A CULTURAL RESOURCES INVENTORY AND MANAGEMENT PLAN FOR THE FAIRFIELD OSBORN PRESERVE

by

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ABSTRACT

PURPOSE OF STUDY: The intent of this thesis is to produce a cultural resources management plan (CRMP) for the Sonoma State University (SSU) Fairfield Osborn Preserve (FOP). A CRMP is an integrated policy and planning document that identifies the cultural resources on a property, contextualizes those resources through research on their natural and cultural environments, addresses impacts, and makes recommendations to best manage them, all within a detailed scope of contemporary cultural resource legislation and best practices. CRMPs are produced for landholding agencies to manage effects on cultural resources stemming from the use of the land, whether they are development activities, conservation efforts, or scientific studies. Furthermore, CRMPs help agencies to use cultural resources in an ethical way that benefits users and managers. The purpose of this CRMP is to aid the SSU Preserves staff in the management, preservation, and protection of cultural resources on the FOP.

METHODS: This is a qualitative study. It began with background research into the environmental, prehistoric, and historic-era qualities of the FOP. Afterwards, a record search was conducted at the Northwest Information Center (NWIC) for previously recorded cultural resources on the property, as well as relevant literature and maps. This was followed by the archaeological fieldwork portion, which incorporated a non-exclusive, deployed surface survey of the entire property during the summer months of 2013 and 2014. Both previously recorded and newly discovered resources were recorded using California State Department of Parks and Recreation (DPR) 523 series forms. All these resources received an initial California Register eligibility assessment.

FINDINGS: The record search at the NWIC indicated there were four previously recorded resources on the property. The archaeological fieldwork phase identified an additional 11 resources and four isolates. Of the total 15 resources, 12 appear to be eligible for the California Register resulting from the initial eligibility assessment. The types of resources include a prehistoric habitation site, homestead era stone fences, buildings, road cuts, dams and reservoirs.

CONCLUSIONS: Based on the research and discoveries, a series of recommendations to FOP managers was established. They include incorporating the newly documented cultural resources into the Preserve database, integrating those resources into interpretive programs, establishing relations with culturally affiliated Native American groups, resurveying the Preserve after any future fires and mass wasting events, and initiating a cultural resources monitoring regimen.

Chair:_____ Date:_____

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Claudia Luke and Suzanne DeCoursey of the SSU Preserves department were integral in allowing me to conduct research at the Preserve, and provided me with insight throughout the last three years. I would also like to thank the Roth family, The Nature Conservancy, and the Sonoma County Agricultural and Open Space District for making the FOP available for students like me.

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CHAPTER I: INTRODUCTION

PURPOSE OF STUDY

The intent of this thesis is to produce a cultural resources management plan (CRMP) for the Sonoma State University (SSU) Fairfield Osborn Preserve (FOP). A CRMP is an integrated policy and planning document that identifies the cultural resources on a property, contextualizes those resources through research on their natural and cultural environments, addresses impacts, and makes recommendations to best manage them, all within a detailed scope of contemporary cultural resource legislation and best practices. CRMPs are produced for landholding agencies to manage effects on cultural resources stemming from the use of the land, whether they are development activities, conservation efforts, or scientific studies. Furthermore, CRMPs help agencies to use cultural resources in an ethical way that benefits users and managers. The purpose of this CRMP is to aid the SSU Preserves staff in the management, preservation, and protection of cultural resources on the FOP.

CULTURAL RESOURCES MANAGEMENT

Cultural resources are defined as anything made or modified by humans, including but not limited to buildings, structures, features, artifacts, ecofacts, sites, and traditional cultural places (TCPs), that hold social importance to a group of persons (Hardesty and Little 2009:204; King 2013:3). Cultural resources management (CRM) is the common name given to the process of "identification, evaluation, and preservation of cultural resources, as mandated by cultural resources legislation and guided by scientific standards within the planning process," (SSU Department of Anthropology 2014). CRM is the result of cultural resource legislation and is often activity driven. These laws

generally dictate that, for activities which may have an effect on the environment (e.g., building a trail system or replacing a pipeline), resources be identified, recorded, evaluated and treated before the activity is implemented. The details of the particular activity determine which legal context (i.e., parameters set by the applicable statutes, and their associated regulations and standards) CRM practitioners function within (Hardesty and Little 2009:8-12). CRM is also a value-oriented and decision based field, as not all cultural resources are important enough to be preserved (Hardesty and Little 2009:6-8). The statutes, regulations and standards outline the process that CRM practitioners follow in order to make these decisions.

The origins of CRM are associated with the earliest legislation addressing cultural resources. King reminds us that those institutions like the Library of Congress and the Smithsonian were “managing cultural resources” in the early and mid-nineteenth century (2013:16). After the Civil War, the Chickamauga National Military Park Act was passed, “to establish a national military park at the battlefield of Chickamauga,” and, “for the purpose of preserving and suitably marking for historical…study," (United States Congress 1890). Most CRM practitioners will not find themselves working within a Chickamauga legal context during their lifetime, but this legislation preceded several waves of related laws enacted over the following century (see Sebastian 2004:4-7; King 2013:386-394).

Taking this historical note into consideration, the expert consensus is that CRM as currently defined began in the 1960s and 1970s (Jameson 2008a:42; King 2013:23; Phillips 2003:1-12). Within these two decades, several prominent pieces of legislation were passed in the US, including the California Environmental Quality Act (CEQA) of

1970. CEQA did not initially address cultural resources, but eventually they were included in the legislation as components of the environment. This era of lawmaking created a demand for cultural resource specialists (e.g., archaeologists, historians, anthropologists, ethnographers, and curators) in government, private, and non-profit sectors (Kerber 1994:2). The establishment of the SSU CRM program in 1978 and the Anthropological Studies Center (ASC) in 1974 was at least partially due to this demand.

THE FAIRFIELD OSBORN PRESERVE – PURPOSE, USES, AND MISSION

The FOP is one of three preserves managed by SSU. The Nature Conservancy (TNC) previously owned approximately half of the current FOP land holdings. These lands were transferred to SSU in 1997 and came with a TNC conservation easement. The remainders of the Bill and Joan Roth family lands were donated in 2006 and 2013 and came with a Sonoma County Agriculture and Open Space District (SCAOPD) conservation easement. The purpose of the SSU Preserves is to "provide lands, facilities, databases, and programs that inspire participation, collaboration, and innovation in education and research," (SSU Preserves 2014a). The mission of the FOP is "to support academic excellence in the liberal arts and sciences by providing education and research experiences in place-based learning, community engagement, diversity, and sustainability," (SSU Preserves 2014b).

PREVIOUS RESEARCH AT THE FOP

The FOP has been traditionally used for scientific research in addition to education. Research began as early as the 1970s, when the Preserve was half of its current size (Smith 1973). Since then, more than 70 publications, including scholarly articles, theses, dissertations, presentations, and technical reports, were produced using

the FOP as their study area (SSU Preserves 2014c). More than a dozen studies are being conducted at the time of writing (SSU Preserves 2014c). Most of these studies are about the biology of the Preserve. Specifically, researchers at the FOP are renowned for their contributions to the study of *Phytophthora ramorum*, the plant pathogen that causes sudden oak death. More than 70 percent of the total publications concern sudden oak death in some regard (see Davidson et al. 2002; Davidson et al. 2002; Davidson et al. 2003; Davidson et al. 2005).

Preserve lands are open to anyone undertaking scientific or creative inquiry. The Preserve provides additional support for undergraduates conducting inquiry projects through Preserve grants and programs.

EDUCATION AT THE FOP

As an educational property, the Preserve is open to anyone interested in visiting the Property on educational field trips, including K-12 students, college students, and community members. The SSU Preserves department additionally offers skill training in environmental education and land management, inquiry-based programs in regional management issues, and service-learning opportunities with SSU classes who engage in real-world challenges at the Preserve.

LEGAL CONTEXT

Most of CRM is activity driven. Ideally, CRMPs are created preemptively for planning purposes (see Smirnoff 2009). This strategy allows land managers to use the CRMP as a tool when making future management decisions. As there are currently no activities scheduled at the FOP that trigger State or Federal regulations, there are no legal mandates for this CRMP. For the purposes of this thesis, a CEQA legal context will be

assumed. Additionally, historical resources owned by state agencies like the SSU Preserves department are subject to California Public Resource Code (PRC) Sections 5024 and 5024.5.

The National Environmental Policy Act (NEPA) of 1969 spawned a series of similar state legislations sometimes referred to as "Little NEPAs" (Marchman 2012:3-4). In California, this legislation is known as CEQA, codified in PRC Sections 21000 et seq. The policy of CEQA follows the logic that a "high-quality environment" is imperative and that public agencies are responsible for reviewing projects prior to their approval as to "lessen the significant environmental impacts of such projects," (PRC Section 21000[a] and 21002). A "project" is defined as "an activity which may cause either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment," and either directly or indirectly involves a public agency (PRC Section 21065). A "significant effect on the environment" constitutes "a substantial, or potentially substantial, adverse change in the environment," (PRC Section 21068).

CEQA considers historical and archaeological resources as part of the environment, and therefore the potential effects on these resources must be considered during the review process (PRC Section 21083.2 and 21084.1). Unique archaeological resources are defined as an “archaeological artifact, object, or site” and satisfy any of these three criteria:

> 1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
> 2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.

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

Historical resources are defined as, " 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," (PRC Section 5020.1) Furthermore, a historical resource must be "listed in, or determined to be eligible for listing in," the California Register of Historical Resources (CRHR) or the National Register of Historic Places (NRHP), listed in a local register, or a "resource identified as significant" in a qualified historical resource survey in order to be considered under CEQA (PRC Section 21084.1 and Section 5024.1[g]). The California Register of Historical Resources (CRHR) was established "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). The criteria for determining the CRHR eligibility of a cultural resource are based on the four NRHP criteria. They are:

> 1. [The resource] 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; and
> 4. Has yielded, or may be likely to yield, information important in prehistory or history (PRC Section 5024.1).

An outline of potential impacts to historical and archaeological resources is found in 14 CCR Section 15064.5. Specifically, when a project may cause substantial adverse

change to the significance of a historical resource or a unique archaeological resource, the lead agency must identify prudent and feasible mitigation measures (14 CCR Sections 15064.5[b] and 15064.5[c]). Substantial adverse change is defined as the "physical demolition, destruction, relocation, or alternation of the resource or its immediate surrounding such that the significance of an historical resource would be materially impaired," (14 CCR Section 15064.5[b]).

Not all development activities involving historical and archaeological resources, or their immediate surroundings, will result in substantial adverse changes. In fact, not all development activities are considered projects. Project is defined as

> The whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment (14 CCR Section 15378[a]).

Projects include activities directly or indirectly supported by public agencies, and when entitlements (permits, leases) are issued by a public agency to a person (14 CCR Section 15378[a]).

FOP managers should be able to distinguish between projects subject to CEQA and other activities in order to determine the appropriate course of action. CEQA addresses what are not considered projects, such as legislation proposals and certain administrative and maintenance actions (14 CCR Section 15378[b]). Projects that are ministerial in nature, "involving little or no personal judgment by the public official," are exempt from CEQA (14 CCR Section 15369). Ministerial projects include issuing hunting tags, marriage licenses, and automobile registrations. Discretionary projects are projects that do involve "an exercise of judgment or deliberation" by the public agency

(14 CCR Section 15357). Discretionary projects are subject to CEQA and include projects like timber harvests plans, issuing permits, and rezoning. Projects may also be statutorily or categorically exempt. Statutory exemptions primarily apply to discretionary projects that include, but are not limited to, "the enactment and amendment of zoning ordinances, the issuance of zoning variances, the issuance of use permits, and the approval of tentative subdivision maps," (PRC Section 21080[a]). Categorical exemptions are outlined in 14 CCR Section 15300 through Section 15333. They include non-impactful projects, but do not apply when they may adversely change the significance of a historical resource (14 CCR Section 15300.2[f]).

CEQA is best understood as a complex process, beginning with determining if the proposed activity represents a discretionary project (California Resources Agency 2005). If the activity is not a discretionary project, or the project is found to be exempt for one of several reasons, then the CEQA process ends there. However, if the activity is determined to be a project with any possibility of having a significant effect on the environment, then the CEQA process continues. Additionally, categorical exemptions cannot be used if the project may adversely affect the significance of a historical resource (14 CCR Section 15300.2[f]). What follows is a lengthy procedure that may include drafting studies and Environmental Impact Reports (EIRs), deciding on how to reduce or avoid significant environmental effects, and finally issuing permits, all while consultation continues between the agencies involved (California Resources Agency 2005). The CEQA flowchart (Figure 1) is an easy to follow graphic that takes the observer through the CEQA process, step by step. The California State University (CSU) CEQA Procedures can be found in the State University Administrative Manual (SUAM).

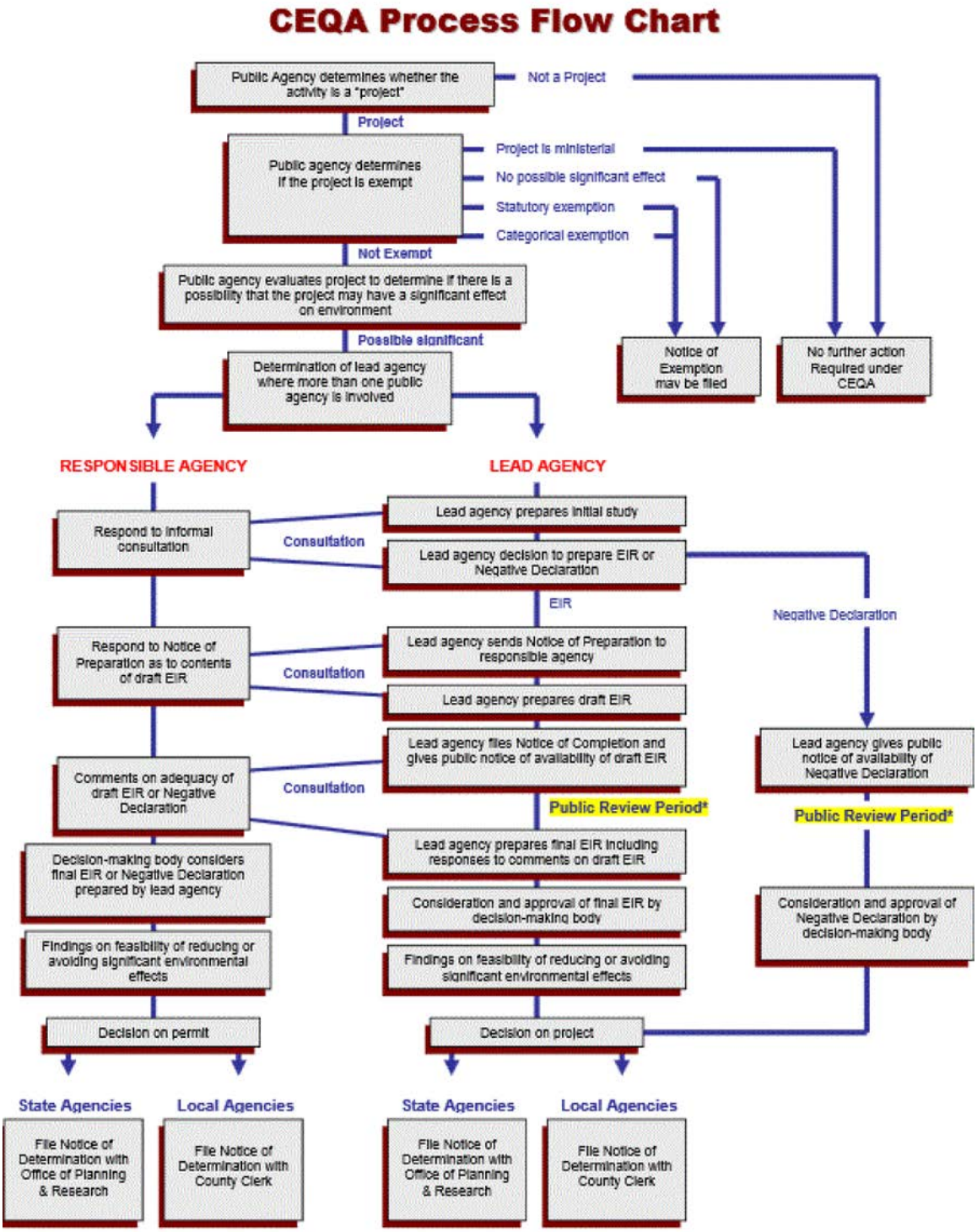


Figure 1: CEQA flowchart

The preceding legal context is meant to serve FOP managers as a framework for understanding CEQA and the CEQA process. However, cultural resource legislation is

dynamic. Proposed amendments to laws, regulations, and guideline are frequent, even if they are not always ratified. Although the legal context of this CRMP is current at the time of this writing, FOP managers should be aware of future changes to cultural resource legislation.

THESIS OVERVIEW

This thesis contains seven chapters. Chapter II is a synopsis of the environmental setting of the FOP, including information on location, flora, fauna, soils, geology, topography, and climate. Chapters III and IV are prehistoric and historical cultural contexts, respectively. Chapter III summarizes pertinent ethnographic, linguistic, and archaeological research. Chapter IV reviews the historic era from European contact to the American period today. This background research provides a basis with which interpretations are made about the cultural resources located during fieldwork.

Chapter V contains the methods for and results of the cultural resources inventory. This chapter also comprises an initial assessment of the CRHR eligibility of these resources. Chapter VI incorporates a literature review on three relevant theoretical frameworks: cultural landscapes, cultural heritage management (CHM), and public education, interpretation and outreach. The literature review will highlight modern CRM theory in regard to these three subjects and will provide a basis for contextualizing the thesis project

Finally, Chapter VII focuses on the CRMP for the FOP. It highlights current and proposed developments at the FOP, addresses any potential impacts to cultural resources, and makes recommendations to support their management. Chapter VII concludes with suggested avenues for future research and recommendations for FOP managers.

CHAPTER II: ENVIRONMENTAL SETTING

INTRODUCTION

This chapter outlines the environmental setting of the FOP and the broader Sonoma Mountain region. The environment is complex and dynamic, and this chapter only focuses on some of the more pertinent aspects. These include information on the physical location of the FOP, extant flora and fauna, hydrological systems, soil types, geologic activity, topographic features, and climatic trends. Articles and publications pertaining directly to the FOP are utilized when appropriate. When these materials are lacking, general regional sources will be consulted.

Humans are inseparable from the natural environment, and they will be the focus of Chapters III and IV. Those chapters, in combination with this environmental setting, function together to provide a detailed context for the interpretation and assessment of the cultural resources present at the FOP.

LOCATION

The FOP is 450 acres in size and is located on the northwest slopes of Sonoma Mountain in southeastern Sonoma County. In the Public Land Survey System (PLSS), the FOP lies within Township 6 North and Range 7 West on the United States Geological Survey (USGS) Glen Ellen 7.5 minute topographic quadrangle. More specifically, the FOP is situated in the southeast quarter of the southeast quarter of Section 23, the western half of Section 24, and the northeast quarter of Section 26.

The FOP is directly 4 miles east of SSU, Rohnert Park, California (Figure 2). The upper gate to the FOP is on the east side of Lichau Road (Figures 3 and 4). The FOP

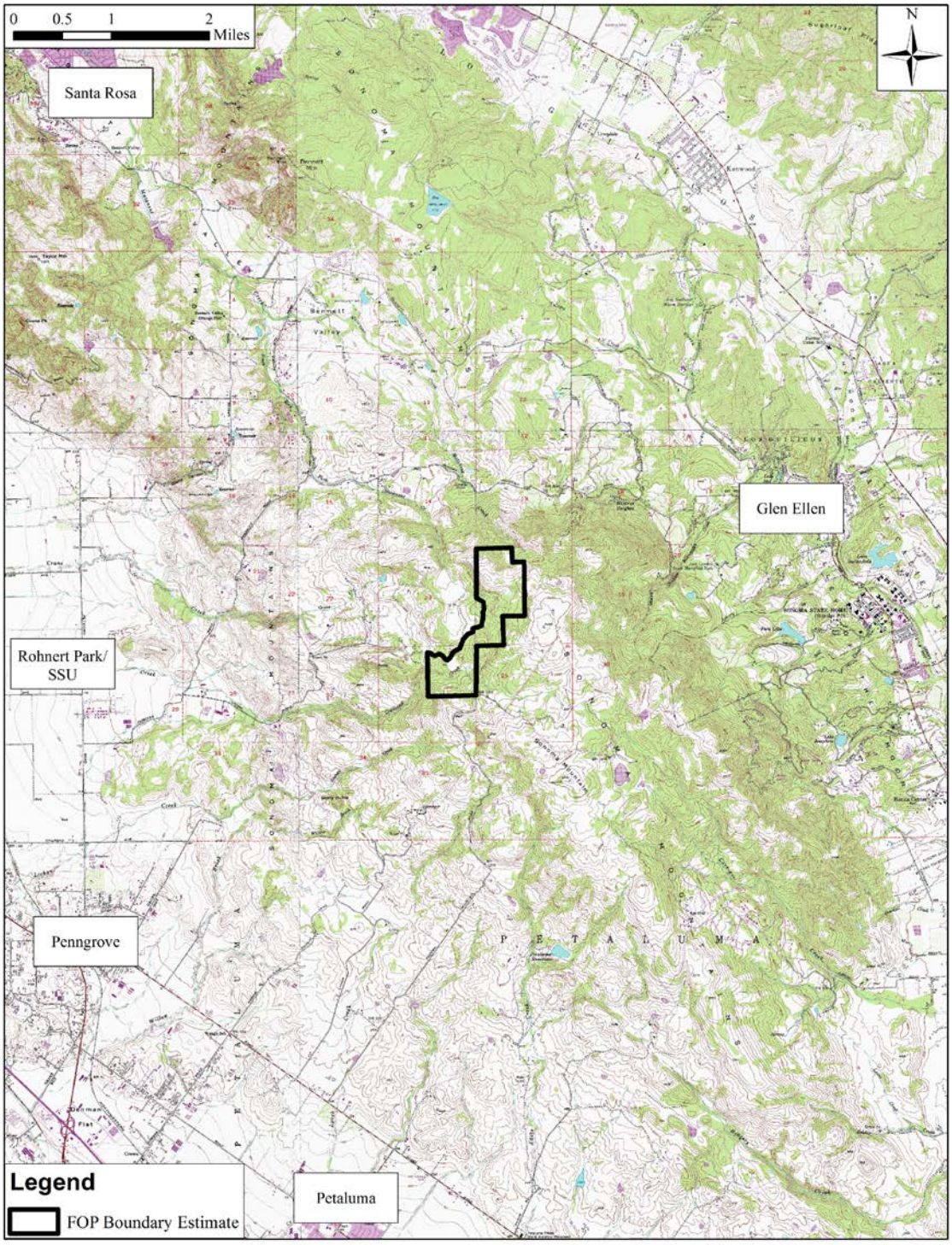


Figure 2: Study area vicinity map (USGS 1954a; 1954b; 1954c; 1954d)

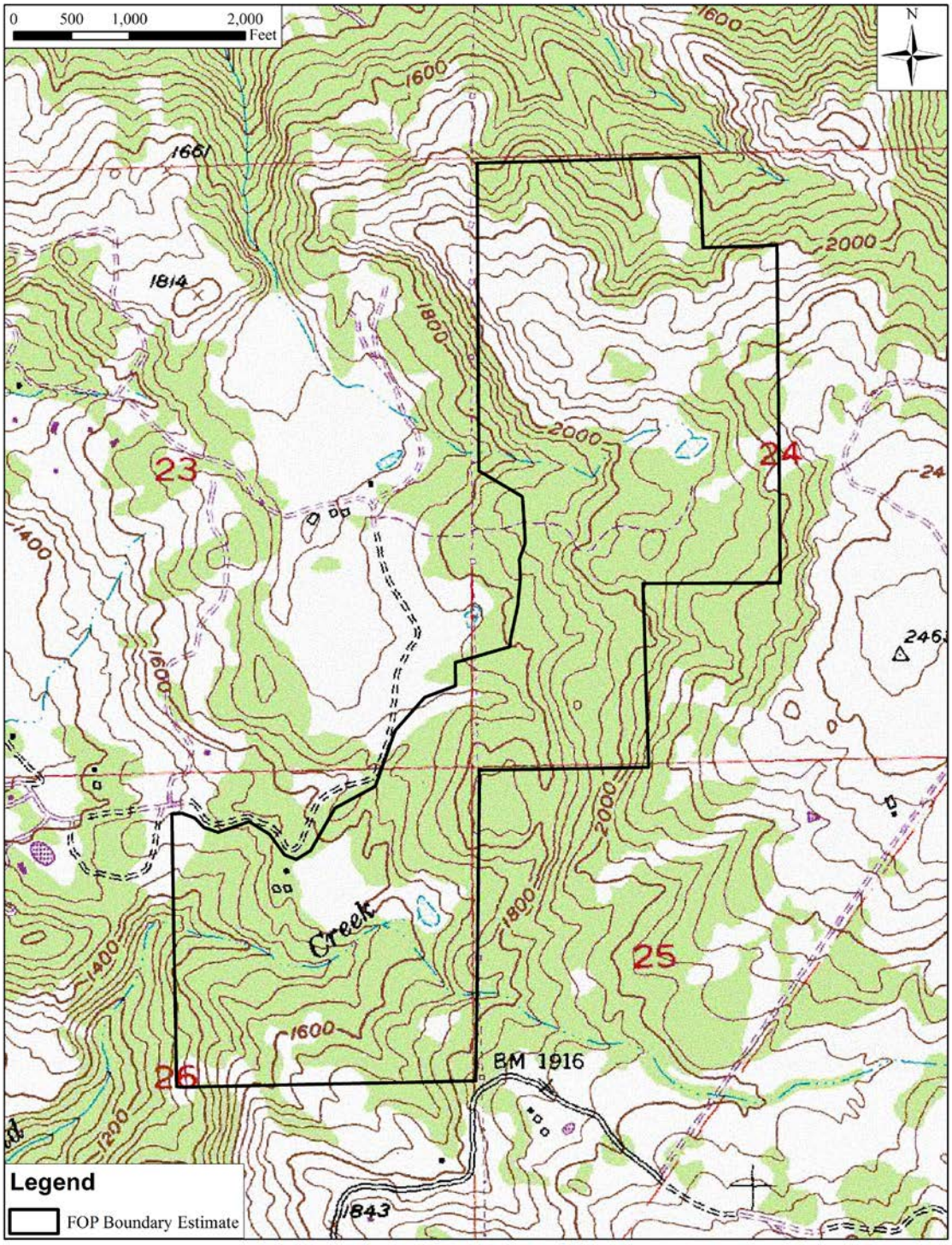


Figure 3: Study area map (USGS 1954a)

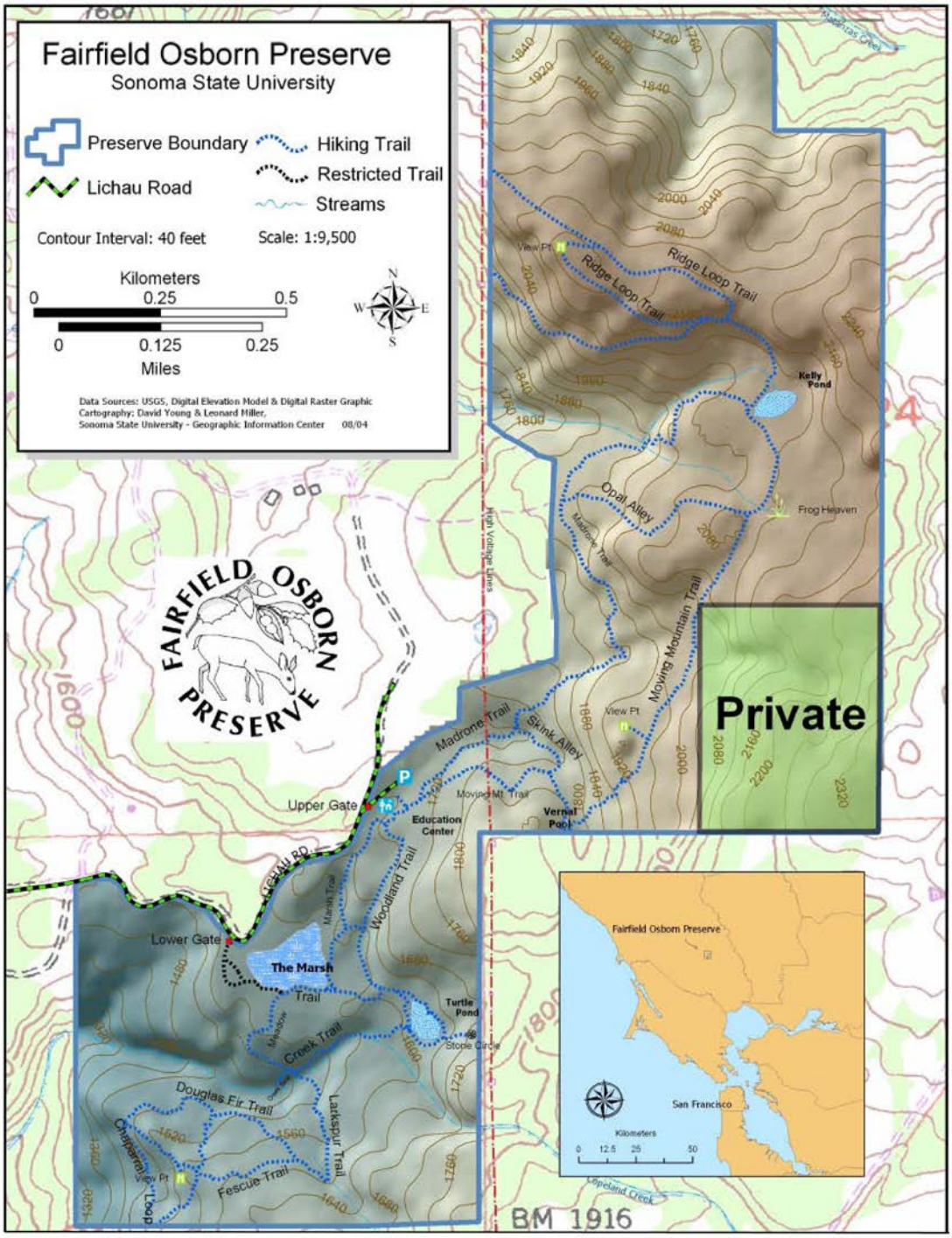


Figure 4: Study area map (Young and Miller 2004)

property is mostly rectilinear, except for the sides adjacent to the southeast of Lichau Road.

FLORA

The FOP includes several plant communities. Lozier and Serpa (1981:4) identify seven distinct communities: oak woodland, pond, freshwater marsh, Douglas fir, grassland, vernal pool, and riparian (SSU Preserves 2014d). These communities are home to at least 371 species of vascular plants, constituting some 74 taxonomic families, and more than 60 types of lichen (SSU Preserves 2014e). They are dynamic, and flora associated with one type may cross into another.

The oak woodland community contains Valley (*Quercus lobata*), Scrub (*Quercus berberidifolia*), Oregon (*Quercus garryana*), Black (*Quercus kelloggii*), Canyon Live (*Quercus chrysolepis*), and Coast Live Oaks (*Quercus agrifolia*) (Figure 5). It is the largest of all the communities and includes an abundance of California Bay Laurel (*Umbellularia californica*) (Lozier and Serpa 1981:9-25). The pond communities are at the perennial Turtle and Kelley ponds (previously called Cattail and Tule ponds), located in the southern and northern portions of the FOP, respectively. There is one additional ephemeral pond (vernal pool), located in the middle section of the Preserve. Both perennial ponds are human made yet have evolved over time into complex microsystems through a process known as ecological succession (Lozier and Serpa 1981:25; Smith 1973:14). The freshwater marsh community is found at Frog Heaven and The Marsh, located in the northern and southern portions of the Preserve, respectively, as well as around the ponds. Sedges (family Cyperaceae), rushes (family Juncaceae), and grasses (family Poaceae) dominate these wet areas (Lozier and Serpa 1981:34-35). Small

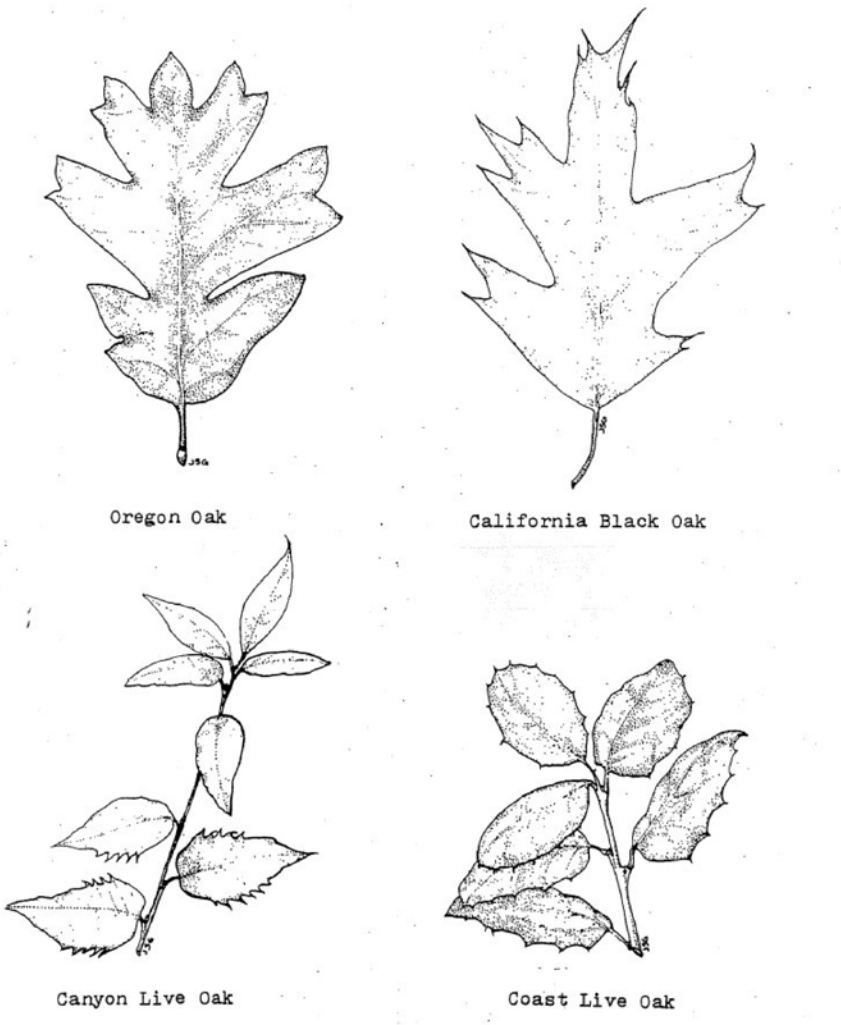


Figure 5: Oak leaves (Lozier and Serpa 1981)

inclusions of the Douglas-fir (*Pseudotsuga menziesii*) community compete within the broader oak woodland community (Lozier and Serpa 1981:42). The grassland community is second only in size to the oak woodland community (Lozier and Serpa 1981:47). It is

characterized by drier conditions and lack of trees and shrubs, in some instances due to early homesteaders and ranchers cutting the trees. A few vernal pool communities exist throughout the FOP, the most notable one being east of the education center along Moving Mountain Trail. Fitting their ephemeral nature, vernal pools are delicate and distinctive ecosystems (Lozier and Serpa 1981:71). When water is present, buttercups (family Ranunculaceae) are common. Finally, the riparian community is present along the hydrological corridors of Copeland Creek and other drainages (Lozier and Serpa 1981:78-79). Tree species here include White Alder (*Alnus rhombifolia*) and Big-leaf Maple (*Acer macrophyllum*). Ferns (family Dryopteridaceae) are typical in the understory.

