

**CULTURAL RESOURCES ASSESSMENT FOR THE UCIP DS ID: 20416 PIPE
REMOVAL PROJECT, SACRAMENTO RIVER WEST SIDE LEVEE DISTRICT,
COLUSA COUNTY, CALIFORNIA**

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USGS 7.5-Minute Quadrangle: Tisdale Weir 1952; Valley Springs 1962

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ABSTRACT

Purpose and Scope: Natural Investigations Company, Inc. (Natural Investigations) was retained to provide cultural resource services in support of the Utility Crossing Inventory Program (UCIP) Desk Study (DS) ID: 20416 Pipe Removal Project (Project) near Grimes, Colusa County, California. The services provided include a cultural resources literature search, Sacred Lands File (SLF) search, paleontological resources sensitivity analysis, intensive pedestrian survey of the Project Area (Project Area), and the present assessment report. This study was completed in compliance with the California Environmental Quality Act (CEQA) Section 21083.2 of the statute and Section 15064.5 of the CEQA Guidelines.

Dates of Investigation: The results of the California Historical Resources Information System (CHRIS) records search were received from the Northwest Information Center (NWIC) on November 17, 2020. The Native American Heritage Commission (NAHC) returned the results of the SLF search on October 22, 2020. The University of California Museum of Paleontology (UCMP) records search was completed on November 23, 2020. Finally, Natural Investigations conducted an intensive pedestrian survey of the Project Area on November 30, 2020.

Investigation Constraints: Ground visibility within the Project Area was excellent (70%-100%) with limiting factors confined to sparse vegetation and woodchips from a recently removed tree.

Findings of the Investigation: The CHRIS records search indicates that two prior cultural resource studies have been completed which included all or portions of the Project Area, and one other study has been completed outside the Project Area but within the 0.25-mile record search radius. The CHRIS search also indicates that no cultural resources of any kind have been previously recorded within the Project Area or the 0.25-mile record search radius. The SLF search returned *negative* results for Native American resources in the vicinity of the Project. One cultural resource (NIC-2020-SRWSLD 01) was identified within the Project Area during the field survey. It is an historical segment of the Sacramento River West Side Levee. No paleontological resources of any kind were identified within the Project Area during the field survey.

Recommendations: Cultural Resources: One cultural resource was identified within the Project Area during the present assessment. The resource is a 350-foot segment of the Sacramento River West Side Levee which carries Wilson Bend Road along its crown. This levee segment appears to be significant within the context of early flood management and engineering in California which enabled the initial settlement and development of the region, as well as for its association with the pioneering Sacramento River Flood Control Project (SRFCP). While the levee has been subject to standard repairs, the areal extent of past improvements has been limited. This assessment finds that the resource retains sufficient integrity to convey its significance. Given these factors, NIC-2020-SRWSLD 01 is recommended eligible for listing in the California Register of Historical Resources (CRHR).

The Project proposes to remove an abandoned pipe penetration within the Sacramento River West Side Levee prism. Removal of the pipe would require excavation of the same section of levee that was previously disturbed at time of the pipe's installation. The levee section will be reconstructed after removal of the utility without significant alteration of its geometry. The historical location of the levee segment will not change following removal and its function will remain consistent with its dual historical uses as a levee and two-lane roadway. Additionally, no changes to the surrounding setting will result from Project actions.

The ultimate aim of the Project is to reduce the risk of levee damage or failure resulting from potential water penetration at the pipe location during a high-water event, so the Project will in fact strengthen the physical integrity of this levee segment. The character defining features of this resource- its setting, alignment, and continued function as an historically significant flood control structure- will be maintained following Project improvements. For these reasons, the impact to NIC-2020-SRWSLD 01 as a result of Project work is expected to be less than significant and no mitigation regarding the resource is recommended at this time. If Project plans change in any substantial way, mitigation may be required.

The Project will implement the following environmental protection measure in order to avoid potential impacts to any cultural resources inadvertently identified within the Project Area: In the event that a cultural resource is inadvertently discovered during Project activities, work will be halted within 30 feet of the find and a qualified archaeologist (36 CFR Part 61) will be notified immediately so that its potential significance can be assessed.

Paleontological Resources: Review of recent geologic mapping indicates that the Project is underlain by Late Holocene-aged (4,000 years ago to the present) alluvium (Qha). These sediments occur on fans, terraces, and in basins. They consist of poorly sorted sand, gravel, and silt. Separate types of alluvial deposits are not delineated in these areas. Given their age, these Late Holocene-age deposits (Qha) are considered to have a low paleontological resource potential.

Six fossil localities have produced significant paleontological remains in Colusa County, all from the Pliocene-aged Tehama Formation. None of these localities have been mapped within the Project Area. No unique geological features have been identified within or near the Project Area and no paleontological resources of any kind were identified within the Project Area during the field survey undertaken as part of this assessment. As no fossils and no unique geologic features have been recorded within the Project Area, and the underlying alluvium and basin deposits are unlikely to contain fossilized remains, the paleontological resource sensitivity within the Project Area is estimated to be low and no additional paleontological resources work is recommended at this time.

Disposition of Data: This report will be filed with Ascent Environmental, Inc. in Sacramento; the Sacramento River West Side Levee District in Grimes; the NWIC in Rohnert Park; and Natural Investigations in Sacramento. All field notes and other documentation related to the study are on file at the Sacramento office of Natural Investigations.

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INTRODUCTION

Natural Investigations Company, Inc. (Natural Investigations) was retained to provide cultural resource services in support of the Utility Crossing Inventory Program (UCIP) Desk Study (DS) ID: 20416 Pipe Removal Project (Project) near Grimes, Colusa County, California. The services provided include a cultural resources literature search, Sacred Lands File (SLF) search, paleontological resources sensitivity analysis, intensive pedestrian survey of the Project Area (Project Area), and the present assessment report. This study was completed in compliance with the California Environmental Quality Act (CEQA) Section 21083.2 of the statute and Section 15064.5 of the CEQA Guidelines.

PROJECT DESCRIPTION AND LOCATION

The Project is located along the Sacramento River West Side Levee, 4.25 miles southeast of Grimes in Colusa County, California. The Project Area encompasses approximately 0.64 acres, including portions of Assessor's Parcel Numbers (APNs) 019-160-023 and 019-160-024, Wilson Bend Road, an abandoned 24-inch steel pipe to be removed, associated well pump and piping, the levee road, and a power pole. The Project Area can be found on the 1952 United States Geological Survey (USGS) Tisdale Weir 7.5-minute topographic quadrangle, in Section 26 of Township 14 north, Range 1 east of the Mount Diablo Base and Meridian (Figure 1).

The Sacramento River West Side Levee District (District) proposes to remove an abandoned pipe penetration (Utility Crossing Inventory Program Desk Study ID, or UCIP DS ID: 20416) within the Sacramento River West Side Levee prism, along Wilson Bend Road in Colusa County. Removal of the pipe would require excavation of the previously disturbed levee section containing the pipe, followed by reconstruction of the section after pipe removal. Project activities would involve closure of a portion of Wilson Bend Road in the Project vicinity during construction, traffic detour routing, disturbance to a depth of approximately 15 feet below the levee crown, temporary stockpiling of excavated material in a staging area on the landside of the levee adjacent to the excavation area, disturbance to approximately 0.64 acres (including the construction staging and excavation areas), asphalt road repair, and roadway re-striping.

The purpose of the Project is to remove an abandoned 24-inch steel levee pipe penetration through the levee to limit the potential risk of levee damage/failure resulting from potential water penetration at the pipe location during a high-water event. Funding for this Deferred Maintenance Project (DMP) Rehabilitation is provided by the Department of Water Resources under the Budget Act of 2018 (Stats. 2018, Ch. 29, Item 3860-001-0001). DMP Rehabilitation is intended to address specific deferred maintenance issues for the State Plan of Flood Control (SPFC) that are recognized as high risks to levee integrity, one of which includes aging pipe penetrations.

Environmental Protection Measures

The Project will implement environmental protection measures in order to avoid potential impacts to any cultural resources inadvertently discovered within the Project Area during Project implementation. These measures are described below.

Previously Undiscovered Cultural Resources

In the event that a cultural resource is inadvertently discovered during Project activities, work will be halted within 30 feet of the find and a qualified archaeologist (36 CFR Part 61) will be notified immediately so that its potential significance can be assessed. Construction activities may continue in other areas, but will not resume in the area of the find until the Sacramento River West Side Levee District provides written permission. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and would be discussed in consultation with Colusa County (County), affiliated tribal organizations, and any other relevant regulatory agencies or invested parties, as appropriate.

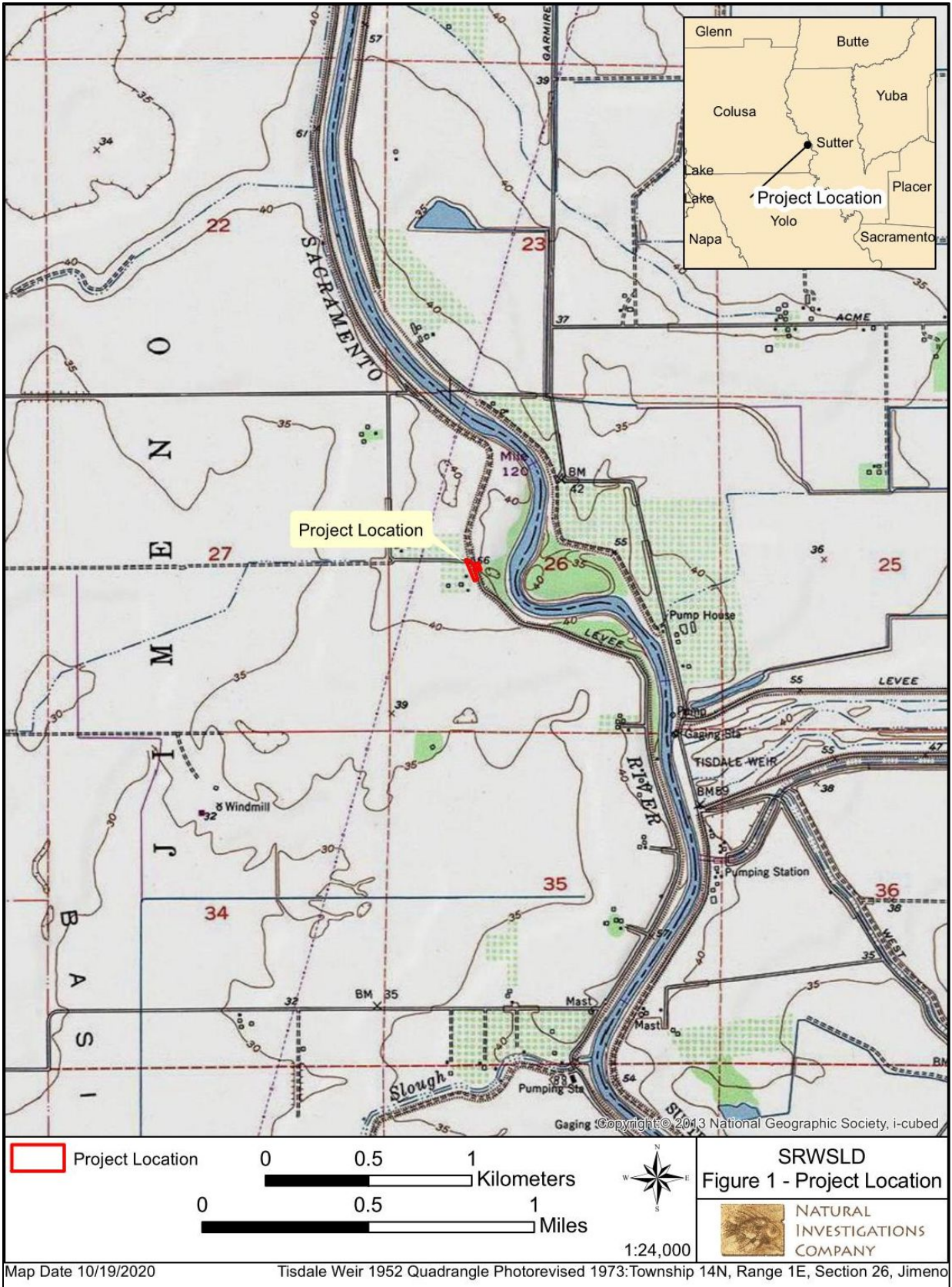


Figure 1. Project Location Map

Previously Undiscovered Human Remains

Although unlikely, the discovery of human remains is always a possibility. State of California Health and Safety Code Section 7050.5 covers these discoveries, except on federal lands. This code section states that no further disturbance may occur until the Colusa County Coroner has made a determination of origin and disposition of the remains pursuant to PRC Section 5097.98. The County Coroner will be notified of the find immediately upon discovery. If the human remains are determined to be of Native American origin, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendent (MLD). The MLD must complete an inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. The Project will fully conform to this code in the event of an inadvertent discovery of human remains.

REGULATORY SETTING

Cultural Resources

The current study was completed under the provisions of CEQA. Section 21083.2 of the statute and Section 15064.5 of the CEQA Guidelines provide instructions for a lead agency to consider the effects of Projects on historical resources and cultural resources. A historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (Public Resources Code [PRC] Section 21084.1), a resource included in a local register of historical resources (PRC Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant (PRC Section 15064.5[a][3]).

According to PRC Section 5024.1(c) (1–4), as well as Section 15064.5(a) (3) (A–D) of the revised CEQA Guidelines, a resource is considered historically significant if it meets at least one of the following criteria:

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

In order to be listed in the CRHR, historical resources must meet at least one of the significance criteria. Resources that do not meet any of these criteria are viewed as not significant. In addition to meeting at least one of the significance criteria, historical resources must possess the quality of *integrity* (location, design, setting, materials, workmanship, feeling, and association). Historic resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance.

Impacts to significant cultural resources from a proposed Project are considered significant if the Project physically destroys or damages all or part of a resource, changes the character of the use of the resource or physical feature within the setting of the resource that contribute to its significance, or introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

Under CEQA, if an archaeological site is not a historical resource but meets the definition of a *unique archaeological resource* as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section. PRC Section 21083.2(g) defines a unique archeological resource to mean 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 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 example available of its type.
- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Should a site qualify as a unique archaeological resource, it is protected under CEQA. If it can be demonstrated that a Project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC Sections 21083.2[a], [b], and [c]). If the agency determines the site does not qualify, then the site merits no further consideration.

An “historical resource” as defined in PRC Section 21084.1, a “unique archaeological resource” as defined in PRC Section 21083.2(g), or a “nonunique archaeological resource” as defined in PRC Section 21083.2(h) may also be a *tribal cultural resource* (TCR). As defined under PRC Section 21074, TCRs are “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American Tribe” that are either: (1) included or determined to be eligible for inclusion in the CRHR; included in a local register of historical resources as defined in PRC Section 5020.1(k); or (2) determined by the lead agency to be significant pursuant to the criteria for inclusion in the CRHR set forth in PRC Section 5024.1(c), if supported by substantial evidence and taking into account the significance of the resource to a California Native American tribe. TCRs were established by Assembly Bill 52, effective July 1, 2015, as a new category of resource under CEQA.

