APPENDIX E

Cultural Resources Report

CULTURAL RESOURCES TECHNICAL REPORT
for the
ETIWANDA HEIGHTS NEIGHBORHOOD AND CONSERVATION PLAN
CITY OF RANCHO CUCAMONGA, CALIFORNIA

Prepared for:

Sargent Town Planning
706 South Hill Street, 11th Floor
Los Angeles, CA 90014
Contact: David Sargent

Prepared by:

Adriane Dorrler, BA, Micah Hale, PhD, RPA, and Kate Kaiser, MSHP

DUDEK
38 N. Marengo Avenue
Pasadena, CA 91101

JANUARY 2019

Printed on 30% post-consumer recycled material.

Cultural Resources Technical Report for the Etiwanda Heights Neighborhood and Conservation Plan, Rancho Cucamonga, California

NATIONAL ARCHAEOLOGICAL DATABASE (NADB) INFORMATION

Authors: Adriane Dorrler, BA, Micah Hale, PhD, RPA, and Kate Kaiser, MSHP

Firm: Dudek

Project Proponent: Sargent Town Planning
706 South Hill Street, 11th Floor
Los Angeles, CA 90014
Contact: David Sargent

Report Date: January 2019

Report Title: Cultural Resources Technical Report for the Etiwanda Heights Neighborhood and Conservation Plan, Rancho Cucamonga, California

Type of Study: Cultural Resources Inventory and Significance Evaluation

New Sites: Temporary Designations: 9020-AD-02, 9020-AV-01, 9020-BC-01, 9020-ISO-PH-01, 9020-ISO-AD-01, 9020-ISO-KS-01

Updated Sites: None

USGS Quads: Rancho Cucamonga Peak, Mount Baldy, Devore, CA 1:24,000; T 1N / R 6W, 7W

Acreage: Approximately 4,388 acres

Keywords: survey, intensive, positive results, evaluation, historic refuse scatter, bedrock milling station, 4,388 acres, City of Rancho Cucamonga

INTENTIONALLY LEFT BLANK

TABLE OF CONTENTS

Section **Page No.**

TABLE OF CONTENTS (CONTINUED)

Section **Page No.**

APPENDICES

FIGURES

TABLE OF CONTENTS (CONTINUED)

Section **Page No.**

ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AB	Assembly Bill
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
City	City of Rancho Cucamonga
CRHR	California Register of Historical Resources
DPR	Department of Parks and Recreation
DPW	Department of Public Works
SCCIC	South Central Coastal Information Center
GPS	Global Positioning System
I-	Interstate
MLD	Most Likely Descendant
NAHC	Native American Heritage Commission
NRHP	National Register of Historic Places
OHP	Office of Historic Preservation
PRC	Public Resources Code
SBCFCD	San Bernardino County Flood Control District
SLF	Sacred Lands File
SR-	State Route
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USGS	U.S. Geological Survey

MANAGEMENT SUMMARY

This cultural resources study was completed in support of the 1,212-acre Neighborhood Priority Area (NPA) located within the greater 4,388-acre Etiwanda Heights Neighborhood and Conservation Plan (EHNCP) Area. The EHNCP is located adjacent to the City of Rancho Cucamonga, California, and as a Plan which could have a potential impact on the environment is subject to compliance with the California Environmental Quality Act (CEQA) regarding the identification and treatment of cultural resources. This report specifically documents archaeological resources greater than 45 years old; and an inventory and evaluation of buildings, structures, and objects greater than 45 years old (built environment) in the Neighborhood Priority Area. The current inventory included a California Historical Resources Information System (CHRIS) records search at the South Central Coastal Information Center (SCCIC), correspondence with the Native American Heritage Commission (NAHC), correspondence with Native American individuals and/or tribal organizations provided by the NAHC, an intensive pedestrian survey, and evaluation of significance of identified resources.

Dudek conducted a California Historical Resources Information System records search at the SCCIC for the proposed EHNCP and surrounding 1 mile on June 15, 2015. SCCIC records indicate that a total of thirty-four (34) previous cultural resources investigations cover at least a portion of the greater Project. Of these, six reports overlap at least a portion of the study area: SB-1591, SB-2851, SB-5365, SB-5358, SB-7422, and SB-7802. SCCIC records indicate that a total of seventy-five (75) previously recorded cultural resources are identified within the one mile search radius for the EHNCP. While eighteen sites are recorded within the 3,176-acre Conservation Priority Area (CPA), no previously recorded cultural resources are identified within the 1,212-acre Neighborhood Priority Area (NPA). The majority of the previously recorded resources located within the CPA consist of historic era homestead structures, water conveyance systems, remnants of mining operations, and transmission lines.

Dudek initiated Native American coordination for the Project on June 12, 2015. As part of the process of identifying cultural resources within or near the Project, Dudek contacted the Native American Heritage Commission (NAHC) to request a review of the Sacred Lands File (SLF). In addition, Dudek requested a list of appropriate contacts for Senate Bill (SB) 18 consultation since the NPA is part of the larger EHNCP. The NAHC indicated "the potential of Native American cultural resources in the Rancho Cucamonga Quad that may be impacted" and recommended contacting the San Manuel Band of Mission Indians for specific information, along with persons identified on a contact list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the EHNCP. After

initial outreach, the Morongo Band of Mission Indians and the San Manuel Band of Mission Indians have responded to the request for information.

The intensive pedestrian survey identified six archaeological resources including three isolates and three sites in the NPA. The isolates include a vertical pipe (9020-ISO-PH-01), a 1950's bottle and can (9020-ISO-AD-01), and a beer can (9020-ISO-KS-01). The sites include two historic era trash scatters (9020-AD-01 and -02), and one prehistoric bedrock milling station (9020-BC-01). None of these resources (isolates or site) were found to contain information that would qualify them for a finding of significance and/or eligibility for listing in the California Register of Historical Resources (CRHR) under any significance criteria. Furthermore, the survey area was found to be highly disturbed from high velocity colluvial events (flash floods and erosion) and thus having a low sensitivity for the discovery of significant archaeological resources. No further work regarding archaeological resources work is recommended for the EHNCP.

No previously recorded or evaluated built environment recourse were identified in the records search findings. As part of this study, Dudek investigated the NPA for the presence of historic era built environment properties 45 years old or older that would require evaluation for listing in the National Register of Historic Places (NRHP) and the California Register of Historical Resources (CRHR). No such buildings or structures are located in the NPA.

Cultural Resources Technical Report for the Etiwanda Heights Neighborhood and Conservation Plan, Rancho Cucamonga, California

1 INTRODUCTION

This cultural resources study was completed in support of the 1,212-acre Neighborhood Priority Area (NPA) located within the greater 4,388-acre Etiwanda Heights Neighborhood and Conservation Plan (EHNCP) Area (Figure 1 – Appendix A). The EHNCP is located in the City of Rancho Cucamonga, California, and the proposed annexation, conservation, development, and restoration activities have the potential to impact the environment. Therefore, the EHNCP is subject to compliance with the California Environmental Quality Act (CEQA) regarding the identification and treatment of cultural resources.

This report documents archaeological resources greater than 45 years old, and inventories and evaluates buildings, structures, and objects greater than 45 years of age (built environment) in the NPA. The current inventory included a California Historical Resources Information System (CHRIS) records search at the South Central Coastal Information Center (SCCIC), correspondence with the Native American Heritage Commission (NAHC), correspondence with Native American individuals and/or tribal organizations provided by the NAHC, an intensive pedestrian survey, and evaluation of significance of identified resources. While this report focuses on the 1,212-acres Neighborhood Priority Area (NPA), cultural resource constraints for the remaining 3,176-acre Conservation Priority Area (CPA) are documented in a separate memorandum: Cultural and Paleontological Resources Constraints Memo for Rancho Cucamonga North Eastern Sphere Annexation Area, submitted to Sargent Town Planning July 2015 (Appendix B).

1.1 Project Location and Description

The City of Rancho Cucamonga (City) is proposing the zoning and annexation of a portion of the City's northern sphere of influence. The area to be annexed is currently within the jurisdiction of San Bernardino County. The Etiwanda Heights Neighborhood and Conservation Plan (EHNCP) comprises the preparation of a Specific Plan for 4,388-acres of mostly undeveloped lands and open space. Only a small portion (300.5 acres) of the ENHCP occurs within the City, the majority of the ENHCP Area occurs within the City's Sphere of Influence, which is located within the unincorporated area of the County of San Bernardino. The ENHCP Area is divided into two priority planning areas: the Conservation Priority Area (CPA) and the Neighborhood Priority Area (NPA). The approximately 3,176-acre CPA is located at the base of the San Gabriel Mountains, bordered to the south by the City and the NPA, as well as the San Gabriel Mountains to the east, west, and north. A portion of the CPA to the east extends from the San Gabriel Mountains south to Wilson Avenue. The CPA is planned to remain as open space or limited rural development. The approximately 1,212-acre NPA located north of the I-210 freeway and bordered by the City to the east, south, and west, and the CPA to the north.

The NPA is within the Cucamonga Peak U.S. Geological Survey (USGS) 7.5-minute quadrangle map, Township 1N, Range 6W, 7W and Sections 13, 17, 18, 19, 20, 24, 25, 29 and 30. The CPA is within the Cucamonga Peak and Devore USGS 7.5-minute quadrangle maps, Township 1N, Range 6W, 7W and Sections 13, 15, 16, 17, 18, and 22.

The City has identified the primary objectives for the ENHCP, which include the following: annex the planning areas (CPA and NPA); conserve the natural resources located on the CPA; develop portions of the NPA; and restore and enhance the remaining portions of the NPA to recover the natural hydrologic and sand transportation processes.

1.1.2 Physical Setting

The EHNCP is located in the foothills of the eastern portion of the San Gabriel Mountains in unincorporated San Bernardino County (Figure 1). The NPA is located in the south-central portion of the U.S. Geological Survey (USGS) Cucamonga Peak quadrangle and generally located north of Interstate 210 and east of Haven Avenue to the City's easterly boundary (Figure 2 – See Appendix A).

The study area is largely undeveloped and occurs within the Day Canyon and Deer Canyon drainages. San Bernardino County has designated the majority of the study area as County Service Area (CSA) 120 - Open Space District-1. The Day Creek Preserve overlaps the northeastern portion of the study area. One large heavily disturbed mining area occurs in the central portion of the study area. Undeveloped land occurs to the north, northwest, and northeast of the study area, which makes up the broader Etiwanda Fan area and includes Day Canyon and Deer Canyon. Two isolated San Bernardino National Forest parcels border the north end of the study area, with the continuous San Bernardino National Forest boundary further to the north. Developed areas of the City of Rancho Cucamonga border the south, east, and west ends of the study area. Existing conservation areas surrounding the study area include the North Etiwanda Preserve (Unit 1 and Unit 2), the 137-acre San Sevaine Spreading Grounds, the 880-acre U.S. Forest Service Conservation Area, and a 35-acre conservation area that was purchased as mitigation for a housing development and set aside through a conservation easement to the San Bernardino County Flood Control District (Rancho Cucamonga General Plan 2010).

Historically, the ENHCP area used to be an active alluvial fan primarily fed by the flows for Deer Creek and Day Creek. At the base of the foothills, the alluvial fan spread and co-mingled these flows creating a dynamic system of braided streams. Over the past 40 years, flood control projects within both the Day and Deer Creek watersheds have greatly diminished the amount of flow and sediment feeding into the alluvial fan.

Several flood control projects were implemented since 1980 that effectively eliminated debris and flood hazards for the protection of the developments downstream. In 1980, the United States Army Corps of Engineers constructed a debris basin and channel system to contain most of the flows within Deer Creek. In 1990, the San Bernardino County Flood Control District (SBCFCD) constructed a debris basin, channel system, and levee within the Day Creek drainage system. The levee system is approximately 5,000 feet downstream of the Day Creek dam and consists of five small in-line debris basins that run along the upstream side of the levee. Each basin spills over into the next until they reach the Day Creek channel. These improvements cut off the majority of flow and sediment to the existing alluvial fan. The basins are equipped with a 36-inch riser, connected to a 24-inch reinforced concrete outlet pipe. These outlets divert minor flows through the levee, where they proceed south through the ENHCP area. These flood control facilities have cut off all flow and debris potential from the lower reach of the alluvial fan (below levee) and most of the flow and debris from the upper reach. As a result, the historical biological and fluvial conditions of the ENHCP area have been altered.

The NPA and a large portion of the CPA were once part of a much larger alluvial fan that extended for miles to the south. The fan included diverse assemblages of scrub and chaparral communities that included natural water flows and a sediment transport process, which created a network of braided channels, alluvial terraces, and benches, which resulted in diverse, multi-age vegetation communities that supported many species that are now rare or locally extinct. As development occurred within the lower plain and valley the need to control floods that flushed timber and boulders from the mountains, allowed for unchecked stream course meanderings, and sand deposition, led to the creation of a system of berms and storm detention basins. These berms and basins ultimately interrupted the sediment transport system that provided a fresh source of sand to habitat areas.

1.2 Regulatory Framework

1.2.1 State

1.2.1.1 California Register of Historical Resources

In California, the term "historical resource" includes but is not limited to "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code (PRC), Section 5020.1(j)). In 1992, the California legislature established the California Register of Historical Resources (CRHR) "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what

properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (PRC, Section 5024.1(a)). The criteria for listing resources on the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the National Register of Historic Places (NRHP), enumerated below. According to PRC Section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity," and (ii) meets at least one of the following criteria:

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

In order to understand the historic importance of a resource, sufficient time must have passed to obtain a scholarly perspective on the events or individuals associated with the resource. A resource less than 50 years old may be considered for listing in the CRHR if it can be demonstrated that sufficient time has passed to understand its historical importance (14 CCR 4852(d)(2)).

The CRHR protects cultural resources by requiring evaluations of the significance of prehistoric and historic resources. The criteria for the CRHR are nearly identical to those for the NRHP and properties listed or formally designated as eligible for listing in the NRHP are automatically listed in the CRHR, as are the state landmarks and points of interest. The CRHR also includes properties designated under local ordinances or identified through local historical resource surveys.

1.2.1.2 California Environmental Quality Act

As described further below, excerpts from the CEQA statute and CEQA Guidelines are of relevance to the analysis of archaeological, historic, and tribal cultural resources:

- PRC Section 21083.2(g) defines "unique archaeological resource."
- PRC Section 21084.1 and CEQA Guidelines Section 15064.5(a) defines "historical resources." In addition, CEQA Guidelines Section 15064.5(b) defines the phrase "substantial adverse change in the significance of an historical resource"; it also defines the circumstances when a project would materially impair the significance of an historical resource.
- PRC Section 21074(a) defines "tribal cultural resources."

- PRC Section 5097.98 and CEQA Guidelines Section 15064.5(e): Set forth standards and steps to be employed following the accidental discovery of human remains in any location other than a dedicated ceremony.
- PRC Sections 21083.2(b)–(c) and CEQA Guidelines Section 15126.4: Provide information regarding the mitigation framework for archaeological and historic resources, including examples of preservation-in-place mitigation measures; preservation-in-place is the preferred manner of mitigating impacts to significant archaeological sites because it maintains the relationship between artifacts and the archaeological context, and may also help avoid conflict with religious or cultural values of groups associated with the archaeological site(s).

More specifically, under CEQA, a project may have a significant effect on the environment if it may cause "a substantial adverse change in the significance of an historical resource" (PRC Section 21084.1; 14 CCR 15064.5(b)). If a site is either listed or eligible for listing in the CRHR, or if it is included in a local register of historic resources, or identified as significant in a historical resources survey (meeting the requirements of PRC Section 5024.1(q)), it is a "historical resource" and is presumed to be historically or culturally significant for purposes of CEQA (PRC, Section 21084.1; 14 CCR 15064.5(a)). The lead agency is not precluded from determining that a resource is a historical resource even if it does not fall within this presumption (PRC, Section 21084.1; 14 CCR 15064.5(a)).

A "substantial adverse change in the significance of an historical resource" reflecting a significant effect under CEQA means "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired" (14 CCR 15064.5(b)(1); PRC, Section 5020.1(q)). In turn, the significance of an historical resource is materially impaired when a project (14 CCR 15064.5(b)(2)):

1. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the CRHR.
2. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to Section 5020.1(k) of the PRC or its identification in a historical resources survey meeting the requirements of Section 5024.1(g) of the PRC, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant.

3. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register as determined by a lead agency for purposes of CEQA.

Pursuant to these sections, the CEQA inquiry begins with evaluating whether a project site or plan area contains any "historical resources," then evaluates whether that project or plan will cause a substantial adverse change in the significance of a historical resource such that the resource's historical significance is materially impaired.

If it can be demonstrated that a project or plan will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (PRC, Section 21083.2(a–c)).

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

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

Impacts to non-unique archaeological resources are generally not considered a significant environmental impact (PRC, Section 21083.2(a); 14 CCR 15064.5(c)(4)). However, if a non-unique archaeological resource qualifies as tribal cultural resource (PRC, Sections 21074(c), 21083.2(h)), further consideration of significant impacts is required.

CEQA Guidelines Section 15064.5 assigns special importance to human remains and specifies procedures to be used when Native American remains are discovered. As described below, these procedures are detailed in PRC Section 5097.98.

1.2.1.3 California Health and Safety Code

California law protects Native American burials, skeletal remains, and associated grave goods, regardless of their antiquity, and provides for the sensitive treatment and disposition of those remains. California Health and Safety Code Section 7050.5 requires that if human remains are discovered in any place other than a dedicated cemetery, no further disturbance or excavation of

the site or nearby area reasonably suspected to contain human remains shall occur until the San Bernardino County coroner has examined the remains (Section 7050.5b). PRC Section 5097.98 also outlines the process to be followed in the event that remains are discovered. If the coroner determines or has reason to believe the remains are those of a Native American, the coroner must contact the NAHC within 24 hours (Section 7050.5c), and the NAHC will notify the Most Likely Descendant (MLD). With the permission of the landowner, the MLD may inspect the site of discovery. The inspection must be completed within 48 hours of notification of the MLD by the NAHC. The MLD may recommend means of treating or disposing of, with appropriate dignity, the human remains and items associated with Native Americans.

1.2.2 Local

1.2.2.1 City of Rancho Cucamonga Code

The first Historic Preservation Ordinance for the City of Rancho Cucamonga was adopted in 1979, and the latest amendment was adopted in 2011. Local landmarks in the City of Rancho Cucamonga are known as either Historic Landmarks, Points of Historic Interest, or as Conservation Districts and are under the aegis of the City Council of the City of Rancho Cucamonga. They are defined in the Historic Preservation Ordinance as follows (Rancho Cucamonga Municipal Code Section Title 17. Article II. Chapter 17.18.020, added by Ordinance No. 848, effective July 7, 2011):

17.18.020 Designations

Designation Criteria for Historic Landmarks

1. The city council may designate a property as a historic landmark if it meets the requirements below.

2. Historic landmarks must meet at least one of the following criteria:

    i. It is or was once associated with events that made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States.

    ii. It is or was once associated with persons important to local, state, or national history.

    iii. It embodies the distinctive characteristics of a type, period, or method of construction.

iv. It represents the work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction.

v. It has yielded or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

3. Historic landmarks must retain integrity from their period of significance with respect to location, design, setting, materials, workmanship, feeling, association, or any combination of these factors. A proposed landmark need not retain all such original aspects, but must retain sufficient integrity to convey its historic, cultural, or architectural significance. Neither the deferred maintenance of a proposed landmark nor its dilapidated condition shall, on its own, be equated with a loss of integrity. Integrity shall be judged with reference to the particular characteristics that support the property's eligibility.

Designation criteria for points of historic interest.

1. The city council may designate a property as a point of historic interest if it meets the requirements applicable to historic landmarks under section 17.18.020.B (Designation Criteria for Historic Landmarks). Points of historic interest shall not be required to retain integrity from their periods of significance.

2. Designated points of historic interest shall not be subject to the same restrictions applicable to designated historic landmarks and contributing resources.

3. Nothing in this section shall be construed as limiting or foreclosing analysis of the impacts of a proposed project on a point of historic interest under the California Environmental Quality Act.

4. The commission shall maintain a current register of points of historic interest for public use and information.

Designation criteria for historic districts and conservation districts.

1. The city council may designate a property or collection of properties as a historic district if the proposed district meets the requirements of both section 17.18.020.B (Designation Criteria for Historic Landmarks) and section 17.18.020.C (Designation Criteria for Points of Historic Interest).

2. A historic district must meet at least one of the following criteria:

    i. It has an identifiable, clear, and distinct boundary that possesses a significant concentration of structures sharing common historical, visual, aesthetical, cultural, archaeological, or architectural plan or physical development.

    ii. It demonstrates character, interest, or value as part of the development, heritage, or cultural characteristics of the community, state, or country.

    iii. It is the site of a significant local, state, or national event.

    iv. It is associated with the lives of persons important to local, state, or national history.

    v. It is identifiable as the work of a master builder, designer, architect, artist, or landscape architect whose individual work has influenced the development of the community, county, state, or country.

3. Historic districts must retain integrity from their period of significance with respect to location, design, setting, materials, workmanship, feeling, and association. Not all properties or structures in a proposed district need to retain all such original aspects, but a substantial number of such properties and structures must retain sufficient integrity to convey the historic, cultural, or architectural significance of the district. Neither deferred maintenance within a proposed district nor the dilapidated condition of its constituent buildings and landscapes shall, on its own, be equated with a loss of integrity. Integrity shall be judged with reference to the particular characteristics that support the district's eligibility.

2 SETTING

2.1 Natural Setting

A series of hills and small mountains surround the EHNCP. These hills and mountains are between the two dominant San Jacinto and Santa Ana mountain ranges. They include La Sierra/Norco Hills, Mount Rubidoux, Box Springs Mountains, and many smaller ranges south of the City. Within the City, surface elevations range from about 700 feet above mean sea level near the Santa Ana River to over 1,400 feet above mean sea level west of La Sierra (City of Riverside 2007). The ground surface of the EHNCP plan site is located approximately 1,000 feet above mean sea level and slopes gently to the west, with an average slope of approximately 5%–6%.

The proposed plan site consists of colluvium leftover from high velocity flows originating in the north. Patchy scrub and annuals dominate the landscape. Common wildlife species found within the plan area include blue-gray gnatcatcher (*Polioptila caerulea*), common raven (*Corvus corax*), desert cottontail (*Sylvilagus audubonii*), Bewick's wren (*Thryomanes bewickii*), Anna's hummingbird (*Calypte anna*), house finch (*Haemorhous mexicanus*), mourning dove (*Zenaida macroura*), red-tailed hawk (*Buteo jamaicensis*), western scrub jay (*Aphelocoma californica*), yellow-rumped warbler (*Setophaga coronata*), American crow (*Corvus brachyrhynchos*), white-crowned sparrow (*Zonotrichia leucophrys*), northern mockingbird (*Mimus polyglottos*), and black phoebe (*Sayornis nigricans*).

2.2 Cultural Setting

2.2.1 Prehistoric Context

Evidence for continuous human occupation in Southern California spans the last 10,000 years. Various attempts to parse out variability in archaeological assemblages over this broad period have led to the development of several cultural chronologies; some of these are based on geologic time, most are based on temporal trends in archaeological assemblages, and others are interpretive reconstructions. Each of these reconstructions describes similar trends in assemblage composition in more or less detail. However, given the direction of research and differential timing of archaeological study following intensive development in the County, chronology building in the Inland Empire must rely on data from neighboring regions to fill the gaps. To be more inclusive, this research employs a common set of generalized terms used to describe chronological trends in assemblage composition: Paleoindian (pre-5500 BC), Archaic (8000 BC–AD 500), Late Prehistoric (AD 500–1769), and Ethnohistoric (post-AD 1769).

Paleoindian Period (pre-5500 BC)

Evidence for Paleoindian occupation in the region is tenuous. Knowledge of associated cultural pattern(s) is informed by a relatively sparse body of data that has been collected from within an area extending from coastal San Diego, through the Mojave Desert, and beyond. One of the earliest dated archaeological assemblages in coastal Southern California (excluding the Channel Islands) derives from SDI-4669/W-12 in La Jolla. A human burial from SDI-4669 was radiocarbon dated to 9,590–9,920 years before present (95.4% probability) (Hector 2006). The burial is part of a larger site complex that contained more than 29 human burials associated with an assemblage that fits the Archaic profile (i.e., large amounts of ground stone, battered cobbles, and expedient flake tools). In contrast, typical Paleoindian assemblages include large stemmed projectile points, high proportions of formal lithic tools, bifacial lithic reduction strategies, and

relatively small proportions of ground stone tools. Prime examples of this pattern are sites that were studied by Emma Lou Davis (1978) on Naval Air Weapons Station China Lake near Ridgecrest, California. These sites contained fluted and unfluted stemmed points and large numbers of formal flake tools (e.g., shaped scrapers, blades). Other typical Paleoindian sites include the Komodo site (MNO-679)—a multicomponent fluted point site, and MNO-680—a single component Great Basined Stemmed point site (see Basgall et al. 2002). At MNO-679 and -680, ground stone tools were rare while finely-made projectile points were common.

Warren et al. (2004) claimed that a biface manufacturing tradition present at the Harris site complex (SDI-149) is representative of typical Paleoindian occupation in the San Diego region that possibly dates between 10,365 and 8200 BC (Warren et al. 2004). Termed San Dieguito (see also Rogers 1945), assemblages at the Harris site are qualitatively distinct from most others in the San Diego region because the site has large numbers of finely-made bifaces (including projectile points), formal flake tools, a biface reduction trajectory, and relatively small amounts of processing tools (see also Warren 1964, 1968). Despite the unique assemblage composition, the definition of San Dieguito as a separate cultural tradition is hotly debated. Gallegos (1987) suggested that the San Dieguito pattern is simply an inland manifestation of a broader economic pattern. Gallegos's interpretation of San Dieguito has been widely accepted in recent years, in part because of the difficulty in distinguishing San Dieguito components from other assemblage constituents. In other words, it is easier to ignore San Dieguito as a distinct socioeconomic pattern than it is to draw it out of mixed assemblages.

The large number of finished bifaces (i.e., projectile points and non-projectile blades), along with large numbers of formal flake tools at the Harris site complex, is very different than nearly all other assemblages throughout the San Diego region, regardless of age. Warren et al. (2004) made this point, tabulating basic assemblage constituents for key early Holocene sites. Producing finely-made bifaces and formal flake tools implies that relatively large amounts of time were spent for tool manufacture. Such a strategy contrasts with the expedient flake-based tools and cobble-core reduction strategy that typifies non-San Dieguito Archaic sites. It can be inferred from the uniquely high degree of San Dieguito assemblage formality that the Harris site complex represents a distinct economic strategy from non-San Dieguito assemblages.

San Dieguito sites are rare in the inland valleys, with one possible candidate, RIV-2798/H, located on the shore of Lake Elsinore. Excavations at Locus B at RIV-2798/H produced a toolkit consisting predominately of flaked stone tools, including crescents, points, and bifaces, and lesser amounts of groundstone tools, among other items (Grenda 1997). A calibrated and reservoir-corrected radiocarbon date from a shell produced a date of 6630 BC. Grenda (1997) suggested this site represents seasonal exploitation of lacustrine resources and small game, and resembles coastal San Dieguito assemblages and spatial patterning.

If San Dieguito truly represents a distinct socioeconomic strategy from the non-San Dieguito Archaic processing regime, its rarity implies that it was not only short-lived, but that it was not as economically successful as the Archaic strategy. Such a conclusion would fit with other trends in Southern California deserts, where hunting-related tools were replaced by processing tools during the early Holocene (see Basgall and Hall 1990).

Archaic Period (8000 BC–AD 500)

The more than 2,500-year overlap between the presumed age of Paleoindian occupations and the Archaic period highlights the difficulty in defining a cultural chronology in Southern California. If San Dieguito is the only recognized Paleoindian component in the coastal Southern California, then the dominance of hunting tools implies that it derives from Great Basin adaptive strategies and is not necessarily a local adaptation. Warren et al. (2004) admitted as much, citing strong desert connections with San Dieguito. Thus, the Archaic pattern is the earliest local socioeconomic adaptation in the region (see Hale 2001, 2009).

The Archaic pattern, which has also been termed the Millingstone Horizon (among others), is relatively easy to define with assemblages that consist primarily of processing tools, such as millingstones, handstones, battered cobbles, heavy crude scrapers, incipient flake-based tools, and cobble-core reduction. These assemblages occur in all environments across the region with little variability in tool composition. Low assemblage variability over time and space among Archaic sites has been equated with cultural conservatism (see Basgall and Hall 1990; Byrd and Reddy 2002; Warren 1968; Warren et al. 2004). Despite enormous amounts of archaeological work at Archaic sites, little change in assemblage composition occurred until the bow and arrow was adopted around AD 500, as well as ceramics at approximately the same time (Griset 1996; Hale 2009). Even then, assemblage formality remained low. After the bow was adopted, small arrow points appear in large quantities and already low amounts of formal flake tools are replaced by increasing amounts of expedient flake tools. Similarly, shaped millingstones and handstones decreased in proportion relative to expedient, unshaped ground stone tools (Hale 2009). Thus, the terminus of the Archaic period is equally as hard to define as its beginning because basic assemblage constituents and patterns of manufacturing investment remain stable, complemented only by the addition of the bows and ceramics.

Late Prehistoric Period (AD 500–1769)

The period of time following the Archaic and before Ethnohistoric times (AD 1769) is commonly referred to as the Late Prehistoric (Rogers 1945; Wallace 1955; Warren et al. 2004); however, several other subdivisions continue to be used to describe various shifts in assemblage composition. In general, this period is defined by the addition of arrow points and ceramics, as

well as the widespread use of bedrock mortars. The fundamental Late Prehistoric assemblage is very similar to the Archaic pattern, but includes arrow points and large quantities of fine debitage from producing arrow points, ceramics, and cremations. The appearance of mortars and pestles is difficult to place in time because most mortars are on bedrock surfaces. Some argue that the Ethnohistoric intensive acorn economy extends as far back as AD 500 (Bean and Shipek 1978). However, there is no substantial evidence that reliance on acorns, and the accompanying use of mortars and pestles, occurred before AD 1400. In San Bernardino County and the surrounding region, millingstones and handstones persisted in higher frequencies than mortars and pestles until the last 500 years (Basgall and Hall 1990); even then, weighing the economic significance of millingstone-handstone versus mortar-pestle technology is tenuous due to incomplete information on archaeological assemblages.

Ethnohistoric Period (post-AD 1769)

The history of the Native American communities before the mid-1700s was largely reconstructed through later mission-period and early ethnographic accounts. The first records of the Native American inhabitants of the region come predominantly from European merchants, missionaries, military personnel, and explorers. These brief, and generally peripheral, accounts were prepared with the intent of furthering respective colonial and economic aims and were combined with observations of the landscape. They were not intended to be unbiased accounts regarding the cultural structures and community practices of the newly encountered cultural groups. The establishment of the missions in the region brought more extensive documentation of Native American communities, though these groups did not become the focus of formal and in-depth ethnographic study until the early twentieth century (Bean and Shipek 1978; Boscana 1846; Fages 1937; Geiger and Meighan 1976; Harrington 1934; Laylander 2000; Sparkman 1908; White 1963). The principal intent of these researchers was to record the pre-contact, culturally-specific practices, ideologies, and languages that survived the destabilizing effects of missionization and colonialism. Such research, often understood as "salvage ethnography," was driven by the understanding that traditional knowledge was being lost due to the impacts of modernization and cultural assimilation. Alfred Kroeber applied his "memory culture" approach (Lightfoot 2005, p. 32) by recording languages and oral histories within the region. Ethnographic research by Dubois, Kroeber, Harrington, Spier, and others during the early twentieth century seem to indicate that traditional cultural practices and beliefs survived among local Native American communities.

It is important to note that even though there were many informants for these early ethnographies who were able to provide information from personal experiences about native life before the Europeans, a significantly large proportion of these informants were born after 1850 (Heizer and Nissen 1973); therefore, the documentation of pre-contact aboriginal culture was increasingly

supplied by individuals born in California after considerable contact with Europeans. As Robert F. Heizer (1978) stated, this is an important issue to note when examining these ethnographies, since considerable culture change undoubtedly occurred by 1850 among the Native American survivors of California.

