

# **Appendix E: Cultural Resources Assessment**



# Cultural Resources Assessment for the H- Cycle Pittsburg Renewable Hydrogen Project, City of Pittsburg, Contra Costa County, California

October 2023

## Prepared For:

H-Cycle  
444 Castro Street, Suite 710  
Mountain View, CA 94041

## Prepared By:

TRC  
10680 White Rock Road, Suite 100  
Rancho Cordova, CA 95670

---

*Prepared by:* Matthew Wetherbee, MSc,  
RPA and Ronald Johnson, MA., RPA



**Keywords:** Cultural resources survey; Project Area coverage 24 acres; Contra Costa County; H-Cycle Pittsburg Renewable Hydrogen Project; Antioch North Quadrangle; Township T2N, Range 1E, Rancho Los Medanos land grant; REJ-092223-SITE-01, P-07000806/CA-CCO-732H (Update).



## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>1</b>
<b>1.0 INTRODUCTION.....</b>	<b>3</b>
1.1 Project Location and Description .....	3
<b>2.0 SETTING.....</b>	<b>6</b>
2.1 Environmental Setting .....	6
2.2 Prehistoric Setting .....	6
2.3 Ethnography .....	9
2.4 Historic Context.....	10
<b>3.0 REGULATORY FRAMEWORK.....</b>	<b>13</b>
3.1 State Regulations .....	13
3.1.1 Historical Resources .....	13
3.1.2 Substantial Adverse Change and Indirect Impacts to Historical Resources.....	14
3.1.3 Archaeological Resources .....	15
3.1.4 California State Assembly Bill 52 .....	15
3.1.4.1 Consultation with Native Americans.....	15
3.1.4.2 Tribal Cultural Resources.....	15
3.1.5 California Register of Historical Resources .....	16
<b>4.0 RESEARCH METHODS.....</b>	<b>17</b>
4.1 Records Search .....	17
4.2 Native American Outreach .....	17
4.3 Field Survey .....	17
<b>5.0 RESULTS .....</b>	<b>17</b>
5.1 Records Search .....	17
5.2 Historic Maps and Aerial Photography Review.....	20
5.3 Field Survey .....	21
<b>6.0 SUMMARY AND EVALUATION .....</b>	<b>26</b>
<b>7.0 CONCLUSION AND RECOMMENDATIONS.....</b>	<b>28</b>
<b>8.0 REFERENCES.....</b>	<b>29</b>



## TABLES

Table 1. Previous Cultural Resources Studies within 0.5 Mile of the Project Area. ....	18
Table 2. Previously Recorded Cultural Resources within 0.5 Mile of the Project Area. ....	20

## FIGURES

Figure 1. Project vicinity. ....	4
Figure 2. Project Area location map. ....	5
Figure 3. Overview of central portion of Project Area; view to the south. ....	22
Figure 4. Overview of northern section of Project Area; view to the east. ....	22
Figure 5. Overview of central portion of Project Area; view to the south. ....	23
Figure 6. Overview of western portion of Project Area; view to the north. ....	23
Figure 7. Overview of east section of Project and resource REJ-092223-STR-01. View to the northwest. ....	24
Figure 8. Overview of resource P-07-000806/CA-CCO-372 (railway spur); view to the south. ....	24
Figure 9. Overview of southern portion of Project Area and railway cars; view to the southwest. ....	25

## APPENDICES

Appendix A:	Report Preparers
Appendix B:	Native American Coordination Documentation
Appendix C:	Field Results and Resource Location Map
Appendix D:	State of California Department of Parks and Recreation 523 Series Forms



## ACRONYM LIST

<b>AB</b>	Assembly Bill
<b>ACHP</b>	Advisory Council on Historic Preservation
<b>A.D.</b>	After Descension
<b>B.C.</b>	Before Christ
<b>CCR</b>	California Code of Regulations
<b>CCTS</b>	Central California Taxonomic System
<b>CEQA</b>	California Environmental Quality Act
<b>CFR</b>	Code of Federal Regulations
<b>CHRIS</b>	California Historical Resources Information System
<b>CRHR</b>	California Register of Historical Resources
<b>GIS</b>	Global Information System
<b>kV</b>	Kilovolt
<b>NAHC</b>	Native American Heritage Commission
<b>NHPA</b>	National Historic Preservation Act
<b>NRHP</b>	National Register of Historic Places
<b>NWIC</b>	Northwest Information Center
<b>PG&amp;E</b>	Pacific Gas & Electric
<b>PRC</b>	Public Resources Code
<b>RPA</b>	Registered Professional Archaeologist
<b>USC</b>	United States Code
<b>USGS</b>	United States Geological Survey



This page intentionally left blank



## Executive Summary

TRC Environmental Corporation (TRC) was retained by H-Cycle to conduct a cultural resources study for the proposed H-Cycle Pittsburg Renewable Hydrogen Project (HCPRHP) (Project) in the City of Pittsburg in Contra Costa County, California. The subject property of the study is located on private land (APN 073-220-049-8) on Pittsburg Waterfront Road within developed land south of Suisun Bay. This study is intended to identify and describe cultural resources that could be impacted by development of the Project. The City of Pittsburg is the lead agency for the California Environmental Quality Act (CEQA). The Project Area measures approximately 24 acres in total and is currently occupied by infrastructure associated with the former Dow Chemical manufacturing facility and tenant spaces occupied by Corteva, Generon, and Schlumberger.

This study includes a cultural context, brief history of the Project Area, a cultural resources records search of the Project Area and 0.5-mile buffer, results of a Sacred Lands File (SLF) search by the California Native American Heritage Commission (NAHC), historic map review, an intensive-level pedestrian survey of the subject property, and a technical report presenting the methodology and results of the study. This study was completed in compliance with and in satisfaction of CEQA. TRC is conducting this study to determine whether the proposed project may have the potential to cause impacts to cultural resources eligible for or listed in the California Register of Historical Resources (CRHR).

On August 31, 2023, TRC archaeologist Matthew Wetherbee, MSc., RPA., initiated a California Historical Resources Information System (CHRIS) records search from the Northwest Information Center (NWIC), located at Sonoma State University in Rohnert Park. The results of the records search indicate that portions of the Project Area were included in three prior cultural resource studies and no cultural resources were recorded within the current Project Area.

TRC archaeologists, Ronnie Johnson, MA, RPA., and Susan Talcott, PhD, RPA conducted the cultural resources survey of the Project Area on September 22, 2023. During the survey efforts, two historic-era built environment resources constructed by the Dow Chemical Plant during the 1950s to support manufacturing operations were recorded in the Project Area. The resources consist of an updated and still active railway spur of the Atchison, Topeka & Santa Fe Railroad (P-07-000806/CA-CCO-732) and an inactive water tower (REJ-092223-STR-01). The Dow Chemical Plant was in operation from the 1950s and ceased operations in the early 1980s. The water tower is no longer in use and the railway spurs remain active today, with railcars stored on track at the time of survey.

Through various avenues of historic background research, neither the railway spurs nor the water tower appear to qualify as “an important example” of type, period, region, or method of construction, nor do they express any ideals or design concepts more fully than other similar railway spurs and water towers in the region. Despite extensive research, no person(s) or event(s) of recognized significance in national, state, or local history have been revealed in association with these resources. Additionally, there is no evidence that they represent the work of a prominent architect, designer, or builder.

Based on the research presented herein, TRC recommends resources REJ-092223-STR-01 and the updated rail spur (P-07-000806) as not eligible for listing on the California Register of Historical Resources, and accordingly do not meet the official definition of a “historical



resource,” as defined in CEQA. The research potential at both resources has been exhausted, and few meaningful conclusions can be drawn from further study. Recordation of the site has been completed and DPR forms will be filed with the NWIC. No other cultural resources were identified within the Project Area during the course of this study.

Therefore, TRC recommends that the City of Pittsburg may reach a finding of No Impact regarding cultural resources. Historical imagery indicates that the Project Area and vicinity had been significantly modified for many decades to support industrial developments and the likelihood of encountering subsurface cultural resources is low. No further cultural resources investigation is recommended for the proposed project unless project plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during any ground-disturbing activities associated with the project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.





## 1.0 Introduction

Between July and September 2023, at the request of H-Cycle, TRC performed a cultural resources study on approximately 24 acres of land for the H-Cycle Pittsburg Renewable Hydrogen Project (HCPRHP) (Project) in the City of Pittsburg, Contra Costa County, California. The subject property of the study is located on private land (APN 073-220-049-8) on Pittsburg Waterfront Road within developed land south of Suisun Bay. This study is intended to identify and describe cultural resources that could be impacted by development of the Project. The City of Pittsburg is the lead agency for the California Environmental Quality Act (CEQA). TRC conducted this study to determine whether the proposed Project may have the potential to cause impacts to properties eligible for or listed in the California Register of Historical Resources (CRHR).

This study includes a cultural context, brief history of the Project Area, a cultural resources records search of the Project Area and 0.5-mile buffer, results of a SLF search by the California NAHC, historic map and aerial photography review, results of an intensive-level pedestrian survey, and provides management recommendations.

The purpose of this cultural resources study is to determine whether previously recorded or unrecorded cultural resources are located in the Project Area, and to aid H-Cycle and the City of Pittsburg in avoiding impacts to these resources during Project implementation.

TRC personnel involved in the preparation of this report include senior archaeologists Matthew Wetherbee, MSc., RPA., Ronnie Johnson, MA., RPA., and GIS specialist, Randy Blake, BA. Resumes of key personnel are provided in Appendix A.

### 1.1 Project Location and Description

The HCPRHP proposes to develop the Project area into a facility for converting municipal waste to hydrogen for use in industrial and heavy-duty transportation sectors. Specifically, the proposed Project lies within the Rancho Los Medanos land grant, Township 2 North, Range 1 East, Mount Diablo Base and Meridian, as shown on the Antioch North, California, 7.5-minute U.S. Geological Survey (USGS) topographic quadrangle (Figures 1-2). The proposed project is to construct and operate a renewable hydrogen production facility to convert waste organic feedstock into carbon-negative renewable hydrogen.

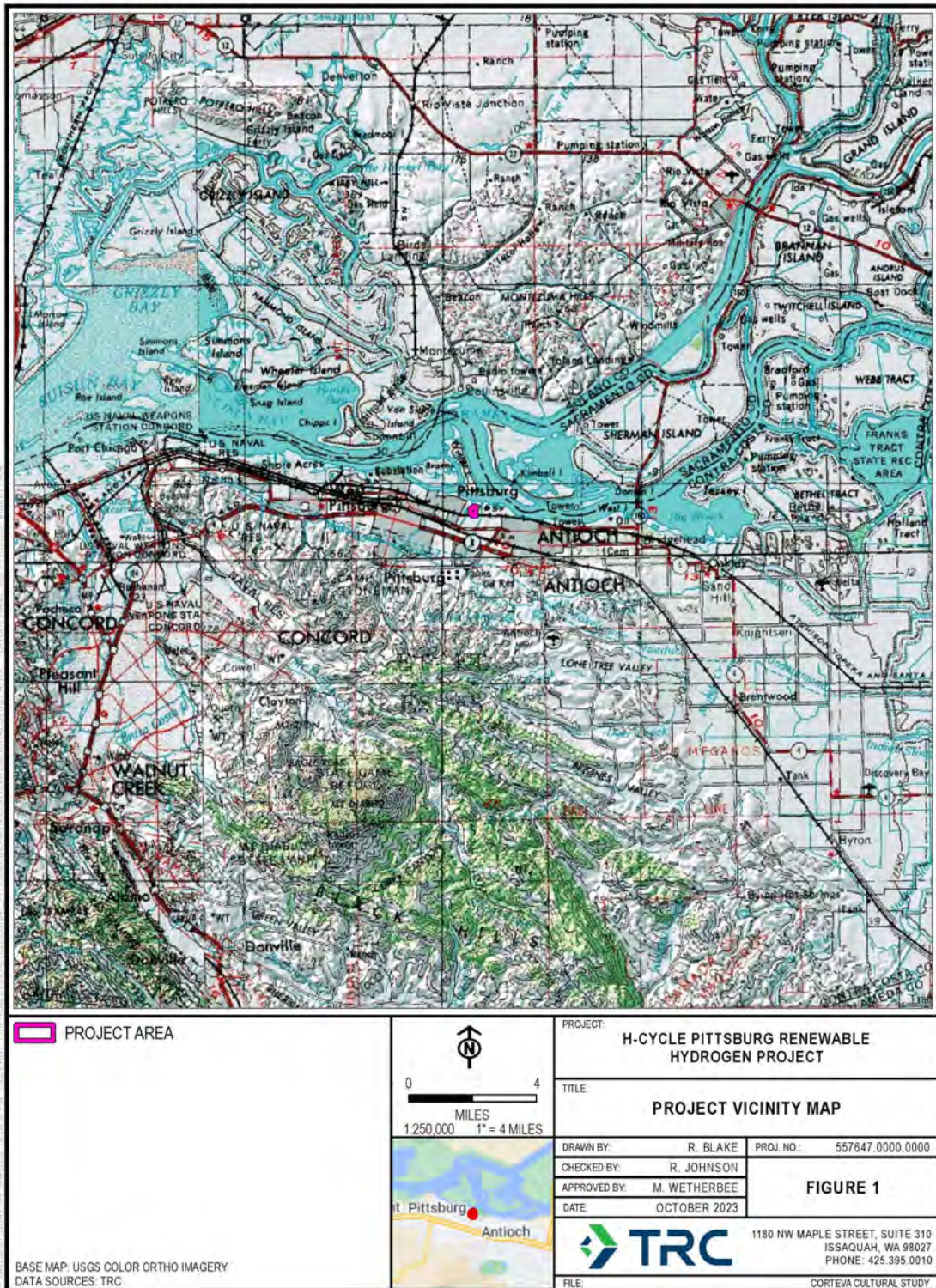


Figure 1. Project vicinity.

