

4.5 Cultural Resources

4.5.1 Introduction

This section evaluates the potential for construction and operation of the Project to result in adverse impacts to cultural resources. Cultural resources include architectural resources, archaeological resources, and human remains.

Comments received during Project scoping relative to Cultural Resources generally concern requests that the archaeological importance of the area be considered and that the Project require Native American observers and qualified archaeologists on site during earth disturbance, that any work within State right-of-way would require an encroachment permit and related cultural resources studies, and a recommendation that an archaeological inventory survey, including background research and communication with Native American tribes be done. These comments have been considered in the preparation of this analysis.

4.5.2 Environmental Setting

Definitions

Cultural resource is a term used to describe both archaeological sites (prehistoric and historic) depicting evidence of past human use of the landscape through material culture and the built environment.

Historic-era architectural resources include buildings, structures, objects, and historic districts. Historic-era architectural resources that are listed in or are eligible for listing in the National Register of Historic Places (National Register) are considered “historic properties.” Historic-era architectural resources that are listed in or are eligible for listing in the California Register of Historical Resources (California Register) are considered “historical resources.”

Archaeological resources consist of prehistoric or historic-era archaeological resources. Prehistoric archaeological materials might include: obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (“midden”) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, milling slabs). Historic-era archaeological materials (not associated with military installations or activities) might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. Similar to historic-era architectural resources, archaeological resources that are listed in or are eligible for listing in the National Register are considered “historic properties.” Archaeological resources that are listed in or are eligible for listing in the California Register are considered “historical resources.” In addition, archaeological resources can be considered “unique archaeological resources” under CEQA.

Project Area of Potential Effects

The Project area or Area of Potential Effects (APE) for the Project is defined as “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the

character or use of historic properties, if any such properties exist” (36 CFR Section 800.16[b]). The Project area is the area of proposed Project components including installation of pipelines, new construction, and upgrades at the existing wastewater treatment facility. Project area and APE are used interchangeably in this section.

Archaeological Area of Potential Effects

The archaeological or direct APE is the area of direct impact. The archaeological APE represents all areas where construction-related ground disturbance could occur, including open excavations, construction work areas, and staging areas.

The width of the archaeological APE for pipelines proposed within existing roadways is equal to the width of the road right-of-way (typically 30 to 100 feet from curb to curb) because it is not currently known where within the right-of-way the pipelines will be located. The archaeological APE for pipelines proposed on off-road locations is 50 feet from centerline of the pipeline to accommodate work areas. Pipeline trenches would generally be no more than 9 feet wide. For all pipelines, the length of the archaeological APE is equal to the length of the proposed pipeline.

Pipeline depths would average 8-9 feet below the ground surface, with deeper excavations (up to 15 feet below ground surface) required where pipelines would be installed via trenchless technologies (i.e., jack and bore, horizontal directional drilling, etc.).

The horizontal archaeological APE for nonlinear facilities is the anticipated footprint and construction-related disturbance associated with each facility. The maximum construction area at the Headquarters-West Annex Site would be approximately 2.2 acres. The maximum construction area at the Chanticleer Site would be approximately 1.5 acres. Depth of ground disturbance for the facilities at these sites would not exceed 2 feet below ground surface. The area of ground disturbance at the SC WWTF would be 1.5 acre. Because of the anticipated softness of the soil underneath the SC WWTF, piles would be driven to a depth of approximately 70 feet below ground surface. The construction area for the recharge wells, monitoring wells, and associated pump stations would be approximately 0.36 acres for the total facilities (roughly 0.12 acres for each facility). Depth of ground disturbance for most facility components would be approximately 2 feet; however, the recharge wells could extend to depths of approximately 900 feet below the ground surface.

In addition to construction areas described above, the APE includes the proposed construction staging areas for the Project (Chapter 3, *Project Description*, Table 3-5).

Architectural Area of Potential Effects

The architectural APE encompasses the direct APE as well as the area of indirect impact, which for historic architectural resources includes the viewshed or setting visible from a Project component as well as the area subject to construction-related vibration.

The horizontal extent of the architectural APE is inclusive of any areas that could be subject to significant vibration effects from construction equipment. For aboveground components, the viewshed and/or setting visible from a Project component is included in the architectural APE.

Natural and Cultural History

This section summarizes the natural and cultural history of the northern Monterey Bay area. Because archaeological regions can represent large geographic areas and display some cultural homogeneity, a discussion of the environmental, prehistoric, ethnographic, and historic contexts is useful in order to evaluate the Project impacts to cultural resources.

Natural Environment

The Monterey Bay area is home to a vast array of floral and faunal species that would have been utilized by both prehistoric and early historic-era populations. Mayer and Laudenslayer (1988) describe the two dominant habitats in the Monterey Bay area as coastal oak woodland and coniferous montane hardwood. Native to coastal oak woodland is the coast live oak tree. During the Mission Period (1769–1834), early settlers in the area affected the integrity of this habitat through the introduction of agriculture and animal husbandry; in addition, the importation of aggressive annual species hindered the development of young oaks. As a result, portions of the woodland have become open woodlands or savannas. Over 60 species of mammals and over 110 species of birds—including California quail, deer, and squirrel—live in the coastal oak woodland habitat. A variety of tree species are found in coniferous montane hardwood habitat, including coast live oak, big-leaf maple, Pacific madrone, tan oak, canyon live oak, Coulter pine, and coastal redwood. The region contains an abundance of natural resources, which would have been taken advantage of by its prehistoric and early historic-era population. Deer, elk, and waterfowl were plentiful, as were marine and Bay resources such as seals, otters, abalone, mussels, oysters, clams and numerous fish species. Franciscan chert was an easily obtainable local raw material for stone tools. Obsidian could be obtained or traded from the Anadel and Napa Glass Mountain quarries north of the San Francisco Bay (Moratto, 1984).

Geological Context

The California coast has undergone dramatic landscape changes since humans began to inhabit the region more than 10,000 years ago. Rising sea levels and increased sedimentation into streams and rivers are among the changes (Helley et al., 1979). In many places, the interface between older land surfaces and Holocene-age landforms are marked by a well-developed buried soil profile (or “paleosol”). Paleosols preserve the composition and character of the earth’s surface prior to subsequent sediment deposition; thus, paleosols have the potential to preserve archaeological resources if the area was occupied or settled by humans (Meyer and Rosenthal, 2007). Because human populations have grown since the arrival of the area’s first inhabitants, younger paleosols (late Holocene) are more likely to yield archaeological resources than older paleosols (early Holocene or Pleistocene).

The APE is primarily within Pleistocene-age coastal terrace deposits, which has a very low potential for buried paleosols to contain archaeological resources because this formation was present prior to the arrival of humans to the area. The APE also intersects bands of the Santa Cruz Purisima Formation, which was formed in the upper Miocene to upper Pliocene and do not have buried site potential. There are areas where the APE extends through Holocene-age alluvial deposits, which has a moderate to high potential for paleosols that could contain archaeological

materials and features. The potential for buried archaeological resources can further be determined based on additional characteristics:

- Archaeological sites tend to be located near perennial water sources;
- Archaeological deposits from successive time periods are more common because the density of human populations increased over time; and
- The longer a landform remained at the surface, the greater the probability that any one spot on that landform was occupied.

Based on the above-described geoarchaeological assessment, there is moderate potential for deeply buried, well-developed soil horizons to be present in the archaeological APE. Those locations include the pipeline alignments extending east from the SC WWTF through the San Lorenzo River floodplain and pipeline alignments extended west from the Headquarters-West Annex Site through the Soquel River floodplain.

Cultural History

Prehistoric Context

Archaeologists have developed individual cultural chronological sequences tailored to the archaeology and material culture of each subregion of California. Each of these sequences is based principally on the presence of distinctive cultural traits and stratigraphic separation of deposits. Jones et al. (2007) provide a framework for the interpretation of the Central Coast and the Monterey Bay Area. The authors divide human history on the Central Coast into six broad periods: the *Paleo-Indian Period* (pre-8000 B.C.), the *Early Archaic Period* (8000 to 3500 B.C.), the *Early Period* (3500 to 600 B.C.), the *Middle Period* (600 B.C. to A.D. 1000), the *Middle/Late Transition Period* (1000 to 1250 A.D.), and the *Late Period* (A.D. 1250–1769). The periods have been largely defined on the basis of distinctive bead types; typological analysis and radiocarbon dating of *Olivella* beads show the bead sequence in the Monterey Bay Area as generally similar to those of the California Central Valley and the Santa Barbara coast. Economic patterns, stylistic aspects, and regional phases further subdivide cultural periods into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods.

