3.12 Cultural Resources

This section describes the existing cultural resources in the action area, the applicable regulations at the federal, state, and local levels, and the potential impacts to cultural resources from the North Bay Water Recycling Program (NBWRP). Information for the section was adapted from the Cultural Resources Survey Report completed for the NBWRA (ESA, 2008). The Impacts and Mitigation Measures section defines significance criteria used for the impact assessment and presents a discussion of potential project-related impacts. Determination of significance of impacts in this EIR/EIS apply only to CEQA, not to NEPA.

3.12.1 Affected Environment/Setting

Area of Potential Effects

The Area of Potential Effects (APE) for the NBWRP 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 800.16[b]). In consultation with the Bureau of Reclamation, an archaeological APE and an architectural/structural APE was determined for the NBWRP (Welch, 2008).

Depending upon the project components, the archaeological APE has been determined as the area of direct impact for the NBWRP. For example, trenching for installing the recycled water pipelines would require a maximum width of three feet and a vertical depth of up to six feet; therefore the vertical APE would be six feet. For the NBWRP, an APE of 50-foot wide corridor (25-foot radius from centerline) would be assumed in undeveloped areas to accommodate for areas for staging and spoils. Depending upon the width of the roadway, a narrower horizontal APE with an average width of 12.5 feet extending through the right-of-way would be assumed in locations encumbered by existing improvements and high-volume roadways.

The improvements at the wastewater treatment plants (WWTPs) and construction of new booster pump stations have a varying archaeological APE (see **Table 3.12-1** below). Each horizontal APE would include the area of direct impact as well as a 25-foot horizontal extension to accommodate staging areas. Exact dimensions for the storage facilities have not yet been determined therefore a maximum horizontal APE would assume14-acres based on the overall size of a SVCSD storage reservoir. The locations of large staging areas outlined in the Project Description have not yet been determined for the project.

The architectural/structural APE for the NBWRP within developed areas would include the area of direct impact and the right-of-way. In the case of project components that would be located within undeveloped areas, the architectural/structural APE would be 25 feet from the centerline of the pipeline or a 25-foot buffer from a project component.

The existing cultural resources or affected environment was studied by conducting a records search at the Northwest Information Center (NWIC) of the California Historical Resources

Information System. The records search area included the APE and a quarter-mile radius of the area covered under the Basic System, the Partially Connected System, and the Fully Connected System. Results of the Records Search area were further delineated into an area of sensitivity assessment (ASA) Alternative 1, Phase 1. The ASA includes the APE and a 500-foot radius to identify locations of greater known cultural sensitivity.

TABLE 3.12-1
AREA OF DIRECT IMPACT FOR WWTP IMPROVEMENTS

Facility	Length (feet)	Width (feet)	Depth (feet)
Novato SD WWTP	None	None	None
SVCSD WWTP	1,675	770	6 (maximum)
Napa SD WWTP	114	40	6 (maximum)
Booster Pump Stations	25	25	6 (maximum)

SOURCE: ESA, 2008.

Indian Trust Assets

Indian Trust Assets (ITAs) are legal interests in property held in trust by the United States (U.S.) for federally-recognized Indian tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. ITAs can include land, minerals, federally-reserved hunting and fishing rights, federally-reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally-recognized Indian tribes with trust land of which the U.S. is the trustee. By definition, ITAs cannot be sold, leased, or otherwise encumbered without approval of the U.S. The characterization and application of the U.S. trust relationship has been defined by case law that interprets Congressional acts, executive orders, and historic treaty provisions.

It is the general policy of the Department of the Interior (DOI) to perform its activities and programs in such a way as to protect ITAs and avoid adverse effects whenever possible (Reclamation, 2000). The proposed facilities would expand the regional use of recycled water in the North San Pablo Bay region for agricultural, urban, and environmental purposes, reduce reliance on local surface and groundwater supplies, and reduce discharges to San Pablo Bay. Implementation of the Basic System, the Partially Connected System, or the Fully Connected System would provide an additional 6,455 acre-feet per year (AFY), 11,215 AFY, or 12, 735 AFY of recycled water respectively for beneficial use. Reclamation will comply with procedures contained in Departmental Manual Part 512.2, guidelines, which protect ITAs.

The Proposed Action or alternatives would not be implemented on or affect tribal lands, areas where mineral or water rights may be held by a tribe, traditional hunting or fishing grounds, or other ITAs. The nearest proposed project construction activity to the Graton Rancheria would occur at a distance of approximately 12 miles away. Therefore, the proposed action would not affect ITAs. The potential for the project to affect significant Native American sites is addressed below.

Cultural History

This section summarizes the cultural history of the San Francisco Bay Area and the San Pablo Bay Region. Because archaeological regions can represent large geographic areas and display some cultural homogeneity, a discussion of the prehistoric, ethnographic, and historic contexts is useful in order to evaluate the project impacts to cultural resources in the APE.

Prehistoric Context

An analytic framework for the interpretation of the San Francisco Bay and North Coast Ranges prehistory is provided by Fredrickson (1974), who divided human history in California into three broad periods: the Paleoindian period, the Archaic period, and the Emergent period. This scheme used sociopolitical complexity, trade networks, population, and the introduction and variations of artifact types to differentiate between cultural units. The significance of prehistoric sites rests partly on their ability to help archaeologists explain the reasons for these changes in different places and at different times in prehistory. The scheme, with minor revisions (Fredrickson, 1994), remains the dominant framework for prehistoric archaeological research in this region.

The Paleoindian period (10,000 to 6000 B.C.) was characterized by small, highly mobile groups occupying broad geographic areas. During the Archaic period, consisting of the Lower Archaic period (6000 to 3000 B.C.), Middle Archaic (3000 to 500 B.C.), and Upper Archaic (500 B.C. to A.D. 1000), geographic mobility may have continued, although groups began to establish longer-term base camps in localities from which a more diverse range of resources could be exploited. The addition of milling tools, obsidian and chert concave-base points, and the occurrence of sites in a wider range of environments suggests that the economic base was more diverse. By the Upper Archaic, mobility was being replaced by a more sedentary adaptation in the development of numerous small villages, and the beginnings of a more complex society and economy began to emerge. During the Emergent Period (A.D. 1000 to 1700), social complexity developed toward the ethnographic pattern of large, central villages where political leaders resided, with associated hamlets and specialized activity sites. Artifacts associated with the period include the bow and arrow, small corner-notched points, mortars and pestles, and a diversity of beads and ornaments (Fredrickson, 1994; Gerike et al., 1996:3.11–3.17).

Many of the original surveys of archaeological sites in the San Francisco Bay Area were conducted between 1906 and 1908. These surveys yielded the initial documentation of nearly 425 “earth mounds and shell heaps” along the San Francisco Bay shoreline (Nelson, 1909). From these beginnings, the most notable sites in the Bay Area were excavated scientifically, like the Emeryville shell mound (designated as CA-ALA-309), the Ellis Landing Site (CA-CCO-295) in Richmond, and the Fernandez Site (CA-CCO-259) in Rodeo Valley (Moratto, 1984). These dense midden sites are vast accumulations of domestic debris and date back to over 2,000 years ago; the Emeryville shell mound, for example, is dated at approximately 2,310 years old ($^{\pm}$220 years). Other evidence suggests that human occupation in the region dates back farther, to approximately 5000 BC (Jones, 1992). While there are several interpretations as to the function of the shell mounds, much of the evidence suggests that they served as territorial landmarks as well as ceremonial features.

Archaeological sites in the Bay Area that date to the Middle Archaic Period (about 3000 to 500 B.C.) reveal an almost exclusive use of cobble mortars and pestles, which is often associated with a heavy reliance on acorns in the economy (Moratto, 1984). Such unusually intensive reliance on one food source indicates that a shift away from the earlier reliance on a broad spectrum of dietary sources to supply food was needed by around 1,000 years ago. The abundance of available food along lakeshores and estuaries during the late Pleistocene/early Holocene likely led to an overexploitation of the resources, which subsequently resulted in population increases; this may explain the shift toward exploiting a readily available yet less-favored food resource like acorns or seeds (Jones, 1991). Nevertheless, given the burgeoning size of Middle Archaic Period settlements, the populations were probably denser and more sedentary, yet continued to exploit a diverse resource base—from woodland, grassland, and marshland to shoreline resources throughout the Bay Area (King, 1974).

The population increases and larger, more complex settlements that began in the late-Middle Archaic Period typify the Upper Archaic Period (about 500 B.C. to A.D. 1000). The sociopolitical climate also appears to have become more elaborate, with clear differentiations in wealth. During the Emergent Period (about A.D. 1000 to 1700), however, there was a decline in new sites and the large shell mounds were abandoned. The population also declined during the Emergent Period, along with associated changes in resource use that were likely caused by humans depleting some terrestrial food sources during the Archaic Period (Broughton, 1994).

Ethnographic Setting

The action area is located within the ethnographic territory of three distinct Native American tribes: Coast Miwok, Patwin, and Wappo, as discussed below.

Coast Miwok

The majority of the action area, including the LGVSD, Novato SD, and SVCSD service areas, is located within the ethnographic territory of the Coast Miwok (Barrett, 1908; Kelly, 1978; Kroeber, 1925). The Coast Miwok language, a member of the Miwokan subfamily of the Penutian family, is divided into two dialects: Western, or Bodega, and Southern, or Marin, which in turn is subdivided into valley and coast. *Miwok* refers to the entire language family that was spoken by Coast Miwok, as well as Lake, Valley, and Sierra Miwok. Coast Miwok territory encompassed all of present-day Marin County and parts of Sonoma County, from Duncan's Point on the coast east to between the Sonoma and Napa Rivers. Each large village had a tribal leader but there does not appear to have been defined larger organization (Kelly, 1978:414).

Much of the information about post-contact Coast Miwok material cultural and lifestyles was gathered from two informants, Tom Smith (Bodega dialect) and María Copa (Marin dialect) (based on Kelly's field notes from 1931 to 1932). Settlements focused on bays and estuaries, or along perennial interior watercourses. The economy was based on fishing, hunting, and gathering, revolving around a seasonal cycle during which people traveled throughout their territory to make use of resources as they became available. Marine foods, including kelp, clams, crabs, and especially fish, were a year-round staple. Acorns were gathered in season and stored for use throughout the year. Tobacco was generously used by most men.

Dwellings were conical in shape and grass-covered. Each large village had a circular, dug-out sweathouse. Basketry techniques included both coiled and twined forms often with the use of multicolored motifs and patterns. Beginning as early as 1600 A.D. the Coast Miwok began to produce and use clamshell disk beads as money (Stewart and Praetzellis, 2003:177). The obsidian trading network was established in the Early Holocene period. Coast Miwok had a powerful sense for the value of property. Some Coast Miwok villages defended their territory against trespassers. Although land was not considered privately owned certain food-producing trees as well as hunting, fishing, and clam-digging locations were controlled by tribelets (Kelly, 1978).

By the mid-1800s Spanish missionization, diseases, raids by Mexican slave traders, and dense immigrant settlement had disrupted Coast Miwok culture, dramatically reducing the population, and displacing the native people from their villages and land-based resources. By the time of California's initial integration into the United States in the late 1840s, the Coast Miwok population had dwindled from approximately 2,000 individuals to one-eighth of its size before European contact (Kelly, 1978:414).

In 1920, the Bureau of Indian Affairs purchased a 15.45-acre tract of land in Graton for the Marshall, Bodega, Tomales, and Sebastopol Indians. This land was put into a federal trust and these neighboring peoples that included both Coast Miwok and Southern Pomo were consolidated into one recognized group called the Graton Rancheria. In 1958, the U.S. government enacted the Rancheria Act of 1958, transferring tribal property into private ownership. Forty-four Rancherias in California were affected, including the Graton Rancheria (DOI, 2008).

Throughout the remaining century, tribal members continued to protect their cultural heritage and identity despite being essentially landless. On December 27, 2000 President Clinton signed into law the legislation restoring federal recognition to the Federated Indians of Graton Rancheria. The tribe currently has approximately 1,100 members.

The Coast Miwok group is a member of the federated Indians of Graton Rancheria. The Graton Rancheria was one of 36 rancherias set aside for landless California Indians between 1906 and 1930 (NIGC, 2007). Based on the review of Graton Rancheria land, there are no known ITAs exercised by tribes within the action area. The nearest land held under a trust in the Marin, Sonoma, and Napa County areas would be the proposed Wilfred site, which is located between the city of Cotati and the city of Rohnert Park in Sonoma County. In 2007, the federated Indians of Graton Rancheria acquired the Wilfred Site, which is comprised of 11 parcels totaling approximately 251 acres. The site was proposed to be taken into trust pursuant to the Graton Rancheria Restoration Act, which requires the Secretary of Interior to accept into trust land located in Marin or Sonoma County for the benefit of the Tribe (25 U.S.C. section 1300n-3(a)). In 2008, the Assistant Secretary of Indian Affairs made a final agency determination to acquire the Wilfred Site into trust for the Federated Indians of Graton Rancheria (73 FR 89). The nearest proposed project construction activity to the Graton Rancheria would occur at a distance of approximately 12 miles away.

