Cultural Resources Survey Report
Winter Island Habitat Restoration

California Department of Water Resources

March 26, 2018

Submitted by:
Parus Consulting, Inc.
3278 Swetzer Road
Loomis, CA 95650
Cultural Resources Survey Report for the
Winter Island Habitat Restoration Project

March 26, 2018

Prepared for:
California Department of Water Resources
1416 9th street
Sacramento, CA 95814

Prepared by:
Parus Consulting, Inc.
3278 Swetzer Road
Loomis, CA 95650
# TABLE OF CONTENTS

ABSTRACT ................................................................................................................................. 1

INTRODUCTION ............................................................................................................................... 2

   Project Description ...................................................................................................................... 2

   Area of Potential Effects (APE) .................................................................................................... 3

Regulatory Setting .............................................................................................................................. 3

   Federal Regulations ................................................................................................................ 3

   State Regulations .................................................................................................................... 4

Report Preparation ......................................................................................................................... 5

   Archaeological Staff Qualifications ......................................................................................... 5

   Report Format ......................................................................................................................... 5

ENVIRONMENTAL SETTING ............................................................................................................. 5

   Geology and Soils ....................................................................................................................... 6

   Climate ........................................................................................................................................ 7

   Flora and Fauna ........................................................................................................................... 7

CULTURAL SETTING ........................................................................................................................... 7

   Prehistoric Overview ................................................................................................................... 7

   Prehistoric Setting ...................................................................................................................... 8

   Ethnographic Setting ................................................................................................................ 9

   Historic Overview ....................................................................................................................... 11

   Spanish Period (1769–1822) ................................................................................................. 11

   Mexican Period (1822-1848) ................................................................................................ 12

   American Period (1848-Present) .......................................................................................... 13

PRE-FIELD RESEARCH .................................................................................................................... 15

   Literature Search Methods ...................................................................................................... 15

   NWIC Literature Search Results ............................................................................................ 16

   Sacred Lands File Search ....................................................................................................... 16

FIELD METHODS ............................................................................................................................ 16

FINDINGS ....................................................................................................................................... 17
ABSTRACT

Purpose and Scope: The California Department of Water Resources (DWR) retained Parus Consulting, Inc. (Parus) to provide cultural resource services for the Winter Island Project in the western Sacramento-San Joaquin River Delta, north of Pittsburg, in Contra Costa County, California. Proposed by DWR, the project would restore tidal wetlands and fish habitat on Winter Island. The services provided by Parus include review of literature and Sacred Lands File searches, a pedestrian survey of approximately 0.13-acre area of potential effects (APE), and a project effects assessment. This study was completed in compliance with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act as the project will include U.S. Army Corps of Engineers (USACE) involvement.

Dates of Investigation: A records search of the APE and vicinity was completed by the Northwest Information Center (NWIC) on November 11, 2016. Parus conducted a pedestrian survey of the APE on December 14, 2017. Following a March 1, 2018 request, the Native American Heritage Commission (NAHC) conducted a search of the Sacred Lands File.

Investigation Constraints: The field survey within the APE was constrained by current inundation of the majority of the island interior, as well as by vegetation density and accessibility around the island perimeter. Ground visibility within the accessible acreage varied from poor to excellent depending on density of vegetation coverage.

Findings of the Investigation: NWIC record search results indicated no studies were completed within or partially within the APE. The Parus survey documented three resources from the historic period which were recorded on California Department of Parks and Recreation Series-523 forms. These resources are considered not eligible for inclusion in either National or California Registers of Historic Places. The NAHC Sacred Lands File indicated that no Native American sacred lands or traditional cultural properties are known to be present within the immediate project vicinity.

Recommendations: The APE has been extensively disturbed through levee construction and maintenance. Such activities have changed the elevation, environment, and sensitivity for cultural resources. Construction monitoring of ground-disturbing activity is not recommended in this extensively disturbed APE. In the event cultural resources are discovered during ground-disturbing activities, work in the immediate area must be halted and a qualified archaeologist notified, who will then evaluate the resource and consult with the DWR, USACE, and any other relevant regulatory agency, as appropriate.

Disposition of Data: This report will be filed with DWR; Northwest Information Center, Sonoma State University, Rohnert Park; and Parus Consulting, Inc., Loomis, California. All field notes and other documentation related to the study are on file at Parus’ Loomis, California office.
INTRODUCTION

The California Department of Water Resources (DWR) retained Parus Consulting, Inc. (Parus) to provide cultural resources services for the Winter Island Tidal Westland Restoration Project (“project”) in the western Sacramento-San Joaquin River Delta, north of Pittsburg, in Contra Costa County, California (Figure 1). The project would restore tidal wetlands and fish habitat on Winter Island. Ownership of Winter Island is divided between the State of California, which purchased the majority of the island from Reclamation District 2122 in 2016, and a private duck-hunting club. The island is entirely encircled by a levee system and has one cross levee that bisects the island.

The project will include permanent disturbances (including dredging and fill) within the waters of the U.S., therefore a 401 permit with the U.S. Army Corps of Engineers (USACE) is required and is considered a federal undertaking. This study was completed in compliance with Section 106 of the National Historic Preservation Act (NHPA) as well as the California Environmental Quality Act (CEQA). The services provided by Parus included a pedestrian survey of the project’s APE and a project effects assessment.

PROJECT DESCRIPTION

The proposed project will restore tidal connectivity to the interior of Winter Island to create aquatic habitat at intertidal and shallow sub-tidal elevations, associated high marsh, and riparian habitats on the site to benefit native fish species.

Project elements include:

- North Breach area activities including excavating approximately 75 cubic yards (CY) of soil, removing an existing water control structure, and application of 90 tons of rip-rap. Approximately 0.05 acre will be permanently disturbed.
- Disturbances in the South Breach area include the excavation of approximately 780 CY of soil, application of 240 tons of rip-rap, and the removal of several existing structures including two docks, a barn, and a water control structure. Approximately 0.21 acre will be permanently disturbed as a result.
- East Channel activities will consist of dredging an approximately 433’ long channel into the center of the island, connecting it with a perimeter channel on the north-eastern bank. An estimated 670 CY of soil will be excavated with a permanent disturbance of 0.37 acre.

Alternative combinations of breach locations will be evaluated through hydrodynamic modeling and other considerations; these alternatives include various combinations of north, south and west breach areas. If the north or south area is breached, the proposed project would remove approximately 100 feet of levee at each breach area. If the West Breach area is breached, the
proposed project would remove approximately 200 feet of levee. At a third site, two abandoned barges (originally placed to fortify the levee) would be removed.

**Area of Potential Effects (APE)**

The APE is located on Antioch North U.S. Geological Survey (USGS) topographic quadrangle in Township 2N, Range 1E, unsectioned, the APE consists of three discontiguous areas on Winter Island (Figure 2).

**Regulatory Setting**

**Federal Regulations**

The current study was completed under the provisions of Section 106 of the NHPA of 1966 (as amended) (36 Code of Federal Regulations [CFR] 800). Cultural resources are considered during federal undertakings chiefly under Section 106 of NHPA of 1966 (as amended) through one of its implementing regulations, 36 CFR 800 (Protection of Historic Properties), as well as the National Environmental Policy Act (NEPA). Properties of traditional religious and cultural importance to Native Americans are considered under Section 101(d)(6)(A) of NHPA.

Section 106 of the NHPA (16 United States Code [USC] 470f) requires federal agencies to take into account the effects of their undertakings on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register of Historic Places (NRHP) and to afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings (36 CFR 800.1). Under Section 106, the significance of any adversely affected cultural resource is assessed and mitigation measures are proposed to reduce any impacts to an acceptable level. Significant cultural resources are those resources that are listed in, or are eligible for listing, on the NRHP per the criteria listed at 36 CFR 60.4 (Advisory Council on Historic Preservation 2000) below.

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

- Are associated with events that have made a significant contribution to the broad patterns of our history; or
- Are associated with the lives of persons significant in our past; or
- Embody the distinctive characteristics of a type, period, or method of installation, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- Have yielded, or may be likely to yield, information important in prehistory or history.
Impacts to significant cultural resources that affect the characteristics of any resource that qualify it for the NRHP are considered a significant effect on the environment. Impacts to significant cultural resources from the proposed project are thus considered significant if the project physically destroys or damages all or part of a resource, changes the character of the use of the resource or physical feature within the setting of the resource which contribute to its significance, or introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource.

**State Regulations**

CEQA requires a lead agency (in this case, DWR) to determine whether a project may have a significant effect on historical resources. If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to 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 (Public Resources Code [PRC] Sections 21083.2[a], [b], and [c]). PRC Section 21083.2(g) describes a unique archaeological resource as an archaeological artifact, object, or about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that the site meets any of the following criteria:

- It contains information needed to answer important scientific research questions, about which there is a demonstrable public interest;
- It has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- It is directly associated with a scientifically recognized important prehistoric or historic event or person.

A historical resource is a resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR) (PRC Section 21084.1), a resource included in a local register of historical resources (PRC Section 15064.5[a][2]), or any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant (PRC Section 15064.5[a][3]).

PRC Section 5024.1, Section 15064.5 of the CEQA Guidelines, and Sections 21083.2 and 21084.1 of the Statutes of CEQA were used as the basic guidelines for this study. PRC Section 5024.1 requires evaluation of historical resources to determine their eligibility for listing on the CRHR. The purpose of the register is to maintain listings of the State's historical resources and to indicate which properties are to be protected from substantial adverse change. The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established federal criteria.
According to PRC Section 5024.1(c)(1–4), as well as Section 15064.5(a)(3)(A–D) of the revised CEQA Guidelines, similar to Section 106 of the NHPA, a resource is considered historically significant if it meets at least one of the following criteria:

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

Impacts to significant cultural resources from a proposed project are considered significant if the project physically destroys or damages all or part of a resource, changes the character of the use of the resource or physical feature within the setting of the resource which contribute to its significance, or introduces visual, atmospheric, or audible elements that diminish the integrity of significant features of the resource. Under CEQA, if an archaeological site is not a historical resource but meets the definition of a “unique archaeological resource” as defined in PRC Section 21083.2, then it should be treated in accordance with the provisions of that section.

REPORT PREPARATION

Archaeological Staff Qualifications
Andrew Miller, MA was the Principal Investigator for this project and co-authored this report with Matt Walker (Historic Architecture). Andrew Miller, Matt Walker, and Alex Walton performed the pedestrian survey for the project. Each staff archaeologist meets or exceeds all requirements of the Secretary of Interior’s Standards and Guidelines for Archaeology and Historic Preservation (National Park Service 1983).

Report Format
The format of this report follows the Archaeological Resource Management Reports: Recommended Contents and Format (Office of Historic Preservation 1990).

ENVIRONMENTAL SETTING

The APE is located in Suisun Bay on Winter Island, a 453-acre island in the western Sacramento-San Joaquin River Delta (the Delta), north of Pittsburg, in Contra Costa County, CA. At present, the interior of the island is a mix of extensive open water on the lower areas with some interspersed emergent vegetation. The upland areas, especially around the perimeter of the island, provide riparian habitat. The vegetation is mainly riparian scrub, with some riparian
there is also a small percentage of nonnative grassland on the island (Major 1988).

**Geology and Soils**

The APE is located at the interface of the Central Valley and Coast Ranges Geomorphic Provinces. The Coast Ranges are mountain ranges (2,000 to 4,000, occasionally 6,000 feet elevation above sea level) and valleys. The ranges and valleys trend north-west, subparallel to the San Andreas Fault. The province terminates on the east where strata dip beneath alluvium of the Central Valley. The Coast Ranges are composed of thick late Mesozoic and Cenozoic sedimentary strata. The northern and southern ranges are separated by a depression containing the San Francisco Bay.

The Central Valley is an alluvial plain, about 50 miles wide and 400 miles long, between the Coast Ranges and Sierra Nevada. The Central Valley is drained by the Sacramento and San Joaquin rivers, which join and enter San Francisco Bay. The eastern border is the west-sloping Sierran bedrock surface, which continues westward beneath alluvium and older sediments. The western border is underlain by east-dipping Cretaceous and Cenozoic strata that form a deeply buried synclinal trough lying beneath the Central Valley along its western side (Norris and Webb 1990).

The Sacramento and San Joaquin Valleys have been filled to their present elevations with thick sequences of sediment derived from both marine and continental sources. The sedimentary deposits range in thickness from relatively thin deposits along the eastern valley edge to more than 20,000 feet (6,096 meters) in the south-central portion of the Central Valley.

The sedimentary geologic formations of the Central Valley province vary in age from Jurassic (199 to 144 million years ago) to Quaternary (200 million years ago to present), with the older deposits being primarily marine in origin. Younger sediments are continentally derived and were typically deposited in lacustrine, fluvial, and alluvial environments with their main source being the Sierra Nevada Range. The Delta began to take on its present form during the end of the last glacial period about 11,000 years ago at the end of the Pleistocene. Rivers and streams draining into the area formed a complex network of channels, islands, and sloughs (Page 1986).

Soils in the Delta range from a variety of alluvial fan deposits to organic peat. Delta soils have a high to very high shrink/swell potential and low strength for supporting the load of embankments, dikes, and levees. The soils on Winter Island include Sacramento silty clay loam, Ryde clay loam, Columbia fine sandy loam, Valdez silt loam, and dredged spoil. The surficial organic soil includes peat, which varies in thickness from 2 feet at the north end of the island to 21 feet at the south end. A firm clay layer, which varies from 4 to 29 feet thick and averages 12 feet deep, typically underlies the surface layer. Below the clay, a layer of sand typically varies...
from 5 to 10 feet thick and averages 8 feet deep. The groundwater table varies between 1 and 4 feet below the surface (Norris and Webb 1990).

**Climate**

Situated in the western portion of the Delta, the APE is located in a transitional climate zone between the coastal and inland extremes. The zone is generally characterized by hot, dry summers and warm, moist winters. Storms and tule (ground) fog frequently occur during the winter months. Winter precipitation in this region typically falls as rain, averaging approximately 13 inches annually. High winter temperatures are approximately 54 degrees Fahrenheit, and summer temperature highs are around 90 degrees Fahrenheit. The current Mediterranean climate is dryer and hotter than the conditions present at the time of California’s initial occupation (Major 1988).

**Flora and Fauna**

The APE is located in the Bay Area-Delta Bioregion. This bioregion comprises a variety of natural communities, which range from salt marshes, to chaparral, to oak woodlands. Because the APE has undergone extensive reclamation, the vegetation and the wildlife habitat it affords have been highly disturbed. Historically, dominant flora would have included coastal live oak, buckeye, willow, western sycamore, tule, and sedges. Important animal food resources for past inhabitants visiting the site would have included salmon, bay mussel, and California oyster, rock-nesting waterfowl, and sea mammals (Milliken et al. 2007).

**Cultural Setting**

**Prehistoric Overview**

California has a documented cultural history that spans over 10,000 years and has been subject to numerous chronological interpretations (Milliken et al. 2007). The Hybrid System presented here is an early-middle-late stage chronology initially developed by Robert F. Heizer in 1958 based on sequences of Olivella shell bead horizons. The work of Bennyhoff and Hughes in 1987 refined the age range for the Middle and Late stages of this chronology based on radiocarbon dating and Accelerated Mass Spectrometry (AMS). The Hybrid System includes the following periods:

- **Early Holocene** 8,000 to 3,500 cal B.C.
- **Early Period** 3,500 to 500 cal B.C.
- **Lower Middle Period** 500 cal B.C. to cal A.D. 430
- **Upper Middle Period** 430 to 1,050 cal A.D.
- **Initial Late Period (Lower Emergent)** 1,050 to 1,550 cal A.D.
- **Terminal Late Period** >1,550 cal A.D.
Prehistoric Setting

Early Holocene (8000 to 3500 ca B.C.)

