

Appendix A

Arborist Report



ARBORIST REPORT WEST SACRAMENTO, CA.

December 17, 2018
City of West Sacramento
ATTN: Amber Wallace
1110 West Capitol Ave
West Sacramento, Ca 95691
Phone: (916) 617-5327
Email: amberwa@cityofwestsacramento.org

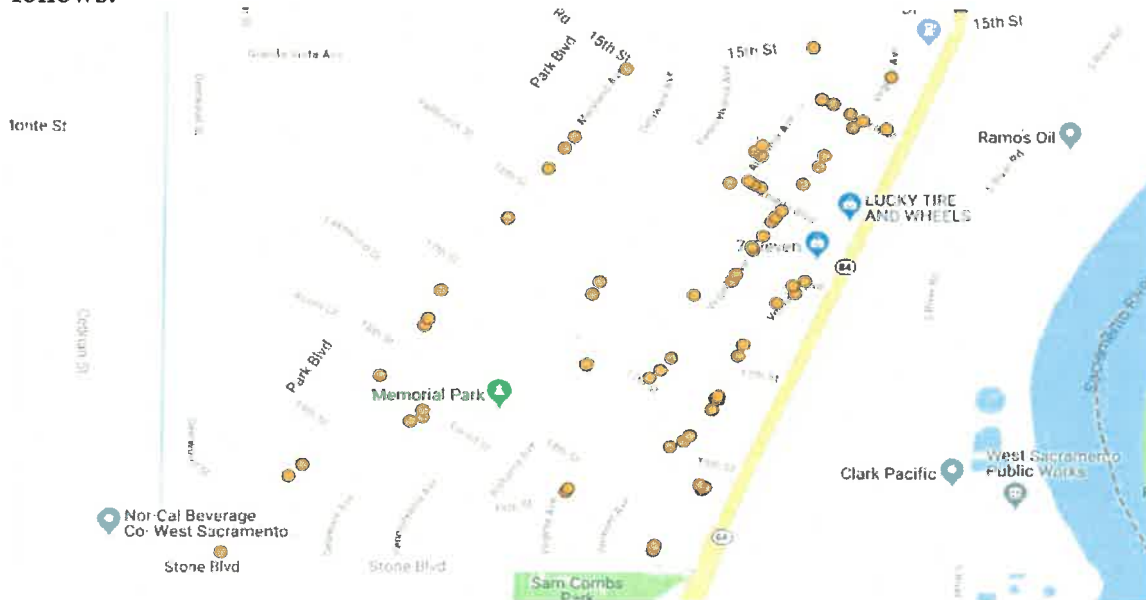
Re: States Streets Project Inventory

SCOPE OF WORK

The purpose of this report is to evaluate the current condition of the trees that reside at 65 various sites in the "States Streets" neighborhood. The City of West Sacramento intends to perform curb/gutter repair, improve ADA access, and retrofit underground utilities. The species is identified as well as the trunk DSH (Diameter at Standard Height 4 ½' above grade), vigor/structural condition, crown spread, recommended maintenance, distance to hardscape, presence of overhead utilities, location by address, and estimated height range. I performed a visual inspection was made from grade level.

OBSERVATIONS

On Wednesday December 12, 2018 I visited the site and have included my findings as follows:



The orange dots in the above image depict the general location of the subject trees



<u>Address</u>	<u>Street</u>	<u>Side</u>	<u>Tree</u>	<u>CommonName</u>	<u>BotanicalName</u>
155	15TH ST	Front	1	LONDON PLANE	Platanus X hispanica
1522	ALABAMA AV	Front	1	LONDON PLANE	Platanus X hispanica
1524	ALABAMA AV	Front	1	INCENSE CEDAR	Calocedrus decurrens
1525	ALABAMA AV	Front	1	LONDON PLANE	Platanus X hispanica
1530	ALABAMA AV	Front	1	SILVER DOLLAR GUM	Eucalyptus polyanthemos
1704	ALABAMA AV	Front	1	VALLEY OAK	Quercus lobata
1529	ALAMEDA BL	SIDE	1	LONDON PLANE	Platanus X hispanica
1529	ALAMEDA BL	SIDE	2	LONDON PLANE	Platanus X hispanica
1529	ALAMEDA BL	SIDE	3	LONDON PLANE	Platanus X hispanica
1908	CAROLINA AV	Front	1	WHITE MULBERRY	Morus alba
1911	CAROLINA AV	Front	1	BOX ELDER	Acer negundo
1911	CAROLINA AV	Front	2	ENGLISH WALNUT	Juglans regia
1936	CAROLINA AV	Front	1	LONDON PLANE	Platanus X hispanica
1936	CAROLINA AV	Front	2	LONDON PLANE	Platanus X hispanica
10	CIRCLE ST	Front	1	LONDON PLANE	Platanus X hispanica
108	CIRCLE ST	Front	1	AMERICAN SWEETGUM	Liquidambar styraciflua
110	CIRCLE ST	Front	1	LONDON PLANE	Platanus X hispanica
1819	DELAWARE AV	Front	1	WHITE MULBERRY	Morus alba
1819	DELAWARE AV	Front	2	WHITE MULBERRY	Morus alba
1823	DELAWARE AV	Front	1	SOUTHERN MAGNOLIA	Magnolia grandiflora
1503	MARYLAND AV	Front	1	MODESTO ASH	Fraxinus velutina 'Modesto'
1523	MARYLAND AV	Front	1	SILVER MAPLE	Acer saccharinum
1529	MARYLAND AV	Front	1	SILVER MAPLE	Acer saccharinum
1539	MARYLAND AV	Front	1	VALLEY OAK	Quercus lobata
1615	MARYLAND AV	Front	1	VALLEY OAK	Quercus lobata
1710	MARYLAND AV	Front	1	MODESTO ASH	Fraxinus velutina 'Modesto'
1725	MARYLAND AV	Front	1	MODESTO ASH	Fraxinus velutina 'Modesto'
1725	MARYLAND AV	Front	2	MODESTO ASH	Fraxinus velutina 'Modesto'
1813	MARYLAND AV	Front	1	COAST REDWOOD	Sequoia sempervirens
1920	MARYLAND AV	Front	1	CHINESE ELM	Ulmus parvifolia
1926	MARYLAND AV	Front	1	CANARY ISLAND PINE	Pinus canariensis
1970	MARYLAND AV	Front	1	AMERICAN SWEETGUM	Liquidambar styraciflua
1621	PENNSYLVANIA AV	Front	1	LONDON PLANE	Platanus X hispanica
1621	PENNSYLVANIA AV	Front	2	LONDON PLANE	Platanus X hispanica
1563	VERMONT AV	Front	1	SIBERIAN ELM	Ulmus pumila
1564	VERMONT AV	Front	1	LONDON PLANE	Platanus X hispanica
1572	VERMONT AV	Front	1	LONDON PLANE	Platanus X hispanica
1580	VERMONT AV	Front	1	LONDON PLANE	Platanus X hispanica
1604	VERMONT AV	Front	1	LONDON PLANE	Platanus X hispanica
1608	VERMONT AV	Front	1	LONDON PLANE	Platanus X hispanica
1630	VERMONT AV	Front	1	DEODAR CEDAR	Cedrus deodara
1630	VERMONT AV	Front	2	DEODAR CEDAR	Cedrus deodara
1713	VERMONT AV	Front	1	SILVER MAPLE	Acer saccharinum