Paleontological Resources

Paleontological resources are limited, non-renewable resources of scientific, cultural, and educational value that are explicitly afforded protection by CEQA, specifically Section VII(f) of Appendix G which addresses the potential for adverse impacts to unique paleontological resources, sites, or geological features. It requires that impacts to such resources be considered in the project review process. While CEQA does not precisely define unique paleontological resources, the treatment of paleontological resources on non-federal lands is usually conducted in accordance with guidance from the criteria established by the SVP. Treatment usually consists of identification, assessment, and mitigation for potential impacts to significant paleontological resources (SVP 2010).

PRC Section 5097.5 states that no person shall “knowingly and willfully” excavate upon, or remove, destroy, injure or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Public lands include those “owned by, or under the jurisdiction of, the [S]tate, or any city, county, district, authority, or public corporation, or any agency thereof.” If paleontological resources are identified within a given project site, the lead agency must take those resources into consideration when evaluating project impacts. The level of consideration may vary with the importance of the resource in question.

In accordance with guidelines established by the SVP (2010), an assessment of the scientific significance of fossilized remains is based on whether they can provide data on the taxonomy and phylogeny of ancient organisms, the paleoecology and nature of paleoenvironments in the geologic past, or the stratigraphy and age of geologic units. Because most vertebrate fossils are rare, they are considered important paleontological resources. Conversely, marine invertebrates are generally common, the fossil record is well developed and well documented, and they are generally not considered important paleontological resources.

Substantial damage to or destruction of significant paleontological resources as defined by the SVP (2010) would represent a significant impact.

REPORT PREPARATION

Tim Spillane, MA was the Principal Investigator for this cultural resources assessment and authored this report. Mr. Spillane is a Registered Professional Archaeologist (RPA) with more than ten years of experience in California archaeology and exceeds all requirements of the *Secretary of Interior's Qualifications Standards* (36 CFR Part 61; National Park Service 1983). Phil Hanes, MA, RPA, performed the pedestrian survey for the Project and drafted the field portion of this report. Mr. Hanes also has more than ten years of experience in California archaeology and meets the same qualification standards as Mr. Spillane. The format of this report follows the Archaeological Resource Management Reports: Recommended Contents and Format prepared by the Office of Historic Preservation (1990).

ENVIRONMENTAL SETTING

GEOLOGY, HYDROLOGY, AND SOILS

The Project is located at an elevation of roughly 40 feet above mean sea level in the Sacramento Valley, on the north side of the Central Valley geomorphic province. The sedimentary geologic formations in the Central Valley province vary in age from Jurassic (199 to 144 million years ago) to Quaternary (200 million years ago to present; Norris and Webb 1990). The older deposits are primarily marine in origin, while the continentally derived, younger sediments, which are mainly sourced from the Sierra Nevada Range, were typically deposited in fluvial, alluvial, and lacustrine environments. There is great variation in the thickness of the sedimentary deposits that fill the Sacramento and San Joaquin valleys to their present elevations. Along the eastern valley edge, the deposits are relatively thin, but range to more than 20,000 feet (6,096 meters) in the south central portion of the valley (Page 1986). In the southeastern Sacramento Valley, the deposits range from 300 to 2,100 feet.

The most significant river in Colusa County is the Sacramento River which bounds its eastern side. Ultimately, the Sacramento River watershed drains to the Sacramento-San Joaquin River Delta. The Sacramento River is the largest river in California, running for 374 miles and draining a total watershed of 21,350 square miles. It flows southward from Mount Shasta to the City of Sacramento, and from there to San Francisco Bay. The watershed historically reached as far north as south-central Oregon. Today the Sacramento River provides more than half of the water supply to Californians and supports the most productive agricultural area in the United States, though modern developments have had a negative impact on its once-abundant fisheries (Palmer 2012).

Review of recent geologic mapping published by California Geological Survey (CGS; Burnett and Jennings 1962; Jennings et al. 2010; Gutierrez 2011) indicates the Project is underlain by Late Holocene-aged (4,000 years ago to the present) alluvium (Qha). These sediments occur on fans, terraces, and in basins. They consist of poorly sorted sand, gravel, and silt. Separate types of alluvial deposits are not delineated in these areas. Given their age, these Late Holocene-age deposits (Qha) are considered to have a low paleontological resource potential.

The SSURGO database maintained by the United States Department of Agriculture (USDA) and National Resource Conservation Service (NRCS) indicates that the Project Area is underlain by soils of the Grandbend Series to the west and of the Vina Series to the east (USDA-NRCS 2020). The Grandbend Series consists of very deep, somewhat poorly drained loam formed in alluvium from mixed sources. It occurs on nearly level floodplains with slopes of 0 to 2 percent. Typical A-horizons extend from 0 to 16 inches below the surface and range in color from grayish brown (10YR 5/2) to very dark grayish brown (10YR 3/2). C-horizons extend from 16 to 54 inches below the surface and range in color broadly from pale brown (10YR

6/3) to dark brown (10YR 3/3) at the uppermost levels, and from gray (2.5Y 6/2) to dark grayish brown (10YR 4/2) at the lowest levels. Gray (5Y 5/1) to black (N 2/0) silty clay loam extends from 54 to 67 inches below the surface. Grandbend Series soils are used primarily for irrigated crops, including tomatoes, beans, safflower, and wheat (USDA-NRCS 1999).

Vina Series soils consist of very deep, well drained loam occurring on Pleistocene alluvial fans with slopes of 0 to 8 percent. Typical A-horizons extend from 0 to 36 inches below the surface and range in color narrowly from dark grayish brown (10YR 4/2) to very dark grayish brown (10YR 3/2). C-horizons extend from 35 to 66 inches below the surface and range in color from grayish brown (10YR 5/2) to dark grayish brown (10YR 4/2). Vina Series soils are used most often for irrigated row crops, orchards, hay, and pasture (USDA-NRCS 2018).

CURRENT LAND USES

The Project vicinity is used mainly agriculturally, including the production of tomatoes, beans, safflower, and wheat, as well as for orchards and pastureland. The Project Area is located bounded by the Sutter Buttes to the north, the Sacramento Valley to the south, the Sacramento River to the east, and the Dunnigan Hills to the west.

CLIMATE, FLORA, AND FAUNA

The Project vicinity is characterized by hot, dry summers and warm, moist winters. Annual precipitation in this region averages 18.5 inches, with most of the rain falling between October and March. Winter temperature averages 46° Fahrenheit (F), and summer temperatures average 75° F with highs around 100° F. The current Mediterranean climate is dryer and hotter than the conditions present at the time of California's initial occupation (Barbour and Major 1988).

The Project vicinity was historically characterized by vegetation communities near permanent drainages, including grasslands, woodlands, riparian scrub/forest along drainages, with grasslands and oak woodlands in valley foothill areas. This mosaic of ecological communities would have provided a very productive environment. Based on ethnographic descriptions of the Native American groups who historically occupied this region, their hunting-gathering economy was supported by a variety of large and small mammals, edible plant species, fish, and birds (Kroeber 1976; Wilson and Towne 1978).

Over the past 150 years, the environment within the Central Valley has been greatly altered. The construction of extensive levee systems to control the Sacramento and San Joaquin Rivers, reclamation of the Delta islands, and the introduction of agricultural practices, ranching and nonnative Mediterranean grasses are among the major historic modifications. Prior to these changes to the natural landscape, the region was covered with native annual and perennial grasses commonly found in the Valley Grassland Community, such as needlegrass (*Stipa* spp.), bluegrass (*Poa* spp.), and three awn (*Aristida divaricata*) (Munz and Keck 1973). Tule (*Scirpus* sp.) and stands of willow (*Salix* sp.), cottonwood (*Populus fremontii*), and sycamore (*Platanus racemosa*) were supported by the marshy wetlands (Wallace 1978:462). Regional oak groves would have included blue oak (*Quercus douglasii*), interior live oak (*Q. wislizeni*), and valley oak (*Q. lobata*). The plant resources utilized by populations during the prehistoric and ethnohistoric periods would have been available in this series of natural communities.

The larger mammals native to the area would have included mule deer (*Odocoileus hemionus californicus*), black-tailed deer (*O. hemionus columbianus*), tule elk (*Cervus elaphus nannoides*), pronghorn (*Antilocapra americana*), mountain lion (*Felis concolor*), and black bear (*Ursus americanus*). Once common in the valley, tule elk and pronghorn are now restricted to very limited areas and the range of black bears is now limited to the Sierran foothills and mountains (Jameson and Peeters 1988). Small animals, such as rabbit (*Sylvilagus* sp.), black-tailed jackrabbit (*Lepus californicus*), gray squirrel (*Sciurus griseus*), coyote (*Canis*

latrans), and gray fox (*Urocyon cinereoargenteus*) would have also been available prior to the major alterations to the landscape in the historic period.

The Central Valley once held an extensive, rich, marshy wetland habitat. Among the migratory waterfowl and other birds that continue to utilize the remnants of this natural feeding ground are mallard duck (*Anas platyrhynchos*), green-winged teal (*A. crecca*), northern pintail (*A. acuta*), great blue heron (*Ardea herodias*), belted kingfisher (*Ceryle alcyon*), red-winged blackbird (*Agelaius phoeniceus*), rock dove (*Columba livia*), northern flicker woodpecker (*Colaptes auratus*), black-shouldered kite (*Elanus caeruleus*), red-tailed hawk (*Buteo jamaicensis*), and northern harrier (*Circus cyaneus*). The region's rivers housed a variety of anadromous and freshwater fish species, such as sturgeon (*Acipenser transmontanus*), salmon (*Oncorhynchus* sp.), and rainbow trout/steelhead (*O. mykiss*), some of which are still fished today.

CULTURAL SETTING

PREHISTORIC OVERVIEW

A tripartite classification scheme for cultural change in California's Sacramento Valley, Sacramento–San Joaquin Delta, and San Joaquin Valley developed as the result of efforts of a number of researchers since the 1930s and has been further refined over the succeeding decades (e.g., Bennyhoff and Fredrickson 1994; Heizer and Fenenga 1939; Heizer 1949; Fredrickson 1973; 1974; 1994; Moratto 2004). As recently summarized by Rosenthal and others (2007), and with the timeframes adjusted for modern calibration curves for radiocarbon dates, the chronological sequence for the Central Valley is: Paleo-Indian (11,500–8550 cal [calibrated] B.C.), Lower Archaic (8550–5550 cal B.C.), Middle Archaic (5550–550 cal B.C.), Upper Archaic (550 cal B.C.–cal A.D. 1100), and Emergent or Late Prehistoric Period (cal A.D. 1100–Historic Contact).

Subsequent to the Paleo-Indian and Lower Archaic periods, the cultural framework within the greater study region is further divided into three regionally based “patterns.” Specific to Central Valley prehistory and the current study region, the regionally based patterns defined by Fredrickson (1973; 1974) are the Windmill, Berkeley, and Augustine. The patterns mark changes in distinct artifact types, subsistence orientation, and settlement patterns, which began circa 5550 cal B.C. and lasted until historic contact in the early 1800s. They were initially identified at three archaeological sites: the Windmill site (CA-SAC-107) near the Cosumnes River in Sacramento County; the West Berkeley site (CA-ALA-307) on the east side of the Bay in Alameda County; and the Augustine site (CA-SAC-127) in the Sacramento–San Joaquin Delta. In general, the patterns conform to three temporal divisions: Middle Archaic Period/Windmill Pattern, Upper Archaic Period/Berkeley Pattern, Late Prehistoric Period/Augustine Pattern.

Paleo-Indian and Lower Archaic Periods (11,500–5550 cal B.C.)

There is little evidence of the Paleo-Indian and Lower Archaic periods in the Central Valley (Rosenthal et al. 2007:151; Dillon 2002). As shown by geoarchaeological studies (e.g., Meyer and Rosenthal 2004b; 2004a; 2008; White 2003), large segments of the Late Pleistocene landscape throughout the central California lowlands have been buried or removed by periodic episodes of deposition or erosion. Periods of climate change and associated alluvial deposition occurred at the end of the Pleistocene (approximately 9050 cal B.C.) and at the beginning of the early Middle Holocene (approximately 5550 cal B.C.). Earlier studies had also estimated that Paleo-Indian and Lower Archaic sites along the lower stretch of the Sacramento River and San Joaquin River drainage systems had been buried by Holocene alluvium up to 33 feet (10 meters) thick that was deposited during the last 5,000 to 6,000 years (Moratto 2004). The formation of the Sacramento–San Joaquin Delta began during the early Middle Holocene (Atwater and Belknap 1980; Goman and Wells 2000). After approximately 1,000 cal B.C. during the Late Holocene, there were renewed episodes of alluvial fan and floodplain deposition (Rosenthal et al. 2007).

The archaeological evidence that is available for the Paleo-Indian Period is comprised primarily by basally thinned, fluted projectile points. These points are morphologically similar to well-dated Clovis points found elsewhere in North America. In the Central Valley, fluted points have been recovered from remnant features of the Pleistocene landscape at only three archaeological localities (Woelfsen Mound, CA-MER-215, in Merced County, Tracey Lake in San Joaquin County, and Tulare Lake basin in Kings County).

In the Central Valley, the Lower Archaic Period is mainly represented by isolated finds as the early landscape was buried by natural alluvial fan and floodplain deposition (Rosenthal et al. 2007). The earliest confirmed archaeological evidence for habitation of the immediate Sacramento vicinity was recovered from below 10 feet of overburden and extending to a depth of 10-22 feet below current street level with dates for occupation on a stable paleo-sandbar at CA-SAC-38 from 8,500 to 3,000 years ago (Tremaine 2008). At Lower Archaic foothill sites in eastern Contra Costa County (CA-CCO-637; Meyer and Rosenthal 1998) and Calaveras County (Skyrocket site CA-CAL-629/630; LaJeunesse and Pryor 1996), abundant milling slabs and handstones have been recovered. In Kern County on the ancient shoreline of Buena Vista Lake, stratified cultural deposits at CA-KER-116 have yielded a stemmed projectile point, chipped stone crescents, and the remains of fish, birds, and shellfish, but no milling tools or plant remains.

Middle Archaic Period/Windmill Pattern (5550–550 cal B.C.)

For the first 3,000 years of the Middle Archaic, archaeological sites on the valley floor are relatively scarce, in part due natural geomorphic processes, unlike the foothills where a number of buried sites have been found (Rosenthal et al. 2007). On the valley floor, sites are more common after 2550 cal. B.C. The archaeological record in the valley and foothills indicates the subsistence system during this period included a wide range of natural resources (e.g., plants, small and large mammals, fish, and waterfowl) that indicate people followed a seasonal foraging strategy (Fredrickson 1973; Heizer 1949; Ragir 1972; Moratto 2004). Some researchers (e.g., Moratto 2004) suggest populations may have occupied lower elevations during the winter and shifted to higher elevations in the summer. Others (e.g., Rosenthal et al. 2007) also suggest there was increasing residential stability along Central Valley river corridors during the Middle Archaic.