Ethnographic Setting

Based on a compilation of ethnographic, historic, and archaeological data, Milliken et al. (2009) describes a group known as the Ohlone, who once occupied the general vicinity of the Project area. While traditional anthropological literature portrayed the Ohlone peoples as having a static culture, today it is better understood that many variations of culture and ideology existed within and between villages. While these descriptions of separations between native cultures of California make it an easier task for ethnographers to describe past behaviors, this masks Native adaptability and self-identity. California's Native Americans never saw themselves as members of larger cultural groups, as described by anthropologists. Instead, they saw themselves as members of specific villages, perhaps related to others by marriage or kinship ties, but viewing the village as the primary identifier of their origins. The Project is in the greater *Awawas*-speaking tribal area; their territory extended from Davenport in the north to Aptos in the south,

and included the present-day city of Santa Cruz and the unincorporated communities of Live Oak, Soquel, and Aptos. Ethnographic villages included *Aptos* village site of *Sokel* in Aptos and the *Uypi* village site of *Chatu-mu* in Santa Cruz (Milliken et al., 2009).

Economically, Ohlone engaged in hunting and gathering. Their territory encompassed both coastal and open valley environments that contained a wide variety of resources, including grass seeds, acorns, bulbs and tubers, bear, deer, elk, antelope, a variety of bird species, and rabbit and other small mammals. The Ohlone acknowledged private ownership of goods and songs, and village ownership of rights to land and/or natural resources; they appear to have aggressively protected their village territories, requiring monetary payment for access rights in the form of clamshell beads, and even shooting trespassers if caught. After European contact, Ohlone society was severely disrupted by missionization, disease, and displacement. Today, the Ohlone, while not federally recognized, still have a strong presence in the Santa Cruz and Monterey Bay Area, and are highly interested in their historic and prehistoric past.

Historic Background

Spanish and Mexican Period

Spanish incursions into the general area began in the early seventeenth century when the Sebastian Vizcaino expedition arrived at Monterey in 1602. It was not until over a century later that the Spanish government began to take an active interest in colonizing what was then known as Alta California. Between 1769 and 1823, Spanish Franciscan priests established 21 missions along the California coast from San Diego to Sonoma. Mission Santa Cruz, founded in 1791, baptized many Ohlone and later Yokuts neophytes. The 1,759 Native Americans baptized at the mission between 1791 and 1840 represented three language groups, *Awawas* (1,154 people), Delta and Northern Valley Yokuts (539 people), and Sierra Miwok (38 people). They and their descendants came to be known as the *Cruzeños*. Originally built on the San Lorenzo River floodplain near the north shore of Monterey Bay, the mission was moved to higher ground following flooding the first year. The mission was the target of at least two documented episodes of violent Native American resistance, with an uprising and partial burning of the mission in 1793 in response to forced relocation of Ohlone populations, and the killing in 1812 of Father Andrés Quintana, reportedly over the use of a metal-tipped whip to punish mission laborers (Milliken, 1995). In 1818, the mission was temporarily evacuated and left in the care of local Spanish settlers in advance of a suspected attack by Argentinean pirates; however, the pirates never landed near Santa Cruz. Instead, the settlers entrusted with protecting the mission looted the church and other mission buildings of valuables (Hoover et al., 2002).

Early American Period

Spanish control of California ended with Mexican independence in 1821. In 1834, the Mexican government secularized the Spanish missions, selling the land and buildings. In Santa Cruz County, 21 land grants were made to Mexican settlers. Most grantees used their land to establish ranches with enormous free-ranging herds of horses and Spanish cattle, which powered the *Californio* economy. Cattle hides and tallow were the medium of exchange in business transactions among the *Californios* and with many trading ships that came from the American east coast. The Project area is located within several land grants including Rancho Potrero y Rincon de San Pedro Regalado (in the immediate vicinity of the former Mission Santa Cruz),

Rancho Arroyo del Rodeo (between Rodeo Creek Gulch and Soquel Creek), and Rancho Shoquel (including present-day Soquel and Capitola) (Hoover et al., 2002).

The 1848 Treaty of Guadalupe Hidalgo brought Alta California under control of the United States. News of the Gold Rush that same year sparked a huge migration into California. Due to the rapid influx of settlers into the area, legal determinations of ownership of lands awarded by Spanish or Mexican authorities were often disputed. The new American government passed the Land Act of 1851, which placed the burden of proof-of-ownership to the grantees so that the few Native Americans who had received grants lost their title, as did many of the Hispanic owners. By congressional action, a board of Land Commissioners heard grant claims; their decision was then appealed in Federal Courts.

Santa Cruz and Vicinity

This summary of the history of Santa Cruz and the surrounding region has been adapted from a cultural resources study completed for the City of Santa Cruz General Plan Update (LSA, 2006). Commercial development of Santa Cruz and the surrounding region's natural resources was well under way by the time California became part of the United States with the signing of the Treaty of Guadalupe Hidalgo. Redwood logging began in 1841, when Joseph L. Major built a sawmill at Mount Hermon north of present-day Santa Cruz. By 1864, 28 sawmills had been established in Santa Cruz County. Logging continued in Santa Cruz County during the latter half of the 19th century, supplying builders in San Francisco, as well as the local lime and tannery industries. By the turn of the century, much of the useable timber had been logged, generating conservation efforts to save the remaining stands, including Big Basin Redwoods in 1902.

Lime quarrying was also an important industry in early Santa Cruz, which, like logging, developed in response to the growing demand for building materials during the post-gold rush construction boom in San Francisco. Two engineers from Massachusetts, A. P. Jordan and Isaac E. Davis, built the first lime kiln in 1853 at the corner of High and Bay streets and established a quarry along the San Lorenzo River between Santa Cruz and Felton. The quarry was eventually sold to Henry Cowell, whose lime operation, along with the Santa Cruz lime operations constituted half of the State's lime production in the 1880s. By the 1890s, Santa Cruz's lime industry began to decline due to the depletion of cheap fuel brought about by extensive logging of the region and the development of cement, which used a cheaper, less pure grade of limestone.

Tanneries were also important to the area's early economy. By 1857, at least four tanneries were established in and near Santa Cruz: Kirby and Jones on Mission Hill, Porter Brothers in Soquel, C. Brown and Company on Laurel Street, and the Grove Tannery on River Street. The tanneries produced skirting, harness, belting, bridle, and sole leather. One of the largest tanneries was owned by A. C. Kron, who had purchased an operating interest in the Grove Tannery in 1867. By 1890, Kron had over 30 employees, a commission house on Clay Street in San Francisco, and a branch in Sydney, Australia. As with the lime industry, however, the local tanneries' overharvesting of local timber for barrel staves and fuel resulted in the industry's demise by the turn of the century.

Although the origin of the name “Soquel” is unknown, it was likely inspired by the language of the native people. The town of Soquel was founded in 1852 along Soquel Creek (which was known to regularly flood the town), and by 1860 the local logging industry had become the third largest in the nation. Paper and flour mills were also constructed along the creek. The Santa Cruz-Watsonville Railroad reached Soquel in 1876, two years after the Camp Capitola beach resort opened. Soquel’s population grew from 328 residents in 1880 to around 3,000 in 1890.

These burgeoning industries also spawned the area’s residential growth and infrastructure development during the 19th century. A water system was built in 1860, facilitating more residential and industrial growth. In the 1870s, the population grew by 50 percent, and housing and development expanded to the east side of the San Lorenzo River, the West Cliff area, Ocean View, and Riverside Avenue. Also during this time, Pacific Street emerged as the business center for Santa Cruz and fostered the City’s first Chinatown. In the 1890s, the street railroad was electrified and expanded with houses built along lines that stretched from downtown to Soquel and the Seabright area.