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<u>Height</u>	<u>Recommended</u>	<u>Parkway</u>	<u>Crown</u>	<u>Comments</u>	<u>Condition</u>	<u>Utility</u>
15-30	Grid/Routine Trim	3	20	None	Fair	No
45-60	Grid/Routine Trim	5	35	None	Fair	No
45-60	Grid/Routine Trim	5	35	None	Fair	No
45-60	Grid/Routine Trim	2	50	None	Fair	No
30-45	Grid/Routine Trim	4	40	None	Good	No
30-45	Grid/Routine Trim	3	65	None	Fair	No
45-60	Removal-Poorly Structured	3	40	None	Poor	Yes
45-60	Removal-Poorly Structured	3	40	None	Poor	Yes
45-60	Removal-Poorly Structured	3	40	None	Poor	Yes
15-30	Grid/Routine Trim	2	20	None	Poor	No
15-30	Removal-Poorly Structured	2	15	Decay	Poor	Yes
15-30	Grid/Routine Trim	2	15	None	Poor	Yes
45-60	Grid/Routine Trim	2	40	None	Fair	No
45-60	Grid/Routine Trim	2	35	None	Fair	No
45-60	Grid/Routine Trim	1	40	None	Fair	No
45-60	Grid/Routine Trim	2	25	None	Fair	No
45-60	Grid/Routine Trim	1	40	None	Fair	No
30-45	Grid/Routine Trim	2	20	Decay	Poor	No
30-45	Grid/Routine Trim	3	15	Decay	Poor	No
30-45	Grid/Routine Trim	3	20	None	Good	No
30-45	Grid/Routine Trim	1	40	None	Fair	No
45-60	Grid/Routine Trim	5	50	None	Fair	No
30-45	Grid/Routine Trim	6	30	None	Fair	No
30-45	Grid/Routine Trim	3	40	None	Fair	No
30-45	Grid/Routine Trim	1	35	None	Fair	No
30-45	Grid/Routine Trim	2	25	None	Fair	No
30-45	Grid/Routine Trim	2	25	None	Fair	No
30-45	Grid/Routine Trim	2	25	None	Fair	No
60+	Grid/Routine Trim	1	30	None	Good	No
30-45	Grid/Routine Trim	2	30	None	Fair	No
45-60	Grid/Routine Trim	2	25	None	Fair	No
45-60	Grid/Routine Trim	10	25	None	Good	No
30-45	Grid/Routine Trim	1	35	Decay	Fair	No
30-45	Grid/Routine Trim	1	32	None	Fair	No
45-60	Trim-Poorly Structured	2	35	None	Poor	No
45-60	Grid/Routine Trim	3	15	None	Fair	No
45-60	Grid/Routine Trim	2	55	None	Fair	No
45-60	Grid/Routine Trim	2	45	None	Fair	No
45-60	Grid/Routine Trim	3	35	None	Fair	No
45-60	Grid/Routine Trim	2	45	None	Fair	No
45-60	Grid/Routine Trim	2	45	None	Fair	No
45-60	Grid/Routine Trim	2	45	None	Fair	No
45-60	Trim-Poorly Structured	1	45	None	Poor	No

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1716	VERMONT AV	Front	1	LONDON PLANE	Platanus X hispanica
1717	VERMONT AV	Front	1	MONTEREY CYPRESS	Hesperocyparis macrocarpa
1733	VERMONT AV	Front	1	LITTLE LEAF LINDEN	Tilia cordata
1733	VERMONT AV	Front	2	LITTLE LEAF LINDEN	Tilia cordata
107	VIRGINIA AV	SIDE	1	LONDON PLANE	Platanus X hispanica
107	VIRGINIA AV	SIDE	2	LONDON PLANE	Platanus X hispanica
107	VIRGINIA AV	SIDE	3	LONDON PLANE	Platanus X hispanica
1509	VIRGINIA AV	Front	1	LONDON PLANE	Platanus X hispanica
1516	VIRGINIA AV	Front	1	ORNAMENTAL PEAR	Pyrus calleryana
1521	VIRGINIA AV	Front	1	LONDON PLANE	Platanus X hispanica
1521	VIRGINIA AV	SIDE	1	SILVER MAPLE	Acer saccharinum
1528	VIRGINIA AV	Front	1	SILVER MAPLE	Acer saccharinum
1531	VIRGINIA AV	Front	1	LONDON PLANE	Platanus X hispanica
1532	VIRGINIA AV	Front	1	LONDON PLANE	Platanus X hispanica
1546	VIRGINIA AV	Front	1	LONDON PLANE	Platanus X hispanica
1556	VIRGINIA AV	Front	1	LONDON PLANE	Platanus X hispanica
1559	VIRGINIA AV	Front	1	MODESTO ASH	Fraxinus velutina 'Modesto'
1571	VIRGINIA AV	Front	1	LONDON PLANE	Platanus X hispanica
1575	VIRGINIA AV	Front	1	LONDON PLANE	Platanus X hispanica
1600	VIRGINIA AV	Side	1	VALLEY OAK	Quercus lobata
1625	VIRGINIA AV	Front	4	LONDON PLANE	Platanus X hispanica
1633	VIRGINIA AV	Front	3	SOUTHERN MAGNOLIA	Magnolia grandiflora
1638	VIRGINIA AV	Front	3	SILVER MAPLE	Acer saccharinum
1811	VIRGINIA AV	Front	1	COAST REDWOOD	Sequoia sempervirens
1811	VIRGINIA AV	Front	2	COAST REDWOOD	Sequoia sempervirens