Excavations at Windmill Pattern sites have yielded abundant remains of terrestrial fauna (deer, tule elk, pronghorn, and rabbits) and fish (sturgeon, salmon, and smaller fishes). Projectile points with a triangular blade and contracting stems are common at Windmill Pattern sites. A variety of fishing implements such as angling hooks, composite bone hooks, spears, and baked clay artifacts, which may have been used as net or line sinkers, are also relatively common. The points are classified within the Sierra Contracting Stem and Houx Contracting Stem series (Justice 2002). The presence of milling implements (grinding slabs, handstones, and mortar fragments) indicate acorns or seeds were an important part of the Middle Archaic diet (Moratto 2004; Rosenthal et al. 2007). In the foothills, pine nut and acorn remains have been recovered from sites in Fresno (CA-FRE-61) and Calaveras (CA-CAL-629/630 and CA-CAL-789) counties.

The variety of artifacts recovered from Windmill Pattern sites includes shell beads, ground and polished charmstones, and bone tools, as well as impressions of twined basketry. Baked clay items include pipes, discoids, and cooking “stones” as well as the net sinkers. Burials in cemetery areas, which were separate from habitation areas, were accompanied by a variety of grave goods. The presence of an established trade network is indicated by the recovery of *Olivella* shell beads, obsidian tools, and quartz crystals. Obsidian sources during the Middle Archaic included quarries in the North Coast Ranges, eastern Sierra, and Cascades (Rosenthal et al. 2007).

Upper Archaic Period/Berkeley Pattern (550 cal B.C.–cal A.D. 1100)

Better understood than any of the preceding periods (Rosenthal et al. 2007), the Upper Archaic is characterized by a shift over a 1,000-year period to the more specialized, adaptive Berkeley Pattern. Excavated archaeological sites signal an increase in mortars and pestles, as well as archaeobotanical remains, accompanied by a decrease in slab milling stones and handstones. Archaeologists generally agree

mortars and pestles are better suited to crushing and grinding acorns, while milling slabs and handstones may have been used primarily for grinding wild grass grains and seeds (Moratto 2004). The proportional change indicates a shift during the Berkeley Pattern to a greater reliance on acorns as a dietary staple (Fredrickson 1974; Moratto 2004; Wohlgemuth 2004). Innovations such as new types of shell beads, charmstones, bone tools, and ceremonial blades are additional evidence of the more specialized technology present during this period.

The artifact assemblage in Berkeley Pattern sites demonstrates that populations continued to exploit a variety of natural resources. In addition to seeds and acorns, hunting persisted as an important aspect of food procurement (Fredrickson 1973). Large, mounded villages that developed around 2,700 years ago in the Delta region included accumulations of habitation debris and features, such as hearths, house floors, rock-lined ovens, and burials (Rosenthal et al. 2007). The remains of a variety of aquatic resources in the large shell midden/mounds that developed near salt or fresh water indicate exploitation of shellfish was relatively intensive.

Berkeley Pattern artifact assemblages are also characterized by *Olivella* shell beads, *Haliotis* ornaments, and a variety of bone tool types. Mortuary practices continue to be dominated by interment, although a few cremations have been discovered at sites dating to this period. Trade networks brought obsidian toolstone to the Central Valley from the North Coast Ranges and the east side of the Sierra Nevada Range.

Emergent Period/Augustine Pattern (cal A.D. 1100–Historic Contact)

The comprehensive archaeological record for the Emergent or Late Prehistoric Period in the Central Valley shows an increase in the number of archaeological sites associated with the Augustine Pattern in the lower Sacramento Valley/Delta region, as well as an increase in the number and diversity of artifacts. The Emergent Period was shaped by a number of cultural innovations, such as the bow and arrow and more elaborate and diverse fishing technology, as well as an elaborate social and ceremonial organization. Dart and atlatl technology was effectively replaced by the introduction of the bow and arrow. Additionally, the cultural patterns typical of the Augustine Pattern as viewed from the archaeological record are reflected in the cultural traditions known from historic period Native American groups (Moratto 2004; Rosenthal et al. 2007).

The faunal and botanical remains recovered at Emergent Period archaeological sites indicate the occupants relied on a diverse assortment of mammals, fish, and plant parts, including acorns and pine nuts. Hopper mortars, shaped mortars and pestles, and bone awls used to produce coiled baskets are among the variety of artifacts recovered from Augustine Pattern sites. The toolkit during this period also included bone fish hooks, harpoons, and gorge hooks for fishing, as well as the bow and arrow for hunting. Small, Gunther barbed series projectile points have been found at sites dating to the early part of the period, while Desert-side notched points appear later in the period. The Stockton serrated arrow point also appears in archaeological assemblages dating to this period and in some parts of the lower Sacramento Valley, Cosumnes Brownware is present. The appearance of ceramics during this period is likely a direct improvement on the prior baked clay industry (Rosenthal et al. 2007).

During the Emergent Period, numerous villages, ranging in size from small to large, were established along the valley floor sloughs and river channels and along the foothills sidestreams. House floors or other structural remains have been preserved at some sites dating to this period (e.g., CA-CAL-1180/H, CA-SAC-29, CA-SAC-267). The increase in sedentism and population growth led to the development of social stratification, with an elaborate social and ceremonial organization. Examples of items associated with rituals and ceremonials include flanged tubular pipes and baked clay effigies representing animals and humans. Mortuary practices changed to include flexed burials, cremation of high-status individuals, and pre-interment burning of offerings in a burial pit. Currency, in the form of clamshell disk beads, also developed during this period together with extensive exchange networks (Fredrickson 1973; Moratto 2004; Rosenthal et al. 2007).

ETHNOGRAPHIC OVERVIEW

The Project Area is located within the ethnographic territory of the Patwin tribe (Johnson 1978). The Patwin occupied lands in the southern portion of the Sacramento River Valley to the west of the Sacramento River, from the town of Princeton southward to San Pablo and Suisun Bays. The Patwin spoke a distinct dialect of Wintuan known as Southern Wintuan which also belongs to the Penutian language family (Merriam 1966; Johnson 1978).

Low natural rises along streams and rivers were the preferred location for Patwin villages, which typically had bedrock mortars, dance houses, sweathouses, and acorn granaries, and many had cemeteries. Typical communities included a central village with several smaller satellite villages. Groups constructed temporary brush shelters while hunting or gathering seasonal plant resources, frequently at higher elevations. Among the major villages established and occupied by the Patwin at the time of European contact were *Aguasto*, *Bo'-do*, *Chemocu*, *Churup*, *Dok'-dok*, *Gapa*, *Imil*, *Katsil*, *Kisi*, *Koh'pah de'-he*, *Koru*, and *Kusêmpu*, (Johnson 1978). The Patwin usually buried their dead, though cremation was common in instances when a tribal member died away from the village (Kroeber 1925; Johnson 1978).

Natural resources were abundant in the area but varied seasonally, so the subsistence economy of the Patwin tribe was based on a combination of fishing, hunting, and the collection of plant foods. Like most native Californian groups, they relied heavily on the acorn, and used a wide variety of tools, implements and enclosures to collect and process food resources. These included bows and arrows, traps, harpoons, hooks, nets, portable stone mortars, bedrock mortars and pestles, various woven tools, and canoes made of tule balsa or logs. The Patwin also traded with neighboring groups for shell ornaments, monetary beads, steatite, and obsidian (Johnson 1978).

Europeans arrived in Patwin territory relatively late in the colonial history of North America. Though their first contact with Northern California Native peoples probably occurred as early as 1579 (Sir Francis Drake's expedition), there are no published accounts of European contact with the tribe until 1832-33 when a party of American trappers working for the Hudson's Bay Company passed through the area. This delay of European intrusions into Patwin lands is unique for California's contact period considering that Spanish missions were established around San Francisco Bay and up to the Sonoma Valley in the late 1700's and early 1800's. Historical records are clear that contact with the Spanish occurred in 1841 when Salvador Vallejo sent men into the area to round up Indians to work on his Sonoma Valley Ranch. Patwin groups are also known to have been forcibly taken by the Spanish to Mission Dolores in San Francisco (Johnson 1978).

The remote nature of the area served to buffer Patwin populations from many of the disrupting activities that were taking place elsewhere in California in its early history. Most written accounts indicate that traditional life continued for many Patwin groups until the 1870's. However, gradually from the mid-19th century, enslavement and mistreatment by Spanish soldiers and missionaries, Mexican land barons, European settlers, and gold diggers, combined with a lack of natural immunity to European diseases, decimated approximately 75% of the Patwin population, wiping out entire villages and forcing the survivors to retreat into the hills (Cook 1976a).

By the mid-1850s, American pioneers and families were making their homes where the tribe had been well-established for millennia. The new settlers planted orchards and tended cattle ranches and farms. Mines yielded quicksilver, gold, and borax. Privately owned toll roads were dug through valleys and into the mountains, bringing more people, who built stores, banks, churches, saloons, and other businesses, forming dozens of new communities. Today, Wintun descendants, including the Patwin, as well as the Nomlaki and Wintu proper, total about 2,500 people and three federally recognized Patwin rancherías remain (SDSU 2010).

HISTORIC OVERVIEW

California History

Post-contact California history is divided into three distinct periods: the Spanish Period (1769–1822), the Mexican Period (1822–1848), and the American Period (1848–present). Although there were brief visits by Spanish, Russian, and British explorers from 1529 to 1769, the first significant settlement in California was established by the Spanish at San Diego in 1769. Between 1769 and 1823, 21 missions were built by the Spanish and the Franciscan Order along the coast between San Diego and San Francisco. The Spanish expeditions into the Central Valley in 1806 and 1808 led by Lieutenant Gabriel Moraga explored along the main rivers, including the American, Calaveras, Cosumnes, Feather, Merced, Mokelumne, Sacramento, San Joaquin, and Stanislaus. Moraga is said to have named the lower Sacramento River and the valley region “Sacramento” (“the Holy Sacrament”; Hoover et al. 2002).

In 1813, Moraga led another expedition in the lower portion of the Central Valley and gave the San Joaquin River its name (Hoover et al. 2002). The abundance of wildlife, such as waterfowl, fish, and fur-bearing animals, within or along the banks of the rivers attracted immigrants to this region. The last Spanish expedition into California’s interior was led by Luis Arguello in 1817. He and his men traveled up the Sacramento River, past the future site of the City of Sacramento to the mouth of the Feather River, before returning to the coast (Beck and Haase 1974:18, 20; Gunsky 1989:3–4).

The first American trapper to enter California was Jedediah Smith, who explored along the Sierra Nevada in 1826 and in 1827, entering the Sacramento Valley and traveling along the American and Cosumnes Rivers. In 1827, Smith also traveled through the San Joaquin Valley. Other trappers soon followed, including employees of the Hudson’s Bay Company in 1832 (Hoover et al. 1966). Between 1830 and 1833, and again in 1837, diseases were introduced by the non-indigenous explorers, trappers, and settlers. These along with relocation to the missions, military raids, and settlement by non-native groups, decimated native Californian populations, communities, and tribes in the Sacramento and San Joaquin valleys (Cook 1976a; 1976b).

The American Period was initiated in 1848 with the signing of the Treaty of Guadalupe Hidalgo, which ended the Mexican–American War (1846–1848) and incorporated California as a territory of the United States. Gold was discovered at Sutter’s Mill on the American River in Coloma the same year, and by 1849, nearly 90,000 people had journeyed to the gold fields to share in the riches. In 1850, largely as a result of the Gold Rush, California became the thirty-first state. Four years later, the bustling boomtown of Sacramento became the state capital. In contrast to the economic boom and population growth that enabled statehood, the loss of land and territory (including traditional hunting and gathering locales), malnutrition, starvation, and violence contributed to the further decline of indigenous Californians from the Northern California coast to the Sierra Nevada foothills (Chartkoff and Chartkoff 1984; Gunsky 1989).

Colusa County History

Colusa County was formally organized in 1850 as one of the original 27 counties created by the first California legislature. At the time of its formation it encompassed all of modern Glenn County and a portion of Tehama County. Glenn County later split from Colusa in 1891. The Glenn County town of Monroeville was the first county seat, but was switched to the town of Colusa in 1854. The county was known officially as *Colusi* until 1854, as it was named after the Patwin village of *Koru* or *Ko-ru-si* which was centered near the town of Colusa west of the Sacramento River and the Sutter Buttes (Hoover et al. 2002; Machado 2016).

General John Bidwell of the Hudson’s Bay Company trappers was among the first explorers of Colusa County. He traveled northward through Colusa, Glenn, and Butte Counties with his team in 1843 in search of a number of mules and horses that had gone missing. Bidwell found his lost animals among another group of explorers traveling from Oregon, and, having reclaimed them, journeyed to Sutter’s Hock Farm in present-day Yuba City. He returned to explore Colusa County further the next year in an effort to find a

grant of land for the children of Thomas O. Larkin, the former United States consul at Monterey. He successfully identified and mapped a suitable piece of land west of the Sacramento River in the vicinity of the modern town of Princeton (McComish and Lambert 1918).

Among the first settlers of Colusa County was John S. Williams. Williams constructed an adobe residence on the banks of the Sacramento River south of Princeton in 1947. He was sent by Thomas Larkin to establish a cattle ranch on lands that the Monterey-based official had recently acquired thanks to the scouting efforts of General Bidwell. Williams found considerable success in the livestock business, but was nevertheless attracted to the gold fields following the historic discovery of gold at Sutter's mill. Once Williams had left to pursue a mining career at the Feather River, he was replaced at the ranch by Charles B. Sterling. Sterling was also highly successful and the enterprise soon became known as Sterling's Ranch (McComish and Lambert 1918).

Gold mining was uncommon in Colusa County, though there are a few recorded gold and silver prospects. An early, though minor, discovery was made by J.W. Brim and J.K. Weast along Trout Creek in the northwestern corner of the county in 1864. They worked the quartz with an arrastra, or primitive mill for grinding and pulverizing gold or silver ore, but abandoned the effort because of mediocre returns. Much more successful was the Manzanita Mine operated by Woodruff Clark and William Cherry, which, together with the Cherry Hill Mine, became part of the most productive gold mining district in the county. The two operations were established at Sulphur Creek near Wilbur Springs in 1865 and they continued to produce gold until 1892. The Monticello and Hughes Mill was constructed at the Manzanita in 1883. The mines yielded an estimated 3,000 ounces of gold during that seven year period, after which mercury became the primary commodity produced, mainly by minor surficial workings and several short drifts. The Cerise Gold Mining Company took ownership of the Cherry Hill and Manzanita mines 1917, merging the two as the Cerise Mine. It operated for only one year, producing a small amount of gold, though the mining of mercury continued at the location until 1943 under the ownership of various companies (Machado 2016; Hudson Institute of Mineralogy 2020).

