E. CULTURAL AND PALEONTOLOGICAL RESOURCES

This section provides an overview of the potential presence of cultural and paleontological resources in the Study Area of the East Bay Regional Parks District's (EBRPD's) Wildfire Hazard Reduction and Resource Management Plan (Plan) the proposed project. Also included is a discussion of potential impacts to such resources as a result of project implementation, as well as mitigation recommendations, as warranted. LSA Associates, Inc., provided EBRPD with a more detailed report concerning cultural and paleontological resources that is available for review at EBRPD's Administrative Headquarters 2950 Peralta Oaks Court, Oakland CA.

The lands managed by EBRPD are home to a wide range of cultural and paleontological resources. These resources contribute to the diverse historical and geological background of the San Francisco Bay Area, and are unique, nonrenewable community assets. Such resources on EBRPD lands include, but are not limited to, prehistoric and historical archaeological sites, historical buildings and structures, areas of traditional or religious value to contemporary communities, and fossiliferous geological deposits.

1. Setting

This subsection describes the existing conditions for cultural and paleontological resources in the Study Area. The subsection begins with a description of the methods used to obtain background information, followed by an overview of the Study Area's prehistory, ethnography, history, and paleontology/geology. A summary of recorded cultural and paleontological resources in the Study Area follows. Finally, the legislative context for cultural and paleontological resources is presented.

The background research for this project was conducted in 2006 and 2007. The dates for each respective phase of the research are indicated, as appropriate.

a. Methods. The information used for this section was obtained primarily from existing documents. Methods are described separately below for cultural and paleontological resources.

(1) Cultural Resources. Information about Study Area cultural resources was obtained through background research, which consisted of a records search, literature review, and contacts with potentially interested parties.

Records Search. On May 3, 2006, and August 15, 2007, a records search (file #05-1039 and #07-246) of the Study Area was conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System, Sonoma State University, Rohnert Park, California. The NWIC, an affiliate of the California Office of Historic Preservation, is the official state repository of cultural resources reports and records for 16 northern California counties, including Alameda and Contra Costa. The purpose of the records search was to identify recorded cultural resources and cultural resource studies in the Study Area.

Part of the background research included a review of the *California Inventory of Historic Resources*,[1] as well as the Office of Historic Preservation's *Five Views: An Ethnic Historic Site Survey for*

[1] California Department of Parks and Recreation, 1976. California Department of Parks and Recreation, Sacramento.

California;[2] *California Historical Landmarks*;[3] *California Points of Historical Interest*;[4] and the *Directory of Properties in the Historic Property Data File.*[5] The *Directory of Properties* includes the listings of the National Register of Historic Places and the California Register of Historical Resources, National Historic Landmarks, and the most recent listings of the California Historical Landmarks and California Points of Historical Interest.

Literature Review. Archaeological, ethnographic, historical, and environmental publications and maps were reviewed. The literature review was done to identify cultural resources in the Study Area and obtain information for the cultural resources background summary.

GIS databases and documents specific to the Study Area were reviewed by LSA. EBRPD provided resource tables and GIS layers depicting the known locations of cultural resources in each Study Area park. This layer was compared with the archival results from the NWIC to identify gaps in the EBRPD cultural resource database. LSA reviewed documents obtained from the records search, EBRPD, and the internet to prepare a current cultural resource inventory for the Study Area, as well as to characterize its historical background. These documents included:

- *A Cultural Resource Management Plan for East Bay Regional Park District Lands*[6]
- *Report of the Archaeological Reconnaissance of the Proposed Mountain Village Developments, Alameda County, California*[7]
- *An Investigation of the Cultural Resources within the Anthony Chabot Regional Park, Alameda County, California*[8]
- *Cultural Resource Reconnaissance for the Proposed East Bay Regional Park District Fire Mitigation Projects, Alameda and Contra Costa Counties, CA, HMGP #919-515-4* [9]
- *Temescal Recreational Area Land Use-Development Plan and Environmental Impact Report*[10]
- *Wildcat Canyon History*[11]
- *Redwood Regional Park*[12]
- *Sibley Volcanic Regional Preserve Brochure*[13]

[2] California Office of Historic Preservation, 1988. California Department of Parks and Recreation. Sacramento.

[3] California Office of Historic Preservation, 1990. California Department of Parks and Recreation. Sacramento.

[4] California Office of Historic Preservation, 1992. California Department of Parks and Recreation. Sacramento.

[5] California Office of Historic Preservation, April 6, 2006. California Department of Parks and Recreation. Sacramento.

[6] Shannon, Peggy, 1990. M.A. thesis, Sonoma State University, Rohnert Park, California.

[7] Archaeological Consulting and Research Services, Inc., n.d. Mill Valley, California.

[8] Banks, Peter, 1982. California Archaeological Consultants, Inc., Oakland, California.

[9] Dexter, Sean, and Daniel Shoup, 2000. URS, Oakland California.

[10] East Bay Regional Park District, 1993. Planning/Stewardship Department, Oakland, California.

[11] East Bay Regional Park District, 2006. Website: http://www.ebparks.org/parks/wildcat.htm.

[12] East Bay Regional Park District, 1977. Oakland, California.

[13] East Bay Regional Park District, n.d. Brochure prepared by the East Bay Regional Park District, Oakland, California.

- *Robert Sibley Volcanic, Huckleberry Botanic, and Claremont Canyon Regional Preserves: Land Use-Development Plan Environmental Impact Report-Final*[14]
- *A Vision Achieved: Fifty Years of the East Bay Regional Park District*[15]
- *Robert Sibley Volcanic Regional Preserve, Huckleberry Botanic Regional Preserve, Claremont Canyon Regional Preserve: Resource Analysis*[16]

(2) Contacts with Potentially Interested Parties. LSA contacted the Native American Heritage Commission (NAHC), the Alameda County Historical Society (ACHS), and the Contra Costa County Historical Society (CCCHS) for information or concerns about the Study Area. Each contact and response is summarized below.

On July 7, 2006, and August 30, 2007, Ms. Debbie Pilas-Treadway, NAHC Environmental Specialist III, responded by faxed letter that the Sacred Lands File did not indicate the presence of Native American cultural resources in the Study Area. On September 5, 2007, LSA spoke to Ms. Helen Lore, Board Member of the ACHS. Ms. Lore stated that neither she nor her organization had any comments or concerns about the project. Ms. Betty Maffei, Director of CCHS, stated in a phone call on June 29, 2006 that neither she nor the CCCHS had any other concerns about the project or Study Area, but supports EBRPD efforts to reduce fire risk by managing fuels on their lands.

(3) Paleontological Resources. Information about Study Area paleontological resources was obtained through background research, which consisted of locality searches and literature review.

Fossil Locality Search. A fossil locality search was conducted on May 26, 2006, and September 19, 2007, using data from the University of California Museum of Paleontology. The fossil locality searches were conducted to identify recorded paleontological resources in the Study Area.

Literature Review. LSA reviewed paleontological and geological literature for the Study Area and its vicinity. This review was done to identify geologic units and the types of fossils that may be within or adjacent to the Study Area.

b. Study Area Overview. This subsection provides a brief overview of the cultural resources background of the Study Area, including Native American habitation prior to, and during, European settlement (prehistory and ethnography), including Native American use of fire as a tool for ecological management; and the historic period spanning from the ethnographic period through the present day (history). A brief summary of park development with individual park unit backgrounds is included as part of the historical summary. Finally, a brief overview of the geology/paleontology of the Study Area is presented. No field study was conducted to prepare this section.

(1) Prehistory and Ethnography. Research indicates that California was probably settled by native Californians between 12,000 and 6,000 years ago.[17] Penutian peoples migrated into central

[14] Royston, Hanamoto, Alley & Abey, 1985. Mill Valley, California.

[15] Stein, Mimi, 1984. East Bay Regional Park District, Oakland, California.

[16] Larry Seeman Associates, Inc., 1985.

[17] Moratto, Michael J., 1984, p. 76. *California Archaeology.* Academic Press, Orlando, Florida.

California around 4,500 years ago and were firmly settled around San Francisco Bay by 1,500 years ago. The descendants of the native groups who lived between the Carquinez Strait and the Monterey area are the Ohlone, although they are often referred to by the name of their linguistic group, Costanoan.[18]

The Ohlone and Bay Miwok were culturally similar and tended to intermarry. The Bay Miwok lived along the Carquinez Strait, in the East Bay Hills, and within certain areas of the East Bay, including what is now San Ramon and Dublin. Since more ethnographic data is available about the Ohlone, and given the cultural similarities between the groups, the following discussion focuses on the Ohlone.

Ohlone villages and temporary campsites were located along waterways near sources of fresh water. Villages were also located adjacent to the marshlands that formerly bordered San Francisco Bay. Historic records from Hispanic explorations describe shell mounds situated along the San Francisco Bay shore, usually beside freshwater creeks that drained into the bay. The mounds are often in groups or clusters of mounds of four to six mounds or more. The size, shape, use, internal composition, and age of these shellmounds varied. However, they were all used for hundreds or thousands of years by Bay Area Native Americans as residential locations (possibly constructed to protect native villages from increasing high tide levels due to sea level rising), resource processing sites, repositories for the dead, and ceremonial purposes. [19] The Emeryville Shellmound, the largest shellmound in the Bay Area prior to its disturbance by historical land development, was established in the early Late Holocene (circa 3000-2500 years before the present) according to radiocarbon dating results.[20] Originally, the Emeryville Shellmound was a complex of six or more shellmounds.[21]

For the Ohlone, like many other Native Americans in California, the acorn was a dietary staple. Acorns were knocked from trees with poles, leached to remove bitter tannins, ground, and eaten as mush or bread. The Ohlone used a range of other plant resources, including buckeye, California laurel, elderberries, strawberries, manzanita berries, goose berries, toyon berries, wild grapes, wild onion, cattail, amole, wild carrots, clover, and chuchupate. Animals taken by the Ohlone included black-tailed deer, Roosevelt elk, antelope, and marine mammals. Smaller animals such as dog, skunk, racoon, rabbit, squirrel, geese and ducks, salmon, sturgeon, and mollusks were also taken. In addition to sustenance, the Bay Area's flora and fauna provided the Ohlone with raw materials for clothing, shelter, and boats.[22]

Intensive Hispanic exploration and settlement of the Bay Area began in the late eighteenth century, and Ohlone culture was radically transformed when European settlers moved into northern California.

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[18] Margolin, Malcolm, 1978. *The Ohlone Way: Indian Life in the San Francisco-Monterey Bay Area.* Coyote Press, Salinas, California.

[19] Lightfoot, Kent, 1997, pp. 129-141. Cultural Construction of Coastal Landscapes, A Middle Holocene perspective from San Francisco Bay. In *Archaeology of the California Coast During the Middle Holocene,* edited by Jon M. Erlandson and Michael Glassow. Perspectives in California Archaeology, vol. 4, Jeanne E. Arnold, senior series editor. Cotsen Institute of Archaeology, University of California, Los Angeles.

[20] Lightfoot, Kent, 2004, pp. 16-17. Shellmounds: An Archaeologist's View. In *News From Native California,* Spring.

[21] Broughton, Jack M., 1996. *Excavation of the Emeryville Shellmound, 1906: Nels C. Nelson's Final Report*. Contributions of the University of California Archaeological Research Facility 54. University of California, Berkeley.

[22] Levy, Richard, op. cit., pp. 491-492.