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15-30	Grid/Routine Trim	2	45	None	Fair	No
60+	Grid/Routine Trim	1	45	None	Fair	No
15-30	Grid/Routine Trim	3	30	None	Fair	No
15-30	Grid/Routine Trim	3	35	Decay	Fair	No
45-60	Grid/Routine Trim	2	50	None	Fair	Yes
45-60	Grid/Routine Trim	2	50	None	Fair	Yes
45-60	Grid/Routine Trim	2	50	None	Fair	Yes
30-45	Grid/Routine Trim	2	30	None	Fair	No
15-30	Grid/Routine Trim	3	15	None	Fair	No
45-60	Grid/Routine Trim	1	40	None	Fair	No
45-60	Grid/Routine Trim	1	35	None	Fair	No
45-60	Grid/Routine Trim	3	40	None	Fair	No
45-60	Grid/Routine Trim	1	50	None	Fair	No
45-60	Grid/Routine Trim	2	50	None	Fair	Yes
45-60	Grid/Routine Trim	2	45	None	Fair	No
45-60	Grid/Routine Trim	2	35	None	Fair	No
15-30	Grid/Routine Trim	2	15	Decay	Poor	No
45-60	Grid/Routine Trim	2	30	None	Fair	No
45-60	Grid/Routine Trim	2	35	None	Fair	No
30-45	Grid/Routine Trim	2	35	None	Fair	Yes
30-45	Grid/Routine Trim	3	25	None	Fair	No
30-45	Grid/Routine Trim	3	25	None	Fair	No
15-30	Removal-Diseased or Declining	3	15	Decay	Poor	No
60+	Grid/Routine Trim	1	25	None	Fair	No
60+	Grid/Routine Trim	1	25	None	Fair	No

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CONCLUSIONS AND DISCUSSION

I performed the inspection of the 65 pre-determined sites, whilst I noticed that at 3 different locations there was an adjacent tree that appeared it would be impacted by the proposed hardscape improvements as well. The addresses of these locations are 1725 Maryland Ave., 1819 Delaware Ave., and 1811 Virginia Ave. The total of potentially impacted trees is currently at a count of 68 trees total.

Of the 68 trees inspected I have recommended 5 trees for removal to grade level due to their location under high voltage lines, poor structure of the crown causing a hazardous condition (4), and declining health (1). The locations of the subject trees are 3 London Plane (*Platanus acerfolia*) trees at 1529 Alameda Blvd., 1 Box Elder (*Acer negundo*) tree located at 1911 Carolina Ave., and 1 Silver Maple (*Acer saccharinum*) at 1638 Virginia Ave.

There are 2 trees on Vermont Ave. that I have recommended more than routine pruning due to their poor structure of the crown causing a hazardous condition. The locations of the subject trees are a Siberian Elm (*Ulmus pumila*) at 1563 Vermont Ave., and a Silver Maple (*A. saccharinum*) at 1713 Vermont Ave.

The remaining 61 trees are recommended for routine maintenance/grid trimming. At the time of inspection there were no significant structural defects or a decline in vigor. It should be noted that this inspection is a preliminary assessment prior to construction. The City of West Sacramento has informed me that they will provide specifications (site plans) of the proposed hardscape improvements for each individual tree site. Any further recommendations to mitigate root damage will need to be made on a case by case basis.

Thank you for the opportunity to assist you in your tree assessment needs. If there are any questions or concerns feel free to contact me directly at (916) 417-1979.

Respectfully,

Kelley Gilleran
ISA Board Certified Master Arborist #WE7061-B
ISA Qualified Tree Risk Assessor #1541



ASSUMPTIONS AND LIMITING CONDITIONS

1. Care has been taken to obtain all information from reliable sources. All data has been verified insofar as possible; however, the Consultant can neither guarantee nor be responsible for the accuracy of information provided by others.
2. The Consultant will not be required to give testimony or to attend court by reason of this report unless subsequent contractual arrangements are made, including payment of an additional fee for such services as described in the fee schedule and contract of engagement.
3. Loss or alteration of any part of this report invalidates the entire report.
4. Possession of this report or a copy thereof does not imply right of publication or use for any purpose by any other than the person to whom it is addressed, without the prior written consent of the Consultant.
5. This report and any values expressed herein represent the opinion of the Consultant, and the Consultant's fee is in no way contingent upon the reporting of a stipulated result, a specified value, the occurrence of a subsequent event, nor upon any finding to be reported.
6. Unless expressed otherwise: 1) information contained in this report covers only those items that were examined and reflects the condition of those items at the time of inspection; and 2) the inspection is limited to visual examination of accessible items without dissection, excavation, or coring. There is no warranty or guarantee, expressed or implied, that problems or deficiencies of the tree(s) or property in question may not arise in the future.
7. Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the beauty and health of trees, and attempt to reduce the risk of living near trees. It is highly recommended that you follow the arborist recommendations; however, you may choose to accept or disregard the recommendations and/or seek additional advice.
8. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specific period of time. Likewise, remedial treatments performed cannot be guaranteed.
9. Any recommendations and/or performed treatments (including, but not limited to, pruning or removal) of trees may involve considerations beyond the scope of the arborist's services, such as property boundaries, property ownership, site lines, disputes between neighbors, and any other related issues. Arborists cannot take such considerations into account unless complete and accurate information is disclosed to the arborist. An arborist can then be expected to consider and reasonably rely on the completeness and accuracy of the information provided.
10. Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. Trees carry risk. The only way to eliminate all risks associated with trees is to eliminate all trees.