The California coast has been occupied by human populations before the Early Holocene as early as 12,000 to 13,000 B.C. according to recent radiocarbon dates from the Northern Channel Islands (Glassow 1996). The Paleoindian tradition in the Bay Area is represented by CA-SCR-177 in Scotts Valley (Milliken 1995), which dates to 12,000 B.C. The Santa Clara Valley and San Luis Obispo (Milliken et al. 2007) also contain some very early sites dating to cal. 7,500 B.C. and cal. 10,400 B.C., respectively. One of the most notable archaeological resources dating to this time period is the BART skeleton (Bickel 1978). This male skeleton was encountered during the construction of the Bay Area Rapid Transit tube in 1969. The skeleton is the oldest encountered in the region and dates to roughly 5,000 years B.C. by radiocarbon testing (Arnold and Walsh 2010:67).

Early Period (3500 to 500 cal B.C.)

Sedentism, regional symbolic integration, and increased regional trade characterize the beginning of the Early Period for the Bay Area. This is indicated by new groundstone technology and the first cut shell beads observed in mortuary contexts. The earliest known Olivella beads in Contra Costa County (CCO) were encountered in a burial provenience containing red ocher at CCO-637. This prehistoric site is located at Los Vaqueros Reservoir in Contra Costa County and contained shell dating to 4,800 years ago (Stevens 2009). Mortar and pestle technology that appeared about 3,400 cal B.C. is believed to be associated with acorn harvesting and processing (Milliken 1995:71). Mortar and pestle use in the Bay Area is documented shortly after 4,000 cal B.C., and includes pestles found at CCO-637 that date to 3,800 cal B.C. (Stevens 2009). Cultural material recorded around the Bay during the Early Period is interpreted to represent lowland sedentary collectors living with upland mobile foragers who occasionally visited the lowland marshes (Milliken et al. 2007:115).

Lower Middle Period (500 cal B.C. to cal A.D. 430) and Upper Middle Period (430 to 1050 cal A.D.)

The Lower Middle Period (LMP) is marked in the Bay Area, Central Valley, and southern California by a sudden change in shell bead designs that had been relatively static for an extensive period of time (Milliken et al. 2007:115). New materials that emerge during the LMP include barbless fish spears, elk femur spatulae, tubes, and whistles.

During the Upper Middle Period (UMP) multiple shell bead horizons accompanied by the spread of the Meganos mortuary complex proliferate from the Livermore Valley to the Bay (Milliken et al. 2007). Distinctive artifacts include show blades, fishtail charmstones, new Haliotis ornament forms, and mica ornaments.
Initial Late Period to Terminal Late Period (Lower Emergent-1050 to 1550 cal A.D.)

The period after 1,000 cal A.D. was originally described as culturally emergent due to a shift in mortuary practices. Burial rites during this time move from including numerous, ubiquitous items with the deceased to the internment of finely wrought grave goods with partial cremations. These changes in funerary rituals, along with the addition of other cultural items including the arrow, flanged pipe, and Olivella callus cups are distinct to the greater Bay Area and are referred to as the Augustine Pattern. The Augustine Pattern in Contra Costa County is marked by new Olivella bead types and Haliotis ornaments appearing at sites such as CCO-308 (Milliken et al. 2007:1160).

During the Terminal Late Period, Olivella cup beads abruptly disappear and are replaced by clamshell disk beads (Milliken et al 2007:117). New tools and beads appear including the toggle harpoon, hopper mortar, plain corner-notched arrow projectile point, and magnesite tube beads. Scholars continue to deliberate over the nature of this regional variation, as its trajectory was abruptly stymied by Spanish colonization beginning in 1776 (Milliken and Bennyhoff 1993:392; Milliken et al. 2007).

Ethnographic Setting
The most comprehensive study of the Miwok comes from Spanish mission records, diaries, and journals, as well as ethnographical studies done in the first half of the twentieth century (Bennyhoff 1977; Levy 1978:399). Much of the history of the Bay Miwok, however, is incomplete. The Bay Miwok (also Me-wuk) historically occupied the APE and surrounding area (Milliken 1995:250). Initially, the location was ascribed to the Costanoans (Ohlone) by Kroeber (1976), and features as the territory of the Saclan tribelet on his extensive ethnolinguistic map of California. Milliken’s historical-linguistic approach to researching Mission records, however, revealed the Saclan to be Bay Miwok, with a principal village located near present-day Pittsburg, California.

The Bay Miwok are one of four other Miwok groups (Bay, Northern Sierra, Central Sierra, and Southern Sierra) whose language is a subfamily of the Miwokan branch of the Utian language family, Penutian stock. Prior to Euro-American contact, the Bay Miwok occupied the Sacramento River-San Joaquin Delta to the Carquinez Straight (Milliken 1995). Neighboring groups included the Wintu to the north, Northern Valley Yokuts to the south, and Ohlone to the west.

The primary political unit, referred to as “tribelets” by ethnographers, among the Mi-wuk were structured by similarities in language and ethnicity (Levy 1978:410). Tribelets controlled specific lands and the natural resources within that territory. The population size of Bay Miwok tribelets averaged between 300 and 500 individuals.
The territory of each tribelet typically included a main village and smaller satellite villages. Traditional houses were semi-subterranean or aboveground conical houses made with tule matting (Levy 1978:408–409). Villages also contained acorn granaries, inter grinding houses, and conical sweathouses.

Seasonally mobile hunter-gatherers with semi-permanent villages, the Sacramento–San Joaquin Delta and surrounding areas provided the Bay Miwok with an abundance of natural resources (Levy 1978:402-403). Acorns, particularly from the prevalent valley oak (*Quercus lobata*), were of particular importance to the diet and were stored in conical-shaped granaries prior to processing. Mule deer, pronghorn antelope, and tule elk, as well as smaller mammals such as cottontails, jackrabbits, beaver, squirrels, and woodrats, were regularly hunted. Waterfowl and fish, particularly salmon, were also important components of the Bay Miwok diet. They also fished for sturgeon and lamprey, captured many types of game birds, such as mountain and valley quail, and consumed river mussels and freshwater clams.

Similar to other California Native American groups, the Miwok employed a variety of tools, implements, and enclosures for hunting and collecting natural resources (Levy 1978:403–406). The bow and arrow, snares, traps, nets, and enclosures or blinds were used for hunting land mammals and birds. Fish were caught with nets, seines, hook and line, harpoons, and basketry traps. The principal water craft was the tule balsa canoe. A variety of wooden tools were used to collect plants, such as fire-hardened digging sticks for roots, beaters for dislodging seeds, and long poles for dislodging acorns and pinecones. Woven burden baskets were used to transport the seeds, roots, or nuts for processing or storage. Both twined and coiled basketry were made by the Miwok.

To process food resources, the Miwok used an array of tools and implements (Levy 1978:405). Bedrock mortars, cobblestone pestles, anvils, and portable stone mortars and pests were used to grind or mill acorns and seeds. Knives, leaching and boiling baskets, woven strainers and winnowers, and woven drying trays, among others, were used during food preparation. Earth ovens were used to bake acorns.

The Bay Miwok participated in an extensive east-west trade network between the coast and the Great Basin (Levy 1978:411–412). From coastal groups marine shell (olivella and abalone) and steatite moved eastward, while salt and obsidian traveled westward from the Sierras and Great Basin. Basketry, an important trade item, moved in both directions.

Within 25 years of the first Spanish soundings of San Pablo Bay in 1775, the vast majority of Bay Miwok had been relocated and baptized at one of the seven Franciscan missions founded in Native American territory (Galvin 1971; Kroeber 1976:463). Multiple resistances to Spanish colonization occurred during this time, including the flight of many Saclan Bay Miwok and Huichiu Ohlone from Mission Dolores in 1795. Led by the Bay Miwok leader, Potroy, these tribes confounded both Spanish and Mission Indian forces for two years until the Saclan Bay
Miwok were defeated in an attack near the present-day town of Lafayette, California (Milliken 1995:104). To further retaliate, the Spanish and Mission Indians raided the remaining Huichiu Ohlone villages. They removed the surviving women and children to Mission Dolores, while the men were taken to the Presidio San Francisco.

The discovery in 1848 of gold in the Sierra foothills and the ensuing Gold Rush led to a flood of nonindigenous peoples into Miwok territory. With the loss of the majority of their traditional lands, as well as enslavement, slaughter, and disease, surviving Miwok labored for the growing lumber, ranching, farming, and mining industries (Levy 1978:401). Their reliance on cash income increased as natural resources decreased with the growth of non-Miwokan communities, farms, and ranches in their traditional territory.

During the first half of the 1900s, the federal government acquired lands (in parcels ranging in size from 2 acres to more than 300 acres) and established reservations, or Rancherias. The U.S. Bureau of Indian Affairs terminated relations with most of these Rancherias between 1934 and 1972, but beginning in 1984, Federal Recognition was restored to the majority of the Rancherias. At present there are seven Rancherias with predominantly Miwok populations from the three California-interior divisions. Some descendants of the Bay Miwok from the Mission San Francisco and Mission San Jose, are members of the Muwekma Ohlone Tribe of the San Francisco Bay Area (Dremen 2011).

**HISTORIC OVERVIEW**

Post-contact history for the State of California generally is divided into three specific periods: the Spanish Period (1769–1822), the Mexican Period (1822–1848), and the American Period (1848–present).

Although there were brief visits by Spanish, Russian, and British explorers from 1529–1769, the beginning of Spanish settlement in California occurred in 1769 with a settlement at San Diego. Twenty-one missions were established from 1769 to 1823. After the 1822 revolution by Mexico against the Spanish crown, the Mexican Period is marked by an extensive era of land grants, most of which were in the interior of the state, as well as exploration by American fur trappers west of the Sierra Nevada. The American Period was initiated in 1848 with the signing of the Treaty of Guadalupe Hidalgo, which ended the Mexican–American War, as well as with the discovery of gold that same year (Gunsky 1989).

**Spanish Period (1769–1822)**

Despite being situated within the territory claimed by Spain, exploration between 1529 and 1769 of Alta (upper) California was limited. During this nearly 250-year span, there were only brief visits by Spanish, Russian, and British explorers. The beginning of Spanish settlement in California, which marked the devastating disruption of the culture of indigenous Californians, occurred in the spring of 1769. That year, Gaspar de Portolá established the first Spanish
settlement in Alta California at San Diego, and with Father Junipero Serra founded the first of 21 missions (Mission San Diego de Alcalá) that would be built by the Spanish and the Franciscan Order between 1769 and 1823. Portolá continued north, reaching San Francisco Bay on October 31, 1769. Later expeditions to Alta California in 1772 by Pedro Fages, who was seeking a site for a mission, and in 1776 by Juan Bautista De Anza, who was seeking a site for a presidio and mission, explored the land east of San Francisco Bay and into the vast plains to the east (Gunsky 1989:2–3).

In 1808, Spanish Lieutenant Gabriel Moraga led the first expedition into the Sacramento Valley and traveled northward along the Sacramento River. The expedition was scouting for new mission locations and searching for runaway Indian neophytes from the coastal missions. They also traveled south as far as the Merced River and explored parts of the American, Calaveras, Cosumnes, Feather, Mokelumne, and Stanislaus rivers. In 1813 Lieutenant Gabriel Moraga led another expedition into the lower portion of California’s Central Valley, giving the name San Joaquin to the large river that flows northward through the county (Hoover et al. 2002:369). Later immigrants were attracted by the abundance of wildlife within or along the banks of the rivers, including waterfowl, fish, and fur-bearing animals. In 1817, the final Spanish expedition into the interior of Alta California was led by Luis Arguello (Beck and Haase 1974:18, 20; Gunsky 1989:3–4). That expedition traveled up the Sacramento River, past the future site of the city of Sacramento to the mouth of the Feather River, before returning to the coast.

**Mexican Period (1822-1848)**

After the end of the Mexican Revolution (1810–1822) against the Spanish crown, all Spanish holdings in North America (including Alta and Baja California) became part of the new Mexican Republic. With the onset of the Mexican Period, an era of extensive land grants began, in contrast to the Spanish colonization through missions and presidios. To increase the population away from the more settled coastal areas where the Spanish had concentrated their settlements, most of the land grants to Mexican citizens in California (Californios) were in the interior.

Rancho Los Medanos (meaning Sand Dunes Ranch) was an 8,859-acre Mexican land grant in present-day Contra Costa County, California given in 1839 by Governor Juan Alvarado to Jose Antonio Mesa and Jose Miguel Garcia. Jose Antonio Mesa was the son of Corporal José Valerio Mesa who came to California with the Anza Expedition. Jose Antonio Mesa's son, Juan Prado Mesa, was the grantee of Rancho San Antonio. The name "los medanos" is derived from the sand hills located along the San Joaquin River on its northern boundary. Rancho Los Medanos was located at the junction of the San Joaquin River and the Sacramento River, extending eastward along the south shore of Suisun Bay to Antioch. The rancho lands included present-day Antioch and Pittsburg.
American Period (1848-Present)
Under the Treaty of Guadalupe Hidalgo of 1848, victory in the Mexican-American War (1846–1848) resulted in Mexico releasing its northern territories (now the states of California, Arizona, Colorado, New Mexico, and part of Utah) to the United States. That same year California became a territory of the United States, and gold was discovered at Sutter’s Mill on the American River in Coloma. The discovery was followed by a vast influx of immigrants and an economic boom, which had a devastating impact on the lives of indigenous Californians. The mass introduction and concentration of diseases, the loss of land and territory (including traditional hunting and gathering locales), violence, malnutrition, and starvation accompanied the tens of thousands of gold seekers (Gunsky 1989).

Mesa and Garcia sold the southern half of their rancho to Americans Colonel Jonathan D. Stevenson in 1849, and the northern half to James Walsh, Michael Murray, and Ellen Fallon in 1850. There was confusion about the orientation of the grant, and in 1851 Stevenson arranged an exchange of deeds, whereby he got the west half of the rancho, and Walsh, Murray, and Fallon got the east half (Hoover, et. al. 1966).

With California's sudden population increase, and a lack of farmed agricultural land, the demand for produce grew rapidly and so too did the price of these goods. Eager to stake their claim, settlers quickly began cultivating the land along the arterial waterways of the Sacramento and San Joaquin rivers as well as the creeks and streams that flowed into them. By the early 1850s, reclamation efforts were underway across much of the Delta in an attempt to harness the marshy Delta islands for cultivation. The low-lying, tule-covered bars were naturally prone to flooding, often inundated by as much as a foot of water at high tide and up to a few feet as snow melted in the Sierra Nevada in late spring. In 1855, following the passage of the Swamp Land Act of 1850, which gave the states title to all swamp and overflow land, the California Legislature authorized the sale of marshy Delta land under their control at low prices with the purchaser’s commitment to reclaim the land for agricultural development (Thompson and Dutra 1983).