These settlers established the mission system and exposed the Ohlone to diseases to which they had no immunity. Mission San Francisco de Assisi (Mission Dolores) was founded in 1776, and drew Ohlone from the entire Bay Area. Mission Santa Clara, just outside of San Jose, was founded in 1777. Many East Bay Native Americans, particularly those of eastern Alameda County and Contra Costa County, went to Mission Santa Clara. Mission records list the Huichun at Mission San Francisco between 1794 and 1805.[23] The Jalquin and the Saclan appear in Mission San Francisco records in 1801-1803, although the Bay Miwok were listed as a group beginning in the 1790s.[24] Following the disbanding of the missions in 1834, native people in the Bay Area moved to ranchos, where they worked as manual laborers.[25]

(2) Native American Use of Fire in the East Bay. In the prehistoric and ethnographic periods, Native Americans in California actively used fire to encourage the growth of desirable plant species, manage plant community succession, and attract economically important animal species.[26] Non-human-induced fire was not a likely determinant of changing vegetation patterns prior to human entry into the area.[27] The distribution of East Bay vegetation patterns has been a matter of speculation over the years, and the agency of human fire management is considered a contributor to the historical origin and modern presence of East Bay grasslands. Evidence of such burn management is inferred from fire scarring in forests north and south of the East Bay, where the interval of fire scar events did not correlate well with the area's low lightning fire potential.[28] The frequency of the fire events exceeded what was expected naturally.

As humans settled in the San Francisco Bay Area, their influence on the expansion of formerly isolated pockets of grassland was probably minimal, likely due to low population densities. As the mid-Holocene arrived, however, evidence indicates that a drying climate increased the efficacy of burning as a selective management tool. This supposition is supported by archaeological evidence of a shift to a seed-based economy as the creation of seed-rich grassland began in earnest.[29]

The benefits of the native use of fire were numerous, but perhaps the greatest boon was subsistence related. The creation of open, non-canopied areas supported a wider array of wildlife and seed-bearing plant resources than formerly shady woodland areas, and as native bunchgrasses and forbs succeeded in newly cleared areas, foraging opportunities increased.[30] As European settlers colonized the East Bay lands formerly held by native occupants, the land management practices these settlers introduced greatly curtailed and in most areas ended any Native American fire management. Though European settlers also used fire to transform the landscape, research suggests that the distribution of

[23] Milliken, Randall, op. cit., p. 243.

[24] Ibid, pp. 244-245, 253.

[25] Levy, Richard, op. cit., pp. 462-470.

[26] Lewis, Henry T., 1973, pp. 41-42. *Patterns of Indian Burning in Californa: Ecology and Ethnohistory.* Ballena Press Anthropological Papers No. 1. Lowell John Bean, Editor.

[27] Keeley, Jon E., 2005, p. 290. Fire History of the San Francisco East Bay Region and Implications for Landscape Patterns. *International Journal of Wildland Fire*, Volume 14, pp. 285-296.

[28] Ibid, p. 293.

[29] Ibid

[30] Lewis, op. cit., pp. 83-85.

grasslands in the East Bay was probably effected thousands of years *prior* to the arrival of those settlers from the Old World.

(3) History. Hispanic exploration along the California coast began in the 16th century, but it was not until the Portolá expedition trekked north from San Diego in 1769 that Europeans saw San Francisco Bay. Spanish settlement in the Bay Area focused around missions and presidios at Monterey, Santa Cruz, San Juan Bautista, San Jose, Santa Clara, San Francisco, San Rafael, and Sonoma. No missions were established in the northern East Bay, despite its agricultural fertility and large native population. The Spanish referred to the East Bay as *Contra Costa* – the "opposite" or "other" coast – and considered it a backwater.[31]

On August 3, 1820, Luis Maria Peralta was granted Rancho San Antonio for his service to the Spanish government. Portions of his 43,000-acre rancho eventually became the cities of Oakland, Alameda, Albany, Berkeley, Emeryville, and parts of San Leandro and Piedmont. The following Study Area park units are within former Rancho San Antonio: Tilden, Claremont Canyon, Sibley, Redwood, and Leona Canyon.

The discovery of gold at Sutter's Mill in 1848 brought thousands of new residents to northern California and dramatically increased settlement in the East Bay. However, the East Bay's gold rush development was unlike San Francisco's raucous Barbary Coast; instead, the "other coast" was known as a quiet area settled by shopkeepers, farmers, and their families. The recipients of Spanish land grants often lost their property to newly arrived settlers, who then founded the towns of Oakland, Emeryville, and Ocean View (later incorporated into the City of Berkeley).

East Bay urban and residential growth in the late 19th century was very gradual. Although Oakland was the largest city in the East Bay, MacArthur Boulevard was still a country road with few buildings until the beginning of the 20th century. The devastation of the 1906 earthquake and fire in San Francisco prompted an increase in development of new residential areas throughout the East Bay to accommodate displaced San Francisco residents. Older neighborhoods became more densely populated as new buildings and related growth became part of the residential fabric.

Park Development.[32] EBRPD development is closely aligned with the development of East Bay water districts and the establishment of large water reserves for the growing populace. Anthony Chabot, a civil engineer, designed reservoirs for the Contra Costa Water Company in the late 1800s. Lake Temescal was designed and constructed in 1868 and Lake Chabot was completed in 1875. San Leandro and San Pablo reservoirs were constructed in the early 1900s. In the early 1920s, when water storage was threatened by urban growth and drought, the East Bay Water Company acquired the local water districts and purchased large tracts of the East Bay Hills to ensure sufficient water supplies. The East Bay Municipal Utility District (EBMUD) was formed in 1924 to import water directly from the Sierra Nevada and the Mokelumne River, and, four years later, EBMUD purchased the East Bay Water Company and all its land holdings. EBMUD now had a stable supply of water from the

[31] Wollenberg, Charles, 1985. *Golden Gate Metropolis: Perspectives on Bay Area History*. Institute of Governmental Studies, University of California, Berkeley.

[32] Portions of this section are excerpted from Sean Dexter and Daniel Shoup, 2000. *Cultural Resource Reconnaissance for the Proposed East Bay Regional Park District Fire Mitigation Projects, Alameda and Contra Costa Counties, CA HMGP #919-515-4.* URS, Oakland, California.

Mokelumne River pipeline, but also a surplus of reservoirs and land holdings. A declaration was made that more than 10,000 acres of the East Bay Hills were 'surplus and available' lands.[33]

In 1934, a ballot measure was proposed to create EBRPD to manage surplus EBMUD lands. The East Bay Metropolitan Park Association, with the Sierra Club and other civic organizations, sponsored the successful ballot measure, but EBMUD did not relinquish the lands until 1936. By 1940, Lake Temescal, Tilden, Sibley and Redwood Regional parks were managed and owned by EBRPD. EBRPD acquired Anthony Chabot Regional Park and Roberts Regional Recreation Area in 1952. Most Contra Costa County parks joined EBRPD in 1963, and by 1967, Briones and Wildcat Canyon Regional parks, Kennedy Grove, and Las Trampas Regional Wilderness had become part of EBRPD. By 1971, Claremont Canyon and lands adjacent to and east of San Francisco Bay were purchased. Leona Heights Regional Open Space Preserve was acquired in 1986.

Anthony Chabot Regional Park and Lake Chabot Regional Park. The southern portion of the park, including Lake Chabot, was within Rancho San Lorenzo. Several domestic sites (no longer extant) were established within what are now the present park boundaries between 1848 and 1878, most likely associated with the logging of Redwood groves in the 19th century. [34] A 1982 review of one of the homestead sites within the Bort Meadow/Big Trees and Stonebridge campgrounds indicated that few traces are left of the domestic sites other than a sparse scatter of historic materials. Portions of the historic Grass Valley Trail, the only route between the Oakland vicinity and Grass Valley, were present during a 1982 review, but we assessed as lacking historical integrity. Campsites associated with the construction of Lake Chabot may also have been present within the Study Area, though they have yet to be identified through field or archival study.

The parks were named for Anthony Chabot, a civil engineer who designed reservoirs, including Lake Chabot, for the Contra Costa Water Company in the late 1800s. EBRPD acquired Anthony Chabot Regional Park in 1952, and the park's Willow Park Golf Course was built in 1966.

Claremont Canyon Regional Preserve. The preserve, formerly within Rancho San Antonio, was known as Telegraph Canyon in the late 19th century. The transcontinental telegraph line ran through the preserve connecting Oakland with the rest of the country. The Pony Express occasionally also used the pass. During the first half of the 1900s, the Marron family held most of the lands and operated a dairy farm. The upper portions of the canyon were held by the Alameda Water Company. In 1914, following the construction of the Claremont Hotel, the preserve was open only to horseback riders and hikers. In 1929, a paved road provided additional access to the lands and individual parcels were subdivided and sold but never developed. An additional 64 acres were added to the preserve in 1979.[35]

Eastshore State Park. The land that became Eastshore State Park had a history of industrial development. Factories and warehouses were built along the waterfront, including the Standard Soap Company and the West Berkeley Planing Mill. Fleming Point became the location first of an explosives company, then of the San Francisco Chemical Company, which manufactured various

[33] Stein, Mimi, op. cit.

[34] Banks, Peter, 1982. *An Investigation of the Cultural Resources within the Anthony Chabot Regional Park, Alameda County, California*. California Archaeological Consultants, Inc., Oakland, California.

[35] Larry Seeman Associates, Inc., op. cit., p. 13.

acids for industrial and laboratory uses. The Vigorite Powder Works on Point Isabel manufactured explosives, as did the California Cap Company farther north. [36] The City of Berkeley elected to use its portion of shoreline for municipal waste disposal, and by 1923 a plan was developed for a "fill and cover" landfill along the shoreline.[37] The waterfront remained an industrial area through much of the 20th century, but recent years have seen a gradual decline in manufacturing businesses. EBRPD acquired the land for Eastshore State Park on behalf of the State of California in 1988.

Huckleberry Botanic Regional Preserve. The preserve was not within any of the East Bay ranchos and was never developed. The Oakland, Antioch, and Eastern Railroad, connecting Oakland and central Contra Costa County, contained a tunnel that was within the park. The tunnel, which is now closed, was in an area called Eastport. The Sacramento Northern Electric Railway later took over the line which was abandoned in the 1950s. The original plan for this preserve was as a connector between Sibley Preserve and Redwood Regional Park. The preserve was expanded to include an entire ecosystem, and became part of EBRPD in 1973.[38]

Kennedy Grove Regional Recreation Area. Long before this 218-acre area became a park, it was the site of ranchos, wheat fields, and stations for a narrow gauge railroad that ran from Oakland to Orinda through Richmond and the Sobrante Hills. Kennedy Grove was once a portion of the 17,754-acre Rancho San Pablo. Francisco Castro took possession of the rancho in 1823, and later the grove was the site of the Clancy Ranch. By 1886 there were scheduled railroad stops of the California Nevada Railroad at Frenchman's Curve and Laurel Grove Station. The park was dedicated as a unit of EBRPD in 1967, named to honor the late President John F. Kennedy.[39]

Leona Canyon Regional Open Space Preserve. The preserve was within the Rancho San Antonio (A.M. Peralta) Land Grant and in the 1880s a quarry for paint manufacturing materials was opened within Leona Heights. A railroad was completed in 1888 to haul quarry materials and ore and, on weekends, to transport visitors out for picnics. The popular Leona Heights Hotel was constructed in 1890 and destroyed by fire in 1906. Railroad transportation continued into the 1930s and Merritt College was constructed at the quarry site, adjacent to and northwest of the park, in 1971.[40]

Miller/Knox Regional Shoreline. Ferry Point was once the western terminus of the transcontinental railroad. It was opened in 1900 by the Santa Fe Railroad to move freight and passengers from Richmond to San Francisco, but ferry service ended in 1975. Prior to 1900 the Potrero Hills, which form the backbone of Miller/Knox Regional Shoreline, were an island until the railroad built a causeway for trains bringing freight and passengers to Ferry Point. The East Bay

[36] California Cap Company, 1922. "The California Cap Company: A Story of the Development of the Blasting Cap Industry, with Sidelights on Manufacturing." In *The Detonator*, July 1922:26-28.