Appendix B
Biological Resources Information

Special-Status Species List

1
2

Table 3.4–1
Special-status Species Known to Occur in or near the Project Area

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
Plants						
Astragalus tener var. ferrisiae Ferris’ milk-vetch	-	-	1B.1	-	Meadows and seeps, valley and foothill grassland. Subalkaline flats on overflow land in the Central Valley; usually seen in dry, adobe soil. 5-75 meters. Blooms April through May.	None. Suitable meadow and seep, valley and foothill grassland is absent from the project area. One CNDDDB occurrence is approximately 4 miles east of the project area.
Astragalus tener var. tener Alkali milk-vetch	-	-	1B.2	-	Playas, valley and foothill grasslands in adobe clay, wetlands, vernal pools. Alkaline soils. 1-60 meters. Blooms March through June.	None. Suitable playa, valley and foothill grassland, and wetland habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
Atriplex cordulata var. cordulata heartscale	-	-	1B.2	-	Chenopod scrub, valley and foothill grassland, meadows and seeps. Alkaline flats and scalds in the Central Valley, sandy soils. 3-275 meters. Blooms April through October.	None. Suitable scrub, valley and foothill grassland, meadow and seep habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
Atriplex depressa brittlescale	-	-	1B.2	-	Chenopod scrub, meadows and seeps, playas, valley and foothill grassland, vernal pools. Usually in alkali scalds or alkaline clay in meadows or annual grassland. 1-325 meters. Blooms April through October.	None. Suitable scrub, meadow and seep, playa, valley and foothill grassland, and vernal pool habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
Carex comosa bristly sedge	-	-	2B.1	-	Wetlands along lake-margins (marshes and swamps), coastal prairie, valley and foothill grasslands. 1-625 meters. Blooms May through September.	None. Suitable wetland, prairie, valley and foothill grassland habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Centromadia parryi</i> ssp. <i>parryi</i> pappose tarplant	-	-	1B.2	-	Chaparral, coastal prairie, meadows and seeps, coastal salt marsh, valley and foothill grassland. Vernal mesic, often alkaline sites. 2-420 meters. Blooms May through November.	None. Suitable chaparral, prairie, meadow and seep, marsh, valley and foothill grassland habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Chloropyron palmatum</i> palmate-bracted salty bird's-beak	FE	SE	1B.1	-	Chenopod scrub, valley and foothill grassland. Usually on Pescadero silty clay which is alkaline, with <i>Distichlis</i> , <i>Frankenia</i> , etc. 5-155 meters. Blooms May through October.	None. Suitable scrub, valley and foothill grassland habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Cuscuta obtusiflora</i> var. <i>glandulosa</i> Peruvian dodder	-	-	2B.2	-	Marshes and swamps (freshwater). Freshwater marsh. 15-280 meters. Blooms July through October.	None. Suitable marsh and swamp habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Downingia pusilla</i> Dwarf downingia	-	-	2B.2	-	Valley and foothill grassland, vernal pools, foothill woodland, freshwater wetlands. 1-445 meters. Blooms March through May.	None. Suitable valley and foothill grassland, vernal pool, woodland and wetland habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Eryngium jepsonii</i> Jepson's coyote thistle	-	-	1B.2	-	Valley and foothill grassland, vernal pools. Clay soils. 3-300 meters. Blooms April through August.	None. Suitable valley and foothill grassland and vernal pool habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Extriplex joaquinana</i> San Joaquin spearscale	-	-	1B.2	-	Chenopod scrub, alkali meadow, playas, valley and foothill grassland. In seasonal alkali wetlands or alkali sink scrub with <i>Distichlis spicata</i> , <i>Frankenia</i> , etc. 0-800 meters. Blooms April through October.	None. Suitable scrub, meadow, playa, valley and foothill grassland is absent from the project area. No CNDDDB records within 5 miles of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Fritillaria agrestis</i> stinkbells	-	-	4.2	-	Clay, often vertic, occasionally serpentine soils in chaparral, valley grassland, and foothill woodland habitats. 0-500 meters. Blooms March through June.	None. Suitable clay, chaparral, valley grassland and foothill woodland habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Gratiola heterosepala</i> Boggs Lake hedge-hyssop	-	SE	1B.2	-	Marshes and swamps (lake margins), vernal pools. 10-2,375 meters. Blooms April through August.	None. Suitable marsh, swamp and vernal pool habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i> woolly rose-mallow	-	-	1B.2	-	Marshes and swamps (freshwater). Moist, freshwater-soaked river banks and low peat islands in sloughs; can also occur on riprap and levees. In California, known from the delta watershed. 0-155 meters. Blooms June through September.	None. Suitable marsh and swamp habitat is absent from the project area. One CNDDDB occurrence is approximately 3 miles south of the project area.
<i>Juglans hindsii</i> Northern California black walnut	-	-	1B.1	-	Perennial deciduous tree found in riparian forest and riparian woodland. 0-440 meters. Blooms April through May.	None. Riparian forest and riparian woodland habitat is absent from the project area. Additionally, no <i>Juglans hindsii</i> species were identified during the arborist field surveys. No CNDDDB records within 5 miles of the project area.
<i>Legenere limosa</i> legenere	-	-	1B.1	-	Wetlands, vernal pools, valley grassland, wetland-riparian. 1-880 meters. Blooms April through June.	None. Suitable wetland, vernal pool, valley grassland, and wetland-riparian habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Lepidium latipes</i> var. <i>heckardii</i> Heckard's pepper-grass	-	-	1B.2	-	Wetlands, valley grassland, wetland-riparian. 2-200 meters. Blooms March through May.	None. Suitable wetland, valley grassland, and wetland-riparian habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	-	-	1B.1	-	Marshes and swamps (brackish or freshwater), riparian scrub. 0-10 meters. Blooms April through November.	None. Suitable marsh, swamp, and riparian scrub habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	-	-	1B.1	-	Cismontane woodland, meadows and seeps, vernal pools, valley and foothill grassland, lower montane coniferous forest. Vernal pools and swales; adobe or alkaline soils. 3-1,680 meters. Blooms April through July.	None. Suitable woodland, meadow and seep, vernal pool, valley and foothill grassland, and forest habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Neostapfia colusana</i> Colusa grass	FT	SE	1B.1	-	Vernal pools, wetlands, valley grassland, wetland-riparian. 5-200 meters. Blooms May through August.	None. Suitable vernal pool, wetland, valley grassland, and wetland-riparian habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Plagiobothrys hystriculus</i> bearded popcornflower	-	-	1B.1	-	Wetlands, vernal pools, valley grassland, wetland-riparian. 0-274 meters. Blooms April through May.	None. Suitable wetland, vernal pool, valley grassland, and wetland-riparian habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Puccinellia simplex</i> California alkali grass	-	-	1B.2	-	Meadows and seeps, chenopod scrub, valley and foothill grasslands, vernal pools. Alkaline, vernal mesic. Sinks, flats, and lake margins. 1-915 meters. Blooms March through May.	None. Suitable meadow and seep, chenopod scrub, valley and foothill grassland, and vernal pool habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Sagittaria sanfordii</i> Sanford's arrowhead	-	-	1B.2	-	Marshes and swamps. 0-650 meters. Blooms May through November.	None. Suitable marsh and swamp habitat is absent from the project area. Three CNDDDB occurrences are approximately 4 and 5 miles northeast, and 3.5 miles southeast of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Symphyotrichum lentum</i> Suisun Marsh aster	-	-	1B.2	-	Marshes and swamps (brackish and freshwater). 0-3 meters. Blooms April through November.	None. Suitable marsh and swamp habitat is absent from the project area. One CNDDDB occurrence is approximately 3.5 miles southeast of the project area.