According to the vegetation database for the FOP, nearly one-third (117 of 371, or approximately 32%) of the vascular plant species on the property are considered non-native (SSU Preserves 2014d). Non-natives are defined as any species that is introduced to a new environment where they do not regularly occur (National Park Service 2014a). This introduction may occur naturally, although the preponderance of non-natives is the result of intentional or unintentional introduction by humans (Opaluch et al. 2005:2). For the FOP, the number of non-natives betrays the human activities that occurred historically in the region. For instance, many of the distinctly non-native vegetation, such as Himalayan Blackberry (*Rubus armeniacus*) and grassland species are directly associated with other evidence of historic era human activity. Non-native grass species were introduced for cattle (Smith 1973:19); in fact, just over a half (23 of 45 or approximately 51%) of the species in the grass family Poaceae are non-native. A few planted individuals of Lombardy Poplar (*Populus nigra*), Common Grape (*Vitis vinifera*),

European Crab Apple (*Malus sylvestris*), Common Fig (*Ficus carica*), Asian Persimmon (*Diospyros kaki*), Cherry Plum (*Prunus cerasifera*), and Agave (*Agave* sp.) represent some other examples of non-native species associated with human activity on the Preserve.

In contrast, Native Americans would have been exposed to much less non-native vegetation prior to European contact. Hypothetically, seeds could travel for hundreds of miles through a material conveyance system, and then be deposited and grow in a new environment. It is now widely accepted that California Indians were active in managing the environment, through pruning, coppicing, sowing, weeding, and burning (Lightfoot and Parrish 2009:9-10). Therefore it is feasible that they could also intentionally introduce new types of vegetation to an ecosystem. But given that the vast majority of the non-native species on the FOP database are intercontinental (and more specifically not from the Americas), it is a secure assumption that prehistoric instances of non-native vegetation in this area were low.

The relationship between Native Americans and the environment, or more specifically, the flora of the environment, is complex. Native Americans modified the distribution and abundance of native vegetation, and some of the patterns in the landscape today may reflect these land use practices. California Indians traditionally used many of the native plants found at the FOP for food, medicine, shelter, dyes, fibers, oils, resins, gums, soaps, waxes, latex, tannins, and tools (USDA Forest Service 2014a). Native Americans often revere these plants and their gathering and collection areas. The Federated Indians of Graton Rancheria (FIGR), a Tribe whose ancestors once lived in the same place of the modern FOP, and the Occidental Arts and Ecology Center (OAEC)

"collaborate on a series of training programs" and "explore principles of ecology, traditional environmental wisdom, and native flora and fauna," (OAEC 2009). This study of how cultures understand and utilize plants is called ethnobotany (Heider 2007:444). This thesis is not ethnobotanical in essence and will not delve deeply into the subject.

FAUNA

The fauna at the FOP include amphibians, reptiles, mammals and birds. Of the 177 known species of vertebrates that inhabit the Preserve, not including humans, only four of these, the House Sparrow (*Passer domesticus*), the European Starling (*Sturnus vulgaris*), the Wild Turkey (*Meleagris gallopavo*), and the American Bullfrog (*Lithobates catesbeianus*), are considered to be non-native (SSU Preserves 2013f). Avifauna makes up almost two-thirds of the total number of species; they include waterfowl, raptors, woodpeckers, hummingbirds, warblers, sparrows, and many others. Mammals include rodents, rabbits, deer, skunks, and predators like mountain lion, coyote, and bobcat. Amphibians include salamanders, newts, frogs, and toads. Reptiles include snakes, turtles, lizards and skinks. Although there are no fish in the perennial Copeland Creek, the artificial Kelly Pond contains at least one species. These fish are non-native, and they were likely spawned from a population of stock fish intentionally introduced to the pond sometime in the past (Suzanne DeCoursey 2014, personal communication). There are currently no estimates on the number of terrestrial or aquatic invertebrate species present at the FOP. Considering that they constitute more than 95% of all animal species on earth, it is reasonable to assume that the FOP has several hundred, if not thousands, of invertebrate species (Brusca and Brusca 2003:3).

HYDROLOGY

Water is abundant at the FOP, which is part of the southernmost portion of the Russian River watershed (Russian River Watershed Association 2013). In fact, water from Sonoma Mountain and Copeland Creek supplied the City of Petaluma from the mid to late 19th century (Sommer 2010). The headwaters of the perennial Copeland Creek begin just east and upslope of the property (USGS 1954a). The stream continues its 9-mile westward path through the southern portion of the property before meeting the Laguna de Santa Rosa. Copeland Creek is managed by the Sonoma County Water Agency and recently underwent rehabilitation in the form of sediment and invasive species removal in order to improve fish habitats and lessen flooding issues (Sherwood 2011). Numerous seasonal drainages exist throughout the property, many of which feed directly into Copeland Creek.

Several natural springs drain into Copeland Creek. These springs are located throughout the Preserve, and in some cases have been intentionally modified to collect the water. Four distinct hydrological features also occur on the Preserve (See Figure 3): Kelly Pond, Turtle Pond, The Marsh, and Frog Heaven. The former three are, at least in part, products of cultural activities.

SOILS AND SEDIMENTS

According to the United States Department of Agriculture (USDA) Soil Survey, soils at the FOP primarily consist of the Goulding, Raynor, and Toomes types (2014:8). Goulding clay loam and cobbly clay loam are the most abundant, constituting more than 90 percent of the property. They occur on backslopes between 15 and 75 percent, are considered well-drained and have a depth to bedrock of 8 to 20 inches. Toomes rocky

loam, a well-drained soil, is found on 30 to 75 percent backlopes in the northern portion of the Preserve and measures between 4 and 20 inches to bedrocks. Raynor clay is a well-drained soil that is relegated to mild slopes of 2 to 15 percent in the southern FOP.

A lab course in physical geography methods taught at the FOP is currently offered through SSU (Beach et al. 2012). In this class, students learn about various soil analysis techniques and collect data that they then incorporate into a final technical report. These reports contain a great deal of information, such as absolute dating results (Pb210 and Cs137) and macrofossil (seeds and charcoal) analysis. These data may be used to better understand the ecological history of the FOP, including fire events, plant distributions, and soil deposits. The relationship between the results of these studies and the cultural resources present on the Preserve should continue to be explored in the future.

GEOLOGY

The overlying geologic formation of the FOP is referred to as the Sonoma Volcanics, one of a series of Bay Area volcanic fields beginning some 23 million years ago (mya) during the Neogene period (Northern California Geological Society 2009:6). The Sonoma Volcanics are relatively young as they formed during the Pliocene epoch, some 5.3 mya to 2.5 mya (Kunkel and Upson 1960:17). The primary lithics of this development consist of rhyolite, andesite, basalt, and other pyroclastic rocks (Koenig 1963). Surface evidence of these rocks is found all over Sonoma Mountain, ranging from small cobbles to large outcrops. Sonoma Volcanics are also characterized by tuffs, flows, and breccias of these lithics, which are separated by occasional interbedded, non-marine sedimentary layers (NCGS 2009:6; Page 1966:267). Manifestations of the underlying Franciscan Assemblage (late Mesozoic, 252 mya to 66 mya) appear in the form of several

natural chert outcrops found throughout the Preserve (Beach et al. 2012:7). These layers of weak volcanic rocks have caused several mass wasting events throughout the property, hence the name Moving Mountain Trail.

TOPOGRAPHY

The Sonoma Mountains are located in southeast Sonoma County (USGS 1954). They run approximately 20 miles, from the southeastern portion of the city of Santa Rosa to just northwest of San Pablo bay, in a northwest-southeast orientation. Sonoma Mountain, located centrally in the range, is the highest point with an elevation of 2463 feet above mean sea level (amsl). The FOP is situated on the northwestern and western slopes of Sonoma Mountain. The highest point in the Preserve is located in its northeastern extent and measures at an elevation of approximately 2280 feet amsl. From there, the elevation drops steeply: at its lowest point, in the southwest of the property, the elevation measures at approximately 1320 feet amsl, a difference of 960 feet. This low point is in a deep canyon where Copeland Creek exits the Preserve boundary.

There are flats and gentle slopes located throughout the property, generally caused by land slides, mass wasting events, and debris flow, but a few of which are the result of cultural processes. For example, the largest flat on the property, located in the southern expanse and commonly known as The Marsh, exhibits modification in the form of cuts along its outer perimeter. The intentional manipulation of topography is also obvious where the two earthen dams have been constructed at Turtle Pond and Kelly Pond.

Paralleling the Sonoma Mountain range to the east is the long, narrow Sonoma Valley (USGS 1954). Sometimes referred to as the Valley of the Moon, its eastern flank is bordered by the Mayacamas Mountains. To the west of the Sonoma Mountain range is

the Santa Rosa Plain, most of which is enveloped by the Laguna de Santa Rosa (Laguna de Santa Rosa Foundation 2011; United States Fish and Wildlife Service 2013). West of the Santa Rosa Plain are the North Coast Ranges, of which the Sonoma Mountains are a component (USDA Forest Service 2014b).

CLIMATE

Climate is defined as the average state of low altitude atmosphere at a specific region on earth (McKnight and Hess 2005:64). Variables in weather, including rainfall, pressure, temperature, wind, heat, and humidity, are all components of climate. Regional climates represent larger trends that are established through extended collection and analysis of this data. Therefore, climate descriptions for smaller areas like the FOP often reflect the longer weather patterns of a larger region. However, the FOP has benefited from ongoing climatology efforts. Daily measurements of precipitation and minimum and maximum temperatures have been taken at the FOP weather station since February 1997 (SSU Preserves 2014g).

The macroclimate of portions of northern and central California is considered to be Mediterranean, generally characterized by dry summers and wet winters (Kottek et al. 2006:260-261). Rainfall is concentrated during the winter and early spring months (November through April). On average, Sonoma County receives between 20 and 40 inches of rain each year; although mountainous areas like the FOP sometimes receive upwards of 70 inches (Northbay Regional Collection 2013). Snowfall is uncommon in Sonoma County but will occasionally occur at higher elevations. Between 1997 and 2005, snow was reported only three times at the FOP (SSU Preserves 2014g). Fog is another element in Sonoma Mountain’s climate. Fog is present throughout the year,

including the summer time, usually in the lower and middle slopes of the mountain (Beach et al. 2012:6).

CHAPTER III: PREHISTORIC CULTURAL CONTEXT

INTRODUCTION

This chapter seeks to develop an initial prehistoric cultural context for the FOP and the immediate surrounding area. A prehistoric cultural context is a document, often developed by anthropologists, that summarizes ethnographic, linguistic, and archaeological information for a particular geographic region (Sudler 1984:3; also see Eddy et al. 1984; Eighmy 1984; Grady 1984; Guthrie et al. 1984; Reed 1984). Contexts often offer different avenues of research for safeguarding and preserving resources, provide direction for land managers and future studies, and aid in the process of interpreting resources located during fieldwork.

The FOP is an ideal location for developing a prehistoric cultural context, as more than a dozen prehistoric sites are present within one-mile of the property. This chapter is divided into four sections. The first three are synopses of relevant ethnographic, linguistic, and archaeological research, beginning in the early 20th century and continuing to the present. The last section is dedicated to the contemporary Native American populations, whose ancestors are associated with the prehistory of the area.

ETHNOGRAPHIC RESEARCH

John Van Maanen describes ethnography as a "written representation of culture (or selected aspects of culture)," resulting from the fieldwork of a researcher who uses methods such as personal interviews and participant observation (1988:1). These written accounts, based on the observations of an ethnographer who generally spends some amount of time with the people who belong to the culture in question, contain details on kinship systems, sociopolitical structure, economic strategies, cosmologies, language,

religion, and numerous other cultural attributes. Ethnographies are also problematic (see Van Maanen 1988). For example, early 20th century ethnographers in California like Alfred Kroeber were utilizing a "memory culture" method, through which researchers elicited information from elders about their upbringing and the lives of their distant kin, attempting to gain insight about their traditions prior to being disturbed by Euro-Americans (Lightfoot and Parrish 2009:77-78). This method and the initial theories about native cultures generated from its results have since been heavily criticized, and in some instances completely dismissed as false (see Jones and Raab 2004). Other academics believe these early ethnographies are still beneficial when "employed in a judicious and discriminating manner," (Lightfoot and Parrish 2009:78).

This section will embrace the latter perspective on these maiden accounts, albeit with some skepticism. Extrapolating the observations of these ethnographers by one thousand or ten thousand years in the past is somewhat speculative: historical observations are not always indicative of early prehistoric life ways. However, in combination with archaeological research, ethnographic observations may serve as the basis for hypotheses, which are tested through material evidence.

Stephen Powers was the first ethnographer who extensively studied California Native American cultures. He published his work in 1877 (Sutton 2008:158). Powers referred to the language spoken by the people who occupied a large swathe of California, from Monterey Bay to the Sierra Mountains to the Sonoma Mountains, as the "Mut-sun" family (Powers 1877:535). Powers compiled nearly 200 words in two languages, Miwok and Tuolumne, which he believed were a part of the Mut-sun family. Later ethnographic

research, summarized below, recognized that this sizeable geographic area was actually made up of dozens of distinct languages and cultural groups.

In the early 20th century, Samuel Barrett conducted ethnolinguistic research in Sonoma County. Originally using the term "Moquelumnan" for a linguistic stock which is presently and more commonly referred to as Miwok, Barrett divided the Moquelumnan into three dialects: the Western, Southern, and Northern (1908:303-314). According to Barrett's maps of the Native linguistic stocks in the North Bay Area, the FOP is located in the Southern dialect area, just west of Glen Ellen (1908:333-368). The ethnographic village of *Lumenta'kala* appears to be only 2 miles north of the FOP, although Barrett writes that the site is "very indefinitely located," (1908:314).

Building on Barrett's study and the research of other ethnographers, Kroeber (1925) produced a more in depth and comprehensive manual on Native Californian cultures and people. Kroeber's updated maps still show the FOP within the traditional territory of the Coast Miwok (Figure 6), although Kroeber indicates that a large area directly east of the property possibly belonged to the Wintun culture and language (1925:274). Again, *Lumenta'kala* is the closest village to the contemporary FOP property. Kroeber does not go into great detail about Coast Miwok culture, writing that "[the Coast Miwok] were undoubtedly closely allied to the Pomo in their habits," (1925:275). Kroeber dedicates a significant portion of the chapter to Sir Francis Drake's expedition to the region in the late 16th century (1908:275-278). Although ethnohistoric accounts like those from the Drake expedition are relevant and perhaps useful to ethnography, they will be reserved for the European Contact section of Chapter IV.

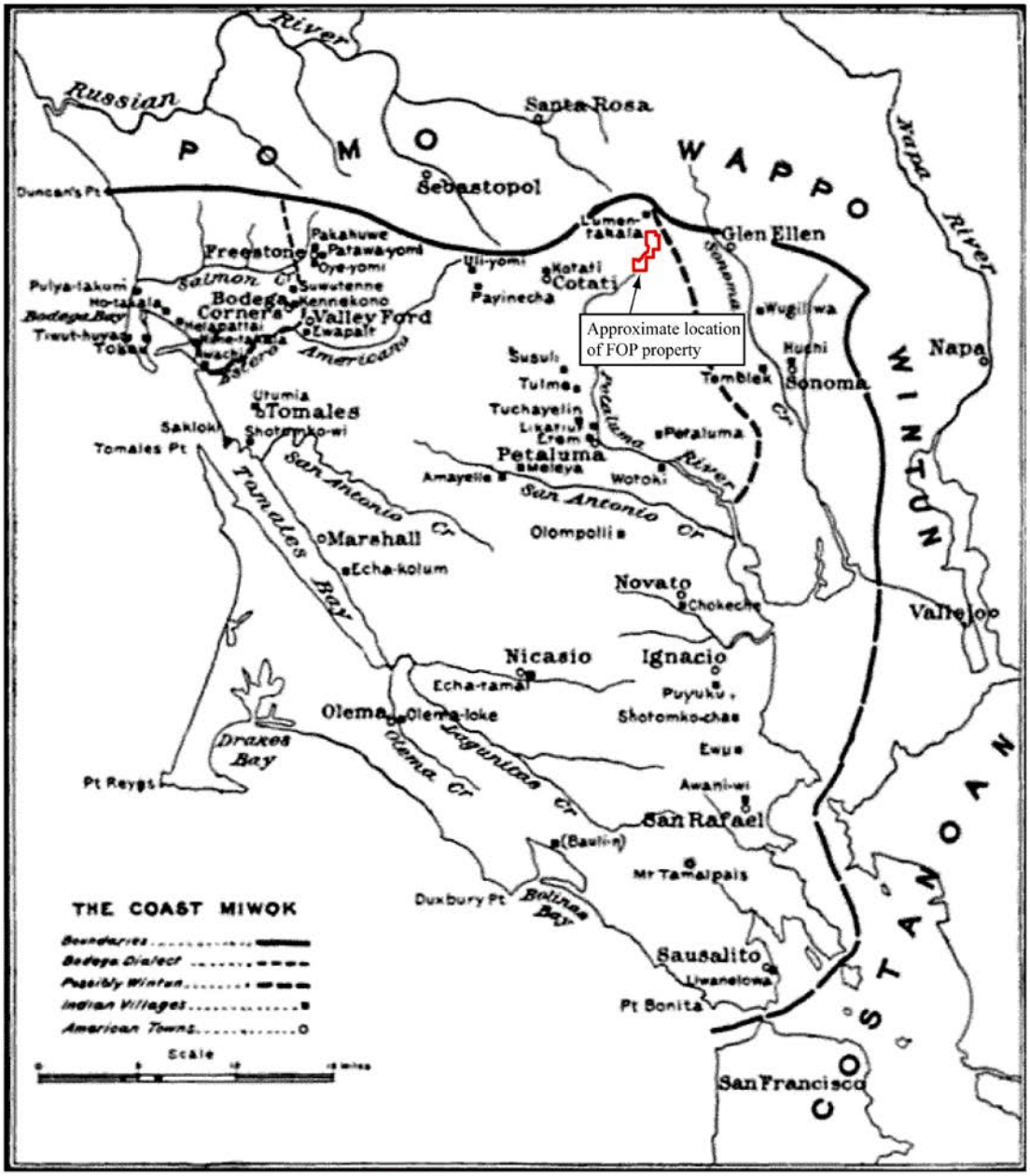


Figure 6: Kroeber's (1925) ethnographic map

Kelly conducted ethnographic research with two Coast Miwok informants, Tom Smith and María Copa Frías, in the early 1930s (1978a:21; 1978b:424). Contributing to the Smithsonian's Handbook of the North American Indians series, Kelly wrote

extensively about Coast Miwok culture, including observations about subsistence, material culture, social organization, ritual, and several other facets (1978b:415-423). Kelly's map mirrors Kroeber's and depicts ethnographic villages as circles (Figure 7).

The Coast Miwok people employed a diverse economic subsistence strategy (Kelly 1978b:415-417). Seasonal and perennial resources were exploited, and foods like the acorn were dried, stored, and eventually processed into a meal. The meat of mammals, avifauna, and fish were consumed. Shellfish and other marine foodstuffs formed an essential portion of the overall diet. Kelp, terrestrial plants, seeds, nuts, and roots were also eaten.

The largest social unit was the village (Kelly 1978b:414). These settlements, several dozen of which are depicted on ethnographic maps (See Figures 6 and 7), had a recognized head-man, a male individual with a limited role in group decision making (Kelly 1978b:419). In addition to the head-man, villages had several female leaders and elders who were responsible for some ceremonial activities, labor organization, and some decision making (Kelly 1978b:419).

Kelly uses the term moiety to describe Coast Miwok social organization (1978b:419). When two descent groups make up a whole society, each group is said to be a moiety (Haviland et al. 2011:251-252). Moieties function together in several ways, through events like marriage and mourning practices, in order to sustain social cohesion. However, Kelly writes that, "in practice, inconsistencies were enormous," and ultimately concludes that the Coast Miwok had no comprehensive social organization (1978b:419).

Coast Miwok people lived in wood-framed, conical huts, constructed of driftwood, willow, grass, rush, tule, and lupine-root (Kelly 1978b:417-418). Larger

Figure 7: Kelly's (1978b) ethnographic map

settlements had semi-subterranean, circular sweathouses and dance houses made of the same materials.

Clothing was made of animal skin, including deer and rabbit, tule, and lupine cords (Kelly 1978b:417-418). Ritual adornments, such as necklaces, wristlets, and belts, featured feathers and clamshell disk beads. Wood and stone (obsidian and chalcedony or chert) were used to make tools like paddles, bows, mortars, charms, and knives. Coiled and twined baskets were created for both utility and aesthetics.

Property and access rights were a serious matter (Kelly 1978b:418-419). Individuals and families controlled certain resources, such as oak trees and hunting areas, and owned personal property like songs, arrows, and instruments. Access to these resources could be traded for or bought. Clam shell disk beads functioned as a form of money, and this was sometimes used for intertribal trade and exchange with other local groups like the Pomo and the Wappo. Several kinds of poisoning and healing specialists sold their practice for the currency, involving the specialized use of flora, fauna, singing, dancing, praying and ritualistic paraphernalia (Kelly 1978b:420).

A person's lifetime was punctuated by a number of rites of passage, including birth and infancy, tribal initiation, puberty and first menses, marriage, and death (Kelly 1978b:421-423). Select individuals were brought into secret societies and cults, learning esoteric dances and languages. Kelly dedicates an entire section to describing dance, and the activity appears to bridge all aspects of Coast Miwok culture. Dancing was often accompanied by singing and music from flutes, drums, rattles, whistles, and clappers. Recreational activities included sports and games, which sometimes involved gambling.

The oral traditions and ethnogenesis of Coast Miwok people follow Coyote, who created the world (Kelly 1978b:423). Coyote accepted the deceased as they fell into the ocean, and sometimes interposed himself into daily life. Spirits and ghosts also existed,

and the Coast Miwok people recognized a number of animals, like the bear and several kinds of birds, as sacred.

LINGUISTIC RESEARCH

Linguistic research often occurred simultaneously with and is arguably inseparable from ethnographic research, as demonstrated above. Coast Miwok actually refers to the language spoken by the people who lived in parts of modern Sonoma and Marin counties (Kelly 1978b:414). Coast Miwok belongs to the Penutian language family, a group that is situated in western North America (Golla 2007:75; Shipley 1978:81-84). Golla places Coast Miwok in the Yok-Utian subfamily of Penutian and estimates that the Miwok and Ohlonean languages split some 4,000 years ago (2007:76). At least two dialects of Coast Miwok are recognized: the Western Bodega dialect and the Southern Marin dialect (Barrett 1908:301-317). A further subdivision within the Southern Marin dialect occurred between coastal and inland valley groups, with the latter spanning the modern FOP boundaries (Figure 8). There is some evidence that the southernmost portion of modern Marin County was occupied by people who spoke a dialect of Ohlonean, although this remains uncertain (Moratto 1984a:532-533). Callaghan, a linguist specializing in the Miwok languages, produced a comprehensive guide to Coast Miwok vocabulary (see Callaghan 1970).

ARCHAEOLOGICAL RESEARCH

Archaeological research in the North Bay Area began in the early 20th century with individuals like Jesse Peter, Llewellyn L. Loud, and Nels C. Nelson, who surveyed, excavated, and recorded hundreds of prehistoric sites with the support of academic

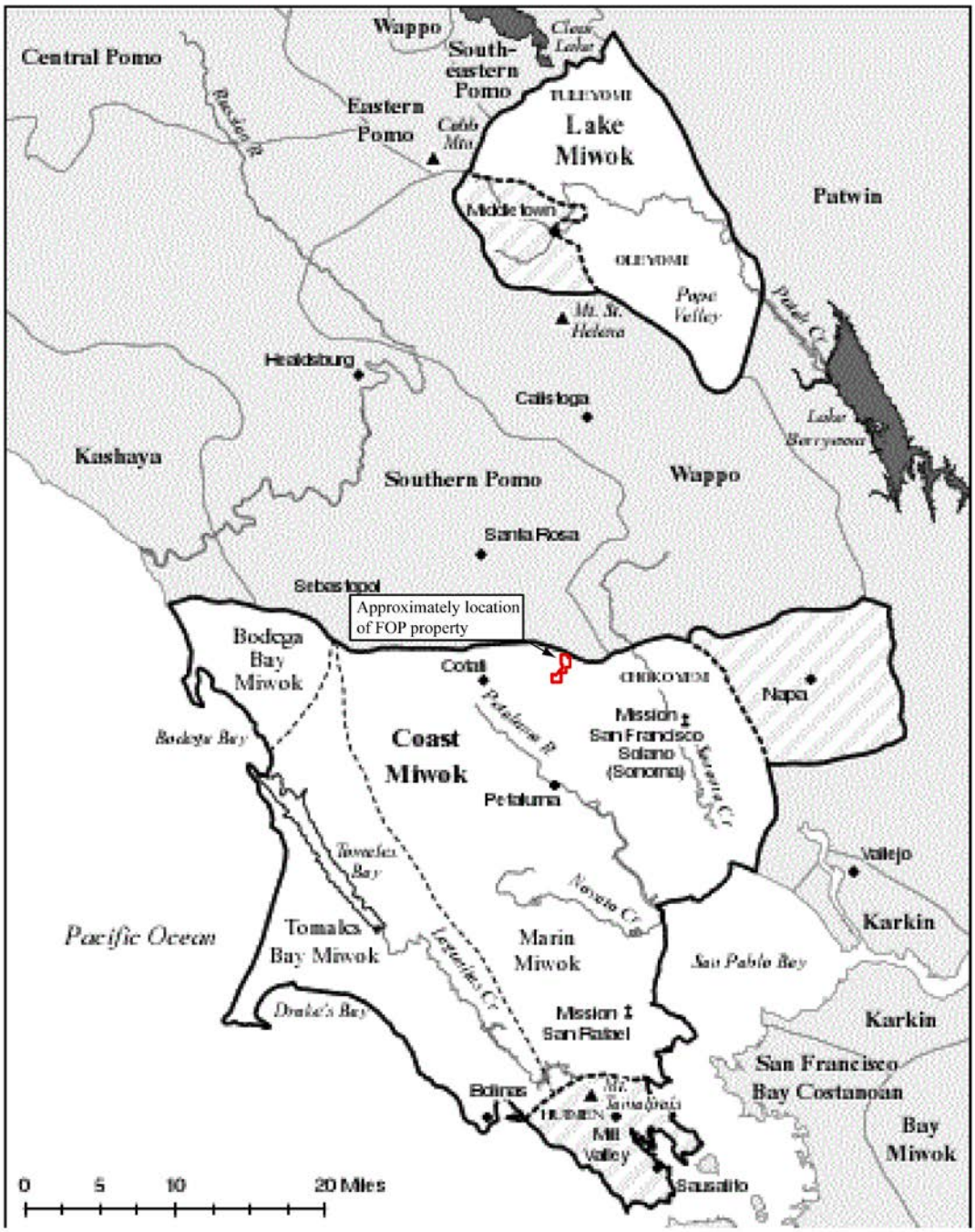


Figure 8: Golla's (2007) linguistic map

institutions like the University of California and the Santa Rosa Junior College (Fredrickson 1984:505-506). These initial records were minimal by modern standards

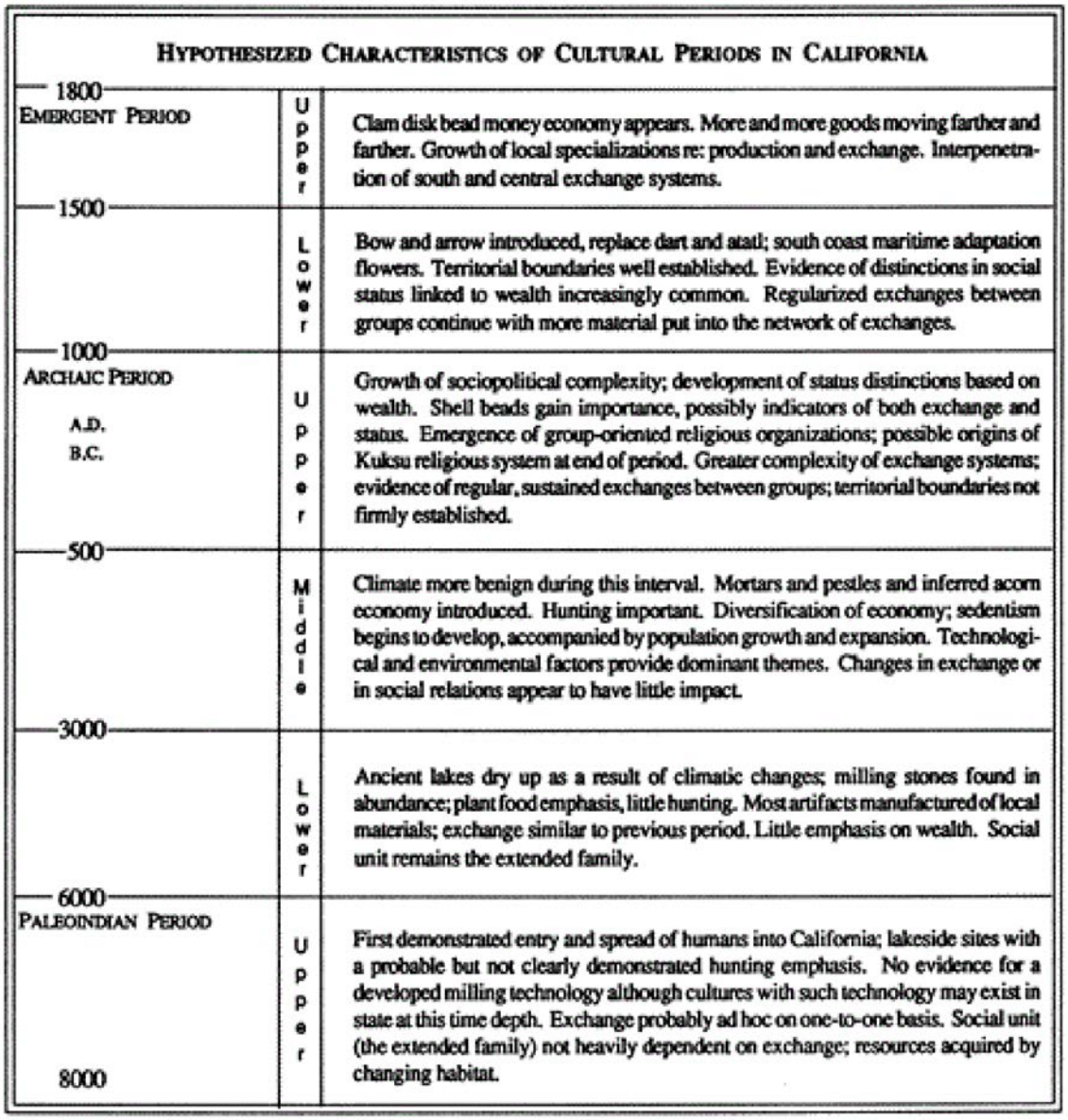
and often spatially imprecise; in some cases this was a product of rapid recording prior to site destruction associated with development (Roberts and Booker 2014).

By the late 1930s, archaeologists J.B. Lilliard, Robert Heizer, and Franklin Fenenga proposed a spatio-temporal model for cultural change based on their interpretations following excavations in the Sacramento Valley (Lilliard et al. 1939; Heizer and Fenenga 1939). The scheme is now commonly referred to as the Central California Taxonomic System (CCTS) and was conceptualized around three variables: time, space, and material culture. The CCTS divided human occupation into three periods: the Early, the Transitional (Middle) and the Late (Heizer and Fenenga 1939:378). The authors, realizing the revolutionary potential of their model, wrote:

> Until quite recently California culture has been widely cited as endowed with an unique uniformity and unchangeableness, persisting in its simple, specific form for thousands of years. We now know this to be incorrect. (Heizer and Fenenga 1939:378)

A decade later, archaeologists were utilizing, updating, and adapting the model (see Beardsley 1948; Belous 1953; Heizer 1949). Fredrickson (1973; 1974; 1984; 1994) expanded and revised the CCTS to encompass the North Coast Ranges, including the Russian River subregion, where the FOP resides (Moratto 1984b:228). Fredrickson used obsidian hydration dating, radiocarbon dating, and stratigraphic relationships to affix approximate date ranges to three occupation periods: the Paleoindian Period, the Archaic Period, and the Emergent Period. Fredrickson's spatio-temporal model is briefly summarized below (Figure 9).

Fredrickson described the Paleoindian period as occurring between 12,000 years before present (YBP) to 8,000 YBP (1994:100). However, based on recent evidence



HYPOTHESIZED CHARACTERISTICS OF CULTURAL PERIODS IN CALIFORNIA

1800 EMERGENT PERIOD	Upper	Clam disk bead money economy appears. More and more goods moving farther and farther. Growth of local specializations re: production and exchange. Interpenetration of south and central exchange systems.
1500	Lower	Bow and arrow introduced, replace dart and atatl; south coast maritime adaptation flowers. Territorial boundaries well established. Evidence of distinctions in social status linked to wealth increasingly common. Regularized exchanges between groups continue with more material put into the network of exchanges.
1000 ARCHAIC PERIOD A.D. B.C.	Upper	Growth of sociopolitical complexity; development of status distinctions based on wealth. Shell beads gain importance, possibly indicators of both exchange and status. Emergence of group-oriented religious organizations; possible origins of Kuksu religious system at end of period. Greater complexity of exchange systems; evidence of regular, sustained exchanges between groups; territorial boundaries not firmly established.
500	Middle	Climate more benign during this interval. Mortars and pestles and inferred acorn economy introduced. Hunting important. Diversification of economy; sedentism begins to develop, accompanied by population growth and expansion. Technological and environmental factors provide dominant themes. Changes in exchange or in social relations appear to have little impact.
3000	Lower	Ancient lakes dry up as a result of climatic changes; milling stones found in abundance; plant food emphasis, little hunting. Most artifacts manufactured of local materials; exchange similar to previous period. Little emphasis on wealth. Social unit remains the extended family.
6000 PALEOINDIAN PERIOD 8000	Upper	First demonstrated entry and spread of humans into California; lakeside sites with a probable but not clearly demonstrated hunting emphasis. No evidence for a developed milling technology although cultures with such technology may exist in state at this time depth. Exchange probably ad hoc on one-to-one basis. Social unit (the extended family) not heavily dependent on exchange; resources acquired by changing habitat.