Ranching and agriculture has played a much more significant role in Colusa County history than the gold and silver mining that was so important east of the Sacramento River. A large number of ranching enterprises reproduced the success of the early Sterling Ranch near Princeton, as the environment of lush native grasses and wild oats was ideal for raising cattle. John Williams introduced long-horned Spanish cattle to the area, and later bred and sold them off to neighboring ranchers. Sheep, hogs, and other American cattle varieties became prominent in later times as well (Machado 2016).

John Sites was a German-born cattleman who arrived in Colusa's Antelope Valley from Cache Creek with a large herd of cattle in 1858. He gradually accumulated roughly 6,000 acres of land in the valley, establishing a lucrative ranching business, first raising cattle, then switching to sheep. The town of Sites in Colusa County is named after him. William Franklin Sites, no relation to John Sites, was a Missouri-born rancher who took up residence in Colusa County in 1876 after a brief period of gold prospecting. He started another early ranching operation, with about a third of his land dedicated to grain and alfalfa production, and the rest to cattle raising (Colusa County 2020).

Grain farming had already overtaken ranching as the primary agricultural pursuit in Colusa County by the 1850s. Among the main early crops produced were hay, wheat, and barley, while more recently the local farming industry has also grown alfalfa, almonds, beans, corn, cotton, melons, onions, pistachios, prunes, pumpkins, rice, sunflower, tomatoes, walnuts, and wine grapes. J.M. Pervere and H.F. Hyde were two of the first grain farmers in the county to establish a sizable business, managing several hundred acres of barley along the Sacramento River north of the town of Colusa already in the 1850s. Near the modern town of Grimes, a man by the name of Morrison founded a flour and sawmill contemporaneous with the Pervere and Hyde operation. These and other early farming ventures made Colusa the most profitable county for agricultural production in the state by 1891 (Machado 2016; Colusa County 2019).

Water Management

In the Sacramento Valley, flooding has always been a serious problem, with local governments and residents adopting various approaches to flood-control, including the construction of levees, rerouting river and stream courses, and building above high-water levels in flood-prone areas (Downey 2010). Colusa County, and particularly areas in northern Colusa, are less prone to flooding issues than counties to the south, though flooding does occur occasionally and can be severe. The agricultural potential of Colusa County lands was obvious from its founding, so water control efforts were undertaken early to convert swamps and sloughs to productive cropland. The first levees were built by landowners using various methods but these often provided insufficient protection. In 1909, for example, a serious mile-wide levee break occurred on the western side of the Sacramento River near Sycamore in Colusa County. It caused significant property damage, destroying crops and drowning hundreds of heads of cattle and horses, as well as thousands of heads of hogs and sheep (Marysville Daily Appeal 1909).

Various legislative acts were passed to facilitate land reclamation between the mid-19th and early 20th centuries. Among the earliest was the Arkansas Act which was passed by the U.S. Congress in 1850. The legislation granted swamp and overflow lands to states for reclamation and agricultural use. It also provided private property owners with access to funding to help with reclamation efforts in support of agriculture and other forms of land development.

Reclamation District 108 was informally organized as the Sacramento Valley Reclamation Company in 1869 by Charles Frederick Reed under the Reclamation District Law of 1868. The district was officially established on September 28, 1870 by Reed and a number of other investors, including W.C. Ralston who built the Palace Hotel in San Francisco, and a lawyer named William Blanding who would later become the company's first president. At the time it included over 40,000 acres of land in Yolo County and over 33,000 in Colusa County. Upon formation of the company, a contract was drawn for the construction of 40 miles of levee between Knights Landing and Sycamore. The first phase of levee construction began at Lower Sycamore Slough near Knights Landing. It cost more than \$120,000 and was completed in the spring of 1871. Over the next decade the district spent roughly \$450,000 (the equivalent of almost five million adjusted for inflation) on levee, headgate, and dam construction, as well as on repair in the aftermath of levee breaks which were frequent during those early years. Beginning in the next century a concerted effort was made to pass legislation to better organize flood risk management and levee maintenance (McComish and Lambert 1918; Basye 2011; ICF 2017).

With the passing of the California State Flood Control Act of 1911, the California legislature established the Reclamation Board to designate reclamation districts and centralize planning efforts for levee construction and the implementation of other water control measures. A major figure in early flood management in the region was Captain Thomas Jackson of the United States Army Corps of Engineers (USACE). In 1905 Jackson prepared a comprehensive flood management plan for the Sacramento Valley which later served as the basis of the Sacramento River Flood Control Project (SRFCP) proposed by the California Debris Commission. Approved in 1914, the SRFCP aimed to revert the river to its natural regime during floods, conveying flood waters through the valley and returning them into the river at its lower reaches via levees, weirs, and bypasses (Warner and Hendrix 1984). Various flood control acts were also passed in 1917, 1928, 1936, and 1941 to regulate and control flood waters of the United States through levees, land and swampland reclamation, and water storage for power (GEI Consultants 2019).

District 108 was subdivided into numerous smaller entities, including the Sacramento River West Side Levee District in 1915, in order to allocate water management responsibilities to all parties benefitting from flood protection. The Sacramento River West Side Levee District was formed to maintain the entire 50-mile Sacramento River West Side Levee from Colusa to Knights Landing. Its formation followed several massive breaks on the west side of the river, north of Reclamation District 108 boundaries between Meridian and Colusa. Since then, the levee district has maintained highly effective levees that protect the City of Colusa, the town of Grimes, and approximately 194,000 acres of surrounding farmland. Today its levees bound Colusa County on three sides, the West Side Levees along the Sacramento River from Colusa

to Knights Landing, the Back Levee along the western boundary of the district to prevent flooding from the Colusa Basin, and a third along the slough on the south side of the district (Basye 2011; District 2018; District 2020).

All of the levees constructed by Reclamation District 108 and Sacramento River West Side Levee District became part of the federally sponsored SRFCP. When originally constructed, the levees along the western side of the Sacramento River were built to whatever standards and at whatever location the local reclamation districts determined appropriate. One of the key achievement of the SRFCP was the establishment of uniform criteria for levee construction and maintenance. Two major floods in Colusa County occurring in 1907 and 1909 (described above) confirmed the foresight of Captain Thomas Jackson and led to the adoption of his flood control system design. It rerouted most of the flow from the Sacramento River into the Sutter and Yolo Bypasses, ultimately reducing the amount of water conveyed between the two Sacramento River levees by nearly 85%. The floods also underscored the need to improve coordination between local reclamation districts. The State Reclamation Board (now the Central Valley Flood Protection Board) helped prevent levee construction or modification that conflicted with SRFCP operations. As a result of the implementation of the SRFCP and the efforts of the engineers who made it possible, Reclamation District 108 has not been flooded since 1915 (Basye 2011).

Project Area History

A review of USGS Mineral Resource Data System records shows no historical mines within or near the Project Area (USGS 2020). The 1861 plat map of the Jimeno Rancho shows that the Project Area is part of the lands granted to Manuel Jimeno by 1844. A small number of possible residences appear to be in place in the Project vicinity, including J.G. Graham's to the north, C.D. Girdener's to the south, and R. Welch's along the river just east of the Project Area. The Project Area is also just north of "tule lands subject to annual overflows" which extend southward to Knight's Landing. Worley's Ferry and Smith's Ferry are shown at the river within this overflow area (GLO 1861).

Bureau of Land Management (BLM) General Land Office (GLO) land plat of 1856 shows that the Project Area is by that time contained within a number of undeveloped parcels ranging in size between 35 and 50 acres. Unnamed fields and fence lines are shown to the west, and fields belonging to Campbell, Widow Clark, Gillet, and Perdue are shown adjacent to the Project location on the east side of the Sacramento River (GLO 1856). No further development of the Project vicinity is shown on the GLO land plats of 1866 or 1907, though the latter shows that Graham has acquired property west of the Project Area by that time (GLO 1866; GLO 1907).

A review of later historical aerials and topographic maps shows that the Project Area has been subject to limited subsequent development. The 1888 USGS Marysville 30-minute topographic quadrangle shows that the Project Area remains vacant and Eddy's Ferry service is in operation along the river to the north just beyond Grand Island. Two related structures are in place (USGS 1888). By 1894 a third structure is in place at Grand Island just south of the two at Eddy's Ferry business (USGS 1894).

The 1912 USGS Tisdale Weir 15-minute topographic quadrangle is the first to depict the Sacramento River West Side Levee extending through the Project Area (Figure 2). It also shows that the farm immediately west of the Project is in place with a single structure, a bridge is constructed along Wilson Bend Road to the northwest, and several additional residences and farms are present in the vicinity (USGS 1912). The 1952 USGS Tisdale Weir 7.5-minute topographic map shows that the farm west of the Project is further developed, with the addition of three more buildings and agricultural fields (Figure 3). Pump houses and gaging stations are depicted on the eastern side of the river north of Tisdale Weir, roughly 0.65 miles southeast of the Project location, and the surrounding area is still sparsely developed with a few farms and houses (USGS 1952). No further development of the Project Area is shown on later topographic maps or historical aerial photographs (NETR 2020).

RESEARCH METHODS AND FINDINGS

CALIFORNIA HISTORICAL RESOURCES INFORMATION SYSTEM

A California Historical Resources Information System (CHRIS) records search was conducted by the Northwest Information Center (NWIC) on the campus of Sonoma State University to determine whether prehistoric or historic cultural resources have been previously recorded within the Project Area, the extent to which the Project Area has been previously surveyed, and the number and type of cultural resources within a 0.25-mile radius of the Project limits. The results of the CHRIS search were returned on November 17, 2020. The archival search of the archaeological and historical records, national and state databases, and historic maps included the following sources:

- National Register of Historic Places: listed properties
- California Register of Historical Resources: listed resources
- Historic Property Data File for Colusa County
- Archaeological Determinations of Eligibility
- California Inventory of Historical Resources
- California Historical Landmarks
- California Points of Historical Interest
- Historical GLO land plat maps

Previous Studies

The CHRIS records search indicates that two prior cultural resource studies have been completed which included all or portions of the Project Area, and one other has been completed outside the Project Area but within the 0.25-mile record search radius. The previous cultural resource studies within 0.25 miles of the Project Area were completed between 1992 and 2010 (Table 1).

Table 1. Previous Studies within 0.25-Mile Radius of Project Area			
NWIC Report S	Study	Author and Year	Proximity to Project Area
13593	Geotechnical Explorations Systems Phase V, Glenn, Colusa, Sutter, and Yolo Counties	Glover 1992	Within
37248	Final Cultural Resources Technical Report, Levee Geotechnical Evaluation Program, Sacramento River: Right Bank Levee, Colusa and Sutter Counties, California	Elliott 2010	Outside, within 0.25 miles
32288	Field Office Report of Cultural Resources Ground Survey Findings, sprinkler irrigation System (442), Contract #749104102PD	Truman 2010	Outside, within 0.25 miles

Previously Recorded Resources

The CHRIS search also indicates that no cultural resources of any kind have been previously recorded within the Project Area or the 0.25-mile record search radius.

OTHER SOURCES

Natural Investigations staff reviewed the additional historical maps and aerial photographs listed below. The results of our review of these sources are incorporated in the Project Area History section above.

- USGS Marysville 30-minute topographic quadrangles of 1888, 1891, 1894, and 1895
- USGS Tisdale Weir 15-minute topographic quadrangle of 1912
- USGS Tisdale Weir 7.5-minute topographic quadrangles of 1952, 2012, 2015, and 2018
- USGS Sutter Buttes 15-minute topographic quadrangle of 1954
- USGS Yuba City 30-minute topographic quadrangle of 1993
- Aerial photographs of 1998, 2005, 2009, 2010, 2012, 2014, and 2016

SACRED LANDS FILE SEARCH

Natural Investigations contacted the Native American Heritage Commission (NAHC) requesting a search of their SLF for traditional cultural resources within or near the Project Area. The results of the search returned by the NAHC on October 22, 2020 were negative for Native American cultural resources in the Project vicinity. The NAHC provided a list of ten tribal individuals and organizations affiliated with the Project Area and recommended that they be contacted for more information on the potential for indigenous resources in the vicinity.

