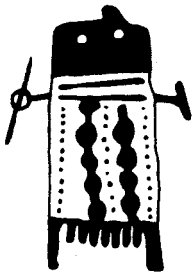
APPENDIX C

ARCHAEOLOGICAL ASSESSMENT/TECHNICAL REPORT



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(Revised)

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RE: Archaeological Assessment/Test Trenching of 323 ± Acre Parcel Associated with Expansion of Yolo County Central Landfill Borrow Site, Woodland, Yolo County (APN 042-100-017 and APN 042-100-018)

Dear Mr. Abelli-Amen,

Please let this letter stand as Basin Research Associates' *Archaeological Assessment Report* for the above project. This letter report provides the results of a records search conducted by the California Historical Resources Information System, Northwest Information Center (CHRIS/NWIC), Sonoma State University, Rohnert Park; a limited literature review; contacting the Native American Heritage Commission for search of the *Sacred Lands Inventory*; a field review; focused backhoe testing of selected areas of the borrow site; and a short management summary with recommendations.

The intent of the research and field study was to determine if significant cultural resources under the California Environmental Quality Act (CEQA) may be affected by the proposed project. The information obtained on their location, type and distribution will be used to develop future mitigative actions.

PROJECT LOCATION AND DESCRIPTION

The 323-acre project site is located at to 43890 County Road 28H, Woodland. The project site is approximately 3.4 miles south/southeast of the City of Woodland and approximately 1.3 miles north/northeast of the City of Davis, and east/northeast of West Sacramento in southeastern Yolo County. The 323-acre project site consists of a 298-acre parcel (APN 042-100-017) and 25-acre parcel (APN 042-100-018) located adjacent to, and west of, the Yolo County Central Landfill (YCCL). The project site is generally bounded by County Road 104 and the existing YCCL to the east, County Road 29 and the Willow Slough Bypass to the south, and agricultural operations to the west and north. Roads in the study area generally parallel cadastral section lines and run parallel to the slough (USGS Davis, CA. 1992; E 1/2 of Section 25 of T 9N, R 2E) [Figs. 1-3].

The County of Yolo Planning, Public Works, and Environmental Services Department, Division of Integrated Waste Management, is proposing to develop a 243-acre soil borrow site on the northern portion of the 298-acre parcel (APN 042-100-017). The YCCL needs a steady supply of soil to support a variety of operations, including daily and intermediate cover, final closure of individual landfill modules, and construction of new modules. These activities are generally required to ensure continued compliance with state requirements. In the past, this soil has been acquired from a variety of sources, including on-site and off-sites soil borrow areas (where native soil materials are excavated and trucked to where it is needed within the YCCL). This project is proposed to provide a new source of soil for the YCCL.

The proposed project would excavate and transport soil to the YCCL to support ongoing landfill operations. Typical YCCL needs for daily and intermediate cover range from approximately 50,000 to 100,000 cubic yards per year. During periods when YCCL modules are being constructed or old ones are being closed (generally once every 3 to 4 years), about an additional 200,000 cubic yards of soil are required over the course of 1 to 3 months. Therefore, the maximum estimated excavation and transport of soil material from the borrow site to the YCCL would be 300,000 cubic yards per year (equal to approximately 8 to 10 acres each year). It is estimated that typical daily excavation and transportation rates would range from 150 to 500 cubic yards per day, but could be as much as 3,000 cubic yards per day. Soil excavation and transportation activities would occur primarily during the dry months. The project site would be excavated to a total depth of approximately 12 to 20 feet (Baseline Environmental Consulting 2014).

AREA OF POTENTIAL EFFECTS (APE)

The Area of Potential Effects (APE) includes all areas where direct or indirect impacts may occur within the project site. The APE is currently agricultural or fallow.

REGULATORY CONTEXT

The regulatory framework that mandates consideration of cultural resources in project planning includes federal, state, and local requirements. Cultural resources include prehistoric and historic archaeological sites, districts, and objects; standing historic structures, buildings, districts, and objects; and locations of important historic events or sites of traditional and/or cultural importance to various groups. Cultural resources may be determined significant or potentially significant in terms of national, state, or local criteria either individually or in combination. Resource evaluation criteria are determined by the compliance requirements of a specific project.

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The California Environmental Quality Act requires a review to determine if the project will have a significant effect on archaeological sites or properties of historic or cultural significance to a community or ethnic group eligible for inclusion in the California Register of Historic Resources. The California Register of Historical Resources C(Public Resources Code Section 5024.1) is a listing of those properties that are to be protected from substantial adverse change, and it includes properties that are listed, or have been formally determined to be eligible for listing in, the National Register of Historic Places, State Historical Landmarks, and eligible

Points of Historical Interest. A historical resource may be listed in the California Register of Historical Resources if it meets one or more of the following criteria:

- it is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
- it is associated with the lives of persons important to local, California, or national history;
- it embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values; or,
- it has yielded or has the potential to yield information important in the prehistory or history of the local area, California, or the nation.

Historical Resources

Public Resources Code Section 21084.1 stipulates that any resource listed in, or eligible for listing in, the California Register of Historical Resources is presumed to be historically or culturally significant. Resources listed in a local historic register or deemed significant in a historical resource survey (as provided under Public Resources Code Section 5024.1g) are presumed historically or culturally significant unless the preponderance of evidence demonstrates they are not. A resource that is not listed in or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register or historic resources, or not deemed significant in a historical resource survey may nonetheless be historically significant (Public Resources Code Section 21084.1). This provision is intended to give the Lead Agency discretion to determine that a resource of historic significance exists where none had been identified before and to apply the requirements of Public Resources Code Section 21084.1 to properties that have not previously been formally recognized as historic.

The California Environmental Quality Act equates a substantial adverse change in the significance of a historical resource with a significant effect on the environment (Public Resources Code Section 21084.1) and defines substantial adverse change as demolition, destruction, relocation, or alteration that would impair historical significance (Public Resources Code Section 5020.1).

Archaeological Resources

Where a project may adversely affect a unique archaeological resource, Public Resources Code Section 21083.2 requires the Lead Agency to treat that effect as a significant environmental effect. When an archaeological resource is listed in or is eligible to be listed in the California Register of Historical Resources, Public Resources Code Section 21084.1 requires that any substantial adverse effect to that resource be considered a significant environmental effect. Public Resources Code Sections 21083.2 and 21084.1 operate independently to ensure that potential effects on archaeological resources are considered as part of a project's environmental analysis. Either of these benchmarks may indicate that a project may have a potential adverse effect on archaeological resources.

Other California Laws and Regulations

Other state-level requirements for cultural resources management appear in the California Public Resources Code Chapter 1.7, Section 5097.5 "Archaeological, Paleontological, and Historical

Sites," and Chapter 1.75 beginning at Section 5097.9 "Native American Historical, Cultural, and Sacred Sites" for lands owned by the state or a state agency.

The disposition of Native American burials is governed by Section 7050.5 of the California Health and Safety Code and sections 5097.94 and 5097.98 of the Public Resources Code, and falls within the jurisdiction of the Native American Heritage Commission.

YOLO COUNTY

Yolo County Code, Title 8, Chapter 8

Title 8, Chapter 8 of the Yolo County Code (the Zoning Code) addresses the treatment of local historic landmarks and historic districts. This chapter of the County code is overseen by the Historic Resources Commission and provides for the identification, protection, enhancement, perpetuation, and use of cultural resources within the County that reflect elements of its cultural, agricultural, social economic, political, aesthetic, military, maritime, engineering, archaeological, religious, ethnic, natural, architectural and other heritage.