Figure 9: Fredrickson's (1994) taxonomic framework diagram

gathered from coastal sites, archaeologists now recognize that human occupation in California may span more than 12,000 years (Arnold et al. 2004; Erlandson 2012). In light of this, the Paleoindian period began during the earliest human occupation of *at least* 12,000 YBP. The Paleoindian period reflects what Fredrickson called the "Post Pattern," an assemblage of "Clovis-style fluted points and chipped crescentics" excavated from the Borax Lake vicinity in Lake County (1974:42).

The Archaic period ranges from approximately 8,000 YBP to 1,000 YBP (Fredrickson 1994:100). Fredrickson divided the Archaic period into the three subperiods: the Lower (8,000 YBP to 5,000 YBP), the Middle (5,000 YBP to 2,500 YBP), and the Upper (2,500 YBP to 1,000 YBP). The Archaic period is characterized by an abundance of milling stones, the development of the mortar and pestle, and the invention of the shell disc bead (Fredrickson 1974:46-8).

The Emergent period ranges from approximately 1,000 YBP to 200 YBP (Fredrickson 1994:100). Fredrickson divided the Emergent period into two subperiods: the Lower (1,000 YBP to 500 YBP) and the Upper (500 YBP to 200 YBP). The Emergent period is characterized by the introduction of sinew-backed bow and arrow technology, and the increasing abundance and standardization of the shell disc bead (Fredrickson 1974:48-9).

There have not been any previously recorded excavations at the FOP, nor any hydration or radiocarbon dating. Therefore it is difficult to postulate an exact period when the FOP land was occupied. However, Fredrickson constructed an artifact typology associated with his temporal model for the Santa Rosa area (Figure 10). In the absence of absolute and relative dating methods, this artifact typology may be used to broadly associate the types of artifacts found during the pedestrian survey of the FOP with a period of occupation. With this in mind, FOP-ISO-02, the proximal end of an obsidian projectile point with a concave base, represents the earliest type of recorded artifact to be found at the FOP (see Figure 10, Artifact 16). These concave points are associated with the Middle Archaic to Late Archaic period (5000 YBP 1000 YBP).

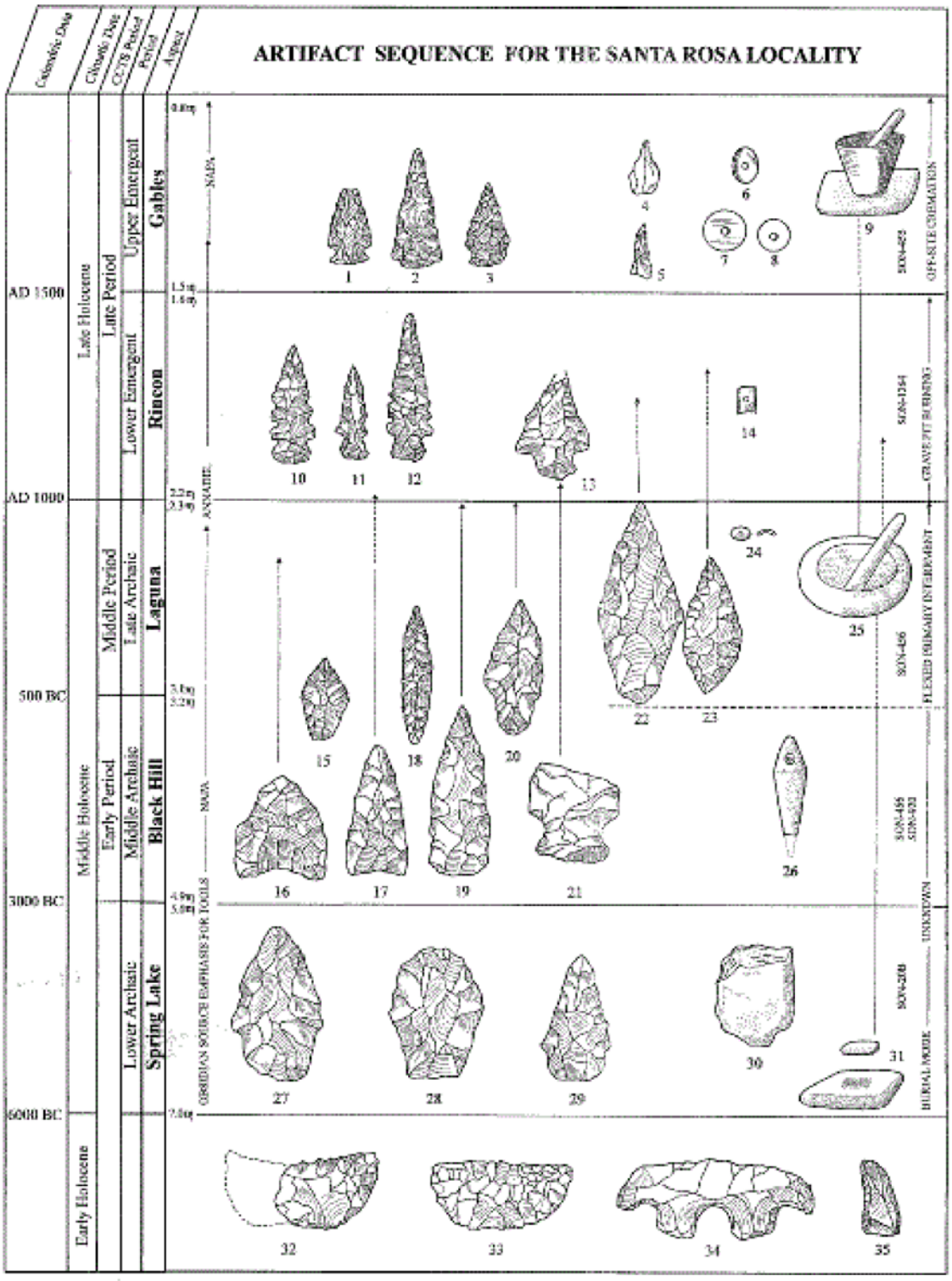


Figure 10: Fredrickson's (1974) artifact sequence for the Santa Rosa locality

This synopsis is only a brief and introductory archaeological context for the FOP. Fredrickson dedicated several decades to building and adapting his spatio-temporal model, writing a Ph.D dissertation, a chapter in a seminal textbook, and several academic articles (see 1973; 1974; 1984; 1994). This description glosses over his model and earlier models because they go beyond the scope of this research project. Furthermore, the summary does not address the criticism that temporal models have received (see Gerow 1974; King 1974).

In 2007, a host of researchers, including Fredrickson, wrote a chapter arguing for the use of a "hybrid cultural taxonomy" in the San Francisco Bay Area (Milliken et al. 2007:101). This spatio-temporal model considers aspects from both the CCTS and Fredrickson's scheme, "allowing the identification of regional aspects within larger cultural patterns, as well as allowing subdivision of cultural patterns into short sequential phases…" (Milliken et al. 2007:102-103). Although Fredrickson's model will be used in this thesis, the hybrid cultural taxonomy exemplifies the most recent stage of an ongoing and evolving process of archaeological theory in regards to prehistory.

CONTEMPORARY NATIVE AMERICAN POPULATIONS

Today, the FOP lies within the territory of the Federated Indians of Graton Rancheria (FIGR), a federally recognized tribe and sovereign government consisting of Coast Miwok and Southern Pomo people (FIGR 2014). Their territory includes all of Marin County and the southern half of Sonoma County. The Environmental and Cultural Preservation Department of FIGR performs a number of functions and services, their mission being:

> To maintain an environmental and cultural program that preserves the Tribe's culture, community and ethics, and integrates them into the Tribe's operations, projects, opportunities, partnerships, and programs on the tribal trust land and throughout the ancestral territory (FIGR 2014b).

The partnership between FIGR and OAEC illustrates this mission statement. Tribal members learn and teach about Traditional Environmental Knowledge (TEK) and participate in public education and organic gardening (OAEC 2009). Although there is presently no such partnership between FIGR and the FOP, FOP managers should consider establishing a relationship with FIGR in order to foster future potential programs.

CHAPTER IV: HISTORICAL CULTURAL CONTEXT

INTRODUCTION

This chapter frames a historical cultural context for the FOP and surrounding environment. For the National Register of Historic Places (NRHP) evaluation process, a historic context is "the history of the relevant geographical area, the history of associated historical themes or subjects, and [is] within an historical and contemporary time frame," (Wyatt 2009:1). Following this definition, Chapter IV begins with the earliest instances of European contact with Native Americans in the Bay Area. The next section highlights the era of Spanish and Mexican governance up to the granting of California to the U.S. government, followed by a synopsis of the American period after the Treaty of Guadalupe Hidalgo. The final section is dedicated to a brief history of the FOP, based on a recent FOP oral history project, beginning with the acquisition of the lands by the Fairfield-Roth family.

EUROPEAN CONTACT

Five documented European expeditions took place along the coast of California between 1542 and 1603, two of which made landfall in what is now Marin County (Lightfoot and Simmons 1998:139-140). In the summer of 1579, the crew of the *Golden Hind* and its famed captain Sir Francis Drake sailed south along the northwest coast and moored in a small harbor for over a month (Castillo 1978:100). During the winter of 1595, explorer Sebastian Rodríquez Cermeño and the crew of the *San Agustín* sailed from the Philippines to Mexico, anchoring for a little over a month in a bay (Castillo 1978:100). The *San Agustín* later sunk in that bay and its crew returned on a smaller ship (Lightfoot and Simmons 1998:144). Although subject to much popular inquiry, the exact

locations of these two landfalls are still unknown, although archaeological research suggests both expeditions harbored somewhere in the modern Drake's Bay (see Moratto 1970; Von der Porten 1970).

Drake and Cermeño encountered Native Californians, likely Coast Miwok speaking people (Lightfoot and Simmons 1998:138-146). Emissaries who attempted to communicate with the unfamiliar parties prefaced the first meetings between the groups. Drake's crew apparently witnessed an extraordinary amount of Coast Miwok social events, including dances, songs, healing, gift exchanges, and other rituals. The Cermeño expedition was not as well recorded as its predecessor's, although the Cermeño company came across two cases of "aggressive signaling and conflict" with the Coast Miwok (Lightfoot and Simmons 1998:144).

Lightfoot and Simmons consider several aspects of the interactions between these early European voyagers and Native Californians, including communication between native peoples about the arrival of the foreigners, the role of ceremony in the encounters, and the timing of the meetings (1998:148-153). Both Drake and Cermeño claimed the land for their respective monarchs, held masses, and built altars, all in a deeply ritualized and Christian fashion that was directed toward the native people. The Coast Miwok held their own ceremonies in turn, the records of which are studied extensively in relation to the research of ethnographers (see Heizer 1947). Based on the initial response of the Coast Miwok, which resembled the Kuksu ceremony and Ghost Dance, scholars believe that they perceived the Drake troop as supernatural or associated them with the afterlife (Heizer 1947:263; Kroeber 1925:277). Furthermore, the timing of Drake's arrival

coincided with a local “ceremonial cycle” when Ghost Dance and Kuksu rituals were celebrated (Lightfoot and Simmons 1998:151).

The exchange of material goods between the Coast Miwok and the explorers is yet another avenue of investigation. Both Spanish and English crews kept track of what was given and received, which provides archaeologists with a list of materials they may expect to unearth (Lightfoot and Simmons 1998:153). Research at midden deposits in Drake’s Bay have unveiled hundreds of 16th century artifacts, including Chinese porcelain, stonewares, terra cottas, iron spikes and nails (Lightfoot and Simmons 1998:156). Many of these items do not match the exchange records and were likely salvaged by the native people from the wreck of the *San Agustín*.

Lightfoot and Simmons also focus on the transfer of diseases from Europeans to Native Americans (1998:161-164). Maladies like smallpox, influenza, and gonorrhea were generally introduced either directly from contact between the two groups, or indirectly from contact between native groups. In the latter scenario, native groups already exposed to the viruses, such as those in the American Southwest and Mexico, are potential carriers and transmit the diseases to other groups via local exchange networks. Lightfoot and Simmons write that there is little ethnohistoric evidence of Drake’s crew exposing California Indians to the pathogens based on the observations of Cermeño some 15 years later (1998:164).

SPANISH AND MEXICAN PERIOD

Almost 200 years after the landfalls of Cermeño and Drake, Gaspar de Portolá and a contingent of men and mules traveled hundreds of miles from Baja California to what is now the San Francisco Bay in Alta California (Paddison 1999:4-5). Some years

later in 1776, Juan Bautista de Anza and an expedition of colonists arrived in the location of what is now the city of San Francisco to establish a mission and military base for the Spanish empire (Hoover et al. 1990:331). The Presidio of San Francisco, Mission San Francisco de Asís (also known as Mission Dolores), and later the Castillo de San Joaquín were all constructed during the late 18th century (Hoover et al. 1990:332-333).

By 1812, members of the Russian-American Company established a settlement some 60 miles north of the Presidio along the northern Sonoma County coast (Hoover et al. 1990:475; Schneider et al. 2012:330). The official purpose of the chartered and joint stock company was to generate wealth for its investors via trade, specifically the fur trade (California State Parks 2013). The settlement also served as a strategic check against the Spanish interests to the south, and it soon became "California's first multiethnic settlement," consisting of Russians, native Alaskans and Californians, and Creoles (Schneider et al. 2012:330). Although the settlers at the Presidio enjoyed trade relations with the Company despite a moratorium forbidding exchange with foreigners, the nearby Russian outpost was perceived as a threat by Spanish authorities that sought to expand their control northward (Hoover et al. 1990:475). Fort Ross remained functional until hunters decimated the sea otter population, and in the early 1840s the Russian-Alaskan colonists sailed back north after selling the property to John Sutter (Hoover et al. 1990:475).

The second mission erected north of San Francisco was Mission San Rafael Arcángel, built in 1817 in what is now the city of San Rafael (Hoover et al. 1990:174). Many of the neophytes taken into Mission Dolores were dying in the Franciscan institution, leading to the construction of a medical sub-mission across the San Francisco

Bay (Hoover et al. 1990:174). The satellite sanitarium became an independent mission by 1823 (Hoover et al. 1990:174).

Around the same time, Mission San Francisco de Solano, the northernmost and final mission, was founded in the modern city of Sonoma (Hoover et al. 1990:476). Akin to Mission San Rafael Arcángel, the development of Mission San Francisco de Solano was tied to neophyte health, although it also served as a geopolitical countermove against the neighboring Russians (Hoover et al. 1990:476).

Summarizing the mission experience for neophytes is a difficult task. As Schneider and colleagues emphasize, the variation in space (1,300 miles from the southernmost Mission San José in Baja California Sur to the northernmost Mission San Francisco de Solano), time (the last mission was built almost 150 years after the first), and religious order (Franciscans, Jesuits, and Dominicans) muddies any attempt at a generalization (Schneider et al. 2012:324). The scenario is further convoluted by the fact that a mission's neophyte population was often comprised of several distinct Native American groups, having their own languages, cultural practices and beliefs (Schneider et al. 2012:324). Needless to say, the mission period is an extremely sensitive issue to contemporary Native Americans.

In addition to neophytes, the Presidio, its missions and pueblos were occupied by priests, farmers, soldiers and their families, much like the rest of Spain's colonial settlements in Mexico and California (Voss 2012:305). During this time, a legally recognized caste system was used to categorize these people based on their ancestry (Haas 1995:30; Voss 2012:306). In Alta California, however, the caste system was not as rigid as elsewhere, allowing some individuals to move upwards in the system during their

lifetimes (Haas 1995:31; Voss 2012:306). The incentive was simple: people belonging to the highest class (termed *Español*) were afforded more opportunities and better privileges, such as the ability to own property (Voss 2012:306). The shift is measurable in the population at the Presidio during the late 18th century, where almost a 20 percent increase in *Español* occurred with a simultaneous reduction in all other lower castes (Voss 2012:306).

By 1821, revolutionaries in Mexico won independence from Spain, with Alta California becoming a part of the new republic (National Park Service 2014b; Pubols 2009:54). The new government banned the caste system, which was eventually replaced by a newer "community-based" system of classification (Haas 1995:31-32; Voss 2012:306). The terms *gente de razón* and *gente sin razón*, literally "people with reason" and "people without reason," were used to distinguish between colonists and native Californians (Haas 1995:31; Pubols 2009:23-24; Voss 2012:306). Additionally, the terms *hijos de país* ("children of the land" or "sons of the country") and Californio began describing a new identity embraced by younger generations of Alta Californians who were "not quite Spanish, but not completely Mexican," (Pubols 2009:156; Voss 2012:306-307).

The young Mexican government's grasp on Alta California was tenuous at best, with "minor rebellions and uprisings every few years," (Pubols 2009:149). Instead, a patriarchal network of wealthy, landholding families controlled most of the trade through the military and bureaucratic positions they held, often doled out to them by relatives or other close allies (see Pubols 2009). They were granted lands during the Spanish and Mexican periods, frequently held the debts of poorer citizens, and were expected to "give

generously to all members of the community," (Pubols 2009:254). This was the system encountered by Mariano Guadalupe Vallejo during the early 1830s when he was given the position of commander of the Presidio and tasked with settling the Pueblo of Sonoma (Hoover et al. 1990:476; National Park Service 2014b). Attempts at establishing other pueblos in what are now the cities of Santa Rosa, Petaluma, and Fulton were unsuccessful, largely due to the opposition of local tribes (Hoover et al. 1990:477). In 1834, the long deteriorating mission system of California was secularized, with much of the mission lands going to the wealthy Californio families (Haas 1995:3-4, 36; Hoover et al. 1990:476; Pubols 2009:215). The new landowners retained many of the mission neophytes as laborers (Haas 1995:36).

Vallejo, now a general, commanded a garrison of soldiers in the Sonoma Plaza during the mid-1830s to the mid-1840s and owned a substantial amount of the surrounding land (Hoover et al. 1990:477-479). Several buildings made up the plaza: Mission San Francisco de Solano (now a parish church), the priest house, Vallejo's house *Case Grande*, a barracks, and several other adobe style buildings (Hoover et al. 1990:477). Vallejo and the other residents of Sonoma, including his family, other Californios, and Euro-Americans, continued to live in the community for several decades, despite the United States' militaristic seizure of Alta California in the mid-19th century (Hoover et al. 1990:477-478).

AMERICAN PERIOD

Euro-Americans were present in Californio society well before the Mexican-American War of 1846. Trader Alfred Robinson and Captain Delano Fitch married into the de la Guerra and Carillo families, respectively, more than a decade before California

was taken by the United States (Pubols 2009:93;124). The marriage between American men and Californio women was becoming more common, as the unions served as both economic alliances and security for the powerful Californio families (Pubols 2009:105-106). However, the nuptials did not prevent contempt for the newcomers and their ever-expanding country from growing within the Californios (Pubols 2009:249-250). Nor did the US government hide its ambitions to expand its territory westward: U.S policy in 1823 (what would be coined the Monroe Doctrine) cautioned the European empires against spreading their colonial holdings any further (Hoover et al. 1990:477).

In 1846, the US Congress declared war on Mexico following a series of territorial disputes near the Texas-Mexico border (Pubols 2009:249;255). Around that time, nearly three-dozen American settlers associated with US Army Captain John C. Frémont captured Sonoma and took several prisoners, including Vallejo, in an event that became known as the Bear Flag Revolt (Hoover et al. 1990:478; Pubols 2009:241). For two years, Mexican and American forces clashed and in 1848 both sides signed the Treaty of Guadalupe Hidalgo (Haas 1995:56-57). The Treaty granted the California territory previously held by Mexico to the US. Although the Treaty recognized the land grants made to Mexican citizens before the war, many were soon "sold or lost, a divestment of property that affected large numbers of Californio heirs and Indian peoples alike," (Haas 1995:4).

The discovery of gold on the American River by James W. Marshall in 1848 was the catalyst of the California Gold Rush (Pubols 2009:281). Within months, 90% of San Francisco's population had abandoned the city for the Sierra Nevada (Pubols 2009:281). The bust did not last long though: by the early 1850s, some 40,000 people came to and

through San Francisco (Richards 2007:20). Between 1848 and 1850, almost 80,000 immigrants came to California. Most were young men from the US but also some came from Asia, Europe, Central and South America (Pubols 2009:288).

California officially became the 31st US state in 1850 (Pubols 2009:284). During this period, US General Land Office (GLO) surveyors were making their way into Sonoma County and mapping out the newly acquired land (US-GLO 1865). Post offices were established in fledgling towns like Cloverdale, Healdsburg, Petaluma, Santa Rosa, Sebastopol (formerly known as Pine Grove), and Windsor during the 1850s (Gudde 1998).

The Homestead Act of 1862, the first of a series of Homestead acts, encouraged settlers to migrate westward by giving them 160-acre swathes of land if they stayed on the property for at least five years and made improvements to the land during that time (Isenberg 2005:138). This pivotal piece of legislation was followed by numerous "industrial versions" including the Pacific Railway Act of 1862, the Mineral Resources Act of 1866, the General Mining Law of 1872, the Timber and Stone Act of 1878, and the Desert Lands Act of 1877, all of which involved granting land and/or resources to private interests (Isenberg 2005:14). Settlers continued coming to Sonoma County years after the original Homestead Act, and by 1877 much of the land was already claimed (Thompson 1877).

Sonoma County was primarily agrarian and pastoral during the late 19th and early 20th centuries (Torliatt 2012:10-32). Early on, economic activities revolved around "logging along the coast hills, cattle ranching, wheat and potato farming, and the early development of the wine industry," (Hurley 2013:1). Later on, milk, butter, cheese, eggs,

meat, grain, hay, hops, prunes, tobacco, apples, walnuts, and citruses began being grown, processed, packaged, and shipped (Torliatt 2012:14-25). The renowned horticulturalist Luther Burbank came to Sonoma County in 1878 and started experimenting in plant hybridization and artificial selection for several decades (Hoover et al. 1990:484-485). Railroad tracks were being laid throughout the county in the 1870s; the railroad eventually ran from Sausalito to Humboldt County, carrying both passengers and goods (Wilson 1990:44).

During the era of prohibition, in the late 1920s and early 1930s, Sonoma County was a hotbed of illegal bootlegging, smuggling, and speakeasies (Torliatt 2012:27-34). The earliest wineries and vineyards in Sonoma County, like the Haraszthy Vineyard, the Sebastiani Winery, the Gundlach-Bundschu Winery, and the Italian Swiss Asti Colony, date back to the early and mid-19th century (Hoover et al. 1990:483-484). The people associated with these establishments, as well as the dozens of other wineries and breweries that began before the Eighteenth Amendment was passed, were resistant to prohibition and in many instances continued operating illegally. Some remained functional by exploiting legal loopholes that allowed for the production of medicinal alcohol, sacramental wine, and alleged “non-alcoholic” grape and apple juices. The latter were often dried, packaged, and sold in “wine bricks” complete with instructions (called warning labels) on the fermentation process (Burnham 2010:1). Prohibition ultimately hurt the wine production industry in Sonoma County, with the total number of wineries dropping significantly between the Eighteenth and Twenty-First Amendments (Torliatt 2012:27-34).

The effects of the Dust Bowl and the Great Depression during the 1930s and 1940s were also felt in Sonoma County. Somewhere between 400,000 and 2.5 million people migrated from the Great Plains region during the 1930s, and between 200,000 and 400,000 of them came to California (Gregory 1989:6-8; Public Broadcasting Service 2013). Some migrants came to Sonoma County, where they found government camps and work in the agricultural sector (LeBaron 2012:1-3). New Deal work programs like the Civilian Conservation Corps (CCC), the Works Progress Administration (WPA), and labor camps helped keep the county alive (Torliatt 2012:32). The political and economic tension was palpable during this time, resulting in open economic tensions between bankers, farmers, laborers, protestors and police (Torliatt 2012:32-35). But by 1935, the county was one of the most agriculturally productive in the entire country (Hurley 2013:1; Torliatt 2012:35; Wilson 1990:47-66).

By the onset of WWII, the population of Sonoma County was almost 70,000, with about 1/7 of the population participating in the draft (Torliatt 2012:36-39). Military facilities were opened in the county, rationing was instituted, and civilians began working in the war industry (Torliatt 2012:36-39). Japanese-Americans living in Sonoma County were relocated to internment camps as a result of Executive Order 9066, a misguided and racist national policy that echoed anti-Chinese legislation of the late 19th and early 20th centuries (National Archives 2014; Torliatt 2012:36-39).

The county's population continued to grow after WWII, and by 1950 there were over 100,000 residents (Torliatt 2012:41). County and local city policies focused on growth and infrastructure, including the construction of airports, freeways, sewers, hospitals, and schools (Torliatt 2012:41-47). Individuals like Hugh Codding began

turning "orchards into suburbs," signaling the first major shift from agriculture to commercial and residential development (Torliatt 2012:41). By 1970, the county's population doubled to over 200,000 residents, and by 1980 the population was almost 300,000 (Torliatt 2012:47-48).

Today, the population of Sonoma County is nearly at half a million residents (Torliatt 2013:59). Many of the original industries, like cattle ranching, dairy farming, and agricultural production, still persist, albeit scaled back (Hurley 2013:56-59). The grape and wine industries are again dominant in the overall agricultural activity, valued at several hundred million dollars each year (Torliatt 2012:59). Other major industries include health care, retail, tourism, manufacturing and construction. Although population growth has slowed, many residents wish to:

> … retain [Sonoma County's] agricultural and small town character while providing for the livelihood of the expanding population. Related to this is the specific challenge of encouraging new development that complements both the physical beauty of the countryside and the county's rich heritage (Hurley 2013:1).

Understanding Sonoma County's history helps situate the FOP's history within a broader context, and allows for comparisons and parallels to be drawn between the two.

HISTORY OF THE FOP

As mentioned in Chapter I, the FOP was created in the early 1970s when the Roths donated the first 200 acres of property to the TNC. Prior to this, the land that is now the FOP had a unique history, beginning with Native Americans. Prehistoric archaeological sites and artifacts in the FOP, including CA-SON-657, CA-SON-2592/H, FOP-ISO-01, and FOP-ISO-02 (see Chapter VI), indicate that Native Americans once

lived on the land. Without absolute dating methods and stratigraphic relationships, it is difficult to project when and for how long Native Americans occupied these sites or created their artifacts. However, using Fredrickson's (1974; see Figure 10) artifact typology, the concave base projectile point style associated with FOP-ISO-02 had a span of 5,000 YBP to 2,000 YBP. The large prehistoric site on the Preserve, CA-SON-657, contains surface artifacts associated with a much later occupation, up to and perhaps beyond the period of European Contact.

In the mid 19th century, at the turn of the American Period in California, US GLO surveyors were beginning to map the lands in and around the FOP. In the 1870s, following the Homestead Act of 1862, two settlers began homesteading FOP land. P. Burns owned the northern portion of FOP land, and J. Russell owned the southern portion. They were responsible for the creation of some of the earliest historic era resources at the FOP, including the stone fences. Also around this time, the Head of the Petaluma Water Works was located somewhere on or around the Preserve (see Chapter VI). The waters from Copeland Creek were piped down to the City of Petaluma for drinking water in 7-inch wrought iron pipes (Sommer 2010). One of the remaining pipe segments, FOP-ISO-04, is located in the southern portion of the FOP.

The history of the FOP after the homesteading period up until the present day is illuminated through a recent FOP oral history project. Started in 2013 by several SSU graduate students in Professor Steve Estes' History 500 course, the students recorded conversations with seven individuals (William Roth, Joan Roth, Lynn Lozier, Larry Serpa, Rocky Rohwedder, and Nathan Rank) about their personal involvement and experience with the FOP. The transcripts are currently available on the FOP website.

According to Lozier (2012), the Elvick family actually lived on the current FOP property prior to the Roths. The Elvicks moved their house west across The Marsh to the location where it would burn down in the 1950s. The house-moving event may also explain why the house was "crooked" when the Roths lived in it. The Elvicks sold their firewood in Petaluma, where it was shipped to San Francisco.

During the 1950s, Joan and William Roth along with their children visited the land along Lichau Road that would become the Fairfield Osborn Preserve (Roth J. 2013:3-4; Roth W. 2013:2-3; SSU Preserves 2014a). They soon purchased the property from the Duerson family (Roth J. 2013:5; Roth W. 2013:6; SSU Preserves 2014a). The Duersons had owned the property since the 1890s, using the acreage for cattle and sheep grazing, timber harvesting, and farming (SSU Preserves 2014a). Also present on the property was a barn and a house. The Roth family lived in the "crooked" house (which burned down in the late 1950s or early 1960s) to begin with and added two bedrooms in the barn's stables. They landscaped the surrounding area with trees and other plants. Soon they had a small studio constructed (where Lynn Lozier and Larry Serpa would live during their tenure as caretakers of the FOP), as well as a horse-riding ring on a small knoll (Lozier 2013:11). Their neighbors were the Horns, the Rivers, the Elvicks, and the Duersons, who lived to the north. For two decades, the Roths enjoyed the land as a summer vacation home and weekend retreat, riding horses, reading, picnicking, hiking, and boating (Roth J. 2013:4-5; Roth W. 2013:6-7; SSU Preserves 2014a). They swam in a cement-swimming hole constructed along Copeland Creek to use during the summers. The Roths also knew about the large prehistoric site on the property, CA-SON-657, and

the artifacts that they collected it from it were in the "crooked" house when it burned down.

In 1972, the Roths donated the southern half of the property to The Nature Conservancy (TNC) (Roth J. 2013:9; SSU Preserves 2014a). The new preserve was named after Joan's father, Fairfield Osborn, a pioneer in environmental conservation (Roth J. 2013:9-10; Roth W. 2013:8-10; SSU Preserves 2014a). TNC allowed SSU instructors to bring students to the Preserve for educational fieldtrips. Two of these students later became the caretakers of the FOP for the TNC (Lozier 2013:12-13; Serpa 2013:9-12). Lynn Lozier and Larry Serpa ran outdoor education and docent-training programs, constructed and maintained trails and fence lines, and lived at the FOP from the mid-1970s to the mid-1980s (Lozier 2013:13-15; Serpa 2013:9-12). Lozier also reports having found prehistoric grinding stones, projectile points ("spear-points"), and clamshells on the property. The first portion of what would become the Marjorie Osborn Education & Research Center (MOERC) was constructed during this time (Lozier 2013:19; Serpa 2013:24-25).

TNC donated the original 200 acres of FOP land to SSU in 1997 under a TNC conservation easement (Lozier 2013:39-40; SSU Preserves 2014a). The first faculty Director of the Preserve, Rocky Rohwedder, oversaw the second phase of construction on the MOERC and was integral in getting the FOP donated to SSU (Rohwedder 2013:6-8). By 2000, Professor Nathan Rank took over as Director, and the FOP was transferred from the Provost's Office to the School of Science and Technology (Rank 2013:13-16; Rohwedder 2013:4-5). Rank continued as Director for almost a decade and organized much of the research on Sudden Oak Death (Rank 2013:6-24).

In 2004, the Roths doubled the size of the FOP after donating the northern half of their land to SSU, this time through a conservation easement with the SCAOPD (Rank 2013:5-6; Roth J. 2013:12; SSU Preserves 2014a). Today, the FOP continues to fulfill its original mission of supporting education and research, and boasts several ongoing projects in biology, technology, and land and water management. The participation of SSU students is fundamental to the outcome and success of these projects. SSU student-naturalists lead K-12 children on weekly fieldtrips on the property. Claudia Luke and Suzanne DeCoursey are currently Preserve Director and Education and Reservation Manager, respectively.

CHAPTER V: THEORETICAL FRAMEWORK

INTRODUCTION

This chapter embeds the background and field research results of this study within several theoretical themes. First, the theoretical construct of cultural landscapes is explored. Cultural landscapes (hereafter referred to as just landscapes) emphasize how elements of an environment are interpreted and perceived. More specifically, for archaeology and cultural resources management, the idea of landscapes allows researchers to explore how their data are connected at several scales, both spatially and temporally. Second, the concept of cultural heritage management (CHM) is addressed, particularly how the intangible characteristics of culture are managed in association with remains of culture. This section also speaks to intellectual and cultural property rights, specifically regarding Native American indigenous knowledge. Lastly, a review of ethics, theories, and practices concerning public education, interpretation, and outreach will provides a basis for the FOP to develop future public cultural resources programs. These three topics are interrelated, and were chosen because of their applicability to the mission and purpose of the FOP. Furthermore, these concepts will be used in the initial California Register eligibility assessment for the resources at the FOP.

CULTURAL LANDSCAPES

German geographers Friedrich Ratzel and Otto Schlüter developed the concept "cultural landscape" near the end of the 19th century (Calcatinge 2012:72; Wu 2010:1147). Within a few decades, American geographer Carl Sauer wrote *The Morphology of Landscape* (1925), a seminal and still relevant text addressing methodology in geography (Oakes and Price 2008:96). The concept received much

attention throughout the 1960s, and was again revitalized in the 1990s (Fairclough 2008:409; Wu 2010:1148). Today, the notions of cultural landscape and landscape archaeology are thriving (see Preucel and Mrozowski 2010; Ingold 2010; Taçon 2010; Casella 2010; Erickson 2010).

A modest definition of cultural landscape is "landscape modified by human activity," (Jones 2003:21). Graham Fairclough (2008:409) presents a weightier understanding:

> …*Landscape* is not quite the same as *environment*. There is a need for archaeological and historical understandings of past environments, but the concept of landscape is seen to be something more than a mere description of the physical traces of the past. This additional factor, which changes environment into landscape, is the existence of an observer who constructs what we call landscape from the material environment.

Fairclough makes two additional points. Contemporary aerial imagery and other associated technologies have multiplied our views of landscape. A century ago, the observer would need to be present at a particular viewpoint to witness a landscape. Today, the observer can use a computer to see that same landscape from a dozen of different angles and altitudes. Second, landscape is not exclusively connected with sight; the observer perceives the landscape with a full range of senses (Fairclough 2008:409).

Landscape is a relative perception. That is, the individual, or groups of individuals, perceive the landscape in their own way. The landscape is based on personal and collective experiences, and any number of tangible and intangible elements. Alister Scott (2008:247), whose study involved mapping public perceptions of landscape in Wales, writes:

> The psychology of seeing, and attaching value and meaning, to a landscape influences where people choose to live, how and where they work, their sense of well being and their sense of place. Perceptions can also influence subjective judgments at a sub-conscious level, so shaping reactions to, and feelings about, certain landscapes, features or developments.

Perhaps individuals foster their own meaning of landscape, but Scott's research signifies that people do hold some common perceptions (2008:356). Following this rationale, the stakeholders of the FOP likely have common views of the landscape. Identifying these shared perceptions would require FOP users to be polled on how they view the Preserve as a landscape.