<i>Trifolium hydrophilum</i> Saline clover	-	-	1B.2	-	Marshes and swamps, valley and foothill grasslands, vernal pools. Elevation 0-300 meters. Blooms April through June.	None. Suitable marsh and swamp, valley and foothill grassland, and vernal pool habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Tuctoria mucronata</i> Crampton's tuctoria or Solano grass	FE	SE	1B.1	-	Valley and foothill grassland, vernal pools. Elevation 5-10 meters. Blooms April through August.	None. Suitable valley and foothill grassland, and vernal pool habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
Natural Communities						
Elderberry Savanna	-	-	-	-	An open, grassy, woodland area dominated by elderberry shrubs.	None. Suitable grassy woodlands are absent from the project area. No elderberry plants are present within the project area. One CNDDDB occurrence is approximately 1.7 miles northeast of the project area.
Great Valley Cottonwood Riparian Forest	-	-	-	-	Riparian woodland dominated by Fremont cottonwood (<i>Populus fremontii</i>).	None. Suitable riparian woodlands dominated by Fremont cottonwood are absent from the project area. One CNDDDB occurrence is approximately 1.7 miles northeast of the project area.
Northern Claypan Vernal Pool	-	-	-	-	Seasonal wetlands that pond water for short periods during the winter and early spring due to an impermeable, subsurface layer that retards percolation.	None. Suitable vernal pool habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
Northern Hardpan Vernal Pool				-	Seasonal wetlands that pond water for short periods during the winter and early spring due to an impermeable, subsurface layer that retards percolation.	None. Suitable vernal pool habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
Invertebrates						
<i>Bombus crotchii</i> Crotch bumble bee	-	SA	-	-	Open grassland and scrub habitats. Nests underground. Forages on plants from the genera <i>Asclepias</i> , <i>Chaenactis</i> , <i>Lupinus</i> , <i>Medicago</i> , <i>Phacelia</i> , and <i>Salvia</i> .	None. Suitable grassland and scrub habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Bombus occidentalis</i> Western bumble bee	-	SA	-	-	Open grassy areas, urban parks and gardens, chaparral, shrub areas, and mountain meadows. Typically nests underground in abandoned rodent burrows or other cavities. Flight period for queens typically extends from early February to late November; flight period for workers and males occurs from April to early November, peaking from early August to early September.	Possible. Suitable foraging habitat exists within the landscaped areas in the project area, and nests could occur in rodent burrows or other cavities within the project area. No CNDDDB records within 5 miles of the project area.
<i>Branchinecta conservation</i> Conservancy fairy shrimp	FE	-	-	-	Endemic to the grasslands of the northern two-thirds of the Central Valley; found in large, turbid pools. Inhabit astatic pools located in swales formed by old, braided alluvium; filled by winter/spring rains, last until June.	None. Suitable grassland and aquatic habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	FT	-	-	-	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	None. Suitable grasslands with vernal pools are absent from the project area. No CNDDDB records within 5 miles of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Branchinecta mesovallensis</i> Midvalley fairy shrimp	-	-	-	-	Often found in small, short-lived vernal pools and grass-bottomed swales ranging from 4 to 663 square feet. Found in Sacramento, San Joaquin, Yolo, Alameda, Merced, Madera, and Fresno counties.	None. Suitable aquatic habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Cicindela hirticollis abrupta</i> Sacramento Valley tiger beetle	-	-	-	-	Requires fine sand and terraced floodplain habitat with low sandy water edge bars. Sensitive to disturbance. Limited to a few sites along the Sacramento and Feather Rivers, most commonly near Nicolaus in Sutter County.	None. Suitable fine sand and terraced floodplain habitat is absent from the project area. One CNDDDB record is approximately 0.2 mile east of the project area.
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	FT	-	-	-	Occurs only in the Central Valley of California, in association with blue elderberry (<i>Sambucus mexicana</i>). Prefers to lay eggs in elderberries 2-8 inches in diameter; some preference shown for “stressed” elderberries.	None. No blue elderberry were present in the project area. Numerous CNDDDB records are within 5 miles of the project area with the nearest record documented directly east of the project area border. Note: the CNDDDB states that this occurrence serves as a placeholder as the exact location of collected beetle is unknown (CNDDDB 2019).
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	FE	-	-	-	Inhabits vernal pools and swales in the Sacramento Valley containing clear to highly turbid water. Pools commonly found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid.	None. Suitable aquatic habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Linderiella occidentalis</i> California linderiella	-	SA	-	-	Occurs in seasonal pools (vernal pools) in unplowed grasslands with old alluvial soils underlain by hardpan or heavy clay or in sandstone depressions. Tolerant of wide temperature range and pool size.	None. Suitable aquatic habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
Amphibians and Reptiles						
Ambystoma californiense California tiger salamander	FT	ST	-	-	Central Valley distinct population segment (DPS) federally listed as threatened. Santa Barbara and Sonoma counties DPS federally listed as endangered. Need underground refuges, especially ground squirrel burrows, and vernal pools or other seasonal water sources for breeding.	None. Suitable vernal pool or other seasonal water sources are absent from the project area. No CNDDDB records within 5 miles of the project area.
Emys marmorata western pond turtle	-	SSC	-	-	An aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches, usually with aquatic vegetation, below 6,000 feet elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 kilometer from water for egg-laying.	None. Suitable aquatic habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
Rana draytonii California red-legged frog	FT	SSC	-	-	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	None. Suitable lowland, foothill, and aquatic habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