(Based on USGS Lodi, Calif., 1:250,000 quadrangles [USGS 1979])

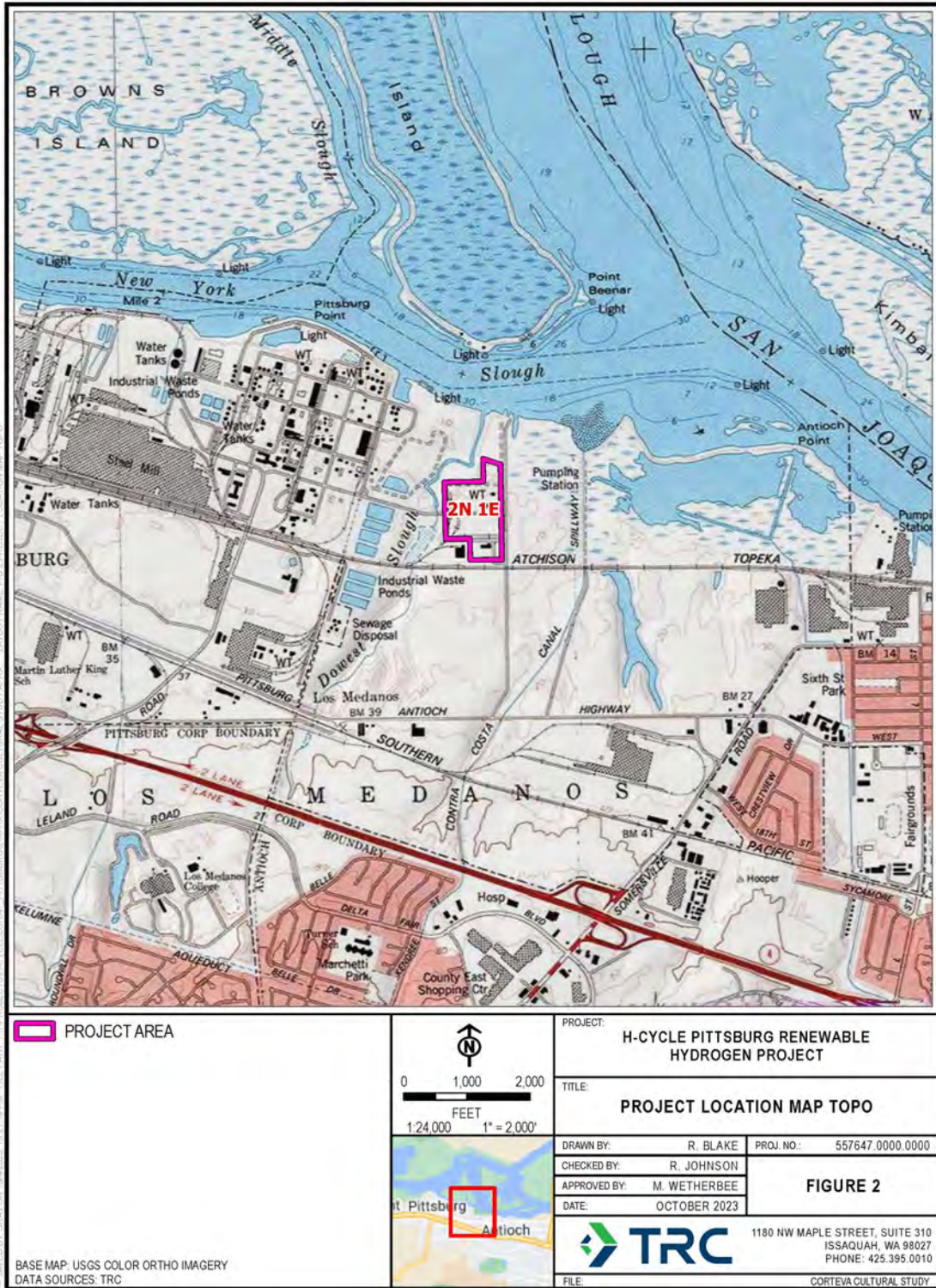


Figure 2. Project Area location map.

(Based on USGS Antioch North, Calif., 1:24,000 quadrangle [USGS 1953; Photo revised 1980])



## 2.0 Setting

### 2.1 Environmental Setting

The Project Area is located at the east end of the City of Pittsburg, California, just south of Suisun Bay. The subject property and surrounding lands were marshlands until development of the local area began in the mid-1950s. Prior to the mid-1950s, there was little development in the vicinity other than Southern Pacific Railroad, Pittsburg Railroad, and the Atchison-Topeka, and Santa Fe Railroad located south and west of the Project Area. By the mid-1950s the vicinity began to develop with industrial growth. Lands immediately surrounding the Project Area remained undeveloped marshland, but the Project Area received a manufacturing facility from the Ethyl Corporation (TRC 2023) including a large warehouse and other buildings.

Soils within the Project Area typically consist of alluvial fans and stream terraces with Capay Clay (CaA), 0 to 3 percent slope and Rincon clay loam (RbD), 9 to 15 percent slope (USDA NRCS 2022). The Project Area is situated approximately 14 feet above mean sea level (msl) and generally the site slopes to the north-northeast. The terrain of the subject property is relatively level.

The property is currently occupied by infrastructure associated with the former Dow Chemical manufacturing facilities and Corteva. There are four buildings currently on the property that are used for material storage, a laboratory, and an empty shed. In addition, there are paved and unpaved parking areas and equipment storage and vegetation throughout the property. There is also an inactive water tower in the northeast corner of the property and railroad spurs along the southern and southwestern property boundaries. There is a stormwater outfall and collection system along the eastern property boundary. Several monitoring wells are located within the Project Area and are abandoned and two small soil stockpiles from grading activities are located in the northern and central portions of the subject property, respectively.

### 2.2 Prehistoric Setting

The Project Area occurs at the west edge of the Central Valley Geomorphic Province. The history of human occupation and use of the Central Valley is characterized by a number of related trends taking place over the last 10,000 years. Archaeologically visible patterns can be attributed as response to gradual changes in climate, resource availability, and human population growth. The cultural response to these changes includes specialization, intensification, sedentism, and the development of regional economic networks. This section provides a brief overview of the changing adaptive strategies used by the inhabitants of the Central Valley and the archaeological manifestations of these changes.

Research into local prehistoric cultures in the area began in the early 1900s with the work of N. C. Nelson of the University of California at Berkeley. Nelson documented 425 shellmounds along the bay shore and adjacent coast when the bay was still ringed by salt marshes three to five miles wide (Nelson 1909). He maintained that the intensive use of shellfish, a subsistence strategy reflected in both coastal and bay shoreline middens, indicated a general economic unity in the region during prehistoric times, and he introduced the idea of a distinct San Francisco Bay archaeological region (Moratto 1984:227) that included the area where the current Project Area is located. Three sites, in particular, provided the basis for the first model of cultural succession in Central California, the



Emeryville Shellmound (CA-ALA-309), the Ellis Landing Site (C A-CC0-295), and the Fernandez Site (CA-CCO-259) (Moratto 1984:227).

Investigations into the prehistory of the Central Valley of California, presaged by early amateur excavations in the 1890s, began in earnest in the 1920s. In the early 20th century, Stockton-area amateur archaeologists J. A. Bar and E. J. Dawson separately excavated a number of sites in the Central Valley and made substantial collections. On the basis of artifact comparisons, Bar identified what he believed were two distinct cultural traditions, an early and a late. Dawson later refined his work and classified the Central Valley sites into three "age-groups" (Moratto 1984).

Professional or academic-sponsored archaeological investigations in central California began in the 1930s, when J. Lillard and W. Purves of Sacramento Junior College formed a field school and conducted excavations throughout the Sacramento Delta area. By seriating artifacts and mortuary traditions, they identified a three-phase sequence similar to Dawson's, including Early, Intermediate, and Recent cultures (Lillard et al. 1939). This scheme went through several permutations (Lillard et al. 1939). In 1948 and again in 1954, Richard Beardsley refined this system and extended it to include the region of San Francisco Bay (Beardsley 1948, 1954). The resulting scheme came to be known as the Central California Taxonomic System (CCTS) (Fredrickson 1973; Hughes 1994:1). Subsequently, the CCTS system of Early, Middle, and Late Horizons was applied widely to site dating and taxonomy throughout central California.

As more data were acquired through continued fieldwork, local exceptions to the CCTS were discovered. The accumulation of these exceptions, coupled with the development of radiocarbon dating in the 1950s and obsidian hydration analysis in the 1970s, opened up the possibility of dating deposits more accurately. Much of the subsequent archaeological investigation in central California focused on the creation and refinement of local versions of the CCTS.

In the 1960s and 1970s, archaeologists including Ragir (1972) and Fredrickson (1973) revised existing classificatory schemes and suggested alternative ways of classifying the prehistory of California. Fredrickson (1973:113-114) proposed four "major chronological periods" in prehistoric California: the Early Lithic Period (described as hypothetical), a Paleoindian Period, an Archaic Period, and an Emergent Period. The Archaic and Emergent Periods were further divided into Upper and Lower periods. Subsequently, Fredrickson (1974, 1994) subdivided the Archaic into Lower, Middle, and Upper.

A series of "patterns," emphasizing culture rather than temporal periods, can be identified throughout California prehistory. Following Ragir, Fredrickson (1973:123) proposed that the nomenclature for each pattern relate to the location at which it was first identified, such as the Windmill, Berkeley, and Augustine Patterns.

Various modifications of the CCTS (e.g., Bennyhoff and Hughes 1987; Fredrickson 1973, 1974; Milliken and Bennyhoff 1993) sustain and extend the system's usefulness for organizing our understanding of local and regional prehistory in terms of time and space. The cultural patterns identified in the Bay Area that in a general way correspond to the CCTS scheme are the Berkeley and Augustine patterns (for information on the Berkeley and Augustine Patterns see Fredrickson 1973, Milliken et al. 2007, Moratto 1984). Dating techniques such as obsidian hydration analysis or radiometric measurements can further increase the accuracy of these assignments.

Most recently, Milliken et al. (2007:99-123) developed what they term a "hybrid system" for the San Francisco Bay Area, combining the Early -Middle-Late Period temporal sequence with the pattern-aspect-phase cultural sequence. Dating of the cultural patterns, aspects, and phases was based on Dating Scheme D of the CCTS, developed by Groza (2002). Groza directly dated over 100 Olivella shell beads, obtaining a series of AMS radiocarbon dates representing shell bead horizons. The new chronology she developed has moved several shell bead horizons as much as 200 years forward in time.

Milliken et al.'s (2007) San Francisco Bay Area Cultural Sequence includes:

- Early Holocene (Lower Archaic) from 8000 to 3500 B.C.
- Early Period (Middle Archaic) from 3500 to 500 B.C
- Lower Middle Period (Initial Upper Archaic) from 500 B.C. to A.D. 430
- Upper Middle Period (Late Upper Archaic) from A.D. 430 to 1050
- Initial Late Period (Lower Emergent) from A.D. 1050 to 1550
- Terminal Late Period, post-A.D. 1550

No archaeological evidence dating to pre-8000 B.C. has been located in the Bay Area. Milliken et al. (2007) suggest that this dearth of archaeological material may be related to subsequent environmental changes that submerged sites, buried sites beneath alluvial deposits, or destroyed sites through stream erosion.

A "generalized mobile forager" pattern marked by the use of milling slabs and handstones and the manufacture of large, wide-stemmed and leaf-shaped projectile points emerged around the periphery of the Bay Area during the Early Holocene Period (8000 to 3500 B.C.). Beginning around 3500 B.C., evidence of sedentism, interpreted to signify a regional symbolic integration of peoples, and increased regional trade emerged. This Early Period lasted until ca. 500 B.C. (Milliken et al. 2007:114, 115).

Milliken et al. (2007:115) identify "a major disruption in symbolic integration systems" circa 500 B.C., marking the beginning of the Lower Middle Period (500 B.C. to A.D. 430). Bead Horizon MI, dating from 200 B.C. to A.D. 430, is described by Milliken et al. (2007:115) as marking a 'cultural climax' within the San Francisco Bay Area.

The Upper Middle Period (A.D. 430 to 1050) is marked by the collapse of the Olivella saucer bead trade in central California, abandonment of many Bead Horizon MI sites, an increase in the occurrence of sea otter bones in those sites that were not abandoned, and the spread of the extended burial mortuary pattern characteristic of the Meganos complex into the interior East Bay. Bead Horizons M2 (A.D. 430 to 600), M3 (A.D. 600 to 800), and M4 (A.D. 800 to 1050) were identified within this period (Milliken et al. 2007:116).

The Initial Late Period, dating from A.D. 1050 to 1550, is characterized by increased manufacture of status objects. In lowland central California during this period, Fredrickson (1973 and 1994, quoted in Milliken et al. 2007:116) noted evidence for increased sedentism, the development of ceremonial integration, and status ascription. The beginning of the Late Period, (ca. A.D. 1000) is marked by the Middle/Late Transition bead horizon.



The Terminal Late Period began circa A.D. 1550 and continued until European settlement of the area.