Today, the FOP is commonly perceived as a nature preserve for education and research, but for Joan and William Roth, Lynn Lozier, Larry Serpa, Rocky Rohwedder, and Nathan Rank, the property is associated with dozens of personal memories. The same is true for the Elvicks, the Duersons, the Horns and the Rivers. There is reason to believe that the late19th and early 20th century occupants had their own perceptions of landscape, too. Jack London, once a resident of Glen Ellen, wrote about the local landscape in *Burning Daylight* (1910):

> There were no houses in the summit of Sonoma Mountain, and, all alone under the azure California sky, he reined in on the southern edge of the peak. He saw open pasture country, intersected with wooded canyons, descending to the south and west from his feet, crease on crease and roll on roll, from lower level to lower level, to the floor of Petaluma Valley, flat as a billiard-table, a cardboard affair, all patches and squares of geometrical regularity where the fat freeholds were farmed.
> Beyond, to the west, rose range on range of mountains cuddling purple mists of atmosphere in their valleys; and still beyond, over the last range of all, he saw the silver sheen of the Pacific. Swinging his horse, he surveyed the west and north, from Santa Rosa to St. Helena, and on to the east, across Sonoma to the chaparral-covered range that shut off the view of Napa Valley. Here, part way up the eastern wall of Sonoma Valley, in

> range of a line intersecting the little village of Glen Ellen, he made out a scar upon a hillside… and continued the circle of his survey to the southeast, where, across the waters of San Pablo Bay, he could see, sharp and distant, the twin peaks of Mount Diablo. To the south was Mount Tamalpais, and, yes, he was right, fifty miles away, where the draughty winds of the Pacific blew in the Golden Gate, the smoke of San Francisco made a low-lying haze against the sky.

This excerpt accurately reflects the present-day view from Sonoma Mountain, granted that the current population of Sonoma County has grown almost tenfold since 1910 (US Census 1995; 2014). Today, London would surely see more houses, vineyards, and roads, and it would have to be a very clear day in order to see the Pacific Ocean. But the pastures, oak woodlands, hills, farms, and mountains are still present, many of which London would still be familiar with. This familiarity is shared with the other families who lived around the mountain back then, like the Duersons and the Elvicks, and also with those who lived there later on, like the Roths. Landscapes transcend lifetimes in a way that connects past generations with the present, and vice versa.

For archaeologists and other history-based social scientists, these timeworn accounts of the landscape, in combination with other evidence such as photos, oral histories, and sites, are powerful lenses through which the past is studied. It is both a question of what elements remain from the account, and what elements are absent. For example, certain geological features like Mt. Saint Helena or the Petaluma Valley remain relatively static in a span of 100 years, barring some major environmental catastrophe like a flood or earthquake, both of which occur with some frequency in Sonoma County. We can reasonably expect these features to withstand a century of change. Other cultural features, like the farms and pastures, are more susceptible to factors like development, fires, and weathering. Perhaps some of these that London witnessed are no longer extant.

London refers to the Golden Gate in his passage. This seems reasonable, given the well-known landmark's size and color. However, the passage was written in 1910, and the construction of the Golden Gate Bridge did not begin until 1933 (Golden Gate Bridge Highway and Transportation District 2012). Therefore, London was not referring to the bridge, but rather the access into San Francisco Bay, named the Golden Gate Straight in the mid-19th century by Captain John C. Frémont (Golden Gate Bridge Highway and Transportation District 2012).

Pre-contact California Indians also held perceptions about the landscape, even if the term did not exist in their languages. Some Coast Miwok oral traditions about sacred places, animals, and people have endured to contemporary times. For example, Coyote is said to come from "far to the west, beyond the ocean," (Kelly 1978a:23). He "dried the water… undertook to regulate the tides… [and] sometimes caused thunder," (Kelly 1978:23-24). For Coast Miwok people, the landscape is more than a combination of natural features, but rather a sacred space where individuals like Coyote, Chicken hawk, and Frog woman regularly interacted with and manipulated the environment.

Projecting the beliefs of modern communities onto ancient communities parallels the previously mentioned challenges concomitant with ethnographic observations (See Chapter III). Archaeological, ethnographic, and ethnohistoric evidence suggests that Native Americans were active land managers, for better or worse, manipulating the environment to suit their needs (see Lightfoot and Parrish 2009). The FOP and surrounding property, with the high density of prehistoric sites, is no exception.

Historically, the perception towards the FOP's landscape has followed a nature-oriented course. After all, the Roths purchased the property as a country retreat for the

summers, a place where they could escape *to* nature. Contrarily, homesteaders sought to *settle* the land, making improvements such as fences and roads, attempting to change the wildness of nature into something familiar and recognizable (see Rockman and Steele 2003). This perception is also true of California as a whole and the American West, which were billed as a "rich environment" and "natural cornucopia that offered the prospect of great wealth," by boosters of westward expansion (Isenberg 2005:7). Nineteenth century Californians "believed that by tapping natural resources, they transformed the beautiful but unproductive wilderness into a garden," (Isenberg 2005:7).

The dichotomy between nature and culture, that nature somehow involves a "human-less" aspect, and that the two are simultaneously mutually exclusive and jointly exhaustive, is rebuffed when one visits the FOP. It does not take long for one to discover the cultural components: the high rate and distribution of non-native vegetation, the fences, trails, roads, buildings, clearings, sites, and dams. There are also examples of overlap between nature and culture, such as the phenomenon of ecological succession (see Chapter II) at both human-made ponds on the property. The Marsh is another example: the landform was created by nearby fault movement, but it was later improved and used by ranchers as a livestock pond. Here, again, is a complex interplay between nature and culture. FOP managers understand the role of humans in shaping the Preserve, and they make this fact explicit in their docent led hikes and informational materials.

A recent article in the Santa Rosa *Press Democrat* highlights the Preserve's emphasis on both nature and culture (McConahey 2014). In it, Suzanne DeCoursey is quoted speaking about both natural and cultural resources in a balanced and meaningful way. The article also mentions that the FOP "carries a 'forever wild' conservation

easement with the Sonoma County Agricultural and Open Space District to prevent future development," (McConahey 2014:D1).

The "forever wild" phrase is used in another recent cover story about the FOP in SSU's magazine *Insights* (SSU 2014). The cover shows a series of stairs going uphill along Moving Mountain Trail, surrounded by oak and bay trees, grasses, and leaves. The caption below the photograph reads: "A land for learning stays 'forever wild.'" This term "forever wild" is referring to the actual language of the SCAOSD conservation easement and the fact that the land will not be developed. However, to the unknowing person, the phrase may mean something entirely different, and perhaps it even reinforces the dichotomous nature-culture rationale that FOP managers are working to dispel.

This research project has found that as a landscape, the FOP is simultaneously natural and cultural, with mountains, houses, and ponds that are teetering somewhere in-between. This point reinforces the fact that humans are not separate from their environment.

CULTURAL HERITAGE MANAGEMENT

John H. Jameson, Jr. considers cultural heritage management (CHM) as an extension of CRM "encompassing the traditionally recognized legal compliance requirements with an infusion and increased emphasis on inclusiveness in education and public interpretation efforts," (2008:42). John Schofield adds that CHM takes "in both tangible and intangible resources; the material and the immaterial," (2008:15-16). Intangible and immaterial characteristics of culture include languages, activities, skills, dances, songs, stories, oral histories, and memories. On the other hand, tangible and

material resources have a physical presence and consist of sites, buildings, artifacts, and structures.

Laurajane Smith (2008:62-63) uses the term archaeological heritage management (AHM) to describe

> A process which fulfills part of a Western cultural, political, and ethical concern with the conservation and curation of material items… which institutionalizes archaeological knowledge and ideology within State institutions and discourses… [and] which is implicitly concerned with the definition of, and debates about cultural, historical, social and national identities.

This definition implies that there is an ongoing dialogue within society regarding what objects are worth preserving. The dialogue is between archaeologists and other heritage specialists, government and agency representatives, and citizens. This dialogue results in the creation of the laws, regulations, standards and guidelines that then dictate how these objects are to be treated.

Rodney Harrison, Graham Fairclough, Jameson and Schofield (2008:7) together use CHM

> …to denote approaches to and views of cultural heritage in the broadest sense (including archaeological and cultural resources management), utilizing archaeologists' perspectives of long-term change and taking as a starting point the role and significance of material culture in the modern world.

In this explanation, CHM is a combination of methods and views generated by archaeologists. There are semantic differences between the terms CRM, CHM, and AHM, and there are also similarities. Because of its stress on public involvement and the relationship between tangible and intangible elements, CHM is the term used in this

study. Regardless, there is a difference between material resources and intangible heritage, both theoretically and legally. Cultural resource laws apply to tangible objects, places, and properties, even though the importance of the resource may be for an intangible reason. If a house is found to be eligible to the California Register of Historical Resources under Criterion 2 because of its association with the life of a person important in the past, then it is not the physical characteristics of the house that make it important. Rather, it is because the property is "associated with a person's productive life, reflecting the time period when he or she achieved significance," (NPS 2002). For example, if the house is important because it is where a famous novelist wrote his or her seminal work, then it was the process of writing the novel, not the house itself, that is important. In this scenario, the intangible process is what makes the tangible resource significant.

The management of heritage is distinctive from the management of physical resources. Heritage is detectable by the various human senses: telling stories around a campfire, learning how to hunt, gathering materials for basket weaving, and shearing a sheep are all aspects of heritage that are seen, felt, smelled, heard and tasted. While these activities have material components (hearths, tools, bones), it is the knowledge of these activities, the words used to describe them, which are fleeting.

A house is another metaphor through which cultural heritage can be explained. The house itself is a physical entity, composed of materials (stone, wood, metal) that form larger features (foundation, frame, siding, roof), which make the house complete. But the house is more than the sum of its materials and features. A house is a process of building: the planning, the physical labor, and the maintenance. It demonstrates a particular know-how, an ability, a skill, all of which are integral to the construction of the

house but will not necessarily be preserved in the materials. That is, while the nails are still tangible 50 years after they were hammered, the action of hammering the nails is not. The results of the action remain for a lifetime, but the action itself ends in a moment.

The process of living in the house further exemplifies the balance between heritage and resources, the immaterial and material. Activities like eating, sleeping, and raising children all occur within the house and have material correlates (bottles, beds, toys). However, the process of living, the generational recipes and food preparation, the songs sung before sleep, and a child's first successful (or not) bicycle riding attempt, are ephemeral.

Folk knowledge, sometimes called traditional knowledge or indigenous knowledge, can be defined as "a cumulative body of knowledge… maintained and developed by peoples with extended histories of interaction with their environment," (International Council for Science 2002:3). For houses, it is called folk architecture (see McAlester and McAlester 1998), but it has a multitude of forms across every culture: folk medicine and childcare (see Towns et al. 2014), folk botany and ecology (see Lampman 2010), and dozens more (see Brunvand 1996).

Certain modern technologies (photographs, videos, audio recordings) capture these moments. They are aspects of modern memory, embraced by Western society as evidentiary and authentic. Harrison and colleagues (2008:6) point out some irony here:

> While on the one hand, photography threated the essence of what made an object 'real' by making its image easily reproducible, it also served to emphasize those things which made the real object 'authentic'; that is, its aura or 'patina' of history, the vestiges of its relations with humans in the past, all of those things we might term its 'heritage'. The growth in popularity of these individual forms of memory representation have had profound influences on the representations of collective memory in the

> West, both in terms of its forms, and its accelerated growth throughout the twentieth century.

Photography, videos and audio recordings are certainly authentic in themselves, but they cannot totally replace whatever experience it is they are trying to capture. As beautiful as a photo of the Golden Gate Bridge at sunset may be, it is not the same as being present at the Golden Gate Bridge and experiencing that sunset. However, these photos are the reason why the Golden Gate Bridge and other landmarks are recognized internationally, despite so many people never having visited them. These media forms are even more significant when they document ephemeral moments like weddings, graduations, and birthday parties. Unlike the Golden Gate Bridge, these instances are not made of welded steel and concrete.

The management of heritage at the FOP has begun with the oral history project (see Chapter IV). By chronicling the memories and words of the individuals who lived on the property, the students recording the oral histories are creating a permanent record of the property, one that archaeological fieldwork in itself could not replicate. These transcripts aid field research, giving meaning and purpose to enigmatic sites. The interviews shed light on the function, age, and history of several of the resources. If at all possible, this oral history project should continue, and perhaps expand to incorporate historic-era photos that the Roth family or other parties have in their possession.

There is also potential for managing Native American heritage alongside preserving prehistoric sites and artifacts. One local example is the recreated Coast Miwok village of Kule Luklo at Point Reyes National Seashore in Marin County. At Kule Luklo, visitors can see what a village may have looked like, including a roundhouse, acorn

granary, and a sweathouse (Thalman 2001:26). Jennifer Sokolove and colleagues (2002:30) make an important distinction about the village: "It is not a reconstruction of a historical village located on a traditional site, or a historical spiritual site for Coast Miwok tribes, but an evocation of a number of sites of historical Coast Miwok occupation." After construction began in 1975, there were several interpretive problems with the village, including signage that claimed the Coast Miwok were an extinct tribe (Sokolove et al. 2002:30). These issues were slowly rectified. Eventually the extant Coast Miwok population began their involvement with Kule Luklo, initially by controlling public access to the round house, and later by holding private ceremonies at the village. Today, park guests can take a ranger-led hike to the village or attend the annual Big Time Festival to learn about Coast Miwok heritage and history (National Park Service 2014b). The Point Reyes Visitor Center also sells a more recent and accurate book about the Coast Miwok and Kule Luklo for a small cost (see Thalman 2001).

The Environmental and Cultural Preservation Department for FIGR offers services for environmental education, interpretive signage and trails (FIGR 2014b). In the past the Tribe has collaborated with other land holding entities, such as the OAEC, regarding cultural heritage programs.

There are several caveats with Native American heritage management programs. One involves the controversy surrounding intellectual property rights (see Nicholas and Bannister 2010). Indigenous knowledge is frequently considered sacred, and the sharing of such knowledge to non-tribal persons should only occur with consent from and collaboration with the Tribe and tribal members. Prehistoric sites and artifacts are also considered sacred, and so revealing the location of these sites is generally inappropriate.

The other downside of allowing public access to prehistoric resources is the possibility of site looting and destruction. These considerations bolster the merit of a reconstructed village like Kule Luklo.

Incorporating a more human and holistic approach benefits the archaeologist's understandings of material culture, which leads to further revelations about human history. The most obvious case comes from the work of ethnographers. Their observations may function as a series of hypotheses that archaeologists test through the material record. This field, sometimes called ethnoarchaeology, has been especially revealing in the analysis of lithic technology (McCall 2012:157). Perhaps even more illuminating than ethnographies are the cultural descendants of the people that the archaeologists are studying. They often still have knowledge of past practices and their purpose.

CHM brings a focus to both the tangible and intangible components of a resource. Archaeologists attempt to make interpretations about the object, site or place within a human context, understanding that there is an immaterial human process or aspect attached to the material resource. The human process and the resource resulting from it are forever tied, as the latter cannot happen without the former.

PUBLIC EDUCATION, INTERPRETATION, AND OUTREACH

As an education and research preserve, the FOP has a number of programs that include cultural resources education, interpretation, and outreach. Within the last few decades, there has been an increase in public archaeology programs (Jameson 2008b:427). Reacting to the surge, Jameson (2008b:428) writes that

> …archaeologists have increasingly collaborated with historians, museum curators, exhibit designers, Web designers, and other cultural resource specialists to devise the best strategies for translating an explosion of archaeological information for the public.

Barbara Little reasons that this growth in public education is "tied to the very survival of the archaeological resource base," (2007:144). This is because a majority of the archaeological research in the US is completed as part of a legal compliance process and is in part funded by public tax revenues. In fact, the Advisory Council on Historic Preservation (ACHP) estimates that "more than 90 percent of the archaeological excavations conducted in the United States are done so pursuant to Section 106 of the NHPA," (2009:2). The increase in public interest for archaeology presents an opportunity for archaeologists to continue education efforts and encourage preservation of cultural resources.

Public interpretation goes a step beyond education, involving stakeholders in conversations with researchers about archaeology, management decisions, and exhibits (Jameson 2008b:427; Little 2007:144; McDavid 2008:514). The work of Carol McDavid (2008:514) at the Levi-Jordan Plantation in Texas is just one illustration of a successful public education and interpretation program involving "politically and emotionally charged archaeologies." McDavid developed a collaborative website for the plantation where archaeologists and nearby community members communicate in a "reflexive, interactive, multivocal and contextual" fashion (2008:514-517). In her conclusion, McDavid (2008:520) found that the website "was successful in being *open* to its visitors," but less successful at "creating a space for *democratic* communication." McDavid (2008:521) also found it difficult to incorporate people who did not have an interest in

archaeology, and that users "did not take the opportunities" to dissent from or criticize the project.

Jameson (2008:429-430) writes about several current ideas on public interpretation, including "values-based management schemes" where the values of stakeholders are identified and incorporated "in planning, physical treatments, and public interpretation efforts." A more unusual approach involves "market versus non-market value assessments," where decisions are made based on a balance of values, such as tourism values (market-based) and preservation values (non-market based) (Jameson 2008:431). Issues at Stonehenge involving the nearby placement of major roads and highways exemplify the market/non-market value scheme (Stone 2008:524-534). There, the government and site managers weigh the value of tourism against the expense of improved preservation.

A local sample of rewarding public education and interpretation programs comes from the Anthropological Studies Center (ASC), a non-profit and education center at SSU. Jameson (2008:429) writes

> Many private and public institutions and universities, archaeology and anthropology departments, and museums in the United States have launched effective public interpretation and outreach programs in recent years. One example is Sonoma State University's Anthropological Studies Center (ASC) which has placed special emphasis on education and outreach in the production of publications and activities for teachers, local civic organizations, archaeology groups, and continuing education programs. ASC's award-winning publications have included public awareness slideshows and videos.

Finally, the notion of public outreach is perhaps just as salient as education and interpretation. After all, without effective outreach, there would be little or no public

involvement. Public outreach is the process of providing information to members of a community. It involves finding underrepresented groups of people, gauging their interests, and notifying them of pertinent research and projects. Again, the FOP is already exceptionally situated in this regard, with school children and other members of the public coming frequently to the property. Little (2007:144) argues that

> Every sector of the archaeological profession considers public education and outreach to be important. Private contract firms of all sizes incorporate elements of public outreach into at least some projects. Public outreach is integral to the work of many private foundations. Governments at every level are rightly concerned with the public benefit of the work they require or sponsor. Therefore, they often want educational or interpretive products such as lesson plans, pamphlets, and exhibits in addition to research reports and databases… An increasing number of schools are including archaeology in elementary and high school curriculum as well.

Public involvement at all levels in archaeology is a benefit to the discipline. It ensures that the values of underrepresented groups of people are included in research, decision-making, and policies. Without democratic participation, archaeology might only reflect the interests of the archaeologists and remain an esoteric science inaccessible to the layperson. Including members of the public in on the process of archaeology in the present is security for archaeology in the future.

CHAPTER VI: CULTURAL RESOURCES INVENTORY

INTRODUCTION

This chapter explains the process and results of investigating and recording cultural resources at the FOP. It begins with a comprehensive account of methods, including research venues and approaches, field strategies, and recording guidelines. The following section presents the previously completed records, historical maps, and relevant literature gathered during the background research phase. Next is a synopsis of the archaeological field research phase and findings. The chapter concludes with an initial California Register eligibility assessment for the cultural resources at the FOP.

METHODS

Within the field of archaeology and CRM, Praetzellis and Praetzellis (2006) of the Anthropological Studies Center (ASC) at SSU advocate a contextual approach, where

> questions build upon each other as new data is gathered from the ground, from the archives, from maps and photographs, and from oral history informants. The answers, when woven together, provide a richer, more human history…and a deeper understanding of the people. (2006:3.7)

The methods of this qualitative study follow this contextual approach.

The process of inventorying the cultural resources of the FOP began with contacting the Native American Heritage Commission (NAHC). In California, the NAHC is "the primary government agency responsible for identifying and cataloging Native American cultural resources," (NAHC 2014). The NAHC "maintains a file of Sacred Lands which contain information unavailable elsewhere" and should be consulted "as early as possible" in the CEQA process (Miner and Rivasplata 1994:5-7). On 9 May 2013, the author faxed a map of the FOP study area, along with a letter specifying the

location, scope, and purpose of the study, to the NAHC. On 20 May 2013, the NAHC replied that their files did not hold any known Native American cultural resources within the FOP study area. The NAHC also included the names and contact information of several Native American organizations and individuals who may have interest or knowledge about cultural resources in the study area. On 28 May 2013, letters and maps were sent to these individuals informing them of the location and purpose of the study. Nick Tipon, member of FIGR and the Tribe's Sacred Sites Protection Committee, replied on 5 June 2013. He stated that there were many important and culturally significant resources at the FOP, including native vegetation, and requested that the Tribe be allowed to comment on this study. A completed version of the study was sent to the Tribe in October 2014. Documentation on the Native American coordination process is located in Appendix A.

On 10 May 2013, a records search was conducted at the Northwest Information Center (NWIC) of the Office of Historic Preservation's (OHP) California Historical Resources Information System (CHRIS). The NWIC is one of ten regional information centers (ICs) throughout California that manage and maintain a database of cultural resource records and materials (OHP 2013a). As part of CEQA, record searches are performed "to determine whether any previously identified resource exist on site," in this case at the FOP (Miner and Rivasplata 1994:5). The record search revealed four previously recorded resources within the FOP. Based on these records, an estimated 10% to 15% of the entire FOP property was formerly surveyed. The record search revealed an additional 25 previously recorded resources within a 1-mile radius of the FOP. The 1-mile radius was chosen given the rural area surrounding the FOP.

The OHP's Historic Properties Directory (HPD) and Archaeological Determination of Eligibility (ADOE) were also reviewed at the NWIC. They include National Register records, California Register records, California State Historical Landmarks, and California State Points of Historical Interest (NWIC 2014). In addition to resource records, the NWIC holds historic maps (Sanborn, Coast Survey, USGS, GLO, and Rancho Plats), local histories and thematic histories, periodicals, and literature (NWIC 2014). When applicable, these records and maps were examined.

Further research was completed at the ASC. The ASC possesses an extensive library of academic literature, ethnographies, reports, and maps. Its staff members, comparative collections, computer hardware and software, and library were consulted with and used during this study.

Archaeological fieldwork at the FOP took place during the summers of 2013 and 2014. The goals of the fieldwork were to survey the entire property, and to identify and record any cultural resources located during the survey. Expectations for finding resources on the property were high given the density of resources in the surrounding area. Fieldwork consisted of a non-exclusive, deployed surface survey with background research, as defined by White and King (2007:85-89). Additional information on field methods is located in the archaeological fieldwork section.

PREVIOUSLY RECORDED RESOURCES

Within the FOP Property

Four resources were previously recorded at the FOP prior to 2013. The following is a summary of those resources. Additional information on the resources is in the

Findings section. Copies of the previously completed site record forms are in Appendix B.

CA-SON-657 is a prehistoric site containing obsidian debitage and projectile points, bowl mortars, and shell fragments (Origer and Wiseman 1970). CA-SON-2118H is a historic-era site consisting of three unmortared basalt stone fences (Compas, Gregg, and Jablonowski). P-49-002804 is a historic-era complex, including a standing barn, a standing studio building, a burnt, collapsed building, non-native landscaping, artifact concentrations, and stone fences (Doherty and Schultz 2000). CA-SON-2592/H is a multicomponent site comprised of stone fences, a wood capped spring, and historic-era and prehistoric artifacts (Rabellino 2012).

Within a 1-mile Radius of the FOP Property

A total of 25 resources were recorded within a 1-mile radius of the FOP prior to 2013. The following is a summary of these resources based on the previously completed records.

CA-SON-97 is a prehistoric midden deposit and lithic artifact concentration (Werner and Amaroli 1977a). Artifacts consist of obsidian projectile points and both chert and obsidian debitage. The site measures 80 ft. north-south by 80 ft. east-west.

CA-SON-101 is a prehistoric midden deposit and lithic artifact concentration (P. Mikkelsen, G. White, L. Leach-Palm 1982; Ribeiro, Jablonowski, and Gahaghian 1993). Artifacts include obsidian projectile points, bifaces, obsidian and chert debitage, and fire affected rock (FAR). Mikkelsen, White, and Leach-Palm also found an opalite scraper and "Excelsior" point fragment (1982:1). They describe the site as exhibiting probable Berkeley Pattern characteristics (1982:2).

CA-SON-102 is a prehistoric site recorded by Loud and Peters in the 1920s. The location of the site is the only information given in the record. Werner and Amaroli (1977b) were unable to relocate the site several decades later.

CA-SON-105 is a prehistoric lithic artifact concentration (Bramlette et al. 1986). The site has several obsidian and chalcedony projectile points, biface fragments, and some flake tools. It measures 490 ft. north-south by 200 ft. east-west.

CA-SON-106/H is a multicomponent site with a prehistoric lithic artifact concentration and a historic-era homestead complex known as the Crilly Homestead (Bramlette, Praetzellis, and Greenway 1986). The lithic artifact concentration is primarily obsidian debitage measuring approximately 100 ft. north-south by 100 ft. east-west. The homestead has an artifact concentration, foundations, building remains, terracing and road cuts, stone fences, a feeding trough, the remains of an orchard, and an improved spring. The artifact concentration contains barrel hoops, bed springs, window glass, colorless glass, blue glass, purple glass, black glass, bricks, white improved earthenware (WIE) ceramics, and blue transfer printed creamware. The homestead complex measures approximately 600 ft. north-south by 600 ft. east-west.

CA-SON-107/H is a multicomponent site containing a prehistoric midden deposit, lithic artifact concentration, and a historic-era ranch complex known as the Duerson Ranch (Duddy 1982; Flynn, Roop, and Duddy 1982). The lithic artifact concentration constitutes obsidian and chert debitage, obsidian bifaces, projectile points, drills, bone fragments, FAR, and groundstone. The ranch complex contains an 1860s house, two barns and several outbuildings from the 1930s, stone fences, farm machinery, and artifact concentrations dating from the early to mid 20th century.

CA-SON-109 is a prehistoric site containing midden deposit, obsidian and chert projectile points, obsidian flake tools and debitage, and burned bone fragments (Flynn, Roop, and Duddy 1983a). The site measures 660 ft. north-south by 330 ft. east-west.

CA-SON-117 is a prehistoric occupation site with several bedrock milling stations (BRMs) (Moreau and Davis 1960; Stanley and Lanigan 1979). Artifacts include obsidian debitage, scrapers, and projectile points. The site measures 130 ft. north-south by 200 ft. east-west.

CA-SON-1024 is a prehistoric lithic artifact concentration (King 1975). Artifacts include obsidian debitage, flake tools, and projectile points. The size of the site is unclear because the sketch map is not to scale.

CA-SON-1032H is the remains of a historic-era residence and/or ranch complex (Amaroli 1976a). A rectangular stone corral, the remains of a wood plank cabin, and the stone foundation and remains of a wood plank barn make up the resource. Both square and round nails are embedded in the planks. The stone corral measures 55 ft. north-south by 30 ft. east-west. The remains of the cabin are approximately 20 ft. north-south by 33 ft. east-west. The remains of the barn are approximately 16 ft. north-south by 26 ft. east-west.

CA-SON-1033H is the remains of a historic-era building or structure (Amaroli 1976b). It is rectangular and has two standing stone walls, one collapsed stone wall, and a hearth. The south and west walls are built into a hillside; the entrance/doorway is on the east side. The resource measures 13 ft. north-south by 16 ft. east-west.

CA-SON-1097 was originally recorded as a lithic artifact concentration containing white chert and quartz (Jackson 1978). A subsequent investigation concluded

that there was little to no evidence of any cultural modification, either prehistorically or historically (Thompson and Origer 1984). Therefore, CA-SON-1097 does not appear to be an archaeological site.

CA-SON-1172/H is a multicomponent site containing a prehistoric lithic artifact concentration and a historic-era farm/ranch complex (Erickson, Kaijankoski, and Smirnoff 2008a; Offermann and King 1979). The prehistoric element has two loci. Locus A is located within the heart of the farm/ranch complex and measures approximately 100 ft. m north-south by 100 ft. m east-west. Locus B is located near a natural spring and measures 160 ft. north-south by 100 ft. east-west. Both loci contain obsidian and chert debitage with a density of about 5 flakes per square meter. Offerman and King reported finding two conical pestles, several obsidian and chert projectile points, scraper tools, and a drill (1979:1-2). The historic-era component includes "an early 20th century side-gabled house, a privy, a spring house, a standing shed, a stone barn foundation and corral, two stone shed foundations, a concrete shed foundation, and a water tank," (Erickson, Kaijankoski, and Smirnoff 2008:1). No historic-era artifacts are noted on the form. The farm/ranch complex measures some 800 ft. north-south by 1000 ft. east-west.

CA-SON-1419 is a prehistoric chalcedony quarry (Parkman and Hood 1983). The quarry consists of several chalcedony cores and flakes. It measures 30 ft. north-south by 30 ft. east-west.

CA-SON-1482H is a 1870s ranch complex known as Todd Ranch (Duddy, Flyyn, and Roop 1983b). The complex has a house, three outbuilding foundations, stacked basalt stone fences, an improved spring, a split rail fence line, an artifact concentration, the remains of a wagon, a bridge, basalt retaining walls, road cuts, and non-native vegetation.

The artifact concentration includes stove parts, bottle fragments, ceramic fragments, brick fragments, square nails, kitchen tools, and sewer pipe fragments. The complex measures 650 ft. north-south by 650 ft. east-west.

CA-SON-1483H is a late 19th-century or early 20th-century site (Duddy, Flynn, Roop 1983c). The site includes a large clearing bordered by stacked stone fences, a rock-lined spring containing wagon parts, a house foundation pad, an artifact concentration, and non-native vegetation. The artifact concentration has ceramic pipe fragments, metal and crockery fragments, bottle fragments, porcelain, square nails, and lumber. The site measures 490 ft. north-south by 330 ft. east-west.

CA-SON-1560H is a historic-era resource consisting of two sections of dry laid fieldstone fences (Praetzellis 1986a). They measure a total of 1300 ft. long, 1 to 2 ft. wide, 1 ft. tall, and 2 to 3 courses in height. Both are oriented north-south.

CA-SON-1562H is a historic-era site known as the Hayfields House (Praetzellis 1986b). Feature 1 is a stone-filled rectangular pit measuring 8 ft. by 11 ft. and believed to be associated with storage. Feature 2 is a domestic artifact concentration measuring 50 ft. in diameter. It contains window glass, green bottle glass, WIE fragments, and milled lumber. Feature 3 is several piles of fieldstone measuring 5 to 10 ft. in diameter and 1.5 ft. tall.

CA-SON-1563H is a historic-era stoned lined depression measuring 12 ft. by 15 ft. (Praetzellis 1986c). It is likely a storage feature and contains window glass, WIE fragments, and green bottle glass.

CA-SON-1564H is a historic-era stone fence feature measuring 630 ft. long and 1 to 1.5 tall (Praetzellis 1986d). The fence has been built into a naturally occurring rock outcrop.

CA-SON-2119 is a prehistoric lithic artifact concentration (McCarthy, Jablonowski, and Searle 1993). It contains obsidian and chert debitage and measures 25 m north-south by 20 m east-west.

CA-SON-2489H is a historic-era resource consisting of 13 segments of dry-laid stone fences forming a pasture (Erickson, Kaijankoski, and Smirnoff 2008b). They vary in length and measure 3 ft. tall, and are 5 courses high.

CA-SON-2490 is a prehistoric site containing a chalcedony quarry and two chalcedony debitage concentrations (Erickson, Kaijankoski, and Smirnoff 2008c). A natural vein of white chalcedony defines the quarry. Concentration 1 measures 150 ft. north-south by 70 ft. east-west. Concentration 2 measures 40 ft. north-south by 40 ft. east-west.

CA-SON-2492 is a prehistoric crypto-crystalline silicate (CCS) quarry measuring 140 ft. north-south by 50 ft. east-west (Newland 2008). It contains numerous pieces of CCS shatter, primary cores, and cobbles.

P-49-004503 is a large historic-era farm complex with seven buildings (Beard 2011). Building 1 is a turn of the 20th century rectangular, hipped-roof dwelling. Building 2 is a rectangular, gable-roof residence constructed in the early 20th century with mid 20th century additions. Building 3 is a gable-roof building above a three-bay garage. Building 4 is a gable-roof barn with vertical board-and-batten siding. Building 5

is a gable-roof barn with a shed-roofed bay. Building 6 is a gable-roof shed with board-and-batten siding. Building 7 is a shed-roofed outbuilding with board-and-batten siding.

As demonstrated above, numerous resources have been recorded at and around the FOP prior to the current study. One goal of this research is to add to these records by locating and documenting additional resources

HISTORICAL MAPS

The land surrounding the modern FOP was being mapped as early as the 1850s. US-GLO surveying in Township 6 North, Range E West, Mount Diablo Meridian, began in 1851 and continued through 1865 (US-GLO 1865). The Cotate Rancho, located only a few miles west of the FOP, was surveyed and mapped by 1857 (General Land Office 1857). The Petaluma Rancho, situated less than one mile southeast of the FOP, was surveyed and plotted in 1860 (GLO 1860). These maps lack great detail, although occasionally they depict natural and cultural features, like streams, forests, mountains, roads, houses and fences.

