern River Flood Canal/Channel (KRFC) are within the Northern Pipeline Project area boundary and, therefore, previous studies of this canal are pertinent to the current investigation. ArchaeoPaleo Resource Management Inc. (2013) described the KRFC as approximately 280 by 1500 feet wide depending upon location:

> Only some portions west of the western edge of the Project area (formed by the West Side Canal) were surveyed and recorded by APRMI [ArchaeoPaleo Resource Management Inc]. In most areas west of the Project area, the density of vegetation would not allow passage. The portions surveyed were a one-mile segment from 50 feet south of Lerdo Highway north to the section border between Section 5 and 8 of T 28S/R 22E; and a segment west of Vlasnik Road, which was 100 feet long. The width of the KRFC in these segments is approx. 400 to 1000 feet, depending on the location. Where segments were surveyed, the segment's entire width was surveyed (ArchaeoPaleo Resource Management Inc. 2013:90).

The history of the KRFC was described in detail in the initial APRMI report:

> The KRFC channel is an earthen canal with an irregular path that variably has a U-shaped or trapezoidal cross-section (Webb 2012). The portions of the channel surveyed are on lands patented to Warren Barnes by the Desert Land Act of 1877 (19 Stat. 377), to the State of California by the Swamp Land Act of 1850 (*9 Stat. 519*), to the Southern Pacific Railroad Company by the Oregon and California Railroad land grant of 1866 (*14 Stat. 239*), and/or to the United States government (United States Congress 2011; BLM 2013). Construction the KVWCC by the Kern Valley Water Company occurred in 1877 and 1878. Canal construction began along the west side of the slough in 1877 with fifty-horse (perhaps mule) teams pulling one-ton "Fresno Scrapers" excavating the bed and building up levees of what became known as the Kern Valley Water Company's Canal" (Herbert et al. 2012).
>
> After the Kern Valley Water Company was organized for the reclamation of the Buena Vista Slough, S.W. Wible was put in charge as engineer… The massive size of the canal he engineered for them was intended to drain the water of the Kern River from the slough and also feed irrigation laterals. When first constructed, it extended 26 miles northwesterly up the slough from Old Headquarters, had a top width of 250 feet, bottom width of 125 feet, and was 7 feet deep. By 1893 the canal was 12 feet deep. The KVWCC was designed to be the main distribution and flood canal for the Kern River in western Kern County. It was intended to reclaim water from (to drain) the Buena Vista Slough and feed irrigation laterals. After the construction of the West Side Canal, the KVWCC lost its distribution function and now only serves as a flood "canal" (channel). As a result, it is not regularly maintained and has experienced erosion and silt deposition. The channel's slopes and floor are vegetated with grasses, sagebrush, tamarisk, and other native and invasive plants; it also contains modern debris (ArchaeoPaleo Resource Management Inc. 2013:90).

Though the canal is a historical site associated with important events and people, the site was deemed not eligible for the CRHR due to a lack of integrity.

P-15-017001/"L" Canal

L Canal is an east-west trending earthen canal that begins at the Cox Canal and continues east to the metal power-line towers in Section 15 of T27S/R22E. The western portion of the canal is present on a 1931 map based on a 1927 survey. An eastern portion present on 1954 and 1973 maps is no longer present. The canal was not deemed eligible for the CRHR based on a lack of association with historic events or persons and lack of research potential.

P-15-017002/CA-KER-9374H/Segments of Main Drain

The Main Drain is a large drainage canal that generally trends north-south through the Northern Pipeline Project area. Portions of it were recorded in the previous 2013 surve; specifically:

> These places are where it crosses Vlasnik Road, where it crosses Lerdo Highway, where it crosses Delfino Road, and a small portion just south of the I-5 crossing. It is about 40 feet wide with a 30-foot wide levee/road on its east side and, when Main Drain Road is not right alongside the canal, a 30-foot wide levee on the west side. Depth could not be determined because water was present in the canal at the time of the survey, but based on the depths of other canals in the area, it is probably about 10 feet deep (ArchaeoPaleo Resource Management, Inc. 2013:92).

Due to improvements to the canal after initial construction and resulting lack of integrity, the site was deemed not eligible for the CRHR.