In 2005 and 2006 at CA-CCO-548, near the John Marsh House on Marsh Creek to the west of Brentwood and Byron, have yielded cultural evidence from a large village site and a major prehistoric cemetery. Almost 500 burials and numerous associated artifacts have been recovered. Dating for this site is incomplete, but probably ranges from between 6,000-7,000 years B.P. to about 1,500 B.P. The site contains major Windmill and Berkeley components.

### **2.3 Ethnography**

The Project Area lies within the territorial borders of the Bay Miwok group. The property was likely inhabited by the Ompin tribelet of the Bay Miwok. This conclusion is based on examination of ethnographic accounts and historic maps (Heizer 1971; Levy 1978). Unless otherwise indicated, the following summary is based upon Levy's 1978 work.

The Bay Miwok occupied the eastern portions of what is now Contra Costa County, from Mt. Diablo northeast into the Sacramento-San Joaquin Delta. The Plains Miwok inhabited the lower reaches of the Mokelumne and Cosumnes Rivers and the banks of the Sacramento River from Rio Vista to Free port. The Sierra Miwok inhabited the foothills and higher mountains of the Sierra. Culturally, the Bay Miwok were probably more similar to the Plains Miwok than to the Sierra Miwok.

The basic subsistence strategy of the Eastern Miwok was seasonally mobile hunting and gathering. The only cultivated crop was tobacco and the only domesticated animal was the dog. An ample supply of seed-bearing annuals and forage for game was assured by intentional burning in August. Acorns, the primary staple of the Eastern Miwok, were gathered in the fall and stored through the winter. An important staple in the summer were seeds, gathered May through August. Plant foods included, acorns, buckeye nuts, laurel nuts, hazelnuts, seeds, roots, greens and some berries. The Miwok ate more meat in the winter, when only stored plant resources were available. Hunting was accomplished with the aid of the bow and arrow, traps, and snares. Animal foods consisted of deer; elk; antelope; rodents; water fowl; quail, pigeons, flickers and other birds; freshwater mussels and clams; land snails; fish; and a variety of insects. Salt was obtained from springs or through trade with the Mono Lake area.

Miwok technology included bone, stone, antler, wood, and textile tools. Basketry items included seed beaters, cradles, sifters, rackets used in ball games, and baskets for storage, winnowing, parching, and carrying burdens. Other textiles included mats and cordage. Tule balsas were constructed for navigation on rivers and in the Delta.

The Eastern Miwok constructed several types of structures. Conical structures of bark were used in the mountains, whereas those of tule matting were used more in the lower elevations of the Central Sierra. Semi-subterranean earth-covered dwellings served as winter homes. Also, within the Miwok settlement were acorn granaries, menstrual huts, sweathouses, conical grinding huts over bedrock mortars, and two types of assembly houses. Large semi-subterranean structures were the focal point of ritual and social gatherings. Circular brush structures were used for mourning ceremonies in summer months.

The Eastern Miwok first came into contact with Europeans in the second half of the eighteenth century, when Spanish explorers entered Miwok territory. The Bay Miwok were the first to be affected by attempts of Spanish missionaries to convert Native American to Christianity. It appears that many Bay and Plains Miwok triplets disappeared from their homelands through combined effects of population removal to the missions at San Francisco and San Jose and disease introduced by Europeans. Runaway neophytes were sought by military expeditions. Initially, the Miwok hid from their Spanish pursuers, but eventually began to fight back. Militarism grew in the 1820s and 1830s, particularly among the Plains Miwok. With the incursion of trappers, gold miners, and settlers, the Miwok were exposed to more new diseases. Although this early contact with settlers had a profoundly negative impact on the Miwok population, both through disease and violent actions, the Miwok people survive and maintain strong communities and action-oriented organization.

## 2.4 Historic Context

**Exploration.** The Sacramento-San Joaquin River Delta was visited frequently by early Euroamerican explorers. Pedro Fages explored the shores of San Francisco Bay in search of a suitable mission site and by 1772 had traveled as far as the San Joaquin River (Hoover et al. 1990; Thompson 1958). The same territory was explored in 1776 by Colonel Juan Bautista de Anza. In 1793, Francisco Eliza sailed into the Sacramento River. Between 1806 and 1817, mission site reconnaissance expeditions were conducted by a number of explorers including Gabriel Moraga (1806, 1808), Father Ramon Abella (1811), Jose Antonio Sanchez (1811), and Father Narciso Duran (1817).

The first American to travel in the Sacramento-San Joaquin River Delta area was probably Jedediah Strong Smith, who opened the Sacramento Trail in the late 1820s. Smith reported to the Hudson's Bay Company on the quantity and quality of the furs available in California. In 1828, the company sent its first trapping expeditions to California. Initially, trapping in the Sacramento and San Joaquin Valleys was profitable. By 1834, however, trapping was no longer lucrative, and by 1842, the Hudson's Bay Company had terminated its California operations. (Hoover et al. 1990.)

**Settlement.** The first American settler in the Solano County area was John Reed Wolfskill. Wolfskill arrived in California in 1838 and by 1842 had acquired Mexican citizenship, thus enabling him to receive land grants from the Mexican government. The Rio de los Potos grant was made to him in 1842, and the patent of 1858 awarded him 17,754 acres, partly in Solano County, and partly in Yolo County (Hoover et al. 1990).

**Land Reclamation.** The reclamation of the Sacramento-San Joaquin River Delta marshes began in the 1850s and peaked in the late 19th and early 20th centuries. In 1850, the Arkansas Swamp Land Act was passed, in which Congress ceded swamp and overflow land to certain states on the condition that the proceeds from the sale of the land go toward reclamation of the land. In 1855, the state legislature passed an act to provide for the sale of swampland in California. Among the provisions of this act was a limit of 320 acres per person sold at \$1 per acre. Swamp and overflow land could be bought on credit, but the purchaser was obligated to reclaim half the land purchased within 5 years. The attempts of individual landholders to build levees and reclaim swamp and overflow land in the 1850s proved futile in most cases. Individual shoestring levees were not strong enough; a system of network of levees and drainages was required. A large infusion of capital and labor was necessary to build strong levees, drain large plots of land, and maintain the system.





In 1861, the state legislature created the State Board of Reclamation Commissioners and authorized it to form reclamation districts (McGowan 1961). In an attempt to enclose large areas bounded by natural levees, 32 districts were formed (Thompson 1958). After the board was dissolved in 1866, control of swamp and overflow land fell to the counties (Thompson 1958). Acreage limitations were removed and incentive programs were instituted. When a landholder certified that \$2 per acre had been spent on reclamation, the purchase price of the land was refunded and the owner given the deed. Speculators took advantage of this offer and a period of opportunistic and often irrational levee building followed (McGowan 1961; Thompson 1958).

By 1870, most swamp and overflow land was privately owned, but progress in reclamation was slow. By 1878, two million acres of swamp and overflow land had been sold. Most of this land was not patented, however, and real reclamation had been accomplished on no more than one-sixth of the total acreage (Thompson 1958). Corporations and wealthy individuals owned 50% of the land and were undertaking extensive reclamation projects in tidal back swamps and islands with some natural levee systems (McGowan 1961). Most of this land was reclaimed with the intent of leasing it.

Most landowners used low-paid Chinese laborers, who had become available for work following the completion of the Central Pacific Railroad in 1869. The Chinese Exclusion Act of 1882 resulted in a decrease in California's Chinese population, however, and the levee system suffered from a lack of proper maintenance. By the turn of the century, large tracts of land had reverted to their pre-1860s status (PAR Environmental Services 1993).

Various technological advances in the late 19th and early 20th centuries helped to make up for the loss of an inexpensive labor force (PAR Environmental Services 1993). Clamshell, hydraulic, and steam-driven dredges took the place of the horse-drawn scrapers and dredges of the early period of reclamation. The introduction of the mechanical ditch digger in 1918 meant that ditches could be cleared with backhoes. Steam-powered and electrical pumps helped to drain the land. Reclamation of virgin land ended in the early 1920s, but work remained to secure already reclaimed lands (Thompson 1958). Dredging activities conducted by the U.S. Army Corps of Engineers in the 1930s removed sand and silt from the river and pumped it inland, depositing it on the tule marshes and pasture lands in the area of Collinsville (William Self Associates 1993).

**Agriculture.** Reclaimed lands were used for agriculture. A number of factors combined to make agriculture in the Sacramento-San Joaquin River Delta a profitable industry. The fertile land of the Delta was easy to work, irrigation in the area was inexpensive, transportation to the port and population center of San Francisco was fast and cheap, and the crops ripened early (Thompson 1958).

**Transportation.** The 1870s saw the expansion of railroads throughout California. Several different routes connected the major towns of the Delta area, such as Benicia, Vallejo, Fairfield and Pittsburg, to the rest of California. Smaller river towns such as Collinsville relied on river ferries to connect them to rail transportation and other river towns. One of the first ferries operated on either side of the Sacramento or San Joaquin Rivers was established by L.W. Hastings in the late 1880s. This ferry connected what is now Collinsville with the opposite shore at the confluence of the Sacramento and San Joaquin Rivers. Dr. Robert Semple, one of the founders of the town of Benicia, established the first ferry across the Carquinez Strait in 1847. Ferry service operated between Benicia and



Martinez until 1962, when the highway bridge connecting the two towns was completed (Hoover et al. 1990:466).

**Local History.** Pittsburg, originally settled in 1839, was called first "New York Landing", then "Black Diamond", before citizens voted on "Pittsburg" on February 11, 1911. The name was selected to honor Pittsburgh, Pennsylvania, as the two cities shared a common steel and mining industrial heritage. This rechristening came at a time when the name of Pittsburgh, Pennsylvania was more commonly spelled without the "h" (Aiello 2004; Borgwardt 1996; Harre 1986).

In 1910, Columbia Steel opened its California steel plant in Pittsburg with one foundry and a crew of 60 employees. It made steel castings for the dredging, lumber and shipping industries. In 1930, Columbia became a subsidiary of U.S. Steel Company. The plant continued to grow until the early 1950s, reaching a peak staff of 5,200 employees. when the markets for its products crashed. The parent company (by 1986, renamed as USS Company) had merged with Korean Pohang Iron and Steel Company. Together they invested \$450 million turning the Pittsburg plant into a modern flat-products mill, renamed as USS-Posco. As of 1999, the facility employed 970 workers and shipped over 1.6 million U.S. tons per year of steel to over 175 customers in the Western U.S., Mexico, Canada and the Pacific Rim (Aiello 2004; Borgwardt 1996; Harre 1986).

The original town site fronts on the Sacramento/San Joaquin River Delta, reflecting its origins as a deep-water channel river port. Since the early 1900s, the city has grown inland to the south, then spread east and west along State Route 4, now a freeway carrying resident commuters to jobs in the San Francisco Bay-Oakland Region. In the process, the former town of Cornwall, California was absorbed. The city has enjoyed continued residential redevelopment growth near its northern boundary, as well as ongoing construction of major subdivisions in the southwest hills, including San Marco Villas (Aiello 2004; Borgwardt 1996; Harre 1986).

The Sacramento Northern (SN) was an electrified interurban railroad in California that extended 183 miles from Oakland north to Chico. There were two branches, one to Woodland-Colusa, and the other to Oroville. The SN had been two separate interurban companies connecting at Sacramento until 1925. The Oakland, Antioch, and Eastern Railway was a trolley-wire powered line that ran from Oakland through a tunnel in the Oakland hills to Moraga, Walnut Creek, Concord, Pittsburg, to Sacramento. It was renamed the San Francisco-Sacramento Railroad briefly. The Northern Electric Railway was a third-rail powered line that ran from Sacramento north through Marysville-Yuba City to Chico. The train crossed the Sacramento River on the Red Gate Bridge. It was renamed the Sacramento Northern Railroad in 1914. In 1928, the two lines combined to become the Sacramento Northern Railway and came under control of the Western Pacific Railroad which operated it as a separate entity. An extensive multiple-car passenger service operated from Oakland to Chico until 1941 including providing dining car service on some trains. Passenger traffic was heaviest from Sacramento to Oakland. Freight operation using electric locomotives continued into the 1960s. The SN was a typical interurban in that its trains, including freight, ran on downtown city streets in Oakland, Sacramento, Yuba City, and Woodland. Once in open country, SN's passenger trains ran at fairly fast speeds. With its shorter route and lower fares, the SN provided strong competition to the Southern Pacific and Western Pacific railroads for passenger business and minor freight business between those two cities. North of Sacramento, rail business was less due to the small-town agricultural nature of the region with its small towns and by competition from the SP Railroad (Aiello 2004; Borgwardt 1996; Harre 1986).



The Sacramento Northern Railroad, a subsidiary of Western Pacific, came into existence around 1929, and was composed of the Oakland, Antioch & Eastern Railroad (also the San Francisco-Sacramento Railroad, originally the Oakland and Antioch Railway), and the Northern Electric Interurban; each of these former lines were in service as early as 1900. Originally electrified, the line converted to diesel in the 1960s. The SN disappeared when Western Pacific was merged into Union Pacific in 1982 (Aiello 2004; Borgwardt 1996; Harre 1986).

Based on a review of historical information, the first structures built on the property by 1957 were the original infrastructure of the Dow Chemical Plant, that included at least four building structures, the rail spurs, and the water tower. and expanded with additional structures in the northern portion of property by 1998. Dow Chemical's onsite operations ceased by the early 1980's. The subject property is currently owned by Dow Chemical Company (TRC 2023).

Ethyl Corporation operated onsite between 1958 and 1963. Based on review of regulatory records, Ethyl Corporation used and stored chemicals to manufacture tetraethyl lead prior to DOW Chemical Company's purchase of the property in 1982. This property was incorporated into the corrective action under the Hazardous Waste Management Program oversight at the DOW Chemical Company property that is now under the direction of the Water Board (TRC 2023).