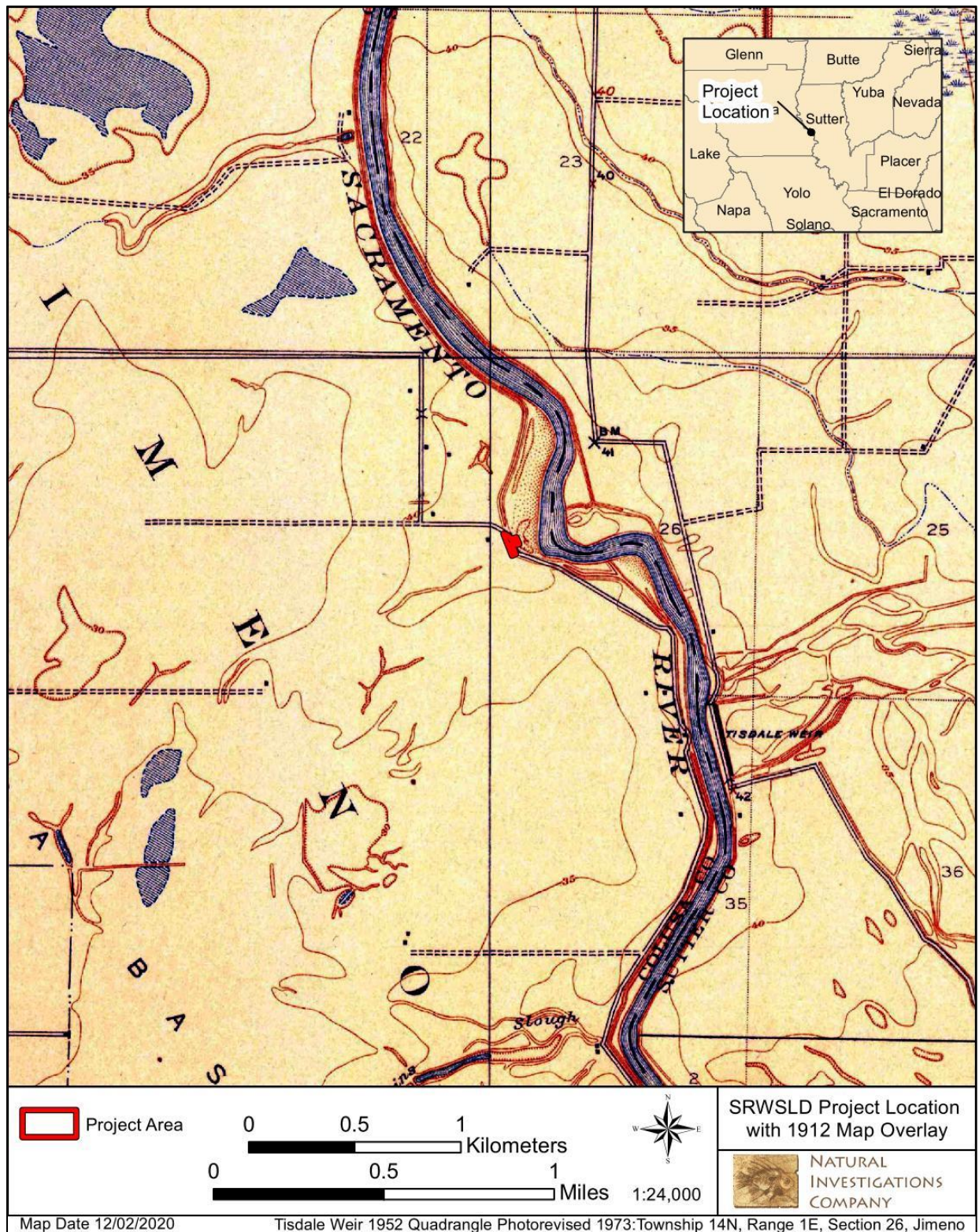


Figure 2. Project Location Map with 1912 Tisdale Weir Quadrangle Overlay

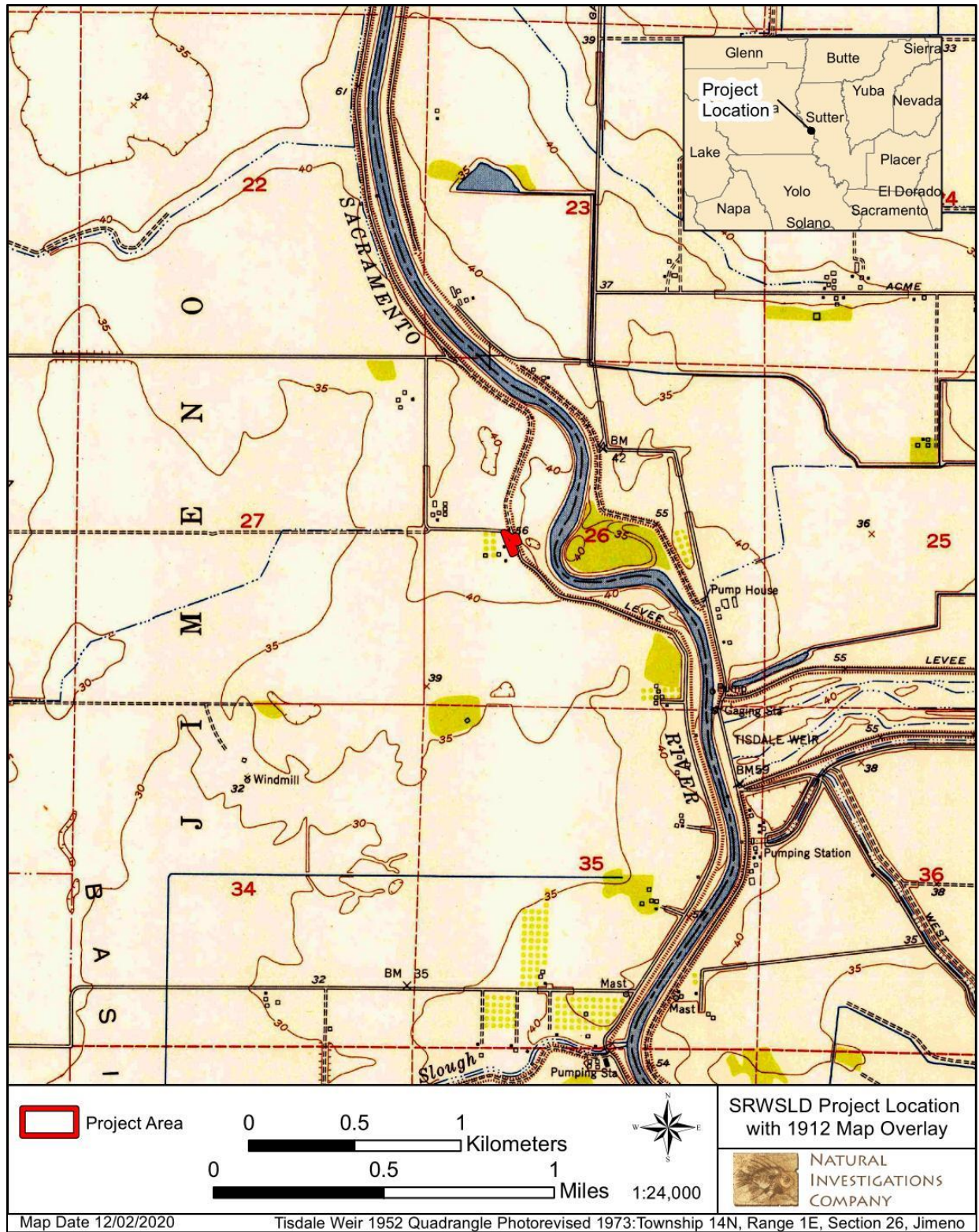


Figure 3. Project Location Map with 1952 Tisdale Weir Quadrangle Overlay

Natural Investigations sent Project information letters to each of the tribes listed by the NAHC on October 27, 2020 requesting additional information on the potential for tribal resources in the area. If no response was received, follow-up phone calls were made on November 11, 2020. To date, one response has been received. On October 28, 2020 Creig Marcus, Tribal Administrator of Estom Yumeka Maidu Tribe of the Enterprise Rancheria, replied via email stating that the Project is outside the aboriginal territory of the tribe and thus they have no comment on the Project. Natural Investigations responded on the same day thanking Mr. Marcus for the reply. Additional information on Native American outreach efforts is included in Appendix A of this report.

PALEONTOLOGICAL RECORDS SEARCH AND SENSITIVITY

A search of the paleontological records maintained by the University of California Museum of Paleontology (UCMP) was conducted on November 23, 2020. The UCMP database indicates that 213 fossil localities have been recorded within Colusa County (UCMP 2020). Of these, only six localities have produced vertebrate fossils, with six fossil specimens being recovered from them in total. The *Chamisal Creek* locality near Arbuckle yielded two fossils of extinct species of Pliocene-aged (5.333 million to 2.58 million years ago) horse (*Nannohippus* sp. and *Equus* sp.). The *Colusa 1* locality is also known to contain Pliocene-aged fossils, though no specimens from the locality are included in the UCMP database. The *Colusa 2* locality, however, has also yielded the fossilized remains of an extinct species of horse (*Equus* sp.). The *Cortina Creek* locality yielded a single fossil of an extinct mammal species similar to a pig (*Platygonus* sp.). The *Salt Creek* locality yielded an extinct horse (*Equus* sp.) fossil, and the *Sand Creek* locality yielded the fossilized remains of a species of bony fish (Osteichthyes).

All of the vertebrate fossils were recovered from the Pliocene-aged Tehama Formation which occurs on the western side of the Sacramento Valley from Redding to Vacaville. The Tehama Formation consists of massive pale greenish-gray to pale-buff sandy clays, which are usually tuffaceous. Intercalations of sand and gravel, often strongly cross-bedded, are present throughout, and a massive coarse-grained pumice tuff member occurs near base. Tehama Formation sediments have been sourced mainly from the Coast Ranges to the west, but also from the Klamath Mountains to the north. The maximum thickness of the formation is 2,000 feet (Staton and Spengler 2014).

Paleontological resources occur in geologic units (e.g., formations or members). The probability of finding significant fossils at a given location can be estimated based on previous records of fossils recovered from the geologic units present in and/or adjacent to it. The geological setting and the number of known fossil localities help to estimate a location's paleontological sensitivity as defined by CEQA. As noted above, the treatment of paleontological resources on non-federal lands usually follows the *SVP Standard Guidelines for the Assessment and Mitigation of Adverse Impacts to Non-renewable Paleontological Resources guidance from the Society for Vertebrate Paleontology* (2010). Treatment typically consists of identification, assessment, and mitigation for potential impacts to significant paleontological resources.

The SVP defines four levels of paleontological sensitivity: *High*, *Low*, *Undetermined*, and *No Potential*. High Potential geologic units are those from which vertebrate or significant invertebrate, plant, or trace fossils have been recovered. These are regarded as having high potential to contain additional significant paleontological resources. Low Potential geologic units are those that are poorly represented by fossil specimens in institutional collections, or that are known to preserve fossils only in rare circumstances. Undetermined Potential geologic units are those for which little or no information is available concerning their paleontological content, geologic age, and depositional history. No Potential geologic units such as high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g. granites and diorites) are those that would not preserve fossil resources under any circumstances (SVP 2010).

Review of recent geologic mapping published by the CGS (Burnett and Jennings 1962; Jennings et al. 2010; Gutierrez 2011) indicates the Project Area is underlain by Late Holocene-aged (4,000 years ago to the present) alluvium (Qha). These sediments occur on fans, terraces, and in basins and consist of poorly sorted

sand, gravel, and silt. Given their age, these Late Holocene-age deposits (Qha) are considered to have a low paleontological resource potential.

Six fossil localities have produced significant paleontological remains in Colusa County, all from the Pliocene-aged Tehama Formation, though none of these localities have been mapped within the Project Area. No unique geological features have been identified within or near the Project Area and no paleontological resources of any kind were identified within the Project Area during the field survey undertaken as part of this assessment. Holocene-age deposits (Qha) such as those along the Sacramento River are considered to have a low paleontological resource potential. Since the fossilization processes take place over millions of years, such geologically immature deposits are unlikely to have fossilized the remains of organisms. As no fossils and no unique geologic features have been recorded within the Project Area, and the underlying alluvium and basin deposits are unlikely to contain fossilized remains, the paleontological resource sensitivity within the Project Area based on SVP criteria is estimated to be low (2010).

FIELD METHODS AND FINDINGS

METHODS

An intensive pedestrian survey of the entire Project Area was conducted by Natural Investigations archaeologist, Phil Hanes, MA, RPA, on November 30, 2020. All portions of the Project Area were surveyed intensively using transects spaced no greater than 15 meters apart. During the survey, all visible ground surfaces were carefully examined for cultural material (e.g., flaked stone tools, tool-making debris, stone milling tools, or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), and historic-era debris (e.g., metal, glass, ceramics). Ground disturbances (e.g., animal burrows, dirt roads, etc.) were also visually inspected. A digital camera was used to take photographs of the Project Area, a Munsell® Soil Color Chart used to record soil color, and a handheld BE-3300-GPS global positioning system (GPS) unit with sub-meter accuracy was used to record locational data.

FINDINGS

One previously unrecorded segment of the Sacramento River West Side Levee (NIC-2020-SRWSLD 01) was identified and documented during the field survey. No other cultural resources were observed within the Project Area and no paleontological resources of any kind were identified during the field survey. California Department of Parks and Recreation (DPR) 523 Series site records were completed for the levee segment and are provided in Appendix B of this report.

The Project Area is comprised of a small segment of the Sacramento River West Side Levee that carries Wilson Bend Road along its crown. It is located roughly 4.25 miles southeast of Grimes in Colusa County, California. The Project Area is accessed from address 1073 Wilson Bend Road via State Route 45 to the west, and is bounded by rural private property to the north, south, and west, and by the Sacramento River to the east. Currently within the Project Area are the levee segment and Wilson Bend Road, an abandoned 24-inch steel pipe within the levee prism which is slated for removal, a well pump, piping, and a power pole.

Ground visibility within the Project Area was excellent (70%-100%) with limiting factors confined to sparse vegetation and woodchips from a recently removed tree. Vegetation on the property was made up of annual grasses and weeds (Photograph 1).

Sacramento River West Side Levee Segment - NIC-2020-SRWSLD 01

This resource is an historic 350-foot segment of the Sacramento River West Side Levee (NIC-2020-SRWSLD 01) located at Wilsons Bend approximately 4.25 miles southeast of Grimes (Levee Miles 27.47 to 27.53). Construction of the levee began shortly after the establishment of Reclamation District 108 in 1870. In the first few years of its operation, the district constructed 40 miles of levee, working northward from Knights Landing to Sycamore. The levee segment recorded here was first built during this period, though it has been subsequently improved and maintained.

The levee segment is of earthen construction and measures approximately 12-feet tall with a 15-foot-wide, two-lane asphalt roadway (Wilson Bend Road) running along the crown. A guardrail has been installed on the eastern side of the road (Photograph 2). Approximately halfway down the western flank of the levee is a single-lane, nine-foot-wide dirt path (Photograph 3). A pipe segment to be removed was placed through the levee and protrudes from its eastern flank. It has been bent and sticks up from the levee at a roughly 45-degree angle (Photograph 4). The western flank of the levee and adjacent farmland is scattered with recently removed well pump and piping equipment (Photograph 5), and replacement equipment has since been installed (Photograph 6). The levee is generally free of vegetation and is strewn with sparse modern roadside refuse.

HISTORICAL RESOURCE EVALUATION**SACRAMENTO RIVER WEST SIDE LEVEE SEGMENT - NIC-2020-SRWSLD 01**

This resource is an 350-foot segment of the Sacramento River West Side Levee (NIC-2020-SRWSLD 01) located at Wilsons Bend approximately 4.25 miles southeast of Grimes (Levee Miles 27.47 to 27.53). Construction of the levee began shortly after the establishment of Reclamation District 108 in 1870. In the first few years of its operation, the district constructed 40 miles of levee on the western bank of the Sacramento River between Knights Landing and Sycamore, beginning on the southern end and proceeding northward. The small segment of the levee evaluated here was first constructed during this period, though it has been subject to subsequent improvements and maintenance. The resource is of earthen construction and Wilson Bend Road runs along its crown.

This segment of the Sacramento River West Side Levee appears to be significant within the context of early flood management and engineering in California which enabled the initial settlement and development of the region, as well as for its association with the pioneering Sacramento River Flood Control Project (SRFCP). While the levee has been subject to standard repairs, the areal extent of improvements has been limited so its historical integrity does not appear to have been impacted significantly as a result of past improvement work. For these reasons, NIC-2020-SRWSLD 01 is recommended eligible for listing in the CRHR. The resource is evaluated against individual CRHR eligibility criteria below.

Criterion 1

Background research indicates that this segment of the Sacramento River West Side Levee is associated with events that have made a significant contribution to the broad patterns of regional history and cultural heritage. Specifically, the segment is part of the original levee constructed along the western bank of the Sacramento River in the early 1870s, shortly after the establishment of Reclamation District 108 and before the formation of the Sacramento River West Side Levee District in 1915 (see Figure 2 above showing levee in place by 1912). The Reclamation District constructed 40 miles of levee along the western bank of the Sacramento River between Sycamore and Knights Landing beginning in 1870, and its construction directly and profoundly influenced the broad historical patterns of domestic settlement and agricultural development in the region. The levees, along with the headgates and dams constructed by the reclamation district in the first decade its operation, converted 33,000 acres of former swamp into productive cropland and inhabitable space during that period in Colusa County alone.