A building, structure, object, particular place, vegetation, or geology, may be designated a County historic landmark if it meets one or more of the following criteria:

(1) It exemplifies or reflects valued elements of the County's cultural, agricultural, social, economic, political, aesthetic, military, religious, ethnic, natural vegetation, architectural, maritime, engineering, archaeological, or geological history; or,

(2) It is identified with persons or events important in local, State, or national history; or,

(3) It reflects significant geographical patterns, including those associated with different eras of settlement and growth and particular transportation modes; or,

(4) It embodies distinguishing characteristics or an architectural style, type, period, or method of construction or is a valuable example of the use of indigenous materials or craftsmanship; or

(5) It is representative of the notable work of a builder, designer or architect; or,

(6) It represents an important natural feature or design element that provides a visual point of reference to members of the community.

Yolo County 2030 Countywide General Plan

Conservation and Open Space Element Policies- Cultural Resources

The 2030 Countywide General Plan contains the following goal, and several relevant policies and implementing actions, related to cultural resources.

Goal CO-4 Cultural Resources. Preserve and protect cultural resources within the County.

Policy CO-4.1: Identify and safeguard important cultural resources.

Policy CO-4.2: Implement the provisions of the State Historical Building Code and Uniform Code for Building Conservation to balance the requirements of the Americans

with Disabilities Act with preserving the architectural integrity of historic buildings and structures.

Policy CO-4.4: Encourage historic resources to remain in their original use whenever possible. The adaptive use of historic resources is preferred when the original use can no longer be sustained. Older residences may be converted to office/retail use in commercial areas and to tourist use in agricultural areas, so long as their historical authenticity is maintained or enhanced.

Policy CO-4.9: Promote the use of historic structures as museums, educational facilities, or other visitor serving uses.

Policy CO-4.10: Encourage voluntary landowner efforts to protect cultural resources consistent with State law.

Policy CO-4.11: Honor and respect local tribal heritage.

Policy CO-4.12: Work with culturally affiliated tribes to identify and appropriately address cultural resources and tribal sacred sites through the development review process.

Policy CO-4.13: Avoid or mitigate to the maximum extent feasible the impacts of development on Native American archaeological and cultural resources.

- ***Action CO-A64***: Require that discretionary projects which involve earth disturbing activities on previously undisturbed soils in an area determined to be archaeologically sensitive perform the following:

  (1) Enter into a cultural resources treatment agreement with the culturally affiliated tribe.

  (2) Retain a qualified archaeologist to evaluate the site if cultural resources are discovered during the project construction. The archaeologist will have the authority to stop and redirect grading activities, in consultation with the culturally affiliated tribe and their designated monitors, to evaluate the significance of any archaeological resources discovered on the property.

  (3) Consult with the culturally-affiliated tribe to determine the extent of impacts to archaeological resources and to create appropriate mitigation to address any impacts.

  (4) Arrange for the monitoring of earth disturbing activities by members of the culturally affiliated tribe, including all archaeological surveys, testing, and studies, to be compensated by the developer.

  (5) Implement the archaeologist's recommendations, subject to County approval.

  (6) Agree to relinquish ownership of all artifacts that are found on the project area to the culturally affiliated tribe for proper treatment and disposition. (Implements Policy CO-4.1, Policy CO-4.13).

- ***Action CO-A65***: Require that when cultural resources (including non-tribal archeological and paleontological artifacts, as well as human remains) are encountered during site preparation or construction, all work within the vicinity of the discovery is immediately halted and the area protected from further disturbance. The project applicant shall immediately notify the County Coroner and the Planning and Public Works Department.

Where human remains are determined to be Native American, the project applicant shall consult with the Native American Heritage Commission to determine the person most likely descended from the deceased. The applicant shall confer with the descendant to determine appropriate treatment for the human remains, consistent with State law (Policy CO-4.1, Policy CO-4.11, Policy CO-4.12, Policy CO-4.13).

- ***Action CO-A66***: Prohibit the removal of cultural resources from the project site except by a qualified consultant and after the County planning staff have been notified. Prehistoric resources include chert or obsidian flakes, projectile points, mortars, pestles, dark friable soil containing shell and bone dietary debris, heat-affected rock, or human burials. Historic resources include stone or adobe foundations and walls, structures and features with square nails, and refuse deposits often in old wells and privies (Policy CO-4.1, Policy CO-4.11).

  Action CO-A70: Refer draft environmental documents, including any studies and recommended mitigation measures, to the appropriate culturally-affiliated tribes for review and comment as part of the public review process (Policy CO-4.1, Policy CO-4.11, Policy CO-4.12).

METHODOLOGY

A prehistoric and historic site record and literature search was conducted by the California Historical Resources Information System, Northwest Information Center, Sonoma State University (CHRIS/NWIC File No. 13-1796 dated June 10, 2014 by Price). Limited reference material from the Bancroft Library, University of California at Berkeley and Basin Research Associates, San Leandro was also consulted for this letter report.

The literature review included a review of lists of various state and/or federal historically or architecturally significant structures, landmarks, or points of interest in/adjacent to the project area including the *Historic Properties Directory for Yolo County* (CAL/OHP 2012a) and the list of *California Historical Resources* (CAL/OHP 2014) with the most recent updates of the National Register of Historic Places; California Historical Landmarks; and, California Points of Historical Interest as well as other evaluations of properties reviewed by the State of California Office of Historic Preservation. Other sources consulted included: *California History Plan* (CAL/OHP 1973); *California Inventory of Historic Resources* (CAL/OHP 1976); *Five Views: An Ethnic Sites Survey for California* (CAL/OHP 1988); *Archeological Determinations of Eligibility for Yolo County* (CAL/OHP 2012b); *Historic Civil Engineering Landmarks of San Francisco and Northern California* (ASCE 1977); list of *Historic Civil Engineering Landmarks* (ASCE 2014); and, other lists and maps (see References Cited and Consulted).

The Native American Heritage Commission was contacted for a review of the Sacred Lands Files (Busby 2014) with negative results (Pilas-Treadway 2014). No other agencies, departments or local historical societies were contacted regarding landmarks, potential historic sites or structures.

An archaeological field survey of the project area was conducted by Ms. Johanna (Josie) Twigg (M.Sc.), an archaeologist meeting the standards of the Secretary of the Interior on June 10-11, 2014.

Focused mechanically assisted backhoe testing of 20 trenches to the immediate east of the recorded archaeological site within the current landfill was completed on November 10, 2014 at the request of the Yocha Dehe Wintun Nation and monitored by a representative of the tribe. The trenching was undertaken to determine if a buried sand ridge associated with the Native American burials from CA-YOL-171 to the east within the exiting landfill could be present within the proposed soil borrow area.

BACKGROUND CONTEXT

ENVIRONMENTAL SETTING

The project is within the Central Valley roughly 10 miles west of the Sacramento River. Summers are hot and winters moderate with an average rainfall of 17 inches during the winter and spring. The general area was formerly open grassland with scattered oak groves on a slightly sloping plain. The project and surrounding area have been mapped by the San Francisco Estuary Institute (SFEI) (2012) as within a wet meadow and seasonal wetland. The project area is within the interface between the erosional soils of the lower Coast Ranges and the alluvial deposits of the Tule marshes of the lower Sacramento River (see Derr 1991; Waechter 1993).