Thamnophis gigas giant gartersnake	FT	ST	-	-	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches. This is the most aquatic of the gartersnakes in California.	None. Suitable freshwater marsh and stream habitat is absent from the project area. The nearest CNDDDB record is documented approximately 4.5 miles north of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
Fish						
Archoplites interrptus Sacramento perch	-	SSC	-	-	Sloughs, slow moving rivers, large lakes of the Central Valley.	None. Suitable aquatic habitat is absent from the project area. The nearest CNDDDB record is documented approximately 3.7 miles south of the project area.
Hypomesus transpacificus Delta smelt	FT	SE	-	-	Sacramento-San Joaquin Delta. Seasonally in Suisun Bay, Carquinez Strait and San Pablo Bay. Seldom found at salinities > 10 parts per thousand (ppt). Most often at salinities < 2ppt.	None. Suitable aquatic habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
Oncorhynchus mykiss irideus steelhead – Central Valley DPS	FT	-	-	-	Populations in the Sacramento and San Joaquin Rivers and their tributaries.	None. Suitable aquatic habitat is absent from the project area. The nearest CNDDDB record is documented directly east of the project area in the Sacramento River and directly south of the project area in the deepwater ship channel.
Oncorhynchus tshawytscha population 6 Chinook salmon – Central Valley spring-run Evolutionary Significant Unit (ESU)	FT	ST	-	-	Naturally-spawning populations found in reaches of upper Sacramento River, Antelope Creek, Battle Creek, Beegum Creek, Big Chico Creek, Butte Creek, Clear Creek, Deer Creek, Feather River, Mill Creek, and the Yuba River.	None. Suitable aquatic habitat is absent from the project area. The nearest CNDDDB record is documented directly south of the project area in the deepwater ship channel.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Oncorhynchus tshawytscha</i> population 7 Chinook salmon – Sacramento River winter-run ESU	FE	SE	-	-	Populations in the Sacramento River and its tributaries.	None. Suitable aquatic habitat is absent from the project area. The nearest CNDDDB record is documented directly south of the project area in the deepwater ship channel.
<i>Pogonichthys macrolepidotus</i> Sacramento splittail	-	SSC	-	-	Largely confined to the Delta, Suisun Bay, Suisun Marsh, Napa River, Petaluma River, and other parts of the San Francisco Estuary, while spawning on upstream floodplains and channel edges. A small populations may live or migrate to the Sacramento River.	None. Suitable aquatic habitat is absent from the project area. The nearest CNDDDB record is documented directly east of the project area in the Sacramento River.
<i>Spirinchus thaleichthys</i> longfin smelt	Candidate	ST, SSC	-	-	Euryhaline, nektonic and anadromous. Found in open waters of estuaries, mostly in middle or bottom of water column. Prefer salinities of 15-30 ppt, but can be found in completely fresh water to almost pure seawater.	None. Suitable aquatic habitat is absent from the project area. The nearest CNDDDB record is documented directly east of the project area in the Sacramento River.
Birds						
<i>Accipiter cooperii</i> Cooper's hawk	-	WL	-	-	Breeds and forages in extensive forests and smaller woodlots of deciduous, coniferous, and mixed pine-hardwoods, as well as in pine plantations, in both suburban and urban habitats.	Possible. Suitable nesting and foraging habitat is present throughout the project area. Two CNDDDB records are documented approximately 2.7 miles and 4 miles northeast of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Agelaius tricolor</i> tricolored blackbird	-	ST	-	-	Highly colonial species, most numerous in Central Valley and vicinity. Largely endemic to California. Nests in freshwater marshes with tules or cattails, or in other dense thorny vegetation such as thistle, blackberry thickets, etc. Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of the colony.	None. Suitable marsh or thorny vegetation is absent from the project area. The nearest CNDDDB record is documented approximately 1.3 miles east of the project area.
<i>Ammodramus savannarum</i> Grasshopper sparrow	-	SSC	-	-	Primarily a summer resident from March to September in California. Occurs in dry, dense grasslands and prefers grasslands with a variety of grasses and tall forbs and shrubs for perches.	None. Suitable grassland habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Ardea alba</i> Great egret	-	SA (nesting colony only)	-	-	Found in both fresh and saltwater habitats, this species wades in shallow water to hunt fish, frogs, and other small aquatic animals.	Not Expected. Marginal nesting habitat exists within the trees in the project area. No CNDDDB records within 5 miles of the project area.
<i>Ardea herodias</i> Great blue heron	-	SA (nesting colony only)	-	-	Usually nests in trees, but also on large bushes, poles, reedbeds, and even on the ground. Frequents a wide range of wetland habitats at other times of year.	Not Expected. Marginal nesting habitat exists within the trees in the project area. The nearest CNDDDB record of a rookery is documented approximately 3 miles northeast of the project area.
<i>Athene cunicularia</i> Burrowing owl	-	SSC	-	-	Typically breeds in open, treeless areas within grassland but will also utilize agricultural fields, golf courses, airports, vacant urban lots and fairgrounds. Utilize man-made objects for burrows such as road culverts, construction pipes, artificial burrows, and rubble/rock piles.	None. Suitable grassland, agricultural lands, golf courses, airports, vacant urban lots and fairgrounds are absent from the project area. The nearest CNDDDB record is documented approximately 1.8 miles northwest of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Aquila chrysaetos</i> Golden eagle	-	SFP	-	-	Broad expanses of open country are required for hunting while nesting primarily occurs in rugged mountainous areas with large trees or on cliffs (and sometimes in wetland, riparian and estuarine habitats).	None. Suitable open and mountainous areas are absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Buteo regalis</i> Ferruginous hawk	-	WL	-	-	Winters in open grasslands, sagebrush flats, desert scrub, low foothills, and fringes of pinyon-juniper habitats. Mostly eats lagomorphs, ground squirrels, and mice. Population trends may follow lagomorph population cycles.	None. Suitable habitat is not present in the project area. No CNDDDB records within 5 miles of the project area.
<i>Buteo swainsoni</i> Swainson's hawk	-	ST	-	-	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannahs, and agricultural or ranch lands with groves or lines of trees. Requires adjacent suitable foraging areas such as grasslands, or alfalfa or grain fields supporting rodent populations.	Possible. Suitable nesting habitat is present within the southwestern portion of the project area. Numerous CNDDDB occurrences are located within 5 miles of the project area; the nearest CNDDDB occurrence is less than 0.5 miles east of the project area.
<i>Charadrius alexandrinus nivosus</i> Western snowy plover	FT	SSC	-	-	Ground nesting bird found primarily on unvegetated to sparsely vegetated coastal beaches and shores of inland alkaline lakes.	None. Suitable beach and lake habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Charadrius montanus</i> Mountain plover	-	SSC	-	-	Winters in tilled fields, heavily grazed annual grasslands, or burned fields in the Central, Imperial and San Joaquin valleys.	None. Suitable field, grassland, and burned field habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	FT	SE	-	-	Riparian forest nester, along the broad, lower flood-bottoms of larger river systems. Nests in riparian jungles of willow, often mixed with cottonwoods, with lower story of blackberry, nettles, or wild grape.	None. Suitable riparian habitat is absent from the project area. A CNDDDB record encompasses a wide portion of the Sacramento area, including the project area.