Photograph 1. Example of ground visibility showing roadside refuse (view detail)



Photograph 2. Overview of roadway along levee crown within Project Area (view south)



Photograph 3. Overview of dirt road on western levee flank (view north)



Photograph 4. Overview eastern levee flank with pipe to be removed shown at center (view north)



Photograph 5. Overview of recently removed well pump and piping equipment (view west)



Photograph 6. Overview of recently installed well pump (view northwest)

In addition, the levee became part of the federally sponsored SRFCP initiated in 1914. The SRFCP implemented the comprehensive Sacramento Valley flood management plan prepared by Captain Thomas Jackson of the USACE in the early years of the 20th century. When originally constructed, the levees along the western side of the Sacramento River were built to whatever standards and at whatever location the local reclamation districts determined appropriate. The SRFCP established uniform criteria for levee construction and maintenance and better organized coordination between reclamation agencies and other invested parties. Following Jackson's design, it reverted the Sacramento River to its natural regime during floods, conveying flood waters through the valley and returning them into the river at its lower reaches via an extensive network of levees, weirs, and bypasses. River flows were rerouted into the Sutter and Yolo Bypasses, ultimately reducing the amount of water conveyed between the two Sacramento River levees by nearly 85%. The SRFCP was a revolutionary engineering feat and has helped ensure that Reclamation District 108 has not flooded since 1915.

A comparable segment of the Sacramento River West Side Levee (Levee Miles 3.41 to 6.45) near the community of Robbins, south of the Project Area and roughly three miles north of Knights Landings, was previously evaluated and recommended eligible for CRHR listing under Criterion 1. That evaluation characterizes the more southerly segment as "an example of California's evolution of reclamation- including the earliest efforts to build levees, formation of reclamation districts, and development of water management policy- which took place between 1850 (Arkansas Act enacted) and 1911 (State Flood Control Act enacted)." The previous evaluation continues: "Levee segments such as this one form the foundation for all reclamation activities that followed throughout the state after 1911" (ICF 2017). The levee segment evaluated here embodies these same qualities, exemplifying the high standards of flood management planning and structural engineering that have made the Central Valley the most productive agricultural region in the state, and one of the most productive in the world. For these reasons NIC-2020-SRWSLD 01 is recommended as eligible for listing in the CRHR under Criterion 1.

Criterion 2

While significant people such as Captain Thomas Jackson were involved in design of flood control infrastructure in the Central Valley generally, as well as in the general planning of the SRFCP, the specific levee segment being evaluated is not known to have any direct link with persons important in local, regional, or national history. It is therefore recommended as ineligible for CRHR listing under Criterion 2.

Criterion 3

Similarly, this particular segment of levee does not appear to embody the distinctive characteristics of a type, period, region, or method of construction, or to represent the work of an important creative individual, or possesses high artistic values. Individually, its construction is of a type that is ubiquitous throughout the Central Valley. For these reasons, the resource is recommended as ineligible for CRHR listing under Criterion 3.

Criterion 4

Finally, the informational value of the resource appears to be exhausted in historical source material, including exhaustive Reclamation District minutes and other technical documents, project plans, modern geospatial data, and cultural resource documents that thoroughly record its salient features. It is therefore recommended as ineligible for CRHR listing under Criteria 4.

Integrity

As noted above, the levee has been subject to standard repairs, though the areal extent of improvements has been limited and its overall condition does not appear to have changed significantly as a result of this maintenance and improvement work. Modern and historical improvements to the resource noted during the

field survey are limited to the installation of a guardrail on the eastern side of the roadway, the placement of a pathway along the western levee flank, the installation of a well pump, piping, and a power pole.

The character defining features of this levee segment are its setting, alignment, and continued function as an important engineered flood management structure. Past improvements have focused on the maintenance, repair, and strengthening of the levee and have not impacted these key features in any significant way. The levee segment continues to serve the function it had when first constructed in the mid-19th century, and its setting has not been substantially altered since that time, either by past development or by land uses in the surrounding area which remain predominantly agricultural. The alignment of the levee and Wilson Bend Road have remained unchanged for more than a century. For these reasons, the resource appears to retain its integrity of location, setting design, feeling, workmanship, and association, though the materials constituting it have been replaced and/or modified in some areas. Considering these factors, it is the finding of this evaluation that the resource retains sufficient integrity to convey its significance.

CONCLUSIONS AND RECOMMENDATIONS

CULTURAL RESOURCES

One cultural resource was identified within the Project Area during the present assessment. The resource is a 350-foot segment of the Sacramento River West Side Levee which carries Wilson Bend Road along its crown. This levee segment appears to be significant within the context of early flood management and engineering in California which enabled the initial settlement and development of the region, as well as for its association with the pioneering Sacramento River Flood Control Project (SRFCP). While the levee has been subject to standard repairs, the areal extent of past improvements has been limited. This assessment finds that the resource retains sufficient integrity to convey its significance. Given these factors, NIC-2020-SRWSLD 01 is recommended eligible for listing in the CRHR.

The Project proposes to remove an abandoned pipe penetration within the Sacramento River West Side Levee prism. Removal of the pipe would require excavation of the same section of levee that was previously disturbed at time of the pipe's installation. The levee section will be reconstructed after removal of the utility without significant alteration of its geometry. The historical location of the levee segment will not change following removal and its function will remain consistent with its dual historical uses as a levee and two-lane roadway. Additionally, no changes to the surrounding setting will result from Project actions.

The ultimate aim of the Project is to reduce the risk of levee damage or failure resulting from potential water penetration at the pipe location during a high-water event, so the Project will in fact strengthen the physical integrity of this levee segment. The character defining features of the resource- its setting, alignment, and continued function as an historically significant flood control structure- will be maintained following Project improvements. For these reasons, the impact to NIC-2020-SRWSLD 01 as a result of Project work is expected to be less than significant and no mitigation regarding the resource is recommended at this time. If Project plans change in any substantial way, mitigation may be required.

The Project will implement environmental protection measures in order to avoid potential impacts to any cultural resources inadvertently discovered within the Project Area. In the event that a cultural resource is inadvertently discovered during Project activities, work will be halted within 30 feet of the find and a qualified archaeologist (36 CFR Part 61) will be notified immediately so that its potential significance can be assessed. Construction activities may continue in other areas, but will not resume in the area of the find until the Sacramento River West Side Levee District provides written permission. If the discovery proves to be significant, additional work, such as data recovery excavation, may be warranted and would be discussed in consultation with Colusa County (County), affiliated tribal organizations, and any other relevant regulatory agencies or invested parties, as appropriate.

Although unlikely, the discovery of human remains is always a possibility. State of California Health and Safety Code Section 7050.5 covers these discoveries, except on federal lands. This code section states that no further disturbance may occur until the Colusa County Coroner has made a determination of origin and disposition of the remains pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately upon discovery. If the human remains are determined to be of Native American origin, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendent (MLD). The MLD must complete an inspection of the site within 48 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. The Project will fully conform to this code in the event of an inadvertent discovery of human remains.

PALEONTOLOGICAL RESOURCES

Review of recent geologic mapping published by the CGS (Burnett and Jennings 1962; Jennings et al. 2010; Gutierrez 2011) indicates the Project Area is underlain by Late Holocene-aged (4,000 years ago to the present) alluvium (Qha). These sediments occur on fans, terraces, and in basins and consist of poorly sorted sand, gravel, and silt. Given their age, these Late Holocene-age deposits (Qha) are considered to have a low paleontological resource potential.

Six fossil localities have produced significant paleontological remains in Colusa County, all from the Pliocene-aged Tehama Formation. None of these localities have been mapped within the Project Area. No unique geological features have been identified within or near the Project Area and no paleontological resources of any kind were identified within the Project Area during the field survey undertaken as part of this assessment. As no fossils and no unique geologic features have been recorded within the Project Area, and the underlying alluvium and basin deposits are unlikely to contain fossilized remains, the paleontological resource sensitivity within the Project Area is estimated to be low and no additional paleontological resources work is recommended at this time.

In the unlikely event that a paleontological resource is inadvertently discovered during Project-related work, regardless of the depth of work or location, it is recommended that work be halted within 30 feet of the find and a qualified paleontologist (SVP 2010) be notified immediately so that an assessment of its potential significance can be undertaken. If the find is determined to be significant, it should be salvaged following the standards of the SVP (2010) and curated at a certified repository such as the UCMP.

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1978 Nisenan. In *California*, Robert F Heizer, editor, pp. 387–397. Handbook of North American Indians vol. 8. Smithsonian Institution, William C. Sturtevant, general editor. Washington DC.

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APPENDIX A:
Sacred Lands File Search Results



NATIVE AMERICAN HERITAGE COMMISSION

October 22, 2020

Cindy Arrington, MS, RPA. Principal
Natural Investigations Co., Inc.

Via Email to: cindy@naturalinvestigations.com

CHAIRPERSON
Laura Miranda
Luiseno

VICE CHAIRPERSON
Reginald Pagaling
Chumash

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Apache*

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Julie Tumamait-Stenslie
Chumash

COMMISSIONER
[Vacant]

COMMISSIONER
[Vacant]

EXECUTIVE SECRETARY
Christina Snider
Pomo

NAHC HEADQUARTERS
1550 Harbor Boulevard
Suite 100
West Sacramento,
California 95691
(916) 373-3710
nahc@nahc.ca.gov
NAHC.ca.gov

Re: SRWSLD (Project 889) Project, Colusa County

Dear Ms. Arrington:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. The results were negative. However, the absence of specific site information in the SLF does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated; if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify me. With your assistance, we can assure that our lists contain current information.

If you have any questions or need additional information, please contact me at my email address: Sarah.Fonseca@nahc.ca.gov.

Sincerely,

Sarah Fonseca
Cultural Resources Analyst

Attachment

**Native American Heritage Commission
Native American Contact List
Colusa County
10/22/2020**

***Cachil Dehe Band of Wintun
Indians of the Colusa Indian
Community***

Daniel Gomez, Chairman
3730 Highway 45 Wintun
Colusa, CA, 95932
Phone: (530) 458 - 8231
dgomez@colusa-nsn.gov

***Paskenta Band of Nomlaki
Indians***

Andrew Alejandre, Chairperson
P.O. Box 709 Nomlaki
Corning, CA, 96021 Wintun
Phone: (530) 528 - 3538
Fax: (530) 528-3595
office@paskenta.org

***Cachil Dehe Band of Wintun
Indians of the Colusa Indian
Community***

Clifford Mota, Tribal Preservation
Liaison
3730 Highway 45 Wintun
Colusa, CA, 95932
Phone: (530) 458 - 8231
cmota@colusa-nsn.gov

Yocha Dehe Wintun Nation

Isaac Bojorquez, Director of
Cultural Resources
PO Box 18 Brooks, CA 95606 Patwin
Phone: (530) 796 - 0103
ibojorquez@yochadehe-nsn.gov

Yocha Dehe Wintun Nation

Leland Kinter, THPO
P.O. Box 18 Patwin
Brooks, CA, 95606
Phone: (530) 796 - 3400
thpo@yochadehe-nsn.gov

***Cortina Rancheria - Kletsel
Dehe Band of Wintun Indians***

Charlie Wright, Chairperson
P.O. Box 1630 Wintun
Williams, CA, 95987
Phone: (530) 473 - 3274
Fax: (530) 473-3301

Yocha Dehe Wintun Nation

Anthony Roberts, Chairperson
P.O. Box 18 Patwin
Brooks, CA, 95606
Phone: (530) 796 - 3400
aroberts@yochadehe-nsn.gov

***Estom Yumeka Maidu Tribe of
the Enterprise Rancheria***

Glenda Nelson, Chairperson
2133 Monte Vista Avenue Maidu
Oroville, CA, 95966
Phone: (530) 532 - 9214
Fax: (530) 532-1768
info@enterpriserancheria.org

Yocha Dehe Wintun Nation

Laverne Bill, Site Protection
Manager
P.O. Box 18 Patwin
Brooks, CA, 95606
Phone: (530) 796 - 3400
lbill@yochadehe-nsn.gov

***Grindstone Rancheria of
Wintun-Wailaki***

Ronald Kirk, Chairperson
P.O. Box 63 Nomlaki
Elk Creek, CA, 95939 Southern Wintun
Phone: (530) 968 - 5365 Wailaki
Fax: (530) 968-5366

This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed SRWSLD (Project 889) Project, Colusa County.



October 27, 2020

PROJECT INFORMATION AND COMMENT REQUEST LETTER

TO: Daniel Gomez, Chairman, Cachil Dehe Band of Wintun Indians of the Colusa Indian Community;
Clifford Mota, Tribal Preservation Liaison, Cachil Dehe Band of Wintun Indians of the Colusa Indian Community;
Charlie Wright, Chairperson, Cortina Rancheria – Kletsel Dehe Band of Wintun Indians;
Glenda Nelson, Chairperson, Estom Yumeka Maidu Tribe of the Enterprise Rancheria;
Ronald Kirk, Chairperson, Grindstone Rancheria of Wintun-Wailaki;
Andrew Alejandro, Chairperson, Paskenta Band of Nomlaki Indians;
Isaac Bojorquez, Director of Cultural Resources, Yocha Dehe Wintun Nation;
Leland Kinter, THPO, Yocha Dehe Wintun Nation;
Anthony Roberts, Chairperson, Yocha Dehe Wintun Nation;
Laverne Bill, Site Protection Manager, Yocha Dehe Wintun Nation.

EMAIL: tim@naturalinvestigations.com

PHONE: (415) 894-7716

PROPOSED

PROJECT: Sacramento River West Side Levee Pipe Removal Project, Grimes, Colusa County, California

USGS

QUAD: Tisdale Weir 1952 Quadrangle: Section 26 of Township 14 north, Range 1 east

ACREAGE: 1

Natural Investigations Company, Inc. (Natural Investigations) was retained to provide cultural resources services in support of the Sacramento River West Side Levee Pipe Removal Project (Project) located 4.25-miles southeast of Grimes in Colusa County, California. The Project Area can be found on the 1952 United States Geological Survey (USGS) Tisdale Weir 7.5-minute topographic quadrangle, in Section 26 of Township 14 north, Range 1 east of the Mount Diablo Base and Meridian (Figure 1).

The Sacramento River West Side Levee District (SRWSLD) proposes to remove an abandoned pipe penetration within the Sacramento River West Side Levee prism, along Wilson Bend Road. Removal of the pipe would require complete excavation of the levee section at the project site, followed by reconstruction of the levee after pipe removal. Project activities would involve closure of a portion of Wilson Bend Road in the project vicinity during construction, traffic detour routing, removal of a large oak tree in the excavation area, disturbance to a depth of approximately 15 feet below the levee crown, temporary stockpiling of excavated material in a staging area on the landside of the levee adjacent to the excavation area, disturbance to approximately 0.64 acres (including the construction staging and excavation areas), asphalt road repair, and roadway re-striping.

The Native American Heritage Commission (NAHC) returned the results of a Sacred Lands File search conducted for the Project on October 22, 2020, stating that records were negative for the presence of Native American cultural resources in the Project Area. The NAHC recommended that we contact you for additional information on the potential for Native American cultural resources in the vicinity of the Project.

We would greatly appreciate any comments that you may have on potential tribal resources in the area and invite you to raise any other concerns relating to the Project should you have them. All information provided regarding specific sites or Native American cultural resources will remain confidential. Please feel free to contact me by phone or email. We would greatly appreciate a response at your earliest convenience.