Wappo

The proposed pipeline routes in the northern Napa SD service area are situated within the ethnographic territory of the Wappo- a population of Yukian speaking, hunter-gatherer people with their own unique dialect and language, who occupied the northern Napa Valley and portions of the north and eastern Russian River Valley, within the Santa Rosa Plain. Geographically, the territorial area occupied by the Wappo stretched in a northwesterly direction from just north of the present-day cities of Napa and Sonoma to include the cities of Geyser, Cloverdale and Middletown at its northern extent (Kroeber, 1925:218–219, Plate 27; Barrett, 1908:264). This territory included the broad northwest-southeast trending river valleys and associated tributaries, as well as the flanking mountains of the Coastal Range and a small enclave along the southern shore of Clear Lake called *Lile'ek* by the Pomo, their neighbors to the west (Kroeber, 1925:219). Isolated from other Yukian-speaking peoples, this group was bound on all sides by other native groups: the Lake Miwok to the north, the Patwin (Wintun) to the south and east, the Pomo to the north and west, and the Coast Miwok to the southwest (Heizer and Whipple, 1971:Map 1).

The name *Wappo* is version of the Spanish term "guapo" which means handsome or brave, a title given to this group during the time of the Missions as a result of their "stubborn resistance to the military adjuncts of the Franciscan establishments" (Kroeber, 1925:217). Stephen Powers recognized the original name for these peoples as *Ashochimi*, and noted that the use of the term "*Wappo* – The Unconquerable" by this population, in reference to itself, was common practice (Powers, 1976:196).

The settlement pattern for the Wappo included permanent villages in valleys, along rivers or other waterways, organized as districts of smaller settlements or 'tribelets' around "one larger and continuously inhabited town, the center of a community with some sense of political unity" (Kroeber, 1925: 218). Tribelet chiefs were elected or appointed and resided at these major villages, and were responsible for maintaining relationships with other tribelets, as well as neighboring native tribes such as the Patwin, Pomo, and Miwok (Jones and Stokes, EDAW 2005:14–10). The Wappo tribelet chief was also responsible for the management of his or her village, performing functions of ceremonial moderator and dispute resolution (Sawyer, 1978:256–263). The subsistence strategy for the Wappo was that of the hunter-gatherer, including a heavy dependence upon the acorn and other natively procured plants and the hunting of big and small game, which included bear, deer, elk, rabbits, and birds, among others.

Material culture traits for the Wappo are shared with their neighboring cultural groups, predominantly those of the Pomo. A wide variety of stone tools manufactured from locally accessible raw material sources were an important part of the Wappo assemblage. Common tool types are projectile points, drills, knives, and scrapers of chert, basalt, or preferably, obsidian. Napa Glass Mountain, "a regionally important obsidian site and quarry, and other local obsidian sources are situated within Wappo territory, a resource which greatly enhanced the trading power of this group (Jones and Stokes, EDAW 2005:14-10, 14-11). The basketry of the Wappo was of noted quality, made from a unique weaving technique utilizing a variety of locally accessible plant materials; this technique is believed to have originated with the Pomo, the western neighboring group of the Wappo. Houses of the Wappo were constructed of a domed framework

of branches that were tied together, covered with leaves and smaller branches in the summer, and branches with mud in the winter. Animal bones as well as marine shells from coastal locations were used as a form of currency, to fashion jewelry, beads, awls, and other functional tools (Sawyer, 1978:261–262).

It is surmised that the population of the Wappo prior to European contact may have exceeded 1,000 persons before falling drastically to 40 persons in 1908. During Spanish occupation, the Wappo were notably resistant to all attempts of subjugation, from which they obtained their title. Despite this resistance, this native population was eventually brought under the control of the Mission at Sonoma, between 1823 and 1834. The remaining population was eventually moved to a reservation in Mendocino, where the majority perished, eventually leading to the closure of the reservation in 1867 (Kroeber, 1925: 221; Sawyer, 1978:258–259).

Patwin

The Salt Marsh Restoration Area may partially be within the ethnographic territory of the Patwin. The word "Patwin" is used to describe not a unified political group but a collection of tribelets whose territory centered on the southern portion of the Sacramento River Valley, from the town of Princeton on the north to the San Pablo and Suisun Bays on the south (Johnson, 1978:352). Neighboring tribes included Nisenan, Konkow, Nomlaki, Costanoan, Plains Miwok, and Pomoans. Patwin tribelets traded among themselves and with these neighboring tribes, exchanging, among other things, bows, obsidian, shell beads, and otter pelts.

The Patwin were organized into autonomous tribelets, each consisting of a primary village and several satellite villages. Each village was headed by a hereditary chief (Johnson, 1978:354). Residence after marriage was matrilocal and the household was the basic social unit. The Patwin hunted, fished, and gathered salmon, waterfowl, deer and other mammals, seeds, and acorns being important food sources. Virtually unique to Northern Californian peoples, the Patwin practiced the Kuksu cult system, which featured a number of secret societies into which young men were initiated (Johnson, 1978:353).

Historic Background

This section presents a discussion of the historic period as it generally applies to the region, as well as an individual synopsis of major historical events within the respective modern-day California counties in which the action area is located (i.e., Sonoma, Napa, and Marin counties).

Regional Overview

First European contact with the Northern California region has often been associated with the landing of Sir Francis Drake, at some point north of the Spanish claim of Point Loma in 1579 (Bancroft, 1886b; Wagner, 1926; Heizer, 1947). The precise location of this landing is not known, although it is often claimed that Drake entered and moored off Drakes Bay at Point Reyes. The next recorded European presence occurred when the Portola expedition entered the area while in search of Point Reyes in 1769. Beginning in 1806 Russian presence increased, particularly to the northwest of the current action area, eventually culminating in the

establishment of a permanent trading outpost for the Russian-American Company at Fort Ross in 1812. Spain controlled the Alta California territory, including the northern San Francisco Bay area, until the establishment of the independent government of Mexico in 1821. Francisco Castro and Father Jose Altamira in 1823 led a Spanish expedition to the area in an effort to scout for potential mission sites and as a result, the mission at Sonoma (San Francisco-Solano Mission) was founded in that same year. The mission cultivated herds of livestock and attempted to convert the local native population with little success. Secularization of mission lands soon followed the transfer of control to the Mexican government, who in 1833 passed a law beginning a period of large, private land-ownership known as Ranchos. It was intended that secularized mission holdings be reverted to the Native Californian population that originally occupied the lands, however most of the territory became the holdings of Mexican and American industrialists. Following the end of the Mexican-American War in 1848, California was admitted to the Union in 1850, becoming the 31st state within the United States of America. Marin County, Sonoma County, and Napa County are among the 27 original California counties established in 1850.

Marin County

The name for this county is purportedly derived from that of a famous Lacatuit Chief, whose people originally occupied this northern San Francisco Bay territory (Bingham, 1906:89). Following the alleged arrival of Sir Francis Drake, Sebastian Rodriguez Cermeno anchored off the Coast of Marin County in 1595. A Portuguese explorer sailing for Spain, Cermeno was ordered to explore more of the coast of California and it was during this trip that his ship, the San Augustin, was shipwrecked at Drakes Bay. While his crew built a new vessel, Cermeno completed modest exploration of the Marin County area (Heizer, 1941). Sebastián Vizcaíno was the next explorer to drop anchor at Drake's Bay, when he arrived in 1603 (Chapman, 1920). Permanent settlement in Marin County was eventually achieved in 1817 when the Mission San Rafael was established by Padres Amaroso and Cijos (Anonymous, 1891). During the Mexican Period, the land within Marin County was divided into several ranchos.

As with many other counties in California, the Gold Rush inspired elevated migration of peoples and industry into Marin. Saw mills opened to take advantage of the numerous Redwood stands in the region, as did paper mills. Cattle ranching, fisheries, and dairies sparked the eventual arrival of the North Pacific Railroad that greatly increased the Euroamerican population of the county. By the late 1850s several prominent Marin County cities were well established, including Sausalito, San Rafael, and Novato. In 1853 a state penitentiary was constructed at San Quentin which is still in use today.

Brief History of Hamilton Air Force Base. The U.S. Army Air Corp (now the U.S. Air Force) selected the Marin County Airfield just south of Novato near San Pablo Bay as the location of a new air base in the late 1920s (Hamilton Air Field) to accommodate four bomb squadrons and their personnel. Construction at Hamilton Field began in July 1932, and was completed in May 1935. Captain Howard B. Nurse, Construction Quartermaster, supervised the design and construction. Nurse departed from traditional base design by rendering the buildings in the Spanish Eclectic (Spanish Revival) style then popular in California. The first squadrons at the air field were the 70th Service Squadron and the 7th Bombardment Group, comprised primarily of

Martin B-10s and B-12s. By 1940, the air base had grown to accommodate over 4,000 personnel. During World War II, Hamilton Field was rapidly expanded to a wartime status, with construction of additional barracks, mess halls, administration buildings, warehouses, schools, hospital and other structures. From 1946 until 1973, air defense was Hamilton Air Force Base's primary mission. Hamilton Air Force Base was decommissioned in 1974, and at this time the airfield was transferred to the Army as Hamilton Army Airfield, the housing to the Navy, and a 411-acre parcel to the General Services Administration for public sale. The General Services Administration public sale occurred in 1985, and the 1988 Base Realignment and Closure closed the Army airfield. Following closure, many of the facilities at the air field have been reclaimed by the city of Novato and county of Marin for public use. Hamilton Field was designated a National Register Historic District in 1998, which includes the hangars, senior housing, theater, hospital, enlisted men's barracks, the bachelor's officer quarters and the swimming pool.

Sonoma County

In 1775 prior to the establishment of the mission, Spanish contact with Sonoma County occurred when Lieutenant Juan Francisco de la Bodega y Quadra entered the aptly-named Bodega Bay (Anonymous, 1891). Sonoma County hosted Russian, Spanish, and other European settlers during the early historic-period, as well as a drastically impacted Native population; the county was within the territory originally controlled by the San Francisco-Solano Mission at Sonoma. With the transition from Spanish to Mexican control, the Mexican government established various military outposts within Alta California one of which was the El Presidio de Sonoma (Sonoma Barracks)—founded in 1836 to board troops under the direction of General Mariano Guadalupe Vallejo. This troop presence was strategically selected in an effort to counter Native American resistance as well as the slow matriculation of Russian control from the north. General Vallejo owned the large Rancho Petaluma and between 1834 and 1840 built the largest adobe in Northern California, the Petaluma Adobe, in the western foothills of the Sonoma Mountains. Vallejo also owned Rancho Agua Caliente along Sonoma Creek adjacent to the town of Sonoma. In 1846, sparked by rumors of looming action by the Mexican government against settlers, a small group of recent Euroamerican immigrants hoisted a flag with a bear and a star in the town center of Sonoma. The "Bear Flag" symbolized the formation of a California Republic that was independent from Mexico. Rebels from this movement occupied the Sonoma Barracks adobe and captured General Vallejo. The independent California Republic was short-lived as war was declared between Mexico and America, with the majority of the "Bear Flaggers" shifting their support behind the American effort to bring California into the Union as a state.

As the American Period began in the late 1840s, the influx of new economies and the process of secularization resulted in an increase in settlement and the development of farming, ranching, and businesses in Sonoma County. It was in the mid-nineteenth century that wine grapes from Europe were first successfully grown. Since its formation, Sonoma County has been a center for viticulture, agriculture, shipping ventures, and larger commercial activities, which encouraged the formation of and prosperity of cities such as Sonoma, Petaluma, Santa Rosa, and Healdsburg.

Brief History of the City of Sonoma and Sonoma Plaza. In 1823, Mission San Francisco Solano de Sonoma was established by Father Junipero Serra. It was the only California mission

installed after Mexican independence from Spanish rule. Sonoma was first acknowledged by Mexico as a city in 1835. Mariano Guadalupe Vallejo, a lieutenant later promoted to General, led the transformation of Sonoma into a Mexican pueblo. Vallejo oversaw construction of the eight-acre central Plaza, which is the largest Mexican-era plaza in California, as well as the street grid, including the 110-foot wide Broadway which leads directly to the plaza (now called Sonoma Square or Sonoma Plaza). When Vallejo's nephew, Juan Bautista Alvarado, was named governor of the Mexican state of Alta California in 1838, Vallejo was named military governor of the state. After California achieved statehood in 1850, Vallejo was elected a state senator and lobbied to maintain Sonoma as the county seat; however, Santa Rosa won the honor in 1854. With U.S. rule came the appropriation of many land holdings, and Vallejo lost almost all of his real estate, which once amounted to 7 million acres. His home on West Spain Street was all that remained of his once large land holdings when he died in 1890. Sonoma was incorporated as a U.S. City in 1881.