Based on ethnographic information, it is believed that at least 88 different languages were spoken from Baja California Sur to the southern Oregon state border at the time of Spanish contact (Johnson and Lorenz 2006, p. 34). The distribution of recorded Native American languages has been dispersed as a geographic mosaic across California through six primary language families (Golla 2007). Since the plan area is in the San Bernardino area, the Native American inhabitants of the region would have spoken the Gabrielino variety of Takic, although the Serrano variety was likely spoken as well, as the traditional boundary between the Serrano and Gabrielino groups is near the plan area.

Victor Golla contends that one can interpret the amount of variability within specific language groups as being associated with the relative "time depth" of the speaking populations (Golla 2007, p. 80). A large amount of variation within the language of a group represents a greater time depth than a group's language with less internal diversity. One method that he employed was drawing comparisons with historically documented changes in Germanic and Romantic language groups. Golla observed that the "absolute chronology of the internal diversification within a language family" can be correlated with archaeological dates (2007, p. 71). This type of interpretation is modeled on concepts of genetic drift and gene flows that are associated with migration and population isolation in the biological sciences.

The tribes of this area traditionally spoke Takic languages that may be assigned to the larger Uto–Aztecan family (Golla 2007, p. 74). These groups include the Gabrielino and Serrano. Golla interpreted the amount of internal diversity within these language-speaking communities to reflect a time depth of approximately 2,000 years. Other researchers contend that Takic may have diverged from Uto–Aztecan ca. 2600 BC–AD 1, which was later followed by the diversification within the Takic-speaking tribes, occurring approximately 1500 BC–AD 1000 (Laylander 2010).

The EHNCP is located within the area associated with the Gabrielino, a name derived from the association with the San Gabriel Mission, who are also known as the Tongva. According to the archaeological record, they were not the first inhabitants of the San Bernardino Valley basin but displaced indigenous Hokan speakers around 500 BC. The Gabrielino shared boundaries with the Chumash to the west, the Tataviam to the north, Serrano to the northeast, the Cahuilla to the east, and the Luiseño and Juaneño to the southwest (Bean and Smith 1978; Kroeber 1925; Heizer 1968).

As with many Native groups, it is quite difficult to make population estimates for the Gabrielino, although one estimate gives village population ranges between 50 and 200 people for possibly more than 50 or 100 villages (Bean and Smith 1978). The arrival of the Spanish decimated Native peoples through disease and changed living conditions, leaving few Gabrielinos by the time ethnographic studies were conducted (Bean and Smith 1978). This makes it difficult to make definitive statements about their culture. The tribes of the region were organized into patrilineal clans or bands centered on a chief, each of which had its own territorial land or range where food and other resources were collected at different locations throughout the year. Place-names were assigned to each territory, often reflecting common animals, plants, physical landmarks, or cosmological elements that were understood as being related to that location. Marriages were sometimes arranged by parents or guardians, and chiefs occasionally had multiple wives (Bean and Smith 1978).

Shamanism was a major component in tribal life. Shamans, who derived their power through dreams or visions, served individual villages. They cured illnesses using a variety of tools and plants. Some locations and natural resources were of cultural significance. Springs and other water-related features were thought to be related with spirits. These resources, often a component of origin stories, had power that came with a variety of risks and properties to those who became affected. Mourning ceremonies were similar throughout the region, generally involving burning of the deceased's possessions, dancing, and ritual wailing, followed by the burning of the deceased's remaining items a year after death (Bean and Smith 1978).

2.2.2 Historic Overview

Spanish Period (1769–1821)

Spanish explorers conducted sailing expeditions along the coast of Southern California between the mid-1500s and mid-1700s. In search of the legendary Northwest Passage, Juan Rodríguez Cabríllo stopped in 1542 at present-day San Diego Bay. With his crew, Cabríllo explored the shorelines of present-day Catalina Island as well as San Pedro and Santa Monica Bays. Much of the present California and Oregon coastline was mapped and recorded in the next half-century by Spanish naval officer Sebastián Vizcaíno. Vizcaíno's crew also landed on Santa Catalina Island and at San Pedro and Santa Monica Bays, giving each location its long-standing name. The Spanish crown laid claim to California based on the surveys conducted by Cabríllo and Vizcaíno (Bancroft 1885; Gumprecht 1999).

More than 200 years passed before Spain began the colonization and inland exploration of Alta California. The 1769 overland expedition by Captain Gaspar de Portolá marks the beginning of California's Historic period, occurring just after the king of Spain installed the Franciscan Order

to direct religious and colonization matters in assigned territories of the Americas. With a band of 64 soldiers, missionaries, Baja (lower) California Native Americans, and Mexican civilians, Portolá established the Presidio of San Diego, a fortified military outpost, as the first Spanish settlement in Alta California. In July of 1769, while Portolá was exploring Southern California, Franciscan Fr. Junípero Serra founded Mission San Diego de Alcalá at Presidio Hill, the first of the 21 missions that would be established in Alta California by the Spanish and the Franciscan Order between 1769 and 1823 (Bancroft 1885; Gumprecht 1999).

Mission San Gabriel Arcángel, in San Gabriel Valley (modern day Alhambra), was established in 1771 as the fourth mission. Though the original 1771 mission was destroyed in a flash flood, a new mission was built in 1776 and el Pueblo de Nuestra Señora la Reina de Los Ángeles, further west, was established in 1781 to support this mission. The mission, like many other Spanish occupations, used Spanish military forces to compel the local Tongva population into the mission's service, baptizing them as neophytes and renaming them the Gabrieliños. The San Gabriel Mission lands extended from Los Angeles east as far as San Bernardino de Sena Estancia (1810), and the San Bernardino Valley, including present day Rancho Cucamonga, would have been under Mission San Gabriel Arcángel control. The Tongva village at Kucamonga (Red Hill) persisted through this period and its name was first recorded by the missionaries at Mission San Gabriel Arcángel in 1785. In the San Gabriel Mission baptismal register, the name Cucamonga, Cucamobit, Cucamobuit, etc., occurred 102 times for the period 1785-1813 (Chattel 2010; Heizer 1968).

Mexican Period (1821–1846)

It was in the early 1820s that Spain's grip on its expansive subjugated territories began to unravel, which greatly affected the political and national identity of the Southern California territory. Mexico established its independence from Spain in 1821, secured California as a Mexican territory in 1822, and became a federal republic in 1824. After Mexican independence and the 1833 confiscation of former Mission lands, Juan B. Alvarado became governor of the territory. In 1836, Alvarado began the process of subdividing the former mission lands into large land grants called ranchos. This included the 13,000 acre Cucamonga Rancho, which was awarded to Tiburcio Tapia in 1839 (Figure 5). The rancho boundaries extended from El Camino Real along its southern border, San Antonio Creek to the west, and Cucamonga Creek to the east. Tapia evidently established a cattle and vineyard operation at his home, located near Red Hill. While these ranchos were established in documentation, the cultural and commercial developments of the ranchos were punctuated and generally slow with little oversight or assistance from the government in Mexico. Tapia himself was a businessperson and a Los Angeles city councilperson, and rarely spent time on his rancho. (Chattel 2010; Stonehouse 1965).

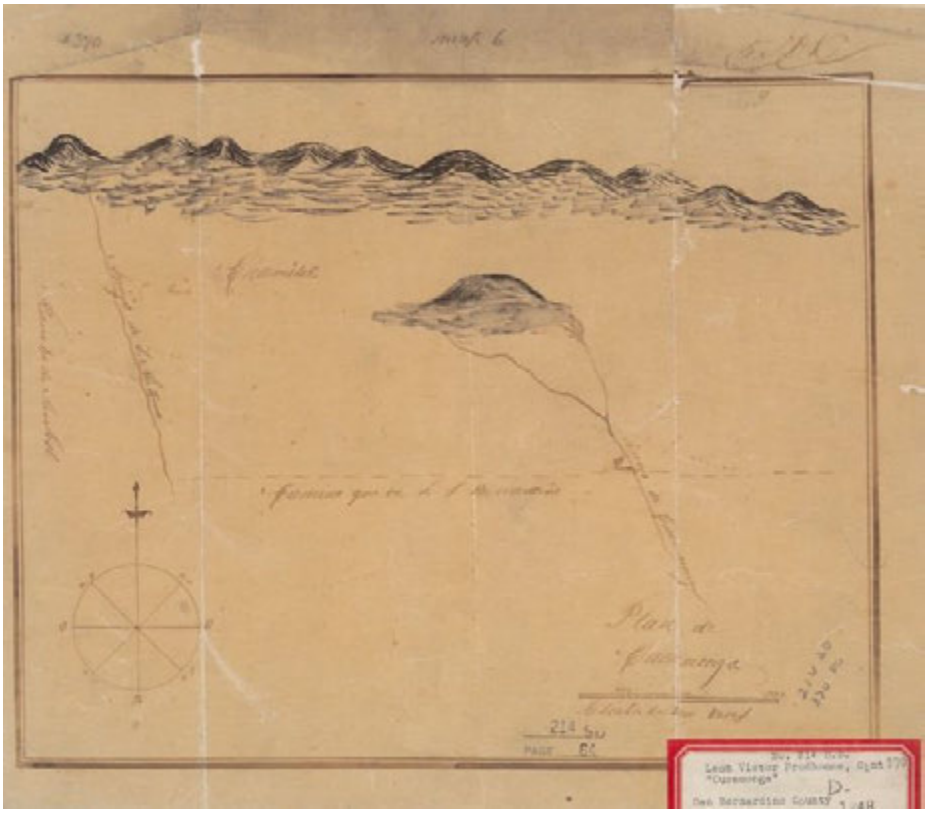

Figure 5 Plan De Cucamonga, c. 1804 (UC Berkeley, Bancroft Library)

American Period (1846–Present)

In the late 1840s and early 1850s, after the arrival of a growing European-descended American and other foreign populations and the conclusion of the Mexican-American war with the Treaty of Guadalupe Hidalgo, issues concerning the land rights immediately ensued with results that largely favored newly-introduced American interests (Starr 2007; Hale 1888). The California Gold Rush was in full steam with a heavy influx of new immigrants from not only across the United States but international travelers as well, many from Asian and Latin American countries, changing the dynamics of local populations. Tiburcio Tapia died in 1845, leaving his daughter, Maria Merced Tapia de Prudhomme, as heir. Prudhomme and her husband, Leon Victor Prudhomme, sold the rancho to John Rains and his wife, Dona Maria Merced Williams de Rains in 1858. Merced was the daughter of a wealthy landowner in the San Bernardino and Riverside area, and John Rains used her inheritance to acquire Cucamonga Rancho and expand the vineyards and winery operations. Rains was murdered outside of Mud Springs (present-day San Dimas) just a few years after acquiring Cucamonga Rancho, in 1862, leaving his wife with his substantial debt. After years of attempts to forcibly seize the rancho from Merced, legal battles to

retain the rancho, and significant droughts from 1863to 1865 that devastated Merced's remaining cattle business, Merced finally conceded to her deceased husband's debts and sold the rancho at a sheriff's sale in 1870. This marked the beginning of the pre-incorporation towns of Cucamonga, Etiwanda, and Alta Loma(Chattel 2010; Clucas 1974; LAT 2001).

Pre-incorporation Etiwanda

Isaias Hellman, a developer and land speculator, purchased a portion of the foreclosed rancho for 50,000, but the era of land speculation was upon the area, and Hellman immediately subdivided the rancho into three parts, selling one portion to the Cucamonga Company, one to the Cucamonga Fruit Lands Company, and one to the Cucamonga Homestead Association. After Hellman and his business associates created the Cucamonga Homestead Association, their first customer was William Whitfield, who obtained a 160-acre homestead from the association sometime between 1870 and 1875. In 1875, Henry Reed purchased a 160-acre homestead from William Whitfield, then, in 1880, sold the 160-acre homestead to Adolph Petsch of Pasadena, who also purchased water rights in Deer and Alder Canyons, creating the 500-acre Iowa Tract. Petsch also purchased the 300-acre Hermosa Tract (1881), and, in 1883, Petsch combined the two to form Ioamosa Colony. Petsch's Hermosa Land and Water Company was formed to administer water and land purchasing for the consolidated 700 acres. It would not be until 1913 that Ioamosa would be renamed to Alta Loma (Chattel 2010; Clucas 1974; Hickox 1981; Stoebe 2001).

George Day bought the Young Ranchito from E.K. Dunlap near the mouth of present-day Day Canyon in 1867, and filed for the first water rights. Captain Joseph S. Garcia, bought a 400-acre tract in 1871 from Day, then sold the land to Hellman and his associates in 1874. Garcia then purchased Government land and water rights in the San Gabriel Mountain foothills between Day Creek and Cucamonga Creek in 1874. In 1881, Garcia sold this land, now 560 acres, to George and William B. Chaffey, who started the Etiwanda Colony as a partnership formed to develop an irrigated agricultural colony. The Chaffey brothers also purchased 640 acres from the Southern Pacific Railroad, then another 700 acres near present-day Ontario and Upland (Chattel 2010; Clucas 1974; Hickox 1981; Stoebe 2001).

The Etiwanda Colony was first laid out along the present Etiwanda Avenue by the Chaffey Brothers in 1882 on the 1,900 acres (Figure 6). When the brothers gained the water rights to the land from Day Creek and East (Young's) Creek, it enabled them to subdivide the 1,900 acre parcel into 10 acre lots and offer one share of the water for each acre. The Chaffey Brothers formed the Etiwanda Water Company in 1882 and hired J.C. Dunlap to survey the route and N.W. Stowell to build wooden flumes, a lined reservoir, and pipeline from their water holdings to the Etiwanda Colony. Miles of concrete pipeline were installed, and the Chaffey brothers had

the foresight to furnish hydroelectric power, lighting the main avenues in their colony. Concurrent with the 1880s Southern California land boom, and with newly acquired land as capital, the brothers began to buy and sell lands and interest in other land companies, amassing a small fortune before leaving in 1886 for a business venture in Australia. A third brother, Charles Chaffey, remained in Etiwanda to oversee the business and growing colony (Hall 1888; Hickox 1981; LAT 1882; Ontario Fruit Grower 1882).

Etiwanda was furnished as many small towns of its time were; it had a main street (now Etiwanda Avenue) with typical businesses: a school, hotels, general merchandise stores, groceries, groceries, wagon shops, blacksmiths, etc. The land surrounding Etiwanda was populated with citrus orchards, grape, and stone fruit growing. By 1890, over 650 acres were being irrigated: 179 for citrus, 186 for stone fruits, 274 for vineyards, 7 for alfalfa and 5 acres for summer crops. A telephone line between Etiwanda and San Bernardino was erected, briefly claiming to be the longest telephone line in the country. A prominent factor in the growth of Etiwanda was the extension of the Santa Fe Railroad to the area in 1874, when the line was extended from Colton to Cucamonga. Etiwanda was just two miles from the railroad at its founding and would eventually expand towards it (Clucas 1974; Hickox 1981; Ontario Fruit Grower 1883).