[37] Pettitt, George A., 1973. *Berkeley: The Town and Gown of It*. Value Communications.

[38] Ibid, p. 12.

[39] East Bay Regional Park District, 2007. *Kennedy Grove History*. Website: http://www.ebparks.org/files/EBRPD_files/brochure/kennedy_grove_text.pdf, revised June 2005.

[40] Archaeological Consulting and Research Services, Inc., n.d. *Report pf the Archaeological Reconnaissance of the Proposed Mountain Village Developments, Alameda County, California*. Mill Valley, California.

Regional Park District restored a part of the pier for public fishing and recreation. EBRPD dedicated this park in 2002.[41,42]

Point Pinole Regional Shoreline. Point Pinole was home to four explosives manufacturing companies over the course of 80 years: Safety Nitro Powder Company, Granite Powder, Giant Powder Company, and Atlas Powder Company. The park's undeveloped location suited a manufacturing industry that posed significant risk of explosion to neighboring buildings. From 1880 to 1960, 2 billion pounds of dynamite were manufactured here. When Giant Powder Company finally ended up at Point Pinole in the 1890s, it consolidated with the existing Safety Nitro plant here, and renamed everything with the Giant name: Giant Station, Giant Village, Giant Highway, etc. By 1916-17, Point Pinole had become an industrial center and company town with its own railroad station, school, Craftsman-style bungalows and boarding houses for workers, and a privately owned recreation area called Giant Park with a dance hall, saloon, barbecue pits, bocce ball court, playground and picnic gazebos. Newer, cheaper alternatives to dynamite were developed during WWII, and by 1960 dynamite manufacturing at Point Pinole came to an end. Bethlehem Steel Company, who had purchased the land as the site of a steel plant, sold it to EBRPD in 1971.[43]

Redwood Regional Park. The park was adjacent to Rancho San Antonio and Rancho Laguna de los Palos Colorados and both ranchos cut redwoods within the park's current boundaries. During the 1800s, mills and mill roads were constructed to meet the demands for lumber. Small shantytowns developed around the mills where up to 100 men resided. The lands within the park were also grazed and farmed after the logging ceased in the late 1800s. These large land parcels changed ownership frequently until they were purchased by the Utility District in 1928. Following the transfer of the property to EBRPD, Redwood Regional Park encompassed more than 2,100 acres.[44]

Roberts Regional Recreation Area. Roberts Regional Recreation Area opened for public use in 1953. The park was named to honor Thomas J. "Tommy" Roberts, who at that time had served as secretary to the EBRPD board of directors for 19 years. This 100-acre area is known for its lush setting in a grove of fragrant second-growth redwood trees off Skyline Boulevard in Oakland. The original grove was logged between 1840 and 1860 to support the needs of a growing Bay Area community. Of particular interest in park is the former location of the famous "landmark trees." The landmark trees were two giant redwoods used by sailors as navigational aids to avoid the treacherous Blossom Rock, submerged in the bay between Alcatraz Island and San Francisco. The location is a California Historical Landmark (#962), marked by a historic plaque near the Madrone picnic area.[45]

Robert Sibley Volcanic Regional Preserve. Little is known about most of this park unit's early land use since Thornhill Canyon or Sibley Triangle is the only portion of the park that was within

[41] East Bay Regional Park District, 2007. *Miller/Knox Regional Shoreline.* Website: http://www.ebparks.org/files/EBRPD_files/brochure/miller_knox_text.pdf.

[42] East Bay Regional Park District, 2007. *Circuit of Miller/Knox Regional Shoreline*, prepared by Bruce and Sandra Beyaert. Website: http://www.ebparks.org/files/miller_knox_hike.pdf.

[43] East Bay Regional Park District, 2004. *Point Pinole Regional Shoreline.* Website: http://www.ebparks.org/files/EBRPD_files/brochure/pt_pinole_text.pdf.

[44] East Bay Regional Park District, 1977, pp. 3-8. *Redwood Regional Park.* Oakland, California.

[45] East Bay Regional Park District, 2003. *Roberts Regional Recreation Area.* Website: http://www.ebparks.org/files/EBRPD_files/brochure/roberts_text.pdf.

Rancho San Antonio. The remainder of the park was undeveloped. Called Round Top Regional Park in the 1930s and early 1940s, the park was originally a Boy Scout camp. The park, one of the three original parks in the EBRPD, was named for Robert Sibley. Sibley helped establish the Park District and served on the board until his death ten years later. Two former quarries have been added to the park. One, the Kaiser quarry north of Round Top was added in 1977, and the other, northwest of the park was added in 1991.[46,47,48]

Sobrante Ridge Regional Reserve. The scenic ridgelands of this park unit were preserved after developers agreed to limit an adjacent subdivision to lower-lying areas. The area was formerly known as the Cutter Ranch, and belonged to Cutter Laboratories in Berkeley through the 1970s. The unit was once part of the vast Rancho Sobrante land grant, given by the Mexican government to Juan Jose Castro in 1841. The name *Sobrante* in Spanish means "excess" or "leftover," and reflects the late date of the land grant, an indications that the lands were leftover lands not included in previous grants. The lands that became Sobrante Ridge Regional Preserve were dedicated to EBRPD by a local construction company in 1985.

Temescal Regional Recreation Area. Prior to 1868, Lake Temescal did not exist. The Ohlone tribe utilized the creek we know today as Temescal Creek. Franciscan missionaries named the creek "Temescal," a name derived from the Aztec words *Tema* (to bathe) and *cali* (a house). In 1868, hydraulic engineer Anthony Chabot constructed a dam to create a reservoir for the then-town of Oakland. In 1936, Lake Temescal, already one of the East Bay Regional Park District's three original parks, opened as a recreation area.[49]

Tilden Regional Park. Charles Lee Tilden was the first president of the EBRPD Board of Directors, and his namesake park is one of the oldest in the EBRPD system. Billie Bell, a golf course architect, designed the Tilden golf course and clubhouse in 1936. The golf course, a Works Progress Administration (WPA) project, was completed in 1937. Federal funds also covered half the cost of constructing the dam for Lake Anza, the first East Bay Hills lake designed solely for recreational purposes. The lake opened in 1940.

The Tilden Merry-Go-Round, built in 1911 by the Hershel Spillman Company, was purchased from a Los Angeles dealer in 1946, and began operating in the park in 1948. The Redwood Valley Railroad, a scale steam train on a 0.75-mile-long track, opened in 1952. By 1967, the track was widened and extended into an area vacated by the Army. Currently, the track is approximately two miles long and has a bridge and a tunnel. A second set of tracks was added in the 1960s for the Golden Gate Steamers, a private train club.

Wildcat Canyon Regional Park. An Ohlone village was situated near the mouth of Wildcat Creek in 1772 when Pedro Fages, Fray Juan Crespi, and several soldiers passed through the area. The lands became part of Juan Jose and Victor Castro's land grant during the Mexican rancho period. The

[46] Larry Seeman Associates, op. cit., pp. 11-12.

[47] East Bay Regional Park District, 2005. *Sibley Volcanic Regional Preserve.* Website: http://www.ebparks.org/files/ EBRPD_files/ brochure/sibley_text.pdf.

[48] Slack, Gordy, 2005. Voice of the Volcano: Stories in Stone at Sibley Preserve. In *Bay Nature* April-June.

[49] East Bay Regional Park District, 2007. *Temescal Regional Park.* Website: http://www.ebparks.org/files/ EBRPD_files/brochure/mlk_text.pdf.

majority of lands later became part of a water company. In 1966, Standard Oil purchased oil rights from the speculators holding the land. Exploratory wells were drilled but, since results were poor, drilling ceased. EBRPD purchased 400 acres of the land in 1967 and formed the park by 1976. It has continued to expand since that time with the addition of new parcels.[50]

c. Geology/Paleontology. This subsection briefly summarizes the paleontological resources setting of the Study Area. The subsection presents the general geological background of the Study Area and vicinity, including the types of fossils known to occur.

(1) Geological Background. The Study Area is in the western coastal margin of the Coast Range Geomorphic Province of northern California, a geologically young and seismically-active region, and is dominated by northwest-southeast-trending low hills and intervening valleys. The Study Area consists of numerous park units generally located on the bayshore and in the East Bay Hills. The Hayward fault, which runs through the generalized center of the Study Area, is a highly active fault zone with a high probability of producing a magnitude 7 and above earthquake within the next 30 years.[51]

In general, the Study Area consists of Tertiary strata resting with angular unconformity on two complexly deformed Mesozoic rock complexes. One of these Mesozoic Rock complexes is made up of Coast Range ophiolite, serpentinite, basalt, gabbro, keratophyre, and overlying Great Valley sequence with some volcanic rocks in the Berkeley area. The other Mesozoic complex is the Franciscan complex, which is composed of strongly metamorphosed greywacke, limestone, argillite, serpentinite, basalt, and other rocks. The following list of the Study Area geologic units is presented in stratigraphic sequence from youngest to oldest. Appendix C provides a summary description of these geologic units:

- Younger Alluvium: Holocene (10,000 Years Ago [ya] to Present)
- Older Alluvium: Pleistocene (10,000 ya to 2,000,000 Years Ago [mya])
- Landslide Deposit: Pleistocene and/or Holocene (2,000,000 ya to Present)
- Unnamed Sedimentary and Volcanic Rocks: Miocene and Pliocene (24 mya -1.8 mya)
- Bald Peak Basalt: Miocene (8.4 mya)
- Siesta Formation: Miocene (24-25 mya)
- Moraga Formation: Miocene (24-25 mya)
- Orinda Formation: Miocene (24-25 mya)
- Claremont Chert: (Miocene 24-25 mya)
- Great Valley Sequence (Late Jurassic to Cretaceous: 161-65 mya)
    - Pinehurst Shale

[50] East Bay Regional Park District, 2006. *Wildcat Canyon History.* Website: http://www.ebparks.org/parks/wildcat.htm.

[51] Working Group on California Earthquake Probabilities, 2003. Earthquake Probabilities around San Francisco, California. Berkeley Seismological Laboratory, University of California, Berkeley. Website: http://pubs.usgs.gov/fs/2003/fs039-03/.

  - Redwood Canyon Formation
  - Shephard Creek Formation
  - Oakland Conglomerate
  - Joaquin Miller Formation
  - Franciscan Mélange
  - Knoxville Formation
- Coast Range Ophiolite (Jurassic: 206-144 mya)
  - Keratophyre
  - Serpentinite
  - Gabbro and Basalt

d. Known or Listed Cultural and Paleontological Resources. This subsection summarizes information about cultural and paleontological resources in the Study Area identified through background research. Cultural resources are discussed first, followed by paleontological resources.