<i>Egretta thula</i> Snowy egret	-	SA (nesting colony only)	-	-	Found along the shores of coastal estuaries, fresh and saline emergent wetlands, ponds, slow-moving rivers, irrigation ditches, and wet fields. Feeds in shallow waters and nests in dense marshes or low trees on stick nests.	None. Suitable aquatic habitat for nesting is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Elanus leucurus</i> White-tailed kite	-	SFP	-	-	Rolling foothills and valley margins with scattered oaks and river bottomlands or marshes next to deciduous woodland. Open grasslands, meadows, or marshes for foraging close to isolated, dense-topped trees for nesting and perching.	Possible. Suitable nesting habitat is present within the trees in the project area. One 2017 CNDDDB record documented a nest in a large oak tree in the backyard of a residence on the south side of 19 th street between Pennsylvania Avenue and Alabama Avenue.
<i>Falco columbaris</i> merlin	-	WL	-	-	Coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, and edges; utilizes a wide range of habitats at low elevations near trees and water. Uncommon winter migrant in California and does not breed in California.	Not Expected. The project area provides a suitable prey base (small birds) for this species; however, this species is fairly uncommon in California. No CNDDDB records within 5 miles of the project area.
<i>Haliaeetus leucocephalus</i> bald eagle	DL	SE, SFP	-	-	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Roosts communally in winter.	None. Suitable ocean, lake, and river habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Laterallus jamaicensis coturniculus</i> California black rail	-	ST, SFP	-	-	Inhabits freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat.	None. Suitable freshwater marsh is absent from the project area. The nearest CNDDDB record is documented approximately 3 miles southwest of the project area.
<i>Melospiza melodia</i> song sparrow "Modesto" population	-	SSC	-	-	Nests in freshwater marshes with emergent vegetation, willow stands, and riparian oak woodlands with understory of dense thorny vegetation such as blackberry brambles.	None. Suitable freshwater marsh and riparian oak woodlands are absent from the project area. A CNDDDB record encompasses a wide portion of the Sacramento area, including the project area.
<i>Nycticorax nycticorax</i> Black-crowned night heron	-	SA (nesting colony only)	-	-	Lowlands and foothills throughout California. Forages along edges of water. Nests and roosts in dense-foliaged trees and dense emergent wetlands.	Not Expected. Marginal nesting habitat exists in the trees in the project area for this species. No CNDDDB records within 5 miles of the project area.
<i>Phalacrocorax auritus</i> Double-crested cormorant	-	WL	-	-	Coast of California and on inland lakes, fresh, salt, and estuarine waters. Rare to fairly common in lakes and rivers in Central Valley. Roosts and nests near water.	None. Suitable lake and estuarine habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.
<i>Plegadis chihi</i> White-faced ibis	-	WL	-	-	Forages in fresh emergent wetland, shallow lacustrine waters, muddy ground of wet meadows, and irrigated or flooded pastures or croplands. Nests in dense, fresh emergent wetlands.	None. Suitable wetland, lacustrine, meadow, pasture and cropland habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Progne subis</i> purple martin	-	SSC	-	-	Forage over towns, cities, parks, open fields, dunes, streams, wet meadows, beaver ponds, and other open areas. In Sacramento, martins nest under long overpasses and elevated freeways, entering through “weep holes” on the undersides of structures.	Possible. Foraging is possible over project area, but nesting is not expected. Numerous CNDDDB occurrences are located within 5 miles of the project area; the nearest CNDDDB occurrence is approximately 1.5 miles northeast of the project area.
<i>Riparia riparia</i> bank swallow	-	ST	-	-	Colonial nester; nests primarily in riparian and other lowland habitats west of the desert. Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	None. Suitable riparian and bank/cliff habitat is absent from the project area. The nearest CNDDDB record is documented approximately 4.5 miles northeast of the project area.
<i>Vireo bellii pusillus</i> Least Bell’s vireo	FE	SE	-	-	Utilizes dense brush, mesquite, willow-cottonwood forest, streamside thickets, scrub oak, moist woodland, scattered cover and hedgerows in cultivated areas, riparian woodlands. Nests in shrubs or low trees. Historically an abundant breeder throughout Central Valley; however, it is now possibly extirpated from this area.	None. Suitable riparian habitat is absent from the project area. The nearest CNDDDB record is documented approximately 1.2 miles north of the project area.
<i>Xanthocephalus xanthocephalus</i> Yellow-headed blackbird	-	SSC	-	-	Breed almost exclusively in marshes with tall emergent vegetation in open areas and edges over relatively deep water. Forage near breeding sites or in uplands, agricultural fields. Occurs primarily as a migrant and summer resident in California from April to early October; breeds from mid-April to late July. Small numbers winter in the southern Central Valley. A few colonies may be present in Yolo County.	None. Suitable marsh habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
Mammals						
<i>Antrozous pallidus</i> pallid bat	-	SSC	-	High priority	Found in a variety of habitats including deserts, grasslands, shrublands, woodlands and forests. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Possible. Suitable roosting habitat is present within the trees within the project area, and foraging habitat within the neighborhood is present. No CNDDDB records within 5 miles of the project area.
<i>Lasionycteris noctivagans</i> Silver-haired bat	-	SA	-	Medium priority	Coastal and montane forests, valley foothill woodlands, pinyon-juniper woodlands, and montane riparian habitats.	Possible. The riparian area directly south of the project area provides suitable roosting habitat for this species; however, this species would only be expected to use the project area for foraging. No CNDDDB records within 5 miles of the project area.
<i>Lasiurus blossevillii</i> Western red bat	-	SSC	-	High priority	Found primarily in riparian and wooded habitats; occurs at least seasonally in urban areas; day roots in trees within the foliage. Found in fruit orchards and sycamore riparian habitats in the Central Valley.	Possible. Suitable roosting habitat is present within the trees in the project area, and foraging habitat within the neighborhood is present. No CNDDDB records within 5 miles of the project area.
<i>Lasiurus cinereus</i> Hoary bat	-	SA	-	Medium priority	Found in open habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Requires water.	Possible. Suitable roosting habitat is present within the trees in the project area, and foraging habitat within the neighborhood is present. The nearest CNDDDB record is documented within the project area.