The Santa Cruz area’s economic focus gradually shifted to tourism nearing the turn of the century. The growth of local tourism was largely a result of railroad access to Santa Cruz County beginning in the late 1870s. Prior to this time, goods were transported and people accessed the area via ship or on narrow, rutted roads. In the early 20th century, popular beach attractions were built, including the Scenic Railway roller coaster in 1908 and the Giant Dipper Roller Coaster in 1924.

World War II had a significant effect on the local economy. Tourism declined due to travel restrictions and gasoline shortages. The area’s fishing economy, which was dominated by Italian immigrants, suffered as the result of Executive Order 9066, which established internment and relocation camps for Japanese, German, and Italian immigrants, including those who were United States citizens. Many Italian families were relocated inland away from the waterfront and many of the fishing boats were abandoned or used in the war effort. The commercial fishing industry never recovered after the war, although sport fishing remains a popular activity. The local tourist economy revived, with the boardwalk undergoing major renovations in the 1950s and again in 1981. The boardwalk, which remains the focus of Santa Cruz’s tourist industry, continues to operate with a mix of historic and modern amusement park attractions.

Santa Cruz Wastewater Treatment Facility

This section has been partially adapted from the 1973 Draft Environmental Impact Statement for the Treatment Facility Expansion and Interceptor Construction in the City of Santa Cruz. Construction of sanitary sewers in Santa Cruz began in the 1880s when the population was about 4,000. By 1917, about three quarters of the city was sewered by a gravity system emptying into the San Lorenzo River and Monterey Bay. Because of the attractive bathing beaches in the area, this disposal method was unsatisfactory and in 1925, a comprehensive study was made of sewage collection and disposal. By 1928, essential parts of a waste water system with a treatment plant located at Neary Lagoon were completed. In 1963, [engineering firm Brown and Caldwell] was hired to survey the whole drainage area. While the survey was underway, the Regional Water Quality Control Board (RWQCB) noted that the City’s treatment plant was not meeting existing

requirements and prepared an “Order to Cease and Desist.” A three-stage construction was envisioned with the first stage to consist of a larger treatment plant with trunk sewers and tunnel outfall. This system was to meet the RWQCB’s requirements. In addition to contracts, 30 additional acres in Neary Lagoon and 56 easements for the trunk sewers and outfall were acquired. This was accomplished in 1966 (EPA, 1973).

The 1928 Sanborn map shows that a “city sewer pumping station” existed in the approximate location of the modern-day Neary Lagoon Public Tennis Courts. The sewer plant included a 1½-story-over-basement wood-frame pumping station building with a circular sewer well, sewer pumps, boilers, and an incinerator. The 1928–1950 Sanborn map shows that the sewer plant had been demolished and a new “City of Santa Cruz Sewer Pumping Plant” had been constructed in the location of the modern-day water treatment facility near the intersection of Bay and Liberty streets. Constructed in 1948, the plant was composed of two circular reinforced concrete tanks with a one-story control house connecting the tanks (Digesters 2 and 3, extant), a pre-existing pump house with a Greek-cross plan (shown as the chlorination station in a 1988 drawing and demolished sometime after that year), a circular vacuator (non-potable water tank, extant), and a one-story brick auto garage (demolished circa 1952). The plant underwent a “primary upgrade” in 1965. Several new buildings are visible in a 1968 aerial photo, and these were located to the north and west of the 1948 plant. These include the pump house, the administration building (process control), and the southern portion of the primary sedimentation tanks (all extant). In 1985, the current outfall was completed. A 1993 aerial photo reveals that more buildings had been constructed since 1968. These include the primary digestion tanks, the solids dewatering building, the bar screen room, the grit removal tank, the UV filtration building, and the northern portion of the primary sedimentation tanks (all extant). The facility underwent an advanced primary upgrade in 1988 and a full secondary upgrade in 1998.

Identification Efforts

The effort to identify previously recorded cultural resources in the vicinity of the APE consisted of archival research, contacting Native American tribes, and a surface survey of the APE.

Records Search Methods

ESA conducted a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University on December 12, 2016 (File No. 16-0889). The purpose of the records search was to: (1) determine whether known cultural resources have been recorded within the APE; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby resources; and (3) develop a context for the identification and preliminary evaluation of cultural resources. The records search consisted of an examination of the following documents:

- **NWIC base maps** (USGS Santa Cruz and Soquel, California 7.5-minute topographic maps) to identify recorded archaeological sites and studies within a *1/2-mile radius* of the Project.
- **NWIC base maps** (USGS Santa Cruz and Soquel, California 7.5-minute topographic maps) to identify recorded architectural resources and studies conducted *within or adjacent* to the Project.

- **Resource Inventories:** California Department of Parks and Recreation (1976), *California Inventory of Historical Resources*. California Department of Parks and Recreation, Sacramento; California Office of Historic Preservation (2012), *Historic Properties Directory Listing for Santa Cruz County* (through April 2012); California Department of Transportation (Caltrans), *Historic Bridge Inventory, District 4, Santa Cruz County*, Updated 2010; Santa Cruz County GIS/Assessor's Data (<http://www.co.santa-cruz.ca.us>).
- **Historical Maps:** An extensive online historical map collection with approximately 50 maps and views of the Monterey Bay area is available online at <http://davidrumsey.com>; Sanborn Fire Insurance Maps; historic aerial imagery available online at <http://historicaerials.com>.

Native American Consultation Efforts

ESA submitted a sacred lands search request to the Native American Heritage Commission (NAHC) on October 18, 2016. ESA received a response on October 20, 2016. A records search of the NAHC sacred land file did not indicate the presence of Native American cultural resources in the vicinity of the APE. The NAHC provided a list of six Native American individuals and organization that might have additional information or concerns. ESA contacted each person on the list by letter on October 26, 2016. The letter provided contact information for the Soquel Creek Water District for additional communication regarding the Project.

Records Search Results

Forty-three (43) cultural resources studies on file at the NWIC have been completed within or immediately adjacent to the APE. These studies consist of surface surveys, background research, architectural analysis, archaeological site boundary definition and evaluations, and finding of effect documents. The Previously Recorded Archaeological Resources section below further discusses studies relevant to specific cultural resources.

The results of the records search indicate that a total of 34 archaeological sites have been previously recorded in the ½ mile records search radius around the APE, including four (4) historic-era archaeological resources, twenty (20) prehistoric archaeological resources, and ten (10) multicomponent sites that contain both historic-era and prehistoric elements. There are no previously recorded architectural resources in the APE on file at the NWIC. Eight (8) prehistoric archaeological resources are within or immediately adjacent to the APE.

Identification Results

Survey Methods

On December 28–30 2016, an ESA archaeologist, accompanied by a field technician, conducted an archaeological surface survey of the APE. The survey consisted of a mixed strategy of pedestrian survey and cursory survey methods. The pedestrian survey consisted of intensively walking the APE in narrow (5–10 meter wide) transects. The cursory survey consisted of a “windshield” survey in paved and built-upon areas combined with pedestrian survey in areas with limited exposed ground surface. The intensity of the survey was determined by environmental conditions (i.e., paved, unpaved, disturbed, vegetation limitations) and predicted archaeological sensitivity of an area based on several factors including the results of previous surveys, mapped locations of previously recorded sites, proximity to waterways and other geographic features, as well as mapped geologic units. Prior to fieldwork, aerial, topographic, and geologic maps of the

APE were examined to determine those areas that would require more intensive pedestrian survey.

Most of the pipeline alignments would be installed within paved road rights-of-way or other built-upon facilities. Urban, paved areas with concrete gutters and sidewalks exhibiting no ground surface exposure were driven. Unpaved shoulders, pull-outs, drainages, cut banks, and landscaped areas were surveyed on-foot. Survey at these locations focused on the inspection of cut banks and other exposures to identify, to the extent possible, the potential for subsurface archaeological components. Off road, unpaved segments of the APE were subjected to an intensive pedestrian survey that consisted of walking the APE corridor in zigzag transects. Unpaved areas were surveyed in 5–10-meter wide transects. Areas of dense vegetation were periodically scraped every 10 meters to reveal ground surface. Locations within the APE nearest to previously recorded sites within a 500-foot radius were examined carefully to determine whether cultural constituents of those sites extended into the APE.