Thank you for your assistance.

Respectfully submitted,

A handwritten signature in blue ink that reads "Timothy James Spillane". The signature is written in a cursive, flowing style.

Tim Spillane, MA, RPA

Principal Investigator/Project Manager/GIS Analyst II

Natural Investigations Company, Inc.

3104 O Street, #221, Sacramento, CA 95816

Attachments: Figure 1: Project Location Map

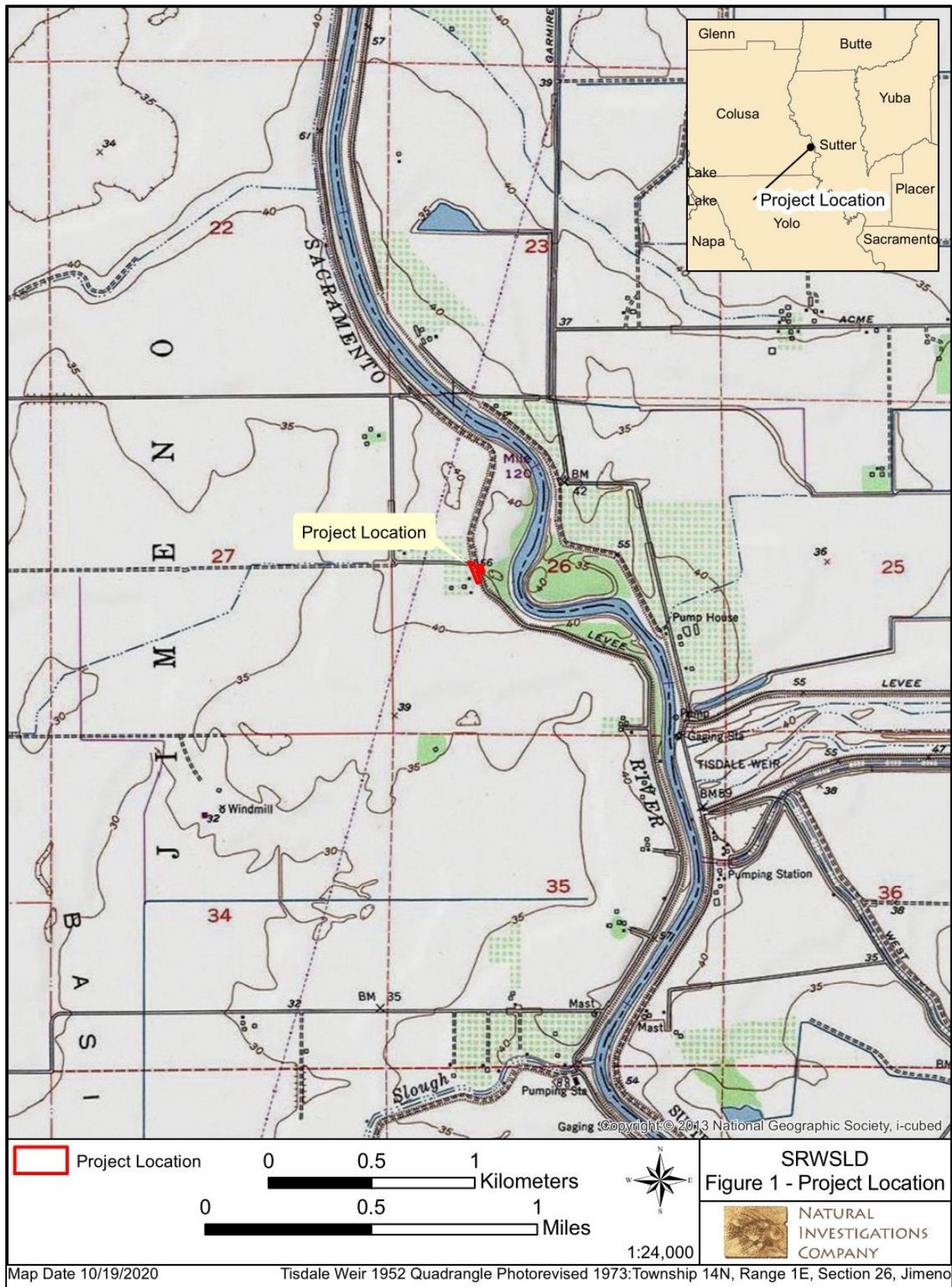


Figure 1. Project Location Map



**Native American Contact Tracking Sheet
Sacramento River West Side Levee Pipe Removal Project,
Colusa County, CA**

Contact Name	Date Letter Sent	Date Follow Up	Responses
Cachil Dehe Band of Wintun Indians of the Colusa Indian Community Daniel Gomez, Chairman 3730 Highway 45 Colusa, CA, 95932 Phone: (530) 458 - 8231 dgomez@colusa-nsn.gov	10/27/2020	11/11/2020	Mr. Gomez was not available. A voice message was left asking if the Tribe had any questions or concerns regarding the project and if so, to please contact Natural Investigations.
Cachil Dehe Band of Wintun Indians of the Colusa Indian Community Clifford Mota, Tribal Preservation Liaison 3730 Highway 45 Colusa, CA, 95932 Phone: (530) 458 - 8231 cmota@colusa-nsn.gov	10/27/2020	11/11/2020	Mr. Mota was not available. A voice message was left asking if the Tribe had any questions or concerns regarding the project and if so, to please contact Natural Investigations.
Cortina Rancheria - Kletsel Dehe Band of Wintun Indians Charlie Wright, Chairperson P.O. Box 1630 Williams, CA, 95987 Phone: (530) 473 - 3274 Fax: (530) 473-3301	10/27/2020	11/11/2020	Mr. Wright was not available. A voice message was left asking if the Tribe had any questions or concerns regarding the project and if so, to please contact Natural Investigations.
Estom Yumeka Maidu Tribe of the Enterprise Rancheria Glenda Nelson, Chairperson 2133 Monte Vista Avenue Oroville, CA, 95966 Phone: (530) 532 - 9214 Fax: (530) 532-1768 info@enterpriserancheria.org	10/27/2020	10/28/2020	On October 28, 2020, Tribal Administrator, Creig Marcus, replied via email stating that the project is outside the tribe's aboriginal territory so they have no comment. Natural Investigations responded on the same day thanking him for the reply.
Grindstone Rancheria of Wintun-Wailaki Ronald Kirk, Chairperson P.O. Box 63 Elk Creek, CA, 95939 Phone: (530) 968 - 5365 Fax: (530) 968-5366	10/27/2020	11/11/2020	Mr. Kirk was not available. A voice message was left asking if the Tribe had any questions or concerns regarding the project and if so, to please contact Natural Investigations.

Paskenta Band of Nomlaki Indians Andrew Alejandro, Chairperson P.O. Box 709 Corning, CA, 96021 Phone: (530) 528 - 3538 Fax: (530) 528-3595 office@paskenta.org	10/27/2020	11/11/2020	Mr. Alejandro was not available. A voice message was left asking if the Tribe had any questions or concerns regarding the project and if so, to please contact Natural Investigations.
Yocha Dehe Wintun Nation Isaac Bojorquez, Director of Cultural Resources PO Box 18 Brooks, CA 95606 Phone: (530) 796 - 0103 ibojorquez@yochadehe-nsn.gov	10/27/2020	11/11/2020	Mr. Bojorquez was not available. A voice message was left asking if the Tribe had any questions or concerns regarding the project and if so, to please contact Natural Investigations.
Yocha Dehe Wintun Nation Leland Kinter, THPO P.O. Box 18 Brooks, CA, 95606 Phone: (530) 796 - 3400 thpo@yochadehe-nsn.gov	10/27/2020	11/11/2020	Mr. Kinter was not available. A voice message was left asking if the Tribe had any questions or concerns regarding the project and if so, to please contact Natural Investigations.
Yocha Dehe Wintun Nation Anthony Roberts, Chairperson P.O. Box 18 Brooks, CA, 95606 Phone: (530) 796 - 3400 aroberts@yochadehe-nsn.gov	10/27/2020	11/11/2020	Mr. Roberts was not available. A voice message was left asking if the Tribe had any questions or concerns regarding the project and if so, to please contact Natural Investigations.
Yocha Dehe Wintun Nation Laverne Bill, Site Protection Manager P.O. Box 18 Brooks, CA, 95606 Phone: (530) 796 - 3400 lbill@yochadehe-nsn.gov	10/27/2020	11/11/2020	Ms. Bill was not available. A voice message was left asking if the Tribe had any questions or concerns regarding the project and if so, to please contact Natural Investigations.

APPENDIX B:
Site Records

PRIMARY RECORD

Primary # _____ HRI # _____

Trinomial _____

NRHP Status Code _____

Other Listings _____

Review Code _____ Reviewer _____ Date _____

Page 1 of 7

*Resource Name or #: NIC-2020-SRWSLD 01

P1. Other Identifier: Sacramento River West Side Levee (Levee Miles 27.47 to 27.53)

*P2a. Location: ☒ Not for Publication ☐ Unrestricted

*a. County: Colusa and

*b. USGS 7.5' Quad: Tisdale Weir Date: 1952 PR 1973 T: 14N ; R: 1E ; NE ¼ of SW ¼ of Sec. 26 ; MD B.M.

c. Address: 1075 Wilson Bend Road City: Knights Landing Zip: 95645

d. UTM: Zone, 10 4321169 mN 600992 mE

e. Other Location Data: Located at Wilsons Bend approximately 4.25 miles southeast of Grimes. Levee Miles 27.47 to 27.53.

*P3a. Description: This resource is an historic 350-foot segment of the Sacramento River West Side Levee at Wilsons Bend, between Levee Miles 27.47 and 27.53. Construction of the levee began shortly after the establishment of Reclamation District 108 in 1870. Within the first few years of its operation, the district constructed 40 miles of levee, working northward from Knights Landing to Sycamore. The levee segment recorded here was first built during this period, though it has been subsequently improved and maintained. It is of earthen construction and measures approximately 12-feet tall. It carries a 15-foot-wide, two-lane asphalt roadway (Wilson Bend Road) along its crown. A guardrail has been installed on the eastern side of the road. Approximately halfway down the western flank of the levee is a single-lane, nine-foot-wide dirt path. A pipe segment to be removed was placed through the levee and protrudes from its eastern flank. The western flank of the levee and adjacent farmland is scattered with recently removed well pump and piping equipment, and replacement equipment has since been installed. The levee is generally free of vegetation and is strewn with sparse modern roadside refuse. This segment of the Sacramento River West Side Levee appears to be significant within the context of early flood management and engineering in California which enabled the initial settlement and development of the region, as well as for its association with the pioneering Sacramento River Flood Control Project.

*P3b. Resource Attribute Codes: HP11. Engineering structure



*P4. Resources Present: ☐ Building ☒ Structure ☐
Object ☐ Site ☐ District ☐ Element of District ☐ Other: _____

P5b. Description of Photo:

Overview of levee showing Wilson Bend Road and western flank.

*P6. Date Constructed/Age and Source:

☒ Historic ☐ Prehistoric ☐ Both: _____

*P7. Owner and Address:

Reclamation District 108
975 Wilson Bend Road
Grimes, CA 95950

*P8. Recorded By:

P. Hanes
Natural Investigations Company
3104 O Street #221
Sacramento, CA 95816

*P9. Date Recorded: November 30, 2020

*P10. Survey Type: Intensive Pedestrian

P11. Report Citation: Spillane, Tim, and Phil Hanes

2020 Cultural Resources Assessment for the Deferred Maintenance Program Pipe Removal Project, Sacramento River West Side Levee District, Colusa County, California. Natural Investigations Company, Inc., Sacramento, CA.

*P12. Attachments: ☐ NONE ☒ Location Map ☐ Continuation Sheet ☐ Building, Structure, and Object Record ☐ Rock Art ☒
Archaeological Record ☐ Photograph Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Artifact Record
☒ Other: Continuation Sheet

State of California ☐ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
ARCHAEOLOGICAL SITE RECORD

Primary # _____

Trinomial _____

Page 2 of 7

*Resource Name or #: NIC-2020-SRWSLD 01

*A1. Dimensions: a. Length: 350ft (NS) b. Width: 150ft (EW)

Method of Measurement: ☐ Paced ☐ Taped ☐ Visual Estimate ☒ Other: GPS

Method of Determination: ☐ Artifacts ☐ Features ☐ Soil ☐ Vegetation ☒ Topography ☐ Cut Bank ☐ Animal Burrow

☐ Excavation ☐ Property Boundary ☐ Other: _____

Reliability of Determination: ☒ High ☐ Medium ☐ Low; Explain: Only section within current project recorded.

Limitation: ☐ Restricted Access ☐ Paved/Built Over ☐ Site limits incompletely defined ☐ Disturbances ☐ Vegetation

☐ Other: _____

A2. Depth: ☐ None ☒ Unknown; Method of Determination: _____

*A3. Human Remains: ☐ Present ☐ Absent ☐ Possible ☒ Unknown; Explain: _____

*A4. Features: A 15-foot-wide, two-lane segment of Wilson Bend Road runs along the crown. A guardrail has been installed on the eastern side of the road. Approximately halfway down the western flank of the levee is a single-lane, nine-foot-wide dirt path. A pipe segment slated for removal was placed through the levee and protrudes from its eastern flank. It has been bent and sticks up from the levee at a roughly 45-degree angle. A well pump and piping recently since been installed on the western flank.

*A5. Cultural Constituents: Modern roadside refuse was noted along the western levee flank.

*A6. Were Specimens Collected: ☒ No ☐ Yes

*A7. Site Condition: ☒ Good ☐ Fair ☐ Poor: _____

*A8. Nearest Water: Sacramento River is 550-feet east of the resource.

*A9. Elevation: 40-feet above mean sea level.

A10. Environmental Setting: The levee is situated between the riparian river environment of the Sacramento River to the east and Central Valley farmland to the west.

A11. Historical Information: See continuation sheet.

*A12. Age: ☐ Prehistoric ☐ Protohistoric ☐ Prehistoric ☐ 1542-1769 ☐ 1769-1848 ☒ 1848-1880 ☒ 1880-1914 ☒ 1914-1945 ☒ Post 1945 ☐ Undetermined: _____

A13. Interpretations: This segment of the Sacramento River West Side Levee appears to be significant within the context of early flood management and engineering in California which enabled the initial settlement and development of the region, as well as for its association with the pioneering Sacramento River Flood Control Project.

A14. Remarks: See continuation sheet.

A15. References: See continuation sheet.