The introduction of mechanical dredges, specifically the clamshell dredge, by the 1870s, expedited the reclamation of marshy Delta land. With the Delta’s levee system largely completed, Delta farmers began to plant orchards, with peaches and pears emerging as the dominant fruits, in addition to a variety of grain crops including alfalfa, wheat, and rye. Dairying emerged as a popular agricultural pursuit, however the regions sporadic flooding made raising cattle challenging in many locations. By the turn of the twentieth century, tomatoes, celery, and asparagus emerged as prominent crops, and the Delta had transformed into one of the leading agricultural regions in the state (Thompson and Dutra 1983).
Early Development of Winter Island

The settlement and development of Winter Island closely follows the development patterns of other small Delta Islands. When Euro-American settlers first passed through the Delta on their voyage to the goldfields, Winter Island was a marshy, tule-covered piece of land. Early maps of the region labeled the island as “Ruckels Island.” In 1864, in accordance with the Swamp Land Act of 1850, Captain George Washington Kimball applied to purchase a large swath of swamp land just north of Antioch at the confluence of the Sacramento and San Joaquin rivers. A native of Maine, Kimball led the first group of settlers to the Antioch area in 1850. After the county surveyor mapped the land, Kimball patented the swampland in 1872 and took control of an approximately 650-acre parcel including what would later be named Winter Island. Prior to his official acquisition of the land, Kimball was likely already using Winter Island for cattle grazing (Schmalenberger and Schmalenberger 1997).

In 1873, just one year after acquiring the patent for the island, Kimball sold his land to William Winter, for whom the island is named. Mr. Winter, a native of New Jersey, used the island as pastureland for a small herd of cattle. Winter constructed a modest home on the island as well as barns and other outbuildings. By the mid-1880s, Winter had moved to San Francisco and put the island up for sale, noting that the island stood about four feet above sea level and was, “covered with a luxuriant growth of nutritious grasses...affording excellent pasturage for hundreds of head of stock.” After a few years on the market, Mr. Winter sold the entirety of Winter Island to Erastus Kelsey in 1887(Schmalenberger and Schmalenberger 1997).

Erastus Kelsey, an Oakland resident and leader of the Oakland Nationalist Club, a branch of the nationwide socialist organization with utopian pursuits, desired to found a co-operative colony. Kelsey planned to establish a utopian co-operative with the assistance of Kate Lockwood Nevins, a Bay Area suffragist and organizer for the Farmers’ Alliance. Formed in 1893, the Co-operative Brotherhood of Winter Island (the Brotherhood) organized to pursue social and economic progress through cooperation amongst its members. Led by its first president, Andrew Jackson Gregg, publisher of The Prohibitionist and candidate for Lieutenant Governor on the Populist Party ticket in the 1894 California election, the Brotherhood originally consisted of 100 members, most of whom resided in the Bay Area. Each member paid a required $1.25 fee to join the colony and an additional $5 each month to demonstrate their commitment to co-operation and help repay Kelsey, now the group’s treasurer, for the land he provided the colony (Schmalenberger and Schmalenberger 1997).

The Brotherhood made the first significant improvements to Winter Island, including the construction of three and a quarter miles of levees, 200 plowed acres with 130 producing a variety of crops, as well as the modest, redwood frame Winter Island Barn in 1895 that still stands at the time of this report. Following the Panic of 1893 and the subsequent economic depression, the Brotherhood’s membership declined. The Brotherhood effectively ceased
operation in 1898, and in 1901, defaulted on their mortgage and ownership of the island returned to Kelsey (Schmalenberger and Schmalenberger 1997).

Winter Island (1900-Present)

California author laureate, Jack London (1876-1916), was a frequent sailor along the Contra Costa coast and would resupply at Pittsburg in the 1910’s. His autobiographical novel, Barleycorn, was written aboard his yawl, Roamer, while moored among houseboat bordellos off Winter Island (Schmalenberger and Schmalenberger 1997).

In 1909, Edward McDonald, who acquired Winter Island the previous year from Kelsey, sold the island to the Winter Island Company. The Winter Island Company, founded by several well-to-do Bay Area residents, utilized the marshy, partially reclaimed Delta island for duck hunting. Since the 1870s, duck hunting emerged as a popular hobby and pastime for wealthy Bay Area businessmen (Schmalenberger and Schmalenberger 1997). The marshy, tule-covered Delta proved ideal land for duck hunting, and private duck hunting clubs were established across the region. In 1920, a second duck hunting club named the Winter Island Club purchased the island, including the barn built by the brotherhood. Owned by several wealthy Bay Area businessmen, the club operated until 1939, when it was sold to two of its members. The barn built by the Brotherhood in the previous century was updated to accommodate electricity during this time.

Six Brothers Ranch acquired the island in 1949. Renamed Winter Island Farms under a new partnership formed in 1950, the group was originally composed of members of the Pacini family (Schmalenberger and Schmalenberger 1997). Winter Island Farms made several attempts at raising livestock over the years, likely utilizing the barn for storage, but the island continued to be used largely for duck hunting. Members of Winter Island Farms organized Reclamation District 2122 in 1982 to oversee maintenance of the island’s levees (Hine 1983). In 2016, the State of California purchased the majority of Winter Island.

PRE-FIELD RESEARCH

LITERATURE SEARCH METHODS

To determine if prehistoric or historic cultural resources were previously recorded within the APE, cultural resources literature searches were performed for DWR by the NWIC of the California Historical Resources Information System at Sonoma State University, Rohnert Park, on November 11, 2016. The records search was conducted to determine the extent to which the APE had been previously surveyed, and the number and type of cultural resources within a 0.25-mile radius of the project limits. The archival searches consisted of an archaeological and historical records and literature review. The NWIC records search summary (NWIC File No. 16-0604) is provided as Appendix A.
NWIC Literature Search Results

The records search by the NWIC shows that no previous cultural resources studies incorporated the current project APE. The search also indicated that no previously documented cultural resources were known to be present within the APE. Records recovered by the NWIC include 17 “Other Reports” (Table 1), which are overviews covering geoarchaeology, the distribution of cultural resources, or ethnographic communities.

Sacred Lands File Search

Parus Consulting contacted the Native American Heritage Commission (NAHC) on March 1, 2018, requesting a search of their Sacred Lands File for traditional cultural resources within or near the APE. The reply from the NAHC, dated March 16, 2018, (Appendix B) states that the search failed to indicate the presence of Native American sacred lands or traditional cultural properties in the immediate vicinity of the project area.

Field Methods

Parus archaeologists Andrew Miller and Alex Walton, and architectural historian Matt Walker conducted a pedestrian survey of accessible dry-land portions the APE on December 14, 2017. Of the approximately 0.38-acre APE, 0.13-acre was surveyed at an intensive level. The remaining 0.25-acre East Channel location was not surveyed as it was thoroughly inundated at the time. Levees and the land adjacent to the levees were intensively surveyed using transects spaced no greater than 15 meters apart.

The entire width of the levee crown and up to 20 feet outward from the toe of the levee surrounding the island, as well as the accessible portions of the island interior in proximity to the levee, were carefully examined for cultural resources. Accessible, undeveloped ground surface areas within the APE were examined for prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, or fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions and features indicative of the former presence of structures or buildings (e.g., postholes, foundations), or historic-era debris (e.g., metal, glass, ceramics). Ground disturbances (e.g., animal burrows, etc.) were visually inspected.

Photographs of the APE, including ground surface visibility and items of interest, were taken with a digital camera. Survey boundaries, transects, and documented resources were recorded with a handheld Garmin global positioning system (GPS) unit with meter accuracy.

Newly identified cultural resources were photographed and recorded on California Department of Parks and Recreation (DPR) series 523 forms. Universal Transverse Mercator (UTM) coordinates for the resources were collected with the handheld GPS unit. No cultural resource materials were collected during the survey.
FINDINGS

SUMMARY

The three, unrecorded, historic-era resources (Table 1), Winter Island Barn (Photograph 1), Winter Island Perimeter Levee (Photograph 2), and Central Drainage Ditch (Photograph 3) were identified and fully recorded on DPR series 523 forms (Appendix C). These resources are described individually below:

The Winter Island Barn

The Winter Island Barn is a modest, rectangular utilitarian building situated near the southern end of Winter Island’s central drainage ditch. The wood framed building has vertical redwood board siding and measures approximately 33 feet long (E/W) and 25 feet wide (N/S). While much of the construction material appears original, large sections of siding and roofing are missing.

The Winter Island Barn was constructed in 1895 by the Brotherhood to support their short-lived agricultural operations on the island. The development of the Winter Island Barn is reflective of both the reclamation and transformation of the marshy Delta land into highly productive agricultural land as well as the wave of socialist and utopian ideology that spread across California and the nation in the late-nineteenth century. Between 1850 and 1950 at least 17 utopian colonies were established in California. Some of these colonies lasted only a few years while others lasted several decades.

The Winter Island Barn does not appear eligible for listing in the NRHP under Criterion A or CRHR under Criterion 1 because it is not representative of a significant contribution to the development of the utopian movement in California of the nation. Additionally, the barn’s later use by the various duck hunting clubs that took ownership of the island was not linked to any significant event; duck hunting clubs in the Delta were common by the early twentieth century. As such, it does not appear to be significant in relation to the development of significant events in local, state, or national history.

Under NRHP Criterion B or CRHR Criterion 2, there is no evidence that the Winter Island Barn has any important associations with any person or persons who made significant contributions to history at the local, state, or national level. While figures such as Erastus Kelsey, Kate Nevins, and Andrew Jackson Gregg achieved modest recognition in the socialist movement in the Bay Area in the late-19th century and were involved with the Brotherhood, research did not reveal that they had any direct association with this barn. None of the figures associated with the duck hunting clubs who owned the barn in later years was identified as having any significant contributions to history. As such, it does not appear that there is the potential for significant associations in this regard.
The Winter Island Barn does not appear eligible for the NRHP under Criterion C or CRHR under Criterion 3 as it is not an important example of any type, period, or method of construction or engineering and it does not represent the important work of a master engineer. The Winter Island Barn is a common example of a vernacular, wood frame barn. Since the mid- to late-nineteenth century, the agriculture industry has dominated the economy of the Delta, and as a result, barns and other outbuildings were constructed to support these efforts. As Delta islands were reclaimed for agricultural production, crops were planted and barns erected. The subject resource is a standard example of a vernacular wood frame barn and generally lacks any significant design or engineering associations that would qualify it for listing under this Criterion.

Under NRHP Criterion D or CRHR Criterion 4, the Winter Island Barn is not significant as a source, or likely source, of important information pertaining to history, building materials, construction techniques, or advancement in barn design. Vernacular barns like Winter Island barn are well documented and it is one of many vernacular barns throughout Contra Costa County, California, and the nation.

Though the studied resource retains sound integrity in all seven aspects, its lack of overall significance precludes the Winter Island Barn for listing in the NRHP or the CRHR because of a lack of significance under any of the criteria for listing. The resource does not appear to be a historic resource under Section 106 of the NHPA (as codified in 36 CFR Part 800), nor does it appear to be a historical resource for the purposes of CEQA (Section 15064.5 [a][2]-[3]).

**Winter Island Perimeter Levee**

The Winter Island Perimeter Levee is a simple earthen levee that wraps around the outer edge of Winter Island. The Winter Island Perimeter Levee is designed to aid with flood prevention. The earthen berm was constructed in phases, and the levee’s design is reflective of this development pattern. The southern half of the levee is the oldest portion of the levee and it is more pronounced and better defined than the northern half. The levee measures approximately 10 feet across at its top and varies between tapering off into the water and steep, eroded drop offs on the water side. Only portions of the levee coinciding with the APE’s South Breach and North Breach were surveyed.

Initial development of the Winter Island Perimeter Levee dates to the mid-1890s, when the the Brotherhood constructed a 3-mile levee span to support their short-lived agricultural operations on the island. The development of the Winter Island Perimeter Levee represents a largely failed, late-nineteenth century effort to reclaim one of dozens of Delta islands.

The Winter Island Perimeter Levee does not appear eligible for listing in the NRHP under Criterion A or CRHR under Criterion 1 because it is not representative of a significant contribution to the development of reclamation efforts in the Delta, California, or the nation.
Construction of earthen levees in the Delta dates to the Gold Rush era, with the first levee constructed on Grand Island in 1849. Construction of the subject Winter Island Perimeter Levee began in approximately 1893, with the construction of its first phase ending in 1897 with the entirety of the levee not completed for several decades later. The development of the subject levee does not play a significant role in the Delta’s agricultural efforts or result in the establishment of significant agricultural efforts. The development of the Winter Island Perimeter Levee is a relatively late reclamation attempt that resulted in a short-lived agricultural operation.

Under NRHP Criterion B or CRHR Criterion 2, there is no evidence that the Winter Island Perimeter Levee has any important associations with any person or persons who made significant contributions to history at the local, state, or national level. Research indicated that the initial development of the Winter Island Perimeter Levee was constructed by the Brotherhood in the 1890s to support their short-lived agricultural efforts on the island. While figures such as Erastus Kelsey, Kate Nevins, and Andrew Jackson Gregg achieved modest recognition in the socialist movement in the Bay Area in the late-19th century and were involved with the Brotherhood, research did not reveal that they had any direct association with the development of the levee. None of the figures associated with the duck hunting clubs who owned Winter Island in later years were identified as having any significant contributions to history. As such, it does not appear that there is the potential for significant associations in this regard.

The Winter Island Perimeter Levee does not appear eligible for the NRHP under Criterion C or CRHR under Criterion 3 as it is not an important example of any type, period, or method of construction or engineering and it does not represent the important work of a master engineer. The Winter Island Perimeter Levee is a common example of an earthen levee. Since the mid- to late-nineteenth century, the agriculture industry has dominated the economy of the Delta, and as a result, levees were constructed to support the large-scale reclamation efforts. The subject resource is a typical example of an earthen levee, a ubiquitous resource in the Delta, and generally lacks any significant design or engineering associations that would qualify it for listing under this Criterion.

Under NRHP Criterion D or CRHR Criterion 4, the Winter Island Perimeter Levee is not a significant source, or likely source, of important information pertaining to history, building materials, construction techniques, or advancement in levee design. Earthen levees like the Winter Island Perimeter Levee are well documented and it is one of countless levees throughout Contra Costa County, California, and the nation.

Though the studied resource retains sound integrity in all seven aspects, its lack of overall significance precludes the Winter Island Perimeter Levee from listing in the NRHP or the CRHR under any of the criteria for listing. The resource does not appear to be a historic resource.
under Section 106 of the NHPA (as codified in 36 CFR Part 800), nor does it appear to be a historical resource for the purposes of CEQA (Section 15064.5 [a][2]-[3]).

Winter Island Central Drainage Ditch

The Winter Island Central Drainage Ditch (Central Drainage Ditch) is a simple earthen ditch that cuts across the length of Winter Island. The ditch extends approximately 1.9 miles, traveling generally southeast from the island’s north end to its south end and typically measure between 10 and 40 feet wide. The banks of the ditch are covered with dense tule growth. The flow of water into and out of the ditch is controlled by a water control system that consists of two modern sluice gates located at the island’s north and south ends. The sluice gates are built into the main levee and consist of modern boards placed on either side of the levee with grated steel walkways leading from the levee to a handwheel on both sides of the levee. A modern wood dock extends from the north side of the south sluice gate.

The Central Drainage Ditch does not appear eligible for listing in the NRHP under Criterion A or CRHR under Criterion 1 because it is not representative of a significant contribution to the development of reclamation efforts in the Delta, California, or the nation. Construction of earthen drainage ditches in the Delta dates to the Gold Rush era. Construction of the subject Winter Island Central Drainage Ditch began in approximately 1895, with the current iteration of the drainage ditch not completed until about 1910. It did not play a significant role in the establishment of a significant agricultural operation. Rather, the development of the Winter Island Central Drainage Ditch represents a relatively late reclamation attempt that resulted in the continued reclamation and drainage of a small Delta island. As such, it does not appear to be significant in relation to the development of reclamation efforts in the Delta or the development of agriculture or duck hunting clubs in the region.