The proposed borrow area is between two major creeks, Cache Creek on the north and Putah Creek on the south, which flow into the Sacramento River. The South Fork of Putah Creek, the nearest unchannelized water course is about five miles south of the proposed project, just south of present-day City of Davis.

The South Fork of Willow Creek, the closest creek to the project area, has been channelized in the project vicinity. The Willow Slough Bypass flows into the Yolo Bypass of the Sacramento River. The present-day alignment of the deep water channel of the Sacramento River, about eight miles west of the proposed project has been much reduced in extent by the Yolo Bypass and other water conveyance systems which have reduced the floodplain leaving nutrient rich soils suitable for agriculture.

NATIVE AMERICAN - Prehistoric

Native American occupation and use of the general study area may extend to as early as 10,000 years ago. Occupation sites appear to have been selected in the area for accessibility, protection from seasonal flooding, and the availability of resources. An early study by Johnson and Johnson (1974) noted the density of prehistoric, ethnographic and historic era sites within a one mile strip of Sacramento River and the numerous creeks and rivers flowing into the Sacramento.

Archaeological information suggests an increase in the prehistoric population over time due to more efficient resource procurement, storage and increasing political complexity with an increasing focus on permanent settlements with large populations in later periods. This change from hunter-collectors to an increased sedentary lifestyle is due to more efficient resource procurement with a focus on staple food exploitation, the increased ability to store food at village locations, and the development of increasing complex social and political systems including long-distance trade networks. The information obtained from archaeological studies in the general area has played a key role in refining both the local and regional interpretations of Native American history for central California.

Archaeological research in the region has been interpreted using several chronological schemes based on stratigraphic differences and the presence of various cultural traits. A three-part cultural chronological sequence, the Central California Taxonomic System (CCTS) was developed by archaeologists to explain local and regional cultural change in prehistoric central California from about 4500 years ago to the time of European contact (Lillard et al. 1939; Beardsley 1948, 1954). This classification scheme, consisting of three horizons - Early, Transitional and Late, has been revised although the prior nomenclature (Early, Middle, Late Horizon) is still in common use (see Fredrickson 1994). Moratto (1984) suggests the Early Horizon dated to ca. 4500 to 3500/3,000 years ago with the Middle Horizon dating to circa 3,500 to 1,500 years ago and the Late Horizon dating to circa 1500 to 250 years ago.

An alternative scheme was developed by Fredrickson (1974) to interpret the prehistoric cultural history of Central California. He used three chronological periods: *PaleoIndian* (10,000-6000 B.C.); an *Archaic Period* (6000 B.C. to A.D. 500) with three stages (Lower Archaic 6000-3000 B.C., Middle Archaic 3000-1000 B.C., and Upper Archaic 1000 B.C.-A.D. 500); and, the *Emergent Period* (A.D. 500-1800) with a Lower and an Upper component.

Little information is available for the PaleoIndian Period. The Archaic Period is characterized by several periods of climatic change with an initial emphasis on seed collecting and processing transitioning to acorn collection and processing. The Middle Archaic also sees an increase in the importance of hunting and the prevalence of marine and littoral faunal remains. Fredrickson suggested that the appearance of new technologies (e.g., concave base projectile points and the appearance of the mortar and pestle) were due to population shifts. The Upper Archaic indicates an increase in social complexity based on burial patterns and complex trade networks. This pattern continues into the Emergent Period which also appears to have a noticeable population increase and evidence of intergroup exchange suggesting complex social, religious and organizational patterns (see. Moratto 1984:211). The Lower Emergent corresponds to Phase 1, Late Horizon while the Upper Emergent (A.D. 1500) is equipment to Phase 2, Late Horizon.

General overviews and perspectives on the regional prehistory including chronological sequences can be found in C. King (1978), Elsasser (1978), Moratto (1984), Fredrickson (1994) and Jones and Klar (2007).

NATIVE AMERICAN - Ethnographic

The aboriginal inhabitants of the region belonged to a group generally referred to as the *Patwin* ('people'), a term of reference applied by several tribelets. The term *Patwin* does not denote a politically unified entity, but rather refers to different groups of people who shared similar cultural traits and close linguistic affinities. Other names employed for the Patwin include *Copéh*, Southern Wintun, Southerly Wintun, Southeastern Wintu.

The South Wintuan or Patwin language belongs to the larger Penutian language family spoken by other California Indian groups known as the Costanoan, Wintun, Maidu, Miwok, and Yokuts. In turn, Patwin includes a number of different dialects of which Suisun is one of many (e.g., Kabalmem, Cache Creek, Cortina, Tebti (Hill Patwin), Colusa and Grimes (River Patwin), and Knight's Landing. Patwin political units were composed of autonomous tribelets with a primary and several satellite villages within a defined territory. The cultural attributes of each tribelet

differed slightly from one another and dialects could be spoken by several tribelets. Each village had a chief who was important in economic and ceremonial domains.

Patwin territory occupied an area about 90 miles north-south extending about 40 miles east-west from Princeton in the southern Sacramento Valley southward to San Pablo and Suisun Bays. Most of the population resided in large villages along rivers. The Patwin aboriginal subsistence relied on hunting and fishing, and the gathering of vegetal foods, especially acorns. The subsistence cycle was dependent on the specific locations utilized by individual villages. Material culture relied on a variety of stone (e.g., projectile points, mortars, pestles) and perishable objects for utilitarian, recreational and ceremonial uses (e.g., bows, harpoons, tule balsa boats, basketry, nets, etc.). Cemeteries were usually located at one end of a village and included cremation in some areas. None of the known Patwin tribal villages or known trails was located in the vicinity of the project.

Tribelet boundaries and village locations are inexact due to incomplete historic records, and they remain a subject of anthropological contention and debate. No villages were recorded between Davis and Woodland (e.g., Kroeber 1925:Pl. 34, 1932; Heizer and Hester 1970:87, Map 1; Johnson 1978:350, Fig. 1).

The aboriginal lifeway was disrupted during the Hispanic era and was subjected to intense EuroAmerican pressures from the late 1840s through the American Period. The disruption of the aboriginal lifeway was due to factors such as the introduction of new diseases, a declining birth rate, missionization, military forays and settler raids to capture aboriginal laborers and in retribution for livestock theft. The Patwin were transformed from hunters and gatherers into agricultural laborers who lived at the missions and worked with former neighboring groups and for individual EuroAmericans. Later, with the secularization of the missions by Mexico in the 1830s, most of the aboriginal population gradually moved from the missions to ranchos to work as manual laborers (Barrett 1908:81; Kroeber 1925, 1932; Heizer and Hester 1970; Johnson 1978:350-359; Shipley 1978:81-82).

Smallpox epidemics in 1828 and especially the one in 1838 and a "new disease" in 1830 had a particularly devastating effect on Native Americans and spread rapidly throughout central and northern California (Johnson 1978:352; Cook 1955). The population of the Patwin declined from an estimated pre-contact total of 3500/12,500 to 185 in 1905-1906 and 200 in 1923-1924. In 1803-1827, there were apparently 10 Southern Patwin villages occupied by 527 individuals. By the early 1930s, Kroeber concluded that the southern half of the Patwin was extinct (Kroeber 1932:254). For a more extensive review of the Patwin see Kroeber (1932) and Johnson (1978) and references therein.