P-15-017004/Vlasnik Road Ditch and Associated Ditch

Vlasnik Road Ditch runs parallel to Vlasnik Road from Main Drain until Milan Road. On the western end of the road the ditch runs along the south side. The ditch switches to the northern side of the road for the eastern extent. The eastern segment first appears on the 1954 Lokern quadrangle while the western segment is not depicted on any quadrangle. One north-south ditch was also depicted on the 1954 map, where the ditch crosses under Vlasnik Road. The ditch was deemed not eligible for the CRHR based on a lack of association with historic events or persons and lack of research potential.

P-15-017005/Segment of the West Side Canal

Portions of the West Side Canal are present within the Northern Pipeline Project area boundary and are therefore important to the current study. The previous APRMI investigation surveyed and evaluated segments of the West Side Canal:

> The West Side Canal is an approximately 30-foot-wide dredged canal/earthen ditch that forms the western boundary of the BVWSD. The canal parallels the Kern Valley Water Company's Canal (Kern River Flood Canal/Channel). The surveyed segment runs from south of Perral Road to north of Carmel Road. On the either side of the canal is an approximately 30-foot wide levee t road, while on the west side is an approximately 20-foot wide road. West of this road is another built-up levee/berm that borders the Kern River Flood Canal/Channel, and is probably made up of dirt excavated for the West Side Canal and/or Kern River Flood Canal/Channel. The canal reaches a depth of approximately 12 feet below the accompanying roads. Four check dams and three bridges over the canal were noted in survey area. The West Side Canal is reported to have been constructed originally to drain water from the slough by the Kern Valley Water Company in the late 1800s —before the 1890s (Webb 2012). In 1912, the canal only existed from Section 27 of T28S/R23E south. Section 27 is just south of the portion of the canal surveyed for the current Project (Webb 2012). According to Webb (2012: 23), in 1917, "a rapid program of expansion, lengthening the canal north of its former terminus and reconstructing the wooden headgates was undertaken to provide enough water for the 1917 crops."
>
> Additional construction and maintenance under the control of the BVWSD resulted in the replacement of old weirs and headgates of the canal with modern concrete structures. The water supply for the canal has also been altered. Water previously entered the canal from Outlet Canal to the southeast. Since 1973, water has entered the canal from the Short Main Canal that connects the East Side and West Side Canal (Webb 2012). However, despite maintaining the same course, the canal has still undergone alterations. The canal's internal shape (cross-section) and depth have been altered and thus compromised (ArchaeoPaleo Resource Management Inc. 2013:93).

Though the canal is part of historically significant events, the site lacks integrity and for this reason was deemed not eligible for the CRHR.

PREVIOUSLY RECORDED ISOLATES

Three isolated prehistoric artifacts, all examples of lithic tool-making waste or debitage, had been identified within the current study area:

P-15-017025

A single chert flake with no use-wear. This isolated artifact is not significant or unique under CEQA, or NRHP eligible under NHPA Section 106.

P-15-017026

A single chert flake with no use-wear. This isolated artifact is not significant or unique under CEQA, or NRHP eligible under NHPA Section 106.

P-15-017028

A single chert flake with no use-wear. This isolated artifact is not significant or unique under CEQA, or NRHP eligible under NHPA Section 106.

Table 3.2 Summary of Eligibility Recommendations.

Site No.	**Eligibility Recommendation**
P-15-016988	Not Eligible
P-15-016992	Not Eligible
P-15-016995/CA-KER-9371H	Not Eligible
P-15-016996	Not Eligible
P-15-017000/CA-KER-9373H	Not Eligible
P-15-017001	Not Eligible
P-15-017002/CA-KER-9374H	Not Eligible
P-15-017004	Not Eligible
P-15-017005/CA-KER-9375H	Not Eligible
Isolate No.	
P-15-017025	Not Eligible
P-15-017026	Not Eligible
P-15-017028	Not Eligible

4. FIELD SURVEY METHODS AND RESULTS

The study area was examined with the field crew walking parallel transects along the pipeline route spaced at 15 meter intervals, in order to identify surface artifacts, archaeological indicators (e.g., shellfish or animal bone), and/or archaeological deposits (e.g., organically enriched midden soil); tabulation and recording of surface diagnostic artifacts; site sketch mapping; preliminary evaluation of site integrity; and site recording, following the California Office of Historic Preservation Instructions for Recording Historic Resources, using DPR 523 forms. A buffer 50 feet wide was included on each side of the pipeline. Because the route primarily follows existing canals with the pipeline planned for the canal berms, this resulted in survey on both side of these canals.