Under NRHP Criterion B or CRHR Criterion 2, there is no evidence that the Central Drainage Ditch has any important associations with any person or persons who made significant contributions to history at the local, state, or national level. Research indicated that the initial development of the Central Drainage Ditch was likely constructed by the Brotherhood in the 1890s to support their short-lived agricultural efforts on the island. Research did not reveal that any of its modestly famous members had any direct association with the development of the Central Drainage Ditch. None of the figures associated with the duck hunting clubs who owned Winter Island in later years were identified as having any significant contributions to history and have no direct association with the construction of the Central Drainage Ditch. As such, it does not appear that there is the potential for significant associations in this regard.

The Central Drainage Ditch does not appear eligible for the NRHP under Criterion C or CRHR under Criterion 3 as it is not an important example of any type, period, or method of construction or engineering and it does not represent the important work of a master engineer. The Central Drainage is a common example of an earthen drainage ditch. Likely initially
developed by the Brotherhood in the late-nineteenth century and expanded and extended in the early twentieth century, the subject resource is a typical example of an earthen drainage ditch, a ubiquitous resource in the Delta, and generally lacks any significant design or engineering associations that would qualify it for listing under this Criterion.

Under NRHP Criterion D or CRHR Criterion 4, the Central Drainage Ditch is not significant as a source, or likely source, of important information pertaining to history, building materials, construction techniques, or advancement in levee design. Earthen ditches like the Central Drainage Ditch are well documented and it is one of many ditches throughout Contra Costa County, California, and the nation.

Though the studied resource retains sound integrity in all seven aspects, its lack of overall significance precludes The Winter Island Central Drainage Ditch for listing in the NRHP or the CRHR because of a lack of significance under any of the criteria for listing. The resource does not appear to be a historic resource under Section 106 of the NHPA (as codified in 36 CFR Part 800), nor does it appear to be a historical resource for the purposes of CEQA (Section 15064.5 [a][2]-[3]).

DETERMINATION OF EFFECTS

As summarized in Table 2, there are no historic properties or historical resources present within the APE surveyed for this project. The three historic-era resources identified within the APE - Winter Island Barn, Winter Island Levee System, and Winter Island Central Drainage Ditch are ineligible for listing in the NRHP or CRHR and thus do not qualify as historic properties or historical resources. Although levee breaches are proposed, implementation of the project will have no effect and no adverse change on the Winter Island Levee System since the resource is not a historic property or a historical resource.

REGULATORY REQUIREMENTS

As mandated by NHPA Section 106, federal agencies must take into account the effects of their undertakings on historic properties and seek ways to avoid, minimize, or mitigate adverse effects on such properties [36 CFR 800.1(a)]. Likewise, CEQA regulations state that “a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment” (PRC Section 21084.1).

“Substantial adverse change” means “demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired” [PRC Section 5020.1(q)].

If a cultural resource qualifies for listing on the NRHP or CRHR and is thus determined to be a historic property or historical resource (CRHR), the provisions of Section 106 and CEQA require the lead agency to determine whether or not the proposed undertaking will have “no adverse effect” or an “adverse effect,” pursuant to 36 CFR 800.4(d)(1-2), upon that historic property or
will result in a “substantial adverse change” to the historical resource as defined under PRC Section 21084.1.

According to federal regulations, “Effect means alteration to the characteristics of a historic property qualifying it for inclusion in or eligibility for the National Register” (36 CFR 800.16[i]). The criteria of adverse effect listed at 36 CFR 800.5(a)(1) are:

“an adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property’s eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative.”

According to CEQA regulations, “a project that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment” (PRC Section 21084.1). “Substantial adverse change” means “demolition, destruction, relocation, or alteration such that the significance of an historical resource would be impaired” (PRC Section 5020.1(q)).

RECOMMENDATIONS

NO CONSTRUCTION MONITORING

Construction monitoring of ground-disturbing activity is not recommended. Although ground visibility within the APE was constrained by vegetation density or flooding, considering Winter Island was a tule marsh prior to the start of reclamation activities in the Delta 150 years ago, and the agricultural history of the island, there is an extremely low probability that intact prehistoric, ethnohistoric, or historic-era archaeological sites remain within the extensively disturbed island interior or in the island levee system.

INADVERTENT DISCOVERIES

In the event that cultural resources are inadvertently discovered during ground-disturbing activities, work must be halted in that area within 100 feet of the find until a qualified archaeologist who meets the Secretary of the Interior’s Standards for archaeologists (National Park Service 1983) can assess the significance of the find. Construction activities could continue in other areas. If the discovery proves to be significant, additional work, such as data recovery
excavation, may be warranted and would be discussed in consultation with DWR, USACE, or any other relevant regulatory agency.

**HUMAN REMAINS**

Although unlikely, the discovery of human remains is always a possibility; State of California Health and Safety Code Section 7050.5 covers these findings, except on federal lands. This code section states that no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to PRC Section 5097.98. The County Coroner must be notified of the find immediately. If the human remains are determined to be of Native American origin, the Coroner will notify the NAHC, which will determine and notify a Most Likely Descendent (MLD). The MLD shall complete the inspection of the site within 24 hours of notification and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.
LITERATURE CITED

    California’s Ancient Past: From the Pacific to the Range of Light. The Society for
    American Archaeology, Washington, D.C.

Bennyhoff, James A. and Hughes, Richard E. 1987
    Shell bead and ornament exchange networks between California and the western Great
    Basin. Anthropological papers of the American Museum of Natural History; v. 64, pt. 2

Bickel, Polly McW. 1978.
    Changing Sea Levels along the California Coast: Anthropological Implications.

Dremann, Sue. 2011.
    "Local Native American tribe seeks identity: Muwekma Ohlone lose federal court battle

    The First Spanish Entry into San Francisco Bay, 1775. John Galvin, Editor. John Howell
    Books, San Francisco, California.

Glassow, Michael. 1996.
    The Significance to California Prehistory of the Earliest Mortars and Pestles.
    Pacific Coast Archaeology Society Quarterly, Volume 32(4), Fall.

Hine, Robert V. 1983.
    California’s Utopian Colonies. University of California Press, Berkeley, CA

Hoover, Mildred B.; Rensch, Ethel; Rensch, Hero; Abeloe, William N. 1966.
    Historic Spots in California. Stanford University Press.

    York. 1925, Bulletin 78, Bureau of American Ethnology of the Smithsonian Institution,
    Washington, D.C.
Levy, R.S. 1978.


Milliken, Randy. 1995.


Geology of the fresh ground-water basin of the Central Valley, California, with texture maps and sections: U.S. Geological Survey, Professional Paper 1401-C, scale 1:500,000.


Winter Island: The Delta’s Attempts at Eden. Distributed by Pittsburg Historical Society, Pittsburg, CA.


Thompson, John and Edward A. Dutra. 1983.

The Tule Breakers: The Story of the California Dredge Stockton Corral of Westerners International, Stockton, CA
FIGURES

FIGURE 1: PROJECT LOCATION
Figure 2: APE Locations

- North Breach
- East Channel
- Winter Island
- South Breach

Map Location

Solano County
Sacramento County
Contra Costa County

Feet 0  1,250  2,500

Figure 2
### TABLE 1. OTHER REPORTS WITHIN APE RADIUS

<table>
<thead>
<tr>
<th>Report No.</th>
<th>Year</th>
<th>Author(s)</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>S-000595</td>
<td>1974</td>
<td>R.F. King</td>
<td>A Report on the Status of Generally Available Data Regarding Archaeological, Ethnographic, and Historical Resources Within a Five Mile Wide Corridor Through Portions of Colusa, Yolo, Solano, and Contra Costa Counties, California</td>
</tr>
<tr>
<td>S-000848</td>
<td>1977</td>
<td>David A. Fredrickson</td>
<td>A Summary of Knowledge of the Central and Northern California Coastal Zone and Offshore Areas, Vol. III, Socioeconomic Conditions, Chapter 7: Historical &amp; Archaeological Resources</td>
</tr>
<tr>
<td>S-001978</td>
<td>1960</td>
<td>Anthony V. Aiello</td>
<td>The Islands of Contra Costa</td>
</tr>
<tr>
<td>S-002458a</td>
<td>1982</td>
<td>Suzanne Ramiller</td>
<td>Archaeological Overview of Humboldt and Del Norte Counties</td>
</tr>
<tr>
<td>S-002458b</td>
<td>1982</td>
<td>Roger H. Werner</td>
<td>Archaeological Overview of Mendocino and Lake Counties</td>
</tr>
<tr>
<td>S-002458c</td>
<td>1982</td>
<td>Suzanne Stewart</td>
<td>Archaeological Overview of Sonoma and Napa Counties</td>
</tr>
<tr>
<td>S-002458d</td>
<td>1982</td>
<td>Suzanne B. Stewart</td>
<td>Archaeological Overview of Alameda, Contra Costa, and Marin Counties</td>
</tr>
<tr>
<td>Report No.</td>
<td>Year</td>
<td>Author(s)</td>
<td>Title</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>S-002458e</td>
<td>1982</td>
<td>Neil Ramiller</td>
<td>Environmental Overview of The Northwest Region</td>
</tr>
<tr>
<td>S-005208</td>
<td>1977</td>
<td>Gregory Greenway and William E. Soule</td>
<td>Sacramento-San Joaquin Delta Investigations: Cultural Resources Reconnaissance</td>
</tr>
<tr>
<td>S-009462</td>
<td>1977</td>
<td>Teresa Ann Miller</td>
<td>Identification and Recording of Prehistoric Petroglyphs in Marin and Related Bay Area Counties</td>
</tr>
<tr>
<td>S-009583</td>
<td>1978</td>
<td>David W. Mayfield</td>
<td>Ecology of the Pre-Spanish San Francisco Bay Area</td>
</tr>
<tr>
<td>S-009795</td>
<td>1986</td>
<td>Thomas Lynn Jackson</td>
<td>Late Prehistoric Obsidian Exchange in Central California</td>
</tr>
<tr>
<td>S-012790</td>
<td>1991</td>
<td>Kenneth N. Owens</td>
<td>Sacramento-San Joaquin Delta, California: Historical Resources Overview</td>
</tr>
<tr>
<td>S-016660</td>
<td>1992</td>
<td>Jeffrey B. Fentress</td>
<td>Prehistoric Rock Art of Alameda and Contra Costa Counties, California</td>
</tr>
<tr>
<td>S-017835</td>
<td>1975</td>
<td>Judy Myers Suchey</td>
<td>Biological Distance of Prehistoric Central California Populations Derived from Non-Metric Traits of the Cranium</td>
</tr>
<tr>
<td>Report No.</td>
<td>Year</td>
<td>Author(s)</td>
<td>Title</td>
</tr>
<tr>
<td>-----------</td>
<td>------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>S-020395</td>
<td>1998</td>
<td>Donna L. Gillette</td>
<td>PCNs of the Coast Ranges of California: Religious Expression or the Result of Quarrying?</td>
</tr>
<tr>
<td>S-026374</td>
<td>2002</td>
<td>James M. Allan</td>
<td>Report of Archival and Historic Literature Research on Three Obstructions to Navigation on the Sacramento-San Joaquin River Delta, Contra Costa County, California</td>
</tr>
<tr>
<td>S-032596</td>
<td>2006</td>
<td>Randall Milliken, Jerome King, and Patricia Mikkelsen</td>
<td>The Central California Ethnographic Community Distribution Model, Version 2.0, with Special Attention to the San Francisco Bay Area, Cultural Resources Inventory of Caltrans District 4 Rural Conventional Highways</td>
</tr>
<tr>
<td>S-033600</td>
<td>2007</td>
<td>Jack Meyer and Jeff Rosenthal</td>
<td>Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4</td>
</tr>
</tbody>
</table>
**Table 2. Project Impacts and Effects to Cultural Resources within APE**

<table>
<thead>
<tr>
<th>Temporary Field Designation</th>
<th>Description</th>
<th>Recorded</th>
<th>Current Condition</th>
<th>NRHP/CRHR Status</th>
<th>Project Impact and Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Winter Island Barn</td>
<td>Redwood barn</td>
<td>Matt Walker, 2018</td>
<td>Poor</td>
<td>Not eligible</td>
<td>Removal; No Effect</td>
</tr>
<tr>
<td>Winter Island Levee System</td>
<td>Improved earthen levee system</td>
<td>Matt Walker, 2018</td>
<td>Good</td>
<td>Not eligible</td>
<td>Levee breaches; No Effect</td>
</tr>
<tr>
<td>Winter Island Central Drainage Ditch</td>
<td>Dredged channel</td>
<td>Matt Walker, 2018</td>
<td>Good</td>
<td>Not eligible</td>
<td>Levee breaches; No Effect</td>
</tr>
</tbody>
</table>
PHOTOGRAPHS

PHOTOGRAPH 1. EAST GABLE END OF WINTER ISLAND BARN

Refuse lumber in left-foreground, camera facing south. December 14, 2017

PHOTOGRAPH 2. WINTER ISLAND PERIMETER LEVEE

PHOTOGRAPH 3. WINTER ISLAND CENTRAL DRAINAGE DITCH

Appendix A:
NWIC Record
Search Confidential
Bound Separately
Appendix B:

Sacred Land File Search
March 16, 2018

Jacqueline Wait
California Department of Water Resources
Sent by Email: jwait@water.ca.gov
Number of Pages: 2

RE: Winter Island Tidal Habitat Restoration, Antioch North, Contra Costa County

Dear Ms. Wait:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the Sacred Lands File does not indicate the absence of Native American cultural resources in any APE.

I suggest you contact all of those listed, if they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: Sharaya.souza@nahc.ca.gov.

Sincerely,

[Signature]
Sharaya Souza
Staff Services Analyst
(916) 573-0168
Appendix C:

DPR Record Forms
Resource Name or #: (Assigned by recorder) Winter Island Barn

P1. Other Identifier:

*P2a. Location: □ Not for Publication □ Unrestricted □ a. County Contra Costa
and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
*P2b. USGS 7.5’ Quad Antioch North, CA Date 1953 T 2N R 1E Sec. 23 Sectioned: MID B.M.
c. Address City Zip
d. UTM: (Give more than one for large or linear resources) Zone 10S 603719.80 mE 4209689.46 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimals, degrees, etc., as appropriate)
The Winter Island Barn is located at the southern end of Winter Island in the Sacramento-San Joaquin Delta. The barn is situated on the east side of the island’s central drainage ditch, just above New York Slough.

*P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Winter Island Barn is a modest, rectangular utilitarian building situated near the southern end of Winter Island’s central drainage ditch (Photograph 1). The single story, front gable building has a low pitch roof covered with corrugated metal and narrow eaves (Photograph 2). The wood framed building has vertical redwood board siding and measures approximately 33 feet long (E/W) and 25 feet wide (N/S). A section of the roofing material on the north side of the barn is missing, revealing the partially deteriorated wood rafters. It appears that the majority of the wood siding is original, however large portions of the siding on its gable ends and its north wall is missing, exposing the building’s interior (Photograph 3). (see Continuation Sheet)

*P3b. Resource Attributes: (List attributes and codes) HP4 - Ancillary Building

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

Photograph 1: Winter Island Barn, facing east 12/14/2017

P6. Date Constructed/Age and Source:
□ Historic □ Prehistoric □ Both 1955 (Schmalenberger & Schmalenberger)

P7. Owner and Address:
State of California
1416 9th Street, Suite 425
Sacramento, CA 95814

P8. Recorded by: (Name, affiliation, and address)
Matt Walker
Cardno, Inc.
2890 Gateway Oaks Drive, Suite 200
Sacramento, CA 95833

P9. Date Recorded: December 14, 2017

P10. Survey Type: (Describe) Intensive

P11. Report Citation: (Cite survey report and other sources, or enter “none.”) Section 106 Analysis Report, Department of Water Resources, Winter Island Tidal Habitat Restoration Project, Contra Costa County, CA January 2016.