(1) Cultural Resources. A total of 251 resources were identified in all of the parks that wee studied through background research. Of the 251 resources, 199 are archaeological in nature (32 prehistoric/167 historical) and 49 represent the historical built environment (e.g., buildings or structures). Three resources are not sufficiently described in EBRPD records to determine their classification. Table IV.E-1, located at the end of this section, summarizes information about cultural resources identified in the parks. Please note that resources in Roberts Regional Recreation Area are subsumed under Redwood Regional Park. Cultural resources were identified through background research and consultation with interested parties.

Two resources in the Study Area are listed in the National Register of Historic Places and the California Register of Historical Resources (California Register): Alvarado Park in Wildcat Canyon Regional Park; and the Herschell Spillman Merry-Go-Round in Tilden Regional Park. Additionally, Alvarado Park is listed in the Contra Costa County Historical Resources Inventory. Two resources in Redwood Regional Park and Roberts Regional Recreation Area are listed in the California Register and are California Historical Landmarks (CHL): Blossom Rock Navigational Trees (CHL #962) in Roberts; and the site where the Rainbow Trout was first identified (CHL #970) in Redwood. Two resources are listed in the California Inventory of Historic Resources: portions of the California and Nevada Railroad in Kennedy Grove Regional Park; and Lake Chabot in Lake Chabot Regional Park. Additionally, the California and Nevada Railroad is listed as a Point of Historical Interest, and Lake Chabot (including Chabot Dam) is listed as a Point of Historical Interest and Historic Civil Engineering Landmark of San Francisco and Northern California. The location of the last manufacturing facility for Giant Powder Company (CHL #1002-1) is in Point Pinole Regional Shoreline; this site is also listed in the California Register.

The cultural resource inventory developed during the review of existing registration programs, archival sources, and environmental documents was compared to the EBRPD cultural resources database. LSA prepared a GIS layer depicting the locations of resources identified during archival research at the NWIC. The layer provides a comparative data source for use in resolving differences

in cultural resource locations between the EBRPD database and the NWIC base maps. A total of six archaeological sites identified in the Study Area were not depicted or otherwise noted in the EBRPD database.

(2) Paleontological Resources. Nine fossil localities were identified in the Study Area. Twenty-four vertebrate fossil localities are recorded within five miles of the Study Area in the bay and inland portions of the East Bay. These fossil localities produced 109 significant vertebrate specimens that came from geologic units known to underlie the Study Area. The literature review identified 27 individual geologic units in the Study Area that are known to contain paleontological resources. Paleontological resources were identified through background research.

e. Regulatory Context. This subsection describes the laws, policies, and regulations that address cultural and paleontological resources in the Study Area. Discussed first is the legislative context for cultural resources, followed by the legislative context for paleontological resources.

(1) Cultural Resources. The California Environmental Quality Act; the California Register of Historical Resources; portions of the California Public Resources, Penal, and Health and Safety codes; the EBRPD Master Plan; portions of EBRPD Ordinance 38; and EBRPD guidelines are the primary planning, treatment, and review mechanisms for cultural resources in the Study Area. Each is summarized below.

California Environmental Quality Act. The California Environmental Quality Act (CEQA) applies to all discretionary projects undertaken or subject to approval by the state's public agencies (California Code of Regulations [CCR] Title 14(3) §15002(i)). CEQA states that it is the policy of the State of California to "take all action necessary to provide the people of this state with… historic environmental qualities…and preserve for future generations examples of the major periods of California history" (Public Resources Code [PRC] §21001(b), (c)). Under the provisions of CEQA, "A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment" (CCR Title 14(3) §15064.5(b)).

CEQA defines a "historical resource" as a resource which meets one or more of the following criteria:

- Listed in, or eligible for listing in, the California Register;
- Listed in a local register of historical resources (as defined at PRC §5020.1(k));
- Identified as significant in a historical resource survey meeting the requirements of PRC §5024.1(g); or
- Determined to be a historical resource by a project's lead agency (CCR Title 14(3) §15064.5(a)).
- A historical resource consists of "Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California . . .Generally, a resource shall be considered by the lead agency to be 'historically significant' if the resource meets the criteria for listing in the California Register of Historical Resources" (CCR Title 14(3) §15064.5(a)(3)).

CEQA requires that historical resources and unique archaeological resources be taken into consideration during the CEQA planning process (CCR Title 14(3) §15064.5; PRC §21083.2). If feasible, adverse effects to the significance of historical resources must be avoided, or the effects mitigated (CCR Title 14(3) §15064.5(b)(4)). The significance of an historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for the California Register of Historical Resources. If there is a substantial adverse change in the significance of a historical resource, the preparation of an environmental impact report may be required (CCR Title 14(3) §15065(a)).

If the cultural resource in question is an archaeological site, CEQA (CCR Title 14(3) §15064.5(c)(1)) requires that the lead agency first determine if the site is a historical resource as defined in CCR Title 14(3) §15064.5(a). If the site qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource.[52] If the archaeological site does not qualify as a historical resource but does qualify as a unique archaeological site, then the archaeological site is treated in accordance with PRC § 21083.2 (CCR Title 14(3) §15069.5(c)(3)). In practice, most archaeological sites that meet the definition of a unique archaeological resource will also meet the definition of a historical resource.[53]

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

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; or
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC §21083.2(g)).

If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) §15126.4 (a)(1)). Mitigation of significant impacts must lessen or eliminate the physical impact that the project will have on the resource. Generally, the use of drawings, photographs, and/or displays does not mitigate the physical impact on the environment caused by demolition or destruction of a historical resource. However, CEQA requires that all feasible mitigation be undertaken even if it does not mitigate impacts to a less than significant level of impact (CCR Title 14(3) §15126.4 (a)(1)).

California Register of Historical Resources. The California Register of Historical Resources (California Register) is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The California Register helps government

[52] California Office of Historic Preservation, 2001a, p. 5. *California Environmental Quality Act (CEQA) and Historical Resources*. Technical Assistance Series 1. California Department of Parks and Recreation, Sacramento.

[53] Bass, Ronald E., Albert I. Herson, and Kenneth M. Bogdan, 1999, p. 105. *CEQA Deskbook: A Step-by-Step Guide on How to Comply with the California Environmental Quality Act*. Solano Press Books, Point Arena, California.

agencies identify, evaluate, and protect California's historical resources,[54] and indicates which properties are to be protected from substantial adverse change (PRC § 5024.1(a)). Any resource listed in, or eligible for listing in, the California Register is to be considered during the CEQA process.[55]

A cultural resource is evaluated under four California Register criteria to determine its historical significance. A resource must be significant at the local, state, or national level in accordance with one or more of the following criteria:

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

In addition to meeting one or more of the above criteria, the California Register requires that sufficient time must have passed to allow a "scholarly perspective on the events or individuals associated with the resource." Fifty years is used as a general estimate of the time needed to understand the historical importance of a resource.[56] The State of California Office of Historic Preservation recommends documenting, and taking into consideration in the planning process, any cultural resource that is 45 years or older.[57]

The California Register also requires a resource to possess integrity, which is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association."[58] Resources that are significant, meet the age guidelines, and possess integrity will generally be considered eligible for listing in the California Register.

California Public Resources Code §5097.5. California Public Resources Code §5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands." Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor.

[54] California Office of Historic Preservation, 2001b, p. 1. *California Register of Historical Resources: Q&A for Local Governments*. Technical Assistance Series 4. California Department of Parks and Recreation, Sacramento.

[55] California Office of Historic Preservation, 2001b, op. cit., p. 4.

[56] California Office of Historic Preservation, 1999, p. 3. *California Register and National Register: A Comparison.* Technical Assistance Series 6. California Department of Parks and Recreation, Sacramento.

[57] California Office of Historic Preservation, 1995, p. 2. *Instructions for Recording Historical Resources*. California Department of Parks and Recreation, Sacramento.

[58] California Office of Historic Preservation, 1999, op. cit., p. 2.

California Penal Code §622.5. California Penal Code §622.5 states that every person, not the owner thereof, who willfully injures, disfigures, defaces, or destroys any object or thing of archeological or historical interest or value, whether situated on private lands or within any public park or place, is guilty of a misdemeanor.

California Health and Safety Code §7050.5. California Health and Safety Code §7050.5 states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the Coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods.

EBRPD Master Plan. The EBRPD Master Plan (Master Plan) defines the long-term vision for lands managed by EBRPD. The Master Plan provides a decision-making framework for EBRPD management, and identifies policies that will achieve district-wide objectives. Park development objectives, land use classifications, and planning and management guidelines are established by the Master Plan. Policies for the preservation and interpretation of cultural resources are woven throughout the Master Plan, including provisions for public participation, interpretation, environmental compliance, open space protection, land acquisition, land use planning, and facility development. Those policies most pertinent to cultural resources in the Study Area are summarized below.

- Public Participation. The District will notify the public of proposed comment periods for draft review documents [that address cultural resources among other environmental topics]. The Board will schedule review sessions in the geographic locale of interested parties to facilitate comments.
- Interpretation. The District will provide a variety of interpretive programs that focus attention on the region's natural and cultural resources. Programs will encourage an appreciation for the preservation of natural and cultural resources, and will provide for volunteer opportunities.
- Environmental Compliance. The District will develop all planning documents in compliance with CEQA [and, as part of the review process, will consider potential impacts to cultural resources].
- Open Space Protection. The District will participate in efforts to protect scenic or cultural resources . . .
- Land Acquisition. Potential acquisitions are considered with respect to the features they contribute, which may include . . . historic or cultural resources [and] interpretive and educational opportunities . . .
- Land Use Planning. In a Regional Preserve that is of historic value, the District will seek to use construction styles that are consistent with and associated with the relevant historical period. If the District considers replicating or recreating former structures on historical sites, the parkland planning document will establish the necessary level of authentication to maintain historic integrity.

If a Regional Preserve has a designated historical period, the Recreation/Staging Unit will have an appearance that harmonizes with the style of the relevant historic period. The District may permit commercial uses for an historic building—such as crafts, stores, book shops, and art shops—if these uses are harmonious with the style of the building and if they do not adversely affect the preservation and enhancement of the structure's historical significance.

- Facility Development. Park improvements will be designed to avoid or minimize impacts on wildlife habitats, plant populations, and other resources.

EBRPD Ordinance 38, Sections 805-808. Portions of EBRPD Ordinance 38 address the disturbance of objects or features of cultural significance on EBRPD lands. Each section is briefly summarized below.

- Section 805. This section states that no person shall damage, injure, collect or remove earth, rocks, sand, gravel, fossils, minerals, features of caves, or any article or artifact of geological interest or value located on District parklands. Though oriented toward natural features, this ordinance may be construed as applying to objects or features that, while appearing natural, are actually modified by human action (e.g., cave pictographs misperceived as natural discoloration).
- Section 806. This ordinance states that no person shall damage, injure, collect or remove any object of paleontological, archaeological or historical interest or value located on District parklands. In addition, any person who willfully alters, damages, or defaces any object of archaeological or historical interest or value or enters a fenced and posted archaeological or historical site shall be arrested or issued a citation pursuant to California Penal Code §622.5.
- Section 807. This ordinance states that special permission may be granted to remove, treat, disturb, or otherwise affect plants or animals or geological, historical, archaeological, or paleontological materials for research, interpretive, educational, or park operational purposes.
- Section 808. This ordinance states that no person shall cut, carve, paint, mark, paste, or fasten on any tree, fence, wall, building, monument, or other property in the District any bill, advertisement, directional or informational signs, or inscription whatsoever.