Because the majority of the pipeline would be installed in paved road right-of-way, and because most of the Project does not propose to utilize the types of vibration-inducing construction equipment or methods that would be expected to cause damage to buildings and structures adjacent to the APE¹, an intensive survey by an architectural historian was not completed for the Project. Architectural and structural resources in the APE were initially noted during the archaeological survey. Architectural resources previously documented during local historic resources surveys were mapped in relation to the Project area. On February 17, 2016, an ESA architectural historian completed a subsequent survey for documentation and evaluation purposes. The architectural historian photographed the resources and completed Department of Parks and Recreation (DPR) forms 523B, which included all necessary elements for additional archival research and evaluation. The Chanticleer Site was not accessible and an archaeological identification survey was not feasible at that location.

Archaeological Resources

Eight (8) archaeological resources are within or immediately adjacent to the Project area. These resources are all located along pipeline alignments, and are not within or adjacent to the nonlinear facilities (SC WWTF, Headquarters-West Annex Site, Chanticleer Site, or construction area for the recharge wells, monitoring wells, and associated pump stations).

CA-SCR-12/H (P-44-000018)

Site CA-SCR-12/H is a prehistoric site first recorded in 1950 by archaeologists Donald Lathrop and William Wallace during grading for the construction of a motel. Human bones had been uncovered and reportedly reburied. In 1974, a portion of the site was excavated by Meg Fritz from San Jose State University and John Fritz from the University of California at Santa Cruz. The archaeologists excavated numerous cultural materials including lithic and groundstone

¹ Construction-related vibration can cause structural damage to historic buildings and structures. Given the proximity and age of existing structures to sites for which PWS components are proposed, only vibratory rollers would cause potential vibratory impacts on historic buildings. (Wilson, Ihrig & Associates, 2009:40).

artifacts, shell, bone, charcoal, beads, and human remains. Historic-era cultural materials were also uncovered.

In 1979, additional finds were discovered including a burial with numerous artifacts, shells, beads, and bones. The materials were uncovered from a depth of 3 feet below the surface.

ESA archaeologists relocated site CA-SCR-12/H during the pedestrian archaeological survey completed for the current Project.

CA-SCR-80 (P-44-000085)

In 1972, archaeologists Jean Stafford and Kim Fisher identified CA-SCR-80 as an area of shell midden with lithic materials, fire-cracked rock, shell, and charcoal. They noted that development had nearly destroyed the site.

ESA archaeologists did not relocate site CA-SCR-80 during the current survey effort. The APE is limited to the road right-of-way and the adjacent area has been highly disturbed from an improvement Project in the early 2000s.

CA-SCR-93/H (P-44-000097)

First formally recorded in 1974, site CA-SCR-93/H is an extensive prehistoric site containing shell midden, lithic tools and fragments, shell-cut beads, charmstones, and groundstone fragments. In addition, numerous historic-era artifacts have been uncovered including a Mission-era spindle whorl, an inscribed bone, a Civil War button, and lead toys. Two excavations and a monitoring program have been conducted at CA-SCR-93/H (Bourdeau, 1986).

ESA archaeologists did not relocate site CA-SCR-93/H during the current survey effort. The APE is limited to the road right-of-way. The adjacent parcels, where site materials had been identified in the past, were not accessible to the surveyors.

CA-SCR-168/H (P-44-000170)

Site CA-SCR-168/H extends over 2,000 feet north and south of the Highway 1 into developed areas and is situated on an elevated plateau above the Soquel Creek floodplain. Beginning in 1978, several different surveys and test excavation identified discontinuous areas of shell midden (Cartier, 1978; Breschini et al., 1984; Waldron and Jones, 1987; Breschini and Haversat, 1989); in 1996, the NWIC defined a large site boundary encompassing these areas. Numerous artifacts have been identified including mortars, pestles, charmstones, chert and obsidian flakes and tools, shell, and bone. Historic-era artifacts were also identified prior to development in the area.

In 1984, archaeologists Gary S. Breschini, Trudy Haversat and Paul Hampson conducted test excavations at CA-SCR-168/H in the portion of the site nearest to the current APE (Breschini et al., 1984). The excavations were completed prior to development. The archaeologists concluded that while the site had been largely disturbed by many years of cultivation, the site was significant and recommended that none of the soils be removed from the property.

ESA archaeologists did not relocate site CA-SCR-168/H during the current survey effort. The APE is limited to the road rights-of-way. Areas adjacent to the site were either paved or very disturbed and no cultural materials were identified.

CA-SCR-269/H (P-44-000271)

Site CA-SCR-269/H consists of isolated locations of chert and obsidian flakes as well as historic-era glass and ceramic fragments. Archaeologists identified the site in 1985 during grading for a parking lot.

ESA archaeologists did not relocate site CA-SCR-269/H during the current survey effort. The APE is limited to the road right-of-way. Areas adjacent to the roadway were paved and the ground surface was not visible.

CA-SCR-292/H (P-44-000285)

Site CA-SCR-292/H consists of a prehistoric lithic concentration of chert debitage with fire-cracked rock, ground stone fragments, and shell. Archaeologist Dana McGowan identified the site in 1991; since that time, a building was constructed on the main portion of the site.

In 2014, archaeologist Michael Newland from Sonoma State University conducted a surface and subsurface investigation in the vicinity of the site (Newland, 2014a and 2014b). The subsurface study consisted of excavating five mechanical auger samples in the road right-of-way. One sample identified cultural materials (represented by seven fragments of chert debitage) at a depth of 8 to 12 inches below the surface. The other four samples did not identify any cultural materials. Subsequently, archaeologists from Holman and Associates drafted an Archaeological Research Design and Treatment Plan for the Project that outlined monitoring requirements during Project implementation. Based on the documentation at the NWIC, as of March 25, 2016 the State Historic Preservation Officer (SHPO) had not yet concurred with the Project findings.

ESA archaeologists did not relocate site CA-SCR-292/H during the current survey effort. The APE is limited to the road rights-of-way. Areas adjacent to the roadway were paved or landscaped and the native ground surface was not visible.

CA-SCR-293 (P-44-000286)

In 1991, archaeologist Dana McGowan identified CA-SCR-293 as an area of shell midden and sparse lithic fragments. It was noted that the site might be fill material.

ESA archaeologists did not relocate site CA-SCR-293 during the current survey effort. The APE is limited to the road right-of-way. The adjacent area has been highly disturbed from an improvements project in the early 2000s.

P-44-000302

Resource P-44-000302 is recorded as a small patch of dark soil and seven marine shell fragments identified during a survey. The shell and dark soil were not found in association. No other cultural materials were identified.

ESA archaeologists did not relocate site P-44-000302 at the recorded location during the current survey effort. The APE is limited to the road rights-of-way. The adjacent area is paved.

Architectural Resources

ESA identified four architectural resources in the Project area during the survey effort. These resources include two residential buildings at the Headquarters-West Annex Site, one residential building at the Chanticleer site, and the complex of industrial buildings that comprise the SC WWTF. These resources have been evaluated for their potential significance and eligibility for listing in the California and National Registers. In addition, the City of Santa Cruz and City of Capitola historic resources surveys lists 40 buildings and structures immediately adjacent to the area of direct impact for the Project (Archives and Architecture, 2013; Chase et al., 1989; Page and Associates, 1976; Swift, 2004).

Residential Buildings at the Headquarters-West Annex Site

Description

The Headquarters-West Annex Site includes two buildings at 2820 and 2850 Capitola Avenue on a 52,185-square foot (sf) lot (APN#030-241-20). According to the Santa Cruz County Assessor, 2850 Capitola Avenue was built in 1890. According to the County Housing Authority, the building at 2820 Capitola Avenue was built in 1950.

The building at 2850 Capitola Avenue is located approximately in the center of the parcel. The 836-sf building is a two-story, wood-frame building that appears to have originally been a residence, with a roughly U-shaped plan. The building's exterior appears to be in poor condition. It is capped by a composition shingle clad roof with gabled and shed roof forms. The exterior walls are clad in an assortment of horizontal and vertical wood siding, plywood, and gypsum panels. All original fenestration has been replaced/filled in with small rectangular openings with wire mesh. These extensive alterations give the building the appearance of a large chicken coop.