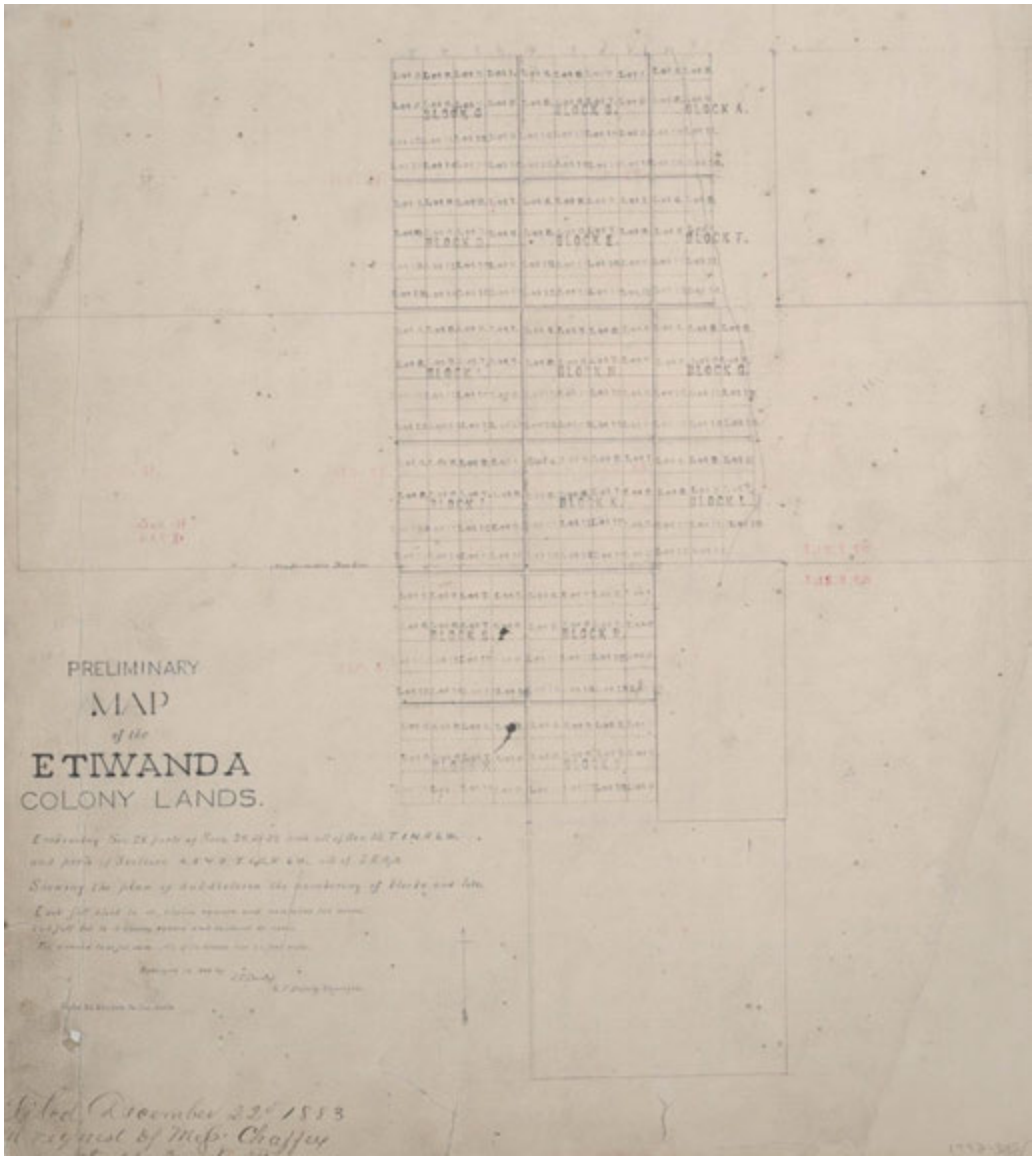

Figure 6 Preliminary Map pf the Etiwanda Colony Lands, 1883 (San Bernardino County Archives)

The Chaffey brothers continued to promote the colony and, by 1904, Etiwanda had a population of nearly 800 residents. The primary travel route west from Etiwanda was via Highland Avenue, Foothill Boulevard (later U.S. Route 66), or Arrow Route. However, in 1906, the Pacific Electric Company began building rail east towards San Bernardino, Redlands, and Riverside. A merger in 1910 between the Pacific Electric Company and the Southern Pacific Railroad (SPRR) prompted the SPRR Company to close the gap between San Dimas and the east. In 1912, the SPRR Company began purchasing land for a commuter train right-of-way in Cucamonga and Etiwanda.

They built the Etiwanda depot, and freight service to Etiwanda opened in 1913 and passenger service in 1914 (Figure 7). The remainder of the distance from Etiwanda to San Bernardino was closed by summer 1914, joining downtown Los Angeles to San Bernardino. Passenger service would cease in 1950 and by the 1960s diesel-powered freight service also ceased, effectively abandoning the line (Heller 2009; LAT 1912, 1913).

Figure 7 Etiwanda Depot, c. 1937 (Los Angeles Public Library)

The close of World War II altered the Etiwanda area and surrounding towns of Alta Loma, Cucamonga, and Fontana for the near future. Many young veterans, both local and out-of-staters, seeking a small town suburban lifestyle in an idyllic setting chose the Etiwanda area to settle, purchase homes with the GI bill, and start families. These new landowners at first enjoyed living out among the citrus groves; however, the draw of the area increased the population, stressed the existing water systems, and drove agricultural production to the fringes. In 1955, an eight-lot subdivision was created on a ten-acre lot, touching off a long and intensive period of residential subdivision development. In 1957, a larger subdivision containing the first tract homes built in Etiwanda was started at the southeast corner of Foothill Boulevard and Etiwanda Avenue. After this point, multiple residential subdivisions grew west and south from the Etiwanda town core a few dozen parcels at a time. The sharp increase in residential development stressed existing

water and sewer systems and the Etiwanda community, still unincorporated, had to rely on the distant San Bernardino County government for assistance. In the late 1950s, the County planning staff offered a re-zoning plan for the Etiwanda Colony lands; however, it was quickly outpaced. San Bernardino County would not replace the plan until 1980. Similar movements were underway in neighboring Alta Loma and Cucamonga (Bridge 2006; Hickox 1981).

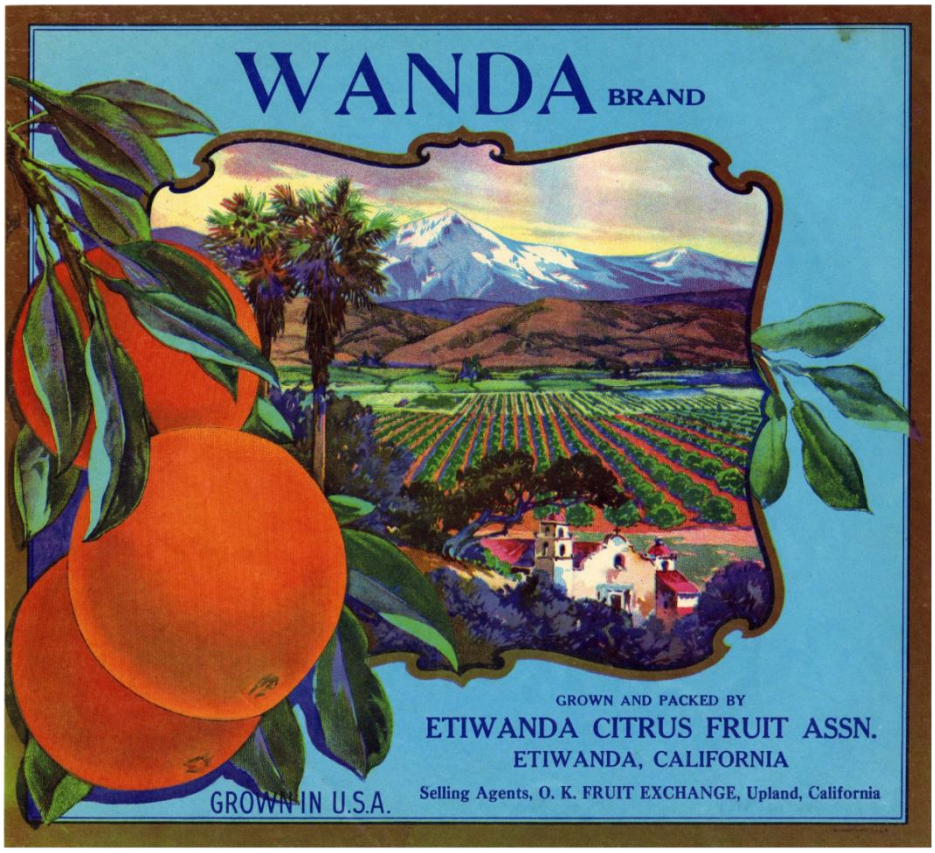

Figure 8 Advertisement: Wanda Brand Citrus, Etiwanda Citrus Fruit Association. (UC Riverside Special Collections, circa 1920)

In the late 1960s, and early 1970s the strain on Etiwanda's existing water and sewer systems, as well as fire, law enforcement, schools, and other local government services, was too much for the growing community. Etiwanda and the neighboring communities of Alta Loma and Cucamonga had grown towards one another to the point where there was no break or open land left between the townships. As neighboring Orange County land values increased in the 1960s, developers turned to inland San Bernardino County. Land value increased while returns on citrus and grape crops declined, leading many farmers to sell their land while they could. In 1969, a catastrophic flood provided the final push and many of the holdout ranchers and farmers sold their damaged

croplands to developers. Faced with the rapid changes to the community size and needs, Alta Loma, Cucamonga, and Etiwanda began seeking independent methods to incorporate and preserve their "rural atmosphere" (Bridge 2006, pg. 27). While Cucamonga was the first to suggest joint incorporation with its neighbors, Alta Loma and Etiwanda voters initially refused. In 1972, Upland and Ontario submitted requests to San Bernardino County to annex portions of Cucamonga and Alta Loma, while Fontana submitted a request to annex Etiwanda completely. The communities refused, but in 1973 Upland proposed to annex all three communities completely, followed by a request by Fontana for the same. For a few more years, the communities funded feasibility studies for incorporation, but faced with the annexation of their communities in 1977 the three towns finally agreed and voted to incorporate as the City of Rancho Cucamonga (Bridge 2006).

Post-Incorporation City of Rancho Cucamonga

Incorporation of Etiwanda, Cucamonga, and Alta Loma as the City of Rancho Cucamonga was approved by voter measure on November 8, 1977. The newly elected city council had a backlog of issues to deal with, as well as fresh issues. In January of 1978, a flood tested the city services for the first time, as the flood waters and debris flows destroyed many of the north-south streets north of 19th Street, including Beryl, Carnelian, Sapphire, Amethyst, Hellman, Ramona, Archibald, and Haven Avenues. The disaster occurred just before the U.S. Army Corps of Engineers was scheduled to build new flood control channels in the area. The population also considerably increased after incorporation, from 27,000 in January 1977 to 42,000 by December 1977. Schools in the newly incorporated city were also drastically over-filled with students. The new City Council could do little about natural disasters, but it did form new school districts and a police department for its growing population and developed an urban growth policy, finally allowing for some regulation of the previously unchecked residential development. In early 1978, the City Council also passed a building moratorium, while the city services addressed necessary post-flood street repairs (Bridge 2006; Progress Bulletin 1977).

The new city government also began to entertain the extension of the Foothill Freeway eastwards, just over 28 miles from La Verne to San Bernardino. The California Department of Transportation (Caltrans) had retained its rights-of-way though Alta Loma and Etiwanda, and the new city council chose to honor these rights and bring the Foothill Freeway through the northern portion of the city. The building moratorium lifted in 1980. In 1989, Highway 30 (previously Highland Avenue) was extended east from San Dimas to San Bernardino. This highway's designation later became State Route 210. Nearly a decade after, in 1998, construction began on the San Dimas-San Bernardino segment, and was completed in 2003 (Bridge 2006; Faigin 2018; SBC Sun 1996).

Neighborhood Priority Area Historical Overview

Though just outside the town of Etiwanda, the Neighborhood Priority Area (NPA), between Power Line Road, Day Creek Flood Channel, Interstate 210, and Deer Creek Flood Control Channel, historically has been an area of high flood activity. As early as 1930, the San Bernardino County Department of Public Works (DPW) was managing the Deer Creek and Day Creek flood potential. Decades prior to the construction of formal flood control channels, in 1915, the cities of Etiwanda, Alta Loma, and Cucamonga had simply paved their north-south oriented roads, and built 12-inch rock curbs, forcing streets to act as flood control channels. The open soil of vineyards and orchards, which were plentiful before World War II, acted as a spreading grounds and flowing water from floods was welcomed. In 1930, DPW engineer Ed Hyatt published a map and short summary of the Deer Creek and Day Creek confluence proposing a "spreading works" (Figure 9). Hyatt proposed 10 ft. high levees and dikes to carry water away from the cones at the mouth of each canyon, which would be diverted to a series of other levees downhill before allowing it into the area to be moved over the spreading grounds. Whatever water could not be absorbed into the spreading grounds was captured by two levees north of Highland Avenue and funneled into unlined channels (Bridge 2006; Hyatt 1930).

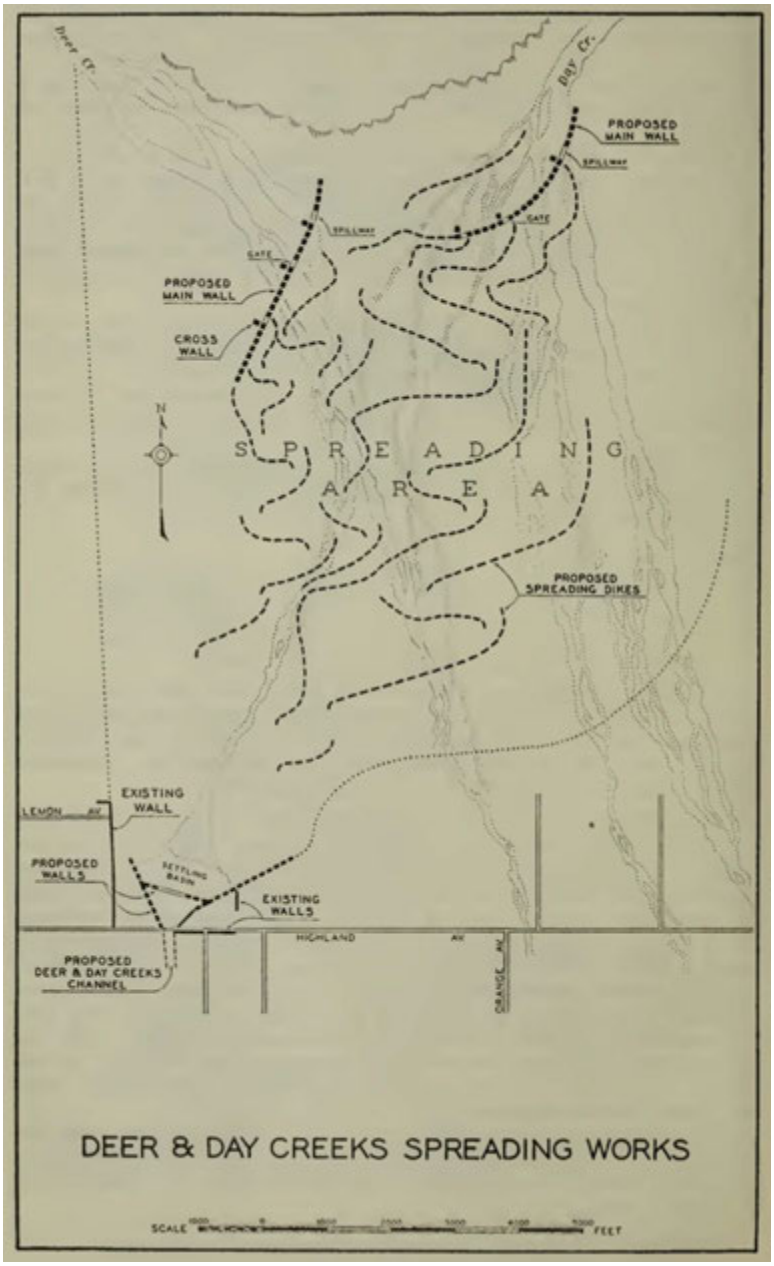

Figure 9 Deer & Day Creek Spreading Works as proposed (Hyatt 1930)

In 1938, a devastating flood affected Los Angeles and San Bernardino County, destroying infrastructure and homes, causing 14 known deaths, and $12 million dollars in damages in San Bernardino County alone. As San Bernardino County is much larger and less populous than Los Angeles County, when the flood destroyed bridges and roads it left many communities isolated for weeks to months and hundreds of people homeless. In response, the San Bernardino County

Flood Control District was created in 1939 by the California Legislature (Chapter 73, Statues 1939) and adopted in spring of the same year. According to historical research, however, the newly-formed San Bernardino County Flood Control District (SBCFCD) did not initiate flood control in the NPA until 1941. Several of the parcels in western Etiwanda were condemned by the county and seized. These would become the Day Creek Flood Control Channel, and extended from the mouth of the canyon to the Riverside County Line. In aerial photographs of the area from 1949, a large "L-shaped" levee and smaller minor levees are visible directing the Deer Creek and Day Creek flows together and then into the Day Creek Channel below Highland Avenue (Figure 10). Prisoners at the Etiwanda Road Prison Camp constructed these levees and other flood control measures around the county (DPW 2018; FAS 1949; SBC Sun 1941a, 1941b, 1950, 1954).