HISTORIC ERA - Hispanic Period

The Spanish philosophy of government in northwestern New Spain was directed at the founding of presidios, missions, and secular towns (pueblo) with the land held by the Crown (1769-1821), while the later Mexican policy stressed individual ownership of the land. After the secularization of the missions by Mexico in 1833, vast tracts of the mission lands were granted to individual citizens.

Even though the routes of the early explorers cannot be determined with total accuracy, a number appear to have passed through the general vicinity of the project area. Expeditions through the study area along the Sacramento River included: Gabriel Moraga in 1808 to as far north as about Glenn or Butte City north of Sutter Buttes. This expedition was followed in 1817 by Luis Arguello with Fathers Narciso Duran and Ramon Abella to as far as present-day Clarksburg, and 1821 again by Arguello with Father Blas Ordaz with John Gilroy as interpreter through present-day Solano and Yolo counties to the vicinity of Grimes (present-day Colusa County). At the time, an Indian rancheria was noted at Putah Creek near present-day Winters with an estimated population of 400.

In addition to the Spanish, Mountain Men expeditions as well as adventurers also travelled along the Sacramento River in the 1830s and 1840s through the study area. Hudson Bay Company trappers arrived in the general study area prior to 1830, cached furs along various creek including present-day Cache Creek. Their "French Camp" was situated on the north bank of the creek (about a mile east of present-day Yolo, formerly Cacheville). Other known parties of Mountain men/trappers passing through present-day Yolo County included Ewing Young who led a group in spring and summer 1830 along the San Joaquin and Sacramento rivers and for a time along Cache Creek. Later in 1832 he camped on Cache and Putah creeks. Later in 1843, Joseph Gale, part of the 1831 Ewing Young party, had cattle rendezvous on Cache Creek (Beck and Haase 1974:#18, #43; Kyle 2002:566-567).

None of the Mexican Period land grants made between 1842 and 1846 included the project area. Among the nine known grants, Putah and Cache creeks were the initial foci of settlement. Only five of the nine were confirmed (Beck and Haase 1974:#26; Kyle 2002:567-568).

HISTORIC ERA -American Period

In the mid-19th century, most of the rancho and pueblo lands in California were subdivided as the result of population growth and the American takeover. This American ascendancy was the result of the confirmation of property titles throughout California, prior to which the transfer of real estate had been extremely risky. The initial explosion in population was associated with the Gold Rush (1848), followed later by the construction of the transcontinental railroad (1869). Still later, the development of the refrigerator railroad car (ca. 1880s), used for the transport of agricultural produce to distant markets, had a major impact on population growth (Hart 1987).

Yolo county was one of the original 27 counties. It was named for Yolo or *Yodoy* [*Yodoi*], a Patwin village reportedly name for "a place abounding in rushes" near present-day Knight's Landing. Fremont, at the mouth of the Feather River north of Sacramento was the first county seat from 1850-1851 followed by Washington (part of present-day West Sacramento) in 1851-1857, then Cacheville (present-day Yolo) in 1857-1861, back to Washington 1861-1862 and in 1862 to Woodland (Heizer and Hester 1970:87, #66; Kyle 2002:566-569).

The proposed borrow site project is approximately two miles north/northeast of the present-day northeast boundary of the City of Davis, approximately five miles south/southeasterly of Woodland and about seven miles west/northwesterly of West Sacramento (e.g., USGS Davis 1992, 1994).

Davis

The *Rancho Laguna de Santos Calle*, an unconfirmed Mexican Period grant acquired in the 1850s by Joseph B. Chiles, includes most of the City of Davis and the University of California at Davis. His son-in-laws Gabriel Brown and Jerome C. Davis divided it and by 1864 the Davis ranch covered 13,000 acres. In 1867 William Dresbach leased the Davis home which became the Yolo House, a hotel. The ensuing settlement, "Davisville", north of the South Fork of Putah Creek merited a post office from 1868 onward. In 1867, Jerome and Isaac Davis sold part of their holdings to the directors of the California Pacific Railroad who formed the Davisville Land Company. Davisville later became a thriving grain-shipping point on the California Pacific Railroad, known as "CAL-P", which began operation in December 1869. Davis Junction north went to Woodland and east to Sacramento. Later in April 1898, the railroad became part of the Southern Pacific Railroad now part of the Union Pacific.

Davisville was incorporated as the City of Davis in 1917. The University State Farm (also known as the Agricultural Station) established by the California State Legislature in 1905 and sited near Davisville in 1906/1907, was a catalyst for continued growth of Davis as well as the general study area. Transportation was a factor in the selection of Davisville, especially the railroad junction at Davis between the State Capitol in Sacramento and main campus of the University of California at Berkeley as well as the its importance in the development of Northern California' agricultural industry. The agricultural school became a branch of the University of California at Berkeley, College of Agriculture with a four-year degree program in 1922. Further expansion to a "general campus" occurred in 1959 and in 1961 with its own graduate studies. The airport, constructed in 1942 by the U.S. military and ceded to Yolo County after World War II has also been a factor in local growth within this agricultural heartland (Hart 1987:125; Fickewirth 1992:24; Prenatt 1995 & 1996:Part 5:25-27; Robertson 1998:90; Kyle 2002:571; LSA 2010:14-15).

Water Conveyance Systems

Water diversion for irrigation in the general study area appears to have started in 1856 with Moore's dam and ditch system on Cache Creek within Gordon's Ranch (*Rancho Quesesosi*). A dam and ditch by David Quincy Adams on the *Rancho Canada de Capay* also on Cache Creek started shortly thereafter in 1857 and was completed in 1870 (JRP/Caltrans 2000:22; Kyle 2002:567-568).

The south levee of the Willow Slough Bypass is located adjacent to the project. Willow Slough, the former *Laguna de Santos Calle* and its major contributory Dry Slough, the former "Deep Arroyo" were renamed when the U.S. Army Corps of Engineers built the Sacramento River Flood Control Project in the first quarter of the 20th century. Willow Slough has always been a discrete waterway expanding to as much as 50 yards in width and 75 feet deep and ending among the Tule marshes on the west side of the Sacramento River. Though both Willow and Dry Slough were ephemeral streams that ran dry in summers, Willow Slough was fed by underground springs in several places. The Willow Slough Bypass[1] was constructed by the U.S.

1. Levee Inventory Identification Nos. 34 and 35 (US/FEMA 2010:40)

Army Corps of Engineers in the 1960s ". . . to divert all flows in downstream Willow Slough to a lower elevation of the Yolo Bypass." (Yolo County 2005: 6-33 - 6-34). The Willow Slough Bypass levees are maintained by the California Department of Water Resources (Davis 2001/2007:317).

Limited Historic Map Review

Goddard's 1857 *Map of the State of California*, shows an extensive marshy area on either side of the Sacramento River. At the time, the project area and vicinity appears to have been located in a "Sink" with closest feature "Davies" on the south side of "Puta C." (Putah Creek). Washington (part of present-day West Sacramento) and the City of Sacramento on the east side of the Sacramento River were foci of activity as indicated by the road network.