In 1877, a historical atlas map of Sonoma County was published (Thompson 1877). Based on "personal observations and actual surveys," Thompson's atlas contains birds-eye-views of towns and houses, portraits of wealthy individuals, and geographic maps at large and small scales. The atlas as a whole contains a wealth of information, and the maps are especially revealing (Figure 11). According to Thompson, the property where the FOP is located appears to have been owned by two separate individuals. P. Burns owned 640 acres, including the northern half of the current FOP property (Sections 23 & 24). The southern half (Section 26) belonged to J. Russell. There is a road running through Russell's property, oriented northwest-southeast. On the south side of the road

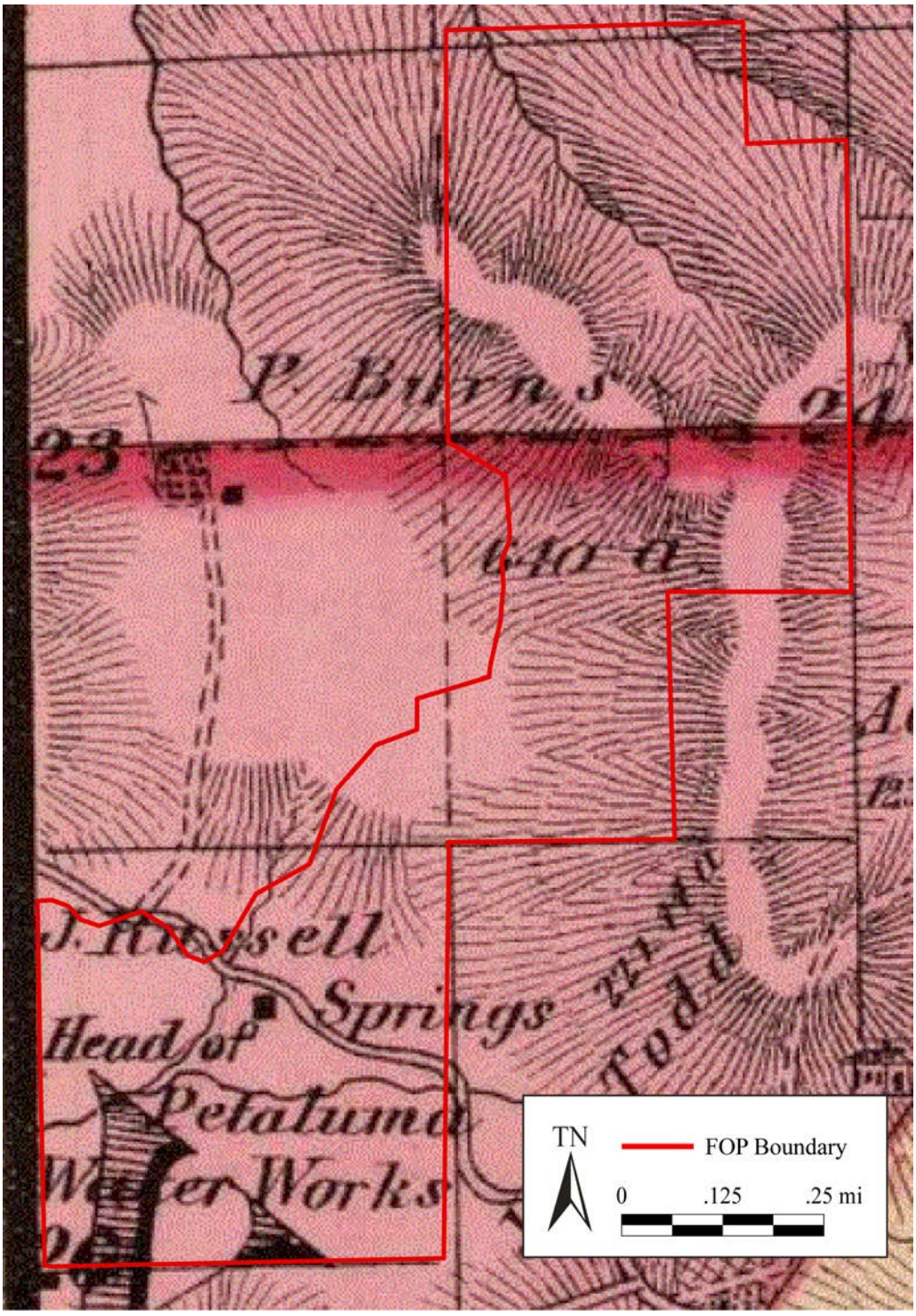


Figure 11: Thompson's (1877) map of Sonoma County

there is a building. To the east of the building there is the word "Springs," and to the south the words "Head of Petaluma Water Works." Two creeks or streams also run through the area.

In 1898, Reynolds and Proctor published an atlas map of Sonoma County (Figure 12, Reynolds and Proctor 1898). In Sections 25 and 26, the map depicts the words "Springs HD. of Petaluma Water," a road running northwest-southeast, and a cluster of buildings.

The United States Geological Survey's (USGS) cartographers and surveyors began making a series of topographic maps throughout the country in 1879 (USGS 2014). The 1916 Santa Rosa quadrangle of the FOP area depicts a dirt road, and a building located west of the one on the Thompson Atlas (Figure 13, USGS 1916). An east-west oriented dirt road runs through the northern portion of the property. Two bodies of water, probably ponds, are on both the north and south sides of the road. In 1944, the USGS released an updated Santa Rosa quadrangle (Figure 14, USGS 1944). The map shows the road in Section 26 terminating at the building, instead of continuing southeast as it does on the Thompson Atlas and the 1916 quadrangle. The road in Section 24 also terminates near the bodies of water, instead of continuing northeast as it does on the 1916 quadrangle. A decade later, the 1954 Santa Rosa quadrangle depicts what is the modern Lichau Road running through Sections 23 and 26 (Figure 15, USGS 1954e). The same building appears in Section 26, and there is now a pond east of the house. The road in Section 24 is gone, and there is only one pond. The 1954 Glen Ellen 7.5' quadrangle shows two additional buildings in Section 26, and where the road was in Section 24 is now a more modern (after 1954 and before 1980) trail (Figure 16, USGS 1954a).

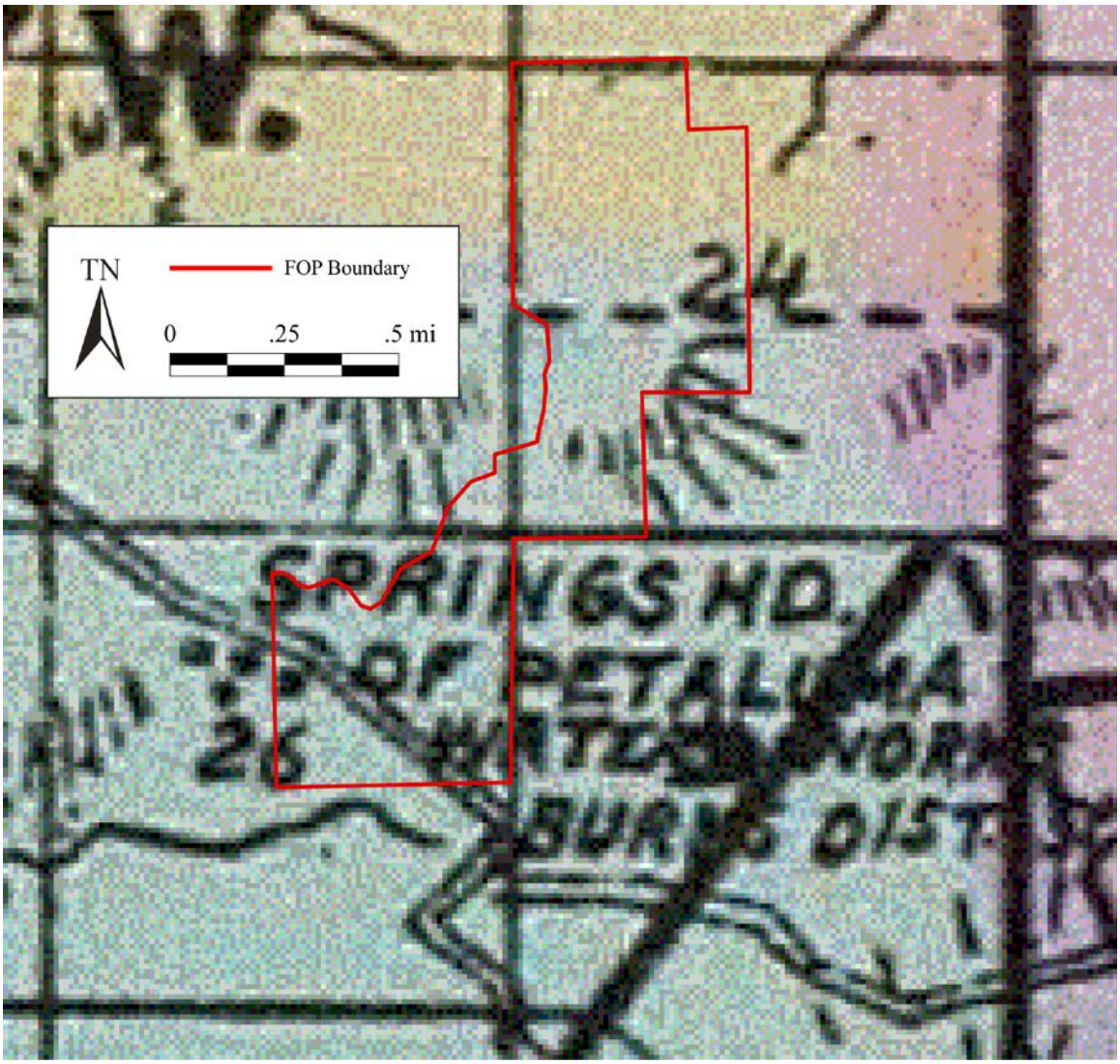


Figure 12: Reynolds and Proctor's (1898) map of Sonoma County

These historical maps are useful in revealing the location of cultural features on the landscape. Many of the features they depict were subsequently located during the archaeological fieldwork portion of this study.

OFFICE OF HISTORIC PRESERVATION FILES AND LITERATURE

The OHP's HPD and ADOE were reviewed to see if they listed any historic properties or archaeological resources that had been previously recorded at the FOP. As of April 5, 2012, these files contained no information about resources at the FOP (OHP

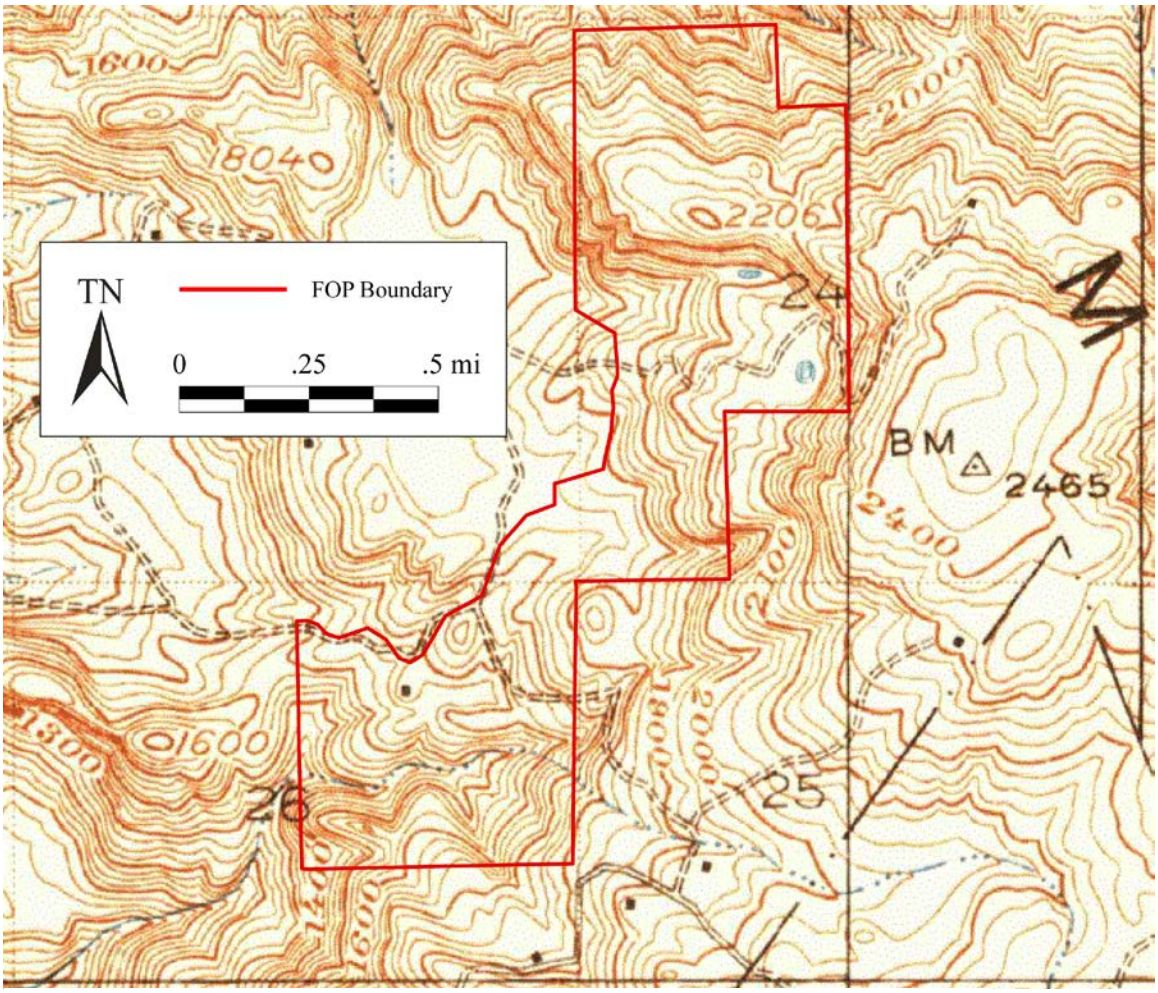


Figure 13: USGS *Santa Rosa* 1916 map

2012a; OHP 2012b). Additional literature reviewed included the California Department of Parks and Recreation's Inventory of Historical Resources (CA-DPR 1976), *Five Views: An Ethnic Historic Site Survey for California* (CA-DPR 1988), the California Historical Landmarks (CA-DPR 1990), the California Register of Historical Interest (CA-DPR 1992), and the OHP's California Register Of Historical Resources (CA-OHP-1998).

ARCHAEOLOGICAL FIELDWORK

Archaeological fieldwork was conducted during May, June, July and August of 2013, and June and July of 2014. The author was the primary surveyor, along with the help of Gilbert Browning III, Devon Jorgenson, and Whitney McClellan. Fieldwork

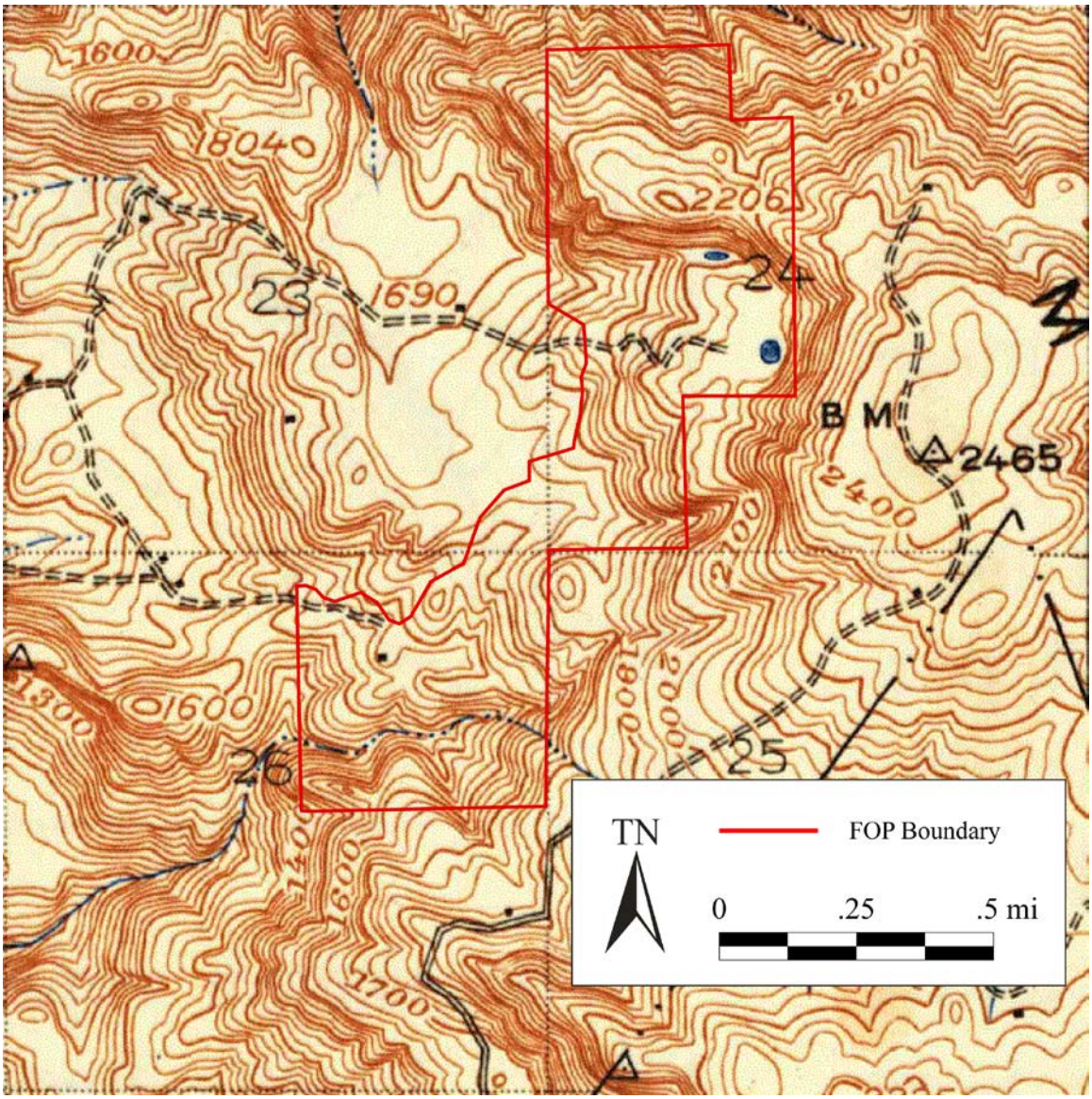


Figure 14: USGS *Santa Rosa* 1944 map

consisted of what White and King (2007:85-89) refer to as a non-exclusive, deployed survey with background research. A *non-exclusive survey* means

> No portion of the study area is excluded from inspection; survey coverage is "complete". Coverage may be complete at a number of different levels of intensity, however, and the level of intensity will naturally affect the probability of identifying all archaeological sites (King and White 2007:85).

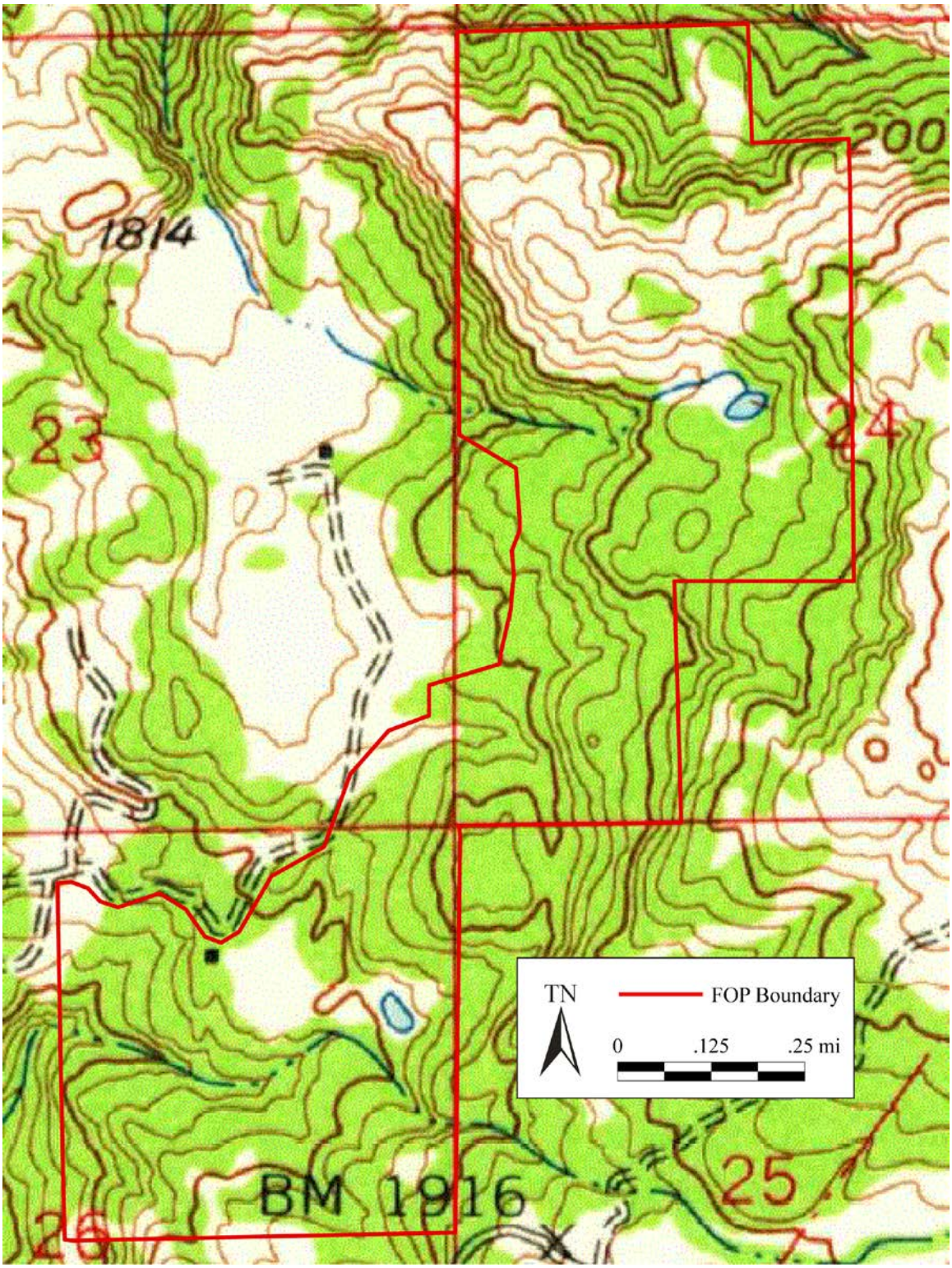


Figure 15: USGS *Santa Rosa* 1954 map

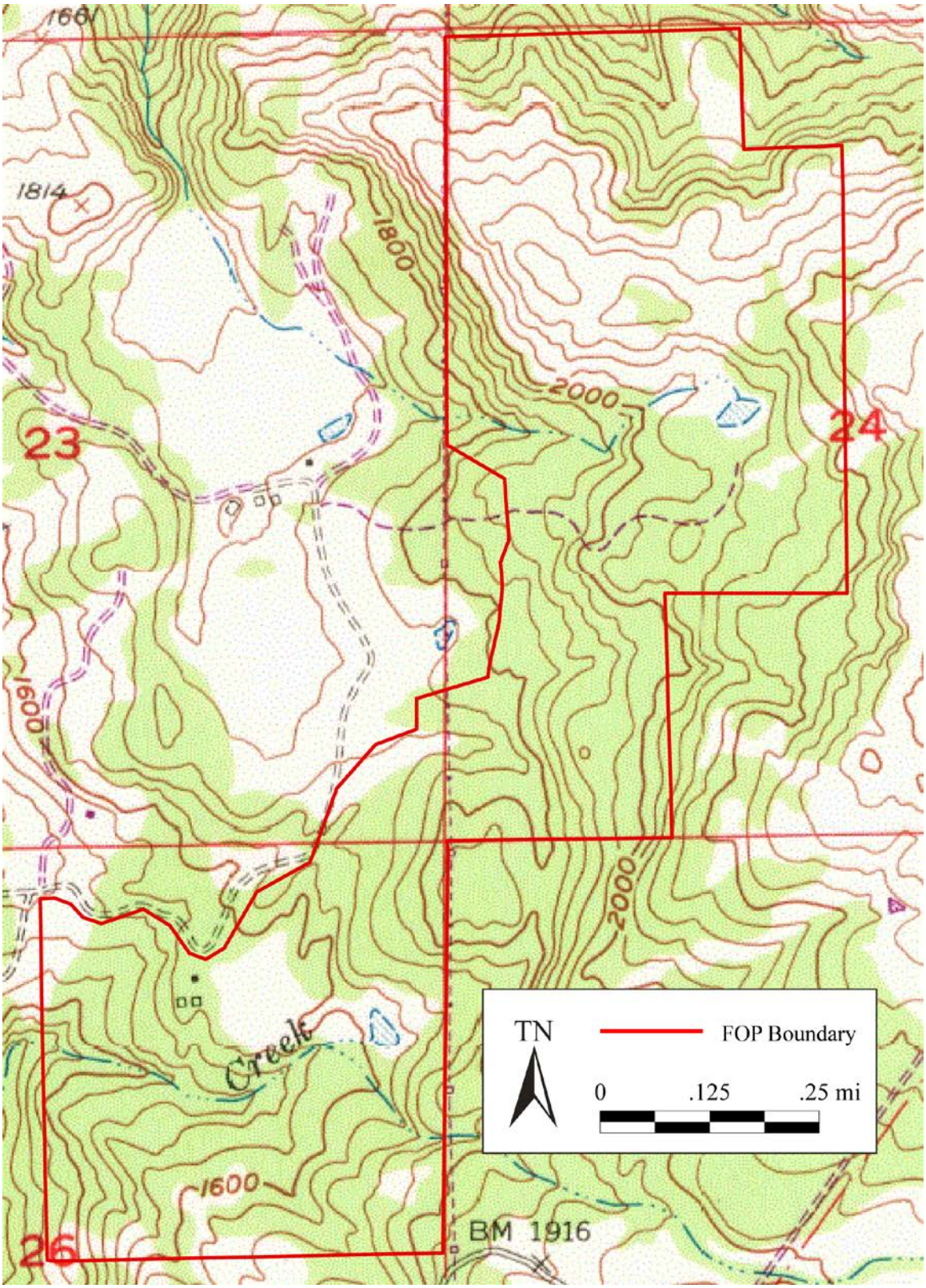


Figure 16: USGS *Glen Ellen* 1954 map

Deployed means that "field crew members are deployed over the landscape in accordance with some kind of plan to ensure essentially total inspection of the land surface," (King and White 2007:89). *Background research* merely refers to the fact that prior to fieldwork, the prehistory and history of the study area were researched.

The entire FOP was covered during fieldwork, constituting approximately 411-acres. *Transect surveying*, where "transects consist of parallel lanes, with crew members each walking a single lane, side by side across the landscape," was utilized during fieldwork (White and King 2007:101). Transects were generally oriented in the cardinal directions and often began at property line fences, trails, drainages, and other geographic features. In places where geographic features were lacking, GPS units were utilized. Coverage intensity was variable throughout the survey. In previously surveyed areas where there were known cultural resources, transects were closely spaced at 15 ft. to 30 ft. apart. In areas that were not previously surveyed, transects were more loosely spaced at 60 ft. to 75 ft. apart. In cases where cultural resources were discovered, transects were tightened to 5 to 10 m apart in order to reveal the full extent of the resource. Surface visibility was very poor (approximately 10%) and limited to existing trails, events of bioturbation (gopher holes, tree uprooting, etc.), drainage banks, and landside areas. When possible, these features were examined. To control for poor ground visibility, the ground was cleared of duff (fallen leaves and vegetation) at 10 to 15 m intervals in order to expose the surface.

This type of survey fits the criteria for what is described as an “intensive survey” by the California Office of Historic Preservation and the Secretary of the Interior’s *Standards and Guidelines for Archeology and Historic Preservation*: "Intensive surveys

go beyond the systematic identification and description of historical resources to encompass the evaluation of those properties within a historic context," (OHP 1995: Appendix 6).

Types of properties that may be at the Preserve include both Native American resources (stone artifacts such as projectile points, scrapers, bifaces, debitage, and hand stones, bedrock milling stations, midden, shell, bone, petroglyphs and pictographs, hearths, quarries, traditional cultural properties, etc.) and historic-era resources over 45 years old (foundations, landscaping, privies, wells, roads, dams, mines, machinery, fences, buildings, artifacts such as metal cans, glass bottles, and ceramic vessels, etc.). Single pieces of lithic debitage and single historic-era artifacts (bottles, cans, nails, etc.) were not recorded if no other artifacts were found in a 10 ft. radius. Formal prehistoric tools (projectile points, bifaces, pestles, etc.) were recorded as isolates when no other artifacts were found in a 3 m radius of them.

Recording methods for resources were based on OHP's *Instructions for Recording Historical Resources* (1995). Records were created on California Department of Parks and Recreation (DPR) forms. The records are located in Appendix B. A description of the resources appears in the results section of this chapter. The records include the precise location of the resources based on GPS coordinates. A statement on the significance and integrity of the resources is found in the initial California Register eligibility assessment section of this chapter.

RESULTS

Nineteen resources were located. Each site was recorded or the record updated. The records for these resources are in Appendix B. A summary of these resources follows.

Previously Recorded Resources

CA-SON-657 is a prehistoric site containing obsidian and chert debitage and tools, clamshell, and midden deposit. It measures approximately 50 m north-south by 100 m east-west. The southern portion of the site appears to be eroding downhill towards Copeland Creek. Several obsidian bifaces and the midsection of a serrated projectile point (arrowhead) were recorded.

CA-SON-2118H is a series of stone alignments, probably fences, constructed of unmortared and stacked basalt cobbles varying in shape and size. A total of three features were recorded. Feature 1 has two portions. Portion 1 is oriented east-west along the FOP property line and measures 250 ft. long (including gaps), 1 to 3 ft. wide, 1 to 3.5 ft. tall, and between 2 and 7 courses high. The western end appears to incorporate a large, naturally occurring basalt outcrop into the alignment. The outcrop also exhibits deep and straight cuts along its edges, and may have been partially quarried to construct the fence. Portion 2 is oriented north-south along the FOP property line and measures 240 ft. long, 1 to 2 ft. wide, 3.5 ft. tall, and 8 courses high. The southern part of Portion 2 intersects the eastern part of Portion 1 almost perpendicularly. Portion 2 continues north past the FOP boundaries for an unknown distance. Feature 2 is oriented east-west and measures 250 ft. long (including gaps), 1.5 to 3 ft. wide, 2 to 3.5 ft. tall, and between 4 and 7 courses high. Feature 3 is oriented northwest-southeast and measures 50 ft. long, 1.5 to 2.5 ft. wide, 2

ft. tall, and 3 courses high. Occasional redwood fence posts with cut nails were found along the alignments.

P-49-002804 is a historic-era complex located just within the south gate entrance of the FOP. The complex measures 420 ft. north-south by 390 ft. east-west. Landscape vegetation comprises poplar, apple, fig, persimmon, stone fruit, grape, and agave. The artifact concentrations consist of ceramics, bottles, and tin cans, all circa 1940s through 1960s. The burnt, collapsed building has a poured-in-place concrete pier, various charred lumber fragments and roofing materials, red-fired bricks, cast-iron plumbing fixtures, ceramic fragments, and cut nails. Doherty and Shultz (2000:2) describe the barn and studio vividly:

> Historic complex comprised of two standing buildings, which include an extensively rehabilitated turn-of-the-century, three bay barn consists of a central gabled bay flanked by shed roof units, with a central gate on a steel rail slider. It is mostly constructed of rough-sawn, full-dimensional lumber, possibly milled on-site or close by, fastened with wire nails. Barn extensively rehabilitated with some new bracing, stability beams, internal support posts, and battens. The battens have replaced and secured with wire finish nails. Collar tied to the rafters suggest that the central bay may have been used for feed/hay or equipment storage, however, the new stability beams would prevent this function today. Some original wood stock has been recycled to make a new door for the north bay. The south bay has been converted to residential quarters. The roof is corrugated sheet metal and is fastened to the original lath sheathing, which are secured to new and original rafters. The floor is mainly made from full-dimensional 2 x 12 inch planks. Concrete has been used to fill in places where the planks have deteriorated, and are dated "1989." The building rests on various foundations; on piers, rocs, and posts and piers. Presently, the barn is being used for the storage and maintenance of supplies and equipment for the Fairfield Osborn Preserve.
>
> The studio appears to be constructed after W.W. II and shows many phases and alterations, which have recycled full-dimensional lumber. The style is a mix of Arts and Crafts and Swedish Modern styles, suggesting circa 1960. However, staff at the Fairfield Osborn Preserve note that the studio was used as an artist's retreat/studio and was

> possibly constructed sometime in the 1940s. The building has a low pitch roof, originally covered with shake shingles, and has been re- roofed with corrugated sheet metal secured to oddly measured rafters (possibly reused lumber) lain directly on the original shake roof. It is sided in a narrow width, vertical board and batten siding. The building rests on a well-supported post and pier foundation.

Due to the accuracy, completeness, and relative recentness of the original record, and the unchanged condition of the resource based on the original record, P-49-002804 only received a record update. The studio building was built sometime after the Roths purchased the land, probably in the 1950s (Roth W 2013; Roth J 2013). The burnt down building was on the FOP before the Roths purchased the land (Roth W 2013; Roth J 2013). That house was originally located at CA-SON-2592/H. It was moved on tree trunk rollers across the marsh to P-49-002804 sometime before the Roths purchased the property. The Roths mentioned that the house was crooked, probably due to the relocation event (Roth W 2013; Roth J 2013). This burned down house is likely the building that appears on Thompson's 1877 map and possibly one of the houses on the Reynolds and Proctor 1898 map. It may have originally belonged to Russell. The 1916 USGS Santa Rosa topographic map shows the house in a different location, so the Elvick family probably moved it sometime before 1916. The house burned down sometime before 1961 or 1962 (Arnold J. to Lozier L., letter, 27 October 1993). The barn was also present on the property prior to the Roth's purchase (Roth J 2013; Roth W 2013). The site used to contain one additional barn, but it collapsed during a mass wasting event in 1986, the remains of which were cleaned up by SSU volunteers (Claudia Luke 2014, personal communication).

CA-SON-2592/H is a multicomponent site containing obsidian debitage, stacked stone fences, a wood capped spring, a small historic-era artifact concentration, a cleared house flat, and several non-native trees (eucalyptus, willow, and cypress). Feature 1 is an unmortared basalt stone fence, measuring 1.5 to 2 ft. wide, 2 to 4 ft. tall, 750 ft. long, and is oriented east-west. Feature 2 is an unmortared basalt stone fence, measuring 1.5 to 2.5 ft. wide, 2 to 4 ft. tall, 500 ft. long, and is oriented roughly north-south. Feature 3 is a natural spring capped with a wood box, measuring 4.5 ft. wide, 7.5 ft. long, and 3 ft. high. A historic-era artifact concentration is directly north of Feature 3, and consists of WIE ceramic fragments, colorless and blue glass bottle tops and fragments, and a stoneware teapot spout fragment. Feature 4 is a unmortared basalt stone fence, measuring 1.5 to 2 ft. wide, 2 to 4 ft. tall, and 150 ft. long. The house flat is likely the original location of the burnt down house that is now located at P-49-002804.

Newly Documented Resources

Eleven resources and four isolates were newly discovered and recorded. The temporary trinomial FOP-2013 were given to each of the resources. After the records are submitted to the NWIC, each resource will receive a formal designation.

FOP-2013-01 is a series of stone alignments, probably fences, constructed of unmortared and stacked basalt cobbles varying in shape and size. Most are along the FOP property boundaries. They are similar to the other rock alignments previously recorded at the FOP and within the 1-mile record search radius. Seven features were recorded. Feature 1 is oriented north-south along the western FOP property line and terminates at the cliff of Copeland Creek. It measures 840 ft. long, 1.5 to 3 ft. wide, 3 ft. tall, and between 1 and 6 courses high. Feature 2 is oriented north-south and bisects the Madrone

and Moving Mountain trails. It measures 380 ft. long, 1.5 to 3 ft. wide, 2.5 ft. tall, and 5 courses high. Feature 3 is oriented east-west along the southern FOP property line and measures 1,380 ft. long (including gaps), 1.5 to 3 ft. wide, 1.5 to 4.5 ft. tall, and 3 to 6 courses high. Feature 4 is oriented north-south along the southeast FOP property line and measures 2,680 ft. long, 1.5 to 3 ft. wide, 2.5 to 4 ft. tall, and 6 courses high. Feature 5 is oriented east-west along the FOP property line and measures 1,510 ft. long (including gaps), 1.5 to 2.5 ft. wide, 2 ft. to 4 ft. tall, and 3 to 6 courses high. Feature 6 is oriented southeast-northwest in the northeastern portion of the FOP and bisects Moving Mountain trail and Opal Alley. It measures 130 ft. long (including gap), 1.5 ft. to 2 ft. wide, 2 ft. tall, and 1 to 3 courses high. Occasional redwood fence posts with cut nails were found along the alignments. Feature 7 is oriented north-south along the northeastern property line. It measures 20 ft. long, 1.5 ft. wide, 3 ft. tall, and 6 courses high.