*Attachment: □ NONE □ Location 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):

DPR 523A (9/2013) *Required Information
The Winter Island Barn does not appear to meet the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR) because of a lack of significance under any of the criteria for listing. The resource does not appear to be a historic resource under Section 106 of the National Historic Preservation Act (NHPA) (as codified in 36 CFR Part 800), nor does it appear to be a historical resource for the purposes of CEQA (Section 15064.5[a][2]-[3]). See Continuation Sheets for comprehensive development context and evaluation of the documented resource.
P3a. Description (Continued):

The building is accessed by a large wood framed opening on its west side, with no door present, and lacks window openings. Remnants of knob and tube electrical wiring and lighting fixtures are present near the peak of its west gable end (Photograph 4). The barn's interior is in deteriorated condition, with exposed beams and wood rafters, loose or missing wood plank floor boards, and modern lighting fixtures (Photograph 5).

B10. Significance (Continued):

Historic Context

The Winter Island Barn was constructed in 1895 by the Co-operative Brotherhood of Winter Island (the Brotherhood) to support their short-lived agricultural operations on the island. Located at the south end of Winter Island, at the confluence of the Sacramento and San Joaquin rivers in the Sacramento-San Joaquin Delta (the Delta), the development of the Winter Island Barn is reflective of both the reclamation and transformation of the marshy Delta land into highly productive agricultural land as well as the wave of socialist and utopian ideology that spread across California and the nation in the late-nineteenth century. Between 1850 and 1900 at least 17 utopian colonies were established in California. Some of these colonies lasted only a few years while others lasted several decades. The Brotherhood constructed the Winter Island Barn to support their brief agricultural efforts on the island, which spanned from about 1895 to 1898, when the colony effectively ceased operation. While the barn is representative of their failed efforts, the Brotherhood did not make a significant contribution to the development of utopian communities in California or the nation.

Early Development and Reclamation of the Delta and Winter Island

Following James Marshall’s gold discovery along the South Fork of the American River in 1848, a mass western migration to California began. As word of gold discovery spread across the nation, California's population grew exponentially, exploding from approximately 100,000 in 1840 to 200,000 by 1852. This dramatic population influx fundamentally shaped the development of Contra Costa County and its Delta islands. As new residents poured into California, they generally flocked first to San Francisco before traveling by boat to gateway cities, including Stockton, Sacramento, and Marysville, for supplies and stories of riches before pushing east into the foothill “Gold Country.” These gold-seeking prospectors first encountered the dense, tule-covered marshlands of the Delta while traveling by boat on their voyage to the goldfields.1

---

Even as the Gold Rush ebbed, a growing number of frustrated miners gave up their efforts in the goldfields and turned to tilling the land for quicker riches. With California’s sudden population increase, and a lack of farmed agricultural land, the demand for produce grew rapidly and so too did the price of these goods. Eager to stake their claim, settlers quickly began cultivating the land along the arterial waterways of the Sacramento and San Joaquin rivers as well as the creeks and streams that flowed into them. Early settlers were attracted to the land surrounding the natural, wooded levees of the Delta along the Sacramento River which allowed for modest flood protection, access to ready supplies of timber, rich soil, a year round supply of water, and afforded easy shipment of products to consumers. By the early 1850s, much of the northern stretches of the Delta, including the areas between Clarksburg and Steamboat Slough, as well as its eastern region near Stockton, were under cultivation. Despite the early development of certain stretches of the Delta, much of the remainder was seemingly uninhabitable and developed slowly, largely resulting from the lack of timber sources and low lying islands without prominent banks which were prone to flooding.

By the early 1850s, reclamation efforts were underway across much of the Delta in an attempt to harness the marshy Delta islands for cultivation. The low-lying, tule-covered bars were naturally prone to flooding, often inundated by as much as a foot of water at high tide and up to a few feet as snow melted in the Sierra Nevada in late spring. In 1855, following the passage of the Swamp Land Act of 1850, which gave the states title to all swamp and overflow land, the California Legislature authorized the sale of marshy Delta land under their control at low prices with the purchaser’s commitment to reclaim the land for agricultural development. Early settlers first established low “shoestring” levees, so named for their modest size, in the northern stretches of the Delta on Grand, Tyler, and Merritt islands. These short, simple earthen levees were typically constructed on top of existing natural levees; however, they soon proved insufficient at protecting the low-lying land from the powerful floodwaters and routinely gave way, flooding the crops below. As levees gave way, landowners rebuilt taller and wider structures in an attempt to protect their land. The introduction of the mechanical dredges, specifically the clamshell dredge, by the 1870s, expedited the reclamation of marshy Delta land, as dredges could do the work of many men at a fraction of the cost.

---

2 John Thompson, “The Settlement Geography of the Sacramento-San Joaquin Delta, California,” PhD diss., (Stanford University, 1957), 133-139; Thompson, “How the Sacramento-San Joaquin Delta was Settled.”
Once levees were constructed and drainage ditches cut through the Delta’s many marshy islands, the Delta quickly transformed into a thriving agricultural region. Delta land proved ideal for growing a variety of crops, with its fertile soil, ready sources for irrigation, and optimal climate. Further, Delta farmers had an advantageous location, situated in close proximity to both the markets of San Francisco and Sacramento. Delta farmers initially grew several low maintenance crops that could withstand moist conditions, including potatoes, onion, and beans in addition to raising beef cattle. By the 1870s, with the Delta’s levee system largely completed, Delta farmers began to plant orchards, with peaches and pears emerging as the dominant fruits, in addition to a variety of grain crops including alfalfa, wheat, and rye. Dairying emerged as a popular agricultural pursuit, however the regions sporadic flooding made raising cattle in many locations. By the turn of the twentieth century, tomatoes, celery, and asparagus emerged as prominent crops, and the Delta had transformed into one of the leading agricultural regions in the state.4

Early Development of Winter Island

The settlement and development of Winter Island closely follows the development patterns of other small Delta islands. When European settlers first passed through the Delta on their voyage to the goldfields, Winter Island was a marshy, tule-covered piece of land. Early maps of the region labeled the island as “Ruckels Island.” In 1864, in accordance with the Swamp Land Act of 1850, Captain George Washington Kimball applied to purchase a large swatch of swamp land just north of Antioch at the confluence of the Sacramento and San Joaquin rivers. A native of Maine, Kimball led the first group of settlers to the Antioch area in 1850. After the county surveyor mapped the land, Kimball patented the swamp land in 1872 and took control of an approximately 650 acre parcel including what would later be named Winter Island. Prior to his official acquisition of the land, Kimball was likely already using Winter Island for cattle grazing, making only minor improvements to the land.5

In 1873, just one year after acquiring the patent for the island, Kimball sold his land to William Winter, for whom the island is named. Mr. Winter, a native of New Jersey, used the island as pasture land for a small herd of cattle. Winter constructed a modest home on the island as well as barns and other outbuildings. By the mid-1880s, Winter had moved to San Francisco and put the island up for sale, noting that the island stood about four feet above sea level and was, “covered with a luxuriant growth of nutritious grasses...affording excellent pasturage for hundreds of head of stock.” After a few years on the market, Mr. Winter sold the entirety of Winter Island to Erastus Kelsey in 1887.6

The Co-operative Brotherhood of Winter Island and the Winter Island Barn

For a brief period in the 1890s, Winter Island was home to a socialist utopian colony known as the Co-operative Brotherhood of Winter Island (the Brotherhood). Between 1890 and 1895, at least seventeen utopian colonies organized in California, more than any other state in the nation. Some lasted only a few years, while others functioned for decades. These colonies formed across the state in Visalia with Kaweah,

---

4 Thompson, “The Settlement Geography of the Sacramento-San Joaquin Delta, California,” 307-312. Thompson, “How the Sacramento-San Joaquin Delta was Settled.”

*Required information
Sonoma County with Alttruria, and in the Santa Cruz Mountains with the Holy City among others. The late nineteenth century was a period of drastic social and political change, as the push for unionization, women's suffrage, prohibition, and the fight to break up monopolies filled the headlines. These colonies formed in an attempt to escape the ills of capitalism and city life for a rural, pastoral life where people worked cooperatively for the betterment of all.  

While short lived, Kelsey's Brotherhood is representative of the wave of socialism that spread across California and the nation in the late-nineteenth century. Erastus Kelsey, an Oakland resident and leader of the Oakland Nationalist Club, a branch of the nationwide socialist organization with utopian pursuits, desired to found a co-operative colony. Inspired by his time in Merced living near the neighboring Kaweah Colony, Kelsey planned to establish a utopian co-operative on his recently purchased Winter Island with the assistance of Kate Lockwood Nevins, a Bay Area suffragist and organizer for the Farmers' Alliance. Formed in 1893, the Co-operative Brotherhood of Winter Island organized to pursue social and economic progress through cooperation amongst its members. Led by its first president, Andrew Jackson Gregg, publisher of *The Prohibitionist* and candidate for Lieutenant Governor on the Populist Party ticket in the 1894 California election, the Brotherhood originally consisted of 100 members, most of whom resided in the Bay Area. Each member paid a required $1.25 fee to join the colony and an additional $5 each month to demonstrate their commitment to co-operation and help repay Kelsey, now the group's treasurer, for the land he provided the colony.  

The Brotherhood made the first significant improvements to Winter Island, including the construction of the subject resource, the Winter Island Barn. Although no more than 30 members ever lived and worked on the island at a given time, work on bolstering the islands natural levees began almost immediately. By 1897, the Brotherhood had enclosed approximately half of the island through the construction of these and a quarter miles of levees. Of the island's 626 acres, 200 were plowed with 130 producing a variety of crops including buckwheat, onions, corn, cabbage, tomatoes, alfalfa, strawberries, and potatoes which they sold to local markets. A small orchard was also planted. Located at the south end of the island along New York Slough, the Brotherhood constructed the modest, redwood frame Winter Island Barn in 1895 to support their agricultural endeavors on the island. The barn was likely used to store hay and other products grown on the island (Figure 1). 

---


9 "Winter Island Colony," *San Francisco Call*, July 28, 1895; Schmaelenberge and Schmaelenberge, *Winter Island*, 6-10, 30-33; Hine, *California's Utopian Colonies*, 142-144.
Despite their efforts, the Brotherhood fell victim to the national economic turbulence that happened to coincide with their formation. The Panic of 1893 and the subsequent prolonged depression that followed made making the monthly $5 payments to the Brotherhood incredibly challenging. By 1896, the Brotherhood’s membership had drastically declined, leaving 22 vacancies, and by the following year, all of the original officers had resigned. The Brotherhood abandoned its plan to build levees around the entirety of the island in an attempt to save money, and instead walled the island at its midway point. In its waning years, the Brotherhood made several attempts to accrue revenue by purchasing a grocery store in Oakland from the Socialist’s Co-operative Association where they sold their products and by stabling horses for the San Francisco Fire Department. The subject barn likely continued to be used for hay storage during this time. The Brotherhood effectively ceased operation in 1898, and in 1901, defaulted on their mortgage and ownership of the island returned to Kelsey. Almost as quickly as the Brotherhood began, the utopian experiment on a small Delta island had failed.13

Later Use of the Island

Since the failed attempt at establishing a utopian colony on the island, ownership of Winter Island has between several duck hunting clubs. In 1909, Edward McDonald, who acquired Winter Island the previous year from Kelsey, sold the island to the Winter Island Company. The Winter Island Company, founded by several well-to-do Bay Area residents, including James Lanagan, a lawyer and resident of Palo Alto; Robert Irving Bentley, chairman of the board of the California Packing Company and resident of San Francisco; and

13 Winter Island: The Delta’s Attempts at Eden, originally published in the San Francisco Examiner, August 16, 1896.
11 “This Altraria has not Failed,” San Francisco Call, December 9, 1896, 11; “Liable to be a Failure,” Sacramento Daily Record-Union, January 9, 1898, 8; Schmalenberger and Schmalenberger, Winter Island, 6-10, 30-33; Hine, California’s Utopian Colonies, 142-144.
Louis S. Beedy, a San Francisco attorney, utilized the marshy, partially reclaimed Delta island for duck hunting. Since the 1870s, duck hunting emerged as a popular hobby and pastime for wealthy Bay Area businessmen. The marshy, tule-covered land of the Delta proved ideal for duck hunting, and private duck hunting clubs were established across the region. In 1920, a second duck hunting club named the Winter Island Blub purchased the island, including the subject barn. Owned by several wealthy Bay Area businessmen, the club operated until 1939, when it was sold to two of its members. The knob and tube electrical wiring in the Winter Island Barn was likely installed under the ownership of these two early duck clubs, as the use of the barn shifted from storing agricultural products to storing equipment used by these duck hunting clubs.¹²

Six Brothers Ranch acquired the island in 1949. Renamed Winter Island Farms under a new partnership formed in 1950, the group was originally composed of members of the Pacini family. Winter Island Farms made several attempts at raising livestock over the years, likely utilizing the barn for storage, but the island continued to be used largely for duck hunting. Members of Winter Island Farms organized Reclamation District 2122 in 1982 to oversee maintenance of the island’s levees. In 2016, the State of California purchased the majority of Winter Island, including Winter Island Barn. The barn is currently unused and in deteriorating condition.¹³

Evaluation

The inventoried Winter Island Barn does not appear eligible for listing in the NRHP under Criterion A or CRHR under Criterion 1 because it is not representative of a significant contribution to the development of the utopian movement in California of the nation. The Winter Island Barn was constructed in 1895 by the Co-operative Brotherhood of Winter Island to support their brief agricultural efforts on the island. Between 1850 and 1950, at least 17 utopian colonies were established across California, with their length of existence varying from a few years to a few decades. The Brotherhood made an unsuccessful attempt, hampered in part by the Panic of 1893, which failed to achieve its goals and did not play a significant role in the development of utopian communities in California or the nation. Additionally, the barns later use by the various duck hunting clubs that took ownership of the island was not linked to any significant event; duck hunting clubs in the Delta were common by the early twentieth century. As such, it does not appear to be significant in relation to the development of significant events in local, state, or national history.

Under NRHP Criterion B or CRHR Criterion 2, there is no evidence that the Winter Island Barn has any important associations with any person or persons who made significant contributions to history at the local, state, or national level. Research indicated that the Winter Island Barn was constructed by the Co-operative Brotherhood of Winter Island in 1895 to support their short-lived agricultural efforts on the island. While figures such as Erastus Kelsey, Kate Nevins, and Andrew Jackson Gregg achieved modest recognition in the socialist movement in the Bay Area in the late-19th century and were involved with the Brotherhood, research did not reveal that they had any direct association with this barn. None of the figures associated
with the duck hunting clubs who owned the barn in later years was identified as having any significant contributions to history. The barn was instead used for a short period for agricultural pursuits by members of the Brotherhood and adapted for various uses by later owners of the resource. As such, it does not appear that there is the potential for significant associations in this regard.