The 1907 USGS Davisville quadrangle shows the "Southern Pacific RR" and roads from "Davisville" including present-day Covell Boulevard, County Roads 303, 104A, and 105 on the south side of the Willow Slough Bypass. Roads 103, 104, and 105 as well as a road along the alignment of present-day Roads 28H and 29 (Willow Slough Bypass) follow the various section lines of T9N R2E and T9N R3E in the study area. In addition, an unpaved road to/from Road 103 ran along the NW ½ of Section 25 of T9N R2E, but did not extend along the northern end of the 277 $\pm$ acre project. An irregularly shaped man-made reservoir (?) was present in the southwest corner of the project, but by 1968 the reservoir had been removed. The available black-and-white 1968 quadrangle suggests the presence of a north-to-south ditch through most of the center of Section 25 to a small water feature. At the time, a large irregular depression contour (at an elevation of 25 feet) was present in the E ½ of Section 25. The 1992 USGS Davis topographic map, with the exception the Willow Slough Bypass shown along the south end of the project, is similar to the 1907 USGS in regard to the local road network (USGS 1907, 1968, 1992).

PRE-FIELD IDENTIFICATION EFFORT

RECORDS SEARCH RESULTS

A prehistoric and historic site record and literature search was conducted by the California Historical Resources Information System, Northwest Information Center, Sonoma State University (CHRIS/NWIC File No. 13-1796 dated June 10, 2014 by Price).

Recorded and/or Reported Sites

No prehistoric, combined prehistoric/historic era or historic era sites have been recorded or reported in or immediately adjacent to the proposed project.

Recorded and/or Reported Sites - Near Project Parcel

One recorded prehistoric site, CA-YOL-171 (P-57-000188), the *Yolo County Landfill Cemetery* is located on the southern boundary of the NW ¼ of Section 30 within the active landfill. The site was discovered in 1981 approximately 370-400 feet to the east of the eastern boundary of the

proposed project during the excavation of Landfill Unit 3.[2] Mr. J. Corosco at the landfill notified Dr. Delbert L. True, Department of Anthropology, University of California, Davis (UCD of the burials and other finds on May 12, 1981.[3] Mr. Corosco wanted the university to have a chance to study the materials but wanted to rebury the remains and retain any artifacts. The excavation was undertaken by UCD graduate students on a volunteer basis.

The resource consisted of four loosely flexed Native American burials exposed at an approximate depth of eight feet blow the former surface within a buried sand ridge adjacent to a slough. No culturally affected soil (i.e., midden) was observed. Burials 1-3 were removed by a field crew under the direction of Drs. True and Martin Baumhoff. Burial 4 was left in place.

Burial 1 was determined to be a young adult; Burial 2 was a young adult male removed from a distinct burial pit; Burial 3 was a young adult approximately 16 years old; and, Burial 4 was not removed but left in place. In addition, 93 pieces of disassociated human bone were present. All of the bone was highly mineralized. Burials 1 and 2 were recorded as damaged by heavy equipment.

Several of the burials had associated artifacts. A conical-based mortar may have been associated with Burial 1; a possible mano fragment and *Margaretifera* sp. shell spoon, ocher fragments were found with Burial 2; and, a notched mortar and pestle were with Burial 3 (Note: UCD records indicate orange ochre, a stone mortar and a pestle were present with Burial 3). Burial 2 was dated to 3895 $\pm$ 800 B.P. using amino acid racemization dating) (Griset 1981/1991/form). It was concluded that the burials may have been in a sand ridge associated with former prehistoric sloughs in the area. The area is mapped by the SFEI (2012) as within a wet meadow and seasonal wetland.

The archaeological work at the landfill was terminated by UC Davis on July 13, 1981 when Dr. True advised Mr. Corosco that the university would have to expend a considerable effort as the remains probably represented a patterned cemetery deposit. Funding and personnel were not available and he advised the landfill to isolate and avoid the southern end of Landfill Unit 3 since all of the burials appeared to be in an E/W trending line presumably along the top of a linear sand ridge. The site may represent a classic example of a prehistoric Central California cemetery deposited in sand ridges along water courses.

The majority of human remains from Burial 1 and 2, and Burial 3 were returned to the landfill for reburial on June 24, 1981. The UCD Department of Anthropology Museum *Inventory of Human Remains and Associated Funerary Objects for Accession 419* notes that the remains were ". . . eventually reburied by the County at the site in September of 1991." This document also notes that the County stopped development of the burial find area. It is assumed that landfill personnel retained the artifacts. No other formal records are available. The *Inventory* notes that

2. Southern edge of Landfill Unit 3, 0.5 miles north of County Road 28H and about 50 feet east of County Road 104 (NW ¼ of Section 30 of T9N R3E).

3. Mr. Corosco is not identified by title/responsibility.

the antiquity of the remains, which originated from within unclaimed territory between the Patwin, Miwok and Nisenan, is unknown. [4]

Recorded and/or Reported Isolated Finds - Near Project Parcel

An isolated find (YOL-ISO-2) consisting of several artifacts was apparently noted by landfill personnel to the southeast of the burial exposure approximately 1000 feet north of County Road 28H and 500 feet east of County Road 104 (SW 1/4 of Section 30 of T9N R3E). The artifacts included "One obsidian serrated biface[5] and a small flat-bottomed mortar"[6] uncovered during the excavation of a trench in 1978. Their exact location was unknown; also unknown whether they were deposited in midden (Griset and Slaymaker 1981/1991/form).

Listed Historic Properties

No National Register of Historic Places and/or California Register of Historical Resources listed, determined or potential archaeological sites, significant local, state or federal historic properties, landmarks, etc. have been identified in the proposed project. Nor have any local landmarks and/or points of interest been identified within or adjacent to the project (see References Cited and Consulted).

Compliance Reports

None of the cultural resource compliance reports on file with the CHRIS/NWIC are within the proposed project.

One report, *Supplement to the Sacramento Metropolitan Area Cultural Resources Survey, Sacramento and Yolo Counties, California* (Bouey 1991/S-12467) includes a small portion of the Willow Slough Bypass levee adjacent to the proposed landfill project. Results were negative for cultural materials.

Related Reports

Two compliance reports on file with the CHRIS/NWIC were completed for the Yolo County Central Landfill. Both reports note the presence of recorded prehistoric site CA-YOL-171 (P-57-000188] and isolates [CA-YOL-ISO-2] within the landfill area.

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4. Linguistic evidence indicates that between approximately 2500 BC and AD 0, the Yokuts expanded from the Delta into the area (R. Bettinger 1995:5 - *Determining Affiliation of Cultural Remains from California Potentially Affiliated with Federally Recognized Tribes*. Manuscript on file, Department of Anthropology Museum, University of California, Davis). Prior to the Yokut expansion, sites in this vicinity were probably occupied by Hokan speakers, perhaps ancestors of the Pomo or Washoe. By approximately AD 0, the Miwok were probably present in the region (Bettinger 1995:5), and possibly also the Patwin and Nisenan (Bettinger 1995:6).

5. The photograph shows a projectile point with a concave base missing its tip.

6. 13 cm high, 14.3 cm rim diameter, 14.0 base diameter with an interior depth of about 8 cm.

A Cultural Resources Study for California Environmental Quality Act (CEQA) Document for the Yolo County Central Landfill Permit Revision, Yolo County, California (Derr 1991/S-13550).

Cultural Resources Assessment Report Yolo County Central Landfill, Yolo County, California (Martin and Self 2003/S-26918).