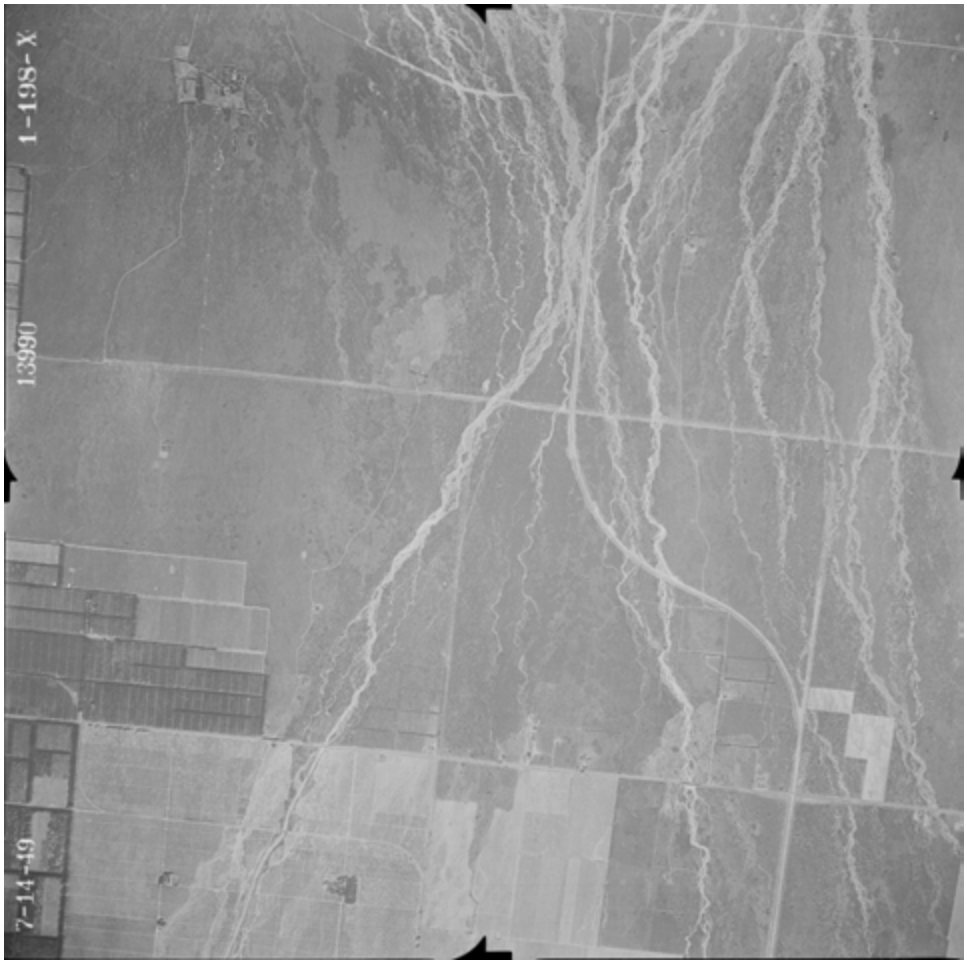

Figure 10 Fairchild Aerial Survey photograph of NPA showing "L-shaped" levee and earthen Day Creek Channel. Wilson Street bisects the middle of the photograph from left to right (FAS 1949)

Moderate floods also occurred in 1952, 1956, 1965, and 1966, eroding the earthen levees and requiring multiple rebuilding projects. As a result, more minor levees appeared in the NPA in the 1950s and 1960s, occasionally shifting and changing or being built into new earthen levees. The Day Creek Channel, at this time an unlined, earthen channel in the NPA, extended further north from the L-shaped levee to Power Line Road (DPW 2018; FAS 1960; Robinson 1959; Southwestern 1953; Universe 1966).

In 1969, two major floods as devastating as the 1938 floods affected the NPA, as well as the entire county. Rain began to fall on January 17, 1969, and multiple storms continued unabated for eight days. On January 24, the SBCFCD noted that an incoming new storm was particularly unwelcome as the last week's storms had caused nearly $400,000 in damage and severely eroded levees at Day Creek and Lytle Creek. The next storm proved devastating. On January 26, 1969, a national state of emergency was called after almost 11 inches of rain fell in the West End of San Bernardino County. Three people were killed in the flood (96 people total died in greater San Bernardino County and Los Angeles County), thousands evacuated, and hundreds were trapped on the roofs of their homes, and all east-west roads in the West End and San Bernardino Valley were closed. After January 27, the new estimate for flood damage to county roads and flood control facilities ratcheted up to $15 million. A series of smaller storms in February dropped 1-2 inches each on the county as officials scrambled to recover from the January floods. Though the roads and residential developments south of the NPA were severely damaged in this flood, the NPA itself mostly suffered from debris flows that eroded and pierced the existing levees and filled the channels (Figure 11) (SBC Sun 1969a, 1969b, 1969c, 1969d; USGS 2008).

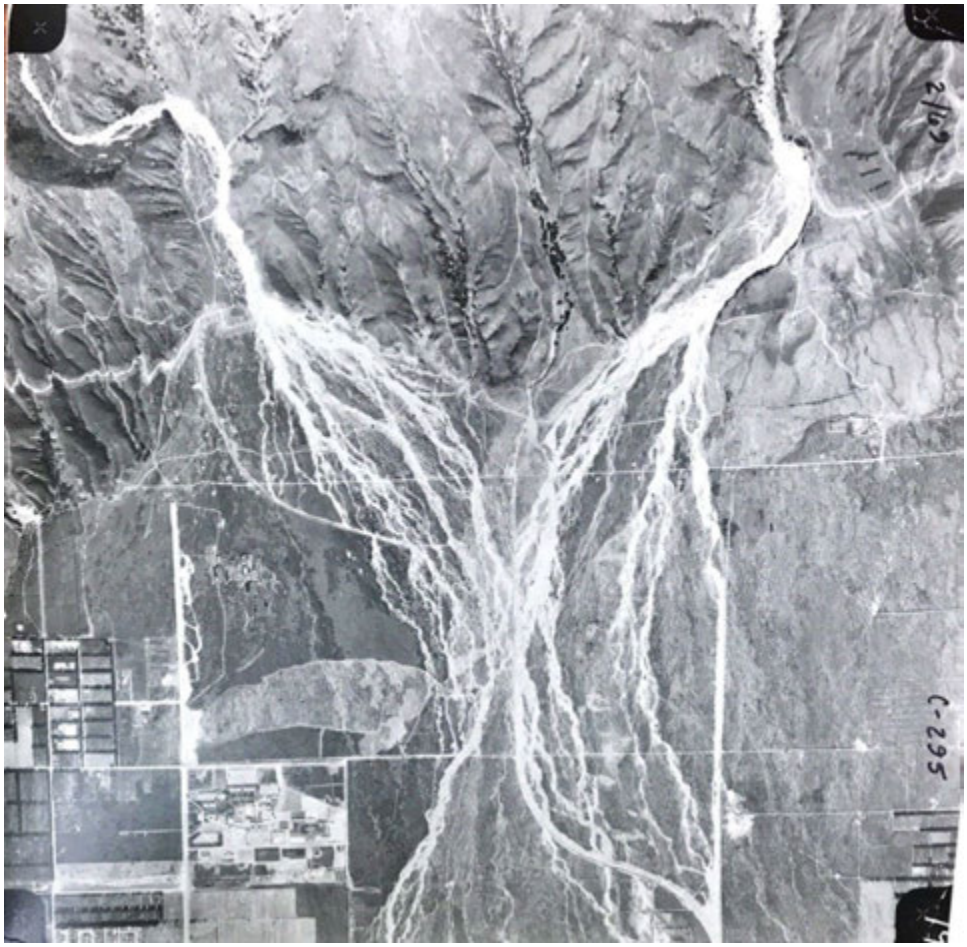

Figure 11 **February 1969 aerial showing destruction of NCD area in Etiwanda (SBCFCD aerial photograph collection, 1969)**

Though it took until the next rainy season to amass the funding to do so, the SBCFCD and US Army Corps of Engineers (USACE) began making plans to reconstruct the levees as reinforced revetment levees at Day and Deer Creek in 1970, as well as engineering concrete channels for Day and Deer Creeks and other major drainages in the western portion of the county. In 1971, the SBCFCD engineered the Deer Creek Spreading Grounds (now covered by a residential development), followed in 1975 by the Day Creek Spreading Grounds. They were tested in moderate floods in 1978 and performed well, but again, earthen levees were eroded and had to be reconstructed. (SBC Sun 1970a, 1970b, 1978; SBCFCD 2018)

The 1980s marked the period of development in the NPA that resulted in the structures seen there today. By 1983, a large-scale USACE project to create concrete-lined flood control channels was completed at Cucamonga Creek, Deer Creek, Demens Creek, and San Antonio

Heights Intercept. The DPW also replaced several earthen channels with concrete-lined channels in the early 1980s, including Day Creek from Highland Avenue to Riverside County and the Santa Ana River. In 1986, the County allowed the Fourth Street Rock Crusher Company (later Hansen Aggregates) to open a sand and gravel mine on 485 acres in the Day Creek area in exchange for dike and levee improvements above the mine, amidst homeowner opposition. Also in 1986, SBCFCD initiated a $40 million flood control project at Day Creek that constructed a debris dam at the canyon mouth, a spreading basin, and a mile of concrete-lined channel that ties into the existing channel at Highland Avenue (Figure 12). This project was called the Day Creek Improvement Project, designed by contracted engineering firm Willdan Associates, and would take several years to complete (DPW 2018; SBC Sun 1978, 1986, 1987, 1989).

Figure 12 Fontana Steelworkers work Day Creek Flood Control Channel (SBC Sun 1989)

Local groups accepted the flood control projects but opposed the gravel mine. Nevertheless, new residential subdivisions appeared less than a mile from the mine in the 1990s (Figure 13). The

City of Rancho Cucamonga filed suit against San Bernardino County over the decision to allow the plant to go forward. The suit was blocked by a judge in 1990 and Fourth Street Rock Crusher Company built their plant. After raising environmental concerns and forcing the company to go through safety regulations in a 36-month time frame, the mine persisted in maintaining the right to mine gravel and did not cease operations until 2010 (Google Earth 2010; SBC Sun 1986, 1990, 1996).

Figure 13 February 1990 ortho-aerial showing NCD area in Rancho Cucamonga, with new residential developments, concrete lined channels (SBCFCD aerial photograph collection, 1990)

2.3 Background Research

2.3.1 CHRIS Record Search Results

Dudek Archaeologist Adriane Dorrler conducted a records search for the EHNCP area and a one-mile radius surrounding the EHNCP at the South Central Coastal Information Center (SCCIC) on June 15, 2015. This search included reviewing their collection of mapped prehistoric, historical and built-environment resources, Department of Parks and Recreation (DPR) Site Records, technical reports, archival resources, and ethnographic references. Additional consulted sources included the National Register of Historic Places (NRHP), California Inventory of Historical Resources (CRHR) and listed Office of Historic Preservation Archaeological Determinations of Eligibility, California Points of Historical Interest, California Historical Landmarks, and Caltrans Bridge Survey information.

2.3.1.1 Previous Technical Studies

SCCIC records indicate that a total of thirty-four (34) previous cultural resources investigations cover at least a portion of the EHNCP. Of these, six reports overlap at least a portion of the Neighborhood Priority Area (Study Area): SB-1591, SB-2851, SB-5365, SB-5358, SB-7422, and SB-7802. Two reports in particular (SB-1591 and SB-5358) discussed historical resources related to or observed in the Study Area.

The 1989 study for the Day Creek Water Project (SB-1591) noted a possible historic age resource consisting of two rectangular rock features located within the north-central portion of the current study area. The resource was considered not significant, and, subsequently, a Department of Parks and Recreation (DPR) 523 form was never completed for the site. The resource was not relocated during the current field effort and is presumed destroyed by the previously extant mining operation.

The 1976 historical summary of Cucamonga Creek's bicentennial flood control project (SB-5358) discussed flood control measures within Day Creek and Deer Creek from the 1920s and later. The current field effort identified numerous potential historical resources that may be related to the early water procurement systems, flood channels, and spreading grounds of the study area including earthen berms, pipeline segments, possible spreading grounds, and ruins of concrete structures reminiscent of turnouts or weirs boxes.

2.3.1.2 Previously Recorded Cultural Resources

SCCIC records indicate that a total of seventy-five (75) previously recorded cultural resources are identified within the one-mile search radius for the EHNCP (Appendix C). While eighteen

sites are recorded within the 3,176-acre CPA, no previously recorded cultural resources are identified within the NPA. The majority of the previously recorded resources located within the CPA consist of historic-era homestead structures, water conveyance systems, remnants of mining operations, and transmission lines. An expansive historic water/irrigation archaeological district is also located in the CPA. Four prehistoric sites are located within the CPA among the foothills of the San Bernardino National Forest.

2.3.2 Building Development Research

2.3.2.1 Rancho Cucamonga Public Library

Dudek visited the Rancho Cucamonga Public Library on November 29, 2018, to review local and city historic resources, and visit the Local History Room. Dudek also reviewed the collection of historical maps, photographs, oral interviews, and general city history hosted online at the City of Rancho Cucamonga's "Portal to the Past" webpage. Information from the Rancho Cucamonga Public Library was utilized to construct the historical context section for this report.

2.3.2.2 City of Rancho Cucamonga Portal to the Past

Dudek reviewed historical maps, photographs, oral interviews, and the general city history hosted online by the City of Rancho Cucamonga. Information from the City of Rancho Cucamonga was utilized to construct the historical context section for this report.

2.3.2.3 San Bernardino County Department of Public Works

Dudek visited the Department of Public Works (DPW) on November 29, 2018. Dudek met with David Bailey of the Flood Control Engineering department and requested project data for DPW engineered structures within the NPA. Dudek also met with Marjorie Schrage of the DPW Planning Department to review the SPW aerial photograph collection (refer to Section 2.3.2.6.) Information from the DPW was utilized to construct the historical context section for this report.

2.3.2.4 Historical Maps

Dudek reviewed historical maps of the Plan Area on November 27, 2018, utilizing collections from the David Rumsey Map Collection (Stanford University Library), USGS historical topographical maps, the Huntington Digital Library map collection, and Online Archive of California. Historical map information was utilized to construct the historical context section for this report.

2.3.2.5 Sanborn Fire Insurance Maps

Sanborn Fire Insurance Company maps for the EHNCP area were not available. The town of Cucamonga, three miles southeast of the NPA, had fire insurance maps from 1913 and 1929. Cucamonga township was separate from Etiwanda until 1977, when Alta Loma, Cucamonga, and Etiwanda incorporated as Rancho Cucamonga. No maps were available for Etiwanda.

2.3.2.6 Aerial Photographs

Aerial photographs were available for the years 1930, 1938, 1949, 1953, 1959, 1960, 1976, 1977, and 1980, from the Map and Imagery Laboratory at University of California Santa Barbara (AMI 1976, 1980; FAS 1930, 1949, 1960; Laval 1938; Robinson 1959; Southwestern 1953; Teledyne Geotronics 1977; Universe 1966). Additional photographs were available for the years 1938, 1959, 1966, 1980, 1995, 2002, 2005, 2009, 2010, 2012, and 2014 from National Environmental Title Research, LLC (NETR 2018). Aerial photographs were also accessed in-person at the San Bernardino County DPW, and photographs that overlapped the plan area were available for the years 1938, 1955, 1966, 1969, 1970, 1972, 1975, 1978, 1983, 1986, 1990, and 1996, including ortho-photos take in 1975 (Aerial Photo Collection, DPW Flood Control Planning Division).