EBRPD Guidelines. The document entitled *EBRPD Guidelines for Protecting Parkland Archaeological Sites*[59] contains guidance for EBRPD staff on the treatment of archaeological sites in the Study Area. Guidance is provided about archaeological site identification and protection; Native American input regarding proposed treatment of archaeological sites and human remains; and special zoning concessions for Native American and non-Native American archaeological sites.

(2) Paleontological Resources. The CEQA Environmental Checklist, the Society for Vertebrate Paleontology, California Public Resources Code §5097.5, the East Bay Regional Park District Master Plan, and portions of EBRPD Ordinance 38 are the primary planning, treatment, and review mechanisms for paleontological resources in the Study Area. Each is summarized below.

CEQA Environmental Checklist. CEQA requires that a determination be made as to whether a project would directly or indirectly destroy a unique paleontological resource or site, or unique

[59] East Bay Regional Park District, 1989. Oakland, California.

geological feature (CEQA Appendix G(v)(c)). If an impact is significant, CEQA requires feasible measures to minimize the impact (CCR Title 14(3) § 15126.4 (a)(1)).

Society of Vertebrate Paleontology. The Society of Vertebrate Paleontology has identified vertebrate fossils, their taphonomic and associated environmental indicators, and fossiliferous deposits as significant nonrenewable paleontological resources. Botanical and invertebrate fossils and assemblages may also be considered significant resources.[60]

California Public Resources Code §5097.5. California Public Resources Code §5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands." Public lands are defined to include lands owned by or under the jurisdiction of the state or any city, county, district, authority or public corporation, or any agency thereof. Any unauthorized disturbance or removal of archaeological, historical, or paleontological materials or sites located on public lands is a misdemeanor.

East Bay Regional Park District Master Plan. Please see the preceding descriptions in the Cultural Resource Legislative Context for a summary of the Master Plan.

EBRPD Ordinance 38, Sections 805-808. Portions of EBRPD Ordinance 38 address the disturbance of objects or features of natural significance on EBRPD lands. Each section is briefly summarized below.

- Section 805. This section states that no person shall damage, injure, collect or remove earth, rocks, sand, gravel, fossils, minerals, features of caves, or any article or artifact of geological interest or value located on District parklands.
- Section 806. This ordinance states that no person shall damage, injure, collect or remove any object of paleontological, archaeological or historical interest or value located on District parklands.
- Section 807. This ordinance states that special permission may be granted to remove, treat, disturb, or otherwise affect plants or animals or geological, historical, archaeological, or paleontological materials for research, interpretive, educational, or park operational purposes.
- Section 808. This ordinance states that no person shall cut, carve, paint, mark, paste, or fasten on any tree, fence, wall, building, monument, or other property in the District any bill, advertisement, directional or informational signs, or inscription whatsoever.

2. Impacts and Mitigation Measures

Project implementation has the potential to adversely affect cultural and paleontological resources. Significance criteria are presented below, followed by potential impacts, and recommended mitigation measures.

a. Significance Criteria. The project would have a significant impact on cultural and paleontological resources if it would:

[60] Conformable Impact Mitigation Guidelines Committee, 1995. Assessment and Mitigation of Adverse Impacts to Nonrenewable Paleontologic Resources: Standards and Guidelines. *Society of Vertebrate Paleontology News Bulletin* 163:22-27.

- Cause a substantial adverse change in the significance of a historical resource as defined in *CEQA Guidelines* §15064.5. Specifically, substantial adverse changes include physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historical resource would be materially impaired.
- Cause a substantial adverse change in the significance of an archaeological resource pursuant to *CEQA Guidelines* §15064.5.
- Directly or indirectly destroy a unique paleontological resource or a unique geologic feature.
- Disturb any human remains, including those interred outside of formal cemeteries.

b. Less-Than-Significant Cultural Resources Impacts. The project consists of different treatment options for fuels reduction and vegetation management. Some of the treatment options involve actions that will result in a greater level of ground disturbance than others. Archaeological deposits, built environment buildings and structures, human remains, or paleontological resources may be adversely impacted as a result of treatment actions. Examples of such impacts could include destruction of archaeological deposits, damage to buildings or structures, displacement of fossil resources, or the disturbance of human remains. Some of the impacts may be considered significant under CEQA if the affected resources qualify as historical resources under PRC §21084.1, or as unique archaeological resources under PRC §21083.2.

Resource management is one of the primary goals of the project. Maintaining the cultural and ecological values that distinguish EBRPD lands was a consideration when Plan goals and objectives were identified. Accordingly, some of the Plan guidelines contain policies for avoiding or minimizing potential impacts to cultural and paleontological resources. Resource identification and avoidance is the preferred approach.

Five treatment options are proposed to achieve project objectives, and each is geared to different fuel reduction and vegetation management approaches. These treatment options include:

- Hand Labor. This option includes minor pruning, mulch and plastic cover application, weed pulling by hand, and shrub removal. These activities generally pose a low risk of impacts to cultural resources (especially archaeological deposits) due to the small scale of activity and ground disturbance. However, the potential still exists for medium-to-large-shrub extraction to result in the removal of a substantial amount of subsurface soil that could accompany a root system. The removal of such root systems could disturb intact archaeological deposits and features if the shrubs were within an archaeological deposit.
- Mechanical Treatment. This option generally includes grading, mowing, overstory removal, the use of landings, yarding, mechanical cutting, and mulching or chipping. These options often use large, tracked equipment that requires site preparation of their operating areas or access corridors. As such, these options pose a high risk of impacts to cultural resources (particularly archaeological deposits), particularly where the creation of landings or roads coincides with areas in which archaeological sites are often found (e.g., ridge, saddles, or mid-slope benches).
- Chemical Treatment. This option includes the application of herbicides to control the growth of vegetation. This option generally poses little-to-no risk of ground disturbance since the application would, for the most part, be by hand. However, the long-term effects of herbicides on

the constituents of archaeological sites, particularly as pertains to site preservation, are not well understood.

- Prescribed Burning. This option includes the burning of larger areas (broadcast burning) or the burning of piles of cut brush (pile burning). This option poses little-to-no risk of ground disturbance, as ignition is done by hand application. However, burning can destroy standing buildings or structures obscured by vegetation overgrowth. Evidence also suggests that fire can alter the structural and geochemical characteristics of some types of prehistoric artifacts, thereby affecting their information potential.
- Grazing. This option includes the use of grazing animals to reduce the fuel load in a given area, primarily grasslands or shrublands. This option generally poses a low risk of ground disturbance, although cattle wallows or the creation of animal trails may result in soil displacement and subsequent erosion, which may impact intact archaeological deposits.

The Plan includes Best Management Practices (BMPs) designed to avoid or minimize the potential disturbance of documented and previously undocumented cultural resources. These BMPs apply to archaeological deposits, built environment resources, and areas of traditional cultural importance. The BMPs vary in intensity and are geared to the likelihood of a particular treatment category resulting in cultural resource impacts.

EBRPD has a GIS database that includes the locations of recorded cultural resources, which contains information previously held by EBRPD, as well as information obtained through background research conducted for this analysis. The selection of recommended treatment areas includes a cross-check for possible conflicts with cultural resources in the EBRPD database. The BMPs are implemented in concert with the cross-check of the GIS database to provide for the identification and protection of cultural resources. The BMPs for each treatment category are summarized below:

Plan Chapter IV. Fuel Treatment Methods

Best Management Practices for Hand Labor - Cultural Resources

- EBRPD will exclude documented cultural resources in the treatment area from hand labor that involves ground disturbance.
- A District staff member trained in cultural resources identification will demarcate the boundaries of previously documented cultural resources identified during hand labor treatment. These resources will be avoided by hand labor treatment consistent with the District's procedures for protecting cultural resources.[61]

Best Management Practices for Mechanical Treatment - Cultural Resources

- Prior to treatment, EBRPD will review its records of documented cultural resources in the treatment area. A trained District staff person will conduct a pre-treatment field review site assessment to identify previously undocumented cultural resources, and will demarcate (i.e., flag) the boundaries of any potentially significant and sensitive cultural resources in the treatment area. Where it is deemed necessary for additional study (i.e., subsurface investigation) to be undertaken, a professional archaeologist will be retained to provide recommendations regarding the documentation and protection of the cultural resources prior to project actions.
- EBRPD treatment actions will avoid the demarcated cultural resources.

[61] East Bay Regional Park District, 1989. *Guidelines for Protecting Parkland Archeological Sites*, Oakland, California.

- In the event that prehistoric or historical archaeological sites or artifacts; paleontological resources; or human remains are encountered during project construction, all ground disturbing activities will be halted within at least 50 feet and the finds will be protected in place (in accordance with EBRPD policy and State and federal law) until the find is evaluated by a qualified resource consultant, and appropriate mitigation, such as curation, preservation in place, etc., if necessary, is implemented. In the case of human remains, the requirements of Health and Safety Code §7050.5 will be met, which involve coroner, Native American Heritage Commission, and Most Likely Descendant notification and coordination.

Best Management Practices for Prescribed Burning - Cultural Resources

- Cultural resources, both archaeological and those in the built environment, are fire-sensitive sites. Therefore, EBRPD or its contractors will ensure that recorded cultural resource sites are provided with appropriate protection during any prescribed burn. This may include conducting a pre-burn site assessment prior to any initial prescribed burn action on a site. The locations of any previously unrecorded cultural resources exposed by burning actions will be mapped and documented. All activities should be planned and executed in such a way as to cause the least amount of impact on cultural sites.
- EBRPD or its contractors will exclude any cultural sites within prescribed burn areas by constructing hand lines within the burn area or clearly delineating the boundaries of the burn area such that all cultural resources are fully excluded. This exclusion should be done shortly before the prescribed burn, and the hand lines removed immediately following to minimize potential risk of resource vandalism. Any digging, surface disturbance, or displacement of soil and vegetation within cultural sites must be avoided. Any mechanical equipment used prior to, during, or following the prescribed burn must be excluded from the cultural site. Foot traffic should be minimized on the cultural site such that the least amount of potential impact is caused. During prescribed burns, onsite personnel will closely monitor fire movement near cultural resources and ensure that fires do not cross into fire-sensitive cultural resource areas.
- All onsite personnel should be adequately informed and knowledgeable of the location of known cultural sites within and around the prescribed burn area. Personnel will also be sufficiently knowledgeable of proper treatment actions that can be applied at cultural sites. The Incident Commander will provide briefings and supervision to prevent potential disturbance of cultural sites.
- Following the completion of prescribed burning actions, all means of delineating site locations must be removed, and any hand lines or other features to identify the cultural sites must be obliterated.

Best Management Practices for Grazing - Cultural Resources

- EBRPD will exclude livestock from the vicinity of documented cultural resources deemed to be sensitive to grazing activities (e.g., a recorded site with human remains or midden).

The BMPs developed for the Plan build upon and implement the District's Master Plan policies and cultural resources guidelines[62] and policies contained within the individual park land use plans in regards to the need to conduct cultural resource surveys prior to or after fuel reduction or vegetation management activities involving substantial ground disturbance.