The Winter Island Barn does not appear eligible for the NRHP under Criterion C or CRHR under Criteria 3 as it is not an important example of any type, period, or method of construction or engineering and it does not represent the important work of a master engineer. The Winter Island Barn is a common example of a vernacular, wood frame barn. Since the mid- to late-nineteenth century, the agriculture industry has dominated the economy of the Delta, and as a result, barns and other outbuildings were constructed to support these efforts. As Delta islands were reclaimed for agricultural production, crops were planted and barns erected. The subject resource is a standard example of a vernacular wood frame barn and generally lacks any significant design or engineering associations that would qualify it for listing under this Criterion.

Under NRHP Criterion D or CRHR Criterion 4, the Winter Island Barn is not significant as a source, or likely source, of important information pertaining to history, building materials, construction techniques, or advancement in barn design. Vernacular barns like Winter Island barn are well documented and it is one of many vernacular barns throughout Contra Costa County, California, and the nation.

Though the studied resource retains sound integrity in all seven aspects, its lack of overall significance precludes eligibility for listing in the NRHP, CRHR, or recognition as a historical resource for the purposes of CEQA.
Photographs (Continued):


State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

1 of 10

*Resource Name or #: (Assigned by recorder) Winter Island Perimeter Levee

P.1. Other Identifier: ______________________

*P.2. Location: □ Not for Publication □ Unrestricted □ a. County Contra Costa
and (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

*b. USGS 7.5' Quad Antioch North, CA Date 1953 T 2 N R 11 E Sec 17 Unsectioned M.D.B.M.
   c. Address Qty Zip
   d. UTM: (Give more than one for large and/or linear resources) Zone 10S 105 610 676.74 mE/ 4209666.45 mN (south end of island)
      Zone 10S 105 610 686.62 mE/ 4212374.55 mN (north end of island)
   e. Other Locational Data: (e.g., parcel #, direction to resource, elevation, decimal degrees, etc. as appropriate)

The Winter Island Perimeter Levee is located along the outer edge of Winter Island in the Sacramento-San Joaquin Delta.

*P.3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Winter Island Perimeter Levee is a simple earthen levee that wraps around the outer edge of Winter Island (Photograph 1). Situated at the confluence of the Sacramento and San Joaquin rivers, just north of Pittsburg, CA, the Winter Island Perimeter Levee is designed to aid with flood prevention. The earthen berm was constructed in phases, and the levee's design is reflective of this development pattern. The southern half of the levee is the oldest portion of the levee and it is more pronounced and better defined than the northern half (Photograph 2). The levee measures approximately 10 feet across at its top, and varies between tapering off into the water and steep, eroded drop offs on the water side.

*P.3b. Resource Attributes: (List attributes and codes) HP11 - Engineering Structure

P.4a. Photograph or Drawing (Photograph required for buildings, structures, and objects.)

*P.4. Resources Present: □ Building □ Structure □ Object □ Site □ District □ Element of District □ Other (Isolates, etc.)

P.5b. Description of Photo: (view, date, accession #)
Photograph 1: South end of Winter Island Perimeter Levee, facing east 12/14/2017

*P.6. Date Constructed/Age and Source:
□ Historic □ Prehistoric □ Both Ca. 1897 (Schmalenberger & Schmalenberger)

*P.7. Owner and Address:
California Department of Water Resources
1416 9th Street, Suite 425
Sacramento, CA 95814

*P.8. Recorded by: (Name, affiliation, and address)
Matt Walker
Cardno, Inc.
2891 Gateway Oaks Drive, Suite 200
Sacramento, CA 95833

*P.9. Date Recorded: December 14, 2017

*P.10. Survey Type: (Describe) Intensive

*P.11. Report Citation: (Give survey report and other sources, or enter "none." Section 106 Analysis Report, Department of Water Resources, Winter Island Tidal Habitat Restoration Project, Contra Costa County, CA, January 2018.

*Required information

DPR 523A [9/2013]
The Winter Island Perimeter Levee does not appear to meet the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR) because of a lack of significance under any of the criteria for listing. The resource does not appear to be a historic resource under Section 106 of the National Historic Preservation Act (NHPA) (as codified in 36 CFR Part 800), nor does it appear to be a historical resource for the purposes of CEQA (Section 15064.5 [a][2][3]). See Continuation Sheets for comprehensive development context and evaluation of the documented resource.
B10. Significance (Continued):

Historic Context

Initial development of the Winter Island Perimeter Levee dates to the mid-1890s, when the Co-operative Brotherhood of Winter Island (the Brotherhood) constructed a 3-mile levee span to support their short-lived agricultural operations on the island. Located at the confluence of the Sacramento and San Joaquin rivers in the Sacramento-San Joaquin Delta (the Delta), Winter Island and the development of its Perimeter Levee is reflective of both the reclamation and transformation of the marshy Delta land into highly productive agricultural land as well as the wave of socialist and utopian ideology that spread across California and the nation in the late-nineteenth century. The Brotherhood began construction of the Winter Island Perimeter Levee to support their brief agricultural efforts on the island, which spanned from about 1895 to 1898, when the colony effectively ceased operation. By the mid-1890s, when the Brotherhood began construction of the Winter Island Perimeter Levee, reclamation efforts in the Delta had been ongoing for nearly half a century. The development of the Winter Island Perimeter Levee represents a largely failed, late-nineteenth century effort to reclaim one of the dozens of Delta islands.

Early Development and Reclamation of the Delta and Winter Island

Following James Marshall’s gold discovery along the South Fork of the American River in 1848, a mass Western migration to California began. As word of gold discovery spread across the nation, California’s population grew exponentially, exploding from approximately 100,000 in 1849 to 200,000 by 1852. This dramatic population influx fundamentally shaped the development of Contra Costa County and its Delta islands. As new residents poured into California, they generally flocked first to San Francisco before traveling by boat to gateway cities, including Stockton, Sacramento, and Marysville, for supplies and stories of riches before pushing east into the foothill “Gold Country.” These gold-seeking prospectors first encountered the dense, silt-covered marshlands of the Sacramento-San Joaquin Delta while traveling by boat on their voyage to the goldfields.1

---

Even as the Gold Rush ebbed, a growing number of frustrated miners gave up their efforts in the goldfields and turned to tilling the land for quicker riches. With California’s sudden population increase, and a lack of farmed agricultural land, the demand for produce grew rapidly and so too did the price of these goods. Eager to stake their claim, settlers quickly began cultivating the land along the arterial waterways of the Sacramento and San Joaquin rivers as well as the creeks and streams that flowed into them. Early settlers were attracted to the land surrounding the natural, wooded levees of the Delta along the Sacramento River which allowed for modest flood protection, access to ready supplies of timber, rich soil, a year round supply of water, and afforded easy shipment of products to consumers. By the early 1850s, much of the northern stretches of the Delta, including the areas between Clarkburg and Steamboat Slough, as well as its eastern region near Stockton, were under cultivation. Despite the early development of certain stretches of the Delta, much of the remainder was seemingly uninhabitable and developed slowly, largely resulting from the lack of timber sources and low lying islands without prominent banks which were prone to flooding.2

By the early 1850s, reclamation efforts were underway across much of the Delta in an attempt to harness the marshy Delta islands for cultivation. The low-lying, tule-covered bars were naturally prone to flooding, often inundated by as much as a foot of water at high tide and up to a few feet as snow melted in the Sierra Nevada in late spring. In 1855, following the passage of the Swamp Land Act of 1850, which gave the states title to all swamp and overflow land, the California Legislature authorized the sale of marshy Delta land under their control at low prices with the purchaser’s commitment to reclaim the land for agricultural development. Early settlers first established low “shoestring” levees, so named for their modest size, in the northern stretches of the Delta on Grand, Tyler, and Merritt islands. These short, simple earthen levees were typically constructed on top of existing natural levees; however, they soon proved insufficient at protecting the low-lying land from the powerful floodwaters and routinely gave way, flooding the crops below. As levees gave way, landowners rebuilt taller and wider structures in an attempt to protect their land.3

Technological advances in the late-nineteenth century helped further fuel the reclamation of Delta land. By the late-1870s, the introduction of mechanical dredges, specifically the clamshell dredge, expedited the reclamation of marshy Delta land. Prior to the introduction of the dredge, levees construction was labor intensive and largely utilized readily available soil from the farmland. Dredges dug up sediment from the riverbed to form the levee rather than using the fertile topsoil from the island itself. These mechanical dredges were also utilized in the development of drainage ditches to aid in the continued drainage of reclaimed land.4

---

1 John Thompson, “The Settlement Geography of the Sacramento-San Joaquin Delta, California,” PhD diss. (Stanford University, 1957), 133-139. Thompson, “How the Sacramento-San Joaquin Delta was Settled.”


Once levees were constructed and drainage ditches cut through the Delta's many marshy islands, the Delta quickly transformed into a thriving agricultural region. Delta land proved ideal for growing a variety of crops, with its fertile soil, ready sources for irrigation, and optimal climate. Further, Delta farmers had an advantageous location, situated in close proximity to both the markets of San Francisco and Sacramento. Delta farmers initially grew several low maintenance crops that could withstand moist conditions, including potatoes, onion, and beans in addition to raising beef cattle. By the 1870s, with the Delta's levee system largely completed, Delta farmers began to plant orchards, with peaches and pears emerging as the dominant fruits, in addition to a variety of grain crops including alfalfa, wheat, and rye. Dairying emerged as a popular agricultural pursuit, however the regions sporadic flooding made raising cattle in many locations. By the turn of the twentieth century, tomatoes, celery, and asparagus emerged as prominent crops, and the Delta had transformed into one of the leading agricultural regions in the state.  

*Early Development of Winter Island*  

The settlement and development of Winter Island closely follows the development patterns of other small Delta Islands. When European settlers first passed through the Delta on their voyage to the goldfields, Winter Island was a marshy, tule-covered piece of land. Early maps of the region labeled the island as "Ruckels Island." In 1864, in accordance with the Swamp Land Act of 1850, Captain George Washington Kimball applied to purchase a large swatch of swamp land just north of Antioch at the confluence of the Sacramento and San Joaquin rivers. A native of Maine, Kimball led the first group of settlers to the Antioch area in 1850. After the county surveyor mapped the land, Kimball patented the swampland in 1872 and took control of an approximately 650 acre parcel including what would later be named Winter Island. Prior to his official acquisition of the land, Kimball was likely already using Winter Island for cattle grazing. Kimball made only minor improvements to the land and likely constructed low "shoestring" levees.  

In 1873, just one year after acquiring the patent for the island, Kimball sold his land to William Winter, for whom the island is named. Mr. Winter, a native of New Jersey, used the island as pastureland for a small herd of cattle. Winter constructed a modest home on the island as well as barns and other outbuildings. By the mid-1890s, Winter had moved to San Francisco and put the island up for sale, noting that the island stood about four feet above sea level and was, "covered with a luxuriant growth of nutritious grasses...affording excellent pastureage for hundreds of head of stock." After a few years on the market, Mr. Winter sold the entirety of Winter Island to Erastus Kelsey in 1887.  

*The Co-operative Brotherhood of Winter Island and the Development of a Perimeter Levee*  

For a brief period in the 1890s, Winter Island was home to a socialist utopian colony known as the Cooperative Brotherhood of Winter Island (the Brotherhood). Between 1890 and 1900, at least seventeen utopian colonies organized in California, more than any other state in the nation. Some lasted only a few years, while others functioned for decades. These colonies formed across the state in Visalia with Kaweah,
Sonoma County with Alturria, and in the Santa Cruz Mountains with the Holy City among others. The late nineteenth century was a period of drastic social and political change, as the push for unionization, women’s suffrage, prohibition, and the fight to break up monopolies filled the headlines. These colonies formed in an attempt to escape the ills of capitalism and city life for a rural, pastoral life where people worked cooperatively for the betterment of all.  

While short lived, Kelsey’s Brotherhood is representative of the wave of socialism that spread across California and the nation in the late-nineteenth century. Erastus Kelsey, an Oakland resident and leader of the Oakland Nationalist Club, a branch of the nationwide socialist organization with utopian pursuits, desired to found a co-operative colony. Inspired by his time in Merced living near the neighboring Kaweah Colony, Kelsey planned to establish a utopian co-operative on his recently purchased Winter Island with the assistance of Kate Lockwood Nevin, a Bay Area suffragist and organizer for the Farmers’ Alliance. Formed in 1893, the Co-operative Brotherhood of Winter Island organized to pursue social and economic progress through cooperation amongst its members. Led by its first president, Andrew Jackson Gregg, publisher of The Prohibitionist and candidate for Lieutenant Governor on the Populist Party ticket in the 1894 California election, the Brotherhood originally consisted of 100 members, most of whom resided in the Bay Area. Each member paid a required $1.25 fee to join the colony and an additional $5 each month to demonstrate their commitment to co-operation and help repay Kelsey, now the group’s treasurer, for the land he provided the colony.  

The Brotherhood made the first significant improvements to Winter Island, including the early development of the subject resource, the Winter Island Perimeter Levee. Although no more than 30 members ever lived and worked on the island at a given time, work on bolstering the island’s natural levees began almost immediately. The group planned to construct a levee around the entirety of the nearly 650-acre island; however, with a small labor force, the work proved to be slow and arduous. By 1897, the Brotherhood had enclosed approximately half of the island through the construction of three and a quarter miles of earthen levees. The development of the levee allowed for the transformation of the island into productive agricultural land. Of the island’s 636 acres, 200 were plowed with 150 producing a variety of crops including buckwheat, onions, corn, cabbage, tomatoes, alfalfa, strawberries, and potatoes which they sold to local markets. A small orchard was also planted. The Brotherhood constructed a modest, redwood frame barn in 1895 at the south end of the island along New York Slough, adjacent to the levee, to support their agricultural endeavors on the island. The barn was likely used to store hay and other products grown on the island (Figure 1).  

[^9]: Schmalenberger and Schmalenberger, Winter Island, 3-10, 26-30; “It’s Utopian, Cooperation to be Tried on a Big Scale,” Oakland Tribune, September 7, 1893; Hine, California’s Utopian Colonies, 142-144.
[^10]: “Winter Island Colony,” San Francisco Call, July 28, 1895, 17; Schmalenberger and Schmalenberger, Winter Island, 6-10, 30-33; Hine, California’s Utopian Colonies, 142-144.