Sonoma Plaza, encompassing some 80 acres and 28 buildings, including the Mission San Francisco Solano, Captain Salvador Vallejo's Casa Grande, the Presidio of Sonoma, and many other buildings along the periphery of the Plaza, was listed in the National Register of Historic Places in 1975 as an historic district significant for its association with historic events, as well as for its architecture. The district has a period of significance from 1829 to 1849, and represents the Mission/Spanish Revival and Italianate styles of architecture. Much of this area also comprises the Sonoma State Historic Park, which consists of six historic architectural resources generally on the north side of the Plaza; the Mission San Francisco Solano de Sonoma, the Blue Wing Inn, the Sonoma Barracks, the Toscano Hotel, as well as La Casa Grande and Lachryma Montis, the homes of General Mariano Vallejo. The boundaries of the National Register Historic District were expanded by an additional 20 acres and numerous buildings in 1992 to areas south and east of the town plaza, along Broadway and the north side of East Napa Street. The expanded Broadway Historic District has a period of significance from 1850 to 1924, and represents the Queen Anne and Italianate styles of architecture.

Napa County

With Alta California's independence from Spain and the beginning of Mexican control, Napa County was subdivided into twelve ranchos: Humana Carne, Catacula, Caymus, Chimiles, Entre-Napa, Le Jota, Locoallomi, Napa, Tulucay, Yajome, Huichia, and Mallacomeato (Anonymous, 1891). The first non-Spanish American settler to the Napa Valley area was George C. Yount in 1831. Originally intending to travel to the Pacific Ocean to trap otter, Yount instead stopped early and worked as a carpenter for General Mariano Vallejo. In 1836, Yount received the 12,000-acre Rancho Caymus land grant, and in 1842 applied for and received the Rancho La Jota land grant on Howell Mountain.

With the discovery of gold in 1848 and the subsequent gold rush of the early 1850s, the population of California grew exponentially. As a previously established American-occupied area, Napa County drew in many of the miners disillusioned by the gold fields and the severe winter in the Sierra Nevada. Saw mills, timber harvesting, and cattle ranches provided employment within Napa Valley. Between 1840 and 1845 many emigrant American families settled in the Napa Valley area. It was in 1848 that Napa City was laid out by Nathan Coombs on

the property that he acquired from Nicholas Higuera's Rancho Entre-Napa. The burgeoning population helped build Napa City from a tent city along Main Street to the primary business and economic center for the Napa Valley it is today. By 1853 the first roads began to appear on Howell Mountain. Old Howell Mountain Road became the stagecoach route between the Napa Valley and Lake County. In the 1860s and 1870s small groups of settlers began planting vineyards in the Napa Valley area and today, Napa County is best known for its world-renowned wine production.

Brief History of Stone Arch Bridges in Napa County. Napa County has an unusual history of stone arch bridge construction that is distinctly different from the rest of California (JRP, 1999). During the 1860s stone arch bridges were a common construction type throughout the United States. Beginning in the 1890s other materials, particularly steel, became more widely used. The exception was Napa County where stone arch bridges continued to be built through the 20th century. Explanation for this trend includes the amount of early settlers in the county who were European immigrants, particularly from England and Italy, who had traditional experience with stone masonry construction. Additionally the hills surrounding the Napa Valley harbor an abundance of commercial-grade stone ideal for bridge and building construction material. Napa County's agricultural dominance produced a high amount of day laborers who could provide the backbone for stone masonry construction. Local historians also emphasize that individuals, in particular County Supervisor Achilles F. Grisby and County Surveyor and City Engineer Oliver Buckman, were strong advocates of stone bridge construction. Stone masonry maintained dominance in bridge construction through the mid-1910s in Napa County when techniques began to trend with the rest of the state using steel and concrete.

Brief History of Napa State Hospital. Due to overcrowded conditions at the Stockton Asylum-California's first State Hospital, a site was selected in 1872 in Napa County for a new State Hospital. Initially, 192 acres of land were purchased for $11,506 from Don Cayetano Juarez. The site was a part of the Mexican Land Grant, Rancho Tulocay, that was received from General Mariano Vallejo. Additional land was acquired over the years bringing the total to over 2,000 acres. The same year that the land for the new hospital was acquired, work began on the construction of the 500-bed, four-story, Gothic-style hospital building. The newly-completed Napa State Hospital opened to its first patients in November in 1875. At this time, the hospital property extended from a wharf on the Napa River to the eastern edge of Skyline Park, allowing for the development of dairy and poultry ranches, vegetable gardens, orchards and other farming operations necessary to make the hospital as self-sufficient as possible. Farming operations ceased in the late 1960's. Napa Valley College, Kennedy Park and Skyline Wilderness Park now occupy most of this land. The hospital population peaked in 1960 with over 5,000 individuals in residence and then steadily declined with the arrival of psychotropic medications and the development of County-based programs. Although the hospital underwent numerous later additions and alterations since its initial construction, the original complex of buildings was determined to be eligible for the National Register as an individual property through a survey evaluation.

Methods

The effort to identify cultural resources in the APE consisted of researching the archives, conducting field surveys, and contacting Native Americans organizations/individuals.

Archival Methods

A records search was conducted at the NWIC at Sonoma State University in April 2008 (File No. 07-1558). Most topographic quadrangle maps of the NBWRP could be examined with the exception of Napa. The Napa quadrangle base map was reviewed on April 20, 2008. Additional records were accessed by reviewing the 7.5-minute quadrangle base maps. Further research was conducted using the files and literature at ESA. The records search included a quarter-mile radius of the APE and was completed in order to (1) determine whether known cultural resources have been recorded within or adjacent to the APE; (2) assess the likelihood of unrecorded cultural resources based on historical references and the distribution of environmental settings of nearby sites; and (3) develop a context for identification and preliminary evaluation of cultural resources.

Included in the review were the California Inventory of Historical Resources (California Department of Parks and Recreation, 1976), California Historical Landmarks (1990), California Points of Historical Interest (1992), and the Historic Properties Directory Listing (2008). The Historic Properties Directory includes listings of the National Register and the California Register of Historical Resources, and the most recent listing (March 7, 2008) of the California Historical Landmarks and California Points of Historical Interest. Historic-period and geological maps were also reviewed including Sale Map No. 8 of Salt Marsh and Tide Lands situated in the County of Marin (1871), Illustrated Atlas of Sonoma County, California (Reynolds and Proctor, 1898), and a historic U.S. Geologic Survey (USGS) topographic map of San Francisco and vicinity (1915).

Survey Methods

A pedestrian and cursory survey (on-foot or windshield) was conducted in the APE. The intensity of the survey used was dependent on the environmental conditions (exposed ground surface verses paved/developed) and predicted archaeological sensitivity of a given area.

Because the proposed pipeline routes are predominantly located within established, paved road rights-of-way, standard pedestrian methods for identifying surface evidence of archaeological sites are less valuable and effective in obtaining positive results. Roadways with large shoulders and segments of roadways that intersected with perennial or intermittent streams and creeks were more closely examined by walking and examining the surface. Segments of pipeline routes that diverted off roads and onto parcels of private land was studied using a pedestrian survey.

ESA archaeologist Heidi Koenig and Nick Tipon of the Federated Indians of Graton Rancheria (FIGR) conducted a supplemental survey of six locations within the APE on September 4, 2008. The survey included the areas previously delineated as sensitive for cultural resources and incorporated comments and perspective from Nick Tipon towards known cultural resources. The six locations included the vicinity of P-21-000174 in the LGVSD Service Area; P-21-000551 in the Novato SD service area; P-49-002054 and P-49-003299 along Arroyo Seco in the SVCSD

service area; P-49-1042 near Fowler Creek in the SVCSD service area; and P-49-000130 near Vallejo's home in the SVCSD service area. The survey methods, results, and corresponding references are provided in the Survey Findings section.

Native American Consultation

Under NEPA, cultural institutions, lifeways, culturally-valued viewsheds, places of cultural association, and other sacred places and trust assets are considered cultural resources (40 CFR 1501.2), Section 106 of the NHPA and Executive Order 12898 (Executive Order 13175, Executive Order 13007, Native American Graves Protection and Repatriation Act). Executive Order 13007 specifically addresses sacred sites.

The Native American Heritage Commission (NAHC) was contacted on April 28, 2008 to request a database search for sacred lands or other cultural properties of significance within or adjacent to the APE. Based on a response received on April 28, 2008, the sacred lands survey did not identify the presence of cultural resources in the APE. The NAHC provided a list of Native American contacts that might provide further information on cultural resources for the action area. Each person or organization identified by the NAHC was contacted by telephone on April 15, 2008.

A meeting was held on June 27, 2008 between ESA archaeologist Heidi Koenig, California State Parks archaeologist Breck Parkman, Nick Tipon and Ken Tipon of the Federation of Indians of Graton Rancheria (FIGR). The meeting was held primarily to provide a general project description for the NBWRP to the agencies and to outline the preliminary results from the records and literature review as well as initial survey results were outlined.

Additional consultation occurred when ESA archaeologist Heidi Koenig and Nick Tipon of the Federated Indians of Graton Rancheria (FIGR) conducted a supplemental survey of six locations within the APE on September 4, 2008. The purpose of this effort was to introduce Mr. Tipon to areas previously delineated as sensitive for cultural resources and incorporate any of his additional comments and perspective towards known cultural resources. Consultation with the NAHC is ongoing.

Records Search Results

Archaeological Resources within the Records Search Area

Based on the records search, 210 archaeological sites have been recorded within the records search area. Archaeological resources in the records search area are comprised of prehistoric archaeological sites (including but not limited to concentrations of 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, handstones, or milling slabs]; battered stone tools, such as hammerstones and pitted stones) and historic-period archaeological resources (including but not limited to stone walls; filled wells or privies; deposits of metal, glass, and/or ceramic refuse, and out-of-use

transportation features such as railroad berms and roads)[1]. Because cultural resources surveys are on-going this list is only applicable at the time of this publication. Cultural resources are recorded continuously and any new research efforts would be required to be updated as appropriate.

Archaeological Resources within the ASA

Table 3.12-2 shows the archaeological resources within the ASA in the Member Agency service areas that are discussed below. The resources include both prehistoric and historic-period archaeological sites as well as architectural/structural properties.

TABLE 3.12-2
CULTURAL RESOURCES LOCATED WITHIN THE ARCHAEOLOGICAL ASA

Service Area	Site Age	Primary Site Number	Trinomial	Site Description
LGVSD	**Prehistoric**	P-21-000174	CA-MRN-149	Shell midden
Novato SD	**Prehistoric**	P-21-000026	CA-MRN-359	Shell midden
	Prehistoric	P-21-000201	CA-MRN-176	Shell midden
	Prehistoric	P-21-000216	CA-MRN-191	Shell midden
	Prehistoric	P-21-000217	CA-MRN-192	Shell midden/Lithic scatter/Burials
	Prehistoric	P-21-000298	CA-MRN-319	Shell midden
	Prehistoric	P-21-000376	CA-MRN-414	Petroglyphs
	Prehistoric	P-21-000377	CA-MRN-415	Bedrock milling station
	Prehistoric	P-21-000551	CA-MRN-502	Shell midden
	Prehistoric	P-21-000657	CA-MRN-444	No record
	Prehistoric	P-21-000658	CA-MRN-445	No record
	Prehistoric	P-21-000659	CA-MRN-446	No record
	Prehistoric	P-21-000660	CA-MRN-447	No record
SVCSD	**Multicomponent**	P-49-000130	CA-SON-132/H	Shell midden/Artifact concentration
	Multicomponent	P-49-002806	CA-SON-2316	Shell midden/Historic-period residence
	Historic-period	P-49-000346	CA-SON-375H	Sonoma Mission - Artifact concentration
	Historic-period	P-49-001344	CA-SON-1439H	El Dorado Hotel - Artifact concentration
	Historic-period	P-49-001367	CA-SON-1464H	Artifact concentration
	Historic-period	P-49-002305	CA-SON-1806H	Artifact concentration/Foundation
	Historic-period	P-49-002367	CA-SON-1900H	Artifact concentration/Foundation
	Historic-period	P-49-002372	CA-SON-1912H	Artifact concentration
	Prehistoric	P-49-000193	CA-SON-221	Shell midden
	Prehistoric	P-49-000345	CA-SON-374	Shell midden
	Prehistoric	P-49-001042	CA-SON-1114	Lithic scatter
	Prehistoric	P-49-001399	CA-SON-1499	Shell midden
	Prehistoric	P-49-001693	CA-SON-1304	Shell midden
	Prehistoric	P-49-002053	CA-SON-135	Shell midden
	Prehistoric	P-49-002054	CA-SON-136	Shell midden
	Prehistoric	P-49-003299	CA-SON-2412	Shell midden
Salt Marsh Area	**Historic-period**	P-28-000722	CA-NAP-810	Railroad grade
Napa SD	**Multicomponent**	P-28-000001	CA-NAP-860/H	Shell midden/Historic-period ranch

NOTE: Primary Site Number and Trinomial Numbers are assigned by the California Historical Resources Information System

[1] The cultural resources located in the records search area are provided in the technical document prepared for cultural resources (ESA, 2008). The cultural resource-list would assist future research to delineate areas of sensitivity for the full development of Alternative 1; Alternative 2; and Alternative 3.