Special attention was paid to rodent burrow back dirt piles, in the hope of identifying sub-surface soil conditions that might be indicative of archaeological features or remains. No cultural resources were collected during the survey.

INVENTORY RESULTS

The study area was surveyed by ASM Associate Archaeologists Peter Carey, M.A., RPA, and Jena Rizzi, B.A., and Assistant Archaeologists Jon Malamma, B.A., and Mike Huerta, A.A. Fieldwork was conducted in July and August 2014. Soils throughout the study area are sandy-silty alluvium with very few lithic clasts, likely reflecting a soils origin in deltaic processes. The study area consists of existing, previously disturbed canal berms with buffers on either side of the berms/canals that had been recently disked, with minimal surface vegetation. Surface visibility was excellent throughout the study area, as a result.

Segments of the nine previously recorded linear historical sites, all canals or ditches, were identified during the survey. In each case the conditions of these canal/ditch segments were found to be fully equivalent to those encountered during and described for the 2013 survey (ArchaeoPaleo Resource Management Inc. 2013). Specifically:

P-15-016988/17 Extension: This linear historical site was found to be in the same condition as when previously recorded and evaluated for CRHR eligibility (ArchaeoPaleo Resource Management Inc. 2013). We concur with the previous determination that this site is not CRHR eligible or unique and recommend the site as not eligible for the NRHP.

P-15-016992/Segments of Canal 17: This linear historical site was found to be in the same condition as when previously recorded and evaluated for CRHR eligibility (ArchaeoPaleo Resource Management Inc. 2013). We concur with the previous determination that this site is not CRHR eligible or unique and recommend the site as not eligible for the NRHP.

P-15-016995/CA-KER-9371H/Segments of Cox Canal: This linear historical site was found to be in the same condition as when previously recorded and evaluated for CRHR eligibility (ArchaeoPaleo Resource Management Inc. 2013). We concur with the previous determination that this site is not CRHR eligible or unique and recommend the site as not eligible for the NRHP.

P-15-016996/Segments of Cox Canal-Associated Ditches: This linear historical site was found to be in the same condition as when previously recorded and evaluated for CRHR eligibility (ArchaeoPaleo Resource Management Inc. 2013). We concur with the previous determination that this site is not CRHR eligible or unique and recommend the site as not eligible for the NRHP.

P-15-017000/CA-KER-9373H/Segments of the Kern River Flood Canal/Channel: This linear historical site was found to be in the same condition as when previously recorded and evaluated for CRHR eligibility (ArchaeoPaleo Resource Management Inc. 2013). We concur with the previous determination that this site is not CRHR eligible or unique and recommend the site as not eligible for the NRHP.

P-15-017001/"L" Canal: This linear historical site was found to be in the same condition as when previously recorded and evaluated for CRHR eligibility (ArchaeoPaleo Resource Management Inc. 2013). We concur with the previous determination that this site is not CRHR eligible or unique and recommend the site as not eligible for the NRHP.

P-15-017002/CA-KER-9374H/Segments of Main Drain: This linear historical site was found to be in the same condition as when previously recorded and evaluated for CRHR eligibility (ArchaeoPaleo Resource Management Inc. 2013). We concur with the previous determination that this site is not CRHR eligible or unique and recommend the site as not eligible for the NRHP.

P-15-017004/Vlasnik Road Ditch and Associated Ditch: This linear historical site was found to be in the same condition as when previously recorded and evaluated for CRHR eligibility (ArchaeoPaleo Resource Management Inc. 2013). We concur with the previous determination that this site is not CRHR eligible or unique and recommend the site as not eligible for the NRHP.

P-15-017005/Segment of the West Side Canal: This linear historical site was found to be in the same condition as when previously recorded and evaluated for CRHR eligibility (ArchaeoPaleo Resource Management Inc. 2013). We concur with the previous determination that this site is not CRHR eligible or unique and recommend the site as not eligible for the NRHP.

No additional historical or prehistoric sites were discovered during the Class III Inventory/Phase I survey.