Aerial photographs revealed that there had been DPW and USACE levees at the Deer Creek and Day Creek drainages as early as 1949. In the 1930 and 1938 aerial photographs, the area is undeveloped, revealing the alluvial fan marked by arroyos and flow paths from the two creek outlets. Two small orchard parcels are located on alluvial fan. The areas south and east of the plan area are defined by orchards, which seem to actively avoid being in the flood path. In 1969, a flood destroyed many of the levees, unpaved flood control channels, and access roads in the area. This is visible in the 1969 aerial held by the SBCFCD when compared to the 1966 aerials. In the 1970 aerial photographs, portions of the major levees and channels are missing, breached, or have arroyos crossing them. Several new levees appear in the late 1970s as well. In aerial photographs from the 1980s the first evidence of paving the previously unlined channels appears.

2.4 Native American Coordination

2.4.1 NAHC Sacred Lands File Search

Dudek initiated Native American coordination for the EHNCP on June 12, 2015. As part of the process of identifying cultural resources within or near the EHNCP, Dudek contacted the Native American Heritage Commission (NAHC) to request a review of the Sacred Lands File (SLF). In addition, Dudek requested a list of appropriate contacts for Senate Bill (SB) 18 consultation since the NPA is part of the larger EHNCP. The NAHC emailed a response on July 6, 2015, and stated that the SLF search "indicates the potential of Native American cultural resources in the

Rancho Cucamonga Quad that may be impacted." The NAHC recommended contacting the San Manuel Band of Mission Indians for specific information. The NAHC also provided a contact list of Native American individuals and/or tribal organizations that may have knowledge of cultural resources in or near the Plan area. Dudek sent letters to each of the persons and entities on the contact list, requesting information about cultural sites and resources in or near the EHNCP. These letters contained a brief description of the proposed plan, reference maps, and a summary of the NAHC.

To date, the Morongo Band of Mission Indians and the San Manuel Band of Mission Indians responded to the request for information. Raymond Huaute, Cultural Resource Specialist for the Morongo Band of Mission Indians, responded that the EHNCP was outside of Morongo's ancestral territory and recommended contacting the San Manuel Band of Mission Indians. Daniel McCarthy, Director of the CRM Department for the San Manuel Band of Mission Indians, responded that the CPA is within the Tribe's ancestral territory and is known for its sensitivity for prehistoric cultural resources. Mr. McCarthy stated that the Tribe wants to consult with the lead agency on the EHNCP. Mr. McCarthy requested a copy of the records search and survey report for review, and recommended that hillside grading methods be used in the CPA to reduce impacts to cultural resources.

3 ARCHAEOLOGICAL RESEARCH DESIGN

This brief research design is presented to provide an idea of the kinds of research questions that may be asked when investigating prehistoric or historic archaeological sites for significance under CEQA guidelines. In general, research questions are meant to explore the ability of a resource to inform upon local or regional patterns in prehistory, or to identify persons or events of significance. This research design has been tailored to discuss ideas relating to the kinds of resources identified in the EHNCP area, such as the bedrock milling station and two historic-period refuse deposits.

3.1 Integrity

Delineation of the horizontal distribution and vertical depth of the site is necessary for an assessment of research potential. Of particular importance is the integrity of the deposits: whether or not features or surfaces are preserved and whether the potential exists for identifying, through analysis, horizontal and vertical spatial patterning in the evidence for prehistoric behavior.

A variety of post-depositional disturbance processes can greatly alter the original character of archaeological sites (e.g., see Gross and Robbins-Wade 2008; Schiffer 1987; Waters 1992). Formation processes such as alluvial deposition, erosion, bioturbation, and modern disturbance can considerably affect the integrity of archaeological sites. Here, attempts are made to identify

and interpret the processes that formed the site, with particular attention given to the character of post-depositional processes and the extent to which they have affected the integrity of the archaeological deposits.

The results of testing at various sites have been used to address the following issues:

- Does the horizontal and vertical extent of the archaeological record within the sites represent continuous or discrete occupations?
- Is it possible to discern depositional versus post-depositional processes that contributed to the present condition of the archaeological record at any of the sites? In other words, what are the factors, both natural and anthropogenic, that altered the position and condition of artifacts from the prehistoric and historic occupations of the sites?
- What kinds of features are potentially preserved at the sites (e.g., structures, wells, privy)? Are there features that are highly disrupted by post-depositional processes but that are still recognizable? Can these features be associated with particular functions?
- By examining spatial patterns in the horizontal distribution of artifacts, is it possible to discern areas that were associated with specific functions? Do patterns in the vertical distribution of artifacts tell us anything about changes in the function, materials exploited, or human activities at the sites through time?
- At historical archaeological sites, is there evidence of overlapping dump episodes, such as multiple points of concentration or concentration of artifacts of a certain age?

The issue of integrity takes on a different meaning when considering the historical built environment. Built structures and landscape features have an intended structure that is often more durable than prehistoric features, and determining integrity is sometimes more obvious. However, the factors contributing to declining integrity of, say, a residential building, not only include exposure to the elements through neglect, but also scavenging of building materials. Scavenging was a common practice during the homestead era when building materials were at a premium and any abandoned building or equipment rarely went unnoticed. The results of scavenging can be completely destructive, but it oftentimes focused on taking easily obtained materials such as wood siding or exposed wood framework, metal piping, sheet metal, windows, and doors. This kind of reuse has direct effects on the integrity of historic features. Determining the impact of scavenging on integrity can be as simple as making observations about missing elements from a building. However, scavenging can go undetected if irrigation pipes were taken; the disappearance of such items would leave little to no trace of its prior existence.

3.2 Chronological Placement

Chronological issues are basic to any archaeological research design, as they provide the primary framework of history. Because chronological controls are essential to any archaeological investigation, several basic questions concerning the temporal data potential of evaluated sites include:

- Can the chronological placement of project sites be determined?
- What kinds of chronometric data can project sites provide? Of those obtained during survey, how well do they correlate in terms of the age estimates they provide (e.g., cans vs. bottles)?
- Are there data indicating the presence of multiple occupation episodes at project sites?
- Do diagnostic artifacts appear to fit with temporal patterns recognized in the surrounding region? Are there any unique diagnostic items present?
- Can chronometric data from project sites help to refine dating schemes in the local region?

Potential chronometric evidence includes radiocarbon dates, obsidian hydration measurements, and diagnostic artifact forms. For historic sites, time-sensitive artifacts are usually limited to items with maker's marks, specific can manufacture styles, or coins. However, it is common for dates of manufacture for a particular artifact to be much broader than those for another artifact class, making a determination for age of consumption for any given class difficult, if not impossible. For this reason, the date of refuse disposal is more pertinent for refuse deposits that are not located at homesites; and this is usually determined by the early manufacture date on the youngest artifact for each dump event. Hale et al. (2010) document a widespread pattern of dumping items of mixed manufacture and consumption age as the result of homesite cleanup and off-site dumping. If refuse deposits are located at a homesite, assessing the age of consumption for historic artifacts is an approximation based on overlapping manufacture dates, taking into account the earliest and latest possible dates. Assemblages that cannot be securely placed chronologically would be less likely to possess a significant research potential. Of course, archival research can provide direct information on the date of construction and occupancy for historic homesites and lands used for agriculture, ranching, or mining.

3.3 Settlement and Site Function

Interpretation of the study sites depends upon an assessment of their places within the larger settlement-subsistence system of their occupants. Sites belonging to functional types that are relatively ubiquitous within the region would be less likely to be considered significant than unusual site types. Sites with evidence of multiple functions may possess richer information content than relatively simple sites; on the other hand, single-function sites may have a greater

research potential than multiple-function sites if the residues from the various activities at the latter cannot be effectively differentiated.

Evidence for the functional uses represented by the site come from surface observations made during both the survey and testing phases, as well as through the results of subsurface excavations. Interpretations of functions rest upon both the range and the relative and absolute frequencies of various classes of features, artifacts, and ecofacts.

Considering historical archaeological sites and homesites, the kinds of artifacts present, the activities they represent, and their overall proportions can give some indication of where refuse originated, and why it was abandoned at its place of discard. The main question for historical archaeological sites is:

- What is the nature of refuse at historic sites? Are proportions of consumptive, household, industrial, and other artifacts substantial enough to derive context of origin(s)?
- Are any maker's marks on historic artifacts indicative of specific places of manufacture? Do they provide any information about where particular goods might have been purchased or otherwise obtained?

These kinds of questions are relevant for understanding the nature of historical occupation, including at homesites or agricultural facilities (i.e., field worker residential areas). Archival research helps bolster field data by documenting past historical landowners, leaseholders, or residents, and by documenting historical changes in the local landscape. While it is virtually impossible to tie historic refuse deposits to residential or agricultural sites, it is possible to identify potential sources of refuse and make informed assumptions about its origin.

3.4 Subsistence

The issues related to subsistence orientation are interwoven with the previously discussed settlement organization, and this section complements the issues discussed previously.

Among the questions addressed are the following:

- Are artifacts present at historical archaeological sites that provide information on the kinds of foods consumed (e.g., food cans, glass bottles)?
- Are artifacts or features present?

To address these issues, a number of data sets and analytical procedures are needed. For historical sites, information is limited to the kinds of food containers and food processing items found at historical archaeological sites.

4 METHODS

4.1 Archaeology Phase I Pedestrian Survey

Dudek conducted an intensive-level pedestrian survey of the 1,212 acre Neighborhood Priority Area (NPA) in July and September 2015. The Intensive-level survey methods consisted of a pedestrian survey conducted in parallel transects spaced no more than 15 meters apart over the entire study area. Deviations from transects only occurred in areas containing dense vegetation, impassible features, or catastrophic disturbances to the natural environment caused by such activities as the mining operation. Within each transect, the ground surface was examined for prehistoric artifacts (e.g., flaked stone tools, tool-making debris, stone milling tools, ceramics, fire-affected rock), soil discoloration that might indicate the presence of a cultural midden, soil depressions, features indicative of the current or former presence of structures or buildings (e.g., standing exterior walls, post holes, foundations), and historic artifacts (e.g., metal, glass, ceramics, building materials). Ground disturbances such as burrows, cut banks, and drainages were also visually inspected for exposed subsurface materials.

Ms. Dorrler took detailed notes and photographs of the newly identified cultural resource and the surroundings. All fieldwork was documented using field notes, digital photography, iPad technology with close-scale field maps, and aerial photographs. Location-specific photographs were taken using an Apple 3rd generation iPad equipped with 8 megapixel resolution and georeferenced PDF maps of the EHNCP area. Accuracy of this device ranged between 3 meters and 10 meters. The location of the newly identified cultural resource and the individual diagnostic artifacts were mapped with a real-time corrected Trimble GeoXT Global Positioning System (GPS) receiver with sub-meter accuracy.

Documentation complied with the OHP and Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44720–44726) and the California OHP Planning Bulletin Number 4(a). Newly identified resources were recorded on California Department of Parks and Recreation (DPR) Form 523 (Series 1/95), using the Instructions for Recording Historical Resources (OHP 1995). The DPR form will be submitted to the SCCIC and is included in confidential Appendix D.

Evaluation methods were tailored to the resources identified, which were confined to the surface. Both historic period refuse deposits and the single bedrock milling feature were located in areas

clearly void of geologic matrix that could house significant subsurface deposits. Therefore, evaluation methods focused on detailed field recordation of identified artifacts. For historic refuse deposits, this included recordation of maker's marks on artifacts, and documenting the frequency of different kinds of artifacts. For the bedrock milling feature, the grinding surface was recorded and photographed. All three archaeological sites were probed with a trowel to determine whether there was a potential for buried artifacts nearby.

4.2 Built Environment Pedestrian Survey

Dudek Architectural Historian Kate G. Kaiser, MSHP, visited the NPA portion of the EHNCP area on December 7, 2018. During the survey, Dudek surveyed all accessible portions of the flood control channels, major levees, and Spreading Grounds. Dudek documented the fieldwork using field notes and digital photography, as well as using close-scale field maps and aerial photographs. Photographs of the EHNCP area were taken with a 16-megapixel Canon PowerShot ELPH180 camera. All field notes, photographs, and records related to this survey are on file at Dudek's Pasadena, California, office. The designation of features surveyed follows the F.C.D. System Number and Reach naming convention provided by the San Bernardino County Department of Public Works.

5 RESULTS

5.1 Archaeology Intensive Pedestrian Survey and Evaluation

Ground visibility throughout the study area varied, but was generally fair as dense vegetation obscured the majority of the ground surface. Burn area from the 2014 fire in the northern and central study area supported periods of good visibility. Highly undulated colluvium waste modified by both alluvial stream wash and mechanical pushing characterized the study area.

The pedestrian survey resulted in the identification of three new archaeological and three new isolated finds. The sites include two historic era trash scatters (9020-AD-01 and -02), and one prehistoric bedrock milling station (9020-BC-01). The isolates include a vertical pipe (9020-ISO-PH-01), a 1950's bottle and can (9020-ISO-AD-01), and a 1960's era pull-tab beer can (9020-ISO-KS-01). The vertical pipe appears to be older than 45 years in age but no definitive information was obtained through archival research or field inspection to verify its age. In general, isolated finds are not historical resources under CEQA and are thus not eligible for listing in the CRHR.

9020-AD-01

This site consists of a historic period refuse scatter of domestic household goods and expendables such as metal cans, fragments of glass and ceramic vessels and dishware, and various other common goods such as parts of shoes (Figure 14). Available maker's marks on green, and clear glass bottles are consistent with those that date to the 1960's, including Owens-Illinois (Toulouse 1971. Approximately 250 glass fragments of green, clear and some brown glass were counted but no whole glass vessels were found. Ceramics were limited to fragments of common dishware including white and pink colored plates. Two plate fragments had the Desert Ware maker's mark; Desert Ware was produced from the 1930s to the late 1960s and was common throughout Los Angeles County.

There was no evidence at this site of overlapping dump episodes or of buried deposits; a trowel was used to probe around and inspect near surface deposits. This appears to be a single dump episode where common household refuse was collected and deposited away from the original point of consumption or use; a common practice in southern California deserts (see Hale et al. 2010).

This refuse deposit contained only common household goods and expendables and cannot be associated with a narrow time period, specific individual or event of interest. This refuse deposit has low artifact diversity and does not contribute to local or regional historic patterns or narratives. For these reasons, this site is recommended as not significant according to criteria 1, 2, 3, or 4 under CEQA significance guidelines, and it is not considered a "unique archaeological resource."

Figure 14 Close-up view of historic refuse deposit 9020-AD-1

9020-AD-02

This site consists of several large pieces of metal and can fragments. The metal pieces are more than 8 ft long and 4 ft wide and appear to be the remains of an industrial container. No diagnostic information was obtained from the metal items and their greater than 45 year age is assumed from condition of the metal. Two can fragments were also identified; both were rotary opened food cans and appeared to date to the 1960s. No other identifying elements were visible.

The refuse identified at this site may not be associated in terms of date or event of disposal. It is possible that the cans represent a separate episode of discard, or they may have washed into the area during a flood event. Taken together, the limited information available on this historic refuse precludes any meaningful contribution to our understanding of local or regional patterns or economic behavior. Therefore this site is recommended as not eligible for listing under any CEQA significance criteria, nor is it considered a "unique archaeological resource" under CEQA.

9020-BC-01

This site consist of a prehistoric bedrock outcrop with a single flat grinding surface evident on its surface (Figure 15). The grinding surface shows minimal polish and poorly defined limits,

characteristic of opportunistic grinding, probably of locally available plant materials. A trowel was used to probe the area immediately around the bedrock milling station to look for buried archaeological deposits or obscured tools; none were found. A thin veneer of 1-10 cm of loose coarse-grained matrix was encountered with no evidence of additional prehistoric tools or remains.

Bedrock milling outcrops such as this are one of the most common constituents of the Late Prehistoric period in California, a time when most aboriginal economies focused on intensive plant processing. Their presence on a landscape known for plant processing and dotted with suitable bedrock platforms for use as opportunistic milling stations is expected and does not contribute significance, individually or cumulatively, to local or regional aboriginal contexts. No individuals or events of significance can be attributed to such isolated features. For these reasons, the site 9020-BC-01 is recommended as not significant under criteria 1, 2, 3, or 4 under CEQA guidelines. Nor is this resource considered a "unique archaeological resource" under CEQA.