DPR 523L (9/2013)
Figure 2. Sketch showing members of the Brotherhood in Winter Island Barn, July 4, 1896.¹¹

Despite their efforts, the Brotherhood fell victim to the national economic turbulence that happened to coincide with their formation. The Panic of 1893 and the subsequent prolonged depression that followed made making the monthly $5 payments to the Brotherhood incredibly challenging. By 1896, the Brotherhood’s membership had drastically declined, leaving 22 vacancies, and by the following year, all of the original officers had resigned. The Brotherhood abandoned its plan to build levees around the entirety of the island in an attempt to save money, and instead walled the island at its midway point. In its waning years, the Brotherhood made several attempts to accrue revenue by purchasing a grocery store in Oakland from the Socialist’s Co-operative Association where they sold their products and by stabling horses for the San Francisco Fire Department. The Brotherhood effectively ceased operation in 1898, and in 1901, defaulted on their mortgage and ownership of the island returned to Kelsey. Almost as quickly as the Brotherhood began, the utopian experiment on a small Delta island had failed.¹²

Later Use of the Island and Levee Extension

Since the failed attempt at establishing a utopian colony on the island, ownership of Winter Island has passed between several duck hunting clubs. In 1909, Edward McDonald, who acquired Winter Island the previous year from Kelsey, sold the island to the Winter Island Company. The Winter Island Company, founded by several well-to-do Bay Area residents, including James Lanagan, a lawyer and resident of Palo Alto; Robert Irving Bentley, chairman of the board of the California Packing Company and resident of San Francisco; and Louis S. Beedy, a San Francisco attorney, utilized the marshy, partially reclaimed Delta island

¹¹ Winter Island: The Delta’s Attempts at Eden, originally published in the San Francisco Examiner, August 16, 1896.
¹² “This Altruria has not Failed,” San Francisco Call, December 9, 1896; “Liable to be a Failure,” Sacramento Daily Record-Union, January 9, 1898; 8; Schmalenberger and Schmalenberger, Winter Island, 6-10, 30-33; Hine, California’s Utopian Colonies, 142-144.
for duck hunting. Since the 1870s, duck hunting emerged as a popular hobby and pastime for wealthy Bay Area businessmen. The marshy, island-covered land of the Delta proved ideal for duck hunting, and private duck hunting clubs were established across the region. In 1920, a second duck hunting club named the Winter Island Club purchased the island. Owned by several wealthy Bay Area businessmen, the club operated until 1939, when it was sold to two of its members.13

By 1953, the Winter Island Perimeter Levee was complete. Construction of the northern half of the Perimeter Levee was likely completed under the direction of either the Winter Island Company or the Winter Island Club. It is plausible that the levee was completed in the early 1930s around the same period that the central drainage ditch was constructed.14

Six Brothers Ranch acquired the island in 1949. Renamed Winter Island Farms under a new partnership formed in 1950, the group was originally composed of members of the Pacini family. Winter Island Farms made several attempts at raising livestock over the years, but the island continued to be used largely for duck hunting. Members of Winter Island Farms organized Reclamation District 2122 in 1962 to oversee maintenance of the island's levees. The Winter Island Perimeter Levee has remained largely unchanged since its completion, with the exception of the addition of protective riprap along stretches of the levee by the Army Corps of Engineers in 1983. In 2016, the State of California purchased the majority of Winter Island, including most of the Winter Island Perimeter Levee, with the intention of restoring unrestricted tidal connectivity to benefit native fish species. The Winter Island Perimeter Levee continues to serve its designed purpose of preventing water from flooding the land.15

Evaluation

The inventoried Winter Island Perimeter Levee does not appear eligible for listing in the NRHP under Criterion A or Criterion 1 because it is not representative of a significant contribution to the development of reclamation efforts in the Delta, California, or the nation. Construction of earthen levees in the Delta dates to the Gold Rush era, with the first levee constructed on Grand Island in 1849. By the 1870s, with the emergence of dredges as common tools in levee construction, the pace of land reclamation had escalated and large scale farming operations became common in the Delta. Construction of the subject Winter Island Perimeter Levee began in approximately 1893, with the construction of its first phase ending in 1897 with the entirety of the levee not completed for several decades later. While the development of the subject levee is reflective of the reclamation efforts that were ubiquitous across the Delta in the mid- to late-nineteenth centuries, it does not play a significant role in these efforts or result in the establishment of significant agricultural efforts. Rather, the development of the Winter Island Perimeter Levee represents a relatively late reclamation attempt that resulted in a short-lived agricultural operation. As such, it does not

---


DPR 523L (9/2013)

*Required Information
appear to be significant in relation to the development of reclamation efforts in the Delta or the development of agriculture in the region.

Under NRHP Criterion B or CRHR Criterion 2, there is no evidence that the Winter Island Perimeter Levee has any important associations with any person or persons who made significant contributions to history at the local, state, or national level. Research indicated that the initial development of the Winter Island Perimeter Levee was constructed by the Co-operative Brotherhood of Winter Island in the 1890s to support their short-lived agricultural efforts on the island. While figures such as Erastus Kelsey, Kate Nevins, and Andrew Jackson Gregg achieved modest recognition in the socialist movement in the Bay Area in the late-19th century and were involved with the Brotherhood, research did not reveal that they had any direct association with the development of the levee. None of the figures associated with the duck hunting clubs who owned Winter Island in later years were identified as having any significant contributions to history. As such, it does not appear that there is the potential for significant associations in this regard.

The Winter Island Perimeter Levee does not appear eligible for the NRHP under Criterion C or CRHR under Criterion 3 as it is not an important example of any type, period, or method of construction or engineering and it does not represent the important work of a master engineer. The Winter Island Perimeter Levee is a common example of an earthen levee. Since the mid- to late-nineteenth century, the agriculture industry has dominated the economy of the Delta, and as a result, levees were constructed to support the large-scale reclamation efforts. The subject resource is a typical example of an earthen levee, a ubiquitous resource in the Delta, and generally lacks any significant design or engineering associations that would qualify it for listing under this Criterion.

Under NRHP Criterion D or CRHR Criterion 4, the Winter Island Perimeter Levee is not significant as a source, or likely source, of important information pertaining to history, building materials, construction techniques, or advancement in levee design. Earthen levees like the Winter Island Perimeter Levee are well documented and it is one of countless levees throughout Contra Costa County, California, and the nation.

Though the studied resource retains sound integrity in all seven aspects, its lack of overall significance precludes eligibility for listing in the NRHP, CRHR, or recognition as a historical resource for the purposes of CEQA.
Photographs (Continued):

State of California
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Other Listings
Review Code Reviewer Date

Resource Name or #: (Assigned by recorder) Winter Island Central Drainage Ditch

P1. Other Identifier:

P2. Location: □ Not for Publication □ Unrestricted *a. County Contra Costa
and (P2c, P2e, and P2b or P2d. Attach a Location Map if necessary.)

*b. USGS 7.5' Quad Antioch North, CA Date 1953 T 2N R 1E Sec Unsectioned: M1 B.M.
c. Address City Zip
d. UTM: (Give more than one for large and/or linear resources) Zone 10S 6901708.08 mE/ 4209677.18 mN (south end);
Zone 10S 6904666.07 mE/ 421377.78 mN (north end)
e. Other Locational Data: e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate.

The Winter Island Central Drainage Ditch extends from the north end to the south end of Winter Island in the Sacramento-San Joaquin Delta.

P3a. Description: (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)
The Winter Island Central Drainage Ditch (Central Drainage Ditch) is a simple earthen ditch that cuts across the length of Winter Island (Photograph 1). The ditch extends approximately 1.9 miles, traveling generally southeast from the island’s north end to its south end and typically measures between 10 and 40 feet wide. The banks of the ditch are covered with dense tule growth. The flow of water into and out of the ditch is controlled by a water control system that consists of two modern sluice gates located at the island’s north and south ends (Photograph 2). The sluice gates are built into the main levee and consist of modern boards placed on either side of the levee with grated steel walkways leading from the levee to a handwheel on both sides of the levee (Photograph 3). A modern wood dock extends from the north side of the south sluice gate (Photograph 4).

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

P3b. Resource Attributes: (List attributes and codes)

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

Photograph 1: Winter Island Central Drainage Ditch facing northwest 12/14/2017

P6. Date Constructed/Age and Source:
□ Historic □ Prehistoric □ Both Ca. 1910 (Schmalenberger & Schmalenberger)

P7. Owner and Address:
State of California
1416 9th Street, Suite 425
Sacramento, CA 95814

P8. Recorded by: (Name, affiliation, and address)
Matt Walker
Cardno, Inc.
2890 Gateway Oaks Drive, Suite 200
Sacramento, CA 95833

P9. Date Recorded: December 14, 2017

Survey Type: (Describe) Intensive

Report Citation: (Cite survey report and other sources, or enter “none.” Section 106 Analysis Report, Department of Water Resources, Winter Island Tidal Habitat Restoration Project, Contra Costa County, CA, January 2013.

*DPR 523A (9/2013)*

*Required information*
<table>
<thead>
<tr>
<th>Resource Name or # (Assigned by recorder)</th>
<th>Winter Island Central Drainage Ditch</th>
</tr>
</thead>
</table>

*Attachments: [ ] NONE  [ ] Location 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):
State of California - The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
BUILDING, STRUCTURE, AND OBJECT RECORD

*Resource Name or # (Assigned by recorder) Winter Island Central Drainage Ditch

Page 2 of 11

B1. Historic Name: Winter Island Central Drainage Ditch
B2. Common Name: Winter Island Central Drainage Ditch
B3. Original Use: drainage  B4. Present Use: drainage
*B5. Architectural Style: Utilitarian
*B6. Construction History: (Construction date, alterations, and date of alterations) First iteration developed ca. 1895. Central Drainage Ditch expanded and extended to north end ca. 1910. Sluice gates at either end have been routinely maintained and replaced over the years.

*B7. Moved? □ No □ Yes □ Unknown Date: ___________ Original Location: ___________
*B8. Related Features: ___________
*B10. Significance: Theme N/A Area N/A
Period of Significance N/A  Property Type N/A  Applicable Criteria N/A (Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Winter Island Central Drainage Ditch does not appear to meet the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR) because of a lack of significance under any of the criteria for listing. The resource does not appear to be a historic resource under Section 106 of the National Historic Preservation Act (NHPA) as codified in 36 CFR Part 600, nor does it appear to be a historical resource for the purposes of CEQA (Section 15064.5 [a][2][4][3]). See Continuation Sheets for comprehensive development context and evaluation of the documented resource.

B11. Additional Resource Attributes: (List attributes and codes) ___________

*B12. References: See footnotes

B13. Remarks:

*Date of Evaluation: January 2018

This space reserved for official comments.
B10. Significance (Continued):

Historic Context

Initial development of the Central Drainage Ditch dates to the mid-1890s, when the Co-operative Brotherhood of Winter Island (the Brotherhood) likely constructed a drainage ditch running to the center of the island to support their short-lived agricultural operations. Located at the confluence of the Sacramento and San Joaquin rivers in the Sacramento-San Joaquin Delta (the Delta), Winter Island and the development of the Central Drainage Ditch is reflective of both the reclamation and transformation of the marshy Delta land into highly productive agricultural land, the wave of socialist and utopian ideology that spread across California and the nation in the late-nineteenth century, and the establishment of duck hunting clubs in the Delta. The Brotherhood likely began construction of the Central Drainage Ditch to support their brief agricultural efforts on the island, which spanned from about 1893 to 1898, when the colony effectively ceased operation. The ditch was later enlarged and extended in the early twentieth century to aid in the continued drainage and reclamation of the island for use by a series of duck hunting clubs with proliferated in the Delta at the turn of the twentieth century. As such, the Central Drainage Ditch is a later example of a common reclamation feature and is not directly associated with development of any significant agricultural efforts or duck-hunting pursuits.

Early Development and Reclamation of the Delta and Winter Island

Following James Marshall’s gold discovery along the South Fork of the American River in 1848, a mass western migration to California began. As word of gold discovery spread across the nation, California’s population grew exponentially, exploding from approximately 100,000 in 1849 to 200,000 by 1852. This dramatic population influx fundamentally shaped the development of Contra Costa County and its Delta islands. As new residents poured into California, they generally flocked first to San Francisco before traveling by boat to gateway cities, including Stockton, Sacramento, and Marysville, for supplies and stories of riches before pushing east into the foothill “Gold Country.” These gold-seeking prospectors first encountered the dense, sedge-covered marshlands of the Sacramento-San Joaquin Delta while traveling by boat on their voyage to the goldfields.¹

Even as the Gold Rush ebbed, a growing number of frustrated miners gave up their efforts in the goldfields and turned to tilling the land for quicker riches. With California's sudden population increase, and a lack of farmed agricultural land, the demand for produce grew rapidly and so too did the price of these goods. Eager to stake their claim, settlers quickly began cultivating the land along the arterial waterways of the Sacramento and San Joaquin rivers as well as the creeks and streams that flowed into them. Early settlers were attracted to the land surrounding the natural, wooded levees of the Delta along the Sacramento River which allowed for modest flood protection, access to ready supplies of timber, rich soil, a year round supply of water, and afforded easy shipment of produce to consumers. By the early 1850s, much of the northern stretches of the Delta, including the areas between Clarksburg and Steamboat Slough, as well as its eastern region near Stockton, were under cultivation. Despite the early development of certain stretches of the Delta, much of the remainder was seemingly uninhabitable and developed slowly, largely resulting from the lack of timber sources and low lying islands without prominent banks which were prone to flooding.

By the early 1850s, reclamation efforts were underway across much of the Delta in an attempt to harness the marshy Delta islands for cultivation. The low-lying, tule-covered bars were naturally prone to flooding, often inundated by as much as a foot of water at high tide and up to a few feet as snow melted in the Sierra Nevada in late spring. In 1855, following the passage of the Swamp Land Act of 1850, which gave the states title to all swamp and overflow land, the California Legislature authorized the sale of marshy Delta land under their control at low prices with the purchaser’s commitment to reclaim the land for agricultural development. Early settler's first established low “shoestring” levees, so named for their modest size, in the northern stretches of the Delta on Grand, Tyler, and Merritt islands. These short, simple earthen levees were typically constructed on top of existing natural levees; however, they soon proved insufficient at protecting the low-lying land from the powerful floodwaters and routinely gave way, flooding the crops below. As levees gave way, landowners rebuilt taller and wider structures in an attempt to protect their land.

Technological advances in the late-nineteenth century helped further fuel the reclamation of Delta land. By the late-1870s, the introduction of mechanical dredges, specifically the clamshell dredge, expedited the reclamation of marshy Delta land. Prior to the introduction of the dredge, levees construction was labor intensive and largely utilized readily available soil from the farmland. Dredges dug up sediment from the riverbed to form the levee rather than using the fertile topsoil from the island itself. These mechanical dredges were also utilized in the development of drainage ditches to aid in the continued drainage of reclaimed land.