The Plan BMPs are intended to achieve a feasible balance between cultural resource protection and cost-effective fuel reduction and vegetation management approaches. The ultimate objective of reducing the risk of wildfire along the wildland/urban interface has a secondary, beneficial impact of reducing the likelihood of impact to EBRPD cultural resources. Therefore, the treatment options included in the Plan to some degree offset their potential cultural resource impacts by reducing the possibility of far greater and more destructive effects through unmitigated catastrophic wildfire damage and emergency responses to fires. This relationship between fuel load reduction and cultural resource protection has been acknowledged in the past by the National Park Service. During project review under the National Environmental Policy Act, the National Park Service concluded that

[62] East Bay Regional Park District, 1989. *Guidelines for Protecting Parkland Archaeological Sites.* Oakland, California.

wildland/urban interface fuels management activities in Yellowstone National Park would result in no significant impact on cultural resources. The National Park Service concluded that ". . . implementation of the preferred alternative would yield long-term beneficial effects to cultural and ethnographic resources as the potential for destructive wildfire is reduced."[63]

(1) Archaeological Deposits. Archaeological deposits may qualify under CEQA as historical resources (PRC §21084.1) or unique archaeological resources (PRC §21083.2). Should project treatment actions destroy or damage portions of such a resource, this may result in a substantial adverse change in the significance of the resource (i.e., may impair the qualities that convey and justify its significance). Per CCR 14(3) §15064.5(b), a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant impact on the environment.

The Study Area contains a diverse array of documented prehistoric and historical archaeological deposits. Known archaeological sites represent a fraction of the total number of sites that exist, as the majority of Study Area lands have not yet been subject to archaeological survey. The locations of prehistoric sites, while usually along or near watercourses and/or on gently sloping land, cannot be predicted with certainty; these sites can be found on many different landform types and in various environmental contexts. Historical archaeological sites, although tending to correlate with areas of past settlement, transportation corridors, or resource extraction, can also be found in almost any context, depending on the motivations of the cultural group that produced the remains. In addition, archaeological site identification is never truly comprehensive, as survey area conditions (e.g., lack of ground visibility due to vegetation) can affect the results of a survey. Therefore, because of the limited archaeological survey coverage in the Study Area, and the variability of the locations of archaeological sites, it can be expected that some recommended treatment areas may contain previously undocumented archaeological resources.

The Plan BMPs described previously provide for the identification of documented archaeological resources from existing records and for pre-treatment field survey site assessments to identify undocumented resources and for the avoidance and protection of such resources where prescribed fire or ground-disturbing activities may occur during treatment. Additionally, the inclusion of newly documented archaeological resources in the EBRPD GIS database will facilitate a more extensive resource protection and management effort for future treatment actions. Because of the inclusion of BMPs in the Plan, the project's potential impacts to archaeological deposits are less than significant.

(2) Built Environment Cultural Resources. Previously documented and undocumented built environment cultural resources may qualify under CEQA as historical resources (PRC §21084.1). Should project treatment actions destroy or damage portions of such a resource, this may result in a substantial adverse change in the significance of the resource (i.e., may impair the qualities that convey and justify its significance). Per CCR 14(3) §15064.5(b), a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant impact on the environment.

[63] *Yellowstone National Park Wildland-Urban Interface Fuels Management FONSI.* Website: http://www.nps.gov/yell/parkmgmt/firefonsi.htm.

The Study Area contains numerous built environment cultural resources, several of which clearly qualify as historical resources under CEQA. As with archaeological deposits in the Study Area, it is likely that undocumented built environment cultural resources exist, some of which may be located in recommended treatment areas.

The Plan BMPs provide for the protection of documented built environment resources by identifying such resources in the field and excluding them from activities that may result in direct impacts. The BMPs also call for the identification and avoidance of previously undocumented built environment resources through focused study and protective measures. Additionally, the inclusion of newly documented built environment resources in the EBRPD GIS database will facilitate a more extensive resource protection and management effort for future fuels treatment actions. Because of the inclusion of BMPs in the Plan, the project's potential impacts to built environment cultural resources are less than significant.

c. Potentially Significant Cultural Resources Impacts. The following describes potentially significant impacts to cultural resources that could result from implementation of the proposed project.

Impact CULT-1: Project implementation may result in impacts to human remains, including those interred outside of formal cemeteries. (S)

Portions of the Study Area, including some portions of the recommended treatment areas, may contain sensitive prehistoric and historical archaeological resources. Such resources may include human burials. Although human burials are most often associated with prehistoric archaeological sites, historical archaeological sites other than historical cemeteries may have human remains, and burials can also be found in isolated contexts. Project treatment actions have the potential to disturb human remains. In addition to their cultural and social value to descendant groups, such human remains may qualify as historical or archaeological resources as defined in PRC §§21084.1 and 21083.2(g). The disturbance or destruction of human remains may result in a significant impact to cultural resources. Implementation of the following mitigation measure would reduce potential impacts to human remains to a less-than-significant level.

> Mitigation Measure CULT-1: During project-related ground disturbing activities, should human remains or associated burial goods be encountered the steps required by *CEQA Guidelines* §15064.5(e) and Health and Safety Code §7050.5 shall be taken. Pursuant to these sections, and to the EBRPD's Cultural Resources Policy, the on-site EBRPD supervisor, or their designee, shall: (1) halt work within 50 feet of the remains; (2) contact the Alameda or Contra Costa County coroners; and (3) contact an archaeologist to evaluate the remains and provide recommendations.
>
> If the remains are of Native American origin, the archaeologist will evaluate the remains for California Register of Historical Resources (California Register) eligibility; the coroner will contact the Native American Heritage Commission in Sacramento, which will in turn identify a Most Likely Descendent (MLD). The MLD shall be provided the opportunity to make recommendations for the respectful treatment of the Native American remains and any related burial goods. If the remains are eligible for the California Register, the archaeologist shall recover scientifically valuable information, as appropriate and in accordance with the recommendations of the MLD. Following the archaeologist's evaluation, a report should be

prepared to document the methods, findings, and recommendations of the archaeologist conducting the work. The report should be submitted to EBRPD and the Northwest Information Center. (LTS)

Impact CULT-2: Project implementation may result in the destruction of unique paleontological resources. (S)

Fossil localities, as well as geological formations known to be paleontologically sensitive, are present in the Study Area, and may be within recommended treatment areas. Project treatment options, particularly mechanical treatment, have the potential to impact unique paleontological resources contained in these localities and formations. Implementation of the following mitigation measure would reduce potential impacts to paleontological resources to a less-than-significant level.

Mitigation Measure CULT-2: If paleontological resources are discovered during fuel reduction activities associated with implementation of the Plan, all work within 50 feet of the discovery shall be redirected and a qualified paleontologist contacted to assess the finds. The paleontologist shall make recommendations regarding the treatment of the discovery. Project personnel shall not collect or move any paleontological resources. It is recommended that adverse impacts to such paleontological resources be avoided by project activities. If such resources cannot be avoided, they shall be assessed to determine their paleontological significance. If the paleontological resources are not significant, then avoidance is not necessary. If the paleontological resources are significant, they shall be avoided or adverse impacts shall be mitigated. Upon completion of the assessment, the paleontologist shall prepare a report documenting the methods and results, and provide recommendations for the treatment of the paleontological resources. EBRPD shall ensure that the feasible recommendations of the consulting paleontologist are implemented prior to actions that could adversely affect the resource in question. (LTS)

Impact CULT-3: Project operational management may exclude cultural resource issues from long-range planning. (S)

The EBRPD Fire Department has been planning for and undertaking individual fuel reduction activities in specific GIS polygons under an annual fuels management plan. Beginning in 2007, multi-disciplinary representatives from EBRPD's Fire Department, Planning, Stewardship, and Operations departments participate in a monthly "Fuels Group" meeting to consider the process of project implementation, to prioritize treatment areas, and to coordinate and identify resource management goals, fuel reduction treatments, potential resource mitigations, and vegetation management implementation practices.

As part of project implementation, the first key step toward initiating the process is to identify the recommended treatment areas that should be given priority for treatment in any given year. Targeted treatment areas will be the focus of annual data collection, a Fuels Treatment Plan, treatment, monitoring and reporting actions that follow in the implementation process. As part of an adaptive management strategy, data collected and outcomes from treatment actions completed in the past will be used in coordination with GIS information to inform and influence which recommended treatment areas are prioritized for the coming year.

Biological data collection and monitoring in recommended treatment areas are the emphasis of the project's data collection, monitoring, and analysis. However, the disparate treatment of cultural resource issues at the planning stage is not consistent with EBRPD policy. Increasing the consideration given to cultural resources in planning for future fuel reduction and vegetation management activities in the Study Area conforms to the EBRPD's vision and policy priorities. As stated in the EBRPD Master Plan,

> The District will maintain a current map and written inventory of all cultural features and sites found on park land, and will preserve and protect these cultural features and sites "in situ," in accordance with Board policy.

Without comparable treatment, it is possible that cultural resource issues will become secondary to biological concerns, which may result in lower levels of protection, uneven resource management, and, ultimately, and degradation of the prehistoric and historical cultural heritage contained in EBRPD lands. Implementation of the following mitigation measure would reduce this potential impact to a less-than-significant level.

> Mitigation Measure CULT-3: The District staff group responsible for Plan implementation and preparation of the annual Fuels Treatment Plan, should include staff with a background in cultural resources management to inventory District cultural resources site records, participate in pre-treatment field review site assessments and provide input on issues of cultural resource identification, evaluation, treatment, and long-term management as it pertains to fuels reduction and vegetation management. (LTS)