ARCHAEOLOGICAL SENSITIVITY

The archaeological sensitivity of the project area and vicinity has not been formally evaluated. However, the presence of a recorded site with subsurface Native American burials within 500 feet of the eastern project boundary suggests a high moderate to high sensitivity for buried archaeological resources in the proposed project area and immediate vicinity. The presence of several creeks, sloughs and other seasonal drainages including the landfill location within a former wet meadow and seasonal wetland suggests some sensitivity associated with occupation and exploitation of wetland resources.

INDIVIDUALS, GROUP AND AGENCY PARTICIPATION

The Native American Heritage Commission was contacted for a search of the *Sacred Lands Inventory* (Busby 2014). The sacred lands search was negative for Native American resources in or adjacent to the project location (Pilas-Treadway 2014) (see Attachments). Information from the Native American Heritage Commission was transmitted to Mr. Eric Parfrey, Principal Planner, County of Yolo Planning, Public Works, and Environmental Services Department who contacted the Yocha Dehe Wintun Nation who had previously expressed interest in county projects. A project notification letter was addressed to Mr. Marshall McKay, Tribal Chairman on October 6 and responded to by Mr. McKay on October 7. Mr. Parfrey met with tribal representatives[7] on at the landfill on October 28 and at the county offices on October 30. The tribal representatives stated that they wanted to see the results of sub-surface testing that would be monitored by a tribal representative incorporated into the project EIR. Mr. Parfrey agreed with the tribal representative's request (E. Parfrey, personal communication, November 2014).

No other local historical societies, or other parties were contacted regarding cultural resources in or adjacent to the project.

PROJECT SURVEY

The archaeological field survey of the project area was conducted by Johanna Twigg (M.Sc.), an archaeologist meeting the Standards of the Secretary of the Interior over two days (June 10-11, 2014). In general the survey was conducted using 25-30 meter east-west transects with the inventory of the four main drainages following their north-south orientation. Visibility was low, 5-10%, due to dense grassy vegetation (e.g., foxtails, thistles and tall meadow grasses). As part of the inventory, Ms. Twigg photographed various components and views of the former agricultural property [Figs. 4-17].

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7. Ms. Marilyn Delgado (Director of Cultural Resources), Mr. James Sarmento (Cultural Resources Manager), and Mr. Anthony Flores, Cultural Monitor Supervisor, Yocha Dehe Wintun Nation.

The project area between the 1960s and mid-200s was used an overland flow treatment field for wastewater and stormwater discharged from the Hunt-Wesson tomato cannery facility located about 2.5 miles to southwest. The discharged wastewater was sprayed across the project parcel via an underground piping system to facilitate disposal by soil infiltration and evaporation. Excess wastewater flowed easterly to a ditch along the eastern boundary and then south to a recirculation basin in the southeast corner on the parcel near the intersection of CR 28H and CR 104. The water was then pumped back to the spray heads or into the Willow Slough Bypass. The recirculation basin was equipped with pumps and a small control shed.

The project area is currently used for cattle grazing and is generally delineated by barbed wire and wire mesh fencing [Figs. 4, 6-7, 16-17]. At the time of the survey the only indication of former use was the presence of circular grass patterns growing around the sprayheads of the overland flow treatment [see Fig. 3]. However, water management features still present included ditches, pumping systems, and several capped monitoring wells and unimproved roads. The exposed soil, a light greyish brown clay loam, was visible primarily along the irrigation/drainage ditches which were occasionally lined with rounded river cobbles [Fig. 5]. In addition, a pile of cobbles was observed near the entry gate about mid-way on the east side of the project.

No surface indications of prehistoric or significant historic archaeological materials were observed during the survey conducted for the proposed project. Three standing building/structures and two water control features were noted.

BUILDING/STRUCTURE

Three standing structures are present in a cluster at the southern end of the project area, approximately 670 feet from the southeast corner along the fence line which fronts County Road 28H [Figs. 8-13].

Structure 1 - corrugated metal building with a flat metal roof, 10 feet wide by 15 feet long by 7 feet high on cement slab foundation, outer edges flush with the walls [Figs. 9-10]. The building has two aluminum "slider" windows on the north and south sides, two "window-mount" style air conditioning units on the east and south sides, an aluminum housing ventilation fan on the roof and a locked door with a cutout for a window on the upper section on the west side. A louvered ventilation vent is present on the east wall under one of the air conditioning units. The building appears to be supplied with electric power via a underground cable. Its function could not be determined but it was emitting a "humming" noise suggestive of perhaps several interior pumps.

Structure 2 - probable wood frame building 18 feet wide by 26 feet long by 8 feet high (at the peak of the roof) sheathed with manufactured wood sheeting simulating vertical planks [Figs. 11-12]. The building has an overhanging gable roof covered with asphalt shingles over boards. The roof is in poor repair with missing shingles and roof boards.. A solid sliding door is present on the east side of the building. Aluminum gutters are present on the long axis of the building. No cement slab foundation visible, however some degraded asphalt was observed. The building was likely used for storage.

Structure 3 - open (no roof) raised box-like structure with a cement base that encloses pumping equipment and tanks [Fig. 13]. The walls of the structure are made of salvaged lumber including 2 x 4s and dog-eared ornamental fence slats. This equipment is

currently in use as indicated by two hoses from the pumps to two large water troughs adjacent to structure.

WATER CONTROL FEATURES

Pump system - large, apparently functional pumping system in the southeast corner of the project is marked by a chain link fencing measuring approximately 120 feet long x 108 feet wide. The pump system sits within a cement lined basin measuring approximately 60 feet long x 50 feet wide and includes pipes, a power pole surrounded by a small concrete block wall [Fig. 14].

Valve assembly - apparently functional valve assembly in good repair located along the southern edge of the project to the west of the standing structures, approximately 720 feet from the southwest corner of the project [Fig. 15]. This feature consists of a section of bolted steel pipe with a U-bend that originates from and terminates into a cement lined box set into the ground, measuring ~6 feet x 6 feet. The pipe is approximately 12-18 inches in diameter with 1 ½ inch bolts. In addition, two shut off valves and a flow meter are visible.

BACKHOE TEST TRENCHES

A focused backhoe test trenching program was completed at the request of the County of Yolo Planning, Public Works, and Environmental Services Department in consultation with the Yocha Dehe Wintun Nation [see Fig. 2]. The tribal representatives requested that the results of sub-surface testing be incorporated into the EIR. An exploratory backhoe testing program was undertaken to determine if the proposed soil borrow site could have a buried sand ridge within the parcel at the depths previously noted for the Native American burials exposed at the original landfill (8-10 feet below grade) to the east. Prior to the testing, a review of the results of an exploratory geotechnical trenching program on the parcel to the west and south of CA-YOL-171 did not indicate the presence of any sand deposits typical of a former ridge. The profiles consisted of either a clayey-silt or silty-clay sediment to at least 10 feet below the existing grade. A trace of sand was noted in one of the 12 trenches near the northern extent of the geotechnical trenches. All of the archaeological backhoe test trenches were completed north of the geotechnical trenches [Figs. 2, 18]

METHODOLOGY

Mr. Charles Barrett, Construction Inspector, Division of Integrated Waste Management, County of Yolo Planning, Public Works, and Environmental Services Department provided access and the heavy equipment for the backhoe trenching program. Mr. Christopher Canzonieri (M.A.), Lead Archaeologist and Physical Anthropologist, directed the trenching program of 20 backhoe test units ("BTUs") within the borrow area on November 10, 2014. Mr. Anthony Flores, Cultural Monitor Supervisor, Yocha Dehe Wintun Nation was the on-site Native American Consultant.