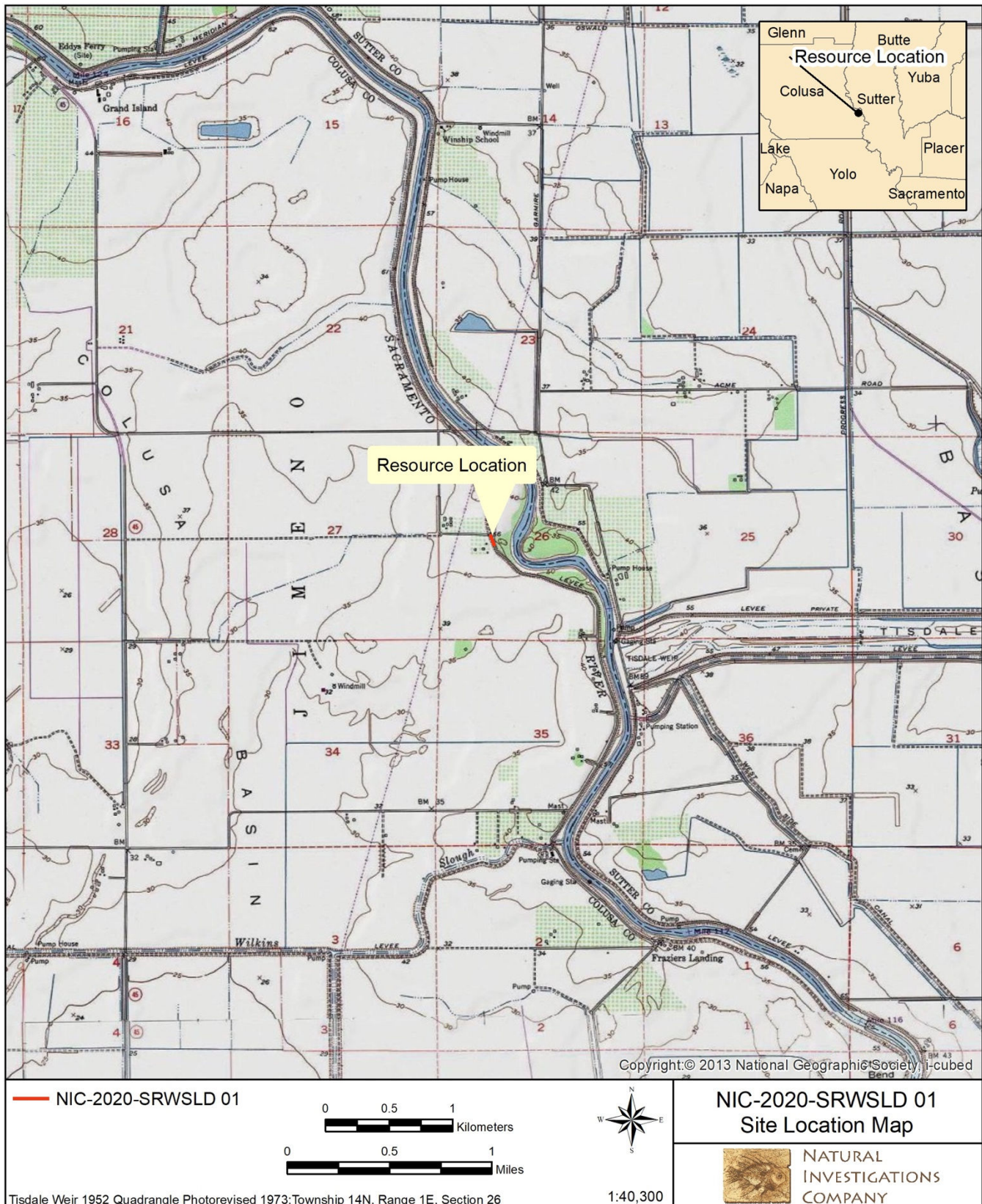
A16. Photographs: _____

Original media/Negatives Kept at: _____

*P17. Form Prepared By: P. Hanes; T. Spillane

Affiliation and Address: Natural Investigation Company, 3104 O Street, No. 221, Sacramento, CA 95816, Sacramento, CA

Date: December 7, 2020



Page 4 of 7

Resource Name or #: NIC-2020-SRWSLD 01

*Recorded by: T. Spillane

*Date 12/10/2020

☒ Continuation ☐ Update

A11. Historical Information. In the Sacramento Valley, flooding has always been a serious problem, with local governments and residents adopting various approaches to flood-control, including the construction of levees, rerouting river and stream courses, and building above high-water levels in flood-prone areas (Downey 2010). Colusa County, and particularly areas in northern Colusa, are less prone to flooding issues than counties to the south, though flooding does occur occasionally and can be severe. The agricultural potential of Colusa County lands was obvious from its founding, so water control efforts were undertaken early to convert swamps and sloughs to productive cropland. The first levees were built by landowners using various methods but these often provided insufficient protection. In 1909, for example, a serious mile-wide levee break occurred on the western side of the Sacramento River near Sycamore in Colusa County. It caused significant property damage, destroying crops and drowning hundreds of heads of cattle and horses, as well as thousands of heads of hogs and sheep (Marysville Daily Appeal 1909).

Various legislative acts were passed to facilitate land reclamation between the mid-19th and early 20th centuries. Among the earliest was the Arkansas Act which was passed by the U.S. Congress in 1850. The legislation granted swamp and overflow lands to states for reclamation and agricultural use. It also provided private property owners with access to funding to help with reclamation efforts in support of agriculture and other forms of land development.

Reclamation District 108 was informally organized as the Sacramento Valley Reclamation Company in 1869 by Charles Frederick Reed under the Reclamation District Law of 1868. The district was officially established on September 28, 1870 by Reed and a number of other investors, including W.C. Ralston who built the Palace Hotel in San Francisco, and a lawyer named William Blanding who would later become the company's first president. At the time it included over 40,000 acres of land in Yolo County and over 33,000 in Colusa County. Upon formation of the company, a contract was drawn for the construction of 40 miles of levee between Knights Landing and Sycamore. The first phase of levee construction began at Lower Sycamore Slough near Knights Landing. It cost more than \$120,000 and was completed in the spring of 1871. Over the next decade the district spent roughly \$450,000 (the equivalent of almost five million adjusted for inflation) on levee, headgate, and dam construction, as well as on repair in the aftermath of levee breaks which were frequent during those early years. Beginning in the next century a concerted effort was made to pass legislation to better organize flood risk management and levee maintenance (McComish and Lambert 1918; Basye 2011; ICF 2017).

With the passing of the California State Flood Control Act of 1911, the California legislature established the Reclamation Board to designate reclamation districts and centralize planning efforts for levee construction and the implementation of other water control measures. A major figure in early flood management in the region was Captain Thomas Jackson of the United States Army Corps of Engineers (USACE). In 1905 Jackson prepared a comprehensive flood management plan for the Sacramento Valley which later served as the basis of the Sacramento River Flood Control Project (SRFCP) proposed by the California Debris Commission. Approved in 1914, the SRFCP aimed to revert the river to its natural regime during floods, conveying flood waters through the valley and returning them into the river at its lower reaches via levees, weirs, and bypasses (Warner and Hendrix 1984). Various flood control acts were also passed in 1917, 1928, 1936, and 1941 to regulate and control flood waters of the United States through levees, land and swampland reclamation, and water storage for power (GEI Consultants 2019).

District 108 was subdivided into numerous smaller entities, including the Sacramento River West Side Levee District in 1915, in order to allocate water management responsibilities to all parties benefitting from flood protection. The Sacramento River West Side Levee District was formed to maintain the entire 50-mile Sacramento River West Side Levee from Colusa to Knights Landing. Its formation followed several massive breaks on the west side of the river, north of Reclamation District 108 boundaries between Meridian and Colusa. Since then, the levee district has maintained highly effective levees that protect the City of Colusa, the town of Grimes, and approximately 194,000 acres of surrounding farmland. Today its levees bound Colusa County on three sides, the West Side Levees along the Sacramento River from Colusa to Knights Landing, the Back Levee along the western boundary of the district to prevent flooding from the Colusa Basin, and a third along the slough on the south side of the district (Basye 2011; District 2018; District 2020).

All of the levees constructed by Reclamation District 108 and Sacramento River West Side Levee District became part of the federally sponsored SRFCP. When originally constructed, the levees along the western side of the Sacramento River were built to whatever standards and at whatever location the local reclamation districts determined appropriate. One of the key achievement of the SRFCP was the establishment of uniform criteria for levee construction and maintenance. Two major floods in Colusa County occurring in 1907 and 1909 (described above) confirmed the foresight of Captain Thomas Jackson and led to the adoption of his flood control system design. It rerouted most of the flow from the Sacramento River into the Sutter and Yolo Bypasses,

State of California ____ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

Page 5 of 7

Resource Name or #: NIC-2020-SRWSLD 01

*Recorded by: T. Spillane

*Date 12/10/2020

☒ Continuation ☐ Update

ultimately reducing the amount of water conveyed between the two Sacramento River levees by nearly 85%. The floods also underscored the need to improve coordination between local reclamation districts. The State Reclamation Board (now the Central Valley Flood Protection Board) helped prevent levee construction or modification that conflicted with SRFCP operations. As a result of the implementation of the SRFCP and the efforts of the engineers who made it possible, Reclamation District 108 has not been flooded since 1915 (Basye 2011).

A14. Remarks. Significance Evaluation

This resource is an 350-foot segment of the Sacramento River West Side Levee (NIC-2020-SRWSLD 01) located at Wilsons Bend approximately 4.25 miles southeast of Grimes (Levee Miles 27.47 and 27.53). Construction of the levee began shortly after the establishment of Reclamation District 108 in 1870. Within the first few years of its operation, the district constructed 40 miles of levee on the western bank of the Sacramento River between Knights Landing and Sycamore, beginning on the southern end and proceeding northward. The small segment of the levee evaluated here was first constructed during this period, though it has been subject to subsequent improvements and maintenance. The resource is of earthen construction and Wilson Bend Road runs along its crown.

This segment of the Sacramento River West Side Levee appears to be significant within the context of early flood management and engineering in California which enabled the initial settlement and development of the region, as well as for its association with the pioneering Sacramento River Flood Control Project (SRFCP). While the levee has been subject to standard repairs, the areal extent of improvements has been limited so its historical integrity does not appear to have been impacted significantly as a result of past improvement work. For these reasons, NIC-2020-SRWSLD 01 is recommended eligible for listing in the CRHR. The resource is evaluated against individual CRHR eligibility criteria below.

Criterion 1

Background research indicates that this segment of the Sacramento River West Side Levee is associated with events that have made a significant contribution to the broad patterns of regional history and cultural heritage. Specifically, the segment is part of the original levee constructed along the western bank of the Sacramento River in the early 1870s, shortly after the establishment of Reclamation District 108 and before the formation of the Sacramento River West Side Levee District in 1915. The Reclamation District constructed 40 miles of levee along the western bank of the Sacramento River between Sycamore and Knights Landing beginning in 1870, and its construction directly and profoundly influenced the broad historical patterns of domestic settlement and agricultural development in the region. The levees, along with the headgates and dams constructed by the reclamation district in the first decade its operation, converted 33,000 acres of former swamp into productive cropland and inhabitable space during that period in Colusa County alone.

In addition, the levee became part of the federally sponsored SRFCP initiated in 1914. The SRFCP implemented the comprehensive Sacramento Valley flood management plan prepared by Captain Thomas Jackson of the USACE in the early years of the 20th century. When originally constructed, the levees along the western side of the Sacramento River were built to whatever standards and at whatever location the local reclamation districts determined appropriate. The SRFCP established uniform criteria for levee construction and maintenance and better organized coordination between reclamation agencies and other invested parties. Following Jackson's design, it reverted the Sacramento River to its natural regime during floods, conveying flood waters through the valley and returning them into the river at its lower reaches via an extensive network of levees, weirs, and bypasses. River flows were rerouted into the Sutter and Yolo Bypasses, ultimately reducing the amount of water conveyed between the two Sacramento River levees by nearly 85%. The SRFCP was a revolutionary engineering feat and has helped ensure that Reclamation District 108 has not flooded since 1915.

A comparable segment of the Sacramento River West Side Levee (Levee Miles 3.41 to 6.45) near the community of Robbins, south of the Project Area and roughly three miles north of Knights Landings, was previously evaluated and recommended eligible for CRHR listing under Criterion 1. That evaluation characterizes the more southerly segment as "an example of California's evolution

Page 6 of 7

Resource Name or #: NIC-2020-SRWSLD 01

*Recorded by: T. Spillane

*Date 12/10/2020

☒ Continuation ☐ Update

of reclamation- including the earliest efforts to build levees, formation of reclamation districts, and development of water management policy- which took place between 1850 (Arkansas Act enacted) and 1911 (State Flood Control Act enacted).” The previous evaluation continues: “Levee segments such as this one form the foundation for all reclamation activities that followed throughout the state after 1911” (ICF 2017). The levee segment evaluated here embodies these same qualities, exemplifying the high standards of flood management planning and structural engineering that have made the Central Valley the most productive agricultural region in the state, and one of the most productive in the world. For these reasons NIC-2020-SRWSLD 01 is recommended as eligible for listing in the CRHR under Criterion 1.

Criterion 2

While significant people such as Captain Thomas Jackson were involved in design of flood control infrastructure in the Central Valley generally, as well as in the general planning of the SRFCP, the specific levee segment being evaluated is not known to have any direct link with persons important in local, regional, or national history. It is therefore recommended as ineligible for CRHR listing under Criterion 2.

Criterion 3

Similarly, this particular segment of levee does not appear to embody the distinctive characteristics of a type, period, region, or method of construction, or to represent the work of an important creative individual, or possesses high artistic values. Individually, its construction is of a type that is ubiquitous throughout the Central Valley. For these reasons, the resource is recommended as ineligible for CRHR listing under Criterion 3.

Criterion 4

Finally, the informational value of the resource appears to be exhausted in historical source material, including exhaustive Reclamation District minutes and other technical documents, project plans, modern geospatial data, and cultural resource documents that thoroughly record its salient features. It is therefore recommended as ineligible for CRHR listing under Criteria 4.

Integrity

As noted above, the levee has been subject to standard repairs, though the areal extent of improvements has been limited and its overall condition does not appear to have changed significantly as a result of this maintenance and improvement work. Modern and historical improvements to the resource noted during the field survey are limited to the installation of a guardrail on the eastern side of the roadway, the placement of a pathway along the western levee flank, the installation of a well pump, piping, and a power pole.

The character defining features of this levee segment are its setting, alignment, and continued function as an important engineered flood management structure. Past improvements have focused on the maintenance, repair, and strengthening of the levee and have not impacted these key features in any significant way. The levee segment continues to serve the function it had when first constructed in the mid-19th century, and its setting has not been substantially altered since that time, either by past development or by land uses in the surrounding area which remain predominantly agricultural. The alignment of the levee and Wilson Bend Road have remained unchanged for more than a century. For these reasons, the resource appears to retain its integrity of location, setting design, feeling, workmanship, and association, though the materials constituting it have been replaced and/or modified in some areas. Considering these factors, it is the finding of this evaluation that the resource retains sufficient integrity to convey its significance.

State of California ____ Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION
CONTINUATION SHEET

Primary # _____
HRI# _____
Trinomial _____

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*Recorded by: T. Spillane

*Date 12/10/2020

☒ Continuation ☐ Update

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