LGVSD

Site P-21-000174 is a shell midden that was originally recorded by N.C. Nelson in 1907. The site was described as a "shellheap" located on a "rocky point, the most prominent to the north after rounding the bend forming the entrance to the Miller Valley basin." Adjacent to marshland at the time, the site extended approximately 125 feet along the bank, 18 to 20 feet above the marsh level, and five to six feet back from the edge of the marsh. The shell fragments were considered small and the soil had "an unusual amount of earth and rock in its composition." One charmstone was collected.

The exact location of this site is uncertain. In 1979 disturbed midden material was recorded south of the NWIC-mapped location of P-21-000174 (ARCS, 1979). The material was designated as "N-2" but a subsequent survey in 1991 was unable to relocate the deposit. An additional survey in 1995 did not locate cultural materials at any of the various suggested locations (DON, 1995). Filling and grading activity in the area has likely eliminated any surface components to this site. Because of the potential for a subsurface deposit, the area is considered generally sensitive for prehistoric resources.

Novato SD

Site P-21-000026 is a prehistoric shell midden with human remains. The site may be the village of *tcōke'ttce* (Barrett, 1908:309) was first recorded by N.C. Nelson in 1907 (Nelson Site MRN-171). Several subsequent recordings have occurred including one subsurface exploration during construction activities (Bieling, 1994; Davis, 1959; Roop and Haslam, 1981). The dark midden soil contains charcoal, heat-affected rock, lithic debitage, shellfish remains, tools and tool fragments, and at least one human burial. Although there is some surface manifestation of the site, much of it has been disturbed by previous construction and/or is found up to 5 feet below the present-day ground surface.

Site P-21-000201is a shell midden that was originally recorded in 1907 by N.C. Nelson. In 1907, the site was located on the edge of a marsh northwest of Deer Island on a hill slope above a wagon road. The 30,000-square foot site was seven to eight feet above the marsh level and six to seven feet high. The site had been flattened by cultivation and contained fine materials and no clam shell.

In 1976 the site was relocated and described as an extensive midden deposit with obsidian and chert debitage and tools (Guruswami, Naidu, and Haslam, 1978). The site had been rediscovered during excavation for road construction and was buried at a depth of three to six feet of fill. The site record noted that several midden deposits and petroglyphs are located on nearby Deer Island. An excavation plan was proposed for the site in the Environmental Impact Report completed for the Woodlands Residence Subdivision. It is unknown at the present time whether the activities were carried out.

Site P-21-000216 is a shell midden recorded by N.C. Nelson in 1907 at the head of a "long straight marsh arm near the northeast extremity of the Novato-Black Point range." The site was approximately 6,600 square feet in area and one to three feet deep. Nelson noted that the site had

likely been "artificially reduced." There have been no subsequent recorded archaeological studies on this site.

Site P-21-000217 is a shell midden with a lithic scatter, a bedrock milling station, and burials. The site was originally recorded by N.C. Nelson as Nelson's 197. The site has been revisited several times.

Site P-21-000298 is a shell midden. The site was first recorded by N.C. Nelson in 1907. Nelson described the site as "insignificant covering only about 100 square feet" located north of the junction of the Sonoma and Petaluma railroad lines. The site has apparently been destroyed (personal communication between Steve Dietz and J. Origer, 1978).

Site P-21-000376 is petroglyphs near Dear Island. The site contains two schist outcrops with at least 4 pecked circles and ovals (Miller, 1974a).

Site P-21-000377 is a bedrock milling station mapped at the NWIC within the ASA. The site is a 2.8 by 0.57 meter basalt outcrop containing at least 41 cupules of various sizes (Miller, 1974b).

Sites P-21-000657, P-21-000658, P-21-000659, and P-21-000660 were recorded by Katherine Flynn in 1976 despite lack of official site record forms submitted to the California State Parks and Recreation Department (site record coordinator for Marin County at that time).The exact location and nature of each site are uncertain. It appears that three sites were recorded on an 88-acre parcel proposed for residential development (Flynn, 1976). One of the sites was P-21-000551. Ms. Flynn noted the replication of P-21-000551 with a site in Bolinas and temporarily numbered the site Q-SME-1. Two additional lithic scatters were also recorded (Q-SME-2 and Qu-SME-A). It is unclear why the fourth trinomial was assigned. Ms. Flynn noted in a follow-up letter from 1981 that at least two of the sites (Q-SME-1 and Q-SME-2) were covered or removed by construction (Flynn, 1981).

SVCSD

Site P-49-000130 is a shell midden and historic-period artifact concentration. The site is outside the delineated boundaries for the APE. However, the importance of the site as one of the only prehistoric sites in the city of Sonoma and the probable association with the Native American population that worked for and lived near General Mariano Vallejo's Lachryma Montis (Parkman, 2008), extended the records search and survey effort to include the location. The site contains a prehistoric midden deposit with obsidian, chert, and basalt lithics, shell, and heat affected rock. The prehistoric component is approximately 225 square meters in area. Historic-period artifacts include glass and ceramic fragments. Site disturbance includes the construction of a pump house and pipelines, a power pole, fences, and cattle grazing (Thompson, 1977; Origer, 2006).

Site P-49-000193 is a shell midden, human remains, and bedrock milling station and was originally recorded by N.C. Nelson in 1907. The site was destroyed at the time of recording; the material was being used for a levee along the adjacent creek bank. A fragment of human bone was observed by Nelson. Several skeletons and artifacts were observed by the "Italians who took the material away" (Nelson, 1907).

Site P-49-000345 is a prehistoric shell mound (Bennyhoff, 1952). Historic-period ceramic fragments were also recorded at the location. The site has not been relocated since its original recording.

Site P-49-000346 includes the Sonoma Mission (established in 1823) as well as associated deposits from subsequent uses including a saloon, barn, city dump, etc. The location was recorded on a site survey record in 1952. No subsequent site records have been submitted for the location although numerous studies have been completed in the following years (Bennyhoff and Elasser, 1954; Felton and Farris, 1996; Treganza, 1956).

Site P-49-001043 is a shell midden. This extensive prehistoric site has been recorded several times (Gerike and Parkman, 1980; Martorana, 2005; Ramiller and Rumph, 1978). Auger testing has been conducted to delineate site boundaries (Benson and Peron, 1981; Meyer, 2007). The site appears to be at least 10,000 square meters in area and includes midden soil with obsidian, chert, chalcedony, and basalt debitage and tools, heat-affected rock, ground stone, and the remains of at least three human burials. The site lies outside of the ASA, however the extensive nature of the site and presence of human remains indicates a heightened sensitivity for prehistoric sites in the vicinity.

Site P-49-001344 is a historic-period site consisting of the El Dorado Hotel and associated features in the rear lot. A refuse-filled pit was recorded with preliminary dates of 1850s–1860s. An adobe wall foundation was also recorded. At the time of recording the deposit was at least 75% destroyed (Praetzellis, 1984).

Site P-49-001367 is a historic-period artifact concentration (Bramlette, 1985). Artifacts types recorded include glass bottles, cuts nails, an iron, glass fragments, and metal debris located in a 25 square meter area.

Site P-49-001399 is a midden and light lithic scatter (Jordan, 1985). Constituents of the site include a grayish black midden soil with clamshell, heat-affected rock, obsidian flakes, one obsidian projectile point fragment, and one possible chert flake. Preliminary analysis by the site recorders indicates a site date earlier than A.D. 900.

Site P-49-002053 is a shell midden. This site was recorded by Nelson in 1907. The NWIC does not have any information other than location of the site.

Site P-49-002305 has a historic-period artifact concentration and foundation. The site was recorded in 1990 (Praetzellis, 1990a). The site included a building foundation pad; the house was reportedly constructed circa 1890 and was removed from the location in 1988. A large artifact concentration remained that included 19th century materials such as white improved earthenware fragments, glass fragments, butchered food bones, and brick fragments.

Site P-49-002367, with historic-period artifact concentration and foundation, represents the location of the “Espindola Adobe” as described by Hendry and Bowman in 1942 (Praetzellis, 1990b). Surface indicators and test trenches revealed a light scatter of mid to late 19th century glass and ceramic fragments.

Site P-49-002372 represents the artifacts recovered during test excavations on a Sonoma block (Praetzellis, 1990c). The site consists of five features including sheet refuse and hollow artifact-filled features dating from the late 19th–early 20th centuries, and one prehistoric obsidian flake. Historic-period artifacts included glass and ceramic fragments, tool fragments, ink bottles, stoneware, and food bone.

Site P-49-002806 includes a historic-period home (Harry Coops House) and a prehistoric midden deposit with shell fragments, heat-affected rock, obsidian debitage, and tool fragments (Evans, 1998). The house was constructed circa 1880 (Sonoma League for Historic Preservation #49-5476-248). The prehistoric component extends from Sonoma Creek towards the house.

Site P-49-003299 is a well-developed midden deposit with shell fragments (predominately bay mussel), heat-affected rock, and a few obsidian fragments (Origer and Associates, 2005). The site measures approximately 26 by 40 meters.

P-28-000772 is an abandoned railroad bed that extends from Buchli Station Road to Milton Road in the Salt Marsh Area. The segment was first recorded in 1989 and was described as being a filled levee-like feature approximately nine to 10 feet wide at the top, 27 to 30 feet wide at the base, and about six feet high (Soule, 1989). A pile of 60 to 70 railroad ties in varying degrees of decomposition were located at some point adjacent to the bed. A milled-wood trestle was recorded in a subsequent survey (Psota and Bieling, 1992).

Napa SD

The P-28-000001 is the Somky Property, a multicomponent site. The site includes a historic-period ranch complex and a prehistoric midden deposit (Tinsley, 2005; Thompson, 2005). The ranch complex is a two-story Colonial Revival-style farmhouse constructed in 1911and associated structures including a worker's cabin, an ornamental fountain, and a Quonset hut. Historic-period refuse including glass, white improved earthenware, and a saw-cut bone were also recorded. The prehistoric component is located on the southwest section of the Somky property near an outbuilding and consists of a moderate to dense scatter of obsidian debitage and one obsidian corner-notched projectile point. The extant structure was determined eligible for the California Register; it was recommended that the prehistoric component be formally evaluated for its eligibility by the identification of intact archaeological deposits and recognized data potential (Bartoy, Rosenthal, and Holson, 2005).

Archaeological Resources within the APE

Novato SD

Site P-21-000551 is a well-developed midden deposit and lithic scatter with human remains. The site was originally recorded as CA-MRN-372 by R.L. Edwards and T. King in 1967 and reportedly investigated by San Francisco State College (Flynn, Duddy, and Gerike, 1980). The trinomial CA-MRN-372 was also assigned to a site in Bolinas. Therefore, the San Marin Drive site was reassigned the number CA-MRN-502. In 1980 the site was rerecorded within a newly bladed construction site for a residential development. The site was described as a dense shell

midden containing obsidian and chert debitage and tools, heat-affected rock, groundstone, hearths, and at least one human burial. One possible bedrock milling station was also noted. Historic-period refuse was also recorded including glass, ceramic, tin, and wire nails. The 1980 site record suggests that a testing program was submitted to the City of Novato and that local Native American representatives had been contacted about the human remains.

SVCSD

Site P-49-001042 is a site with sparse obsidian scatter in a 150 by 20 meter area (Ramiller and Rumph, 1978). Subsequent survey did not relocate the site (Flynn, 1980). Flynn reported that the light scatter of obsidian may have been transported to that location by farm equipment from the more substantial site of CA-SON-1115. A cultural resources monitor was recommended during ground disturbance in the vicinity.

Site P-49-001693 is a dark clay midden containing obsidian debitage and one small obsidian blade. Some heat-affected rock and a ground stone were also recorded (O'Brien and Roop, 1980). The site may be a disturbed portion of CA-SON-221 recorded by Nelson in 1909. The site was heavily disturbed at that time due to vineyard cultivation, and augering of the site revealed no stratigraphy at depths of 20 to 30 centimeters. The actual depth of the site was cited as unknown. In addition, the alluvial and fluvial deposition in this area is high given the proximity to two branches of Fowler Creek.

Site P-49-002054 is a shell midden recorded by Nelson in 1907. The NWIC does not have any information other than the location.

Napa SD

Site P-28-000622 is a light lithic scatter (Baker, 1988). Approximately 10 to 12 obsidian flakes were noted in a 25 by 6 meter area between a small ranch road and a fence. One obsidian biface tool fragment was recorded. No other cultural materials were noted. Since the time of recording a bridge has been replaced and the ranch road has been paved. It was recommended that an archaeologist be present during ground-disturbing activities in the area although it is not currently known whether the ground disturbing activities occurred.