Figure 15 View to the south of 9020-BC-01, a bedrock milling feature

5.2 Built Environment Survey Results

No historic era built environment resources 45 years old or older are located in the NPA. During the built environment survey a Dudek qualified architectural historian recorded elements of the

Day Creek Improvement Area, which is a water management system that encompasses a network of related structures. The Day Creek Improvement Area encompasses the entirety of the NPA, extending south from Power Line Road, bound by the Deer Creek Channel on the west side and Day Creek Channel on the east side, and Highland Avenue to the south. It consists of the Day Creek Spreading Grounds, the Day Creek Channel, the Deer Creek Channel, and numerous engineered structures categorized by the Department of Public works records as interim levees, ultimate levees, storm drains. These features and their construction dates are summarized in Table 1 and briefly described below.

Table 1. Built Environment Resources

Name	SBCFCD Designation	Description	Date Constructed	Project Area
Deer Creek Channel (USACE)	1-501-1B	Concrete lined channel; reach from Deer Creek Debris Dam to Highland Avenue	1983	CPA, NPA
Deer Creek Spreading Grounds	1-502-2A	Canyon mouth to Highland Avenue	Circa 1976	CPA, NPA
Deer Creek Reception Levee	1-503-5A	DESTROYED: Reception levee from Canyon Mouth to north of hillside avenue	Circa 1972 to 1997	CPA
Deer Creek Debris Dam (USACE)	1-506-3A	Dam at mouth of Deer Canyon	1983	CPA
Day Creek Spreading Grounds	1-602-2A	Spreading Grounds	1975	NPA
Day Creek Channel	1-601-1A	Concrete channel segment. Reach from Day Creek Debris Dam to Spreading Grounds levee	1986	CPA
Day Creek Channel	1-601-1B	Concrete channel segment; reach from Spreading Grounds to Highland Avenue	1986	NPA
Day Creek Reception Levee	1-602-5A	Levee north of mine, adjoined to Day Creek Channel on east side	1986	NPA
Day Creek Improvement Area	1-611-1A	Levees, reclaimed mine site basin, spreading grounds on alluvial fan	1986	CPA, NPA
Day Creek Debris Dam	1-611-4A	Dam at mouth of Day Canyon	1986	CPA
Day Creek Spreading Grounds Basins	1-614-4A, -4B, -4C, -4D, and -4E	Basins at confluence of receptor levee and Day Creek Channel (1-601-1B)	1975	NPA

1-501-1B: Deer Creek Channel

Deer Creek Channel is located in the western portion of the NPA and was designed by the USACE (Figure 16). It was completed it 1983 and is constructed of reinforced concrete. Access could not be given at the time of survey, therefore, estimated measurements could not be given for the Deer Creek Channel. The channel reach below Highland Avenue was concrete lined in

the early 1980s. The channel reach within the NPA was becomes a concrete lined channel by 1983.

Figure 16 Looking west toward 1-501-1B Deer Creek Channel (IMG_0328)

1-502-2A: Deer Creek Spreading Grounds

The Deer Creek Spreading Grounds and is located west of the Day Creek spreading grounds and levee, extending southeast towards the confluence of the two creek's flow (Figure 17). The Deer Creek Receptor levee, which operated in conjunction with the spreading grounds, was destroyed in 1997 to construct a residential development. Several earthen ridges are visible on the alluvial fan, and are still visible in aerial photographs. The Deer Creek Dam and channel appear to have made these levees and spreading grounds obsolete.

Figure 17 1-502-2A and 5A: Deer Creek Spreading grounds and receptor levee (IMG_1627)

1-601-1B: Day Creek Channel Segment Spreading Grounds to Highland Avenue

This flood control channel was designed by Willdan Associates, under contract from the SBCFCD, and constructed in phases beginning in 1986 (Figure 18). The channel measures roughly 66.5 feet wide, and 11 feet deep, trending downhill along the sloping grade. It is constructed of reinforced concrete. The 1B reach extends from the 1-602-5A levee south to Highland Avenue, or 1.5 miles.

Figure 18 1-601-1B: Day Creek Channel, looking south, downstream (IMG_1063)

1-602-2A: Day Creek Spreading Grounds Canyon Mouth to Highland Avenue

The Day Creek Spreading Grounds was designed in 1975 by an SBCFCD engineer (J.A.C.) (Figure 19). The spreading grounds cover nearly the entire NPA, 1,164 acres, not including the Los Osos High School or the residential developments south of the NPA. The Spreading Grounds contains a large, roughly rectangular basin in the northeastern portion, the former gravel and sand mine of Fourth Street Rock Crusher Company.

Figure 19 1-602-2A Day Creek Spreading Grounds, looking southeast (IMG_1049)

1-602-5A: Day Creek Spreading Grounds Reception Levee south of Day Creek Spreading Grounds to Banyan Street

This levee is a curving S-shape and extends from the east to west major revetment levee in the northern portion of the NPA (Figure 20). The levee was built in 1986 by Willdan Associates and is constructed with soil, alluvial gravels, and cobbles within a mesh wire reinforced retaining wall. The top of the levee serves as an access road and was a variable width, always greater than 10 feet wide. The height of the levee varied along its length, but generally appeared to be between 10 feet to 20 feet in height. The levee extends east-west, north of the Fourth Street Rock Crusher gravel pit, for

Figure 20 Looking north toward 1-602-5A Day Creek Spreading Grounds Levee (IMG_1643)

1-614-4A through 4E: Day Creek Spreading Basin including portions of receptor levees

Several unreinforced earthen levees in were added between 1941 and 1986, however have been so badly damaged by flooding episodes that they are badly eroded and indistinguishable from the surrounding landscape. These levees are earthen, and vary in height and width. Some levees north of the major receptor levee (1-602-5A) and one curving L-shaped levee south of the major receptor are clearly visible (Figures 21, 22).

Figure 21 1-614-4A to 4E: looking north to receptor levees, north of Power Line Road (IMG_1648)

Figure 22 1-614-4A-4E: receptor levee, south of major levee 1-602-5A (IMG_1041)

Research revealed that the Day Creek Improvement Area system components date between the early 1970s to the 1990s. None of the existing components is 45 years old or older. Additionally, water management systems like the Day Creek Improvement Area are common throughout the state of California. Some of the earliest systems that date back to the mid-1800s are still in place and in use today. As a water management system established in the later part of the 20th century the Day Creek Improvement Area does not warrant consideration or evaluation under thresholds established for resources that have achieved exceptional significance before they have reached the age of 50. Consequently, there are no historic era built environment resources located in the NPA that required evaluation under NRHP or CRHR criteria. In summary, the NPA does not contain any built environment properties considered historical resources for the purposes of CEQA.

6 IMPACTS AND RECOMMENDATIONS

6.1 Impacts Assessment

CEQA requires a lead agency to determine whether a project or plan may have a significant effect on historical resources (PRC, Section 21084.1). If it can be demonstrated that a project or plan will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. To the extent that they cannot be left undisturbed, mitigation measures are required (Section 21083.2(a)–(c)).

One hundred percent of the proposed NPA was surveyed for cultural resources (archaeological and built environment). As described in Section 5.1, there are three newly identified archaeological resources within the planned development area: 9020-AD-01, 9020-AD-02, 9020-BC-01. As a result of the inventory and evaluation effort, these resources were found ineligible for the CRHR or local listing.

No previously recorded built environment resources were identified in the records search. Several built environment structures associated with the Day Creek Improvement Area were identified during pedestrian survey; however none meet the thresholds for evaluation under CEQA or NHPA (for the USACE resources). As such there are no built environment historical resources located in the NPA. In summary, the NPA contains no known archaeological resources or built environment resources that could be considered historical resources under CEQA, and thus the EHNCP will not have a significant impact to historical resources.

6.2 Recommendations

No known historical resources will be impacted through EHNCP implementation. The geology of the NPA is such that there is a low probability of discovering significant archaeological resources during ground breaking activities. For these reasons, archaeological monitoring is not required during Project ground-breaking activities for the EHNCP.

Unanticipated Discovery of Cultural Resources

In the unlikely event that cultural resources are exposed during construction activities for the proposed EHNCP, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find, the archaeologist may simply record the find and allow work to continue. If the discovery proves significant under CEQA, additional work, such as preparation of an archaeological treatment plan, testing, or data recovery, may be warranted.

Unanticipated Discovery of Human Remains

In accordance with Section 7050.5 of the California Health and Safety Code, if human remains are found, the San Bernardino County Coroner shall be notified within 24 hours of the discovery. No further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains shall occur until the coroner has determined, within 2 working days of notification of the discovery, the appropriate treatment and disposition of the human remains. If the remains are determined to be Native American, the coroner shall notify the NAHC in Sacramento within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the NAHC must immediately notify those persons it believes to be the Most Likely Descendant (MLD) from the deceased Native American. The MLD shall complete their inspection within 48 hours of being granted access to the site. The designated Native American representative would then determine, in consultation with the property owner, the disposition of the human remains.

7 REFERENCES

14 CCR 15000–15387 and Appendices A–L. Guidelines for Implementation of the California Environmental Quality Act, as amended.

48 FR 44716. Notice: "Archeology and Historic Preservation; Secretary of the Interior's Standards and Guidelines." September 29, 1983.

48 FR 44720–44726. "The Secretary of the Interior's Standards and Guidelines for Federal Agency Historic Preservation Programs Pursuant to the National Historic Preservation Act." April 24, 1998.

AMI (Aerial Map Industries). 1976. Aerial photograph, Flight AMI-SBD-76, Frame 8131. 1:36,000 scale. March 3, 1976. Aerial Photograph Collection, Map and Imagery Laboratory, University of California Santa Barbara. Accessed December 12, 2018. http://mil.library.ucsb.edu/apcatalog/report/report.php?filed_by=ami-sbd-76

AMI (Aerial Map Industries). 1980. Aerial photograph, Flight AMI-SBD-80, Frame 10724. 1:36,000 scale. July 21, 1980. Aerial Photograph Collection, Map and Imagery Laboratory, University of California Santa Barbara. Accessed December 12, 2018. http://mil.library.ucsb.edu/apcatalog/report/report.php?filed_by=ami-sbd-80

Bailey, Janet F. 1961. "The Growth of Riverside." Unpublished thesis; University of California, Riverside. Riverside Special Collections Department.

Bancroft, H.H. 1885. "History of Mexico 1804-1824." In *The Works*, Vol. XIL. San Francisco, California: Bancroft & Company.

Basgall, M.E., and M. Hall. 1990. "Adaptive Variation in the North-Central Mojave Desert." Paper presented at the 55th Annual Meeting of the Society for American Archaeology, Las Vegas.

Basgall, M. E., L. Johnson, and M. Hale. 2002. "An Evaluation of Four Archaeological Sites in the Lead Mountain Training Area, Marine Corps Air Ground Combat Center, Twentynine Palms, California." Submitted to U.S. Army Corps of Engineers, Fort Worth, Texas.

Bean, L.J., and F.C. Shipek. 1978. "Luiseño." In *Handbook of North American Indians*, Vol. 8, *California*, edited by Robert F. Heizer, 550–563. Washington, D.C.: Smithsonian Institution.

Bean, L.J., and C.R. Smith. 1978. "Gabrielino." In *California*, edited by Robert F. Heizer, 538–548. Vol. 8 in *Handbook of North American Indians*, edited by William C. Sturtevant. Washington, D.C.: Smithsonian Institution.

Boscana, G. 1846. "Chinigchinich: A Historical Account of the Origin, Customs, and Traditions of the Indians at the Missionary Establishment of St. Juan Capistrano, Alta California." In *Life in California*, by Alfred Robinson, 227–341. New York, New York: Wiley & Putnam.

Bridge, Catherine Vail. 2006. *Founding the City of Rancho Cucamonga: 1972*-1978. Claremont, CA: The Paige Press.

Brown, J.B. 1985. *Harvest of the Sun: An Illustrated History of Riverside County*. Northridge, California: Windsor Publications.

Brown, John, and James Boyd. 1922. *History of San Bernardino and Riverside Counties: With Selected Biography of Actors and Witnesses of the Period of Growth and Achievement*. The Western Historical Association.

Byrd, Brian F., and Seetha N. Reddy. 2002. "Late Holocene Adaptations along the Northern San Diego Coastline: New Perspectives on Old Paradigms." In *Catalysts to Complexity: Late Holocene Societies of the California Coast*, edited by Jon M. Erlandson and Terry L. Jones, 41–62. Cotsen Institute of Archaeology, University of California, Los Angeles.

California Department of Transportation. 2007. *A Historical Context and Archaeological Research Design for Agricultural Properties in California*. Sacramento, California: Division of Environmental Analysis, California Department of Transportation.

California Public Resources Code, Sections 21000–21177. California Environmental Quality Act (CEQA), as amended.

Chattel (Chattel Architecture, Planning & Preservation, Inc.). 2010. *Historic Context Statement for the City of Rancho Cucamonga, California.* Appendix to the City of Rancho Cucamonga 2010 General Plan Update. Accessed November 27, 2018. https://www.cityofrc.us/civicax/filebank/blobdload.aspx?BlobID=6276

Clucas, Donald L. 1974. *Light Over the Mountain: A History of the Rancho Cucamonga Area*. Upland: California Family House.

Davis, E.L., e.d. 1978. *The Ancient Californians: Rancholabrean Hunters of the Mohave Lakes Country*. Natural History Museum of Los Angeles County, Science Series No. 29.

DPW (San Bernardino County Department of Public Works). 2018. "Flood History." Accessed December 13, 2018. http://cms.sbcounty.gov/dpw/FloodControl/History.aspx

Elderbee, R.L. 1918. "History of Temescal Valley." *Publications of the Historical Society of Southern California*. Vol. I.

Fages, P. 1937. *A Historical, Political, and Natural Description of California* (1775). Translated by Herbert Ingram Priestly. Berkeley, California: University of California Press.

Faigin, Daniel. 2018. "California highways: SR 210." Accessed December 13, 2018. https://www.cahighways.org/209-216.html#210

FAS (Fairchild Aerial Surveys). 1930. Aerial photograph, Flight C-829, frame 43. 1:18,000 scale. February 18, 1930. Aerial Photograph Collection, Map and Imagery Laboratory, University of California Santa Barbara. Accessed December 12, 2018. http://mil.library.ucsb.edu/apcatalog/report/report.php?filed_by=C-829

FAS. 1949. Aerial photograph, Flight C-13990, frame 1-198X. 1:14,400 scale. July 14, 1949. Aerial Photograph Collection, Map and Imagery Laboratory, University of California Santa Barbara. Accessed December 12, 2018. http://mil.library.ucsb.edu/apcatalog/report/report.php?filed_by=c-13990

FAS. 1960. Aerial photograph, Flight C-23870, frame 1443. 1:18,000 scale. May 20, 1960 Aerial Photograph Collection, Map and Imagery Laboratory, University of California Santa Barbara. Accessed December 12, 2018. http://mil.library.ucsb.edu/apcatalog/report/report.php?filed_by=C-23870

Foster, John, James Schmidt, Carmen Weber, Gwendolyn Romani, and Roberta Greenwood. 1991. *Cultural Resource Investigation: Inland Feeder Project, Metropolitan Water Distric of Southern California*. Prepared by Greenwood & Associates. On file at the Eastern Information Center.

Gallegos, D.R. 1987. "San Dieguito-La Jolla: Chronology and Controversy." San Diego County Archaeological Society, Research Paper No. 1.

Geiger, M., and C.W. Meighan. 1976. *As the Padres Saw Them: California Indian Life and Customs as Reported by the Franciscan Missionaries, 1813-1815*. Santa Barbara, California: Santa Barbara Mission Archive Library.

George, Joan, and M. Colleen Hamilton. 2009. *Significance Assessment and Determination of Effects to Historical Resources along the Perris Valley Commuter Rail Line*. Prepared for Dr. R. Motschall, Kleinfelder. Hemet, California: Applied Earthworks Inc.

Golla, V. 2007. "Linguistic Prehistory." In *California Prehistory: Colonization, Culture, and Complexity*, edited by T.L. Jones and K.A. Klar, 71–82. New York, New York: Altamira Press.

Grenda, D. R. 1997. *Continuity and Change: 8,500 Years of Lacustrine Adaptation on the Shores of Lake Elsinore: Archaeological Investigations at a Stratified Site in Southern California.* Statistical Research Inc. Technical Series 59. Tucson, Arizona.