## **3.0 Regulatory Framework**

This section identifies state legislation; local statutes, ordinances, and guidelines that govern the identification and treatment of cultural resources; and the analysis of project-related effects to these resources. The lead agency must consider their relevant requirements when making decisions on projects that may affect cultural resources.

### **3.1 State Regulations**

CEQA requires a State or Local lead agency to analyze whether historic and/or archaeological resources may be adversely impacted by a proposed project. Under CEQA, a "project that may cause a substantial adverse change in the significance of a historic resource is a project that may have a significant effect on the environment" (PRC Section 21084.1). Answering this question is a two-part process: first, the determination must be made as to whether the proposed project involves cultural resources. Second, if cultural resources are present, the proposed project must be analyzed for a potential "substantial adverse change in the significance" of the resource.

#### ***3.1.1 Historical Resources***

According to State CEQA guidelines section 15064.5, for the purposes of CEQA, historical resources are as follows:

A resource listed in, or formally determined eligible ... for listing in the CRHR (PRC 5024.1, Title 14 California Code of Regulations [CCR], Section 4850 et seq.).

A resource included in a local register of historical resources, as defined in Section PRC 5020.1(k), of the Public Resources Code or identified as significant in a historic resources survey meeting the requirements of Section PRC 5024.1(g).

Any object, building, structure, site, area, place, record, or manuscript that the lead agency determines to be eligible for national, state, or local landmark listing; generally, a resource shall be considered by the lead agency to be historically significant (and therefore a historic resource under CEQA) if the resource meets the criteria for listing on the CRHR (as defined in PRC Section 5024.1, Title 14 CCR Section 4852).

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity (as defined above) does not meet the NRHP criteria may still be eligible for listing in the CRHR.

According to CEQA, the fact that a resource is not listed in or determined eligible for listing in the CRHR or is not included in a local register or survey shall not preclude the lead agency from determining that the resource may be an historical resource (PRC Section 5024.1). Pursuant to CEQA, a project with an effect that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (state CEQA guidelines Section 15064.5[b]).

### ***3.1.2 Substantial Adverse Change and Indirect Impacts to Historical Resources***

State CEQA guidelines specify that a “substantial adverse change in the significance of an historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired” (state CEQA guidelines Section 15064.5). Material impairment occurs when a project alters in an adverse manner or demolishes “those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion” or eligibility for inclusion in the NRHP, CRHR, or local register. In addition, pursuant to state CEQA guidelines section 15126.2, the “direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects.”

The following guides and requirements are of particular relevance to this study’s analysis of indirect impacts to historic resources. Pursuant to state CEQA guidelines (Section 15378), study of a project under CEQA requires consideration of “the whole of an action, which has the potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment.” State CEQA guidelines (section 15064(d)) further defines direct and indirect impacts as follows:

- (1) A direct physical change in the environment is a physical change in the environment which is caused by and immediately related to the project.
- (2) An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. If a direct physical change in the environment in turn causes another change in the environment, then the other change is an indirect physical change in the environment.
- (3) An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project.

### **3.1.3 Archaeological Resources**

In terms of archaeological resources, PRC Section 21083.2(g) defines a *unique archaeological resource* as an archaeological artifact, object, or site about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

- (1) Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
- (2) Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- (3) Is directly associated with a scientifically recognized important prehistoric or historic event or person.

If it can be demonstrated that a proposed 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]). CEQA notes that, if an archaeological resource is neither a unique archaeological resource nor an historical resource, the effects of the project on those resources shall not be considered to be a significant effect on the environment (State CEQA guidelines section 15064.5[c][4]).

### **3.1.4 California State Assembly Bill 52**

Assembly Bill 52 of 2014 (AB 52) amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3.

#### **3.1.4.1 Consultation with Native Americans**

AB 52 formalizes the lead agency – tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with the project, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report.

#### **3.1.4.2 Tribal Cultural Resources**

Section 4 of AB 52 adds Sections 21074(a) and 21074(b) to the PRC, which address tribal cultural resources and cultural landscapes. Section 21074(a) defines *tribal cultural resources* as one of the following:

- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
  - (A) Included or determined to be eligible for inclusion in the CRHR.
  - (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

- (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

Section 1 (a)(9) of AB 52 establishes that “a substantial adverse change to a tribal cultural resource has a significant effect on the environment.” Effects on tribal cultural resources should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures “capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource.” Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to tribal cultural resources, the consultation shall include those topics (PRC Section 21080.3.2[a]). The environmental document and the mitigation monitoring and reporting program (where applicable) shall include any mitigation measures that are adopted (PRC Section 21082.3[a]).

### ***3.1.5 California Register of Historical Resources***

Created in 1992 and implemented in 1998, the CRHR is “an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state’s historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC Sections 21083.2 and 21084.1). Certain properties, including those listed in or formally determined eligible for listing in the NRHP and California Historical Landmarks numbered 770 and higher, are automatically included in the CRHR. Other properties recognized under the California Points of Historical Interest program, identified as significant in historical resources surveys, or designated by local landmarks programs, may be nominated for inclusion in the CRHR. According to PRC Section 5024.1(c), a resource, either an individual property or a contributor to a historic district, may be listed in the CRHR if the State Historical Resources Commission determines that it meets one or more of the following criteria, which are modeled on NRHP criteria:

- **Criterion 1:** It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
- **Criterion 2:** It is associated with the lives of persons important in our past.
- **Criterion 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.
- **Criterion 4:** It has yielded, or may be likely to yield, information important in history or prehistory.

Resources nominated to the CRHR must retain enough of their historic character or appearance to convey the reasons for their significance. Resources whose historic integrity does not meet NRHP criteria may still be eligible for listing in the CRHR.

## **4.0 Research Methods**

### **4.1 Records Search**

The California Historical Resources Information System (CHRIS) information centers house cultural resources records and reports for California's 58 counties. TRC initiated a CHRIS records search at the Northwest Information Center (NWIC) of the Project Area plus an approximate 0.5-mile buffer. The purpose of the records search was to identify previously recorded prehistoric or historic cultural resources, including isolated artifacts, archaeological sites, historical buildings, and structures that are in and within approximately 0.5 mile of the Project Area. The records search was intended to provide information about specific resources that may be in the subject property, as well as to provide a preliminary assessment of the cultural resources sensitivity of the general vicinity. The records search included a review of the appropriate USGS quadrangles on which archaeological sites are plotted, archaeological site records, and data from previous surveys and research reports. In addition, the CHRIS database, the NRHP, the CRHR, the listings of California Historical Landmarks, and the California Points of Historical Interest were examined to ascertain the presence of designated, evaluated, or historic-era resources in the Project Area.

### **4.2 Native American Outreach**

On July 21, 2023, TRC submitted a SLF request to the NAHC. The response to the SLF Search was received from the NAHC on August 7, 2023, and included a list of recommended Native American Contacts. The NAHC SLF search failed to indicate the presence of Native American cultural resources in the Project Area. Documentation of the SLF search is provided in Appendix B.

### **4.3 Field Survey**

On September 22, 2023, TRC archaeological field director Ronnie Johnson, MA, RPA, and TRC Principal Investigator Susan Talcott, Ph.D., RPA., carried out the intensive-level, pedestrian field survey of the Project Area. During the survey, the archaeologists walked parallel east-west transects spaced 15 meters (ca. 50 feet) apart. In this way, the ground surface, where accessible, was systematically and carefully examined for any evidence of human activities dating to the prehistoric or historic periods (i.e., 50 years ago or older). Ground visibility was good (75-100 percent) as majority of the project has been built over throughout the decades and contains recent development including paved and gravel roads, cement foundations, buildings and other standing structures associated with the Dow Chemical Company and the Ethyl Corporation operations, respectively. The results of the survey are discussed below. A field survey map is provided in Appendix C.

## **5.0 Results**

### **5.1 Records Search**

The record search indicated that portions of the Project Area were included in three cultural resource surveys between 1985 to 2017. The first of these was in 1985 and was in support of the Pittsburg Marina Expansion project (Woodward-Clyde Consultants 1985). That survey documented that the project site had been severely impacted through grading, fill deposit, and

used as a hazardous waste disposal area. Nineteen years later, the eastern boundary of the project area was included in a cultural resources study that included survey and construction monitoring in support of an 8-inch diameter natural gas Montezuma pipeline project (Busby 2004). Cultural resources monitoring was conducted in 2001 along the eastern boundary of the current Project Area and building debris was identified and was interpreted as representing a single episode of building debris transported to the project area and dumped into, or as, fill during expansion of the Dow Chemical facility within the past 50 years (Busby 2004). It was determined that none of the objects, either individually or as a group, appeared eligible for the CRHR or met the definition of a unique archaeological resource (Busby 2004). The last survey to include a portion of the southeastern boundary of the current Project Area occurred in 2017 and was in support of the Antioch Brackish Water Desalination Project (Koenig 2017) and no cultural resources were identified. In addition, there were 23 other cultural resources surveys and studies outside of the Project Area, but within the 0.5-mile radius (see Table 1).

**Table 1. Previous Cultural Resources Studies within 0.5 Mile of the Project Area.**

Report Number	Author	Year	Report Title	Relationship to Project Area
S-007386	David Chavez	1985	Cultural Resources Evaluation for the Delta Landing EIR/EIS, Antioch, Contra Costa County, California.	Outside (within 0.5 mile)
S-007647		1985	Cultural Resource Investigation of the Proposed Pittsburg Marina Expansion Project.	Within Project Area
S-031405	James M. Allan	2006	Archaeological Survey and Cultural Resources Assessment for the City of Antioch's proposed Antioch Recycled Water Pipeline project (letter report)	Outside (within 0.5 mile)
S-035196	Allen Estes, Aimee Arrigoni, David Buckley, James Allan, and William Self	2006	Cultural Resource Assessment Delta Diablo Sanitation District and the City of Antioch Recycled Water Pipeline Extension Project, Antioch, Contra Costa County, California	Outside (within 0.5 mile)
S-035196	Milford Wayne Donaldson and Susan M. Fry	2007	BUR070508H; Proposed Extension of a Recycled Water Pipeline with the City of Antioch, Contra Costa County, California (07-SCAO-086)	Outside (within 0.5 mile)
S-037097	Aimee Arrigoni and Thomas Young	2010	Cultural Resource Assessment Report Supplement Delta Diablo Sanitation District and the City of Antioch Recycled Water Pipeline Extension Project, Antioch, Contra Costa County, California	Outside (within 0.5 mile)
S-046909	Aisha Rahimi-Fike	2015	Delta Diablo Recycled Water System Expansion Project, Historical Resources Inventory and Evaluation Report, Contra Costa County, California	Outside (within 0.5 mile)
S-046909		2015	Delta Diablo Recycled Water System Expansion Project, Archaeological Inventory Report, Contra Costa County, California	Outside (within 0.5 mile)
S-050521	Heidi Koenig	2017	Antioch Brackish Water Desalination Project, Cities of Antioch And Pittsburg, Contra Costa County, Cultural Resources Survey Report	Within Project Area
S-050521	Heidi Koenig	2019	Cultural Resources Survey Report, Antioch Brackish Water Desalination Project, Cities of Antioch and Pittsburg, Contra Costa County, Revised 2019	Within Project Area
S-010040	Allan Bramlette, Mary Praetzellis, Adrian Praetzellis, and David A. Fredrickson	1988	Archaeological and Historical Resources Within the Los Vaqueros/Kellogg Study Area, Contra Costa and Alameda Counties, California	Outside (within 0.5 mile)
S-010040	Allan G. Bramlette, Mary Praetzellis,	1991	Archaeological Resources Inventory for Los Vaqueros Water Conveyance Alignments, Contra	Outside (within 0.5 mile)