Architectural/Structural Resources within the Architectural APE

There are 66 recorded historic architectural properties listed in or eligible for listing in the National Register within the search radius that have National Register ratings (status codes) between "1" (listed on the National Register) and "5" (eligible for local listing). The majority of the resources (61) are located in downtown Sonoma within the SVCSD service area. The resources within each Member Agency service area are described below. None of these resources are located within the immediate APE.

LGVSD

Hamilton Field Enlisted Barracks. Recorded historic architectural resources adjacent to the LGVSD service area APE are the Enlisted Barracks located on South Palm Drive, and the

Hangars on Hangar Avenue, at Hamilton Field in Novato. The structures were built in 1933, and were assigned a National Register status code of "2S2," which indicates that they are individual properties determined eligible for the National Register through the Section 106 process of the National Historic Preservation Act (NHPA). The structures are also listed in the California Register.

SVCSD

Sonoma Plaza/Broadway Historic District. There are 61 recorded historic architectural resources that are listed in or determined eligible for listing in the National or California registers located adjacent to SVCSD service area APE. These resources are primarily clustered around Sonoma Square in downtown Sonoma, which has a high concentration of city's brick and wood frame commercial buildings dating from the late eighteenth to the early twentieth centuries. The majority of the recorded historic architectural resources consists of commercial structures located along Broadway leading to Sonoma Square, and are within the Broadway Historic District. Several additional recorded historic resources in the SVCSD service area APE are located on 1st Street West along the western perimeter of Sonoma Square. Fewer historic architectural resources, such as residences or ranches, are located further outside the Plaza, such as along Arnold Drive, Denmark Street, Napa Road, and Watmaugh Road.

Napa SD

Four recorded historic architectural resources are located adjacent to the Napa SD service area APE. These include the 1875 Napa State Hospital, and three historic ranches. The Napa State Hospital, located at 2100 Napa-Vallejo Highway, was completed in 1875, with numerous later additions and alterations. This complex of buildings was assigned a National Register status code of "3S," which indicates its eligibility for the National Register as an individual property through a survey evaluation. Kreuzer Ranch at 167 Kreuzer Lane in northern Napa County dates from 1890, and was assigned a National Register status code of "1S," (i.e., an individual property). Two additional ranches, the 1875 Bergstrom Ranch and the 1916 Mount George Farm Center located at 1225 and 3275 Hagen Road, respectively, were assigned National Register status codes of "3S," (i.e., individual properties through a survey evaluation).

No other recorded historic architectural resources listed in or eligible for listing in the National Register or California Register were identified within or adjacent to any of the architectural APE for the remaining services areas, including the Novato SD service area, the Salt Marsh area, or any associated WWTPs. Because the NBWRP components would be primarily located within public rights-of-ways, no significant direct or indirect impacts to eligible resources, if they exist, would occur. Therefore, an intensive architectural survey and evaluation would be of little or no value to the understanding of the project's potential effects on such resources. However, an intensive architectural survey and evaluation was conducted for four historic-period bridges within the Napa SD service area (described below) due to their potential of being affected by the project.

Survey Findings

Newly recorded sites were documented on California Department of Parks and Recreation forms 523. Efforts to relocate previously recorded sites during the 2008 survey effort were documented on DPR 523L Continuation forms. All updated and new site records are provided in the Cultural Resource Technical Report (ESA, 2008).

LGVSD

The LGVSD service area was surveyed by an ESA Registered Professional Archaeologist and Nick Tipon of the FIGR on September 4, 2008. The APE in the LGVSD service area is primarily paved with no surface visibility. Adjacent locations with limited surface visibility such as landscaped areas were reviewed for cultural materials, especially in the recorded vicinity of the P-21-000174 site.

Several locations been suggested for the site P-21-000174. No surface indications of cultural materials were observed during the project survey. A previous survey indicates that the site has likely been destroyed (DON, 1995). The area is considered as generally sensitive for archaeological resources.

The Northwestern Pacific Railroad corridor was surveyed for the Sonoma Marin Area Rail Transit Project by Garcia and Associates (2004). The railroad was recorded as a historic-period cultural resource (site P-21-002618) and was determined to be not eligible for either the National or California registers. It was recommended that individual features or elements associated with the railroad be evaluated for their eligibility. No eligible features or elements are located within the LGVSD service area APE.

Novato SD

Based on a survey of the Novato SD WWTP site, (William Self, 2004), no cultural resources were recorded. An ESA Registered Professional Archaeologist surveyed the proposed pipeline routes in the Novato SD service area on May 20, 2008. The area is primarily in a residential/urban environment. Paved sidewalks and landscaping obscure visibility in segments west of Highway 101 with the exception of Arroyo Avichi Park. East of Highway 101 the setting varied from urban to rural residential with a narrow right-of-way. No prehistoric or historic-period archaeological resources were recorded during this survey effort.

One archaeological site has been recorded within the APE of the Novato SD service area. The site was recorded during construction in 1980. Very little natural ground surface is visible in the location due to pavement and landscaping. A 100-foot radius along the right-of-way in the vicinity of this site was subject to intensive survey methods that included surface scraping with a trowel to remove any vegetation and reveal any shallow subsurface deposits. No cultural materials were observed and the site could not be relocated. No surface indications of the site were found during a subsequent survey effort in September 2008 with Nick Tipon of the FIGR.

Several additional sites are located within the ASA of the Novato SD service area. The portions of the APE nearest to these sites were inspected thoroughly to determine whether site boundaries extended into the APE (described below):

- Site P-21-000026. No midden soils, shell fragments, or other cultural materials were observed on the surface within the APE nearest to this site.
- Site P-21-000201. The nearest APE is paved and landscaped with no ground surface visibility.
- Site P-21-000216 was a large shellmound at the time of recording in 1907. There have been no successive recordings since that date. No midden, shell fragments, or other cultural materials were observed in the APE nearest to this site.
- Site P-21-000298. The nearest APE is paved and landscaped with no surface visibility.
- Site P-21-000376 is a petroglyph located near Dear Island.
- Site P-21-000377 is a bedrock milling station.
- The precise locations of sites P-21-000657, P-21-000658, P-21-000659, and P-21-000660 are not recorded. There is no indication that these sites extend into the APE nearest to their generally known locations.

SVCSD

An archaeological field inspection of the SVCSD Service Area pipelines was conducted by an ESA Registered Professional Archaeologist on December 13 and 14, 2005 (ESA, 2006). The area proposed for the booster pump station at Napa Road and Denmark Street was also subjected to pedestrian survey however the location was heavily vegetated with shrubs and trees reducing the surface visibility. No archaeological deposits were observed throughout the pipeline routes and the booster pump station. The Arroyo Seco section was not surveyed due to accessibility issues and the low visibility of the ground surface (mainly due to high levels of vegetation).

Site P-49-001693 (also called the Vineyard Site), was previously identified north of the proposed alignment by O'Brien and Roop (1980). Augering of the site in 1980 revealed no stratigraphy at 20–30 cm depths. An ESA survey conducted in 2005 did not identify any evidence of this site on the surface. The area surrounding the site has been used for viticulture for many years and, as a result, the native surface layers have been disturbed or removed. Shallow exposures using a trowel did not yield any cultural material or midden soils.

Site P-49-003299 is recorded east of the pipeline alignment. Site P-49-001399 is further to the east. No cultural materials were found in the 2005 survey in the vicinity of these sites or in the 2008 subsequent survey effort. The site P-49-003299 has not been relocated since its original recording in 1907. The site may have been destroyed due to grading or other earth-moving activities.

The exact location of P-49-002054 is not known (the site was recorded in 1907). No cultural materials were found in the vicinity mapped for this site during the 2005 survey conducted by ESA.

Site P-49-001042 was originally recorded within the APE. Cultural materials were not relocated during the 2005 survey. The site has been described as a possible redeposit of materials from a more substantial site (CA-SON-1115) located on the same ranch property.

Site P-49-000130 is located approximately north of the APE. During the on-foot survey conducted in 2005 no cultural material was observed in the nearest vicinity. The potential significance of P-49-000130—a contact-period site associated with General Mariano Vallejo's Native American workforce—justified an extended survey effort in the vicinity to confirm the presence or absence of cultural material in the immediate APE. Surface evidence of the site was found. The site consisted of darkened midden soil with a very light scatter of lithic debitage, shell, and one stone tool fragment. There is no indication that the site extends into the nearest APE located to south on the bike path.

Several additional sites are located within the ASA of the SVCSD service area. The nearest APE to these sites was inspected thoroughly to determine whether site boundaries extended into the APE.

- Site P-49-000193. No cultural materials were found during the 2005 survey in the APE nearest to the site.
- Site P-49-000345. No cultural resources were noted in the nearest APE.
- Site P-49-002053. No artifacts were found in the APE nearest to the mapped location of this site.
- Site P-49-002806. The site was recorded as destroyed and no cultural materials were observed within the nearest APE.

Historic-period archaeological sites such as filled wells or privies, foundations, and surface scatters (including P-49-000346, P-49-001344, P-49-001367, P-49-002305, P-49-002367, and P-49-002372) tend to be localized. No evidence of these sites was located within the current APE.

The Sonoma Valley Railroad berm was recorded in July 2008 as recommended by California State Parks, Senior Archaeologist Breck Parkman. The resource was recorded on a DPR form 523a. The railroad segment is currently paved for use as a bike path from Fourth Street East, west to Maxwell Farms Regional Park at Highway 12. From Fourth Street East, east towards Seventh Street East, an unpaved segment is located through the Sebastiani Winery property. At Seventh Street East the segment veers south to travel down Eighth Street East towards Vineburg. Embedded rails and ties are visible throughout the vineyard property segment, as well as between Seventh Street and East Napa, and along Eighth Street. The Sonoma Valley Railroad was incorporated in 1878 and a narrow-gauge line was constructed from Sonoma Landing at San Pablo Bay north to Sonoma. In 1881 the line was extended to Glen Ellen. The line served

Sonoma through the 1970s (Period of Significance 1878–1970s). A rebuilt railroad depot (the original depot burned in 1976) is located north of the segment at 270 First Street West. The railroad has not been previously evaluated for inclusion on the California or National Registers; however it appears unlikely that it would meet the criteria for evaluation, primarily due to its impaired integrity for the majority of its length. In addition the area of direct impact for the NBWRP is parallel to the tracks and would not impair or disturb the remaining features. Following project construction, the area would be restored to pre-project conditions.

The 37-acre parcel north of the SVCSD WWTP was surveyed on June 21, 2005 by an ESA Registered Professional Archaeologist (ESA, 2006). Approximately 14 acres of this parcel is proposed for the development of the new operational and capacity storage reservoirs and the distribution pump station. No archaeological material was identified within this survey area.

Based on an archaeological survey of the Salt Marsh Area on February 26, 2003 (Jones & Stokes, 2003), no archaeological materials were identified in the current Salt Marsh pipeline segment. The railroad berm recorded as P-28-000722 is 100 feet northeast of the nearest APE and was not relocated during the survey.

Napa SD

A mixed strategy survey of the Napa SD Service Area was conducted by an ESA Registered Professional Archaeologist on May 20, 2008. The area is primarily residential characterized by a rural atmosphere. The narrow roadways have few large pullouts and a limited right-of-way (two to six foot wide). Shoulders include earthen water-drainage ditches (occasionally lined with rocks or concrete). Rock walls delineating property boundaries were common throughout the vicinity.

Based on a survey (ESA, 2003) of the pipeline segment that would extend through the south end of Napa State Hospital, two historic-period archaeological resources (a rock wall and a concrete water reservoir) were recorded although not within 500 feet of the area of direct impact. No archaeological resources were recorded within the APE.

Site P-28-000622 was previously recorded as a very light lithic scatter (Baker, 1988). Major modifications to the road, bridge, and private driveway have occurred since the original recordation of the site. No cultural materials were found at this location during the survey effort.

Four historic-period stream crossing bridges were recorded during the 2008 survey effort (described below):

Coombsville Road Bridge #1. This bridge, which crosses Murphy Creek, is located on Coombsville Road approximately 2,000 feet east of the intersection with Fourth Avenue. It is a poured concrete barrel arch bridge with rough coursed stone parapets (side railings) about 20 feet long and about 24 feet wide. The bridge was constructed circa 1900, with an adjacent ornamental stone culvert dated 1941. Napa County is unique for its many stone arch bridges that dominated bridge construction from the 1860s through the mid-1910s, due to the available local supply of stone and the primarily European masons who had the skills to carve them. A survey and

evaluation by ESA determined that the bridge fits partially into the historical theme of Napa County's stone arch bridges because of its cut field stone parapets, and was constructed circa 1900 which is within this theme's period of significance (1860–1915). However, because this bridge is primarily a poured-concrete structure with smaller stone elements, it does not fit completely within the historical theme of Napa County's stone arch bridges, and therefore, does not appear to be eligible for listing in the National or California Registers.