FOP-2013-02 is a road cut located in the central portion of the FOP and is oriented approximately east-west. The road continues to the east past the FOP property line. On the west, it appears to join up with Lichau Road, but this is not entirely clear. The 1877 Thompson Atlas depicts a road in the same general area; FOP-2013-02 is likely this 1877 road. It measures 1,620 ft. long, 6 to 8 ft. wide, and has two large berms at the southeastern portion, which measures 15 ft. from their tops.

FOP-2013-03 is an earthen-dam and pond with associated non-native vegetation. The pond is currently referred to as Turtle Pond and is located in southern portion of the FOP. The dam is oriented north-south and measures 150 ft. long, 8 ft. wide, and 20 ft. tall. The pond is also oriented north-south, measuring 150 ft. long and 50 ft. wide. The pond first appears on the 1954 USGS Santa Rosa 15’ topographic map, and so was likely

created sometime between 1944 and 1954. The non-native vegetation consists of blackberry brambles (*Rubus discolor*) and poplars (*Populus nigra*). It appears that it functioned for recreation and as a reservoir for livestock.

FOP-2013-04 is a dam located at the confluence of Copeland Creek and an unnamed, seasonal drainage. The system is constructed of concrete, although some quarried stone is also used. On the west side where the trail meets the resource, several concrete walls, approximately 4 ft. in height and 1 ft. thick, are built along the western and eastern banks of the drainage. The northern most wall connects to a large bedrock outcrop on its northern end, which appears to have been quarried for some of the stone used in constructing the system. The floodgate has been removed from the central wall. A series of three steps allowing for access to the large bank between Copeland Creek and the seasonal drainage is located on the eastern side. Dry-stacked stone and poured concrete is located around and at the base of the floodgate. Several of the concrete walls have ferrous metal fixtures embedded into them. It was built as a swimming hole for the Roth family during the 1950s (J. Roth 2013). During the summer, the floodgate would be in place, allowing the cement containment system to fill up with water for swimming. During the winter, the floodgate was removed, allowing for the drainage to feed into Copeland Creek.

FOP-2013-05 is a redwood trough, measuring 4.5 ft. in length north-south and 2 ft. in width east-west with a height of 1.5 ft. The lumber appears to be full dimension and consists of 2 in. by 10 in. planks cut and assembled into a rectangular shape using cut nails. A long, heavily rusted metal pipe, measuring 1.5 in. in diameter, runs in several segments from a drainage and natural spring located outside the FOP property boundaries

to the east. It measures over 40 ft. in length. Another metal pipe with a threaded end runs up from the ground and into the trough on its northern side. The trough is covered in thick moss and/or lichen. This resource may be associated with several other resources nearby, including a historic-era road cut (FOP-2013-08), a collapsed structure (FOP-2013-09), and an earthen dam and pond (FOP-2013-06). The 1916 USGS Santa Rosa topographic quadrangle map indicates a dirt road, most likely FOP-2013-08, running through the area. The resource is likely associated with historic-era homesteading and/or cattle ranching activities during the late 19th century and early 20th century.

FOP-2013-06 is an earthen dam and pond. The dam is located on the northwestern end of the pond. The dam is oriented northeast-southwest and measures 200 ft. long, with a 30 ft. width at its base and a 15 ft. width at its top. Along the northern end of the dam is an overflow drainage that runs downslope and west from the dam/pond and outside the western FOP boundaries. An FOP trail runs along the top of the dam. The pond, known as Kelly Pond, measures approximately 300 ft. northeast-southwest by 150 ft. northwest-southeast. Its depth is unknown. The pond is fed by two natural drainages located to its northeast and southeast. The remains of a wooden gate, constructed with metal hinges and wire nails, is located immediately south of the pond. A semi-buried piece of riveted metal equipment, possibly a water heater, is located 50 ft. west of the south end of the dam. The pond appears on the 1916 USGS Santa Rosa 15’ topographic map. It is unclear if the pond existed before the dam or if the dam was entirely responsible for creating the pond.

FOP-2013-07 is a large flat, known as "The Marsh." It measures approximately 400 ft. north-south by 500 ft. east-west. It is cut into the hillside and has stacked stone

along its southern and eastern edges where the trails run. Other than this, there is no evidence of human modification. An earthquake along the Rodgers Creek Fault created the landform (SSU Preserves 2014a). It functioned as a cattle pond during the historic-era, and was later used by the Roths for recreation (Rank 2013:3). A partially or fully submerged rowboat is alleged to be somewhere in the marsh, but this was not located.

FOP-2013-08 is a dirt road cut. A segment of it known as “Opal Alley” is currently used a hiking trail at the FOP. It begins at the western edge of the FOP property line and runs upslope to the east before cutting northwest and out of the eastern FOP property line. This segment is approximately 2,800 ft. in length. The second segment splits from the first near where Opal Alley and the Moving Mt. Trail meet. It runs south for approximately 420 ft. and continues outside the FOP property line. Both segments are approximately 8 to 10 ft. wide. The first segment appears on the 1916 Santa Rosa 15’ topographic map. Due to its age and steepness, it is likely that horses, cattle, and/or wagons, not automobiles, originally used the first segment. Although similar in appearance, the second segment does not appear on any maps and so its approximate age cannot be determined. The resource may be associated with a historic-era dam and pond (FOP-2013-06), a collapsed structure (FOP-2013-09), a series of stone fences (FOP-2013-01) and a trough (FOP-2013-05), all located nearby on the eastern end of Segment 1. Two isolated punch key metal cans and a small metal wire and picket fence were noted near Segment 2.

FOP-2013-09 is the remains of a collapsed structure or building. A large, corrugated metal sheet, measuring 2 ft. by 7 ft. and containing a circular hole is located just east of a second sheet that measures 6 ft. by 6 ft. Various smaller metal sheets are

used as patches and tacked between the second sheet. These sheets were probably used as the siding or roof for the structure. Nothing was found underneath the corrugated sheet. Located around the second sheet are various pieces of milled lumber. The milled wood concentration extends 6 ft. to the west of the sheet, 8 ft. to the north, 7 ft. to the east, and 3 ft. to the south. The lumber contains cut nails and is full dimension. Several wood planks appear to be embedded in the ground and may have functioned as a floor. Some wire nails are also present. There are also some metal hinges on the wood. Just south of the collapsed structure is rectangular stone foundation, measuring approximately 10 ft. by 8 ft. with 1-2 courses. Several resources are located nearby (FOP-2013-05, FOP-2013-06, FOP-2013-08, and FOP-2013-09) and may be associated with this resource. A more modern barbed wire fence is located just east of the resource and is oriented north-south.

FOP-2013-10 is a large flat measuring approximately 200 ft. north-south by 200 ft. east-west. On its east side there is a one to two course linear stone feature embedded in the ground. On the south and west sides there is a stacked stone fence, 6 courses in height, 3 ft. tall, 1.5 ft. wide, running for less than 50 ft. On the west and north sides, there is a linear alignment of bay trees along the edge of a knoll. In the northwestern corner, there is a pile of milled wood. This resource seems to be the riding ring that the Roths built and used during their stay at the property (Lozier 2013).

FOP-2013-11 is a collapsed wooden platform, possibly a stage. It measures approximately 20 ft. north-south by 20 ft. east-west, and is constructed of standard dimension lumber and plywood. It contains galvanized wire nails, bolts, and other joinery. It appears to be more modern than the other resources at the FOP.

FOP-ISO-01 is an obsidian biface tool. It is located at the confluence of a drainage and a trail in the northwestern portion of the Preserve. No other prehistoric artifacts were located in the surrounding area.

FOP-ISO-02 is the proximal end of an obsidian projectile point with a concave base. It is located along a trail in the northeastern portion of the FOP. No other artifacts were located in the surrounding area. Using Fredrickson's "Artifact Sequence for the Santa Rosa Locality," this tool is associated with the Middle and Late Archaic Periods (Fredrickson 1974; see Figure 10).

FOP-ISO-03 is a bronze plaque on a boulder located along the Creek Trail. The plaque commemorates the original dedication of the FOP property to TNC in the 1970s.

FOP-ISO-04 is a short segment of wrought iron pipe sticking out from a hill located along Larkspur Trail. It measures 7 in. in diameter, is oriented north-south, and is riveted. Based on its size, form, and orientation, the pipe appears to be a segment of the Petaluma Water Company's (later the Sonoma County Water Company) water conveyance system, which brought drinking water to the City of Petaluma from Copeland Creek beginning in 1871 (Sommer 2010). This claim is also supported by the historic-era maps, which refer to the head of the Petaluma Water Works being present on the property.

INITIAL CALIFORNIA REGISTER ELIGIBILITY ASSESSMENT

The California Register of Historical Resources (CRHR) closely mirrors the National Register of Historic Places (NRHP) and was established as

> … an authoritative guide in California to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to extent

> prudent and feasible, from substantial adverse change (PRC Section 5024.1[a]).

The State Historical Resources Commission (SHRC), a group of nine individuals selected by the Governor of California, oversees the CR (PRC Section 5020.2[a]; Section 5024.1[a]). Five of these individuals are professionals of "history, prehistoric archaeology, historic archaeology, architectural history, and architecture,"(PRC Section 5020.2[b]). Two are required to be knowledgeable about ethnic history and folklife, respectively, and the remaining two "represent the public," (PRC Sections 5024.2 through 5024.4).

The SHRC has many responsibilities, including the development of procedures to determine whether or not a historical resource is significant and meets any of four criteria requirements (PRC Section 5024.1[b]). A "historical resource" is defined as

> … 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, social, political, military, or cultural annals of California (PRC Section 5020.1[j].

The four criteria requirements for a historical resource can be found in Chapter I (p. 6).

The California OHP has developed a series of technical assistance bulletins regarding the CRHR, NRHP, historic preservation, and laws (OHP 2013b). Bulletin #3 states

> In addition to having significance, resources must have integrity for the period of significance. The period of significance is the date or span of time within which significant events transpired, or significant individuals made their important contributions. Integrity is the authenticity of a historical resource's physical identity as evidenced by the survival of characteristics or historic fabric that existed during the resource's period of significance. Alterations to a resource or changes in its use over time may

> have historical, cultural, or architectural significance. Simply, resources must retain enough of their historic character or appearance to be recognized as historical resources and to convey the reasons for their significance. A resource that has lost its historic character or appearance may still have sufficient integrity for the California register if, under criterion 4, it maintains the potential to yield significant scientific or historical information or specific data (OHP 2002:3).

Bulletin #1 sums up the seven kinds of integrity: "location, design, setting, materials, workmanship, feeling, and association," (OHP 2001:28). When determining the eligibility of a historical resource for inclusion in the CRHR, the resource's integrity "must also be judged with reference to the particular criteria under which a resource is proposed for eligibility," (14 CCR Section 4852[c]).

This evaluation considers each of the 15 resources on the FOP property, including those documented previously and those documented as a result of this study, individually. That is, each resource receives its own evaluation. As mentioned in the previous chapter, these resources also contribute to and exemplify the history and prehistory of the landscape, within and beyond the boundaries of the FOP. According to Caltrans' "General Guidelines for Identifying and Evaluating Historic Landscapes," resources that are recorded as sites "could be individual components of a landscape," (1999:6). For this CRMP, resources were recorded individually, but together they form larger cultural landscapes.

Archaeological sites, including midden deposits, quarries, lithic artifact concentrations, bedrock milling stations, and burial places, characterize the prehistoric landscape of the FOP and beyond. Other tangible resources associated with the prehistoric landscape involve areas of culturally significant native vegetation (such as basket making materials), places where Native Americans may have gathered these

resources. It is difficult to determine these gathering sites, but it is reasonable to assume that they occur in places nearby archaeological sites. Other, less tangible contributors to the prehistoric landscape include sacred places. A sacred place may be associated with a geographic feature, such as Sonoma Mountain, but without relevant ethnographic data or oral traditions, finding these locations is problematic.

Resources associated with the homestead and ranching periods characterize the historic-era landscape in and around the FOP. These early resources, the stone fences, roads, houses, dams and reservoirs, and non-native vegetation represent some of the earliest Euro-American history in Sonoma County.

In essence, the prehistoric and historic-era resources of the FOP function as elements that contribute to the Property as a cultural landscape. Individually, they possess characteristics that qualify them as eligible to the CRHR. The following evaluation considers these resources individually, but also recognizes their contribution to the whole cultural landscape.

Similarly, these resources possess value beyond what the four criteria requirements for the CRHR symbolize. The prior chapter highlights some of these values using the concepts of cultural heritage and public education and interpretation. Although the resources at the FOP are used to teach the public about cultural heritage, the potential ability for a resource to be used for public education is not currently recognized by the criteria. The following evaluation will not consider these additional concepts for this reason.

This section serves only as an initial CRHR eligibility assessment. Only a professional trained and educated in the field of expertise most directly associated with

the resource in question should carry out the eligibility assessment for that resource. For instance, a professional architect and/or architectural historian should evaluate architectural resources, a prehistoric archaeologist should evaluate prehistoric resources, a historical archaeologist should evaluate historic-era resources, and so forth.

What follows is a breakdown of the four criteria considerations, as well as seven kinds of integrity, for each resource at the FOP. A summary table for this initial evaluation of the resources is included at the end (Table 1).

CA-SON-657

CA-SON-657 is a prehistoric site containing lithic artifacts, ground stone, midden and clamshell. It appears to be eligible under Criterion 4. The site contains artifacts which can be dated and sourced, and therefore may be likely to produce significant information about prehistory. There are a number of technical methods that may be utilized, including hydration and radiocarbon dating, x-ray fluorescence (XRF) testing, flotation, faunal, pollen and isotype analysis. These methods may yield evidence with profound implications for material conveyance and occupation periods. The types of artifacts are also important. Sinew-backed bow technology is a relatively recent occurrence prehistorically, and so the presence of arrow points at CA-SON-657 suggests the site was occupied later in time. Stone milling technology, clamshell disc beads, and burial patterns, are also significant.

If local Native Americans consider Sonoma Mountain a traditional cultural property, then CA-SON-657 may also be significant under Criterion 1. This should only be determined with Native American collaboration and participation. CA-SON-657, as an individual component of a larger prehistoric landscape, which includes CA-SON-97, CA-

SON-101, CA-SON-102 and CA-SON-105, is also significant under Criterion 1. This site, like many of the other prehistoric sites around the FOP, is associated with the prehistoric period and Native Americans, both of which have a momentous influence in Sonoma County and California history prior to European contact.

Establishing a period of significance for prehistoric sites is problematic. With a preponderance of absolute dating results and well-defined strata, it is possible to devise accurate periods of occupation. In this instance, an intensive surface survey revealed artifacts that suggest a later period of occupation. It is feasible that subsurface deposits exist, and if so, they may include older materials. Therefore the period of significance for CA-SON-657 is very broad, from 10,000 YBP to 200 YBP.

The site appears to retain integrity of location, as it has not been moved, although it is eroding along the north and south sides. The site likely once had some intentional design, and the midden deposit only appears in the south of the site. The site looks to maintain integrity of setting with large landforms and native vegetation in the view shed, but modern elements (power poles, trails, non-native vegetation and a dam) do surround the site. Materials present at the site (lithic artifacts, clam shell, midden) have not been recreated or replaced. According to Lozier (2012), the Roths collected some of these artifacts. A high quality of workmanship is evident in the few formal tools at the site. Feeling and association are challenging to measure. Seeing the site and artifacts inspires a feeling of antiquity and reverence. There is an unmistakable association between the site and the earlier Native Americans who made it. CA-SON-657 appears eligible for the CRHR.

CA-SON-2118H

CA-SON-2118H is a series of stacked stone fences. It appears to be eligible under Criteria 1 and 3. Stacked stone fences are often associated with homesteading (Tuolumne County Historical Society 2013; Oakdale Cowboy Museum 2007:5-9). They qualified as homestead improvements and were used towards obtaining the Homestead patent (Homestead Act of 1862). Sometimes they mark the exact boundaries of the original homestead, allocated using PLSS. Designed by Thomas Jefferson, the PLSS is a quintessential American product associated with the Revolutionary War and American westward expansion (US Department of the Interior 2013). Theses stone fences are important because of their association with some of the earliest homesteading and settlement activities in Sonoma County, but also a broader, older American history. They contribute as individual components to the overall homesteading landscape of Sonoma County and California, as do CA-SON-1032H, CA-SON-1482H, CA-SON-1483H, CA-SON-1560H, CA-SON-1564H, and CA-SON-2489H, the other previously documented stone fences in a 1-mile radius of the FOP. CA-SON-2118H represents some of the earliest historic-era occupation in the area. These fences, when considered together, are a testament to the tenacity of the original Euro-American settlers in the area, and for these reasons they appear to be eligible under Criterion 1. As for Criterion 3, the significance of these fences is drawn from their distinctive type and characteristics: dry laid and stacked stone, varying in height and width, with redwood posts and metal string. Seemingly simple, the construction of these fences, miles in length and intermittently on steep slopes, was an exhausting task. Their extensive existence throughout many counties in California, and the US, contributes to a total historic-era landscape.

The period of significance for historic-era features tends to be more refined than for prehistoric sites. These fences are ascribed to a "homesteading period" in and around Sonoma County (see Chapter III). Homestead patents were usually filed five years after improving and living on the land; the land patents of Burns and Russell were both signed in 1871, placing them on the property around 1866. For the FOP, the homesteading period spans the 1862, the year of the original Homestead Act, to 1871, the year Burns and Russell received their patents.

These fences retain integrity in each of the seven elements. They have not been moved; many are on the original section and aliquot lines of the PLSS. Their design has not changed, although some of the fences have collapsed. The setting has become heavily overgrown in some places, and modern features are apparent. The fence materials are all original, but most of the redwood fence posts have collapsed or disintegrated completely. The regional uniformity of these fences and their simple but pragmatic technology demonstrate integrity of workmanship. There is a strong association between these fences and the original homesteaders given their geospatial relation to the PLSS. Knowing the history of these fences, seeing them and walking their lengths, they instill a feeling of appreciation, curiosity, and even some envy of the lives of these early homesteaders. CA-SON-2118H appears to be eligible for the CRHR.

P-49-002804

P-49-002804 is a historic-era residential and ranch complex. It appears to be eligible under Criteria 1, 3, and 4. The oldest component of the site, the collapsed and burnt house, appears on the 1877 Historical Atlas in its original location at CA-SON-2592/H (Thompson 1877). This may have been the homestead house of Russell and later

was the home of the Elvicks. The second oldest component, the barn, was probably built in the late 19th or early 20th century. Based on the observations of Doherty and Shultz (2000:2) and the oral history records, it is probably associated with later livestock ranching, agricultural activities, and storage. Ranching and agriculture actually preceded the American period, as early Mexican-Californio settlers were ranching and farming in Sonoma County prior to the Treaty of Guadalupe Hidalgo in 1848. The period of significance for the site spans the late 19th century until the mid 20 century, when the Roths purchased the property. This residential complex site, similar to CA-SON-1032H, CA-SON-1172/H, CA-SON-1482H, CA-SON-1483H, CA-SON-1562H, CA-SON-1563H, and P-49-004503, contributes to the landscape of the early ranching period in Sonoma County, and therefore appears to be eligible under Criterion 1.

Under Criterion 3, the barn and still standing house both exhibit distinct construction characteristics. The house is described as a post-WWII (circa 1950s) Arts and Crafts and Swedish Modern style mix. The house and most of the landscaping are associated with the Roth period. The three-bay and central gabled barn style occurs elsewhere in Sonoma County. For Criterion 4, the site likely contains an abundance of data in the forms of foundations, privies, and artifacts like cans, bottles, ceramics, nails, coins, and toys. For P-49-002804, these deposits may contain materials that once belonged to Russell, the Duersons, the Elvicks, and the Roths. These types of sites, in combination with documentary evidence, are important because they provide archaeologists with information about historic-era economic strategies, rural planning and geography.

P-49-002804 maintains integrity of location, except for the burnt house, which was moved from its original location at CA-SON-2592/H. Integrity of design is also still intact, with some modifications to the barn since its original construction. The setting has changed somewhat, becoming heavily overgrown and with some erosion and landslides along Copeland Creek. Original materials were replaced at the barn in order to build new bracing, stability beams, internal support posts, battens, and concrete. Workmanship is still exemplified in the original parts of the barn and standing house, as well as the landscaping around the buildings. There is a strong association between the burnt house and the Duerson and Roth family members who still live near the property. The standing studio house is directly associated with the Roths, but it is unclear with whom the barn is associated. The Roth family still feels very attached to this place, where they spent many of their summers together. P-49-002804 appears to be eligible for the CRHR.

CA-SON-2592/H

CA-SON-2592/H contains prehistoric lithic artifacts and several historic-era components, including rock fences, a house pad, a modified spring box, non-native vegetation, and artifacts. The site appears to be eligible under Criteria 1, 3, and 4, for many of the same reasons as CA-SON-657, CA-SON-2118H, and P-49-002804. Taken together, they make up and are associated with the early homesteading and ranching period and landscape of Sonoma County, and are therefore eligible under Criterion 1. CA-SON-2592/H maintains some integrity of location; the house was moved to P-49-002804 during the period of significance. The design of the fences and spring box has changed little. The resource has retained good integrity of setting: some modern elements are in proximity to the site. None of the materials have been replaced and therefore it

retains integrity of materials. Workmanship is exhibited in the fences and spring box. The site is likely associated with both Russell and the Elvick family. The site has retained integrity of feeling to a minor degree due to the absence of the house. CA-SON-2592/H appears to be eligible for the CRHR.

FOP-2013-01

Under the same justifications as CA-SON-2118H, FOP-2013-01 appears to be eligible under Criteria 1 and 3, and retains similar levels of integrity. These stone fences help to form the early homestead landscape of Sonoma County, and are consequently eligible under Criterion 1. The position of the fences coincides with the original Homestead boundaries, thereby retaining integrity of location. They are in their original form and plan, and so integrity of design is maintained. The resource retains much of its integrity of setting, despite some more modern developments at the FOP. Many of the original wooden fence posts are missing, and so the resource partially retains its integrity of materials. Integrity of workmanship is retained through the long lengths and broad distribution of these fences over the landscape. The resource evokes a sense of early settlement and homesteading, and therefore retains integrity of feeling. The fences are directly linked to the settlement and homesteading of the property and maintain integrity of association. FOP-2013-01 appears to be eligible for the CRHR.

FOP-2013-02

FOP-2013-02 is a historic-era road cut. The resource appears to be eligible under Criterion 1. This road first appeared on the Thompson 1877 map, and was likely built sometime before this during the homestead period. It is no longer in use as an extension of Lichau Road, and originally led past CA-SON-2592/H towards the east. This road

allowed for transportation of goods, livestock, and people between homesteads and more populated towns like Santa Rosa, Cotati, and Petaluma. These roads help form the historic-era landscape of the homestead and ranching periods in Sonoma County, and appear eligible under Criterion 1.

FOP-2013-02 possesses integrity of location, as it has not been moved. The design is altered, as portions of the road are now active trails, and other portions are no longer in use and difficult to discern. The setting is overgrown and runs past some more modern features. Materials have not been changed. Workmanship is demonstrated in the more obvious hillside cuts but is mostly absent. Feeling is mostly lacking, but association with the homestead period, Russell and CA-SON-2592/H is clear. FOP-2013-02 appears to be eligible for the CRHR under Criterion 1.

FOP-2013-03

FOP-2013-03 is an earthen dam and pond. It appears to be eligible under Criterion 1 because of its association with the ranching period of significance. It was likely constructed sometime before 1954, as it is depicted on the Santa Rosa 1954 topographic map, but not the 1944 edition. Rank (2013:2) mentions it once functioned as a cattle pond, and the Roth family used it for recreation in the 1950s and 1960s. These dams and reservoirs contribute to the ranching period landscape in Sonoma County, and are therefore eligible under Criterion 1.

The resource retains integrity of location, as it is still in its original place of construction. The dam and pier are still functional and maintain integrity of design. The site has retained partial integrity of setting due to the modern power lines running nearby. Integrity of materials is maintained because the dam has not been modified or

rehabilitated. It retains poor integrity of workmanship, feeling, and association, as it almost appears as a natural feature on the landscape and is no longer used for cattle or recreation. Given its association with the ranching period and its integrity, FOP-2013-03 appears to be eligible for the CRHR under Criterion 1.

FOP-2013-04

FOP-2013-04 is a cement and rock swimming hole associated with the Roths and constructed sometime in the 1950s or 1960s. The resource may become eligible under Criterion 2 due to its association with the Roth family and when sufficient time has passed. It retains integrity of location, as it has not been moved. It retains partial integrity of design because it is no longer functions as a swimming hole and it is missing its floodgate. The physical environment around the swimming hole has not been altered, and so it retains integrity of setting. The only materials missing from the swimming hole is the floodgate, so it partially retains integrity of materials. It exhibits both skill and labor in its construction, and so it retains decent integrity of workmanship. The resource inspires some sentiment of recreation, and therefore retains good integrity of feeling. There is a direct link between the swimming hole and the Roth family, so it does retain integrity of association. FOP-2013-04 does not appear to be eligible for the CRHR.

FOP-2013-05

FOP-2013-05 is a redwood trough and metal pipe. It appears to be eligible under Criterion 1 because of its association with the ranching period. Based on the full dimension lumber, cut nails, and metal piping, this trough is associated with the ranching period. Troughs are essential for raising livestock where water is scarce, and they contribute to the ranching landscape of Sonoma County. It maintains integrity of location

as it has not been moved. The resource retains partial integrity of design, as the metal pipes that once fed the trough water are heavily rusted and can no longer be used. The physical environment has changed little, and so the resource maintains integrity of setting. The resource retains excellent integrity of materials, as they appear to all be original and not replaced. No great labor or skill was involved in its construction, so it lacks integrity of workmanship. There is a direct association between the trough and the ranching period, and it rouses some sense of early ranching in Sonoma County. Therefore it retains both integrity of association and feeling. Given its association with the ranching period and its integrity, FOP-2013-05 appears to be eligible for the CRHR.

FOP-2013-06

FOP-2013-06 is an earthen dam and reservoir. It appears to be eligible under Criterion 1 due to its association with the ranching. The dam and reservoir were constructed between 1898 and 1916, and are associated with the ranching period. The reservoir likely functioned as a water source for livestock. At some point, fish were introduced to the reservoir. During the 1950s and 1960s, the Roth family used the reservoir for recreation. Like FOP-2013-04, these reservoirs make up the ranching landscape of Sonoma County, and are eligible under Criterion 1. It possesses integrity of location, as it has never been moved from its original position. It retains integrity of design, as its form and structure have not been altered. The physical environment surrounding the resource has some more modern features that do not relate to the period of significance, so the resource retains good integrity of setting. The materials are all original, so the resource retains integrity of materials. Integrity of workmanship is exhibited in the labor it would have taken to construct this dam before the advent and

proliferation of tractors. The reservoir is associated with the ranching period, and retains integrity of association. Seeing the resource stirs a personal feeling of the ranching period, so it retains integrity of feeling. FOP-2013-06 appears to be eligible for the CRHR based on its association with the ranching period and its integrity.

FOP-2013-07

FOP-2013-07 is a large marshy depression with cuts and stacked stones on its south and east sides. It once functioned as a cattle pond during the ranching period, and during the 1950s and 1960s the Roth family used it for recreation. It appears to be eligible under Criterion 1 for its association with the ranching period. Similar to FOP-2013-04 and FOP-2013-06, this reservoir exemplifies the ranching period landscape by displaying how ranchers fed and watered their livestock. Due to its association with the ranching landscape in Sonoma County, it appears eligible under Criterion 1. It maintains integrity of location, as it has not been moved. It partially retains integrity of design, as it appears to have been modified for modern trails along its south and east sides. Integrity of setting is retained somewhat, given the addition of modern features surrounding the resource. There is little change to the original materials, and so it retains integrity of materials. It retains little integrity of workmanship because there is little evidence of specialized labor or skill involved in its construction. The resource retains little integrity of feeling, as it now appears to be an almost natural marsh. Integrity of association is retained through its connection with the ranching period as a cattle pond. Given these factors, FOP-2013-07 appears to be eligible for the CRHR under Criterion 1.

FOP-2013-08

FOP-2013-08 is a historic-era road cut, and it appears to be eligible under Criterion 1 for similar reasons as FOP-2013-02. The road cut appears on the Santa Rosa 1916 (USGS 1916) map, and is associated with the ranching period. Like FOP-2013-02, these roads characterize early ranching period landscape by showing how ranchers and livestock traveled from place to place. Due to its association with the ranching landscape, is appears eligible under Criterion1. It retains integrity of location, as it has not been moved. It partially retains integrity of design, as sections of it are nearly indistinct and could no longer be used as a road. Integrity of setting is mostly retained, with some more modern elements in the surrounding environment. The materials have not been replaced, so it retains integrity of materials. Integrity of workmanship is partially present, as the resource exhibits some artistic skill and labor. Integrity of feeling is also lacking, as it does not arouse a feeling of the ranching period. The resource does maintain integrity of association given its connection with the ranching period, evident by the historical maps. Given these factors, the FOP-2013-08 appears to be eligible for the CRHR.

FOP-2013-09

FOP-2013-09 is the remains of a collapsed structure or building. Its original function is unclear. It appears to be eligible under Criteria 1 and 4 because of its probable association with the ranching period and the possibility of the site containing additional important information. The site is likely associated with FOP-2013-05, FOP-2013-06, and FOP-2013-08 given their proximity, and helps contribute to the overarching ranching landscape of the area by exhibiting how ranchers used the land. The site maintains partial integrity of location and design, as the corrugated roof is several dozen feet east of the

foundation and the structure/building has completely collapsed. The physical environment around the resource has changed little, and so the resource retains integrity of setting. The materials are all original, so the resource maintains integrity of materials. The resource retains some integrity of workmanship, as it exhibits some artistic skill and labor. Integrity of feeling is mostly absent, as the resource does not evoke a sense of early ranching in Sonoma County. Integrity of association is maintained through its proximity to the other ranching period resources. For these reasons, FOP-2013-09 appears eligible for the CRHR.

FOP-2013-10

FOP-2013-10 is the remains of a horse-riding ring, constructed and used by the Roths in the 1950s and 1960s. The resource may become eligible under Criterion 2 due to its association with the Roth family and when sufficient time has passed. This resource contributes to the Roth family's mark on the landscape, along with FOP-2013-04 and P-49-002804. It maintains integrity of location, as it has not been moved. The resource retains integrity of design, as the perimeter of the ring is still visible in the linear stone fence and bay tree features. Some more modern features are visible in the surrounding environment, so the resource partially retains integrity of setting. None of the materials have been replaced, so the ring retains integrity of materials. There is some skill and labor involved in the ring's construction, and so the resource partially retains integrity of workmanship. The resource does not induce a great sense of equestrianism, and so it does not retain integrity of feeling. It retains good integrity of association, as it is directly associated with the Roth family. FOP-2013-10 does not appear to be eligible for the CRHR at this time.

FOP-2013-11

FOP-2013-11 is the remains of a collapsed platform or stage. As its function is unknown, it does not appear to be eligible under any of the criteria. Given the type of materials it is made of, it was likely constructed during or after the 1950s and 1960s. It does not appear to have been moved, and so it retains integrity of location. It is unclear what it was designed for, and so the resource only partially retains integrity of design. The physical environment around the structure has not changed, so the structure retains integrity of setting. The materials used for the structure have not been replaced, and so the platform retains integrity of materials. The platform appears to have been built by a skilled carpenter, and so it retains integrity of workmanship. The structure does not retain integrity of feeling or association, as the purpose of the structure is unclear. FOP-2013-11 does not appear to be eligible for the CRHR.

Table 1. Initial California Register Eligibility Assessment for Resources in the FOP

Resource Designation	Resource Type	CR Eligibility
CA-SON-657	Prehistoric lithic artifact concentration and midden	Appears to be eligible
CA-SON-2118H	Stone fences	Appears to be eligible
P-49-002804	Houses, barn, artifact concentrations, landscaping	Appears to be eligible
CA-SON-2592/H	Spring box, house pad, historic-era and prehistoric lithic concentration, stone fences, non-native vegetation	Appears to be eligible
FOP-2013-01	Stone fences	Appears to be eligible
FOP-2013-02	Road cut	Appears to be eligible
FOP-2013-03	Dam and reservoir	Appears to be eligible
FOP-2013-04	Swimming hole	May be eligible in future

FOP-2013-05	Trough	Appears to be eligible
FOP-2013-06	Dam and reservoir	Appears to be eligible
FOP-2013-07	Modified marsh	Appears to be eligible
FOP-2013-08	Road cut	Appears to be eligible
FOP-2013-09	Foundation and collapsed structure	Appears to be eligible
FOP-2013-10	Horse riding ring	May be eligible in future
FOP-2013-11	Collapsed platform	May be eligible in future

CHAPTER VII: CULTURAL RESOURCES MANAGEMENT PLAN

INTRODUCTION

The final chapter of this thesis is dedicated to the cultural resources management plan (CRMP) developed for the FOP (for explanation of a CRMP, see Chapter I). The first section reviews past, present, and future development at the FOP. As CRM is largely activity driven, it is prudent to identify these activities, as well as their impacts, which will be addressed in the second section. This is followed by a series of recommendations to FOP personnel, founded on current laws, regulations, and professional ethics. This thesis will end with suggestions for future research and overall conclusions drawn from the study.

FOP INFRASTRUCTURE

There has been little development at the FOP since its birth in the early 1970s. Below is a list of existing FOP infrastructure with a brief description for each feature.

- The Marjorie Osborn Education and Research Center (MOERC): this 2,100 square feet building is located in the central portion of the Preserve, near the north entrance gate and parking lot. It holds two classrooms, restrooms, a kitchen, and living space for FOP staff.
- Barn, studio and utility shed: at the southern entrance to the Preserve is a renovated barn that stores FOP hardware and general equipment. Near the barn is a studio that is currently unoccupied. At the main entrance parking lot is a small, modern utility shed that houses some equipment and a power generator for the facilities.