Report Number	Author	Year	Report Title	Relationship to Project Area
	Adrian Praetzelis, Katherine M. Dowdall, Patrick Brunmeier, and David A. Fredrickson		Costa County, California	
S-018352		1976	East/Central Contra Costa County Wastewater Management Plan, California: Cultural Resources Survey	Outside (within 0.5 mile)
S-018352	Adam Cvijanovic and Larry Aull	1976	Assessment of Historical and Architectural Resources	Outside (within 0.5 mile)
S-018352	Colin I. Busby	1976	Assessment of Archaeological Resources: East/Central Contra Costa County Wastewater Management Plan	Outside (within 0.5 mile)
S-018440	G. James West and Patrick Welch	1996	Class II Archaeological Survey of the Contra Costa Canal, Contra Costa County, California	Outside (within 0.5 mile)
S-022929	Sara M. Atchley	2000	Positive Archaeological Survey and Historic Resources Evaluation Report for the State Route 4/Loveridge Road Flood Relief Project - Kirker Creek, City of Pittsburg, Contra Costa County	Outside (within 0.5 mile)
S-022929	Aimee Dour-Smith	2000	State Route 4 Flood Relief Project on Kirker Creek- Supplement to Archaeological Survey Report	Outside (within 0.5 mile)
S-022929	Janice C. Calpo	2000	Historic Architectural Survey Report for the State Route 4/Loveridge Road Flood Relief Project- Kirker Creek, City of Pittsburg, Contra Costa County	Outside (within 0.5 mile)
S-024322	Sally Morgan and Bruce Bachand	1998	Pittsburg District Energy Facility, Cultural Resources Technical Report (Appendix K)	Outside (within 0.5 mile)
S-024322	Sally Morgan and Bruce Bachand	1998	Pittsburg District Energy Facility, Cultural Resources Technical Report (Supplement to Appendix K)	Outside (within 0.5 mile)
S-024322		2000	Pittsburg District Energy Facility Cultural Resources, Technical Report Addendum 1, Appendix K (Additional Construction Laydown Area)	Outside (within 0.5 mile)
S-030387	Bai "Tom" Tang, Michael Hogan, Josh Smallwood, and Terri Jacquemain	2005	Historical Resources Compliance Report, Burlington Northern Santa Fe Railway Double Track Project (Segment 2), Oakley (MP 1146.1) to Port Chicago (MP 1164.4), In and Near the Cities of Oakley, Antioch, and Pittsburg, and the Port Chicago Naval Weapons Station, Contra Costa County, California	Outside (within 0.5 mile)
S-030387	Bai "Tom" Tang, Michael Hogan, Josh Smallwood, and Terri Jacquemain	2005	Archaeological Survey Report/Historical Resource Evaluation	Outside (within 0.5 mile)
S-030579	Colin I. Busby	2004	Cultural Resources Report, Delta Energy Center Site (DEC) and Associated Linears, Cities of Pittsburg and Antioch, Contra Costa County, California, California Energy Commission (CEC), Project 98-AFC-3C	Within Project Area
S-035861	Bai "Tom" Tang	2009	Historic Property Survey Report, proposed undertaking to upgrade the capacity of the Burlington Northern Santa Fe (BNSF) Railway's mainline from Mile Post (MP) 1146.1 to MP 1164.4, between the City of Oakley and the Port Chicago Naval Weapons Station in Contra Costa County	Outside (within 0.5 mile)
S-035861	Bai "Tom" Tang, Michael Hogan, Josh Smallwood, and Terri Jacquemain	2009	Archaeological Survey Report/Historical Resource Evaluation Report, Burlington Northern Santa Fe Railway Double Track Project (Segment 2), In and near the Cities of Oakley, Antioch, and Pittsburg and the Port Chicago Naval Weapons Station, Contra	Outside (within 0.5 mile)

Report Number	Author	Year	Report Title	Relationship to Project Area
			Costa County, California	

The results from the records search identified three previously recorded historic built environment resources within 0.5-mile of the Project Area and none within the subject property (see Table 2). These resources include one railroad, the approximate location of the Great Western Electrical Chemical, Dow Chemical Company with associated buildings, and the former site of the Camp Stoneman Wastewater Treatment facility and associated features. It is anticipated that none of these previously recorded resources within the 0.5-mile radius will be impacted by the proposed project.

**Table 2. Previously Recorded Cultural Resources within 0.5-Mile of the Project Area.**

Primary Number	Trinomial	Resource Type	Description	Recorder(s) and Year(s)	Relationship to Project Area	NRHP/CRHR Status
P-07-000806	CA-CCO-000732H	Historic (AH7; HP39)	Atchison, Topeka & Santa Fe Railroad	1995 (Brian Hatoff, Woodward Clyde); 1995 (Brian Hatoff, Woodward Clyde); 1995 (Brian Hatoff, Woodward Clyde); 1995 (Brian Hatoff, Woodward Clyde); 1996 (Ward Hill, [none]); 1998 (S. Ashkar, Jones & Stokes Associates, Inc.); 1998 (Meta Bunse, JRP Historical Consulting); 1999 (S. Atchley, G. Roark, Jones & Stokes Associates, Inc.); 2004 (Josh Smallwood, CRM Tech); 2009 (J. Lang, GANDA); 2016 (Polly S. Allen, JPR Historical Consulting)	Outside (within 0.5 mile)	Recommended Not Eligible
P-07-001086	N/A	Historic building (HP08)	Great Western Electrical Chemical, Dow Chemical Co	1976 (C. A. Farren, Contra Costa County Planning Dpt.)	Outside (within 0.5 mile)	Unknown
P-07-004995	CA-CCO-000869H	Historic site (AH2; AH4)	Camp Stoneman Wastewater Treatment Facility	2022 (Ronnie Johnson, TRC Companies)	Outside (within 0.5 mile)	Recommended Not Eligible

## 5.2 Historic Maps and Aerial Photography Review

To assess whether historic properties or features may have once been located within the Project Area, TRC consulted archival records maintained by the CHRIS Northwest Information Center, current NRHP listings, and reviewed available historic maps that encompass the project area, including the U.S. Geological Survey (USGS) quadrangle maps dating to 1907, 1908, 1912, 1916, 1918, 1953, 1968, 1978, 1980, 2012, 2015, and 2018. In addition to consulting records maintained by the CHRIS, TRC reviewed historic aerial imagery, and the NRHP for historic properties or features that may have once been located within the proposed Project Area.



Based on the 1907 to 1918 USGS topographic maps and the 1937 through 1952 aerial photographs, no structures are depicted on the subject property and the vicinity remained undeveloped. Aerial photos from 1937 through 1952 show the Dowest Slough extending through the northwest portion of the Project Area. Based on aerial photographs from the 1950's, the subject property was developed with the original infrastructure of the Dow Chemical Plant, that included at least four building structures, the rail spurs, and the water tower. The 1968 USGS topographic map depicts multiple infrastructure features on the site, but by 1980 most of the features had been removed. In addition, the Dowest Slough in the northwest corner had been filled in during this time. The aerial photographs indicate from at least 1984 to the present there is little change to the site configuration except for the addition of a new structure along the north-central property boundary and the property appears to be in its current configuration. The USGS topographic maps do not depict any structures or the rail spurs on the subject property during this timeframe (NETR 2023).

### **5.3 Field Survey**

Cultural survey was conducted on September 22, 2023, by TRC archaeological field director Ronnie Johnson, MA, RPA, and TRC Principal Investigator Susan Talcott, Ph.D., RPA. Overall, the entire Project Area was heavily disturbed due to decades of development from prior corporations improving the property and very little native soils are present as large portions of the property are covered by pavement or fill materials (Figures 4-9). Minimal vegetation was present throughout the Project Area. No archaeological sites were encountered during field survey; however, two historic built environment resources were identified.

Located at the northeastern section of the Project Area is a historic-era water tower (REJ-092223-STR-01; Figure 7). No artifacts or features were identified in associated with this water tower. Below the water tower, the surface consisted of a mixture of pavement, gravel, and low-lying shrubs intermixed with modern trash. The water tower is approximately 100 feet in height and 30 feet in diameter. The structure consists of a round tank with four tank support columns (legs) constructed from steel and a riser pipe down the middle. Around the tank is a balcony with a handrail. The southeast leg has a ladder running from the ground up to the tank and three levels of support struts and four levels of tie rods are present.

At the southwestern section of the project are three railway spurs which divert from the Atchison, Topeka & Santa Fe Railroad (P-07-000806/CA-CCO-732; Figures 8-9) located outside the Project. Two of the railway spurs run west to east extending from P-07-000806 along the entire length of the Project Area spanning approximately 875 feet. The third railway spur runs from south to north for 400 feet to an unknown storage building. Currently there are train cars occupying each rail. There was an isolated railway spike identified adjacent to the middle railway spur on the north side.



**Figure 3. Overview of central portion of Project Area; view to the south.**



**Figure 4. Overview of northern section of Project Area; view to the east.**



**Figure 5. Overview of central portion of Project Area; view to the south.**



**Figure 6. Overview of western portion of Project Area and railroad spurs (P-07-000806/CA-CCO-732); view to the north.**



**Figure 7. Overview of east section of Project and resource REJ-092223-STR-01. View to the northwest.**



**Figure 8. Overview of resource P-07-000806/CA-CCO-372 (railway spur); view to the south.**



**Figure 9. Overview of southern portion of Project Area and railway cars; view to the southwest.**

## 6.0 Summary and Evaluation

During the current field survey efforts, one existing historic-era built environment resource was updated and one newly recorded historic-era built environment resource was recorded within the Project Area. The Atchison, Topeka & Santa Fe Railroad (P-07-000806/CA-CCO-732) was updated with a railway spur traversing into the property and an inactive water tower (REJ-092223-STR-01) was recorded within the northeast section of the property. Both resources have occupied the Project Area since the 1950s.

The Atchison, Topeka & Santa Fe Railroad (P-07-000806/CA-CCO-732) was originally established in the latter half of the 19<sup>th</sup> century just south of the current Project Area traversing in an east-west direction. The railway spur was established in the 1950s diverting from the mainline and heading in a northeast direction into the subject property. At the southwestern section of the Project Area, the spur splits into three railway spurs with two spurs running west to east for approximately 875 feet terminating near the eastern boundary of the property. The third railway spur runs from south to north for 400 feet towards an unknown building. Currently there are train cars occupying each rail. There was an isolated railway spike identified adjacent to the middle railway spur on the north side. The spur was most likely built to service the Dow Chemical plant and other industrial operations occupying the property during the historic period. No accounts of service sheds or buildings to house the railway cars are documented on the property. The rails, ties, and ballast are of similar type of materials and construction with other railroads.

Resource P-07-000806 has been previously recorded and recommended ineligible for listing on the NRHP/CRHR (Caipo 1999). The railway spurs do not possess significance in relation to any historic contexts or themes in the region. Although, they served as a corridor for industrial uses on the subject property, this utilitarian role lacks significance under any of the criteria for listing on the CRHR. The generalized transportation role does not convey significant themes of development (Criterion 1). The railway spurs are not directly associated with any significant individuals relating to the area's industrial development (Criterion 2). Further, as a freight corridor with standard and commonly constructed infrastructure features, the line does not convey any significant engineering or architectural features (Criterion 3). Finally, this type of freight infrastructure is otherwise well documented, and the spurs do not appear to be a principal source of information in this regard (Criterion 4). In addition, the railway spurs, like numerous other historic-era railroads that remain in use today, have substantially lost their historic integrity due to repeated upgrading and other physical alterations and therefore do not appear to meet any of the criteria for listing on the CRHR.

Resource REJ-092223-STR-01 was apparently constructed during the 1950s and part of the original infrastructure of the Dow Chemical Plant along with at least four buildings and the railroad spurs. As mentioned above, the water tower is approximately 100 feet in height and 50 feet in diameter. The structure consists of a round tank with four tank support columns (legs) constructed from steel and a riser pipe down the middle. Around the tank is a balcony with a handrail. The southeast leg has a ladder running from the ground up to the tank. Three levels of support struts and four levels of tie rods are present. The integrity of the resource is poor due to Dow Chemical's ceasing onsite operations by the early 1980s, followed by several decades of alternative property use and neglect.





The water tower does not possess significance in relation to any historic contexts or themes in the region. Although, it served as a water supply resource for industrial uses on the subject property, this utilitarian role lacks significance under any of the criteria for listing on the CRHR. Built in the 1950s and in use to the early 1980s to specifically support operations at the Dow Chemical Plant, the water tower is not a good reflection of broader events within the historic context of the development of the Pittsburg area (Criterion 1). Despite extensive research, no information was identified that the water tower is directly associated with any significant individuals or events relating to the area's industrial development (Criterion 2). The water tower was constructed in similar fashion to other water towers from that period and was not showing to be a pioneering or exceptional example of the standard and common style water tower. Insufficient information was found demonstrating that the water tower conveys significance as an excellent or notable example of design or civil engineering. The water tower fails to convey special elements of notable, innovative or early engineering or architectural design. In addition, the water tower does not convey significance of design, materials, craftsmanship or feeling from its period of significance. The water tower does not exemplify a specific era of history of the city and does not exemplify the best remaining architectural or engineering type in the city or region. Furthermore, it does not possess high aesthetic or artistic value (Criterion 3). The water tower appears to only have been in use from the 1950s through the 1980s, when the Dow Chemical Plant ceased operations on the property, and is not an adequate measure for information pertaining to the local history of the area, California, or the nation (Criterion 4). Therefore, resource REJ-092223-STR-01 is recommended as ineligible for listing on the CRHR.

## 7.0 Conclusion and Recommendations

TRC conducted a literature records search and an intensive-level survey of the 24-acre Project Area formerly operated by the Dow Chemical Plant. The Project Area was heavily disturbed due to decades of prior development of the subject property with large portions of the Project Area covered by pavement or fill. In areas where native soils were exposed ground surface visibility was good. During the cultural resources survey, two historic-era built environment resources constructed by the Dow Chemical Plant during the 1950s to support manufacturing operations were recorded in the Project Area. The resources consist of an updated railway spur of the Atchison, Topeka & Santa Fe Railroad (P-07-000806/CA-CCO-732) and an inactive water tower (REJ-092223-STR-01). The Dow Chemical Plant was in operation from the 1950s and ceased operations in the early 1980s. The water tower is no longer in use and the railway spurs remain active today.

Through various avenues of historic background research, neither the railway spurs nor the water tower appear to qualify as “an important example” of its type, period, region, or method of construction, nor do they express any ideals or design concepts more fully than other similar railway spurs and water towers in the region. Despite extensive research, no person(s) or event(s) of recognized significance in national, state, or local history have been revealed in association with these resources. Additionally, there is no evidence that they represent the work of a prominent architect, designer, or builder.

Based on the research presented herein, TRC recommends resources REJ-092223-STR-01 and the updated rail spur (P-07-000806) as not eligible for listing on the California Register of Historical Resources, and accordingly do not meet the official definition of a “historical resource,” as defined in CEQA. The research potential at both resources has been exhausted, and few meaningful conclusions can be drawn from further study. Recordation of the sites has been completed and DPR forms will be filed with the NWIC. No other cultural resources were identified within the Project Area during the course of this study.