The building at 2820 Capitola Avenue is located in the southwest corner of the parcel. The building is a single-story, wood-frame residence with an irregular-shaped plan that appears to have been constructed in multiple phases and with many alterations. The building's exterior appears to be in poor condition. The exterior walls are clad in an assortment of wood siding and it is capped by a composition shingle clad roof with gabled, hipped, and shed forms. The area around the building is used for storage of rubbish, auto parts, and old furniture causing some areas of the parcel to be inaccessible to the surveyor.

Research indicates that the residence at 2850 Capitola Avenue was occupied by the Millsap family from at least 1940 until at least 1977. Napoleon "Poley" Millsap and his wife Isabelle raised their two children, Lorrie Patrice and Darrell, in the house. Poley was a mechanic for Santa Cruz County, and he owned and operated Millsap's Quarry (later known as Olive Springs Quarry) for ten years until 1953. Darrell "Bunky" Millsap (1931–2012) was an accomplished painter who won numerous local awards in his youth. In 1956, he graduated with a degree in commercial illustration from the Art Center School in Los Angeles and built a career as a prolific illustrator for publications in Southern California. He formed the Millsap/Kinyon Illustration partnership and later formed his own Darrel Millsap Illustration until he retired in 1999.

Beginning in 1960, Susan Fry operated her real estate office on the parcel, likely from 2820 Capitola Avenue. Research did not reveal information about this business.

Evaluation

ESA staff evaluated the buildings for their potential historical significance under California Register and National Register Criteria 1/a through 4/d. The buildings at 2820 and 2850 Capitola Avenue existed as a single-family residence and also as a real estate office during the 20th century. The buildings were constructed at least 30 years before the oldest neighboring buildings and do not appear to be part of a larger residential development or subdivision. Research does not suggest that the buildings contributed to broad patterns of local or regional history or the cultural heritage of California or the United States, and for this reason is not recommended eligible for listing under Criterion 1/a. Several people are associated with the buildings, but none were found to have been important to local, California, or national history. The building is not associated with the productive life of Darrell Millsap, who lived in the residence as a child and became an accomplished illustrator in his adulthood in Southern California. Research did not reveal associations with any other significant persons. It therefore is not recommended eligible for listing under Criterion 2/b. Both buildings are vernacular in style and the products of unknown architects/builders. They are in fair to poor condition and do not embody distinctive characteristics of a type, region, or method of construction, represent the work of a master, or possess high artistic value, and are not recommended eligible for listing under Criterion 3/c. Research did not reveal that the buildings at 2820 and 2850 Capitola Avenue would provide important information relevant to history or prehistory that was not already known. For these reasons, the buildings are not recommended eligible for listing under Criterion 4/d.

Integrity

The buildings at 2820 and 2850 Capitola Avenue remain in their original locations and therefore retain integrity of location. However, the present residential neighborhood has developed from what was once an agricultural area with few buildings, and setting has been compromised. Both buildings have been extensively altered and have lost integrity of design, materials, workmanship, feeling, and association. The buildings retain a very low degree of integrity.

Summary

As the buildings at 2820 and 2850 Capitola Avenue do not meet any of the California or National Register criteria and retain a very low degree of integrity, ESA recommends them to be ineligible for listing in the California or National Registers. Subsequent to the evaluations in December 2016, the buildings were demolished and removed from the site.

Residential Building at the Chanticleer Site

Description

The Chanticleer Site is an 83,809-sq. ft. lot located at the southwest corner of Chanticleer and Soquel avenues in the city of Santa Cruz. It is occupied by a 1,140-sq. ft. residential building located near the northeast corner of the lot. A gated gravel driveway on Chanticleer Avenue is the only point of entry to the parcel, which is surrounded by a chain link fence on its north, east, and west sides. There are no formal landscape elements, and most of the parcel is undeveloped. The subject building has been abandoned for an unknown period of time.

The building located at 2505 Chanticleer Avenue is two-stories in height, roughly rectangular in plan, clad in stucco, and capped by a combination of gabled, flat, and shed roofs clad with composition shingles. A 1952 aerial photograph shows that the land surrounding the subject building was formerly occupied by larger agricultural properties and smaller residential lots.

The residence was occupied by William R. and Clara Pitman in 1950-1954. The earliest newspaper mention of this address in 1950 is an advertisement for “red fryer” chickens and white roasting hens, indicating that the parcel operated as a poultry farm (*Santa Cruz Sentinel*, December 8, 1950:16). Kenneth and Alma Tuttle occupied the farm from 1954 until at least 1960, during which time the parcel was known as Tuttle’s Poultry Ranch (*Santa Cruz Sentinel*, October 29, 1954:16). In 1963, the building was occupied by Robert and Tina Ann Dabbs and their two children (*Santa Cruz Sentinel*, March 17, 1963:34). The Dabbs divorced in 1966 and likely vacated the house around that time. Robert Dabbs would later co-own The Afro Company at 314 Laurel Street in Santa Cruz, which sold “art, clothing, sculpture, authentic headdresses, and all products pertaining to Black heritage and culture” (*Santa Cruz Sentinel*, December 8, 1974:27). The parcel has been owned by Arthur Lam since at least 1972, and a cursory search of city directories published since that time indicate that he has never resided there. An internet search indicates that 2505 Chanticleer Avenue was more recently occupied by Davey Tree Surgery at an unknown time.

Evaluation

ESA staff evaluated the building for its potential historical significance under California Register and National Register Criteria 1/a through 4/d. The subject building at 2505 Chanticleer Avenue existed as a single-family residence and poultry farm during the mid-20th century. Aerial photographs illustrate that earlier buildings and structures occupied the lot, and it is possible that the parcel was originally developed as one of the “poultry plants” constructed in ca. 1921-22 as part of the Wilson Brothers Tract No. 2, which occupied land between Soquel Road (Soquel Avenue did not exist at that time), Capitola Road, and Chanticleer Avenue (*Santa Cruz Evening News*, December 7, 1921:2). Although research did not definitively conclude that this was in fact the case, it is likely that 2505 Chanticleer Avenue contributed to broad patterns of the poultry industry in the Live Oak area of Santa Cruz, and for this reason it is recommended eligible for listing under Criterion 1/a. (Note: 2505 Chanticleer Avenue is not one of the 12 “chicken landmarks” identified in 2006 by volunteer members of the Live Oak History Project as properties of prioritized historical significance.) Several people are known to have been associated with the subject building, but none were found to have been important to local, California, or national history. The residence at 2505 Chanticleer Avenue therefore is not recommended eligible for listing under Criterion 2/b. The subject building is vernacular in style and the product of an unknown architect/builder. It is in poor condition and does not embody distinctive characteristics of a type, region, or method of construction, represent the work of a master, or possess high artistic value, and it is not recommended eligible for listing under Criterion 3/c. Research did not reveal that the subject building at 2505 Chanticleer Avenue would provide important information relevant to history or pre-history that was not already known. For these reasons, the subject building is not recommended eligible for listing under Criterion 4/d.

Integrity

The building at 2505 Chanticleer Avenue remains on its original site and therefore retain integrity of location. The present neighborhood has developed from what was once an agricultural and residential area to be characterized by higher density residential and commercial development, and setting has been compromised. The building appears to have been extensively altered and has lost integrity of design, materials, workmanship, and feeling. The building has not been used as a residence or a poultry farm for many years, and integrity of association with those uses has been lost. The subject building retains a very low degree of integrity.

Summary

Although the building at 2505 Chanticleer Avenue appears to be eligible for listing under Criterion 1/a it does not retain sufficient integrity to convey its significance. Therefore, ESA recommends it to be ineligible for listing in the California or National Registers.

Santa Cruz Wastewater Treatment Facility

Description

This resource is the campus of industrial buildings and structures that comprise the SC WWTF in the City of Santa Cruz. The SC WWTF occupies an area north of Bay Street between West Cliff Drive on the east, the Santa Cruz Branch Line Railroad on the south, California Street on the west, and Neary Lagoon Park on the north. All buildings were constructed at a lower elevation than Bay Street, and the campus is mostly hidden from view at the level of surrounding streets. All vehicular traffic enters the SC WWTF by an access road from California Street. The entire SC WWTF is paved with asphalt. The campus was built in several phases between 1948 and circa 2000, and extant buildings are of reinforced concrete construction.