Coombsville Road Bridge #2. This bridge, which crosses Tulucay Creek, is located on Coombsville Road about 450 feet east of the intersection with First Avenue. Nearly identical to the Coombsville Road Bridge #1, it is also a poured concrete barrel arch bridge with rough coursed stone parapets about 20 feet long and about 24 feet wide. The bridge is dated 1902. Because this bridge is primarily a concrete structure with smaller stone elements, it does not fit completely within the historical theme of Napa County's stone arch bridges, and therefore does not appear to be eligible for listing in the National or California Registers.

Hagen Road Bridge. This bridge, which crosses the southern fork of Sarco Creek, is located 220 feet west of the intersection of Hagen Road and La Londe Lane. Stylistically similar to the Coombsville Road Bridges #1 and #2, it also it is also a poured-concrete barrel arch bridge with rough coursed stone parapets about 20 feet long and about 24 feet wide constructed circa 1900. Because this bridge is primarily a concrete structure with smaller stone elements, it does not fit completely within the historical theme of Napa County's stone arch bridges, and therefore does not appear to be eligible for listing in the National or California Registers.

Loma Heights Road Bridge. This bridge, which also crosses the southern fork of the Sarco Creek, is located on Loma Heights Road about 100 feet south of the intersection with Hagen Road. It is a poured-concrete bridge built circa 1920 with concrete parapets about 20 feet long and about 24 feet wide. As described above, Napa County is unique for its many stone masonry bridges which dominated bridge construction from the 1860s through the mid-1910s, after which techniques began to trend with the rest of the state using steel and concrete. As a concrete bridge constructed circa 1920, it does not fit within the historical theme of Napa's early stone arch bridges from 1860–1915, and is more typical of the all-concrete bridges that were constructed throughout the state at this time. As such, it does not appear to be eligible for listing in the National or California Registers.

The Napa SD WWTP has been surveyed twice and no cultural resources have been recorded within the area of proposed upgrades (Flynn, Roop, and Melander, 1983; Mikkelsen, Berg, and Bouey, 1991). Although these surveys occurred more than five years ago, the WWTP site is highly disturbed, paved, and otherwise developed. Site P-28-000001 (CA-NAP-860/H) is located over 500 feet from the upgrades proposed for the Napa SD WWTP. No cultural materials have been recorded within the APE for the proposed upgrade at the Napa SD WWTP.

3.12.2 Regulatory Framework

Federal

Archaeological and architectural resources (buildings and structures) are protected through the NHPA of 1966, as amended (16 USC 470f) and it's implementing regulation, Protection of Historic Properties (36 CFR Part 800), the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979. Prior to implementing an "undertaking" (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies (e.g., Bureau of Indian Affairs, Bureau of Land Management, U.S. Bureau of Reclamation, U.S. Army Corps Of Engineers, etc.), to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing on the National Register of Historic Places. Section 101(d)(6)(A) of the NHPA allows properties of traditional religious and cultural importance to a tribe to be determined eligible for inclusion in the National Register. Under the NHPA, a find is significant if it meets the National Register listing criteria at 36 CFR 60.4, as stated below:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association and:
>
> a) That are associated with events that have made a significant contribution to the broad patterns of our history, or
>
> b) That are associated with the lives of persons significant in our past, or
>
> c) That 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) That have yielded, or may be likely to yield, information important in prehistory or history.

The American Indian Religious Freedom Act of 1978 allows access to sites of religious importance to Native Americans. On federal land, the Archaeological Resources Protection Act (ARPA) and Native American Graves Protection and Repatriation Act (NAGPRA) would apply. The ARPA assigns penalties for vandalism and the unauthorized collection of archaeological resources on federal land and provides for federal agencies to issue permits for scientific excavation by qualified archaeologists. The NAGPRA assigns ownership of Native American graves found on federal land to their direct descendants or to a culturally affiliated tribe or organization and provides for repatriation of human remains and funerary items to appropriate Native American descendants.

Federal review of projects is normally referred to as the Section 106 process. The Section 106 review normally involves a four-step procedure described in detail in the implementing regulations (36 CFR Part 800):

- identify and evaluate historic properties in consultation with the SHPO and interested parties;
- assess the effects of the undertaking on properties that are eligible for inclusion in the National Register;
- 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.

Management of ITAs

Executive Order 13007, Indian Sacred Sites, 61 FR 104

Executive Order 13007, signed on May 24, 2006, requires Reclamation, to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions, to avoid adversely affecting the physical integrity of Indian sacred sites and to allow access by Indian religious practitioners to sacred sites. All actions pursuant to this Order must comply with the 1994 Memorandum for Government to Government Relations (described below).

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, 63 FR 96

Executive Order 13175 (2000) was issued to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications. When implementing such policies, agencies shall consult with tribal officials as to the need for federal standards and any alternatives that limit their scope or otherwise preserve the prerogative and authority of Indian tribes.

Government-to-Government Relations with Native American Tribal Governments (Memorandum signed by President Clinton; April 29, 1994). Federal Register, Vol. 59, No. 85

The Memorandum directs federal agencies to consult, to the greatest extent practicable and to the extent permitted by law, with tribal governments prior to taking actions that affect federally recognized tribal governments. Federal agencies must assess the impact of federal government plans, projects, programs, and activities on tribal trust resources and assure that tribal government rights and concerns are considered during such development.

Consistent with President William J. Clinton's 1994 memorandum, "Government-to-Government Relations with Native American Tribal Governments," the U.S. Department of the Interior (DOI), Bureau of Reclamation, Mid-Pacific Region (Reclamation), assesses the effects of its programs on tribal trust resources and federally recognized tribal governments. Reclamation is tasked to

actively engage federally recognized tribal governments and consult with such tribes on government-to-government level (59 Federal Register, 1994) when its actions affect ITAs. The U.S. DOI Departmental Manual Part 512.2 ascribes the responsibility for ensuring protection of ITAs to the heads of bureaus and offices (DOI, 1995). DOI is required to "protect and preserve ITAs from loss, damage, unlawful alienation, waste, and depletion" (DOI, 2000). Reclamation is responsible for assessing whether the proposed project has the potential to affect ITAs.

Secretarial Order No. 3175 – Departmental Responsibilities for Indian Trust Resources

Secretarial Order 3175, enforceable on November 8, 1993, requires that any anticipated impacts to ITAs from a proposed action by the DOI agencies be addressed in environmental documents (Office of American Indian Trust, 1995). The DOI bureaus and offices are required to consult with the recognized tribal government with jurisdiction over the trust property that a proposed action may affect.

Secretarial Order No. 3206 – American Indian Tribal Rights, Federal – Tribal Trust Responsibilities, and the Endangered Species Act

Secretarial Order No. 3206 was signed on June 5, 1997 and applies to all agencies within the DOI and Department of Commerce. This order clarifies the responsibilities when actions of the DOI agencies taken under the authority of the Endangered Species Act affect, or may affect, Indian lands, tribal trust resources, or the exercise of American Indian tribal rights. DOI agencies will carry out their responsibilities in a manner that harmonizes the federal trust responsibility to tribes, tribal sovereignty, and statutory missions of the departments, and that strives to ensure that the Indian tribes do not bear a disproportionate burden for the conservation of listed species.

Secretarial Order No. 3215 – Principles for the Discharge of the Secretary's Trust Responsibility

Secretarial Order No. 3215 was signed on April 29, 2000 and is intended to provide guidance to the employees of the DOI who are responsible for carrying out the Secretary's trust responsibility as it pertains to ITAs.

Departmental Manual 512 DM Chapter 2 – Departmental Responsibilities for Indian Trust Resources

This chapter of the manual, effective December 1, 1995, establishes the policies, responsibilities, and procedures for operating on a government-to-government basis with federally recognized Indian tribes for the identification, conservation, and protection of American Indian and Alaska Native trust resources to ensure the fulfillment of the federal Indian Trust responsibility.

Indian Policy of the Bureau of Reclamation

Under the Indian Policy, Reclamation will comply with federal laws and policies relating to Indians; acknowledge and affirm the relationship between the U.S. and federally recognized Indian Tribes; and actively seek partnerships with Indian Tribes to ensure that the tribes have the opportunity to participate fully in the Reclamation program as they develop and manage their water and other related resources.

Bureau of Reclamation Protocol Guidelines: Consulting with Indian Tribal Governments

The document provides guidance on the protocol for conducting consultation and maintaining government-to-government relationships with Indian tribes.

Bureau of Reclamation Indian Trust Asset Policy and Guidance – 1993

This policy was signed by the Commissioner on July 2, 1993 and was incorporated in the Reclamation's environmental directives on October 1, 1993. The policy is intended to protect ITAs from adverse impacts of the Reclamation's programs and actions, and to help Reclamation assess and mitigate impacts to ITAs. The policy states that Reclamation shall carry out its activities in a manner that avoids adverse impacts, and in the case of adverse effects, mitigation or compensation shall be provided. To carry out this policy, Reclamation modified its NEPA Handbook compliance procedures to require evaluation of potential effects of proposed actions on trust assets.

State

The State of California implements the NHPA through its statewide comprehensive cultural resource surveys and preservation programs. The California Office of Historic Preservation (OHP), as an office of the California Department of Parks and Recreation, implements the policies of the NHPA on a statewide level. The OHP also maintains the California Historical Resources Inventory. The State Historic Preservation Officer is an appointed official who implements historic preservation programs within the state's jurisdictions.

Local

The local general plans, polices, and regulations that govern cultural resources within the affected jurisdictions are defined in Appendix 3.12 of this EIR/EIS.

3.12.3 Environmental Consequences/Impacts

Significance Criteria under NHPA

Section 106 of the NHPA requires that a federal agency with direct or indirect jurisdiction over a proposed federal or federally-assisted undertaking, or issuing licenses or permits, must consider the effect of the proposed undertaking on historic properties. An historic site or property may include a prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register maintained by the U.S. Secretary of the Interior. If an undertaking may have an adverse effect, the first step is to identify the APE and the historic or cultural resources within the APE.

A significant impact would occur if a proposed action results in an adverse effect to a property that is listed in or eligible for inclusion in the National Register. The specific Criteria of Effect and Adverse Effect, as defined in 36 CFR 800.9, used to evaluate an undertaking's effect on a historic property, are as follows:

- An undertaking has an effect on a historic property when it may alter the characteristics of the property that qualify the property for inclusion in the National Register. For the purpose of determining effect, alteration to features of the property's location, setting, or use may be relevant depending on a property's significant characteristics and should be considered.

- An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Adverse effects on historic properties include, but are not limited to:

  (1) Physical destruction, damage, or alteration of all or part of the property;

  (2) Isolation of the property from or alteration of the character of the property's setting when that character contributes to the property's qualification for the National Register;

  (3) Introduction of visual, audible, or atmospheric elements that are out of character with the property or alter its setting;

  (4) Neglect of a property resulting in its deterioration or destruction; and

  (5) Transfer, lease, or sale of the property.

Significance Criteria under CEQA

Based on the Appendix G of the CEQA Guidelines, project implementation would have significant impacts and environmental consequences on cultural resources if it would result in any of the following:

- A substantial adverse change in the significance of a historical resource that is either listed or eligible for listing on the National Register of Historic Places, the California Register of Historic Resources, or a local register of historic resources;

- A substantial adverse change in the significance of a unique archaeological resource;

- Disturbance or destruction of a unique paleontological resource or site or unique geologic feature; or

- Disturbance of any human remains, including those interred outside or formal cemeteries.

Impact 3.12.1: Impact to Cultural Resources/Archaeological Sites. Project construction could affect existing cultural resources or uncover unknown and/or buried archaeological materials in areas of high prehistoric archaeological sensitivity. (Less than Significant with Mitigation)

While no archaeological sites were located in the APE, the archaeological investigation indicates that certain areas are sensitive for buried prehistoric archaeological resources that may be considered significant resources. Project construction would involve excavation activities that could inadvertently uncover and affect existing cultural resources and/or archaeological materials, which could be a significant impact. Implementation of **Mitigation Measures 3.12.1** and **3.12.2** would reduce the impact to less-than-significant levels.

Construction activities could require staging areas at locations that may have the potential to contain cultural resources. This impact would be minimized by implementation of **Mitigation Measure 3.12.3** and would be applicable to all member agencies, and therefore not discussed further.