Fourteen isolated prehistoric artifacts were however discovered and recorded during the survey. These are listed in Table 4.1 (see Confidential Appendix A for isolate locations.) They include eight waste flakes (lithic debitage), two unifacially-flaked tools, three bifacially-flaked tools, and one hammerstone. The presence of these widely dispersed isolated artifacts is indicative of very

low intensity use of the study area in general over time. Isolated artifacts do not constitute archaeological sites, and they are categorically not CRHR eligible or unique under CEQA or NRHP eligible under NHPA Section 106.

Table 4.1 Isolated Artifacts, Northern Pipeline Project

Resource	Description	Section/Township/Range
BVWSD-ISO-1	Red/brown CCS flake with white cortex, 2.0 x 1.9 cm	Sec 21/T27S/R22E
BVWSD-ISO-2	Brown chert biface fragment with white inclusions, 2.9 x 3.6 cm	Sec 28/T27S/R22E
BVWSD-ISO-3	Obsidian biface fragment, 3.2 x 3.2 x 1.0 cm	Sec 32/T27S/R22E
BVWSD-ISO-4	White CCS uniface, complete, 4.5 x 3.4 x 1.3 cm	Sec 5/T28S/R22E
BVWSD-ISO-5	Opaque beige/orange CCS flake, ~20% cortex, 2.3 x 1.4 x 0.6 cm	Sec 5/T28S/R22E
BVWSD-ISO-6	Battered quartzite cobble fragment, only one half present, exhibits battering at end and along one lateral edge, 8.9 x 7.6 x 6.4 cm	Sec 5/T28S/R22E
BVWSD-ISO-7	Red-orange CCS interior flake, 2.0 x 1.1 x 0.8 cm	Sec 5/T28S/R22E
BVWSD-ISO-8	Mottled white/beige/grey CCS flake with possible retouching/use-wear along one margin. The dorsal surface may be cortex or a highly patinated interior surface, flake: 4.0 x 3.4 x 1.0 cm; use edge: 2.5 cm	Sec 4/T28S/R22E
BVWSD-ISO-9	Red CCS interior flake fragment, 1.9 x 1.8 x 0.4cm	Sec 4/T28S/R22E
BVWSD-ISO-10	Tan/orange chert flake, 3.1 x 2.9 cm	Sec 9/T28S/R22E
BVWSD-ISO-11	Chert flake with some cortex, 2.5 x 1.6 cm	Sec 9/T28S/R22E
BVWSD-ISO-12	Multicolored chert uniface with some cortex, 5.1 x 3.1 x 1.2 cm	Sec 9/T28S/R22E
BVWSD-ISO-13	Red CCS biface fragment (likely a projectile point fragment). Distal portion missing base with evidence of a possible shoulder retained. Slightly serrated edges, 3.8 x 2.5 x 0.8 cm	Sec 28/T27S/R22E
BVWSD-ISO-14	Orange CCS flake fragment, 2.6 x 1.0 x 0.6 cm	Sec 33/T28S/R22E

5. SUMMARY AND RECOMMENDATIONS

An intensive Phase I archaeological survey/Class III Inventory were conducted for the BVWSD Northern Pipeline Project study area, located near Lost Hills, Kern County, California. A records search of site files and maps was conducted at the Southern San Joaquin Valley AIC and a search of the NAHC *Sacred Lands File* was completed. These investigations determined that the study area had not been previously surveyed in its entirety. Portions of nine historical linear sites, all canals or ditches, had been recorded in or were known to extend into the study area however, all of which had been previously determined not significant (ArchaeoPaleo Resource Management 2013). No Native American sacred sites or cultural landscapes had been identified within or immediately adjacent to the study area. Intensive Phase I survey of the approximately 25 mile linear study area failed to result in the identification or recording of new significant historical resources, and we concur with the previous determination that the nine historical canals and ditches are not significant and are not CRHR or NRHP eligible.

RECOMMENDATIONS

An archival records search, background studies, and an intensive, on-foot surface reconnaissance of the BVWSD Northern Pipeline Project study area, Kern County, California, were conducted as part of a Phase I archaeological survey/Class III inventory. No significant historical resources were found to be present within the study area. Development of this study area therefore does not have the potential to result in adverse impacts to cultural resources, and no additional archaeological work is recommended for it. It is recommended that an archaeologist be contacted in the unlikely event that archaeological resources are discovered during the construction or use of the pipeline.

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CONFIDENTIAL APPENDIX A: ISOLATED ARTIFACT LOCATION MAPS AND PRIMARY RECORDS