Evaluation

An ESA architectural historian evaluated the SC WWTF for its potential historical significance under California Register and National Register Criteria 1/a through 4/d. While the campus as a whole was investigated, only the historic-age buildings that fit into the period of significance were evaluated. The buildings that were evaluated are Digesters 2 and 3, the water tank, the process control/administration building, the Primary Sedimentation Structure, Dissolved air flotation Tank 1, and the Influent Pump Station. The majority of the buildings and structures on the campus are less than 50 years old and are not age-eligible to be considered for listing in the California or National Registers.

The SC WWTF provides necessary public services, and it is not exceptional or significant for the role that it plays in Santa Cruz and the surrounding area. The facility won several awards and recognitions in the last 15 years, but not enough time has passed to gain a historical perspective on those events. Other water treatment plants in California predate the SC WWTF, including the 1895 filtration plant at Lake Chabot in Castro Valley, which was the first and “long the most important” on the Pacific Coast. Prior to the 1920s, large-scale filtration plants had been used by larger cities in the eastern United States for decades, but California had focused on smaller scale local water distribution. Research does not suggest that the SC WWTF contributed to broad patterns of local or regional history or the cultural heritage of California or the United States, and for this reason it is not recommended eligible for listing under Criterion 1/a.

Research did not reveal that the SC WWTF is associated with any people who were/are important to local, California, or national history. Numerous people were involved in the design and construction of the SC WWTF, and numerous others have been employed there over the years. However, none of these individuals has made specific contributions to history that have been identified and documented as associated with this SC WWTF. For these reasons, the SC WWTF is not recommended eligible for listing under Criterion 2/b.

The oldest buildings at the SC WWTF (Digesters 2 and 3 and the water tank) were designed in a simple utilitarian architectural style with restrained Streamline Moderne details. The Primary Sedimentation Structure, parts of which date from 1965 and circa 1968–1988, was also designed in a utilitarian style. Even though the Streamline Moderne style had come to its popular end around 1950, this building exhibits some elements associated with Streamline Moderne, presumably in order to appear harmonious with the earlier buildings. It must be emphasized that the style of these buildings is not Streamline Moderne; rather the buildings are designed in a utilitarian style (meaning that the design is dictated primarily by the building's function). The Streamline Moderne details are so subtle that the buildings are not considered to embody distinctive characteristics of that style. Nor do they exemplify a method of construction or possess high artistic value. The three buildings dating from 1948 were designed by civil engineer Daniel M. McPhetres who also designed the Oak Creek and Kilburn Road bridges in Stanislaus County (1918; www.historicbridges.org), the Soquel Drive Bridge in Aptos (1928; www.bridg Hunter.com), and the Stockton Avenue Bridge in Capitola for the Works Progress Administration (1934; www.livingnewdeal.org). Research revealed little information about McPhetres. Even though he may have been a prominent local engineer, this would indicate that the buildings are not the work of a master. The process control/administration building, which was built in 1965, was enlarged after 1988. Historic photographs of the building were not found, but the extent of the alterations indicate that it no longer exhibits its original design. The dissolved air flotation tank 1 and the Influent Pump Station are simply designed utilitarian buildings with little architectural detail. For these reasons, the SC WWTF is not recommended eligible for listing under Criterion 3/c.

Research did not reveal that the SC WWTF would provide important information relevant to history or pre-history that was not already known. For these reasons, the SC WWTF is not recommended eligible for listing under Criterion 4/d.

Integrity

The buildings and structures that comprise the SC WWTF remain in their original locations and therefore retain integrity of location. Likewise, the residential and natural setting is similar to the historic setting. The buildings that were surveyed retain integrity of design, materials, workmanship, and feeling, and association. In summary, the SC WWTF retains a high degree of integrity.

Summary

As the SC WWTF does not meet any of the California and National Register criteria but retains a high degree of integrity, ESA recommends it to be ineligible for listing in the California and National Registers.

4.5.3 Regulatory Framework

Federal

Effects of federal undertakings on historic and archaeological resources are considered through the National Historic Preservation Act (NHPA) of 1966, as amended (54 United States Code [U.S.C.] 306108), and its implementing regulations. Before an undertaking (e.g., federal funding or issuance of a federal permit) is implemented, Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties (i.e., properties listed in or eligible for listing in the National Register) and to afford the Advisory Council on Historic Preservation a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the National Register. Under the NHPA, a property is considered significant if it meets the National Register listing criteria a through d, at 36 Code of Federal Regulations 60.4, as follows:

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

- a) Are associated with events that have made a significant contribution to the broad patterns of our history, or
- b) Are associated with the lives of persons significant in our past, or
- c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
- d) Have yielded, or may be likely to yield, information important in prehistory or history

For a resource to be eligible for the National Register, it must also retain enough integrity to be recognizable as a historical resource and to convey its significance. Resources that are less than 50 years old are generally not considered eligible for the National Register.

Federal review of the effects of undertakings on significant cultural resources is carried out under Section 106 of the NHPA and is often referred to as the Section 106 review. This process is the responsibility of the federal lead agency. The Section 106 review typically involves a four-step procedure, which is described in detail in the implementing regulations of the NHPA:

- Define the Area of Potential Effects in which an undertaking could directly or indirectly affect historic properties.
- Identify historic properties in consultation with the State Historic Preservation Officer (SHPO) and interested parties.
- Assess the significance of effects of the undertaking on historic properties.
- Consult with the SHPO, other agencies, and interested parties to develop an agreement that addresses the treatment of historic properties and notify the Advisory Council on Historic Preservation and proceed with the Project according to the conditions of the agreement.

State

The State of California consults on implementation of the NHPA of 1966, as amended, and also oversees statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation, as an office of the California Department of Parks and Recreation, implements the policies of the NHPA statewide. The Office of Historic Preservation also maintains the California Historical Resources Inventory. The SHPO is an appointed official who implements historic preservation programs within the state's jurisdictions.

California Environmental Quality Act

The California Environmental Quality Act (CEQA), as codified in Public Resources Code (PRC) Section 21000 et seq., is the principal statute governing the environmental review of projects in the state. CEQA requires lead agencies to determine if a project would have a significant effect on historical resources, including archaeological resources. The CEQA Guidelines define a historical resource as: (1) a resource in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (3) any object, building, structure, site, area, place, record, or manuscript that 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, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

CEQA requires lead agencies to determine if a project would have a significant effect on important archaeological resources, either historical resources or unique archaeological resources. If a lead agency determines that an archaeological site is a historical resource, the provisions of Public Resources Code Section 21084.1 would apply and CEQA Guidelines Sections 15064.5(c) and 15126.4 and the limits in Public Resources Code Section 21083.2 would not apply. If a lead agency determines that an archaeological site is an historical resource, the provisions of PRC Section 21084.1 and CEQA Guidelines Section 15064.5 would apply. If an archaeological site does not meet the CEQA Guidelines criteria for a historical resource, then the site may meet the threshold of PRC Section 21083 regarding unique archaeological resources. A unique archaeological resource is "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.
- Has a special and particular quality such as being the oldest of its type or the best available example of its type.
- Is directly associated with a scientifically recognized important prehistoric or historic event or person" (PRC Section 21083.2 [g]).

The CEQA Guidelines note that if a resource is neither a unique archaeological resource nor a historical resource, the effects of the Project on that resource shall not be considered a significant effect on the environment (CEQA Guidelines Section 15064[c][4]).

Local

County of Santa Cruz General Plan

The following objective and policies from the County of Santa Cruz General Plan apply to cultural resources within the Project area:

Objective 5.19: Archaeological Resources. To protect and preserve archaeological resources for their scientific, educational, and cultural values, and for their value as local heritage.

Policies

5.19.1 Evaluation of Native American Cultural Sites. Protect all archaeological resources until they can be evaluated. Prohibit any disturbance of Native American Cultural Sites without an appropriate permit. Maintain the Native American Cultural Sites ordinance.

5.19.2 Site Surveys. Require an archaeological site survey (surface reconnaissance) as part of the environmental review process for all projects with very high site potential as determined by the inventory of archaeological sites, within the Archaeological Sensitive Areas, as designated on General Plan and LCP Resources and Constraints Maps filed in the Planning Department.