Griset, S. 1996. "Southern California Brown Ware." Unpublished PhD dissertation; University of California, Riverside.

Gross, T.G., and M. Robbins-Wade. 2008. "Settlement Pattern and Predictive Modeling of Site Locations." In *Prehistoric and Historic Archaeology of Metropolitan San Diego: A Historic Properties Background Study*, 299–331. Carlsbad, California: ASM Affiliates.

Guinn, J.M. 1907. *A History of California and an Extended History of Its Southern Coast Counties*. Los Angeles, California: Historic Record Company.

Gumprecht, B. 1999. *Los Angeles River: Its Life, Death, and Possible Rebirth*. Baltimore: John Hopkins University Press.

Hale, Edson D. 1888. *The County of San Bernardino, California, and Its Principal City.* New York, New York: Columbia College in the City of New York.

Hale, M. 2001. "Technological Organization of the Millingstone Pattern in Southern California." Master's thesis; California State University, Sacramento.

Hale, M. 2009. "San Diego and Santa Barbara: Socioeconomic Divergence in Southern California." PhD dissertation; University of California, Davis.

Hale, M., B. Comeau, and C. Willis, 2010. *Final Class II and Class III Cultural Resources Inventory Report for the Tule Wind Project, McCain Valley, San Diego County, California*. Submitted to HDR Engineering, San Diego, California.

Hall, William Hammond. 1888a. "Detail Irrigation Map: Ontario Sheet." Map sheet in *Detail Irrigation Map(s) of Los Angeles and San Bernardino Counties, California to Accompany Report on Irrigation and Water Supply*. Sacramento: California State Engineering Department. David Rumsey Map Collection, Stanford University Library. Accessed November 27, 2018. https://www.davidrumsey.com/luna/servlet/detail/RUMSEY~8~1~207646~3003402:Ontario--Detail-Irrigation-Map-?sort=Pub_List_No_InitialSort%2CPub_Date%2CPub_List_No%2CSeries_No

Hall, William H. 1888. "Day's Canon and Other Works: Etiwanda Colony Irrigations." Chapter 13 – San Bernardino Works and Projects, Section 1, in *Irrigation in California [Southern]: the Field, Water-Supply, and Works, Organization and Operation in San Diego, San Bernardino, and Los Angeles Counties*. Second part of the Report of the State Engineer of California on Irrigation and the Irrigation Question. Sacramento: California State Engineering Department. p. 332–338. Accessed January 8, 2019. https://books.google.com/books?id=gIFBAAAAMAAJ&lpg=PA332&ots=inCHSgPbXL&dq=Day%E2%80%99s%20Canon%20and%20Other%20Works%3A%20Etiwanda%20Colony%20Irrigations&pg=PA3#v=onepage&q=Day%E2%80%99s%20Canon%20and%20Other%20Works:%20Etiwanda%20Colony%20Irrigations&f=false

Harrington, J.P. 1934. "A New Original Version of Boscana's Historical Account of the San Juan Capistrano Indians of Southern California." *Smithsonian Miscellaneous Collections* 92(4).

Hector, S.M. 2006. *Cultural Resources Study for the Maintenance of Old Mission Dam, Mission Trails Regional Park, San Diego, California*. Prepared for the City of San Diego.

Heizer, R, ed. 1968. "The Indians of Los Angeles County." *Southwest Museum Papers*. No 21. Los Angeles, CA: Southwest Museum. Accessed November 27, 2018. https://memory.loc.gov/service/gdc/calbk/007.pdf

Heizer, R. 1978. "Introduction." In *California*, edited by R.F. Heizer, 1–6. Vol. 8 in *Handbook of North American Indians*, edited by W.C. Sturtevant. Washington, D.C.: Smithsonian Institution.

Heizer, R., and K.M. Nissen. 1973. *The Human Sources of California Ethnography*. Berkeley, California: University of California Archaeological Research Facility, Berkeley.

Heller, John, 2009. "DRAFT: Pacific Electric Etiwanda Depot." National Register of Historic Places Inventory/Nomination Form. South Pasadena, CA: John Heller, Architect.

Hickox, Robert L. 1981. *A History of Etiwanda*. Rancho Cucamonga: City of Rancho Cucamonga

Hurt, Suzanne. 2014. "Riverside: Scientists, Park Officials Strive to Keep Legendary Orange Tree Alive." *The Press-Enterprise*. Published August 27, 2014. Accessed August 18, 2016. http://www.pe.com/articles/tree-749004-citrus-trees.html.

Hyatt, Ed. 1930. "Bulletin No. 31. Santa Ana River Basin." *Reports on State Water Plan Prepared Pursuant to Chapter 832, Statues of 1929*. Sacramento, CA: State of California, Department of Public Works, Division of Water Resources.

Johnson, J.R., and J.G. Lorenz. 2006. "Genetics, Linguistics, and Prehistoric Migrations: An Analysis of California Indian Mitochondrial DNA Lineages." *Journal of California and Great Basin Anthropology* 26:33–64.

Kroeber, A. 1925. *Handbook of the Indians of California*. Washington D.C.: Smithsonian Institution.

LAH (Los Angeles Herald). 1882. "Local Brevities." Newspapers.com: *Los Angeles Herald*, May 11, 1882, pg.3.

LAT (Los Angeles Times). 1882. "Etiwanda." Newspapers.com: *Los Angeles Times*, June 22, 1882, pg. 3.

LAT. 1912. "Right of Way Is Purchased." Newspapers.com: *Los Angeles Times*, July 31, 1912, pg. 27.

LAT. 1913. "New Service to Etiwanda." Newspapers.com: *Los Angeles Times*, November 29, 1913, pg. 21.

LAT. 2001. "Greed, Violence Haunted Healthy Heiress." Latimes.com, L.A. Then and Now. February 18, 2001. Accessed November 27, 2018. http://articles.latimes.com/2001/feb/18/local/me-27083

Laval Company Inc. 1938. Aerial photograph, Flight AXL-1938, Frame 60-75. 1:20,000 scale. July 4, 1938. Aerial Photograph Collection, Map and Imagery Laboratory, University of California Santa Barbara. Accessed December 12, 2018. http://mil.library.ucsb.edu/apcatalog/report/report.php?filed_by=AXL-1938

Laylander, D. 2000. *Early Ethnography of the Californias, 1533-1825*. Salinas, California: Coyote Press Archives of California Prehistory.

Laylander, D. 2010. "Linguistic Prehistory." *Research Issues in San Diego Prehistory*. Accessed August 31, 2012. http://www.sandiegoarchaeology.org/Laylander/Issues /index.htm.

Lightfoot, K.G. 2005. *Indians, Missionaries, and Merchants: The Legacy of Colonial Encounters on the California Frontiers.* Berkeley, California: University of California Press.

Love, Bruce, Bai "Tom" Tang, Michael, Hogan, and Mariam Dahdul. 2002. *Cultural Resources Technical Report: UCR Long Range Development Plan*. Prepared by CRM TECH for EIP Associates. On file at the Eastern Information Center.

March Field Air Museum 2011. 2011. "History of March Air Force Base." Accessed March 13, 2011. www.marchfield.org.

NETR (National Environmental Title Research LLC). 2018. Historic aerial photographs of Rancho Cucamonga dating from 1938, 1959, 1966, 1980, 1995, 2002, 2005, 2009, 2010, 2012, and 2014. Accessed December 12, 2018. https://www.historicaerials.com/viewer

Nostrand, Richard L. 1996. *The Hispano Homeland*. University of Oklahoma Press.

OHP (Office of Historic Preservation). 1995. *Instructions for Recording Historical Resources*. California State Parks, Office of Historic Preservation. March 1995. Accessed October 2016. http://ohp.parks.ca.gov/pages/1054/files/manual95.pdf.

Ontario Fruit Grower. 1882. "Stowell's Pipe Camp." *Ontario Fruit Grower*, December 4, 1882. In Hickox 1981, p 106-107.

Ontario Fruit Grower. 1883. "Etiwanda Improvements." *Ontario Fruit Grower*, March 13, 1883. In Hickox 1981, p 116-118.

Patterson, Tom. 1971. *A Colony for California, Riverside's First Hundred Years*. Riverside, California: Press-Enterprise Company.

Progress Bulletin. 1977. " It's Now Official: Rancho Cucamonga Becomes a City." Newspapers.com: *Progress Bulletin*, December 1, 1977, pg. 11

Robinson (Robinson Aerial Surveys, Inc. 1959. Aerial photograph, Flight AXL-1959, frame 17W-172. 1:20,000 scale. November 24, 1959. Aerial Photograph Collection, Map and Imagery Laboratory, University of California Santa Barbara. Accessed December 12, 2018. http://mil.library.ucsb.edu/apcatalog/report/report.php?filed_by=axl-1959

Rogers, M.J. 1945. "An Outline of Yuman Prehistory." *Southwestern Journal of Anthropology* 1:167–198.

SBC Sun (San Bernardino County Sun). 1941a. "Flood Board to Search Titles." Newspapers.com: *The San Bernardino County Sun.* February 4, 1941, pg. 11.

SBC Sun. 1941b. "Conservation District Will Acquire Lands." Newspapers.com: *The San Bernardino County Sun*. March 4, 1941, pg. 5.

SBC Sun. 1942a. "Miracle at Fontana: Giant Kaiser Steel Mill to Be In Full Production in January." Newspapers.com: *The San Bernardino County Sun*. August 2, 1942, pg. 1, 8.

SBC Sun. 1942b. "Giant Kaiser Furnace 'Blown In' as New West Coast Industry Started." Newspapers.com: *The San Bernardino County Sun*. December 31, 1942, pg. 1.

SBC Sun. 1950. "Prisoners Work on Projects Not Ordinarily Done. Newspapers.com: *The San Bernardino County Sun*. April 30, 1950, pg. 8.

SBC Sun 1954. "West End Pheasant Hunt to Go On As Scheduled." Newspapers.com: *The San Bernardino County Sun*. October 31, 1954, pg. 48.

SBC Sun. 1969a. "New Storm Expected to Bring Significant Rain Into County." Newspapers.com: *The San Bernardino County Sun*. January 24, 1969, pg. 1.

SBC Sun. 1969b. "Killer Floods Hit West End: S.B. County Reels Under Storm's Onslaught." Newspapers.com: *The San Bernardino County Sun*. January 26, 1969, pg. 1-2.

SBC Sun. 1969c. "County Flood Damage Tops $15 Million." Newspapers.com: *The San Bernardino County Sun*. January 28, 1969, pg. 1.

SBC Sun. 1969d. "County Flood-Damage Will Take 2 Years to Repair. Newspapers.com: *The San Bernardino County Sun*. March 23, 1969, pg. 13.

SBC Sun. 1970a. "One Year After Flood Disaster, County's $8.3 Million Restoration Plan Nears Goal." Newspapers.com: *The San Bernardino County Sun*. January 25, 1970, pg. 13.

SBC Sun. 1970b. "Army Corps of Engineers Project: Emergency Flood Control Under Way in West End." Newspapers.com: *The San Bernardino County Sun*. November 11, 1970, pg. 024

SBC Sun. 1978. "Channels Slow Flood Damage." Newspapers.com: *The San Bernardino County Sun*. February 13, 1978, pg. 22.

SBC Sun. 1980. "Builders Swamp Rancho Office." Newspapers.com: *The San Bernardino County Sun*. September 3, 1980, pg. 45.

SBC Sun. 1986a. "Water Board Attempts Neutral Stand on Proposed Gravel Plant. Newspapers.com: *The San Bernardino County Sun*. August 6, 1986, pg. 35.

SBC Sun. 1986b. "R.C. Will Sue County to Block Sand, Gravel Mine." Newspapers.com: *The San Bernardino County Sun*. August 22, 1986, pg. 25.

SBC Sun. 1987. "Flood Project Advances." Newspapers.com: *The San Bernardino County Sun*. February 10, 1987, pg. 11.

SBC Sun. 1989. "Flood Control." Newspapers.com: *The San Bernardino County Sun*. August 18, 1989, pg. 22.

SBC Sun. 1990. "Judge: Mining Firm Can Build Plant in Rancho." Newspapers.com: *The San Bernardino County Sun*. February 17, 1990, pg. 17.

SBC Sun. 1996. "Rancho Nears OK of Highway 30 Extension." Newspapers.com: *The San Bernardino County Sun*. January 17, 1996, pg. 19.

SBCFCD (San Bernardino County Flood Control District) 2018. Personal communication. December 3, 2018.

Schiffer, M.B. 1987. *Formation Processes of the Archaeological Record*. Albuquerque, New Mexico: University of New Mexico Press.

Southwestern (Southwestern Aerial Surveys). 1952. Aerial photograph, Flight AXL-1953B, Frame 36K-138. 1:20,000 scale. October 21, 1952. Aerial Photograph Collection, Map and Imagery Laboratory, University of California Santa Barbara. Accessed December 12, 2018. http://mil.library.ucsb.edu/apcatalog/report/report.php?filed_by=AXL-1953B

Sparkman, Philip S. 1908. "The Culture of Luiseño Indians." *University of California Publications in American Archaeology and Ethnography* 8(4):187–234.

Starr, Kevin. 2007. *California: A History*. New York, New York: Modern Library Publications.

Stoebe, Martha Gaines. 2001 *History of Alta Loma, California, 1880-1980*. Rancho Cucamonga: City of Rancho Cucamonga

Stonehouse, Merlin. 1965. *John Wesley North and the Reform Frontier*. Minneapolis, Minnesota: University of Minnesota Press.

Teledyne Geotronics. 1977. Aerial photograph, Flight TG-7700, Frame 21-18. 1:24,000 scale. September 19, 1977. Aerial Photograph Collection, Map and Imagery Laboratory, University of California Santa Barbara. Accessed December 12, 2018. http://mil.library.ucsb.edu/apcatalog/report/report.php?filed_by=tg-7700

Toulouse, Julian. 1971. *Bottlemakers and Their Marks*. Thomas Nelson, Inc., New York.

Universe (Universe Aerial Survey, Inc.). 1966. Aerial photograph, Flight Universe-112-1, Frame 58. 1:24,000 scale. October 18, 1966. Aerial Photograph Collection, Map and Imagery Laboratory, University of California Santa Barbara. Accessed December 12, 2018. http://mil.library.ucsb.edu/apcatalog/report/report.php?filed_by=UNIVERSE-112-1

USGS. 2008. Appendix A: Day Creek in "An Evaluation of Selected Extraordinary Floods in the United States Reported by the U.S. Geological Survey and Implications for Future Advancement of Flood Science." *Scientific Investigations Report 2008-5164.* Washington DC: U.S. Department of the Interior. Accessed December 13, 2018. https://pubs.usgs.gov/sir/2008/5164/pdf/sir20085164_DayCreek.pdf

Wallace, W.J. 1955. "A Suggested Chronology for Southern California Coastal Archaeology." *Southwestern Journal of Anthropology* 11:214–230.

Warren, C.N. 1964. "Cultural Change and Continuity on the San Diego Coast." Unpublished PhD dissertation; University of California, Los Angeles.

Warren, Claude N. 1968. "Cultural Tradition and Ecological Adaptation on the Southern California Coast." In *Archaic Prehistory in the Western United States*, edited by Cynthia Irwin-Williams, 1–14. Eastern New Mexico University Contributions in Anthropology No. 1. Portales.

Warren, C.N., G. Siegler, and F. Dittmer. 2004. "Paleoindian and Early Archaic Periods." In *Prehistoric and Historic Archaeology of Metropolitan San Diego: A Historic Properties Background Study*. Prepared for the Metropolitan Wastewater Department, City of San Diego. Encinitas, California: ASM Affiliates.

Waters, M.R. 1992. *Principles of Geoarchaeology: A North American Perspective*. Tucson, Arizona: University of Arizona Press.

White, Raymond. 1963. "Luiseño Social Organization." *University of California Publications in American Archaeology and Ethnology* 48:91–194.

INTENTIONALLY LEFT BLANK.

APPENDIX A (CONFIDENTIAL—UNDER SEPARATE COVER)

Maps

APPENDIX B (CONFIDENTIAL—UNDER SEPARATE COVER)

Constraints Memo For Preserve Area

APPENDIX C

Records Search,
NAHC Sacred Lands File Search,
and Tribal Correspondence