- Wooden bridges: the largest footbridge is located near the northern entrance parking lot and connects the lot to the MOERC. Smaller simple footbridges are located at places where the trails cross drainages.
- Parking areas and roads: the main parking area is just beyond the northern entrance gate, with a short segment of gravel road running between the parking area and Lichau Road. A smaller parking area is located just beyond the southern entrance gate, but this area is used infrequently and mostly by FOP personnel. A short road links the parking area to the barn and studio. A portion of Moving Mt. Trail doubles as a fire road.
- Weather station and sensor network: current components of the network are located just northeast of the main parking lot. They include a weather station, transmission tower, solar panels, and batteries. Data from the transmission tower are transmitted wirelessly to an antenna located at the MOERC.
- Solar panel bank: these are located just north of the parking lot and provide power to the FOP facilities.
- Trails: the current trail system includes 13 named paths (Ridge Loop Trail, Opal Alley, Madrone Trail, Moving Mountain Trail, Skink Alley, Woodland Trail, Marsh Trail, Meadow Trail, Creek Trail, Douglas Fir Trail, Chaparral Trail, Fescue Trail, and Larkspur Trail) that run for more than six miles throughout the property. The design and materials of these trails vary from simple, well-trodden footpaths that are periodically cleared of vegetation, to more complicated railroad tie stair systems.

- Fences: fences are located along the perimeter of the property. Most of the fences are made of metal stakes and barbed wire, and in some places they incorporate historic era stone fences.
- Power lines: PG&E power lines run in a north-south orientation through the center part of the Preserve. PG&E operates and maintains these power lines, through an easement with SSU, occasionally cutting trees that pose risk of falling on the lines.

FOP ACTIVITIES AND DEVELOPMENT

Development at the FOP can be separated into two broad categories: recurring activities and new development. Recurring activities includes, but is not limited to, routine maintenance, education and research activities. Routine maintenance includes activities such as trail and fence upkeep, tree trimming, habitat restoration, and building repairs (Table 3, left column).

Educational activities include field trips by university classes, guided tours for K-12 students and community members, and on-site training programs. Some educational programs include supervised restoration activities.

Research is encouraged in all disciplines, including the arts, and can be undertaken by classes, students working independently, faculty, and private individuals. Examples of research projects underway include the WATERS (Watershed Academics To Enhance Regional Sustainability) Collaborative, a series of projects involving sediment and erosion, riparian restoration, and water quality. Because the FOP is a site for encouraging research of all kinds, the specific types of activities cannot be easily predicted. Studies could require trenching (e.g. for installation of exclusion fencing), burn

treatments, vegetation removal, or installation of long-term equipment. However, to date most of the projects only require low impact methods, such as the use of pin flags, tree markers, pens, and plywood caps.

There are several new development projects in planning at the FOP. These include:

- The development of a carbon neutral and low-impact campground near the renovated barn and studio at the southern entrance to the property.
- The installation of new sensors and telecommunication sites.
- The construction of new trails that expand into the recently acquired 50-acre Roth parcel.
- The expansion of the parking lots.
- The development of indoor/outdoor social space around the MOERC.

IMPACTS

With its research and educational mission, the FOP is a perfect site to demonstrate best management practices in the protection of cultural resources. While only some of the Preserve activities and developments require legal consultation (see section below), FOP managers assess all activities for potential impacts to cultural resources.

Not all types of activities result in the same types of impacts to cultural resources (Table 2). Yet all of the on-site activities, except activities occurring in buildings, have potential to impact cultural resources depending on the specific activities proposed.

Table 2: FOP Activities and Potential Impacts to Cultural Resources

Activities	**Potential Impacts**

Use of existing facilities	None likely.
Facility repairs and routine maintenance	Impacts possible, depending on the nature of repairs and maintenance. Subsurface repairs and maintenance, such as replacing utility lines, could unearth and damage subsurface resources. Above ground repairs and maintenance, such as replacing windows, are less impactful, unless they are occurring to a structure that is listed as a cultural resource (e.g. the renovated barn at P-49-002804).
Facility infrastructure expansion (see above)	Impacts possible, depending on nature of expansion. Expansion involving subsurface activities (e.g. construction of new buildings) or above surface activities occurring near resources (e.g. campsite around P-49-002804), could unearth and damage resources, or alter the significance of a resource by affecting the setting.
Trail use	Impacts possible, but mostly relegated to artifacts that are located along trails. These artifacts could be damaged by human traffic or be collected.
Trail construction and repair	Impacts possible, depending on nature of construction and repair. New trail construction could damage subsurface or on surface artifacts. More superficial types of repair/maintenance, such as vegetation clearing, are unlikely to impact resources.
Fence maintenance and construction	Impacts possible, depending on nature of maintenance. Driving new fence posts into the ground could impact subsurface resources, but rewiring old fence posts unlikely to cause impacts.
Habitat restoration	Impacts possible, depending on the nature of restoration. Subsurface activities (e.g. digging and grubbing) could impact resources. Ground level or above ground level activities (e.g., grazing) are unlikely to impact cultural resources if they do not alter erosion processes. Garbage should be checked before being cleared away to be sure that it is less than 45 years of age.
Tree trimming	Impacts possible, depending on location of the activity.

Research and other studies	Impacts possible, depending on nature of studies. Studies involving subsurface activity (e.g. fences, posts, pens, augurs, and soil collection) could unearth and damage resources.
Trespassing or illegal activities	Impacts possible. Intentional or unintentional destruction of resources may result from on and off trail trespassing and other illegal activities (e.g. marijuana cultivation). Looting of artifacts is also possible.
Natural processes	Impacts possible. Erosion, earthquakes, bioturbation, tree falls, and fires could damage resources.

Not all cultural resources share the same levels of sensitivity. That is, a resource with high sensitivity is more likely to be impacted by all levels of activities, whereas resources with moderate and low sensitivity are less likely to be impacted by activities. Generally, sites that are prehistoric or contain delicate artifacts and features can be more sensitive to disturbance (Table 3).

Table 3: FOP Resources and Sensitivity Levels

Resource	**Sensitivity Level**
CA-SON-657, prehistoric site	High sensitivity
CA-SON-2118H, stone fences	Low sensitivity
P-49-002804, barn & studio complex	Moderate sensitivity
CA-SON-2592/H, spring & stone fences	Moderate sensitivity
FOP-2013-01, stone fences	Low sensitivity
FOP-2013-02, road cut	Low sensitivity
FOP-2013-03, dam & reservoir	Low sensitivity
FOP-2013-04, swimming hole	Low sensitivity
FOP-2013-05, trough	Low sensitivity

FOP-2013-06, dam & reservoir	Low sensitivity
FOP-2013-07, modified marsh	Low sensitivity
FOP-2013-08, road cut	Low sensitivity
FOP-2013-09, collapsed structure	Low sensitivity
FOP-2013-10, riding ring	Low sensitivity
FOP-2013-11, collapsed platform	Low sensitivity

FOP MANAGEMENT PROCEDURES

This section outlines a stepwise procedure for FOP staff to ensure the protection of cultural resources on-site.

1. Online Application. All visitors to the Preserve submit an application that describes the purpose of the work to be undertaken, detailed information on the activities and methods proposed, and any permits held to undertake the work.

2. Proximity Assessment. Prior to the approval of the activity, FOP staff compares the location of that activity to the locations of previously documented cultural resources.

3. Sensitivity Assessment. When the activity occurs on or near a previously documented resource, FOP staff considers the potential for the activity to disturb the subsurface and surface layers, or directly damage the cultural resource (e.g., barn, foundations, dams). High sensitivity sites (i.e., CA-SON-657) can contain vulnerable components at the surface and subsurface levels. Subsurface activities (e.g., digging grubbing, and auguring) have a higher likelihood of unearthing and/or damaging resources. Surface level activities (e.g., mowing, shallow weed removal) could still impact resources, but are less likely to do so and may be

adapted to avoid surface level resources. The sites with low sensitivity that lack subsurface components (e.g. roads, dams and reservoirs) are not likely to be impacted by subsurface activities. Subsurface activities at resources with moderate sensitivity and subsurface components (e.g., P-49-002804, CA-SON-2592/H) may impact those resources. Surface level activities are not likely to impact these resources. Activities that occur in locations where there are no previously documented cultural resources should proceed with caution. There is potential for these activities to unearth and impact undocumented cultural resources at the FOP. If new cultural resources are discovered during the course of an activity, the activity should stop, and FOP staff should be alerted of the discovery and assess the situation. If the resource appears to be isolated (e.g. one or two artifacts without additional artifacts or features), the activity can likely proceed. If the resource has additional components, it should be recorded and added to the CRMP.

4. Consultation. FOP managers will consult with ASC personnel prior to the commencement of any ground disturbing projects that is near a recorded cultural resource, could directly impact a cultural resource, or has potential to create significant soil disturbance. These include activities like building or replacing fences and constructing trails. This will insure that decisions regarding cultural resource are made in a professional and permissible way.

5. Project Implementation. If any cultural resources are discovered in addition to the inventory provided here, FOP managers will contact ASC personnel, especially if they are found during a project that might damage, disturb, or alter

those resources. When possible, cultural resource monitors should be present during any ground disturbing projects.

LEGAL CONSULTATION

As outlined in Chapter I, CEQA and PRC apply to a range of activities. But in some cases, certain activities are not subject to PRC or CEQA. This may be because they are ministerial projects, or they are found to be statutorily or categorically exempt (see Chapter 1). Ideally, FOP managers should account for any and all impacts to cultural resources, regardless of the legal context. This policy reflects both legal and ethical considerations for cultural resources.

There are a number of laws set forth by county, state, and federal government to protect cultural resources. More specifically, the statutes pertaining to Historical Resources (PRC Sections 5020 through 5029.6), Archaeological, Paleontological, and Historical Sites (PRC Sections 5097 through 5097.7), Native American Historical, Cultural, and Sacred Sites (PRC Sections 5097.9 through 5097.991), the Native American Historic Resource Protection Act (PRC Sections 5097.993 through 5097.994), and the California Environmental Quality Act (PRC Sections 21083.2 and 21084.1) are relevant to activities at the Preserve. It is also against the law to willfully destroy or deface "objects of archaeological or historical interest…whether situated on private lands or within any public park or place," (Penal Code 6221/2). Additionally, the California State University (CSU) CEQA Procedures can be found in the State University Administrative Manual (SUAM).

Determining the legal context of an activity during the planning stages will allow FOP managers to follow the applicable regulations and begin the appropriate

environmental review process. Although there are many laws pertaining to cultural resources (see above), there are only two laws that will likely apply to the range of activities at the FOP in the future: CEQA of 1970, and Section 106 of the NHPA of 1966, as amended.

This CRMP assumes that most projects and activities will fall under CEQA (see Chapter I); however, this may not always be the case. For example, if the activity is wholly or partially funded by a Federal agency, then the activity is actually an undertaking and is subject to Section 106 of the NHPA of 1966, as amended.
If FOP managers are not certain what legal context applies to their activity, they could consult ASC personnel for clarification. A table showing when the relevant legal context applies is below (Table 4).

Table 4: CEQA and Section 106 Legal Contexts

When CEQA Applies	When Section 106 Applies
The activity is a project: "A project is an activity undertaken by a public agency or a private activity which must receive some discretionary approval (meaning that the agency has the authority to deny the requested permit or approval) from a government agency which may cause either a direct physical change in the environment or a reasonably foreseeable indirect change in the environment," (California Natural Resources Agency 2014).	The activity is an undertaking: An undertaking is "a project, activity, or program funded in whole or in part under the direct or indirect jurisdiction of a Federal agency, including A) those carried out by or on behalf of the agency; B) those carried out with Federal financial assistance; C) those requiring a Federal permit, license, or approval; and D) those subject to State or local regulation administered pursuant to a delegation or approval by a Federal agency," (NHPA of 1966, as amended).

CEQA provides guidelines to determine which activities trigger the CEQA process. CEQA applies to projects that require discretionary approval from a government

Agency (e.g., Board of Supervisors, California Fish and Game, etc.) and might result in physical changes to the environment. Some examples of projects are applications for road developments and use permits. Some of the new development projects in planning at the FOP listed above may require CEQA consultation. Most of the recurring activities (e.g., introduction of grazing, fence repair, etc.) are not likely to trigger consultation.

If human remains are ever discovered on the property, FOP managers should cease any activity in the vicinity and immediately contact the country coroner (Health and Human Safety Code Section 7050.5[b]). It is against the law to knowingly disturb human remains (Health and Human Safety Code Section 7050.5[a]). If the coroner determines the human remains are Native American, then the Native American Heritage Commission (NAHC) will be contacted within a 24-hour period (Health and Human Safety Code Section 7050.5[c]).

RECOMMENDATIONS

A series of recommendations are presented here, based on the current and future FOP developments, likely impacts to cultural resources, and the goals of Preserve staff.

1: Incorporate Resources into Preserve Database

As part of the CRMP, site records for FOP resources will be given to Preserve staff upon their completion. This information should be incorporated into the preexisting Preserve Geographic Information System (GIS). The Preserve GIS will allow Preserve staff to access this information, such as the location of the resources, prior to any activities that may affect those resources. This GIS may then be updated as new cultural resources are found or new information is discovered about previously recorded resources.

2: Integrate Resources into Interpretive Programs

Cultural resources are already part of the FOP's interpretive programs. The naturalist docents, who give educational tours of the FOP to community members, receive instruction on cultural resources and the FOP's history during their initial training. Including parts of this CRMP (e.g., Chapters III and IV) as required reading for the docents would enhance their training. Naturalists could also be trained as *interpreters*. These interpreters would give tours focusing on the history of the FOP and incorporate the Preserve's cultural resources into the hike, while simultaneously teaching about natural resources. Which resources the naturalists use depends on their hiking route, but the ideal types of resources are larger features like fences, roads, houses, and dams (see below). With additional planning, the tours could be adapted to fit the history lessons of the school groups that visit.

The FOP also has an informational website that discusses the history of the area. The website could be altered to include portions of this CRMP, or even a link to access an electronic version of the entire CRMP. The only confidential information in this CRMP is located in the appendices; these should not be made available to the public.

The docent naturalist tour guides already incorporate cultural resources during their hikes with the public. These cultural resources may be used to teach both about the history of the FOP and the broader, regional history of Sonoma County and California. Below is a list of cultural resources on the Preserve that can be included into these guided hikes, along with how the docents may use them to teach about history.

- CA-SON-2118H and FOP-2013-01: the stone fences on the property occur frequently and can be seen along some of the trails. Many of their segments

(including the segment immediately south of the MOERC) actually fall on PLSS section and aliquot lines. The PLSS is associated with early US history, Thomas Jefferson and the Revolutionary War. Furthermore, the Homestead Act of 1862 allotted homesteaders 160-acre parcels of land using the PLSS. This is why many of these fence segments were constructed on PLSS section and aliquot lines: they represent the original homestead boundaries of Russell and Burns, who homesteaded the southern and northern portions of the FOP, respectively. Furthermore, these stone fences were constructed as improvements to the homestead, which were required to receive the homestead patent.

- P-49-002804: the barn and studio near the southern entrance to the property are associated with the Roths and the families that lived on the property prior to the Roths (the Elvicks and Duersons). The barn could be used to explain that property was used for ranching prior to the Roth purchase. The studio could be used to teach about the Roth period, and later the TNC period when Lozier and Serpa were caretakers of the Preserve.
- CA-SON-2592/H: the spring box, non-native trees, and house pad are associated with the original homestead in the southern portion of the Preserve. The spring box could be used to explain the importance of water in both the region and in California. The house pad could be used to teach where the original homesteader lived (J. Russell), and that the house was actually moved from this location, using log rollers, across the Marsh to the location where it burned down near the barn and studio. Both the house and spring box would qualify as improvements to the homestead.

- FOP-2013-02 and FOP-2013-08: these road cuts were constructed circa 1877 and 1916, respectively. The former was constructed during the homestead period, and the latter during the ranching period. Portions of these roads are now used as trails, and docents could use them to explain how certain cultural features of the FOP have evolved over time to function for different purposes.
- FOP-2013-03, FOP-2013-06, and FOP-2013-07: these dams and reservoirs were originally constructed as watering ponds for livestock, and later used by the Roth family for recreation. These resources could be used to teach how ranchers modified the landscape to care for their herds. They can also be used to explain how the Roth family used these features for recreation.
- FOP-ISO-01: this segment of riveted wrought iron pipe is likely associated with the Petaluma Water Works and once brought drinking water from Copeland Creek to the City of Petaluma. It could be used to show how Copeland Creek and the FOP are important in Petaluma's history.

While the historic-era resources at the FOP have potential for being used during public tours in a "hands on" (or more precisely, eyes on) manner, prehistoric resources should not be used without consultation with and approval from contemporary Native American groups with cultural affiliation to the area.

3: Establish Relations with Affiliated Native American Groups

The prehistoric resources on the FOP may be of particular interest to local Native American groups. FIGR was contacted as part of this CRMP, and Nick Tipon of the Sacred Sites Protection Committee expressed interest in the prehistoric and native botanicals resources on the FOP. FIGR will receive a final version of this CRMP, and

FOP staff should invite Tribal members to the Preserve in order to show them these resources. This will give both members of the Tribe and FOP staff an opportunity to meet and discuss the management of these resources. A partnership between FIGR and the FOP would encourage the development of an interpretation or heritage program for prehistoric resources and Native American heritage.

4: Resurvey Property after Future Fires and Mass Wasting Events

When and if a fire occurs at the FOP in the future, the area where the fire has burned should be resurveyed when it is safe to do so. The ground visibility at the FOP as a whole is very poor, and fires provide an opportunity for archaeologists to see bare soil and the artifacts that may have been obscured by vegetation. Additionally, if a mass wasting event occurs at the FOP, the place where the event occurred should be resurveyed when safe. These mass wasting events could unearth additional cultural resources.

5: Implement a Site Monitoring Program

Cultural resource monitoring programs are a management strategy used by land holding agencies such as NPS and California State Parks, whereby agency personnel periodically visit known resources to assess their condition. The frequency of visits to the resource is often determined by a number of factors, including site sensitivity, condition, and traffic. For example, a burial site on a hillside near a trail might be visited annually, but a remote lithic concentration or bedrock mortar complex may only be monitored every five years.

The one site on the Preserve that should receive monitoring due to its sensitivity and the amount of human traffic and studies taking place near and around it is CA-SON-

657. This prehistoric site is large, and appears to be eroding along the north and south sides where trails run near it.

FOP staff should also consider having a cultural monitor present during activities that are likely to impact previously documented cultural resources. The cultural monitor can then gauge the impacts of the activities as they occur, and, if necessary, stop the activity if cultural resources are likely to be damaged or destroyed.

CONCLUSIONS AND FUTURE RESEARCH

Part of the FOP's mission to contribute to the knowledge and ongoing dialogue about cultural resources, their significance, and how best to manage them. This CRMP provides FOP managers with an inventory of cultural resources present on the property, and a plan that they can refer to when making management choices.

As a landscape, the FOP is perceived in many diverse ways. To the naturalist, it is a landscape of flora and fauna, geological formations and water networks. To the archaeologist, it is a landscape of cultural resources: fences, houses, roads, and sites. To the Native American community, it may be a sacred landscape: mountains where Coyote stood, or gathering places passed down from generation to generation. This thesis exposes the overlap between these views and discourages dichotomous views of natural vs. cultural landscapes. An open hillside or valley holds the illusion of being natural, when in fact it may have been intentionally cleared of trees and planted with non-native grasses for livestock grazing. Similarly, a pond teeming with native flora and fauna appears undomesticated, when actually it began as a human construct. While these features are frequently recorded and evaluated individually, they are often associated with a broader cultural pattern, such as homesteading. At a broader scale, these landscapes

become more apparent. The stacked-stone fence that continues past the FOP property boundaries does so for miles, zigzagging across greater Sonoma County. They continue into Marin and Napa, and their more distant relatives can be seen as far as Yuba County, and perhaps even beyond the state of California. They were not built by the same people, but often for the same purposes (homesteading), during the same period (late 19th-century), and using the same geospatial reference (PLSS). The significance of these fences becomes much more apparent when they are understood at this landscape level. Their integrity of feeling and association become deeper, too.

This study discloses several other opportunities for future research. These research foci are only meant as suggestions, not as requirements, for FOP personnel. They include:

- A more thorough spatial and categorical analysis of native and non-native vegetation. This study could reveal the types and locations of vegetation Native Americans gathered, as well as the extent of vegetation associated with historic era activities, such as ranching.
- The integration of data collected by the soils and morphology classes with archaeological research. This study could disclose associations between certain ecological interactions (e.g. fire events) and human interactions.
- A study of CA-SON-657 in consultation with FIGR representatives using obsidian XRF and hydration methods, radiocarbon dating, flotation, pollen, faunal and isotope analysis. These analyses would expose sources of obsidian, provide a time period for when the artifacts were created and the site inhabited, and show what kinds of materials / foodstuffs were being used.

- The collection of additional oral histories from other members of the Roth family, as well as the Duersons, the Horns, the Rivers, and the Elvicks. This would provide more history about the FOP and its surrounding area.
- A cultural resources survey of the new 40-acre parcel donated by the Roths, and the lands adjacent to or nearby the FOP. A new survey could reveal additional resources, which could then be added to the FOP database.
- A poll of how FOP stakeholders perceive the landscape. This poll would provide insight about how the FOP is perceived, and this information could be used to adapt interpretive programs.
- The development of a cultural resources and heritage public education and interpretation program. Cultural resources and history are already included into the interpretive program, but a program specifically about history and heritage may attract additional stakeholders to the FOP.

This document contributes to all aspects of FOP's mission, contributing to existing data sets and research publications, providing information for education programs, and ensuring the preservation of resources for further study. As future researchers continue this tradition, they will use, expand on, and challenge the findings and assertions of this study. This plan should be updated if the FOP receives additional land, or when new resources are discovered. A periodic revision of the plan should occur every ten years.

References Cited

Advisory Council on Historic Preservation (ACHP)
2009 Section 106 Archaeological Guidance. Electronic document, http://www.achp.gov/docs/ACHP%20ARCHAEOLOGY%20GUIDANCE.pdf, accessed on September 27, 2014.

Amaroli, Paul
1976a *Archaeological Site Record for CA-SON-1032H*. On file at the Northwest Information Center, Rohnert Park, California.

1976b *Archaeological Site Record for CA-SON-1033H*. On file at the Northwest Information Center, Rohnert Park, California.

Anthropological Studies Center (ASC)
2014 About Us. Electronic document, http://www.sonoma.edu/asc/, accessed on June 3, 2014.

Arnold, Jeanne E., Michael R. Walsh, and Sandra E. Hollimon
2004 The Archaeology of California. *Journal of Archaeological Research* 12(1):1-73.

Barrett, Samuel A.
1908 *The Ethno-Geography of the Pomo and Neighboring Indians*. University of California Press, Berkeley.

Beach, Gavin, Lareina Earls, Stephen Garibaldi, Adrienne Gause, Joshua Goudy, Robert Gleaton, Sarah Hebern, Alexander Pugliese, Camilla Rockefeller, Kirstie Watkins, Brian Woodward, Caitlyn Yates, Collin Yballa, and Tom Ziegler
2012 *Soil and Sediment Analysis at Fairfield Osborn Preserve: A Final Report by the Class of Geography 317*. Edited by Michelle Goman. Sonoma State University, Rohnert Park, California.

Beardsley, R.K.
1948 Cultural Sequences in Central California Archaeology. *American Antiquity* 14:1-28.

Beard, V.
2011 *Archaeological Site Record for P-49-004503*. On file at the Northwest Information Center, Rohnert Park, California.

Belous, R.E.
1953 The Central California Chronological Sequence Re-examined. *American Antiquity* 18:341-353.

Bramlette, Gary, McLear, and Adrian Praetzellis
1986 *Archaeological Site Record for CA-SON-105*. On file at the Northwest Information Center, Rohnert Park, California.

Bramlette, Adrian Praetzellis and Greenway
1986 *Archaeological Site Record for CA-SON-106/H*. On file at the Northwest Information Center, Rohnert Park, California.

Brunvand, Jan Harold
1996 *American Folklore: An Encyclopedia*. Garland Publishing, Inc., New York.

Brusca, Richard C. and Gary J. Brusca
2003 *Invertebrates.* 2nd ed. Sinauer Associates, Inc., Sunderland, Massachusetts.

Burnham, Kelsey
2010 Prohibition in Wine Country. *Napa Valley Register* 18 April. Electronic document, http://napavalleyregister.com/lifestyles/real-napa/prohibition-in-wine-country/article_ed8bdf22-4a81-11df-bb7d-001cc4c002e0.html, accessed May 29, 2014.

Calcatinge, Alexandru
2012 *The Need for a Cultural Landscape Theory: An Architect's Approach*. Lit Verlag, Berlin, Germany.

California Code of Regulations
California Register of Historical Resources, 14 CCR Sections 4850 et seq.

Guidelines for the Implementation of CEQA. 14 CCR Sections 15300 et seq.

California Department of Parks and Recreation (DPR)
1976 *California Inventory of Historical Resources*. On file at the Northwest Information Center, Rohnert Park, California.

1988 *Five Views: An Ethnic Historic Site Survey for California*. State of California Department of Parks and Recreation, Sacramento. California.

1990 *California Historical Landmarks*. State of California Department of Parks and Recreation, Sacramento, California.

1992 *California Register of Historical Interest*. State of California Department of Parks and Recreation, Sacramento, California.

California Department of Transportation (Caltrans)
1999 *General Guidelines for Identifying and Evaluating Historic Landscapes*. Environmental Program, Sacramento, California. Electronic document, http://www.dot.ca.gov/ser/downloads/cultural/languide.pdf, accessed November 7, 2014.

California Office of Historic Preservation (OHP)
1995 *Instructions for Recording Historical Resources*. Office of Historic Preservation, Sacramento, California.

1998 *California Register of Historical Resources (CRHR)*. State Office of Historic Preservation, Sacramento, California.

2001 Technical Assistance Bulletin #1: CEQA and Historical Resources. Electronic document, http://www.ohp.parks.ca.gov/pages/1054/files/ts01ca.pdf, accessed July 23, 2014.

2002 Technical Assistance Bulletin #3: California Register Questions & Answers. Electronic document, http://ohp.parks.ca.gov/?page_id=1069, accessed July 23, 2014.

2012a *Historic Properties Directory*. On file at the Northwest Information Center, Rohnert Park, California.

2012b *Archaeological Determinations of Eligibility*. On file at the Northwest Information Center, Rohnert Park, California.

2013a California Historical Resource Information System. Electronic document, http://ohp.parks.ca.gov/?page_id=1068, accessed June 2, 2014.

2013b Publications and Forms. Electronic document, http://ohp.parks.ca.gov/?page_id=1069, accessed July 23, 2014.

California Natural Resources Agency
2014 Frequently Asked Questions About CEQA. Electronic document, http://resources.ca.gov/ceqa/more/faq.html, accessed November 16, 2014.

California Public Resources Code
The California Environmental Quality Act. Sections 21000 et seq.

The California Register of Historical Resources, as amended. Sections 5020 et seq.

California Resources Agency
2005 CEQA Process Flow Chart. Electronic document, http://ceres.ca.gov/ceqa/flowchart/, accessed February 23, 2014.

California State Parks.
2013 Fort Ross State Historic Park. Electronic document, http://www.parks.ca.gov/?page_id=449, accessed May 5, 2014.

Callaghan, Catherine A.
1970 *Bodega Miwok Dictionary*. University of California Press, Berkeley.

Casella, Eleanor Conlin
2010 Landscapes of Punishment and Resistance: A Female Convict Settlement in Tasmania, Australia. In *Contemporary Archaeology in Theory*, edited by Robert Preucel and Stephen Mrozowski, pp.92-103. Wiley-Blackwell, Oxford.

Castillo, Edward D.
1978 The Impact of Euro-American Exploration and Settlement. In *California*, edited by Robert F. Heizer, pp. 99-127. Handbook of the North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Compas, L., J. Gregg, and M. Jablonowski
1993 *Archaeological Site Record for CA-SON-2118H*. On file at the Northwest Information Center, Rohnert Park, California.

Davidson, J. M., A. C. Wickland, H. Patterson, K. Falk, and D. M. Rizzo
2005 Transmission of *Phytophthora ramorum* in Mixed-Evergreen Forests of California. *Phytopathology* 95:587-597.

Davidson, J. M., M. Garbelotto, E. M. Hansen, P. Reeser, and D. M. Rizzo
2002 Another Canker-Causing *Phytophthora* from California and Oregon forest trees. *Phytopathology* 92:S17-S18.

Davidson, J. M., M. Garbelotto, S. T. Koike, and D. M. Rizzo
2002 First Report of *Phytophthora ramorum* on Douglas-fir in California. *Plant Disease* 86:1274.

Davidson, J. M., S. Werres, M. Garbelotto, E. M. Hansen, and D. M. Rizzo
2003 Sudden Oak Death and Associated Diseases caused by *Phythopthora ramorum*. Online. Plant Health Progress doi:10.1094/PHP-2003-0707-01-DG.

Doherty, S. and R. Shultz
2000 *Archaeological Site Record for P-49-002804*. On file at the Northwest Information Center, Rohnert Park, California.

Duddy, Flynn, and Roop
1983 *Archaeological Site Record for CA-SON-1483H*. On file at the Northwest Information Center, Rohnert Park, California.

Eddy, Frank W., Allen E. Kane, and Paul R. Nickens
1984 Southwest Colorado Prehistoric Context. Electronic document, http://www.historycolorado.org/sites/default/files/files/OAHP/crforms_edumat/pdfs/601.pdf, accessed December 2, 2013.

Eighmy, Jeffrey L.
1984 Colorado Plains Prehistoric Context. Electronic document, http://www.historycolorado.org/sites/default/files/files/OAHP/crforms_edumat/pdfs/604.pdf, accessed December 2, 2013.

Erlandson, Jon M.
2012 A Land by the Sea: An Ocean View of California Archaeology. In *Contemporary Issues in California Archaeology*, edited by Terry L. Jones and Jennifer E. Perry, pp.21-35. Left Coast Press, Inc., Walnut Creek, California.

Erickson, Clark L.
2010 Amazonia: The Historical Ecology of a Domesticated Landscape. In *Contemporary Archaeology in Theory*, edited by Robert Preucel and Stephen Mrozowski, pp.104-128. Wiley-Blackwell, Oxford, UK.

Erickson, Kate, Phil Kaijankoski, and Leslie Smirnoff
2008a *Archaeological Site Record for CA-SON-1172/H*. On file at Northwest Information Center, Rohnert Park, California.

2008b *Archaeological Site Record for CA-SON-2489H*. On file at the Northwest Information Center, Rohnert Park, California.

2008c *Archaeological Site Record for CA-SON-2490*. On file at the Northwest Information Center, Rohnert Park, California.

Fairclough, Graham
2008 "The Long Chain": Archaeology, Historical Landscape Characterization, and Time Depth in Landscape. In *The Heritage Reader*, edited by Graham Fairclough, Rodney Harrison, John H. Jameson Jr., and John Schofield, pp.408-424. Routledge, New York.

Federated Indians of Graton Rancheria (FIGR)
2014a Coast Miwok and Southern Pomo. Electronic document, http://gratonrancheria.com/, accessed April 25, 2014.

2014b Environmental and Cultural Preservation Department. Electronic document, http://www.gratonrancheria.com/tribal-programs/environmental-cultural-preservation/, accessed July 20, 2014.

Flynn
1982 *Archaeological Site Record for CA-SON-107/H.* On file at the Northwest Information Center. Rohnert Park, California.

Flynn, Roop, and Duddy
1982 *Archaeological Site Record for CA-SON-107/H*. On file at the Northwest Information Center, Rohnert Park, California.

1983a *Archaeological Site Record for CA-SON-109*. On file at the Northwest Information Center, Rohnert Park, California.

1983b *Archaeological Site Record for CA-SON-1482H*. On file at the Northwest Information Center, Rohnert Park, California.

Fredrickson, David A.
1973 Early Cultures of the North Coast Ranges. Ph.D dissertation, Department of Anthropology, University of California, Berkeley.

1974 Cultural Diversity in Early Central California: A View from the North Coast Ranges. *The Journal of California Anthropology* 1(1):41-53.

1984 The North Coast Region. In *California Archaeology*, edited by Michael J. Moratto, pp.471-527. Academic Press, Inc., San Francisco.

1994 Archaeological Taxonomy in Central California Reconsidered. In *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson*, edited by Richard E. Hughes, pp.91-103. Contributions of the University of California Archaeological Research Facility No. 52, Berkeley.

Gerow, Bert A.
1974 Comments on Fredrickson's "Cultural Diversity." *The Journal of California Anthropology* 1(2):239-246.

Golden Gate Bridge Highway and Transportation District
2012 Golden Gate Bridge Research Library. Electronic document, http://goldengatebridge.org/research/facts.php#HowLongtoBuild, accessed September 24, 2014.

Golla, Victor
2007 Linguistic Prehistory. In *California Prehistory: Colonization, Culture, and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp.71-82. AltaMira Press, Lanham.

2011 *California Indian Languages*. University of California Press, Berkeley.

Grady, James
1984 Northwest Colorado Prehistoric Context. Electronic document, http://www.historycolorado.org/sites/default/files/files/OAHP/crforms_edumat/pdfs/600.pdf, accessed December 2, 2013.

Gregory, James N.
1989 *American Exodus: The Dust Bowl Migration and Okie Culture in California*. Oxford University Press, New York.

Gudde, Erwin G.
1998 *California Place Names: The Origin and Etymology of Current Geographical Names*. 4th ed., revised by William Bright. University of California Press, Berkeley.

Guthrie, Mark R., Powys Gadd, Renee Johnson, and Joseph L. Lischka
1984 Colorado Mountains Prehistoric Context. Electronic document, http://www.historycolorado.org/sites/default/files/files/OAHP/crforms_edumat/pdfs/603.pdf, accessed December 2, 2013.

Haas, Lisbeth
1995 *Conquests and Historical Identities in California: 1769-1936*. University of California Press, Berkeley.

Hardesty, Donald L. and Barbara J. Little
2009 *Assessing Site Significance: A Guide for Archaeologists and Historians.* 2nd ed. AltaMira Press, New York.

Harrison, Rodney, Graham Fairclough, John H. Jameson Jr., and John Schofield
2008 Heritage, Memory, and Modernity. In *The Heritage Reader*, edited by Graham Fairclough, Rodney Harrison, John H. Jameson Jr., and John Schofield, pp.1-12. Routledge, New York.

Haviland, William A., Harald E. L. Prins, Bunny McBride, and Dana Walrath
2011 *Cultural Anthropology: The Human Challenge*. 13th ed. Wadsworth, Belmont, California.

Heider, Karl G.
2007 *Seeing Anthropology: Cultural Anthropology through Film*. 4th ed. Allyn & Bacon, Boston.

Heizer, Robert F.
1947 Francis Drake and the California Indians, 1579. *University of California Publications in American Archaeology and Ethnology* 42(3).

1949 The Archaeology of Central California I: The Early Horizon. *University of California Anthropological Records* 12(1).

Heizer, Robert F., and Franklin Fenenga
1939 Archaeological Horizons in Central California. *American Anthropologist* 41:378-399.