5.19.3 Development Around Archaeological Resources. Protect archaeological resources from development by restricting improvements and grading activities to portions of the property not containing these resources, where feasible, or by preservation of the site through project design and/or use restrictions, such as covering the site with earthfill to a depth that ensures the sites will not be disturbed by development, as determined by a professional archaeologist.

5.19.4 Archaeological Evaluations. Require the applicant for development proposals on any archaeological site to provide an evaluation, by a certified archaeologist, of the significance of the resource and what protective measures are necessary to achieve General Plan and LCP Land Use Plan objectives and policies.

5.19.5: Native American Cultural Sites. Prohibit any disturbance of Native American Cultural Sites without an archaeological permit which requires but is not limited to the following:

- a) A statement of the goals, methods, and techniques to be employed in the excavation and analysis of the data, and the reasons why the excavation will be of value.
- b) A plan to ensure that artifacts and records will be properly preserved for scholarly research and public education.
- c) A plan for disposing of human remains in a manner satisfactory to local Native American Indian groups.

4.5.4 Impacts and Mitigation Measures

Significance Criteria

Based on Appendix G of the CEQA Guidelines, the Project would have a significant impact on cultural resources if it would cause:

- A substantial adverse change in the significance of a historical resource that is either listed or eligible for listing in the California Register or a local register of historic resources;
- A substantial adverse change in the significance of a unique archaeological resource;
- Disturbance of human remains, including those interred outside of dedicated cemeteries.

Approach to Analysis

Architectural Resources

Potential impacts on architectural resources are assessed by identifying any activities (either during construction or operations) that could affect resources identified as historical resources for the purposes of CEQA. Once a resource has been identified as a CEQA historical resource, it then must be determined whether the impacts of the Project would “cause a substantial adverse change in the significance” of the resource (CEQA Guidelines Section 15064.5[b]). A substantial adverse change in the significance of a historical resource means “physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the historic resource would be materially impaired” (CEQA Guidelines Section 15064[b][1]). A historical resource is materially impaired through the demolition or alteration of the resource’s physical characteristics that convey its historical significance and that justify its inclusion in the California Register (CEQA Guidelines Section 15064.5[b][2][A]).

Archaeological Resources

Archaeological resources can include historical resources according to CEQA Guidelines Section 15064.5 as well as unique archaeological resources as defined in PRC Section 21083.2(g). The significance of most prehistoric and historic-era archaeological sites is usually assessed under California Register Criteria 4. These criteria stress the importance of the information potential contained within the site, rather than its significance as a surviving example of a type or its association with an important person or event. Archaeological resources also may be evaluated under California Register Criteria 1, 2, and/or 3. Under CEQA archaeological resources also may be assessed as unique archaeological resources, defined as archaeological artifacts, objects, or sites that contain information needed to answer important scientific research questions.

Impacts on unique archaeological resources or archaeological resources that qualify as historical resources are assessed pursuant to PRC Section 21083.2 which states that the lead agency shall determine whether the Project may have a significant effect on archaeological resources. As with architectural resources above, whether the impacts of the Project would “cause a substantial adverse change in the significance” of the resource must be determined (CEQA Guidelines Section 15064.5[b]).

Human Remains

Human remains, including those buried outside of formal cemeteries, are protected under several state laws, including Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. This analysis considers impacts on human remains including intentional disturbance, mutilation, or removal of interred human remains.

Impact Summary

Table 4.5-1 summarizes the potential cultural resource impacts associated with implementation of the proposed Project and shows the significance determination for each impact.

**TABLE 4.5-1
 SUMMARY OF IMPACTS – CULTURAL RESOURCES**

Impacts	Significance Determinations
Impact 4.5-1: The Project could cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5.	LSM
Impact 4.5-2: The Project could cause a substantial adverse change in the significance of an archaeological resource, including those determined to be a historical resource defined in Section 15064.5 or a unique archaeological resource defined in PRC 21083.2.	LSM
Impact 4.5-3: The Project could potentially disturb human remains, including those interred outside of dedicated cemeteries.	LSM

NOTE:

LSM = Less than Significant impact with Mitigation

Impact Discussion

Impact 4.5-1: The Project could cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. (*Less than Significant with Mitigation*)

The following discussion focuses on architectural resources. Archaeological resources, including archaeological resources that are potentially historical resources according to CEQA Guidelines Section 15064.5, are addressed under Impact 4.5-2.

Based on the results of the background research, survey, and evaluation provided above, there are no historical resources eligible for listing in the California Register in the Project area. ESA staff evaluated the residential buildings near the Headquarters-West Annex site, the residential building at the Chanticleer site, and the SC WWTF and recommends that none of the buildings or structures meet the California or National Register criteria and are therefore not historical resources for the purposes of CEQA. As there are no historical resources in the Project area, there would be no direct impact on historical resources.

However, as discussed in Impact 4.13-4, vibration from construction equipment used during excavation and backfilling could result in cosmetic or other damage to 18 buildings previously recorded as part of the City of Santa Cruz and City of Capitola historic resources surveys if large vibratory compactors were operated near the buildings (see Table 4.13-9 for a list of the buildings). **Mitigation Measures 4.13-3, Vibration Monitoring for Pipeline Installation in the Vicinity of Historic Buildings**, require that site buildings be monitored, and to modify pipeline placement and/or modify construction equipment uses to types with less vibration potential. With implementation of these measures, the potential for vibration impact on contributory buildings would be less than significant.

Measure 4.13-3: Vibration Monitoring for Pipeline Installation in the Vicinity of Historic Buildings (applies to buildings listed in Table 4.13-9).

Refer to Impact 4.13-4 in Section 4.13, *Noise and Vibration*, for details.

Significance after Mitigation: Less than Significant.

Impact 4.5-2: The Project could cause a substantial adverse change in the significance of an archaeological resource, including those determined to be a historical resource defined in Section 15064.5 or a unique archaeological resource defined in PRC 21083.2. (Less than Significant with Mitigation)

This section discusses archaeological resources that are potentially historical resources according to CEQA Guidelines Section 15064.5 as well as unique archaeological resources defined in Section 21083.2(g).

The results of the background research, environmental assessment, and archaeological surface survey indicate that there are eight prehistoric and/or multicomponent (prehistoric and historic-era) archaeological resources in or immediately adjacent to the Project area. These resources are all located along pipeline alignments, and are not within or adjacent to the nonlinear facilities or construction area for the AWPf and recharge well sites. The archaeological sites (CA-SCR-12/H; CA-SCR-80; CA-SCR-93/H; CA-SCR-168/H; CA-SCR-269/H; CA-SCR-292/H; CA-SCR-293; and P-44-000302) have been identified as a result of the archaeological resources assessment conducted for the proposed Project. All of the sites consist of dark midden soil with shell fragments and artifacts, indicative of prehistoric archaeological sites in the Santa Cruz County area. The sites have been recorded immediately adjacent to paved roadways and it is unknown whether the sites extend into the areas for which Project components are proposed. The existing pavement makes it impossible to visually determine whether the sites extend into the Project areas, as pavement presently obscures access to portions of the Project areas adjacent to the identified archaeological sites. While formal evaluation has not been conducted to determine whether any of the archaeological sites qualify as eligible for listing in the California Register, sufficient information exists to suggest that the sites qualify as “historical resources” pursuant to CEQA Section 15064.5(a)(4) and Public Resources Code 21098.1. As such, for the purposes of the analysis in this EIR, the District considers these sites to be “historical resources.”

Where there are known historical resources that could be affected by the Project, there is potential for a significant impact. This impact would be reduced to a less-than-significant level through implementation of **Mitigation Measure 4.5-2a (Archaeological Research Design and Treatment Plan)**, which would ensure that site constituents are identified in the Project area prior to Project implementation and either avoided during construction, and/or appropriately treated.² This mitigation measure only applies to pipeline alignments in the vicinity of known

² As of the date of this EIR, the District is continuing to evaluate the specific assemblage of Project components and pipeline alignments. Part of the purpose of the EIR is to evaluate the site options and provide information to inform and support the District’s decision regarding final Project design. Once the final Project configuration has been determined, the final selected components and alignments would be known, and the design could progress to a

archaeological sites (CA-SCR-12/H; CA-SCR-80; CA-SCR-93/H; CA-SCR-168/H; CA-SCR-269/H; CA-SCR-292/H; CA-SCR-293; and P-44-000302). With implementation of this mitigation measure, the Project's potential effects on archaeological resources would be reduced to a less-than-significant level.