---

1 John Thompson, “The Settlement Geography of the Sacramento-San Joaquin Delta, California,” PhD diss., (Stanford University, 1957), 133-179; Thompson, “How the Sacramento-San Joaquin Delta was Settled.”
3 DPR 523L (9/2013) *Required information
Once levees were constructed and drainage ditches cut through the Delta's many marshy islands, the Delta quickly transformed into a thriving agricultural region. Delta land proved ideal for growing a variety of crops, with its fertile soil, ready sources for irrigation, and optimal climate. Further, Delta farmers had an advantageous location, situated in close proximity to both the markets of San Francisco and Sacramento. Delta farmers initially grew several low maintenance crops that could withstand moist conditions, including potatoes, onion, and beans in addition to raising beef cattle. By the 1870s, with the Delta's levee system largely completed, Delta farmers began to plant orchards, with peaches and pears emerging as the dominant fruits, in addition to a variety of grain crops including alfalfa, wheat, and rye. Dairying emerged as a popular agricultural pursuit, however the regions sporadic flooding made raising cattle in many locations. By the turn of the twentieth century, tomatoes, celery, and asparagus emerged as prominent crops, and the Delta had transformed into one of the leading agricultural regions in the state.5

Early Development of Winter Island

The settlement and development of Winter Island closely follows the development patterns of other small Delta Islands. When European settlers first passed through the Delta on their voyage to the goldfields. Winter Island was a marshy, tule-covered piece of land. Early maps of the region labeled the island as "Ruckels Island." In 1864, in accordance with the Swamp Land Act of 1850, Captain George Washington Kimball applied to purchase a large swatch of swamp land just north of Antioch at the confluence of the Sacramento and San Joaquin rivers. A native of Maine, Kimball led the first group of settlers to the Antioch area in 1850. After the county surveyor mapped the land, Kimball patented the swampland in 1872 and took control of an approximately 650 acre parcel including what would later be named Winter Island. Prior to his official acquisition of the land, Kimball was likely already using Winter Island for cattle grazing. Kimball made only minor improvements to the land and likely constructed low "shoestring" levees.4

In 1873, just one year after acquiring the patent for the island, Kimball sold his land to William Winter, for whom the island is named. Mr. Winter, a native of New Jersey, used the island as pastureland for a small herd of cattle. Winter constructed a modest home on the island as well as barns and other outbuildings. By the mid-1880s, Winter had moved to San Francisco and put the island up for sale, noting that the island stood about four feet above sea level and was, "covered with a luxuriant growth of nutritious grasses...affording excellent pasturage for hundreds of head of stock." After a few years on the market, Mr. Winter sold the entirety of Winter Island to Erastus Kelsey in 1887.7

The Co-operative Brotherhood of Winter Island and the Reclamation of the Island

For a brief period in the 1890s, Winter Island was home to a socialist utopian colony known as the Co-operative Brotherhood of Winter Island (the Brotherhood). Between 1890 and 1894, at least seventeen utopian colonies organized in California, more than any other state in the nation. Some lasted only a few years, while others functioned for decades. These colonies formed across the state in Visalia with Kaweah.
Sonoma County with Altruria, and in the Santa Cruz Mountains with the Holy City among others. The late nineteenth century was a period of drastic social and political change, as the push for unionization, women's suffrage, prohibition, and the fight to break up monopolies filled the headlines. These colonies formed in an attempt to escape the ills of capitalism and city life for a rural, pastoral life where people worked cooperatively for the betterment of all.  

While short lived, Kelsey's Brotherhood is representative of the wave of socialism that spread across California and the nation in the late-nineteenth century. Erastus Kelsey, an Oakland resident and leader of the Oakland Nationalist Club, a branch of the nationwide socialist organization with utopian pursuits, desired to found a co-operative colony. Inspired by his time in Merced living near the neighboring Kaweah Colony, Kelsey planned to establish a utopian co-operative on his recently purchased Winter Island with the assistance of Kate Lockwood Nevins, a Bay Area suffragist and organizer for the Farmers' Alliance. Formed in 1893, the Co-operative Brotherhood of Winter Island organized to pursue social and economic progress through cooperation amongst its members. Led by its first president, Andrew Jackson Gregg, publisher of *The Prohibitionist* and candidate for Lieutenant Governor on the Populist Party ticket in the 1894 California election, the Brotherhood originally consisted of 100 members, most of whom resided in the Bay Area. Each member paid a required $1.25 fee to join the colony and an additional $5 each month to demonstrate their commitment to co-operation and help repay Kelsey, now the group's treasurer, for the land he provided the colony. 

The Brotherhood made the first significant improvements to Winter Island, and likely developed the first iteration of the Central Drainage Ditch. Although no more than 30 members ever lived and worked on the island at a given time, work on bolstering the islands natural levees began almost immediately. The group planned to construct a levee around the entirety of the nearly 650-acre island; however, with a small labor force, the work proved to be slow and arduous. By 1897, the Brotherhood had enclosed approximately half of the island through the construction of three and a quarter miles of earthen levees. A small channel, following the alignment of the present Central Drainage Ditch, extended from the island's south end to its center where the levees terminated. The development of the levee allowed for the transformation of the island into productive agricultural land. Of the island's 636 acres, 200 were plowed with 130 producing a variety of crops including buckwheat, onions, corn, cabbage, tomatoes, alfalfa, strawberries, and potatoes which they sold to local markets. A small orchard was also planted. Twice a month, members of the Brotherhood lifted the levee gates, one was likely located at the southern end of the central ditch, to irrigate the crops. 

Despite their efforts, the Brotherhood fell victim to the national economic turbulence that happened to coincide with their formation. The Panic of 1893 and the subsequent prolonged depression that followed made making the monthly $5 payments to the Brotherhood incredibly challenging. By 1896, the

---


9 Schmalenberger and Schmalenberger, *Winter Island*, 3-10, 26-30; "It’s Utopian. Co-operation to be Tried on a Big Scale," *Oakland Tribune*, September 7, 1893; Hine, *California’s Utopian Colonies*, 142-144.

Brotherhood's membership had drastically declined, leaving 22 vacancies, and by the following year, all of the original officers had resigned. The Brotherhood abandoned its plan to build levees around the entirety of the island in an attempt to save money, and instead walled the island at its midway point. In its waning years, the Brotherhood made several attempts to accrue revenue by purchasing a grocery store in Oakland from the Socialist's Co-operative Association where they sold their products and by stabling horses for the San Francisco Fire Department. The Brotherhood effectively ceased operation in 1898, and in 1901, defaulted on their mortgage and ownership of the island returned to Kelsey. Almost as quickly as the Brotherhood began, the utopian experiment on a small Delta island had failed.\(^\text{11}\)

*Later Use of the Island and the Development of the Central Drainage Ditch*

Since the Brotherhood's failed attempt at establishing a utopian colony on the island, ownership of Winter Island has passed between several duck hunting clubs. In 1909, Edward McDonald, who acquired Winter Island the previous year from Kelsey, sold the island to the Winter Island Company. The Winter Island Company, founded by several well-to-do Bay Area residents, including James Lanagan, a lawyer and resident of Palo Alto; Robert Irving Bentley, chairman of the board of the California Packing Company and resident of San Francisco; and Louis S. Beedy, a San Francisco attorney, utilized the marshy, partially reclaimed Delta island for duck hunting. Since the 1870s, duck hunting emerged as a popular hobby and pastime for wealthy Bay Area businessmen. The marshy, tule-covered land of the Delta proved ideal for duck hunting, and private duck hunting clubs were established across the region. In 1920, a second duck hunting club named the Winter Island Club purchased the island. Owned by several wealthy Bay Area businessmen, the club operated until 1939, when it was sold to two of its members.\(^\text{12}\)

The current iteration of the Central Drainage Ditch was likely developed in the early twentieth century under the direction of the Winter Island Company. Upon their acquisition of the marshy, partially reclaimed island, the group of wealthy duck hunters likely invested in the continued reclamation of the island in an attempt to prevent deterioration of the ideal hunting land. According to Delta historian John Thompson, the San Joaquin Ditching Company likely cut the north-south Central Drainage Ditch in the early twentieth century, expanding and extending the early drainage ditch developed by the Brotherhood. Sluice gates were likely installed at either end of the channel to control the inflow and outflow of water from the ditch. This drainage ditch aided in the continued drainage of the island in addition to allowing duck hunters boat access to the island's interior pools. Founded in 1908 by Orville Woodward and George LaMontagne, the San Joaquin Ditching Co. specialized in cutting drainage ditches and constructing levees, and worked on several reclamation projects in the Delta including those on Grizzly Island, the Terminous Tract, and Woodward Island, in addition to cutting the Winter Island Central Drainage Ditch.\(^\text{13}\)

Six Brothers Ranch acquired the island in 1949. Renamed Winter Island Farms under a new partnership formed in 1950, the group was originally composed of members of the Pacini family. Winter Island Farms made several attempts at raising livestock over the years, but the island continued to be used largely for

\(^\text{11}\) "This Alturria has not Failed," *San Francisco Call*, December 9, 1896, 11; "Liable to be a Failure," *Sacramento Daily Record-Union*, January 9, 1896, 8; Schmalenberger and Schmalenberger, *Winter Island*, 6-10, 30-33; Hino, *California's Utopian Colonies*, 142-144.


\(^\text{13}\) Thompson and Dutra, *The Tule Brainers*, 258; Schmalenberger and Schmalenberger, *Winter Island*, 36.
duck hunting. Members of Winter Island Farms organized Reclamation District 2122 in 1982 to oversee maintenance of the island’s levees. In 2016, the State of California purchased the majority of Winter Island, including most of the Winter Island Perimeter Levee, with the intention of restoring unrestricted tidal connectivity to benefit native fish species. The Winter Island Central Drainage Ditch continues to serve its designed purpose of providing flood control and interior island access.14

Evaluation

The inventoried Central Drainage Ditch does not appear eligible for listing in the NRHP under Criterion A or CRHR under Criterion 1 because it is not representative of a significant contribution to the development of reclamation efforts in the Delta, California, or the nation. Construction of earthen drainage ditches in the Delta dates to the Gold Rush era, as early prospectors sought to reclaim the marshy Delta land for agricultural use. By the 1870s, with the emergence of dredges and ditches as common tools for drainage ditch construction, the pace of land reclamation escalated and large scale farming operations became common in the Delta. Construction of the subject Winter Island Central Drainage Ditch began in approximately 1895, with the current iteration of the drainage ditch not completed until about 1910. While the development of the subject drainage feature is reflective of the reclamation efforts that were ubiquitous across the Delta in the mid- to late-nineteenth centuries, it did not play a significant role in these efforts or result in the establishment of a significant agricultural operation. Rather, the development of the Winter Island Central Drainage Ditch represents a relatively late reclamation attempt that resulted in the continued reclamation and drainage of a small Delta island. As such, it does not appear to be significant in relation to the development of reclamation efforts in the Delta or the development of agriculture or duck hunting clubs in the region.

Under NRHP Criterion B or CRHR Criterion 2, there is no evidence that the Central Drainage Ditch has any important associations with any person or persons who made significant contributions to history at the local, state, or national level. Research indicated that the initial development of the Central Drainage Ditch was likely constructed by the Co-operative Brotherhood of Winter Island in the 1890s to support their short-lived agricultural efforts on the island. While figures such as Erastus Kelsey, Kate Nevins, and Andrew Jackson Gregg achieved modest recognition in the socialist movement in the Bay Area in the late-19th century and were involved with the Brotherhood, research did not reveal that they had any direct association with the development of the Central Drainage Ditch. None of the figures associated with the duck hunting clubs who owned Winter Island in later years were identified as having any significant contributions to history and have no direct association with the construction of the Central Drainage Ditch. As such, it does not appear that there is the potential for significant associations in this regard.

The Central Drainage Ditch does not appear eligible for the NRHP under Criterion C or CRHR under Criterion 3 as it is not an important example of any type, period, or method of construction or engineering and it does not represent the important work of a master engineer. The Central Drainage is a common

example of an earthen drainage ditch. Since the mid- to late-nineteenth century, the agriculture industry has dominated the economy of the Delta, and as a result, drainage ditches were constructed to support the large-scale reclamation efforts. Likely initially developed by the Brotherhood in the late-nineteenth century and expanded and extended by the San Joaquin Ditching Company in the early twentieth century, the subject resource is a typical example of an earthen drainage ditch, a ubiquitous resource in the Delta, and generally lacks any significant design or engineering associations that would qualify it for listing under this Criterion.

Under NRHP Criterion D or CRHR Criterion 4, the Central Drainage Ditch is not significant as a source, or likely source, of important information pertaining to history, building materials, construction techniques, or advancement in levee design. Earthen ditches like the Central Drainage Ditch are well documented and it is one of many ditches throughout Contra Costa County, California, and the nation.

Though the studied resource retains sound integrity in all seven aspects, its lack of overall significance precludes eligibility for listing in the NRHP, CRHR, or recognition as a historical resource for the purposes of CEQA.
Photographs (Continued):


Appendix A:
NWIC Record Search
Confidential
Re: Winter Island Habitat Restoration Project (DWR charge code: X.0010.WINC.041)

The Northwest Information Center received your record search request for the project area referenced above, located on the Antioch North USGS 7.5’ quad(s). The following reflects the results of the records search for the project area and a ¼ mi. radius:

<table>
<thead>
<tr>
<th>Resources within project area:</th>
<th>None listed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources within ¼ mi. radius:</td>
<td>None listed</td>
</tr>
<tr>
<td>Reports within project area:</td>
<td>None listed</td>
</tr>
<tr>
<td>Reports within ¼ mi. radius:</td>
<td>S-7386 (in but excluded by requested: S-7647, S-18352)</td>
</tr>
<tr>
<td>Other Reports within records search radius:</td>
<td>Included is a list of the 17 “Other Reports” within or encompassing your project area. These reports are classified as Other Reports; reports with little or no field work or missing maps. The electronic maps do not depict study areas for these reports, however a list of these reports has been provided. In addition, you have not been charged any fees associated with these studies.</td>
</tr>
</tbody>
</table>

Resource Database Printout (list): ☒ enclosed ☒ not requested ☐ nothing listed
Resource Database Printout (details): ☒ enclosed ☒ not requested ☐ nothing listed
Resource Digital Database Records: ☒ enclosed ☒ not requested ☐ nothing listed
Report Database Printout (list): ☒ enclosed ☒ not requested ☐ nothing listed
Report Database Printout (details): ☒ enclosed ☒ not requested ☐ nothing listed
Report Digital Database Records: ☒ enclosed ☒ not requested ☐ nothing listed
Resource Record Copies: ☒ enclosed ☒ not requested ☐ nothing listed
Report Copies: ☒ enclosed ☒ not requested ☐ nothing listed
OHP Historic Properties Directory: ☒ enclosed ☒ not requested ☐ nothing listed
Archaeological Determinations of Eligibility: ☒ enclosed ☒ not requested ☐ nothing listed
Please forward a copy of any resulting reports from this project to the office as soon as possible. Due to the sensitive nature of archaeological site location data, we ask that you do not include resource location maps and resource location descriptions in your report if the report is for public distribution. If you have any questions regarding the results presented herein, please contact the office at the phone number listed above.

The provision of CHRIS Data via this records search response does not in any way constitute public disclosure of records otherwise exempt from disclosure under the California Public Records Act or any other law, including, but not limited to, records related to archeological site information maintained by or on behalf of, or in the possession of, the State of California, Department of Parks and Recreation, State Historic Preservation Officer, Office of Historic Preservation, or the State Historical Resources Commission.

Due to processing delays and other factors, not all of the historical resource reports and resource records that have been submitted to the Office of Historic Preservation are available via this records search. Additional information may be available through the federal, state, and local agencies that produced or paid for historical resource management work in the search area. Additionally, Native American tribes have historical resource information not in the CHRIS Inventory, and you should contact the California Native American Heritage Commission for information on local/regional tribal contacts.

Should you require any additional information for the above referenced project, reference the record search number listed above when making inquiries. Requests made after initial invoicing will result in the preparation of a separate invoice.

Thank you for using the California Historical Resources Information System (CHRIS).

Sincerely,

Annette Neal
Researcher

CA Inventory of Historic Resources (1976): ☐ enclosed ☒ not requested ☐ nothing listed
Caltrans Bridge Survey: ☐ enclosed ☒ not requested ☐ nothing listed
Ethnographic Information: ☐ enclosed ☒ not requested ☐ nothing listed
Historical Literature: ☐ enclosed ☒ not requested ☐ nothing listed
Historical Maps: ☐ enclosed ☒ not requested ☐ nothing listed
Local Inventories: ☐ enclosed ☒ not requested ☐ nothing listed
GLO and/or Rancho Plat Maps: ☐ enclosed ☒ not requested ☐ nothing listed
Shipwreck Inventory: ☒ enclosed ☐ not requested ☐ nothing listed

*Notes:

** Current versions of these resources are available on-line:

Shipwreck Inventory: [http://www.slc.ca.gov/Info/Shipwrecks.html](http://www.slc.ca.gov/Info/Shipwrecks.html)