Table IV.E-1: Cultural Resources Identified in the Study Area

EBRPD #	Primary #	Trinomial	HPD #	Resource Name/Description	Park[a]	County	Comments
achs001	N/A	N/A	N/A	Grass Valley farming and ranch site	AC	ALA	
achs002	N/A	N/A	N/A	Peterson/Aleyss homestead site	AC	ALA	
achs003	N/A	N/A	N/A	Big Bear riding stables site	AC	ALA	
achs004	N/A	CA-ALA-434H	N/A	Grass Valley ranch site - big trees	AC	ALA	
achs005	N/A	CA-ALA-435H	N/A	Stonebridge site	AC	ALA	
achs006	N/A	N/A	N/A	Homesite (1899)	AC	ALA	
achs007	N/A	N/A	N/A	Pinehurst watershed caretaker residence	AC	ALA	
achs008	N/A	N/A	N/A	Marciel Family homestead site	AC	ALA	
achs009	N/A	N/A	N/A	Homesite	AC	ALA	
achs010	N/A	N/A	N/A	Homesite	AC	ALA	
achs011	N/A	N/A	N/A	Homesite	AC	ALA	
achs012	N/A	N/A	N/A	Bort Meadow eucalyptus	AC	ALA	
achs015	N/A	N/A	N/A	"Possible" ranch building site	AC	ALA	
achs016	N/A	N/A	N/A	Buried bridge buttress	AC	ALA	
achs017	N/A	N/A	N/A	Homesite (1899)	AC	ALA	
achs018	P-01-002185	CA-ALA-580H	N/A	Fence	AC	ALA	
achs019	P-01-000158	CA-ALA-436H	N/A	Grass Valley Trail	AC	ALA	
achs020	P-01-002180	N/A	N/A	Grass Valley Bridge	AC	ALA	Concrete bridge faced with stone
acna021	N/A	CA-ALA-422	N/A	Bedrock mortars/cupules	AC	ALA	
bkhs011	N/A	N/A	N/A	Quarry Site and Artifacts	BK	CCO	
bkhs012	N/A	N/A	N/A	Sunken Sailing Barges	BK	CCO	
bkhs013	N/A	N/A	N/A	Island Historic Farming Features	BK	CCO	
bkna001	P-07-000168	CA-CCO-290	N/A	[Shellmound]	BK	CCO	
bkna002	P-07-000169	CA-CCO-291	N/A	[Shellmound]	BK	CCO	
bkna003	N/A	N/A	N/A	[Shellmound]	BK	CCO	
bkna004	N/A		N/A	[Shellmound]	BK	CCO	
bkna005	P-07-000169	CA-CCO-291	N/A	[Shellmound]	BK	CCO	Same site number as bkna002
bkna006	P-07-000167	CA-CCO-289	N/A	[Shellmound]	BK	CCO	
bkna007	P-07-000170	CA-CCO-292	N/A	[Shellmound]	BK	CCO	
cbhs001	N/A	N/A	N/A	Glory of the Seas/Crab Cove Maritime	CB	ALA	
cbhs002	N/A	N/A	N/A	Blackie, Maritime Mascot Gravesite	CB	ALA	
cbhs003	N/A	N/A	N/A	Memory Lane	CB	ALA	
cbhs004	N/A	N/A	N/A	Neptune Beach Site	CB	ALA	
cbhs005	N/A	N/A	N/A	Dirigible Anchor/Maritime School	CB	ALA	
cchs001	P-01-002183	CA-ALA-579H	N/A	Fence	CC	ALA	
cchs002	P-01-000039	CA-ALA-019	N/A	Contemporary rockcarving	CC	ALA	
eshs001	P-07-002554	N/A	N/A	Point Fleming Pier	ES	ALA	P-07-002554 superceded by P-01-010617 (ALA County)
kehs001	N/A	N/A	N/A	Former CCC campsite	KG	CCO	

Table IV.E-1 *Continued*

EBRPD #	Primary #	Trinomial	HPD #	Resource Name/Description	Park[a]	County	Comments
kghs002	N/A	N/A	N/A	Oakland/Orinda railroad bed	KG	CCO	Listed in California Inventory of Historic Resources; California Point of Historical Interest
lchs001	P-01-00039	CA-ALA-423H	N/A	Yema-Po	LC	ALA	Chinese village site
lchs002	N/A	N/A	N/A	Slate House	LC	ALA	
lchs003	N/A	N/A	N/A	Lake Chabot and Chabot Dam	LC	ALA	Listed in California Inventory of Historic Resources; California Point of Historical Interest; Historic Civil Engineering Landmark
lchs004	N/A	N/A	N/A	Cork oak tree	LC	ALA	
lchs005	N/A	N/A	N/A	Nike missile silo	LC	ALA	
lchs006	N/A	N/A	N/A	Sand filter plant	LC	ALA	
lchs007	N/A	N/A	N/A	Tunnel no. 3	LC	ALA	
lchs008	N/A	N/A	N/A	Filter pond no. 1	LC	ALA	
lchs009	N/A	N/A	N/A	Filter pond no. 2	LC	ALA	
lchs010	N/A	N/A	N/A	Nike missile silo	LC	ALA	
lchs011	N/A	N/A	N/A	Nike site kennels	LC	ALA	
lchs012	N/A	N/A	N/A	Nike site bldg - carpentry shop	LC	ALA	
lchs013	N/A	N/A	N/A	Nike site bldg	LC	ALA	
lchs014	N/A	N/A	N/A	Nike site bldg - auto maintenance shop	LC	ALA	
lchs015	N/A	N/A	N/A	Nike site bldg - public safety	LC	ALA	
lchs016	N/A	N/A	N/A	Nike site bldg	LC	ALA	
lchs017	N/A	N/A	N/A	Nike site bldg - storage	LC	ALA	
lchs018	N/A	N/A	N/A	Nike site bldg - pump house	LC	ALA	
lchs019	N/A	N/A	N/A	Nike site bldg - Lake Chabot office	LC	ALA	
lchs105	N/A	N/A	N/A	Nike launch site	LC	ALA	
lchs106	N/A	N/A	N/A	Nike radar site	LC	ALA	
lehs001	P-01-002181	CA-ALA-577H	N/A	Hunting cabin	LCn	ALA	
lehs002	N/A	N/A	N/A	McKell Cottage	LCn	ALA	
mkhs001	N/A	N/A	N/A	Bernardi Residence	MK	CCO	
mkhs002	N/A	N/A	N/A	False gun emplacements	MK	CCO	
mkhs003	N/A	N/A	N/A	Nicholl Knob	MK	CCO	
mkhs004	N/A	N/A	N/A	Santa Fe bldgs, steam rooms, etc.	MK	CCO	
mkhs005	N/A	N/A	N/A	Ferry Pt. Pier	MK	CCO	
mkhs007	P-07-000785	N/A	N/A	Bray Property	MK	CCO	
mkna006	N/A	CA-CCO-285	N/A	[Shellmound]	MK	CCO	
mkna008	N/A	CA-CCO-287	N/A	[Shellmound]	MK	CCO	
mlhs001	N/A	N/A	N/A	Arrowhead Marsh	ML	ALA	
mlhs002	N/A	N/A	N/A	Damon Marsh	ML	ALA	
mlhs003	N/A	N/A	N/A	WWII sunken ships (3 Sites)	ML	ALA	
mlhs004	N/A	N/A	N/A	California's first migratory bird reserve	ML	ALA	
pphs001	N/A	N/A	N/A	Main office safe footing	PP	CCO	
pphs048	N/A	N/A	N/A	No. 1 Nitrating House	PP	CCO	
pphs061	N/A	N/A	N/A	"Site of Giant Powder Co."	PP	CCO	

Table IV.E-1 *Continued*

EBRPD #	Primary #	Trinomial	HPD #	Resource Name/Description	Park[a]	County	Comments
				Monument			
ppphs066	N/A	N/A	N/A	Gelatine mix house	PP	CCO	
ppphs077	N/A	N/A	N/A	No. 2 Hall Punch House	PP	CCO	
ppphs083	N/A	N/A	N/A	Magazine area office	PP	CCO	
ppphs084	N/A	N/A	N/A	Gelatine magazine	PP	CCO	
ppphs085	N/A	N/A	N/A	Dynamite magazine	PP	CCO	
ppphs088	N/A	N/A	N/A	Old wharf	PP	CCO	
ppphs100	N/A	N/A	N/A	Giant Powder Site	PP	CCO	
ppphs110	N/A	N/A	N/A	Export magazine	PP	CCO	
ppphs128	N/A	N/A	N/A	Testing laboratory	PP	CCO	
ppphs191	N/A	N/A	N/A	Hospital	PP	CCO	
ppphs222	N/A	N/A	N/A	Recreation hall	PP	CCO	
ppphs317	N/A	N/A	N/A	Black powder rumbler	PP	CCO	
ppphs340	N/A	N/A	N/A	No. 1 Hall Punch House	PP	CCO	
ppphs425	N/A	N/A	N/A	Nitro di biazzi building	PP	CCO	
ppphs500	N/A	N/A	N/A	Sobrante to Nitro rail spur	PP	CCO	
ppphs501	N/A	N/A	N/A	Giant Station to "Old" Line spur	PP	CCO	
ppphs502	N/A	N/A	N/A	Giant Station to warehouses spur	PP	CCO	
ppphs504	N/A	N/A	N/A	Dynamite line	PP	CCO	
ppphs505	N/A	N/A	N/A	Gelatin line	PP	CCO	
ppphs506	N/A	N/A	N/A	"Old" Line	PP	CCO	
ppphs507	N/A	N/A	N/A	Black powder line	PP	CCO	
ppphs508	N/A	N/A	N/A	Magazine area lines	PP	CCO	
ppphs510	N/A	N/A	N/A	Safety area line	PP	CCO	
ppphs511	N/A	N/A	N/A	Powder line	PP	CCO	
ppphs550	N/A	N/A	N/A	Giant Post Office	PP	CCO	
ppphs551	N/A	N/A	N/A	Giant Station	PP	CCO	
ppphs552	N/A	N/A	N/A	Sobrante Station	PP	CCO	
ppphs605	N/A	N/A	N/A	[unnamed Black Powder]	PP	CCO	
ppphs624	N/A	N/A	N/A	Boarding house	PP	CCO	
ppphs629	N/A	N/A	N/A	Powder burn area	PP	CCO	
ppphs630	N/A	N/A	N/A	Safety Nitro (1892)	PP	CCO	
ppphs633	N/A	N/A	N/A	Steel water tank and tower	PP	CCO	
ppphs704	N/A	N/A	N/A	"horseshoe" monument	PP	CCO	
ppphs705	N/A	N/A	N/A	tenant house 3	PP	CCO	
ppphs706	N/A	N/A	N/A	tenant house 2	PP	CCO	
ppphs707	N/A	N/A	N/A	tenant house 1	PP	CCO	
ppphs709	N/A	N/A	N/A	Bowling alley	PP	CCO	
ppphs711	N/A	N/A	N/A	Petrich's Saloon	PP	CCO	
ppphs712	N/A	N/A	N/A	Ethnic Lodge	PP	CCO	
ppphs713	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs714	N/A	N/A	N/A	Ethnic lodge	PP	CCO	
ppphs715	N/A	N/A	N/A	Dump	PP	CCO	
ppphs716	N/A	N/A	N/A	Foundation & berm	PP	CCO	
ppphs717	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs718	N/A	N/A	N/A	Kearny Ranch Site	PP	CCO	