The Chanticleer Site is privately owned and would require District acquisition prior to Project implementation, if the site were selected. Currently the site is not accessible and an archaeological resources identification survey was not feasible. If the Chanticleer Site is chosen as the location for the AWP and pump station, Project construction could cause impacts to as-yet-unknown archaeological resources, a significant impact. **Mitigation Measure 4.5-2b (Cultural Resources Study of the Chanticleer Site)**, would reduce the potential for such impacts through a pre-construction cultural resources identification study to determine whether previously unrecorded archaeological resources are present. The results of the study would provide additional recommendations including site avoidance, construction monitoring, evaluation efforts, or inadvertent discovery protocol. Implementation of this mitigation measure would reduce potential impacts on archaeological resources at the Chanticleer Site to a less-than-significant level.

Following implementation of Mitigation Measure 4.5-2a and Mitigation Measure 4.5-2b, there may still be the potential to uncover previously unknown archaeological resources during Project ground disturbing activities. Impacts to unknown archaeological resources would be potentially significant. This impact would be reduced to a less-than-significant level by implementation of **Mitigation Measure 4.5-2c (Inadvertent Discovery of Cultural Resources)**, which would ensure that if archaeological resources were identified during ground disturbing activities, construction would halt, a qualified archaeological consultant would assess the find, and appropriate actions (including consideration of avoidance) would be enacted.

Mitigation Measures

Measure 4.5-2a: Archaeological Research Design and Treatment Plan.

This mitigation measure only applies to pipeline alignments in the vicinity of known archaeological sites (CA-SCR-12/H; CA-SCR-80; CA-SCR-93/H; CA-SCR-168/H; CA-SCR-269/H; CA-SCR-292/H; CA-SCR-293; and P-44-000302). Prior to the 30% design plans for the Project, the District shall:

1. Relocate Project components to a location that would not potentially affect historical resources.
2. Or if relocation is infeasible and historical resources would potentially be affected, design and implement an Archaeological Research Design and Treatment Plan (ARDTP) to determine whether site constituents of the known historical resources extend into the Project area.

The investigation would be completed under the methods and research design outlined in an ARDTP. A qualified archaeologist (defined as one meeting the Secretary of the

more advanced level. At that time, the District (or the District's contractor) would prepare the subject plans, based upon the location- and design-specific information available at that time. As the Archaeological Research Design and Treatment Plan is tailored to the specific locations on which construction activities would occur, to prepare these plans before the final Project siting and design has been determined would be premature.

Interior's Professional Qualification Standards for archaeology) shall prepare the ARDTP in consultation with the affiliated Native American tribe(s) of the Project area. The ARDTP shall address, at a minimum, the following: the establishment of Environmentally Sensitive Areas; treatment and recovery of important scientific data contained within the portions of the historical resources located within and adjacent to the Project area; construction worker cultural resources sensitivity training; archaeological and Native American monitoring; inadvertent discovery protocols; and provisions for curation of recovered materials.

The ARDTP shall address the methods for subsurface investigation at each of the nine historical resources that could be affected by components of the selected Project (CA-SCR-12/H; CA-SCR-80; CA-SCR-93/H; CA-SCR-168/H; CA-SCR-269/H; CA-SCR-292/H; CA-SCR-293; and P-44-000302) to determine whether the site constituents within the Project area contribute to each of the sites' overall eligibility. The subsurface investigation shall address whether the portions of the sites within the Project area contain important scientific data (Criterion 4) or other archaeological materials of traditional/cultural value to Native American tribes (Criteria 1, 2, and 3). The ARDTP shall include the specific methods that will be employed at each site location (i.e., the length and depth of excavation, the type of equipment utilized, the percent of area investigated at each site location). The investigation may include trenching or coring in the Project area adjacent to the known site components. The ARDTP shall identify how the proposed plan would preserve any significant historical information obtained and identify the scientific/historic research questions applicable to the resources, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. The results of the investigation shall be documented in a technical report that provides a full artifact catalog, analysis of items collected, results of any special studies conducted, and interpretations of the resource within a regional and local context. All technical documents shall be placed on file at the Northwest Information Center of the California Historical Resources Information System. The results report shall include recommendations for archaeological and Native American monitoring in Environmentally Sensitive Areas of the proposed Project to the extent deemed appropriate by the qualified archaeologist who carried out the work described here.

Significance after Mitigation: Less than Significant.

Measure 4.5-2b: Cultural Resources Study of the Chanticleer Site.

If the Chanticleer Site is chosen as the location for the AWPf and pump station, the District shall conduct an archaeological resources investigation for the Chanticleer Site Project area that includes, at a minimum:

- An updated records search at the NWIC;
- An intensive archaeological resources survey of the Chanticleer Site Project area;
- A memorandum disseminating the results of this research; and,
- If a potential archaeological resource is identified, develop and implement an Archaeological Research Design and Treatment Plan per Mitigation Measure 4.5-2a.

Significance after Mitigation: Less than Significant.

Measure 4.5-2c: Inadvertent Discovery of Cultural Resources.

If prehistoric or historic-era archaeological resources are encountered by construction personnel during Project implementation, all construction activities within 100 feet shall halt until a qualified archaeologist, defined as one meeting the Secretary of the Interior's Professional Qualification Standards for archaeology, can assess the significance of the find. Prehistoric archaeological materials might include obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; stone milling equipment (e.g., mortars, pestles, hand stones, or milling slabs); and battered stone tools, such as hammer stones and pitted stones. Historic-era materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse.

If a find is evaluated and determined to be significant, a mitigation plan shall be developed that recommends preservation in place as a preference or, if preservation in place is not feasible, data recovery through excavation. The mitigation plan shall be developed in consultation with the affiliated Native American tribe(s), as appropriate. If preservation in place is feasible, this may be accomplished through one of the following means: (1) modifying the construction plan to avoid the resource; (2) incorporating the resource within open space; (3) capping and covering the resource before building appropriate facilities on the resource site; or (4) deeding the resource site into a permanent conservation easement. If preservation in place is not feasible, a qualified archaeologist shall prepare and implement a detailed treatment plan to recover scientifically consequential information from the resource prior to any excavation at the site. Treatment for most resources would consist of (but would not necessarily be limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the Project. The treatment plan shall include provisions for analysis of data in a regional context; reporting of results within a timely manner; curation of artifacts and data at an approved facility; and dissemination of reports to local and state repositories, libraries, and interested professionals.

Significance after Mitigation: Less than Significant.

Impact 4.5-3: The Project could disturb human remains, including those interred outside of dedicated cemeteries. (*Less than Significant with Mitigation*)

Prehistoric archaeological resources may contain human burials. Based on the background research and surface survey there are locations very near to the Project area that have been used for human burial purposes. The possibility of encountering human remains, including those associated with the several prehistoric archaeological resources in the vicinity of the Project area, cannot be entirely discounted. Project-related disturbance of human remains would be a significant impact. The potential for such impact would be reduced to a less-than-significant level through implementation of **Mitigation Measure 4.5-3 (Inadvertent Discovery of Human Remains)**. The measure sets forth protocols and procedures for responding in the event that human remains are identified during ground disturbing activities, including halting construction,

contacting the County Coroner to assess the find, among other appropriate actions (including contacting the Most Likely Descendant).

Mitigation Measure

Mitigation Measure 4.5-3: Inadvertent Discovery of Human Remains.

In the event human remains are uncovered during construction activities for the Project, the District shall immediately halt work, contact the Santa Cruz County Coroner to evaluate the remains, and follow the procedures and protocols pursuant to Section 15064.5(e)(1) of the CEQA Guidelines. State Health and Safety Code Section 7050.5 requires that no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98. If the remains are determined to be of Native American descent, the coroner has 48 hours to notify the Native American Heritage Commission (NAHC). The NAHC will then identify the person thought to be the Most Likely Descendent of the deceased Native American. The Most Likely Descendent will make recommendations for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

Significance after Mitigation: Less than Significant.

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