Hoover, Mildred Brooke, Hero Eugene Rensch, Ethel Grace Rensch, William N. Abeloe
1990 *Historic Spots in California*. 4th ed., revised by Douglas E. Kyle. Stanford University Press, Stanford, California.

Hurley, Marianne R.
2013 History of Sonoma County: An Overview. Sonoma County Permit and Resource Management Department. Electronic document, http://www.sonoma-county.org/prmd/historic/history.htm, accessed May 29, 2014.

Ingold, Tim
2010 The Temporality of Landscape. In *Contemporary Archaeology in Theory: The New Pragmatism*, edited by Robert Preucel and Stephen Mrozowski, pp.59-76. Wiley-Blackwell, Oxford, UK.

International Council for Science
2002 *Science and Traditional Knowledge*. Electronic document, http://www.icsu.org/publications/reports-and-reviews/science-traditional-knowledge/Science-traditional-knowledge.pdf, accessed September 25, 2014.

Isenberg, Andrew C.
2005 *Mining California: An Ecological History*. Hill and Wang, New York.

Jameson, John J., Jr.
2008a Cultural Heritage Management in the United States: Past, Present, and Future. In *The Heritage Reader*, edited by Graham Fairclough, Rodney Harrison, John H. Jameson Jr., and John Schofield, pp. 42-61. Routledge, New York.

2008b Presenting Archaeology to the Pubic, Then and Now: An Introduction. In *The Heritage Reader*, edited by Graham Fairclough, Rodney Harrison, John J. Jameson Jr., and John Schofield, pp.427-456. Routledge, New York.

Jones, Michael
2003 The Concept of Cultural Landscape: Discourse and Narratives. In *Landscape Interfaces*, edited by Hannes Palang and Gary Fry, pp.21-51. Kluwer, Dordrecht, Netherlands.

Jones, Terry L. and L. Mark Raab
2004 The Rediscovery of California Prehistory. In *Prehistoric California: Archaeology and the Myth of Paradise*, edited by L. Mark Raab and Terry L. Jones, pp. 1-9. University of Utah Press, Salt Lake City, Utah.

Kelly, Isabel
1978a Some Coast Miwok Tales. *The Journal of California Anthropology* 5(1):21-41.

1978b Coast Miwok. In *California*, edited by Robert F. Heizer, pp. 414-425. Handbook of the North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Kerber, Jordan E.
1994 *Cultural Resources Management: Archaeological Research, Preservation Planning, and Public Education in the Northeastern United States*. Bergin & Garvey, Westport, Connecticut.

King, Thomas F.
1974 Flight to the New Pigeonholes: Comments on Fredrickson. *The Journal of California Anthropology* 1(2):233-239.

1975 *Archaeological Site Record for CA-SON-1024*. On file at Northwest Information Center, Rohnert Park, California.

2013 *Cultural Resources Law & Practice.* 4th ed. AltaMira Press, New York.

Kroeber, Alfred L.
1925 *Handbook of the Indians of California*. Bureau of Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C. Reprinted 1976 by Dover, New York.

Laguna de Santa Rosa Foundation
2011 Science and Research. Electronic document, http://www.lagunadesantarosa.org/programs_sr_srpe.shtml, accessed March 3, 2014.

Lampman, Aaron M.
2010 How Folk Classification Interacts with Ethnoecological Knowledge: A Case Study from Chiapas, Mexico. *Journal of Ecological Anthropology* 14(1):39-51.

LeBaron, Gaye
2012 'Dust Bowl' sheds more light on Sonoma County history. *The Press Democrat* 24 November. Electronic document, http://www.pressdemocrat.com/article/20121124/news/121129805#page=0, accessed May 29, 2014.

Lightfoot, Kent G. and Otis Parrish
2009 *California Indians and Their Environment: An Introduction*. University of California Press, Berkeley.

Lightfoot, Kent G. and William S. Simmons
1998 Culture Contact in Protohistoric California: Social Contexts of Native and European Encounters. *Journal of California and Great Basin Archaeology* 20(2):138-170.

Lilliard, J.B., R.F. Heizer, and F. Fenenga
1939 *An Introduction to the Archaeology of Central California*. Sacramento Junior College, Department of Anthropology Bulletin 2.

Little, Barbara J.
2007 *Historical Archaeology: Why the Past Matters*. Left Coast Press, Walnut Creek, California.

Lozier, Lynn
2013 *Fairfield Osborn Preserve Oral History Project*. Transcript of an oral history conducted by Jocoya Fox-Jones, Sonoma State University, pp. 1-49. Electronic document, http://www.sonoma.edu/preserves/documents/osborndata/fop_transcript_lozier.pdf, accessed May 29, 2014.

Lozier, Lynn and Larry Serpa
1981 *Guide to the Natural History of the Fairfield Osborn Preserve.* Electronic document, http://www.sonoma.edu/preserves/documents/guide_to_the_natural_history_of_the_fairfield_osborn_preserve.pdf, accessed July 19, 2014.

Marchman, Patrick
2012 *"Little NEPAs": State Equivalents to the National Environmental Policy Act in Indiana, Minnesota, and Wisconsin*. Paper presented to the Duke Environmental Leadership Program, Nicholas School of the Environment, Duke University.

McAlester, Virginia, and Lee McAlester
1998 *A Field Guide to American Houses*. Alfred A. Knopf, New York.

McCall, Grant S.
2012 Ethnoarchaeology and the Organization of Lithic Technology. *Journal of Archaeological Research* 20:157-203.

McCarthy, Y., M. Jablonowski, and S. Searle
1993 *Archaeological Site Record for CA-SON-2119*. On file at the Northwest Information Center, Rohnert Park, California.

McConahey, Meg
2014 A Land for Learning. *Press Democrat* 12 August. Electronic document, http://www.pressdemocrat.com/lifestyle/2510697-181/a-land-for-learning?page=0, accessed November 8, 2014.

McDavid, Carol
2008 Archaeologies that Hurt; Descendants that Matter: A Pragmatic Approach to Collaboration in the Public Interpretation of African-American Archaeology. In *The Heritage Reader*, edited by Graham Fairclough, Rodney Harrison, John J. Jameson Jr., and John Schofield, pp.514-523. Routledge, New York.

McKnight, Tom L. and Darrel Hess
2005 *Physical Geography*. 8th ed. Pearson Prentice Hall, New Jersey.

Mikkelsen, P., Greg White, and L. Leach-Palm
1982 *Archaeological Site Record for CA-SON-101*. On file at the Northwest Information Center, Rohnert Park, California.

Milliken, Randall, Richard T. Fitzgerald, Mark G. Hylkema, Randy Groza, Tom Origer, David G. Bieling, Alan Leventhal, Randy S. Wiberg, Andrew Gottsfield, Donna Gillette, Viviana Bellifemine, Eric Strother, Robert Cartier, and David A. Fredrickson
2007 Punctuated Culture Change in the San Francisco Bay Area. In *California Prehistory: Colonization, Culture and Complexity*, edited by Terry L. Jones and Kathryn A. Klar, pp.99-123. AltaMira Press, Lanham, Maryland.

Miner, Paul F. and Antero Rivasplata
1994 *CEQA and Archaeological Resources*. CEQA Technical Advice Series. Governor's Office of Planning and Research, Sacramento, California.

Moratto, Michael J.
1970 A History of Archaeological Research at Point Reyes, California. In *Contributions to the Archaeology of Point Reyes National Seashore: A Compendium in Honor of Adam Treganza*, edited by R. E. Schenk, pp. 97-104. Treganza Museum Papers 6, San Francisco.

1984a Linguistic Prehistory. In *California Archaeology*, edited by Michael J. Moratto, pp. 529-574. Academic Press, Inc., San Francisco.

1984b San Francisco and Central Coast Regions. In *California Archaeology,* edited by Michael J. Moratto, pp. 218-283. Academic Press, Inc., San Francisco.

Moreau, A. and J. T. Davis
1960 *Archaeological Site Record for CA-SON-117*. On file at Northwest Information Center, Rohnert Park, California.

National Park Service (NPS)
1983 *Archaeology and Historic Preservation: Secretary of the Interior's Standards and Guidelines [As Amended and Annotated]*. Electronic document, http://www.nps.gov/history/local-law/arch_stnds_0.htm, accessed June 4, 2014.

2002 *National Register Bulletin #15: How to Apply the National Register Criteria for Evaluation*. Electronic document, http://www.nps.gov/nr/publications/bulletins/nrb15/, accessed October 3, 2014.

2013 About the Homestead Act. Electronic document, http://www.nps.gov/home/historyculture/abouthomesteadactlaw.htm, accessed July 30, 2014.

2014a Non-native species. Electronic document, http://www.nps.gov/grsm/naturescience/non-native-species.htm, accessed February 24, 2014.

2014b Coast Miwok at Point Reyes. Electronic document, http://www.nps.gov/pore/historyculture/people_coastmiwok.htm, accessed September 27, 2014.

National Archives
2014 Executive Order 9066. Electronic document, http://www.archives.gov/historical-docs/todays-doc/?dod-date=219, accessed May 29, 2014.

Native American Heritage Commission (NAHC)
2014 Native American Heritage Commission History. Electronic document, http://www.nahc.ca.gov/nahc_history.html, accessed May 31, 2014.

Newland, Mike
2008 *Archaeological Site Record for CA-SON-2492*. On file at Northwest Information Center, Rohnert Park, California.

Nicholas, George P. and Kelly P. Bannister
2010 Copyrighting the Past? Emerging Intellectual Property Rights Issues in Archaeology. In *Contemporary Archaeology in Theory: The New Pragmatism*, 2nd ed., edited by Robert W. Preucel and Stephen A. Mrozowski, pp.593-617. Wiley-Blackwell, Oxford, UK.

Northern California Geological Society (NCGS)
2009 February 2009 NCGS Newsletter. Electronic document, http://www.ncgeolsoc.org/Newsletters/2009/February%202009%20NCGS%20Newsletter.pdf, accessed February 24, 2014.

Northwest Information Center (NWIC)
2014 Historical Inventory. Electronic document, http://www.sonoma.edu/nwic/historical-inventory.html, accessed June 3, 2014.

Oakdale Cowboy Museum
2007 Stone Fences & Corrals in the South Central Sierra Nevada Foothills Catalog. Exhibit, October 2007 - May 2008. Electronic document, http://www.oakdalecowboymuseum.org/Pages/SubPages/Downloads/StoneFencesandCorrals.pdf, accessed July 30, 2014.

Oakes, Timothy S. and Patricia L. Price
2008 *The Cultural Geography Reader*. Routledge, New York.

Occidental Arts and Ecology Center (OAEC)
2009 Federated Indians of Graton Rancheria. Electronic document, http://www.oaec.org/figr, accessed July 20, 2014.

Offermann, J. and A. King
1979 *Archaeological Site Record for CA-SON-1172/H*. On file at the Northwest Information Center.

Opaluch, James J., James L. Anderson, and Kurt Schnier
2005 *A Risk Based Approach to Managing the Intentional Introduction of Non-Native Species*. Paper presented at the Association of Environmental and Resource Economists (AERE) Workshop, Grand Teton National Park, Wyoming.

Origer, Thomas and K. Wiseman
1970 *Archaeological Site Record for CA-SON-657*. On file at the Northwest Information Center, Rohnert Park, California.

Parkman, E. Breck and Joe Hood
1983 *Archaeological Site Record for CA-SON- 1419*. On file at the Northwest Information Center, Rohnert Park, California.

Phillips, David A., Jr.
2003 *Who's My Daddy? Who's My Mommy? Results of a Poll on the Origins of Private Sector CRM*. ACRA Edition October 1-12.

Powers, Stephen
1877 *Tribes of California*. University of California Press, Berkeley.

Praetzellis, Mary and Adrian Praetzellis
2006 Research Themes. In *Stockton Events Center Project: Cultural Resource Mitigation Report Archaeology of the Judge Creaner Home Site*. Julia G. Costello, Terry L. Brejla, Judith Marvin, Michael Meyer, and Erica Gibson, eds.Foothill Resources Ltd. Submitted to City of Stockton Department of Housing and Redevelopment. Copies available at the Central California Information Center, Turlock, California.

Praetzellis, Adrian
1986a *Archaeological Site Record for CA-SON-1560H*. On file at the Northwest Information Center, Rohnert Park, California.

1986b *Archaeological Site Record for CA-SON-1562H*. On file at the Northwest Information Center, Rohnert Park, California.

1986c *Archaeological Site Record for CA-SON-1563H*. On file at the Northwest Information Center, Rohnert Park, California.

1986d *Archaeological Site Record for CA-SON-1564H*. On file at the Northwest Information Center, Rohnert Park, California.

Preucel, Robert W. and Stephen A. Mrozowski,
2010 The New Pragmatism. In *Contemporary Archaeology in Theory: The New Pragmatism*, edited by Robert Preucel and Stephen Mrozowski, pp.1-50. Wiley-Blackwell, Oxford, UK.

Public Broadcasting Service
2013 *Mass Exodus From the Plains*. General Article. Electronic document, http://www.pbs.org/wgbh/americanexperience/features/general-article/dustbowl-mass-exodus-plains/, accessed May 29, 2014.

Pubols, Louise
2009 *The Father of All: The de la Guerra Family, Power, and Patriarchy in Mexican California*. University of California Press, Berkeley.

Rabellino, Kyle S.
2012 *Archaeological Site Record for CA-SON-2592/H*. On file at Northwest Information Center, Rohnert Park, California.

Rank, Nathan
2013 *Fairfield Osborn Preserve Oral History Project*. Transcript of an oral history conducted by Chris Wendt, Sonoma State University, pp. 1-26. Electronic document, http://www.sonoma.edu/preserves/documents/osborndata/fop_transcript_rank.pdf, accessed May 29, 2014.

Reed, Allen D.
1984 West Colorado Prehistoric Context. Electronic document, http://www.historycolorado.org/sites/default/files/files/OAHP/crforms_edumat/pdfs/602.pdf, accessed December 2, 2013.

Reynolds and Proctor
1898 *Map of Sonoma County, California, 1898*. Reynolds and Proctor, Santa Rosa.

Ribeiro, Maria, M. Jablonowski, and Y. Gahaghian
1993 *Archaeological Site Record for CA-SON-101*.

Richards, Leonard L.
2007 *The California Gold Rush and the Coming of the Civil War*. Vintage Books, New York.

Roberts, Allen and Matthew Booker
2014 Shell Mounds in San Francisco Bay Area. Electronic document,https://www.stanford.edu/group/spatialhistory/cgi-bin/site/viz.php?id=23, accessed April 23, 2014.

Rockman, Marcy and James Steele
2003 Conceptual Frameworks. In *The Colonization of Unfamiliar Landscapes: The Archaeology of Adaptation*, edited by Marcy Rockman and James Steele, pp.1-3. Routledge, New York.

Rohwedder, Rocky
2013 *Fairfield Osborn Preserve Oral History Project*. Transcript of an oral history conducted by Daniel Dunn, Sonoma State University, pp. 1-13. Electronic document, http://www.sonoma.edu/preserves/documents/osborndata/fop_transcript_rohwedder.pdf, accessed May 29, 2014.

Roth, Joan
2013 *Fairfield Osborn Preserve Oral History Project*. Transcript of an oral history conducted by Megan Wells, Sonoma State University, pp. 1-15. Electronic document, http://www.sonoma.edu/preserves/documents/osborndata/fop_transcript_roth_joan.pdf, accessed May 29, 2014.

Roth, William
2013 *Fairfield Osborn Preserve Oral History Project*. Transcript of an oral history conducted by Alexander E. Porter, Sonoma State University, pp. 1-15. Electronic document,http://www.sonoma.edu/preserves/documents/osborndata/fop_transcript_roth_william.pdf, accessed May 29, 2014.

Russian River Watershed Association (RRWA)
2013 RRWA Interactive Map. Electronic document, http://www.rrwatershed.org/map/,accessed February 24, 2014.

Schneider, Tsim D., Sara L. Gonzalez, Kent G. Lightfoot, Lee M. Panich, and Matthew A. Russell
2012 A Land of Cultural Pluralism: Case Studies from California's Colonial Frontier. In *Contemporary Issues in California Archaeology*, edited by Terry L. Jones and Jennifer E. Perry, pp. 319-337. Left Coast Press, Walnut Creek.

Schofield, John
2008 Heritage Management, Theory, and Practice. In *The Heritage Reader*, edited by Graham Fairclough, Rodney Harrison, John H. Jameson Jr., and John Schofield, pp.15-30. Routledge, New York.

Scott, Alister
2008 Assessing Public Perception of Landscape: the LANDMAP experience. In *The Heritage Reader*, edited by Graham Fairclough, Rodney Harrison, John H. Jameson Jr., and John Schofield, pp.15-30. Routledge, New York.

Sebastian, Lynne
2004 Archaeology and the Law. In *Legal Perspectives on Cultural Resources*, edited by Jennifer R. Richman and Marion P. Forsyth, pp. 3-16. AltaMira Press, New York.

Serpa, Larry
2013 *Fairfield Osborn Preserve Oral History Project*. Transcript of an oral history conducted by Rachel Higgins, Sonoma State University, pp. 1-49. Electronic document, http://www.sonoma.edu/preserves/documents/osborndata/fop_transcript_serpa.pdf, accessed May 29, 2014.

Service, Elman R.
1962 *Primitive Social Organization: An Evolutionary Perspective.* Random House, New York.

Sherwood, Brad
2011 State Approves Funding for North Coast and Bay Area Projects. Electronic document, http://www.scwa.ca.gov/lower.php?url=press-releases&article=state-approves-funding-for-north-coast-and-bay-area-projects-2011-08-24, accessed February 24, 2014.

Shipley, William F.
1978 Native Languages of California. In *California*, edited by Robert F. Heizer, pp. 80-90. Handbook of the North American Indians, vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Smirnoff, Leslie E.
2009 *A Cultural Resources Inventory and Management Plan for Sonoma Land Trust's Little Black Mountain Property*. Master's thesis, Department of Anthropology, Sonoma State University, Rohnert Park, California.

Smith, Laurajane
2008 Towards a Framework for Archaeological Heritage Management. In *The Heritage Reader*, edited by Graham Fairclough, Rodney Harrison, John J. Jameson Jr., and John Schofield, pp.62-74. Routledge, New York.

Smith, Marie B.
1973 *Avifauna Census and Habitat Associations of Fairfield Osborn Preserve, Sonoma County, California*. Master's thesis, Department of Biology, Sonoma State University, Rohnert Park, California.

Sokolove, Jennifer, Sally K. Fairfax, and Breena Holland
2002 Managing Place and Identity: The Marin Coast Miwok Experience. *The Geographical Review* 92(1):23-44.

Sommer, Skip
2010 Stories From the Past: Petaluma Gets a Water Works, 1860. *The Petaluma Post* 10 September, Petaluma, California.

Sonoma State University
2014 Sparking a Legacy of Environmental Education and Research. *Insights* Fall 2014:1-6.

Sonoma State University Department of Anthropology
2014 Master of Arts in Cultural Resources Management. Electronic document, https://www.sonoma.edu/anthropology/graduate/master.html, accessed October 3, 2014.

Sonoma State University Preserves
2014a About the Preserves. Electronic document, http://www.sonoma.edu/preserves/about/, accessed February 23, 2014.

2014b Mission. Electronic document, http://www.sonoma.edu/preserves/about/mission.html, accessed February 24, 2014.

2014c Publications of Fairfield Osborn Preserve. Electronic document, http://www.sonoma.edu/preserves/osborn/data.html, accessed February 24, 2014.

2014d Vascular Plants of the Fairfield Osborn Preserve. Electronic document, http://www.sonoma.edu/preserves/documents/osborndata/osborn-vascular-plants.pdf, accessed February 24, 2014.

2014e Fairfield Osborn Preserve Lichens. Electronic document, http://www.sonoma.edu/preserves/documents/osborndata/osborn-lichen.pdf, accessed February 24, 2014.

2014f Fairfield Osborn Preserve Vertebrates. Electronic document, http://www.sonoma.edu/preserves/osborn/data.html, accessed February 24, 2014.

2014g Weather Station Data. Electronic document, http://www.sonoma.edu/preserves/documents/osborndata/osborn-1997-2005-meteorology.pdf, accessed March 3, 2014.

Stanley, Jason and Michele Lanigan
1979 *Archaeological Site Record for CA-SON-117*. On file at Northwest Information Center, Rohnert Park, California.

Stone, Peter
2008 Stonehenge: A Final Solution? In *The Heritage Reader,* edited by Graham Fairclough, Rodney Harrison, John H. Jameson Jr., and John Schofield, pp.524-534. Routledge, New York.

Sudler, Barbara
1984 Preface. In *Northwest Colorado Prehistoric Context*, by James Grady. Electronic document, http://www.historycolorado.org/sites/default/files /files/OAHP/crforms_edumat/pdfs/600.pdf, accessed December 2, 2013.

Sutton, Mark Q.
2008 *An Introduction to Native North America*. 3rd ed. Pearson, Boston.

Taçon, Paul S. C.
2010 Identifying Ancient Sacred Landscapes in Australia: From Physical to Social. In *Contemporary Archaeology in Theory*, edited by Robert Preucel and Stephen Mrozowski, pp.77-91. Wiley-Blackwell, Oxford, UK.

Thalman, Sylvia Barker
2001 *The Coast Miwok Indians of the Point Reyes Area*. Point Reyes National Seashore Association, Point Reyes, California.

Thompson, S. and Thomas Origer
1984 *Archaeological Site Record for CA-SON-1097*. On file at the Northwest Information Center, Rohnert Park, California.

Thompson, Thos. H.
1877 *Historical Atlas Map of Sonoma County, California*. Thos H. Thompson & Co., Oakland.

Torliatt, Lee
2012 Sonoma County Timeline. Sonoma County Historical Society. Electronic document, http://www.sonomacountyhistory.org/sonoma-county-timeline/, accessed May 29, 2014.

Towns, Alexandra M., Sandra Mengue Eyi, and Tinde van Andel
2014 Traditional Medicine and Childcare in Western Africa: Mothers' Knowledge, Folk Illnesses, and Patterns of Healthcare-Seeking Behavior. *Public Library of Science* 9(8):1-9.

Tuolumne County Historical Society
2013 Stone Corrals and Fences. Electronic document, http://tchistory.org/TCHISTORY/Wonders_13.htm, accessed July 30, 2014.

United States Bureau of Land Management (US-BLM)
2014 General Land Office Records. Electronic document, http://www.glorecords.blm.gov/results/default.aspx?searchCriteria=type=map|st=CA|twp_nr=6|twp_dir=N|rng_nr=7|rng_dir=W|m=21#resultsTabIndex=3, accessed July 30, 2014.

United States Census Bureau
1995 California Population of Counties by Decennial Census: 1900 to 1990. Compiled and edited by Richard L. Forstall, Population Division. Washington, D.C.

2014 State and County QuickFacts: Sonoma County, California. Electronic document, http://quickfacts.census.gov/qfd/states/06/06097.html, accessed September 23, 2014.

United States Congress
1890 Chickamauga and Chattanooga National Military Park Act, Georgia and Tennessee. 51st Congress, 1st Session. Government Printing Office, Washington, D.C.

United States Department of Agriculture (USDA)
2014 Custom Soil Resource Report for Sonoma County, California. Natural Resources Conservation Service (NRCS), Washington, D.C. Online database available at the NRCS website, http://websoilsurvey.nrcs.gov, accessed February 6, 2014.

USDA Forest Service
2014a Ethnobotany. Electronic document, http://www.fs.fed.us/wildflowers/ethnobotany/, accessed July 20, 2014.

2014b Mendocino National Forest: About the Area. Electronic document, http://www.fs.usda.gov/main/mendocino/about-forest/about-area, accessed March 3, 2014.

United States Department of the Interior (US-DOI)
2013 The Public Land Survey System. Electronic document, http://www.nationalatlas.gov/articles/boundaries/a_plss.html.

United States General Land Office (US-GLO)
1857 Plat of the Cotate Rancho. United States General Land Office. National Archives, Washington, D.C.

1860 Plat of Rancho Petaluma. United States General Land Office. National Archives, Washington, D.C.

1865 Plat of Township 6 North, Range 7 West, Mount Diablo Meridian. United States General Land Office. National Archives, Washington, D.C.

United States Geologic Survey (USGS)
1916 *Santa Rosa, California, Quadrangle Map*. 15-minute series. U.S. Geological Survey, Washington, D.C.

1944 *Santa Rosa, California, Quadrangle Map*. 15-minute series. U.S. Geological Survey, Washington, D.C.

1954a *Glen Ellen, California, Quadrangle Map*. 7.5-minute series. U.S. Geological Survey, Washington, D.C. (photorevised 1980).

1954b *Cotati, California, Quadrangle Map*. 7.5-minute series. U.S. Geological Survey, Washington, D.C. (photorevised 1980).

1954c *Kenwood, California, Quadrangle Map*. 7.5-minute series. U.S. Geological Survey, Washington, D.C. (photorevised 1980).

1954d *Santa Rosa, California, Quadrangle Map*. 7.5-minute series. U.S. Geological Survey, Washington, D.C. (photorevised 1980).

1954e *Santa Rosa, California, Quadrangle Map*. 15-minute series. U.S. Geological Survey, Washington, D.C.

2014 History. Electronic document, http://www.usgs.gov/aboutusgs/who_we_are/history.asp, accessed June 4, 2014.

Van Maanen, John
1988 *Tales of the Field: On Writing Ethnography*. University of Chicago Press, Chicago, Illinois.

Von der Porten, Edward P.
1970 The Porcelains and Terra Cottas of Drake's Bay. In *Contributions to the Archaeology of Point Reyes National Seashore: A Compendium in Honor of Adam Treganza*, edited by R. E. Schenk, pp. 223-256. Treganza Museum Papers 6, San Francisco.

Voss, Barbara L.
2012 A Land of Ethnogenesis: Material Culture, Power, and Identity. In *Contemporary Issues in California Archaeology*, edited by Terry L. Jones and Jennifer E. Perry, pp. 303-318. Left Coast Press, Walnut Creek, California.

Watt, Laura A., Leigh Raymond, and Meryl L. Eschen
2004 Reflections on Preserving Ecological and Cultural Landscapes. *Environmental History* 9:620-647.

Werner and Amaroli, Paul
1977a *Archaeological Site Record for CA-SON-97*. On file at the Northwest Information Center, Rohnert Park, California.

1977b *Archaeological Site Record for CA-SON-102*. On file at the Northwest Information Center, Rohnert Park, California.

White, Gregory G. and Thomas F. King
2007 *The Archaeological Survey Manual*. Left Coast Press, Walnut Creek, California.

Wilkie, Laurie A.
2006 Documentary Archaeology. In *The Cambridge Companion to Historical Archaeology*, edited by Dan Hicks and Mary C. Beaudry, pp. 34-47. Cambridge University Press, Cambridge, UK.

Wilson, Simone
1990 *Sonoma County: The River of Time.* Windsor Publications, Inc., Chatsworth, California.

Wu, Jianguo
2010 Landscape of Culture and Culture of Landscape: Does Landscape Ecology Need Culture? *Landscape Ecology* 25:1147-1150.

Wyatt, Barbara
2009 The Components of a Historic Context: A National Register White Paper. Electronic document, http://www.nps.gov/nr/publications/policy.htm, accessed December 2, 2013.

Young, David and Leonard Miller
2004 Map of Fairfield Osborn Preserve. Electronic document, http://www.sonoma.edu/preserves/documents/osborndata/osborn-preserve-overview.pdf, accessed February 24, 2014.

Appendix A
Native American Coordination Documents

ANTHROPOLOGICAL STUDIES CENTER
Sonoma State University
1801 East Cotati Avenue, Building 29
Rohnert Park, CA 94928

FAX TRANSMITTAL FORM

To: Native American Heritage Commission

Fax No.:916.373.5471
Phone No.: 916.373.3710

Date: 9 May 2013

Total Number of Pages: 2
(including cover page)

From: Kyle Rabellino
Fax No.: (707)664-4155
Phone No.: (707)664-2381
E-mail: asc@sonoma.edu

Re: Cultural Resources Study of the Fairfield Osborn Preserve Penngrove, Sonoma County, California

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COMMENTS

Please review the sacred lands files for any Native American cultural resources that may be within or adjacent to the project area depicted on the accompanying map. The project area, near Penngrove, Sonoma County, lies within Township 6 North, Range 7 West, Sections 23, 24, and 25, as depicted on the Sonoma, Calif. 7.5' topographic map. The study is being conducted for the purposes of completing a Cultural Resources Management Plan for the Fairfield Osborn Preserve. We also request a list of Native American individuals /organizations who may have knowledge of cultural resources in the project area. Please call if you have any questions.

Thank you for your assistance.

ASC Web Site: http://www.sonoma.edu/projects/asc/

Please call as soon as possible if there are any transmission problems: (707)664-2381

STATE OF CALIFORNIA Edmund G. Brown, Jr., Governor

NATIVE AMERICAN HERITAGE COMMISSION
1550 Harbor Blvd.
West SACRAMENTO, CA 95691
(916) 373-3710
Fax (916) 373-5471

May 20, 2013

Kyle Rabellino
Sonoma State University
1801 E. Cotati Ave., Bldg. 29
Rohnert Park, CA 94928

Sent by Fax: 707-664-4155

Number of Pages: 2

Re: Fairfield Osborn Preserve Penngrove, Sonoma County

Dear Ms. Rabellino:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 373-3713.

Sincerely,

Debbie Pilas-Treadway
Environmental Specialist III

Native American Contacts
Sonoma County
May 16, 2013

The Federated Indians of Graton Rancheria
Gene Buvelot
6400 Redwood Drive, Ste 300
Rohnert Park , CA 94928
coastmiwok@aol.com
415 279-4844 - Cell
707-566-2288 ext 103

Coast Miwok
Southern Pomo

The Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Ste 300
Rohnert Park , CA 94928
coastmiwok@aol.com
707-566-2288
707-566-2291 - fax

Coast Miwok
Southern Pomo

The Federated Indians of Graton Rancheria
Frank Ross
PO Box 854
Novato , CA 94948
miwokone@yahoo.com
(415) 269-6075

Coast Miwok
Southern Pomo

Ya-Ka-Ama
7465 Steve Olson Lane
Forestville , CA 95436
cbelleau@yakaama.org,
(707) 887-1541

Pomo
Coast Miwok
Wappo

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Fairfield Osborn Preserve Penngrove, Sonoma County

28 May 2013

The Federated Indians of Graton Rancheria
Gene Buvelot
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928

Dear Mr. Buvelot,

My name is Kyle Rabellino and I am a M.A. candidate in the CRM program at Sonoma State University and an employee of the Anthropological Studies Center (ASC). I am conducting a record search and cultural resources inventory of approximately 410 acres of the Fairfield Osborn Preserve (FOP), in Penngrove, Sonoma County, as depicted on the Glen Ellen 7.5' topographic map (see attached project location map). The study is being conducted as part of my thesis and for the purposes of completing a cultural resources management plan for the FOP. Additionally, I will be taking a sample of approximately 30 pieces of obsidian for non-destructive X-ray fluorescence testing.

I would appreciate being informed of any information, concerns, ideas and/or input that your organization may have in regards to cultural resources within the project area and the cultural resources management plan in general. Please do not hesitate to give me a call at (707) 664-2381 or contact me via email at rabellin@sonoma.edu. If you prefer, please write me at the address above. I look forward to hearing from you. Thank you.

Sincerely,

Kyle Rabellino
Project Coordinator

28 May 2013

The Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928

Dear Mr. Sarris,

My name is Kyle Rabellino and I am a M.A. candidate in the CRM program at Sonoma State University and an employee of the Anthropological Studies Center (ASC). I am conducting a record search and cultural resources inventory of approximately 410 acres of the Fairfield Osborn Preserve (FOP), in Penngrove, Sonoma County, as depicted on the Glen Ellen 7.5' topographic map (see attached project location map). The study is being conducted as part of my thesis and for the purposes of completing a cultural resources management plan for the FOP. Additionally, I will be taking a sample of approximately 30 pieces of obsidian for non-destructive X-ray fluorescence testing.

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Sincerely,

Kyle Rabellino
Project Coordinator

28 May 2013

The Federated Indians of Graton Rancheria
Frank Ross
PO Box 854
Novato, CA 94948

Dear Mr. Ross,

My name is Kyle Rabellino and I am a M.A. candidate in the CRM program at Sonoma State University and an employee of the Anthropological Studies Center (ASC). I am conducting a record search and cultural resources inventory of approximately 410 acres of the Fairfield Osborn Preserve (FOP), in Penngrove, Sonoma County, as depicted on the Glen Ellen 7.5' topographic map (see attached project location map). The study is being conducted as part of my thesis and for the purposes of completing a cultural resources management plan for the FOP. Additionally, I will be taking a sample of approximately 30 pieces of obsidian for non-destructive X-ray fluorescence testing.

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Sincerely,

Kyle Rabellino
Project Coordinator

28 May 2013

The Federated Indians of Graton Rancheria
Nick Tipon
6400 Redwood Drive, Suite 300
Rohnert Park, CA 94928

Dear Mr. Tipon,

My name is Kyle Rabellino and I am a M.A. candidate in the CRM program at Sonoma State University and an employee of the Anthropological Studies Center (ASC). I am conducting a record search and cultural resources inventory of approximately 410 acres of the Fairfield Osborn Preserve (FOP), in Penngrove, Sonoma County, as depicted on the Glen Ellen 7.5' topographic map (see attached project location map). The study is being conducted as part of my thesis and for the purposes of completing a cultural resources management plan for the FOP. Additionally, I will be taking a sample of approximately 30 pieces of obsidian for non-destructive X-ray fluorescence testing.

I would appreciate being informed of any information, concerns, ideas and/or input that your organization may have in regards to cultural resources within the project area and the cultural resources management plan in general. Please do not hesitate to give me a call at (707) 664-2381 or contact me via email at rabellin@sonoma.edu. If you prefer, please write me at the address above. I look forward to hearing from you. Thank you.

Sincerely,

Kyle Rabellino
Project Coordinator

FEDERATED INDIANS OF GRATON RANCHERIA

Federated Indians of Graton Rancheria
Sacred Sites Protection Committee
6400 Redwood Drive Suite 300
Rohnert Park, CA 94928

June 5, 2013

Kyle Rabellino
ASC
1801 E. Cotati Ave.
Rohnert Park, CA 94928

Dear Kyle:

The Federated Indians of Graton Rancheria (FIGR), a federally recognized Tribe and sovereign government, has received your request regarding to XRF obsidian samples form the Fairfield Osborn Preserve. FIGR provides comments regarding cultural resources to protect and/or avoid our cultural resources that might be adversely impacted by the scope of work of a project. The Sacred Site Protection Committee (SSPC) is authorized by the Tribal Council to work with agencies to develop the specific plans and procedures to avoid any potential adverse impacts.

There are many cultural resources within the preserve, especially plants of cultural significance and importance. Please send us a draft of your study for comments from the Tribe.

The non-destructive testing of obsidian is acceptable and we would like a copy of the results for our records.

Respectfully,

Nick Tipon
Sacred Sites Protection Committee