Therefore, TRC recommends that the City of Pittsburg may reach a finding of No Impact regarding cultural resources. Historical imagery indicates that the Project Area and vicinity had been significantly modified for many decades to support industrial developments and the likelihood of encountering subsurface cultural resources is low. No further cultural resources investigation is recommended for the proposed project unless project plans undergo such changes as to include areas not covered by this study. However, if buried cultural materials are encountered during any ground-disturbing activities associated with the project, all work in that area should be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds.

## 8.0 References

- Aiello, M.  
2004 Images of America: Pittsburg. Arcadia Publishing.
- Beardsley, R.K.  
1954 Temporal and Areal Relationships in Central California Archaeology. University of California Survey Reports 24-25. Berkeley, CA.
- Bennyhoff, J.A., and Richard E. Hughes  
1987 *Shell Bead and Ornament Exchange Networks between California and the Western Great Basin*. Anthropological Papers of the American Museum of Natural History 64(2). American Museum of Natural History, New York.
- Borgwardt, R.  
1996 *Our Heritage-The First 50 Years*, The Review, Western Railway Museum.
- Bramlette, A.  
1988 Phased Archaeological Research within the Los Vaqueros Locality, Contra Costa and Alameda Counties, California. Paper presented at the 22<sup>nd</sup> Annual Meeting, Society for California Archaeology, Redding, California.
- Bramlette, A., M. Praetzelis, A. Praetzelis, D.A. Fredrickson  
1988 Archaeological and Historical Resources within the Los Vaqueros/Kellogg Study Area Contra Costa and Alameda Counties, California. Anthropological Studies Center, Sonoma State University, Academic Foundation, Inc. Prepared for Jones and Stokes Associates, Inc., Sacramento, California.
- Busby, Colin  
2004 Cultural Resources Report: Delta Energy Center Site (DEC) and Associated Linears Cities of Pittsburg and Antioch Contra Costa County, California. California Energy Commission (CEC); Project 98-AFC-3C. Prepared for Calpine, Pittsburg, CA and CH2M Hill, Sacramento, CA.
- Caipo, Janice C.  
1999 Architectural Survey Report for the State Route 4 Flood Relief Project – Kirker Creek, Pittsburg, California.
- Chartkoff, J.L., and K.K. Chartkoff.  
1984 *The Archaeology of California*. Stanford University Press, Stanford.
- Fredrickson, D.A.  
1973 Early Cultures of the North Coast Ranges, California. Unpublished Ph.D. dissertation. University of California, Davis.
- 1974 Cultural Diversity in Early Central California: A view from the North Coast Ranges. *Journal of California Anthropology*: 1:41-53.

1994 Archaeological Taxonomy in Central California Reconsidered. In R.E. Hughes (ed.), *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson*. Contributions of the University of California Archaeological Research Facility No. 52, Berkeley.

Governor's Office of Planning and Research

1998 CEQA, California Environmental Quality Act Statutes and Guidelines. Governor's Office of Planning and Research, Sacramento, California.

Groza, R.

2002 *An AMS Chronology for Central California Olivella Shell Beads*. Master's thesis, Department of Anthropology, San Francisco State University, San Francisco, California.

Harre, D.

1986 *California's Electric Railways Interurbans Special No. 100*, Interurban Press, Glendale, CA.

Heizer R.F.

1971 *The California Indians: A Source Book*. Compiled and edited by R.F. Heizer and M.A. Whipple. 2nd ed. University of California Press, Berkeley.

Hoover, M.B., H.E. Rensch, E.G. Rensch, and W.N. Abeloe.

1990 *Historic Spots in California*. Revised by Douglas E. Kyle. Stanford University Press. Stanford, California.

Hughes, R.E.

1994 *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson*. Contributions of the University of California Archaeological Research Facility No. 52, Berkeley.

Kelly, I.

1978 Coast Miwok. In *California*, edited by R.F. Heizer, pp.414-425. Handbook of North American Indians, Vol.8, W.C. Sturtevant, general editor, Smithsonian Institution. Washington, D.C.

Koenig, H.

2017 *Antioch Brackish Water Desalination Project, Cities of Antioch and Pittsburg, Contra Costa County; Cultural Resources Report*. Prepared for the City of Antioch.

Levy, R.

1978 Eastern Miwok. In *California*, edited by R.F. Heizer, pp. 398--413. Handbook of North American Indians, Vol.8, W.C. Sturtevant, general editor, Smithsonian Institution. Washington, D.C.

Lillard, J.B., R.F. Heizer, and F. Fenenga

1939 *An Introduction to the Archaeology of Central California*. Sacramento Junior College, Department of Anthropology, Bulletin 2.

McGowan, J.A.

1961 *History of the Sacramento Valley*. Lewis Historical Publishing Company. New York.



Milliken, R.T, and J.A. Bennyhoff

1993 Temporal Changes in Beads as Prehistoric California Grave Goods. In *There Grows a Green Tree: Essays in Honor of D. A. Fredrickson*, edited by Greg White, Pat Mikkelsen, William R. Hildebrandt, and Mark E. Basgall, pp. 381–395. Center for Archaeological Research at Davis Vol. 11. University of California, Davis.

Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottfield, Donna Gillette, Vaviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson.

2007 *Punctuated Culture Change in the San Francisco Bay Area Prehistoric California: Colonization, Culture, and Complexity*. Edited by T.L. Jones and K.A. Klar, AltaMira Press. pp. 99–124.

Moratto, M.J.

1978 *Archaeology & California's Climate*. Californian Indian Library Collections. Berkeley.

1984 *California Archaeology*. Academic Press. San Diego.

Nationwide Environmental Title Research, LLC (NETR).

2023 Historic Aerials. Electronic Resource, <http://www.historicaerials.com/?javascript>, accessed September 14, 2023.

Nelson, N.C.

1909 Shellmounds of the San Francisco Bay Region. University of California Publications in American Archaeology and Ethnology 7(4).

PAR Environmental

1993 National Register of Historic Places Determination of Eligibility for Three Historic Sites in Contra Costa and San Joaquin Counties, California. Prepared by M. L. Maniery and L.R. Fryman, Sacramento, California. Prepared for Jones & Stokes Associates, Inc. Sacramento.

Ragir, S.R.

1972 *The Early Horizon in Central California Prehistory*. Contributions to the University of California Archaeological Research Facility 15. University of California, Berkeley.

Smith, A.D.

2000 Positive Archaeological Survey and Historic Resources Evaluation Report for the State Route 4/Loveridge Road Flood Relief Project – Kirker Creek, City of Pittsburg, Contra Costa County. Prepared for Mark Thomas & Company, Walnut Creek, CA and City of Pittsburg, Pittsburg, CA.

Thompson, J.

1958 *The Settlement and Geography of the Sacramento-San Joaquin Delta, California*. University Microfilms International, Dissertation Information Service. Ann Arbor, Michigan.

TRC

2023 Phase I Environmental Site Assessment. Former Corteva Property on Pittsburg Waterfront Road, APN 073-220-049-8, Pittsburg, California 94565. Prepared for H Cycle, Mountain View, California.



United States Department of Agriculture Natural Resources Conservation Service (USDA NRCS)

2023 Web Soil Survey, Washington. Electronic resource, <http://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx>, accessed September 14, 2023.

William Self Associates

1993 *Archaeological Survey Report, Montezuma Wetlands Project, Solano County, California*. Prepared by Williams Self Associates, Orinda, CA. Prepared for Brady and Associates, Berkeley. Report S-16522 on file at the Northwest Information Center of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Woodward-Clyde Consultants

1985 Cultural Resource Investigation of the Proposed Pittsburg Marina Expansion Project. Prepared for the City of Pittsburg, California.

## Appendix A: Resumes

TRC Cultural Resource Senior Staff conducted the survey effort. These individuals meet the professional qualification standards in Archaeology, Historic Preservation, and Architectural History, as set forth by the Secretary of the Interior (Standards and Guidelines, *Federal Register* Vol. 48, No. 190, September 28, 1983).

### Person and Position

**Matthew Wetherbee**, MSc. *Paleoecology of Human Societies, Register of Professional Archaeologists (RPA)*

*Position and Project Role: Cultural Resources Lead – West Coast/Principal Investigator, Report Author*

Mr. Wetherbee is an archaeologist with 18 years of cultural resources management (CRM) experience focused on prehistory throughout California and the Pacific Northwest. He has managed multiple small and large-scale residential and commercial projects for environmental firms, and high-profile capital projects and operations and maintenance environmental compliance programs. This work includes pre-field research, cultural resources surveys, significant assessments for California Register of Historical Resources (CRHR) and National Register of Historical Places (NRHP), developing and reviewing mitigation recommendations, preparing technical reports and agreement documents, and reviewing consultants work according to state and federal heritage laws and regulations such as California Environmental Quality Act (CEQA), Washington State Environmental Policy Act (SEPA), and Section 106 and 110 of the National Historic Preservation Act (NHPA) for protecting cultural resources.

**Ronald Johnson**, MA. *Anthropology, RPA*

*Position and Project Role: Field Director*

Mr. Johnson is a professional archaeologist with an emphasis on settlement patterning. His experience includes various projects in the United States and abroad and has particular experience throughout California and in northwestern Nevada. Mr. Johnson has ample understanding and familiarity of cultural resource management through archaeological monitoring, survey, assessment, and evaluation with multiple consulting firms throughout southern and northern California. Mr. Johnson permitted as a field director on Bureau of Land Management (BLM), United States Forest Service (USFS), and US National Park Service (NPS) lands throughout California. This demonstrates his abilities to identify and assess surface and subsurface archaeological deposits and contribute towards evaluations for cultural resources as defined by the NRHP. He has experience working with agencies and private utilities in accordance with local, state, and national preservation guidelines, including Section 106 of the NHPA, Archaeological Resources Protection Act (ARPA), CEQA and Native American Graves Protection and Repatriation Act (NAGPRA). Additionally, Mr. Johnson has extensive experience with adhering to various facility safety protocols and procedures related to fire support, working in confined spaces, and hydroelectric projects. In addition to being a cultural resources specialist, Mr. Johnson is currently gaining experience in land planning and project management.



**Appendix B:**  
**Native American Coordination Documentation**



## NATIVE AMERICAN HERITAGE COMMISSION

August 7, 2023

Matthew Wetherbee  
TRCVia Email to: [mwetherbee@trccompanies.com](mailto:mwetherbee@trccompanies.com)

Re: H-Cycle Thermal Conversion Project, Contra Costa County

To Whom It May Concern:

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: [Cody.Campagne@nahc.ca.gov](mailto:Cody.Campagne@nahc.ca.gov).

Sincerely,

Cody Campagne  
Cultural Resources Analyst

Attachment

ACTING CHAIRPERSON  
Reginald Pagaling  
ChumashSECRETARY  
Sara Dutschke  
MiwokCOMMISSIONER  
Isaac Bojorquez  
Ohlone-CostanoanCOMMISSIONER  
Buffy McQuillen  
Yokayo Pomo, Yuki,  
NomlakiCOMMISSIONER  
Wayne Nelson  
LuiseñoCOMMISSIONER  
Stanley Rodriguez  
KumeyaayCOMMISSIONER  
VacantCOMMISSIONER  
VacantCOMMISSIONER  
VacantEXECUTIVE SECRETARY  
Raymond C.  
Hitchcock  
Miwok, NisenanNAHC HEADQUARTERS  
1550 Harbor Boulevard  
Suite 100  
West Sacramento,  
California 95691  
(916) 373-3710  
[nahc@nahc.ca.gov](mailto:nahc@nahc.ca.gov)  
[NAHC.ca.gov](http://NAHC.ca.gov)