No Project Alternative

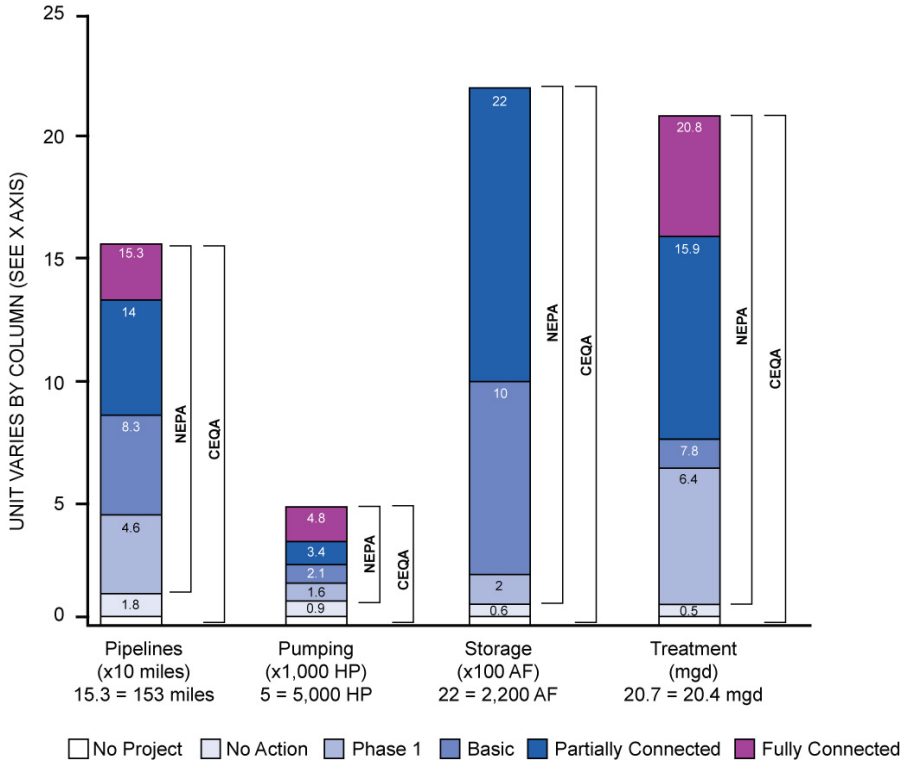
The NBWRP would not be implemented under the No Project Alternative, therefore no impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.12-1, No Action**).

CHART 3.12-1
COMPARISON OF NEPA AND CEQA BASELINES FOR PROPOSED FACILITIES, BY ALTERNATIVE



SOURCE: CDM, 2009

Under future baseline (2020) conditions, cultural resources within the region are anticipated to remain unchanged. A discussion of individual Member Agencies is provided below.

Archaeologists and ethnographers have documented that the action area was intensively occupied by Native American groups. Coast Miwok, Wappo, and Patwin settlements focused on bays and estuaries, near perennial interior watercourses and springs, at the confluence of watercourses, along midslope terraces, and along ridgelines. The greater area incorporates all of these elements and was, therefore, a highly favored location for prehistoric populations.

Historic-period cultural resources have also been recorded throughout the action area for the three alternatives. Presence of a number of historic-period buildings, structures, and archaeological sites indicates intensive use and occupation throughout the historic period, which is reflected in material remains, both archaeological sites and the built environment. Project construction could have a significant effect to such existing cultural and archaeological sites. The impact would be reduced to less-than-significant levels by implementation of **Mitigation Measure 3.12.4**.

When specific plans are available for each phase of program-level activity, a project-level cultural resources review should be prepared. It is important to consult with the appropriate Native American representatives during the early phases of project planning. A discussion of potential impacts by Member Agency is provided below.

LGVSD/NMWD

There would be no project facilities constructed under the No Action Alternative, therefore no impacts on cultural resources would occur.

Novato SD/NMWD

Under the No Action Alternative, project construction could affect existing sites in the archaeologically sensitive area along Hill Road and Olive Street. This could be a significant impact, which would be reduced by implementation of **Mitigation Measures 3.12.1**, **3.12.2**, and **3.12.3**.

SVCSD

Project construction associated with Alignment 1A of the Sonoma Valley Recycled Water Project could affect the sites by Fowler Creek. There are two additional prehistoric sites located within the ASA in the vicinity; therefore the area could be sensitive for prehistoric resources. The impact to potential prehistoric resources could be significant. Implementation of **Mitigation Measures 3.12.1**, **3.12.2**, and **3.12.3** would reduce impacts to less than significant.

Under the Napa Salt Marsh Restoration Project, the Option A salt pond pipeline was discussed and analyzed in the Napa River Salt Marsh Restoration Project EIR/EIS (JSA, 2003). Construction activities associated with Options B and C could affect any cultural resources located close to Buchlis Station Road (as discussed in Setting above). The impacts however would be minimized through implementation of **Mitigation Measures 3.12.1**, **3.12.2**, and **3.12.3.**

Napa SD

There would be no project facilities constructed under the No Action Alternative, therefore no impacts on cultural resources would occur.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 horsepower (HP) of pumping capacity, treatment facilities providing 6.4 million gallons per day (mgd) of tertiary capacity, and 65 acre-feet (AF) of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts to cultural resources and archeological sites under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD

Under Phase 1, project construction in the LGVSD area could affect the sites in the archaeologically sensitive area around **P-21-000174.** The geologic map indicates that the area was historically on a rise surrounded by Holocene alluvial fan deposits overlaying tidal marsh and basins. The general location is sensitive for prehistoric archaeological resources and the project could potentially impact unknown and/or buried portions of this site. Implementation of **Mitigation Measures 3.12.1**, **3.12.2**, and **3.12.3** would reduce impacts to less-than-significant.

Novato SD/NMWD

P-21-000551 was not relocated during the current survey effort. The most recent site record on file at the NWIC indicates that the site may extend below the pavement into San Marin Drive, although no evidence for this was found suring the survey effort. The general area should be considered sensitive for prehistoric archaeological resources. Implementation of Mitigation **Measures 3.12.1**, **3.12.2**, and **3.12.3** would reduce impacts to less-than-significant.

The **Olive/H Street corridor** includes sites **P-21-000201, P-21-000216, P-21-000298, P-21-000376, and P-21-000377**. Historically, the Olive Street alignment was located along the edge of marshland and portions of the street are constructed on artificial fill overlaid on Bay Mud. The depth of artificial fill is not known. However, given the high sensitivity of the remaining portions of Olive Street and H Street the general area should be considered sensitive for prehistoric resources. Implementation of **Mitigation Measures 3.12.1**, **3.12.2**, and **3.12.3** would reduce impacts to less-than-significant.

No indicators of **P-21-000026** were located within the APE of the NBWRP, however the general area should be considered sensitive for prehistoric archaeological resources. Implementation of **Mitigation Measures 3.12.1**, **3.12.2**, and **3.12.3** would reduce impacts to less-than-significant.

SVCSD

The alignment that would extend through downtown Sonoma would lie just south of Lachryma Montis and along the northern and western boundaries of the Historic Park. Given the history of the area, it is possible that features, artifacts, and other subsurface deposits exist that could yield important information regarding California's history. Sonoma had a sizable Native American population during the Spanish and Mexican periods; the whereabouts of the residential area associated with this population is not known. No evidence of **P-49-000345** was found in the APE. During the subsequent survey effort in September 2008 surface evidence of **P-49-000130** was located approximately 700 feet north of the APE. There is no indication that the site extends into the APE. However, the general vicinity is sensitive for prehistoric cultural resources. The general area should be considered sensitive for prehistoric archaeological resources. Implementation of **Mitigation Measures 3.12.1**, **3.12.2**, and **3.12.3** would reduce impacts to less than significant.

Pipeline installation along Arroyo Seco has a potential to encounter intact archaeological deposits. One archaeological site, **P-49-002054**, has been recorded within the APE of this pipeline segment. Subsequent survey efforts have failed to relocate this site. **P-49-003299** and **P-49-001399** are also located in this vicinity. The proximity of the pipeline to the Arroyo Seco waterway increases the potential for archaeological deposits in this area and pedestrian survey methods could not be satisfactorily completed in areas highly vegetated or areas with limited surface visibility. The general area should be considered sensitive for archaeological resources. Therefore, the implementation of **Mitigation Measures 3.12.1**, **3.12.2**, and **3.12.3** would reduce impacts to less-than-significant.

Pipeline installation in the vicinity of Fowler Creek has a potential to encounter intact archaeological deposits. There are no surface indicators that **P-49-001693** extends into the APE. Surface survey also did not find evidence of **P-49-001042**. There are two additional prehistoric sites located within the ASA in this vicinity and the area should be considered sensitive for prehistoric resources. The general area should be considered sensitive for archaeological resources. Therefore, the implementation of **Mitigation Measures 3.12.1**, **3.12.2**, and **3.12.3** would reduce impacts to less-than-significant.

Under Phase 1, impacts related to the Napa Salt Marsh Restoration Project would be equivalent to those under the No Action Alternative.

Napa SD

P-28-000622 could not be relocated during the current survey effort. Since its recording, the Murphy Creek Bridge has been replaced, the road has been widened, and the adjacent driveway has been repaved. The area should be considered sensitive for archaeological resources. Therefore, implementation of **Mitigation Measures 3.12.1**, **3.12.2**, and **3.12.3** would reduce impacts to less-than-significant.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary

capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts to cultural resources and archeological sites under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to cultural resources and archeological sites under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to cultural resources and archeological sites under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative.

Mitigation Measures

Mitigation Measure 3.12.1: The appropriate Member Agency will incorporate the following measures:

Mitigation Measure 3.12.1a: Prepare a Cultural Resources Monitoring Plan. Prior to authorization to proceed, or issuance of permits, the applicant shall prepare and submit a cultural resources monitoring plan to the appropriate jurisdiction for review and approval. Monitoring shall be required for all surface alteration and subsurface excavation work including trenching, boring, grading, use of staging areas and access roads, and driving vehicles and equipment within all areas delineated as sensitive for cultural resources. A qualified professional archaeologist (cultural resources monitor) that is approved by each Member Agency in consultation with all affected jurisdictions shall prepare the plan. The plan shall address (but not be limited to) the following issues:

- Training program for all construction and field workers involved in site disturbance;

- Person(s) responsible for conducting monitoring activities, including Native American monitors;
- How the monitoring shall be conducted and the required format and content of monitoring reports, including any necessary archaeological re-survey of the final pipeline alignment (including the need to conduct shovel-test units or auger samples to identify deposits in advance of construction), assessment, designation and mapping of the sensitive cultural resource areas on final project maps, assessment and survey of any previously unsurveyed areas;
- Person(s) responsible for overseeing and directing the monitors;
- Schedule for submittal of monitoring reports and person(s) responsible for review and approval of monitoring reports;
- Procedures and construction methods to avoid sensitive cultural resource areas (i.e. boring conduit underneath recorded or discovered cultural resource site);
- Clear delineation and fencing of sensitive cultural resource areas requiring monitoring;
- Physical monitoring boundaries (e.g., 200-foot radius of a known site);
- Protocol for notifications in case of encountering of cultural resources, as well as methods of dealing with the encountered resources (e.g., collection, identification, curation);
- Methods to ensure security of cultural resources sites;
- Protocol for notifying local authorities (i.e. Sheriff, Police) should site looting and other illegal activities occur during construction.

Mitigation Measure 3.12.1b: Archaeological and Native American Monitoring. If an intact archaeological deposit is encountered, all soil disturbing activities in the vicinity of the deposit shall cease until the deposit is evaluated. The appropriate Member Agency, as necessary, shall retain the services of a Native American monitor and a qualified archaeological consultant that has expertise in California prehistory to monitor ground-disturbing within areas designated as being sensitive for buried cultural resources. The archaeological monitor shall immediately notify the appropriate Member Agency of the encountered archaeological deposit. The monitors shall, after making a reasonable effort to assess the identity, integrity, and significance of the encountered archaeological deposit, present the findings of this assessment to NBWRA and the appropriate Member Agency. During the course of the monitoring, the archaeologist may adjust the frequency—from continuous to intermittent—of the monitoring based on the conditions and professional judgment regarding the potential to impact resources.

If a Member Agency, in consultation with the monitors, determines that a significant archaeological resource is present within their jurisdiction and that the resource could be adversely affected by the NBWRP, the Member Agency shall:

- Re-design the NBWRP to avoid any adverse effect on the significant archaeological resource; *or*,

- Implement an archaeological data recovery program (ADRP) (unless the archaeologist determines that the archaeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible). If the circumstances warrant an archaeological data recovery program, an ADRP shall be conducted. The project archaeologist and the Member Agency shall meet and consult to determine the scope of the ADRP. The archaeologist shall prepare a draft ADRP that shall be submitted to the appropriate Member Agency for review and approval. The ADRP shall identify how the proposed data recovery program would preserve the significant information the archaeological resource is expected to contain. The ADRP shall identify the scientific/historic research questions applicable to the expected resource, the data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, shall be limited to the portions of the historic property that could be adversely affected by the NBWRP. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.

Mitigation Measure 3.12.1c: Cultural Resources Assessment for Staging Areas. When locations for staging are defined the areas of potential effect should be subject to a cultural resources investigation that includes, at a minimum:

- An updated records search at the Northwest Information Center;
- An intensive survey of all areas within the lots;
- A report disseminating the results of this research; and,
- Recommendations for additional cultural resources work necessary to mitigate any adverse impacts to recorded and/or undiscovered cultural resources.