Table IV.E-1 *Continued*

EBRPD #	Primary #	Trinomial	HPD #	Resource Name/Description	Park[a]	County	Comments
ppphs719	N/A	N/A	N/A	Foundation & berm	PP	CCO	
ppphs720	N/A	N/A	N/A	Granite Powder Co.	PP	CCO	
ppphs721	N/A	N/A	N/A	Randall Ranch (1860)	PP	CCO	
ppphs722	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs723	N/A	N/A	N/A	Granite foun. & berm	PP	CCO	
ppphs724	N/A	N/A	N/A	Granite foun. & berm	PP	CCO	
ppphs725	N/A	N/A	N/A	Granite foun. & berm	PP	CCO	
ppphs726	N/A	N/A	N/A	Granite Powder	PP	CCO	
ppphs727	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs728	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs729	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs730	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs731	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs732	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs733	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs734	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs735	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs737	N/A	N/A	N/A	Foundation	PP	CCO	
ppphs738	N/A	N/A	N/A	Black Powder Press	PP	CCO	
ppphs739	N/A	N/A	N/A	unknown	PP	CCO	
ppphs740	N/A	N/A	N/A	Black Powder (?)	PP	CCO	
ppphs741	N/A	N/A	N/A	Black Powder (?)	PP	CCO	
ppphs742	N/A	N/A	N/A	[unknown]	PP	CCO	
ppphs744	N/A	N/A	N/A	[unnamed Black Powder]	PP	CCO	
ppphs745	N/A	N/A	N/A	Black Powder (?)	PP	CCO	
ppphs747	N/A	N/A	N/A	[unknown]	PP	CCO	
ppphs751	N/A	N/A	N/A	Large Shell Dynamite Hand Pack House	PP	CCO	
ppphs757	N/A	N/A	N/A	Croatian Fishing Village-Sobrante	PP	CCO	
ppphs758	N/A	N/A	N/A	Chinese Fishing Village-Site	PP	CCO	
ppphs759	N/A	N/A	N/A	Gionochios Fishing Resort	PP	CCO	
ppphs760	N/A	N/A	N/A	Giant Park/ Sobrante Park	PP	CCO	
ppphs761	N/A	N/A	N/A	Trestle Bridge over RR	PP	CCO	
ppna862	P-07-000143	CA-CCO-264	N/A	[Shellmound]	PP	CCO	
ppna863	P-07-000144	CA-CCO-265	N/A	[Shellmound]	PP	CCO	
rdhs001	N/A	N/A	N/A	Blossom Rock redwoods tree site	RW	ALA	Listed in the California Register; California Historical Landmark
rdhs002	N/A	N/A	N/A	Rainbow Trout historic plaque	RW	ALA	Listed in the California Register; California Historical Landmark; CHRIS code: 1CL
rdhs003	N/A	N/A	N/A	Redwood stump	RW	CCO	
rdhs004	N/A	N/A	N/A	Redwood stump	RW	CCO	
rdhs005	N/A	N/A	N/A	Redwood stump	RW	CCO	
rdhs006	N/A	N/A	N/A	Sulfur mine	RW	ALA	
rdhs007	N/A	N/A	N/A	Logging mill location	RW	CCO	
rdhs008	N/A	N/A	N/A	Church of the Woods	RW	ALA	
rdhs009	N/A	N/A	N/A	Homesite	RW	ALA	
rdhs010	N/A	N/A	N/A	Big Bear Tavern site	RW	ALA	
rdhs011	N/A	N/A	N/A	Gulch	RW	ALA	

Table IV.E-1 *Continued*

EBRPD #	Primary #	Trinomial	HPD #	Resource Name/Description	Park[a]	County	Comments
rdhs012	N/A	N/A	N/A	Park residence	RW	ALA	
rdhs013	N/A	N/A	N/A	Orchard	RW	ALA	
rdhs014	N/A	N/A	N/A	Possible homesite	RW	ALA	
rdhs015	N/A	N/A	N/A	Possible mill location	RW	ALA	
rdhs016	P-01-002182	CA-ALA-578H	N/A	Huntfields equestrian area	RW	ALA	Rock/concrete wall enclosures
rdhs017	P-07-000800	N/A	N/A	Historic trash scatter	RW	CCO	
rdhs018	N/A	N/A	N/A	Redwood Peak gravesites	RW	CCO	Two grave stones
rdhs019	N/A	N/A	N/A	Redwood Canyon School	RW	ALA	
rdhs020	N/A	N/A	N/A	Redwood Inn	RW	ALA	
rdhs021	N/A	N/A	N/A	Logging mill locations	RW	ALA	
srhs001	N/A	N/A	N/A	Conley House	SB	CCO	
srhs002	N/A	N/A	N/A	Cottage site	SB	CCO	
srhs003	N/A	N/A	N/A	Gas station site	SB	CCO	
srhs004	N/A	N/A	N/A	Quarry with labyrinth	SB	CCO	
srhs101	N/A	N/A	N/A	East Portal Old Claremont Tunnel	SB	CCO	
srna004	P-01-002186	CA-ALA-581	N/A	Isolate	SB	CCO	Chert flake
tihs001	N/A	N/A	N/A	Vollmer Peak rock wall	Tld	CCO	
tihs002			76000480	Merry-go-round	Tld	CCO	Listed in the National and California registers
tihs003	N/A	N/A	N/A	Brazil Building	Tld	CCO	
tihs004	N/A	N/A	N/A	Rotary Grove peace monument	Tld	CCO	
tihs005	N/A	N/A	N/A	Pozzulana Quarry Site	Tld	CCO	
tihs006	N/A	N/A	N/A	Turn-of-the-century water system remnant	Tld	CCO	
tihs007	N/A	N/A	N/A	Sweetbriar Dairy Site	Tld	CCO	
tihs008	N/A	N/A	N/A	Anti-aircraft installation	Tld	CCO	Constructed circa 1944
tihs009	N/A	N/A	N/A	Big Springs water distribution structure	Tld	CCO	
tihs010	N/A	N/A	N/A	Hopkins Property/Byrnes Ranch Site	Tld	CCO	
tihs011	N/A	N/A	N/A	WPA golf course	Tld	CCO	Constructed circa 1930s
tihs012	N/A	N/A	N/A	Old Observatory Site	Tld	CCO	
tihs013	N/A	N/A	N/A	Mineral Springs	Tld	CCO	
tihs014	N/A	N/A	N/A	Mrs. Mary Curran Ranch Site	Tld	CCO	
tihs015	N/A	N/A	N/A	CCC Camp Wildcat	Tld	CCO	Circa 1930s
tihs016	N/A	N/A	N/A	Spillway and dam	Tld	CCO	Circa 1921
tihs017	N/A	N/A	N/A	Ferndale/Sullivan Ranch	Tld	CCO	
tihs019	P-01-000799	N/A	N/A	Tilden steam trains	Tld	ALA	
tihs020	P-01-002254	N/A	N/A	Rock art	Tld	ALA	
tihs021	P-07-000801	N/A	N/A	Golf course pipeline	Tld	CCO	
tihs022	P-07-000802	N/A	N/A	Archery range foundation	Tld	CCO	
tihs023	n/A	N/A	N/A	Memorial grove/botanic gardens	Tld	CCO	
tihs024	n/A	N/A	N/A	Memorial grove	Tld	CCO	
tihs025	n/A	N/A	N/A	Nike radar site	Tld	CCO	
tina001	n/A	CA-CCO-024	N/A	Jewel Lake campsite	Tld	CCO	Midden, obsidian blade
tina018	N/A	CA-CCO-024	N/A	Jewel Lake campsite	Tld	CCO	Midden, isolate
tina020	P-01-002254	N/A	N/A	Lake Anza mortars	Tld	CCO	Bedrock mortars

Table IV.E-1 *Continued*

EBRPD #	Primary #	Trinomial	HPD #	Resource Name/Description	Park[a]	County	Comments
tmhs001	N/A	N/A	N/A	Beach House WPA Rock Work	TM	ALA	
tmhs002	N/A	N/A	N/A	Kiwanis Bldg WPA Rock Work/Play Site	TM	ALA	
tmhs003	N/A	N/A	N/A	Temescal Dam	TM	ALA	
wchs001	P-07-000323	CA-CCO-553H	92000313	Wildcat Cn	WC	CCO	
wchs022	P-07-000323	CA-CCO-553H	92000313	Alvarado Park	WC	CCO	Listed in National and California registers, and the Contra Costa County Historical Resource Inventory
wchs023	N/A	N/A	N/A	Belgum sanitarium site	WC	CCO	
wchs024	N/A	N/A	N/A	Nike radar site	WC	CCO	
wchs025	N/A	N/A	N/A	Homesite	WC	CCO	
wchs026	N/A	N/A	N/A	Homesite	WC	CCO	
wchs027	N/A	N/A	N/A	Homesite	WC	CCO	
wchs028	N/A	N/A	N/A	Homesite	WC	CCO	
wchs029	N/A	N/A	N/A	Homesite	WC	CCO	
wchs030	N/A	CA-CCO-889	N/A	Contemporary rockcarving	WC	CCO	"Giacou" carved in rock[b]
wchs031	N/A	N/A	N/A	Nike Launch Site	WC	CCO	
wcna001	P-07-000323	CA-CCO-553H	92000313	Alvarado village site/WPA park features	WC	CCO	Village Site; see CCO-553H, 125, 274, 349, 353, 373
wcna002	N/A	CA-CCO-125	N/A	Midden	WC	CCO	
wcna003	N/A	CA-CCO-373	N/A	Midden	WC	CCO	
wcna004	N/A	CA-CCO-349	N/A	Bedrock mortars/cupules	WC	CCO	
wcna005	N/A	CA-CCO-274	N/A	Midden	WC	CCO	
wcna006	N/A	CA-CCO-553H	N/A	Wildcat Cn	WC	CCO	
wcna007	N/A	CA-CCO-553H	N/A	Wildcat Cn	WC	CCO	
wcna010	N/A	CA-CCO-578	N/A	Mortar	WC	CCO	Bedrock mortar
wcna011	P-07-000346	N/A	N/A	Amos Site	WC	CCO	Shellmound/petroglyph /bedrock mortar/cupule
wcna012	P-07-000347	CA-CCO-580	N/A	Amos Rock	WC	CCO	Cupule rock
wcna013	P-07-000348	CA-CCO-581	N/A	Star Rock	WC	CCO	Pleiades Petroglyph
N/A	P-01-002184	N/A	N/A	Fence	CC	ALA	
N/A	P-01-000235	CA-ALA-429H	N/A	Chinese work camp	LC	ALA	
N/A	P-07-002587	N/A	N/A	Rock wall	SB	CCO	
N/A	P-07-002717	N/A	N/A	Petroglyphs and bedrock mortars	Tld	CCO	
N/A	C-889[b]	N/A	N/A	Isolate	WC	CCO	
N/A	P-07-002607	CA-CCO-762	N/A	Petroglyph	WC	CCO	
N/A	P-07-001171	N/A	12796	Brooks Island	BK	CCO	CHRIS code: 5S2
N/A	N/A	CA-CCO-301	N/A	Shellmound	ES	CCO	
N/A	P-07-002555	CA-CCO-754H	N/A	Stege Marsh Pier	ES	CCO	
N/A	P-01-005892	N/A	68815	Naval Supply Center	MH	ALA	No longer extant; CHRIS code: 2S2
N/A	P-01-010632	N/A	N/A	Western Pacific Railroad Ferry Slips	MH	ALA	Western Pacific Mole
N/A	P-01-000255	N/A	N/A	U.S. Army Air Corps Mechanics Training	ML	ALA	Mapped within park at NWIC
N/A	P-07-001374	N/A	74394	Giant Powder Company Site	PP	CCO	California Historical Landmark; CHRIS code: 7L

Table IV.E-1 *Continued*

EBRPD #	Primary #	Trinomial	HPD #	Resource Name/Description	Park[a]	County	Comments
N/A	P-07-002569	N/A	N/A	Shell deposits	PP	CCO	Mapped within park at NWIC
N/A	P-01-009576	N/A	106353	Lake Temescal Bath House	TM	ALA	CHRIS code: 2S2

[a] AC - Anthony Chabot, BK - Brooks Island, CB - Crown Beach, CC - Claremont Canyon, ES - East Bay Shoreline, KG - Kennedy Grove, LC - Lake Chabot, LCn - Leona Canyon, MH - Middle Harbor, MK - Miller/Knox, ML - Martin Luther King, Jr., Regional Shoreline, PP - Point Pinole, RW - Redwood, SB - Sibley, SR - Sobrante Ridge, Tld - Tilden, TM - Temescal, WC - Wildcat Canyon .
[b] EBRP database lists C-889 as "CA-CCO-889." This resource is an isolate and has not been formally recorded.

California Historical Resource Information System (CHRIS) Status Codes
1CL - Automatically listed in the California Register due to CA Landmark status, 2S2 - Determined eligible for separate listing in National and California registers, 5S2 - Ineligible for the National Register, but still of local interest, 7L - Evaluated for a register other than the National Register.