**Native American Heritage Commission  
Native American Contact List  
Contra Costa County  
8/7/2023**

County	Tribe Name	Fed (F) Non-Fed (N)	Contact Person	Contact Address	Phone #	Fax #	Email Address	Cultural Affiliation	Counties	Last Updated
Contra Costa	Amah Mutsun Tribal Band of Mission San Juan Bautista	N	Irene Zwierlein, Chairperson	3030 Soda Bay Road Lakeport, CA, 95453	(650) 851-7489	(650) 332-1526	amahmutsuntribal@gmail.com	Costanoan	Alameda, Contra Costa, Monterey, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz	
	Chicken Ranch Rancheria of Me-Wuk Indians	F	Lloyd Mathiesen, Chairperson	P.O. Box 1159 Jamestown, CA, 95327	(209) 984-9066	(209) 984-9269	lmathiesen@ctrtribal.com	Me-Wuk	Alameda, Amador, Calaveras, Contra Costa, El Dorado, Fresno, Madera, Mariposa, Merced, Mono, Sacramento, San Joaquin, Santa Clara, Solano, Stanislaus	3/22/2023
	Confederated Villages of Lisjan Nation	N	Deja Gould, Language Program Manager	10926 Edes Ave Oakland, CA, 94603	(510) 575-8408		cvtribe@gmail.com	Bay Miwok Ohlone Delta Yokut	Alameda, Contra Costa, Sacramento, San Joaquin, Santa Clara, Solano, Stanislaus	3/22/2023
	Confederated Villages of Lisjan Nation	N	Cheyenne Gould, Tribal Cultural Resource Manager	10926 Edes Ave Oakland, CA, 94603	(510) 575-8408		cvtribe@gmail.com	Bay Miwok Ohlone Delta Yokut	Alameda, Contra Costa, Sacramento, San Joaquin, Santa Clara, Solano, Stanislaus	3/22/2023
	Confederated Villages of Lisjan Nation	N	Corrina Gould, Chairperson	10926 Edes Avenue Oakland, CA, 94603	(510) 575-8408		cvtribe@gmail.com	Bay Miwok Ohlone Delta Yokut	Alameda, Contra Costa, Sacramento, San Joaquin, Santa Clara, Solano, Stanislaus	3/22/2023
	Guidiville Rancheria of California	F	Michael Derry, Historian	PO Box 339 Talmage, CA, 95481	(707) 391-1665		historian@guidiville.net	Pomo	Alameda, Contra Costa, Lake, Marin, Mendocino, Napa, Sacramento, San Joaquin, Solano, Sonoma	6/21/2023
	Guidiville Rancheria of California	F	Bunny Tarin, Tribal Administrator	PO Box 339 Talmage, CA, 95481	(707) 462-3682		admin@guidiville.net	Pomo	Alameda, Contra Costa, Lake, Marin, Mendocino, Napa, Sacramento, San Joaquin, Solano, Sonoma	6/21/2023
	Indian Canyon Mutsun Band of Costanoan	N	Karyon Sayers-Roods, MLD Contact	1615 Pearson Court San Jose, CA, 95122	(408) 673-0626		karyon@karyonconsulting.com	Costanoan	Alameda, Contra Costa, Monterey, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz	4/17/2018
	Indian Canyon Mutsun Band of Costanoan	N	Ann Marie Sayers, Chairperson	P.O. Box 28 Hollister, CA, 95024	(831) 637-4238		ams@indiancanyon.org	Costanoan	Alameda, Contra Costa, Monterey, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz	
	Muwekma Ohlone Indian Tribe of the SF Bay Area	N	Monica Arellano, Vice Chairwoman	20885 Redwood Road, Suite 232 Castro Valley, CA, 94546	(408) 205-9714		monicavarellano@gmail.com	Costanoan	Alameda, Contra Costa, Marin, Merced, Napa, Sacramento, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Solano, Stanislaus	7/12/2019
	Nashville Enterprise Miwok-Maidu-Nishinam Tribe	N	Cosme Valdez, Chairperson	P.O. Box 580986 Elk Grove, CA, 95758-0017	(916) 396-1173		valdezcome@comcast.net	Miwok	Alameda, Contra Costa, Monterey, Merced, Mono, Sacramento, San Joaquin, Santa Clara, Solano, Stanislaus	7/17/2023
	Nashville Enterprise Miwok-Maidu-Nishinam Tribe	N	Leland Valdez, Cultural Resources		(916) 429-8047			Miwok	Alameda, Contra Costa, Monterey, Merced, Mono, Sacramento, San Joaquin, Santa Clara, Solano, Stanislaus	7/17/2023
	North Valley Yokuts Tribe	N	Katherine Perez, Chairperson	P.O. Box 717 Linden, CA, 95236	(209) 887-3415		canutes@verizon.net	Costanoan Northern Valley Yokut	Alameda, Calaveras, Contra Costa, Fresno, Madera, Mariposa, Merced, Sacramento, San Benito, San Joaquin, Santa Clara, Solano, Stanislaus	5/12/2020
	North Valley Yokuts Tribe	N	Timothy Perez,	P.O. Box 717 Linden, CA, 95236	(209) 662-2788		huskanam@gmail.com	Costanoan Northern Valley Yokut	Alameda, Calaveras, Contra Costa, Fresno, Madera, Mariposa, Merced, Sacramento, San Benito, San Joaquin, Santa Clara, Solano, Stanislaus	5/12/2020
	The Ohlone Indian Tribe	N	Desiree Vigil, THPO	1775 Marco Polo Way, Apt. 21 Burlingame, CA, 94010	(650) 290-0245		dirwin368@yahoo.com	Bay Miwok Ohlone Patwin	Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara	7/24/2023
	The Ohlone Indian Tribe	N	Vincent Medina, Tribal Consultant	17365 Via Del Rey San Lorenzo, CA, 94580	(510) 610-7587		vincent.d.medina@gmail.com	Bay Miwok Ohlone Patwin	Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara	7/24/2023
	The Ohlone Indian Tribe	N	Andrew Galvan, Chairperson	P.O. Box 3388 Fremont, CA, 94539	Phone: (510) 882-0527	(510) 687-9393	chochenyo@AOL.com	Bay Miwok Ohlone Patwin	Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara	7/24/2023
	Tule River Indian Tribe	F	Neil Peyron, Chairperson	P.O. Box 589 Porterville, CA, 93258	(559) 781-4271	(559) 781-4610	neil.peyron@tulerivertribe-nsn.gov	Yokut	Alameda, Amador, Calaveras, Contra Costa, Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Monterey, Sacramento, San Joaquin, Stanislaus, Sutter, Yolo, Yuba	7/22/2016
	Tule River Indian Tribe	F	Kerri Vera, Environmental Department	P. O. Box 589 Porterville, CA, 93258	(559) 783-8892	(559) 783-8932	kerri.vera@tulerivertribe-nsn.gov	Yokut	Alameda, Amador, Calaveras, Contra Costa, Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Monterey, Sacramento, San Joaquin, Stanislaus, Sutter, Yolo, Yuba	7/22/2016
	Tule River Indian Tribe	F	Joey Garfield, Tribal Archaeologist	P. O. Box 589 Porterville, CA, 93258	(559) 783-8892	(559) 783-8932	joey.garfield@tulerivertribe-nsn.gov	Yokut	Alameda, Amador, Calaveras, Contra Costa, Fresno, Inyo, Kern, Kings, Madera, Mariposa, Merced, Monterey, Sacramento, San Joaquin, Stanislaus, Sutter, Yolo, Yuba	7/22/2016
	Wilton Rancheria	F	Dahilton Brown, Director of Administration	9728 Kent Street Elk Grove, CA, 95624	(916) 683-6000		dbrown@wiltonrancheria-nsn.gov	Miwok	Alameda, Alpine, Amador, Contra Costa, El Dorado, Mono, Nevada, Placer, Sacramento, San Joaquin, Solano, Stanislaus, Sutter, Yolo, Yuba	6/25/2020
	Wilton Rancheria	F	Jesus Tarango, Chairperson	9728 Kent Street Elk Grove, CA, 95624	(916) 683-6000	(916) 683-6015	jtaranjo@wiltonrancheria-nsn.gov	Miwok	Alameda, Alpine, Amador, Contra Costa, El Dorado, Mono, Nevada, Placer, Sacramento, San Joaquin, Solano, Stanislaus, Sutter, Yolo, Yuba	10/28/2020
	Wilton Rancheria	F	Steven Hutchason, THPO	9728 Kent Street Elk Grove, CA, 95624	(916) 683-6000	(916) 863-6015	shutchason@wiltonrancheria-nsn.gov	Miwok	Alameda, Alpine, Amador, Contra Costa, El Dorado, Mono, Nevada, Placer, Sacramento, San Joaquin, Solano, Stanislaus, Sutter, Yolo, Yuba	10/28/2020

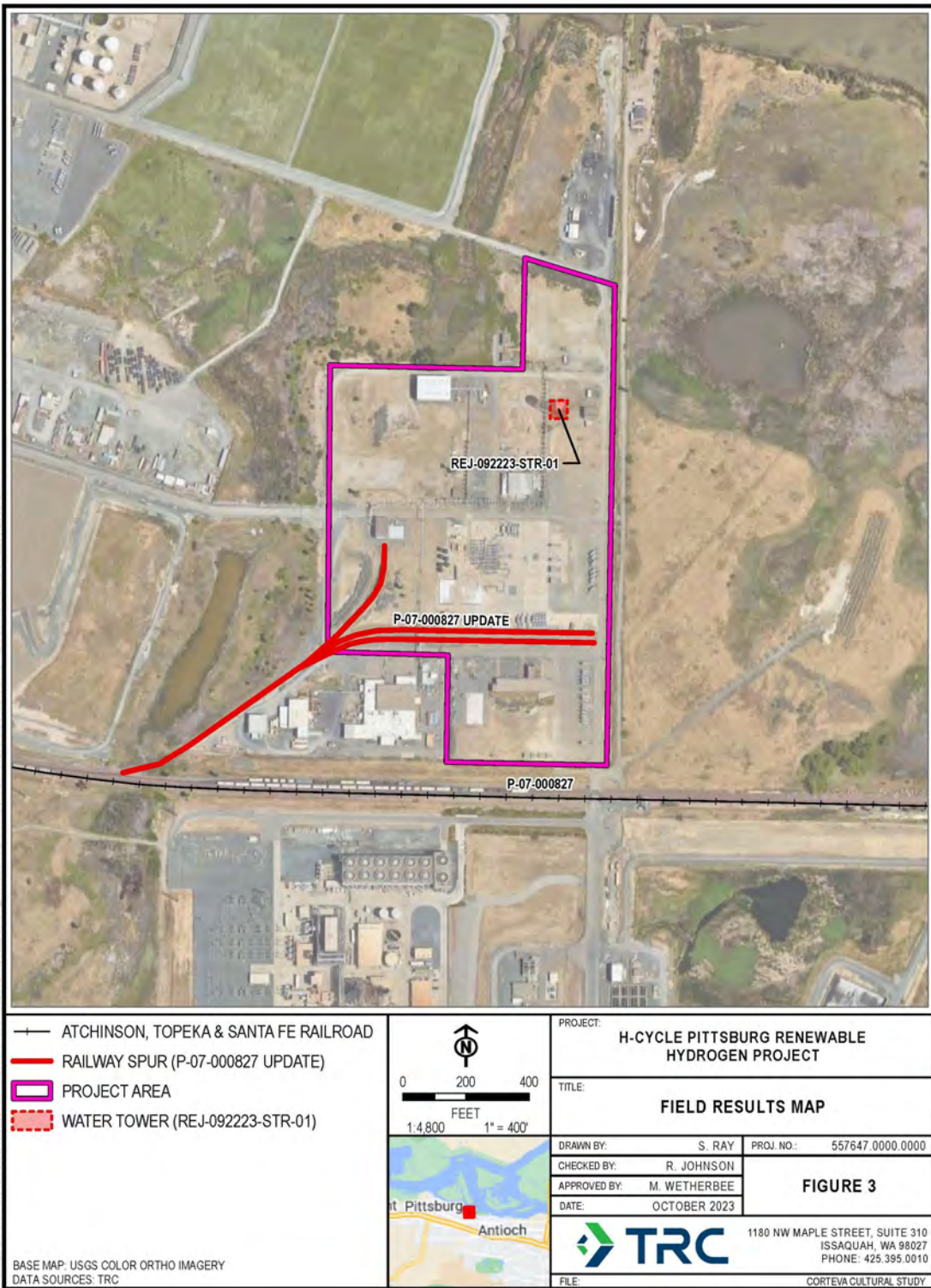
This list is current only as of the date of this document. Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed H-Cycle Thermal Conversion Project, Contra Costa County.

Record: PR03-2023-003915  
Report Type: List of Tribes  
Counties: Contra Costa  
NAHC Group: All



**Appendix C:**  
**Field Results and Resource Location Map**  
*Not for Public Distribution*



Field Results and Resource Location Map



**Appendix D:**

**State of California Department of Parks and  
Recreation 523 Series Forms**

*Not for Public Distribution*

Other Listings  
Review Code

Reviewer

Date

Page 1 of 3

\*Resource Name or #: P-07-000806 Update

**P1. Other Identifier:**

\*P2. Location:  Not for Publication  Unrestricted

\*a. County: Contra Costa

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

\*b. USGS 7.5' Quad: Antioch North

Date:

T 2N ; R 1E ;

¼ of

¼ of Sec

; M.D. B.M.

c. Address:

City:

Zip:

d. UTM: Zone: 10 ; 601326.44mE/ 4208699.56mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

From the intersection of California Ave and Loveridge Road continue 0.39 miles north-northeast towards Pittsburg Antioch Highway. Turn right (east) on Pittsburg Antioch Highway and continue for 0.96 miles. Turn left (north) onto Arcy Lane and continue north for 0.47 miles until you come to a locked gate. The resource is located 382 feet north of the locked gate.

\*P3a. **Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries) The Atchison, Topeka & Santa Fe Railroad (P-07-000806/CA-CCO-732) was originally established in the latter half of the 19<sup>th</sup> century just south of the current Project Area traversing in an east-west direction. The railway spur was established in the 1950s diverting from the mainline and heading in a northeast direction into the subject property. At the southwestern section of the Project Area, the spur splits into three railway spurs with two spurs running west to east for approximately 875 feet terminating near the eastern boundary of the property. The third railway spur runs from south to north for 400 feet towards an unknown building. Currently there are train cars occupying each rail. There was an isolated railway spike identified adjacent to the middle railway spur on the north side. The spur was most likely built to service the Dow Chemical plant and other industrial operations occupying the property during the historic period. No accounts of service sheds or buildings to house the railway cars are documented on the property. The rails, ties, and ballast are of similar type of materials and construction with other railroads.

\*P3b. **Resource Attributes:** (List attributes and codes) HP17. Railroad Depot: Stations and other buildings connected to the operation of railroads and streetcars. E.g., sheds, roundhouses, etc.

\*P4. **Resources Present:**  Building  Structure  Object  Site  District  Element of District  Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Overview of three railway spurs, facing east, 9/22/2023.