All units were excavated using a backhoe with a 24-inch wide toothed bucket. The units were oriented either north-south or east-west and measured 13-16 feet long x 3 feet wide x 10-12.5 feet deep [see Fig. 18; Table 1]. Several proposed units were shifted from their original location

to avoid possible underground utilities and impacts to the elevated unimproved road. The trenches were not entered due to their depth. All were backfilled and compacted at the completion of the testing [Figs. 19-26].

Standard archaeological recordation, including a written description, stratigraphic sediment profile, and photographic documentation were completed for each unit. Soil data including Munsell® soil color, Sand-Gauge©, and USDA soil texture for each strata were determined using the spoil from each trench.

In general, the sediments consisted of approximately 0 to 4 feet of a dry, hard grayish brown (10YR 5/2) clayey silt over a firm very dark grayish brown (10YR 3/2) clayey silt from 4 to 8/10 feet below the surface. A moist olive yellow (2.5Y 6/6) clayey silt with approximately one percent sand (8 to 12.5 feet below the surface) sediment was present in 12 units. The sand was very fine grain and similar to that noted in one unit of the geotechnical testing completed for the landfill (Charles Barrett, personal communication). However, no indications of an extensive sand deposit suggesting a former sand ridge was present in the tested area although the minor percentage of sand present at the maximum depth could possibly indicate the former edges of a slough near a sand ridge or aeolian deposition of sand in standing water.

RESULTS

No prehistoric cultural material was exposed in any of the 20 trenches. The observed sediments were relatively uniform across the test area. Additionally, no rodent burrows or rocks/cobbles were present in any of the units.

TABLE 1
Summary of Results from Backhoe Test Units (BTUs)

BTU 1 (N600/W600)		
DEPTH (feet) (below surface)	***OBSERVATIONS***	***COMMENTS***
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 14 feet long x 3 feet wide x 10 feet deep.
4 to 10 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
BTU 2 (N600/W400)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 16 feet long x 3 feet wide x 10 feet deep.
4 to 10 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
BTU 3 (N600/W200)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 14 feet long x 3 feet wide x 10 feet deep.
4 to 10 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	

TABLE 1, con't
Summary of Results from Backhoe Test Units (BTUs)

BTU 4 (N600/W100)		
DEPTH (feet) (below surface)	***OBSERVATIONS***	***COMMENTS***
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 15 feet long x 3 feet wide x 10 feet deep.
4 to 10 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
BTU 5 (N400/W600)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 15 feet long x 3 feet wide x 10.5 feet deep.
4 to 8 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
8-10 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand
BTU 6 (N400/W400), con't		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 15 feet long x 3 feet wide x 10 feet deep.
4 to 8 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
8-10 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand
BTU 7 (N400/W200)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 15 feet long x 3 feet wide x 10 feet deep.
4 to 8 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
8-10 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand
BTU 8 (N400/W100)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 14 feet long x 3 feet wide x 10 feet deep.
4 to 8 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
8-10 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand
BTU 9 (N213/W600)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 16 feet long x 3 feet wide x 10 feet deep. BTU offset 13 feet to north so as not to impact the elevated road.
4 to 8 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
8-10 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand

TABLE 1, con't
Summary of Results from Backhoe Test Units (BTUs)

BTU 10 (N214/W400), con't		
DEPTH (feet) (below surface)	***OBSERVATIONS***	***COMMENTS***
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 16 feet long x 3 feet wide x 10 feet deep. BTU offset 14 feet to the north so as not to impact the elevated road.
4 to 10 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
BTU 11 (N211/W200)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 16 feet long x 3 feet wide x 10 feet deep. BTU offset 11 feet to the north so as not to impact the elevated road.
4 to 8 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
8-10 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand
BTU 12 (N211/W100)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 16.5 feet long x 3 feet wide x 12.5 feet deep. BTU offset 11 feet to the north so as not to impact the elevated road.
4 to 8 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
8-12.5 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand
BTU 13 (N94/W600)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 16 feet long x 3 feet wide x 10 feet deep. BTU offset 6 feet to the south so as not to impact irrigation line.
4 to 10 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
BTU 14 (N94/W400)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 13 feet long x 3 feet wide x 10 feet deep. BTU offset 6 feet to the south so as not to impact irrigation line.
4 to 10 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
BTU 15 (N94/W200)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches, BTU 16 feet long x 3 feet wide x 10 feet deep. BTU offset 6 feet to the south so as not to impact irrigation line.

TABLE 1, con't
Summary of Results from Backhoe Test Units (BTUs)

BTU 15 (N94/W200), con'		
DEPTH (feet) (below surface)	***OBSERVATIONS***	***COMMENTS***
4 to 10 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
BTU 16 (N94/W100)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 15 feet long x 3 feet wide x 12 feet deep. BTU offset 6 feet to the south so as not to impact the irrigation line.
4 to 10 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
10-12 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand
BTU 17 (N0/W600)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 14 feet long x 3 feet wide x 10 feet deep.
4 to 8 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
8-10 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand
BTU 18 (N0/W400)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 15 feet long x 3 feet wide x 10 feet deep.
4 to 8 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
8-12 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand
BTU 19 (0/W200)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 15 feet long x 3 feet wide x 10 feet deep.
4 to 8 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
8-10 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand
BTU 20 (N0/W100)		
Surface to 4 feet	Stratum A: hard dry grayish brown (10YR 5/2) clayey silt pebbles.	Roots present within the first several inches of excavation. BTU 13 feet long x 3 feet wide x 12 feet deep.
4 to 10 feet	Stratum B: firm very dark grayish brown (10YR 3/2) silty clay.	
10-12 feet	Stratum C: moist olive yellow (2.5Y 6/6) clayey silt with 1% sand	Very fine grain sand

NOTE: All Munsell color readings for units were completed in sunlight

FINDINGS

This report was completed to comply with CEQA and with Yolo County cultural resources and planning policies. The following findings are made:

No prehistoric, combined prehistoric/historic era or historic sites have been recorded or reported in or immediately adjacent to the proposed project.

None of cultural resource compliance reports on file with the California Historical Resources Information Center/Northwest Information Center include the proposed project.

The review of the *Sacred Lands Inventory* by the Native American Heritage Commission was negative.

No known ethnographic, traditional or contemporary Native American use areas and/or other features of cultural significance have been identified in or adjacent to the project.

No known Hispanic Period expeditions, dwellings, other structures, features, etc. have been reported in or adjacent to the proposed project.

No American Period archaeological sites have been recorded or reported in or adjacent to the proposed project.

No evidence of significant prehistoric or historically significant archaeological resources or potentially significant architectural resources was observed during the field survey conducted for the proposed project.

No evidence of an extensive sand deposit linked with the buried sand ridge in the landfill to the east that yielded Native American burials was exposed during a limited backhoe testing program on the proposed soil borrow parcel.

No local, state or federal historically or architecturally significant structures, landmarks, or points of interest have been identified within or adjacent to the proposed project.

No historic properties listed, determined eligible, or potentially eligible for inclusion on the National Register of Historic Places and/or California Register of Historical Resources have been identified in or adjacent to the proposed project.