Mitigation Measure 3.12.1d: Inadvertent Discoveries. If discovery is made of items of historical or archaeological interest, the contractor shall immediately cease all work activities in the area (within approximately 100 feet) of discovery. 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, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse. After cessation of excavation the contractor shall immediately contact the NBWRA and appropriate Member Agency. The contractor shall not resume work until authorization is received from the appropriate Member Agency.

- In the event of unanticipated discovery of archaeological indicators during construction, the Member Agency shall retain the services of a qualified professional archaeologist to evaluate the significance of the items prior to resuming any activities that could impact the site.
- In the case of an unanticipated archaeological discovery, if it is determined that the find is unique under NHPA and/or potentially eligible for listing in the National Register, and the site cannot be avoided, appropriate Member Agency shall provide a research design and excavation plan, prepared by an archaeologist, outlining recovery

of the resource, analysis, and reporting of the find. The research design and excavation plan shall be submitted to NBWRA and appropriate Member Agency and approved by the appropriate Member Agency prior to construction being resumed.

Mitigation Measure 3.12.1e: Project-level Cultural Resources Assessment. When project-level plans are completed for the Basic System; the Partially Connected System; and the Fully Connected System, NBWRA the appropriate Member Agency will conduct a cultural resources investigation for the APE that includes, at a minimum:

- An updated records search at the NWIC;
- An intensive cultural resources survey of the APE;
- A report disseminating the results of this research; and,
- Recommendations for additional cultural resources work necessary to mitigate any adverse impacts to recorded and/or undiscovered cultural resources.

Significance after Mitigation: Less than Significant.

Impact 3.12.2: Discovery of Human Remains. Project construction could result in damage to previously unidentified human remains. (Less than Significant with Mitigation)

Based on background research, there is no indication that any particular site in the APE has been used for human burial purposes in the recent or distant past. Therefore, it is unlikely that human remains would be encountered during construction of the NBWRP. However, in the unlikely event that human remains were discovered during project construction, including those interred outside of formal cemeteries, the human remains could be inadvertently damaged, which could be a significant impact. However, this impact would be minimized by implementation of **Mitigation Measure 3.12.5**.

No Project Alternative

The NBWRP would not be implemented under the No Project Alternative, therefore no impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity,

and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.12-1, No Action**).

Under future baseline (2020) conditions, cultural resources within the region are anticipated to remain unchanged. A discussion of individual Member Agencies is provided below.

LGVSD/NMWD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Novato SD/NMWD and SVCSD

Impacts associated with some portions of recycled water projects that would be constructed under the No Action Alternative would be similar to those discussed above. The impacts would apply to Novato SD and SVCSD.

Napa SD

There would be no project facilities constructed under the No Action Alternative, therefore no impact would occur.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts related to discovery of human remains under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below.

LGVSD/NMWD, Novato SD/NMWD, SVCSD, Napa SD

The impacts from construction of the Phase 1 components would be similar to those discussed above under the No Action Alternative, in addition to the impacts associated with the additional components under Phase 1.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts related to discovery of human remains under the Basic System would be equivalent to and greater than the impacts discussed above under the No Action Alternative and Phase 1, in proportion to the facilities constructed under this alternative. Implementation of Mitigation **Measure 3.12.5** would reduce the potential impact to less-than-significant level.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts related to discovery of human remains under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative. Implementation of **Mitigation Measure 3.12.5** would reduce the potential impact to less-than-significant level.

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts related to discovery of human remains under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative. A discussion of impacts by Member Agency is provided below. Implementation of **Mitigation Measure 3.12.5** would reduce the potential impact to less-than-significant level.

Mitigation Measure

> **Mitigation Measure 3.12.2: Discovery of Human Remains.** If potential human remains are encountered, the appropriate Member Agency shall halt work in the vicinity of the find and contact the county coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the coroner determines the remains are Native American, the coroner shall contact the NAHC. As provided in Public Resources Code Section 5097.98, the NAHC shall identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent makes recommendations for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.

Significance after Mitigation: Less than Significant.

Impact 3.12.3: Impact to historic architectural resources. The NBWRP has the potential to impact the setting of historic architectural resources. (No Impact)

The NBWRP has the potential to impact historic architectural resources located in the action area. Trenching and backfill operations during construction could have indirect impacts to the historic resources due to ground disturbance, however the disturbance would be temporary and the construction sites would be restored to pre-project conditions after construction. In addition, the area of direct impact would be confined to the construction site (e.g., parallel to exposed tracks and rails without disturbing the remaining features of the railroad under Napa SD project). The NBWRP would not alter or demolish existing historic structures or buildings. Therefore no impact is expected.

No Project Alternative

The NBWRP would not be implemented under the No Project Alternative, therefore no impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity, and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see Chart 3.12-1, No Action and **Table 3.12-3**).

TABLE 3.12-3
HISTORIC ARCHITECTURAL RESOURCES IN THE ACTION AREA

Recycled Water Action areas		Cultural Resources				
		No Action Alternative	**Phase 1**	**Alternative 1: Basic System**	**Alternative 2: Partially Connected System**	**Alternative 3: Fully Connected System**
LGVSD	NMWD URWP (South)	-	Hamilton Field Enlisted Barracks and Hangars			
SVCSD	Central Sonoma Valley	Sonoma Plaza/ Broadway Historic District	-	-	-	Sonoma Plaza/ Broadway Historic District
	Napa Salt Marsh	-	Sonoma Valley Railroad			
Napa SD	MST	-	Coombsville Road Bridges 1 and 2, Hagen Road Bridge, and Loma Heights Road Bridge			
	Napa (local)	-	-	-	Napa State Hospital	

Under future baseline (2020) conditions, cultural resources within the region are anticipated to remain unchanged. A discussion of individual Member Agencies is provided below.

Proposed construction would occur within existing public rights-of-way and would avoid direct impacts to historic architectural resources. Table 3.12-3 lists the historic architectural resources in the individual member agencies.

Phase 1 (Project level)

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The impacts to historic architectural resources under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative (see Table 3.12-3). A discussion of impacts by Member Agency is provided below.

Alternative 1: Basic System (Program level)

Compared to the CEQA Baseline, the Basic System projects would provide 83 miles of new pipeline, 2,158 HP of pumping capacity, treatment facilities providing 7.8 mgd of tertiary capacity, and 1,020 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Basic System would provide 65 miles of new pipeline, 1,246 HP of pumping capacity, treatment facilities providing 7.3 mgd of tertiary capacity, and 955 AF of storage.

The impacts to historic architectural resources under the Basic System would be equivalent to and greater than the impacts discussed for Phase 1, in proportion to the facilities constructed under this alternative (see Table 3.12-3).

Proposed construction would occur within existing public rights-of-way and would avoid direct impacts to historic architectural resources (see Table 3.12-3). Trenching and backfill operations during construction could have indirect impacts to the historic resources due to ground disturbance, however the disturbance would be temporary and the construction sites would be restored to pre-project conditions after construction. In addition, the area of direct impact would be confined to the construction site (e.g., parallel to exposed tracks and rails without disturbing the remaining features of the railroad under Napa SD project). The NBWRP would not alter or demolish existing historic structures or buildings. Therefore no impact is expected.

Alternative 2: Partially Connected System (Program level)

Compared to the CEQA Baseline, the Partially Connected System would provide 139 miles of new pipeline, 3,454 HP of pumping capacity, treatment facilities providing 15.9 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the

Partially Connected System would provide 122 miles of new pipeline, 2, 542 HP of pumping capacity, treatment facilities providing 15.4 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to historic architectural resources under the Partially Connected System would be equivalent to and greater than the impacts discussed for the Basic System, in proportion to the facilities constructed under this alternative (see Table 3.12-3).

Alternative 3: Fully Connected System (Program level)

Compared to the CEQA Baseline, the Fully Connected System would provide 153 miles of new pipeline, 5,021 HP of pumping capacity, treatment facilities providing 20.8 mgd of tertiary capacity, and 2,220 AF of storage. Compared to the No Action Alternative (NEPA Baseline), the Fully Connected System would provide 135 miles of new pipeline, 3, 907 HP of pumping capacity, treatment facilities providing 20.3 mgd of tertiary capacity, and 2,155 AF of storage.

The impacts to historic architectural resources under the Fully Connected System would be equivalent to and greater than the impacts discussed for the Partially Connected System, in proportion to the facilities constructed under this alternative (see Table 3.12-3).

Impact 3.12.4: Ground-borne vibration. Ground-borne vibration from construction activities could damage historic architectural resources. (Less than Significant)

Use of heavy equipment (e.g., a large bulldozer) typically generates vibration levels of 0.031 peak particle velocity at a distance of 50 feet. Since the potential building damage threshold of 0.5PPV is not exceeded, there will likely be no impact to historic architectural resources. Historic architectural resources located in the vicinity of the proposed construction activities may be structurally fragile and could be damaged by ground-borne construction vibration by cracks on exterior masonry or stucco or foundation settling. This impact would apply only to SVCSD under Phase 1, and, therefore is not discussed for the other Member Agencies.

No Project Alternative

The NBWRP would not be implemented under the No Project Alternative, therefore no impact would occur. For a discussion of the No Project under future conditions, see No Action Alternative below.

No Action Alternative

Under the No Action Alternative, which includes consideration of future conditions, it is likely that a subset of water recycling projects would be implemented by the Member Agencies on an individual basis, without the benefit of regional coordination or federal funding.

For comparison to the Action Alternatives, it is estimated that approximately 17.5 miles of new pipeline, 912 HP of pumping capacity, treatment facilities providing 0.5 mgd of tertiary capacity,

and approximately 65 AF of storage would be constructed by Member Agencies on an individual basis (see **Chart 3.12-1, No Action**).

Under future baseline (2020) conditions, cultural resources within the region are anticipated to remain unchanged. A discussion of individual Member Agencies is provided below.

Historic architectural resources would be located within 50 feet of construction activities of the SVRWP Alignment 1. Structures especially at risk would be those within the Sonoma Plaza/Broadway Historic District. However, at peak construction vibration levels of 0.031 at these sites, construction activities would not exceed the potential building damage threshold of 0.5 PPV. No physical damage to historic structures, such, is anticipated. Therefore, vibration from the ground-borne construction would have a less-than-significant impact on historic architectural resources.

Phase 1

Compared to the CEQA Baseline, Phase 1 projects would provide 46 miles of new pipeline, 1,655 HP of pumping capacity, treatment facilities providing 6.4 mgd of tertiary capacity, and 65 AF of storage. Compared to the No Action Alternative (NEPA Baseline), Phase 1 projects would provide 28 miles of new pipeline, 743 HP of pumping capacity, treatment facilities providing 5.9 mgd of tertiary capacity, and no additional storage.

The ground-borne vibration impacts to historic architectural resources under Phase 1 would be equivalent to and greater than the impacts discussed for the No Action Alternative, in proportion to the facilities constructed under this alternative.

SVCSD

Historic architectural resources would be located within 50 feet of construction activities of the SVRWP Alignment 2. Refer to the discussion above under No Action Alternative.

3.12.4 Impact Summary by Service Area

Table 3.12-4 provides a summary of potential cultural resources impacts associated with implementation of the NBWRP.

TABLE 3.12-4
POTENTIAL IMPACTS AND SIGNIFICANCE – CULTURAL RESOURCES

Proposed Action	Impact by Member Agency Service Areas			
	LGVSD/ NMWD	Novato SD/ NMWD	SVCSD	Napa SD/ Napa County
Impact 3.12.1: Impacts to Cultural/Archaeological Sites.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	LSM	LSM	NI
Phase 1	LSM	LSM	LSM	LSM
Alternative 1: Basic System	LSM	LSM	LSM	LSM
Alternative 2: Partially Connected System	LSM	LSM	LSM	LSM
Alternative 3: Fully Connected System	LSM	LSM	LSM	LSM
Impact 3.12.2: Discovery of Human Remains.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	LSM	LSM	NI
Phase 1	LSM	LSM	LSM	LSM
Alternative 1: Basic System	LSM	LSM	LSM	LSM
Alternative 2: Partially Connected System	LSM	LSM	LSM	LSM
Alternative 3: Fully Connected System	LSM	LSM	LSM	LSM
Impact 3.12.3: Impacts to the setting of historic architectural resources.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	NI	NI
Phase 1	NI	NI	NI	NI
Alternative 1: Basic System	NI	NI	NI	NI
Alternative 2: Partially Connected System	NI	NI	NI	NI
Alternative 3: Fully Connected System	NI	NI	NI	NI
Impact 3.12.4: Ground-borne vibration.				
No Project Alternative	NI	NI	NI	NI
No Action Alternative	NI	NI	LSM	NI
Phase 1	NI	NI	LSM	NI
Alternative 1: Basic System	NI	NI	LSM	NI
Alternative 2: Partially Connected System	NI	NI	LSM	NI
Alternative 3: Fully Connected System	NI	NI	LSM	NI

NI = No Impact
LTS = Less than Significant impact
LSM = Less than Significant with Mitigation
BI= Beneficial Impact

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