\*P6. **Date Constructed/Age and Sources:**  Historic

Prehistoric  Both

\*P7. **Owner and Address:**

H-Cycle 444 Castro Street,  
Suite 710  
Mountain View, CA 94041

\*P8. **Recorded by:** (Name, affiliation, and address)

Ronnie Johnson and Susan Talcott  
TRC  
10680 White Rock Road, Suite 100  
Rancho Cordova, CA 95670

\*P9. **Date Recorded:** 9/22/2023

\*P10. **Survey Type:** Intensive

\*P11. **Report Citation:** (Cite survey report and other sources, or enter "none.") Wetherbee, Matthew and Ronnie Johnson. 2023. Cultural

Resources Assessment for the H-Cycle Pittsburg Renewable Hydrogen Project, City of Pittsburg, Contra Costa County, California.

\*Attachments:  NONE  Location Map  Sketch Map  Continuation Sheet  Building, Structure, and Object Record  
 Archaeological Record  District Record  Linear Feature Record  Milling Station Record  Rock Art Record  
 Artifact Record  Photograph Record  Other (List):

**L1. Historic and/or Common Name:** Atchison, Topeka & Santa Fe Railroad

**L2a. Portion Described:**  Entire Resource  Segment  Point Observation **Designation:**

**b. Location of point or segment:** (Provide UTM coordinates, legal description, and any other useful locational data. Show the area that has been field inspected on a Location Map)

Railway spur starting point diverting from Atchinson, Topeka & Santa Fe Railroad: 10S, 601146.50 mE, 4208574.88 mN

North railway spur endpoint: 10S, 601373.06 mE, 4208797.44 mN

Central railway spur endpoint: 10S, 601580.37 mE, 4208718.50 mN

South railway spur endpoint: 10S, 601580.92 mE, 4208709.26 mN

**L3. Description:** (Describe construction details, materials, and artifacts found at this segment/point. Provide plans/sections as appropriate.)

Three railway spurs divert from the Atchison, Topeka & Santa Fe Railroad (P-07-000806). Two of the railway spurs run west to east extending from P-07-000806 approximately 875 feet. The third railway spur runs from south to north for 400 feet to an unknown storage building. Based on historic aerials the railway spurs were constructed sometime around 1957.

**L4. Dimensions:** (In feet for historic features and meters for prehistoric features)

**a. Top Width:** 5 feet

**b. Bottom Width:** 5 feet

**c. Height or Depth:** 1 foot

**d. Length of Segment:** 400 feet and 875 feet

**L5. Associated Resources:**

Isolated railway spike location:

10S, 601344.94 mE, 4208714.31 mN

**L6. Setting:** (Describe natural features, landscape characteristics, slope, etc., as appropriate.)

The resource is located within an industrial setting. Dowest Slough is located adjacent to the resource to the west.

**L7. Integrity Considerations:**

Railway spur is not eligible for listing on the California Register of Historical Resources as

Caipo (1999) determined P-07-000806 does not appear to meet the criteria for listing in the CRHR or the NRHP.

**L4e. Sketch of Cross-Section** (include scale) **Facing:** East



**L8a. Photograph, Map or Drawing**



**L8b. Description of Photo, Map, or Drawing** (View, scale, etc.) Map of three railway spurs extending from Atchison, Topeka & Santa Fe Railroad (P-07-000806).

**L9. Remarks:**

The property is currently used by GENERON, an industrial gas supplier, and Cameron Process Systems, an oil and natural gas company.

**L10. Form Prepared by:** (Name, affiliation, and address)

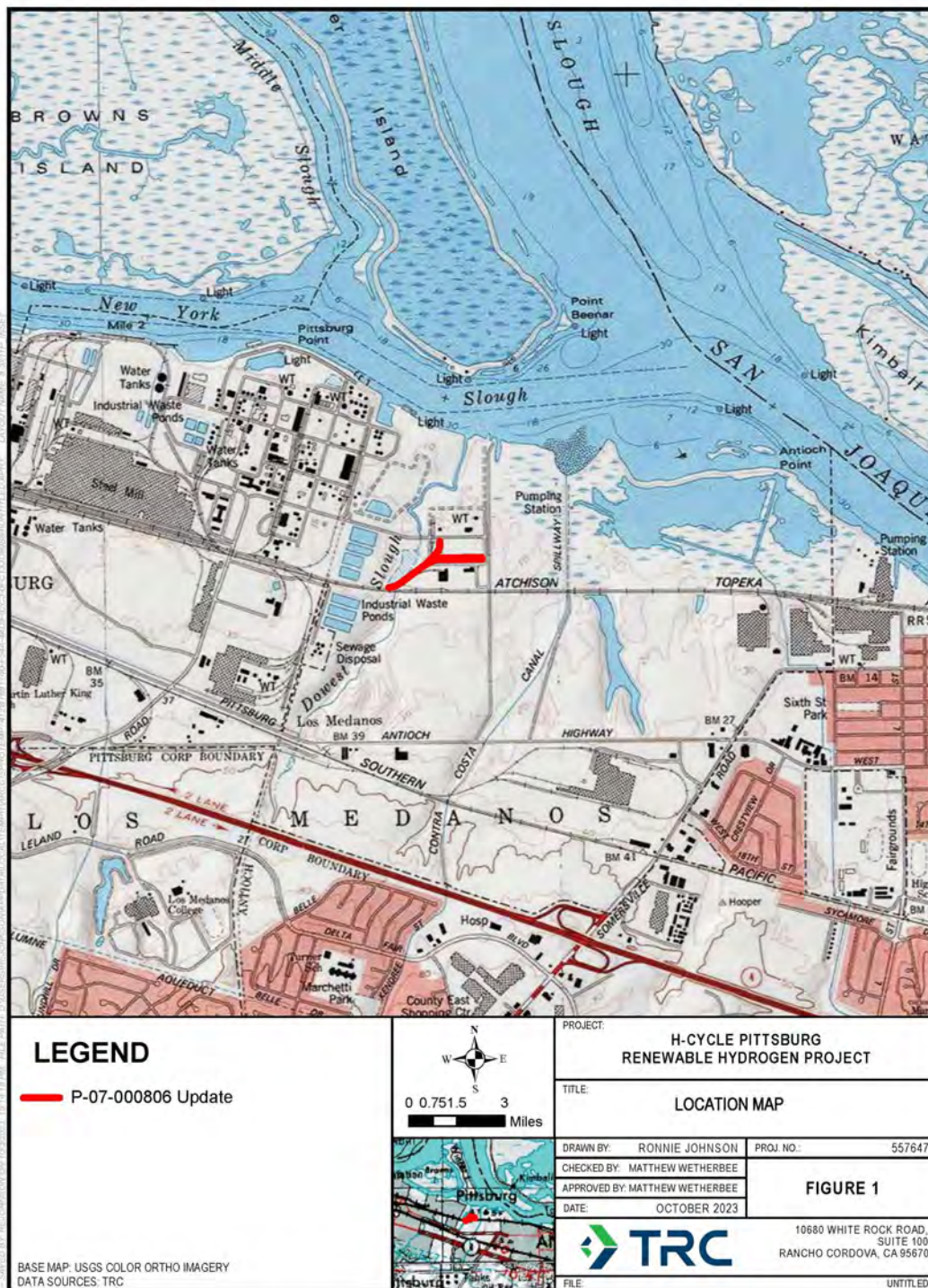
Ronnie Johnson  
TRC  
10680 White Rock Road, Suite  
100 Rancho Cordova, CA 95670

**L11. Date:** 9/23/2023

\*Map Name: Antioch North

\*Scale: 1:24000

\*Date of map: 2003





**Other Listings**  
**Review Code**

**Reviewer**

**Date**

Page 1 of 3

\*Resource Name or #: REJ-092223-STR-01

**P1. Other Identifier:**

\*P2. Location:  Not for Publication  Unrestricted

\*a. County: Contra Costa

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

\*b. USGS 7.5' Quad: Antioch North

Date:

T 2N ; R 1E ; ¼ of ¼ of Sec ; M.D. B.M.

c. Address:

City:

Zip:

d. UTM: Zone: 10 ; 601540.91mE/ 4208929.49mN (G.P.S.)

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate) Elevation:

From the intersection of California Ave and Loveridge Road continue 0.39 miles north-northeast towards Pittsburg Antioch Highway. Turn right (east) on Pittsburg Antioch Highway and continue for 0.96 miles. Turn left (north) onto Arcy Lane and continue north for 0.47 miles until you come to a locked gate. The resource is located 0.20 miles north of the locked gate.

\*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

The H-Cycle Pittsburg Renewable Hydrogen Project (HCPRHP) proposes to develop a facility for converting municipal waste to hydrogen for use in industrial and heavy-duty transportation sectors. TRC conducted a cultural resources survey in September 2023 to determine whether previously recorded or unrecorded cultural resources are located in the project area, and to aid H-Cycle and the City of Pittsburg in avoiding impacts to these resources during project implementation. Located at the northeastern section of the project is a historic-era water tower built by the Dow Chemical Plant to service manufacturing operations on the property in the 1950s. No artifacts or features were identified in associated with this water tower. Below the water tower, the surface consisted of a mixture of pavement, gravel, and low-lying shrubs intermixed with modern trash. The water tower is approximately 100 feet in height and 30 feet in diameter.

\*P3b. Resource Attributes: (List attributes and codes) HP11. Engineering Structure: A structure not covered in any other category. E.g., docks, runways, water towers, etc.

\*P4. Resources Present:  Building  Structure  Object  Site  District  Element of District  Other (Isolates, etc.)

P5a. Photo or Drawing (Photo required for buildings, structures, and objects.)



P5b. Description of Photo: (View, date, accession #) Overview of water tower, facing north, 9/22/2023

\*P6. Date Constructed/Age and Sources:  Historic  Prehistoric  Both

\*P7. Owner and Address: H-Cycle 444 Castro Street, Suite 710 Mountain View, CA 94041

\*P8. Recorded by: (Name, affiliation, and address) Ronnie Johnson and Susan Talcott TRC 10680 White Rock Road, Suite 100 Rancho Cordova, CA 95670

\*P9. Date Recorded: 9/22/2023

\*P10. Survey Type: Intensive

\*P11. Report Citation: (Cite survey report and other sources, or enter "none.") Wetherbee, Matthew and Ronnie Johnson. 2023. Cultural Resources Assessment for the H-

Cycle Pittsburg Renewable Hydrogen Project, City of Pittsburg, Contra Costa County, California.

\*Attachments:  NONE  Location Map  Sketch Map  Continuation Sheet  Building, Structure, and Object Record  Archaeological Record  District Record  Linear Feature Record  Milling Station Record  Rock Art Record  Artifact Record  Photograph Record  Other (List):

**BUILDING, STRUCTURE, AND OBJECT RECORD**

- B1. Historic Name: None
- B2. Common Name: None
- B3. Original Use: Unknown
- B4. Present Use: None

\*B5. **Architectural Style:** The reservoir tower is cylindrical

\*B6. **Construction History:** (Construction date, alterations, and date of alterations)

Based on historic aerials, the water tower was constructed sometime in 1957-1958 and part of the original infrastructure of the Dow Chemical Plant along with at least four buildings and the rails spurs.

\*B7. **Moved?** No Yes Unknown **Date:** ca.1950s **Original Location:** Yes

\*B8. **Related Features:** The structure consists of a round tank with four tank support columns (legs) constructed from steel and a riser pipe down the middle. Around the tank is a balcony with a handrail. The southeast leg has a ladder running from the ground up to the tank and three levels of support struts and four levels of tie rods are present. The integrity of the resource is poor due to Dow Chemical's ceasing onsite operations by the early 1980s, followed by several decades of alternative property use and neglect.

B9a. Architect: Unknown (possibly Dow Chemical Plant)

b. Builder: Unknown

\*B10. **Significance: Theme:** Rail Transportation

**Area:** Pittsburg, Ca

**Period of Significance:** ca. 1957-1958

**Property Type:** industrial gas supplier, oil and natural gas company.

**Applicable Criteria:**

(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The water tower remains on the property to the present day and most of the other structures have been demolished; all other standing structures on the property appear to be of recent age. The water tower does not possess significance in relation to any historic contexts or themes in the region. Although, it served as a water supply resource for industrial uses on the subject property, this utilitarian role lacks significance under any of the criteria for listing on the CRHR. Built in the 1950s and in use to the early 1980s to specifically support operations at the Dow Chemical Plant, the water tower is not a good reflection of broader events within the historic context of the development of the Pittsburg area (Criterion 1). Despite extensive research, no information was identified that the water tower is directly associated with any significant individuals or events relating to the area's industrial development (Criterion 2). The water tower was constructed in similar fashion to other water towers from that time period and was not showing to be a pioneering or exceptional example of the standard and common style water tower. Insufficient information was found demonstrating that the water tower conveys significance as an excellent or notable example of design or civil engineering. The water towers fails to convey special elements of notable, innovative or early engineering or architectural design. In addition, the water tower does not convey significance of design, materials, craftsmanship or feeling from its period of significance. The water tower does not exemplify a specific era of history of the city and does not exemplify the best remaining architectural or engineering type in the city or region. Furthermore, it does not possess high aesthetic or artistic value (Criterion 3). The water tower appears to only have been in use from the 1950s through to 1980s when the Dow Chemical Plant ceased operations on the property and is not an adequate measure for information pertaining to the local history of the area, California, or the nation (Criterion 4). Therefore, resource REJ-092223-STR-01 is recommended as ineligible for listing on the CRHR.

B11. Additional Resource Attributes: (List attributes and codes): HP11. Engineering Structure: A structure not covered in any other category. E.g., docks, runways, water towers, etc.

\*B12. **References:** None

B13. Remarks: None

\*B14. **Evaluator:** Ronnie Johnson and Matthew Wetherbee, TRC

\*Date of Evaluation: 9/22/2023

(This space reserved for official comments.)