The archaeological sensitivity of the project area and vicinity has not been formally evaluated. However, the presence of CA-YOL-171 a recorded site with subsurface Native American burials within 400-500 feet of the eastern project boundary suggests a high moderate to high sensitivity for buried archaeological resources in the general area. The presence of several creeks, sloughs and other seasonal drainages including the landfill location within a former wet meadow and seasonal wetland as well as the presence of isolated prehistoric artifacts also suggests some sensitivity for archaeological sites associated with occupation and exploitation of wetland resources.

CULTURAL RESOURCE IMPACTS AND MITIGATION MEASURES

No recorded archaeological resources are present within the project parcel. A focused backhoe testing program did not expose any geological formations or sediments that appeared to have archaeological sensitivity. However, due to the perceived archaeological sensitivity of the general project area, two potential cultural resources impacts and two mitigation measures are

recommended to protect any unexpected cultural resource discoveries including Native American burials from construction impacts during future excavation at the proposed soil borrow location.

DEFINITION OF IMPACTS

The California Environmental Quality Act states that a project that may cause a substantial adverse change in the significance of a cultural resource may have a significant effect on the environment. Substantial adverse change in the significance of a cultural resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. The significance of a cultural resource is materially impaired when a project:

> Demolishes or materially alters in an adverse manner those physical characteristics of a cultural resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or,
>
> Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of cultural resources pursuant to Public Resources Code Section 5020.1(k) or its identification in a cultural resources survey meeting the requirements of Public Resources Code 5024.1(g), unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or,
>
> Demolishes or materially alters in an adverse manner those physical characteristics of a cultural resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of the California Environmental Quality Act.

Impacts

The project could potentially affect as yet unknown prehistoric cultural resources within the parcel. Potential impacts include:

Impact CR-1: The potential to cause a substantial adverse change in the significance of archeological resources.

> Previously unknown archaeological resources could be exposed during ground disturbing construction operations associated with soil removal at depths below eight feet. Construction operations could result in the inadvertent exposure of buried prehistoric or historic archaeological materials that could be eligible for inclusion on the California Register of Historical Resources (Public Resources Code Section 5024.1) and/or meet the definition of a unique archeological resource as defined in Section 21083.2 of the Public Resources Code.
>
> This significant impact would be reduced to a less-than-significant impact with implementation of Mitigation Measure CM-1 which requires the review, identification, evaluation and treatment of any significant archaeological finds by a Professional Archaeologist at the time of discovery. This measure will be implemented in accordance with the County General Plan Actions CO-A64, CO-A65, and CO-A66.

Impact CR-2: The potential to disturb any human remains, including those interred outside of formal cemeteries.

Previously unknown Native American human remains could be exposed during ground disturbing construction operations associated with soil removal. Construction operations could result in the inadvertent exposure of buried prehistoric or protohistoric (ethnographic) Native American human remains.

This significant impact would be reduced to a less-than-significant impact with implementation of Mitigation Measure CM-2 which requires that the treatment of human remains and or associated or unassociated funerary objects during any soil-disturbing activity must comply with applicable state law. This measure will be implemented in accordance with the County General Plan Actions CO-A65 and CO-A66.

MITIGATION MEASURES

The following mitigation measures shall be implemented in concert with the specific requirements of Yolo County General Plan Action programs CO-64, CO-65, and CO-66:

Mitigation Measure CM-1

(a) The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources including prehistoric Native American burials.

(b) The project proponent shall retain a Professional Archaeologist to provide pre-construction briefing(s) to supervisory personnel of any excavation contractor to alert them to the possibility of exposing significant prehistoric archaeological resources within the project area. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery, and the procedures to follow regarding discovery protection and notification of the project proponent and archaeological team. An "Alert Sheet" shall be posted in conspicuous locations at the project location to alert personnel to the procedures and protocols to follow for the discovery of potentially significant prehistoric archaeological resources. [8]

(c) The project proponent shall retain a Professional Archaeologist on an “on-call” basis during ground disturbing construction for the project to review, identify and evaluate cultural resources that may be inadvertently exposed during construction.

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8. Significant prehistoric cultural resources may include:

   a. Human bone - either isolated or intact burials.
   b. Habitation (occupation or ceremonial structures as interpreted from rock rings/features, distinct ground depressions, differences in compaction (e.g., house floors).
   c. Artifacts including chipped stone objects such as projectile points and bifaces; groundstone artifacts such as manos, metates, mortars, pestles, grinding stones, pitted hammerstones; and, shell and bone artifacts including ornaments and beads.
   d. Various features and samples including hearths (fire-cracked rock; baked and vitrified clay), artifact caches, faunal and shellfish remains (which permit dietary reconstruction), distinctive changes in soil stratigraphy indicative of prehistoric activities.
   e. Isolated prehistoric artifacts

The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under the California Environmental Quality Act.

(d) If the Professional Archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and recommended mitigation measures to mitigate to a less-than significant impact. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing and data recovery among other options. The completion of a formal *Archaeological Monitoring Plan* may be developed if extensive archaeological deposits are exposed during borrow operations. Treatment of any significant cultural resources shall be undertaken with the approval of the project proponent and the County of Yolo Planning, Public Works, and Environmental Services Department in consultation with the Yocha Dehe Wintun Nation.

(e) A *Monitoring Closure Report* shall be filed with the County of Yolo Planning, Public Works, and Environmental Services Department, and Environmental Services Department at the conclusion of ground disturbing construction if archaeological and Native American monitoring of excavation was undertaken.

Mitigation Measure CM-2

The treatment of human remains and of associated or unassociated funerary objects discovered during any soil-disturbing activity within the project shall comply with applicable State laws. This shall include immediate notification of the County of Yolo County Medical Examiner (County Coroner) and the County of Yolo Planning, Public Works, and Environmental Services Department.

In the event of the coroner's determination that the human remains are Native American, notification of the Native American Heritage Commission, is required who shall appoint a Most Likely Descendant (MLD) (Public Resources Code Section 5097.98).

The project sponsor, archaeological consultant, and MLD shall make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5(d)). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. The California Public Resources Code allows 48 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the reburial method, the project will follow Public Resources Code Section 5097.98(b) which states that ". . . the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

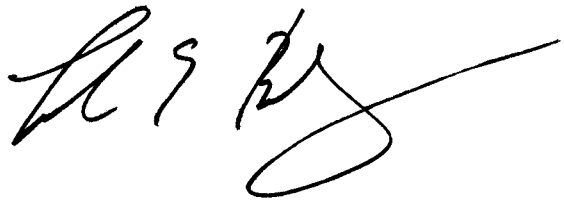
RECOMMENDATIONS

General Plan **Action CO-A70** requires: Refer draft environmental documents, including any studies and recommended mitigation measures, to the appropriate culturally-affiliated tribes for review and comment as part of the public review process. (Policy CO-4.1, Policy CO-4.11, Policy CO-4.12)

CLOSING REMARKS

If I can provide any additional information please don't hesitate to contact me.

Sincerely yours,
BASIN RESEARCH ASSOCIATES, INC.,



Colin I. Busby, Ph.D., RPA
Principal

CIB/dg
Enclosures

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Abbreviations

n.d. no date
v.d. various dates
N.P. no publisher noted
n.p. no place of publisher noted

Note: The abbreviated phrase "CHRIS/NWIC, Sonoma State University, Rohnert Park" is used for material on file at the California Historical Resources Information System, Northwest Information Center, Sonoma State University, Rohnert Park.

ATTACHMENTS

FIGURES

CORRESPONDENCE