Name	Status				Habitat and Flowering Period	Potential to Occur in the Project Area
	Federal	State	CNPS	WBWG		
<i>Taxidea taxus</i> American badger	-	SSC	-	-	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient prey (fossorial rodents) source, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	None. Suitable open habitat is absent from the project area. No CNDDDB records within 5 miles of the project area.

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U.S. Fish and Wildlife Service (USFWS) Federal Listing Categories:		California Department of Fish and Wildlife (CDFW) State Listing Categories:	
Candidate	Federal Candidate for Listing	SE	State listed as Endangered
DL	Federally Delisted	SFP	State Fully Protected Species
FE	Federally Listed as Endangered	SR	State listed as Rare
FT	Federally listed as Threatened	SSC	Species of Special Concern
-	No Listing	ST	State listed as Threatened
		WL	Watch List
		SA	“Specials Animals” is a broad term used to refer to all the animal taxa tracked by the CNDDDB, regardless of their legal or protection status. This list is also referred to as the list of “species at risk” or “special status species” (CDFW 2018). Criteria used to define a special animals can be found in CDFW’s CNDDDB Special Animals List (CDFW 2018).
		-	No Listing
California Native Plant Society (CNPS) Listing Categories			
1A	Presumed extirpated or extinct in California	4.2	Limited distribution or infrequent throughout a broader area in California; fairly threatened in California
1B.1	Rare, threatened, or endangered in California and elsewhere; seriously threatened in California		
1B.2	Rare, threatened, or endangered in California and elsewhere; fairly threatened in California		
2B.1	Rare, threatened, or endangered in California, but more common elsewhere; seriously threatened in California		
2B.2	Rare, threatened, or endangered in California, but more common elsewhere; fairly threatened in California		
Western Bat Working Group			
High priority	Imperiled or at high risk of imperilment.		
Moderate priority	Level of concern that should warrant closer evaluation, more research, and conservation actions of both the species and possible threats.		
Low priority	While there may be localized concerns, the overall status of the species is believed to be secure.		
Special-status Species Potential to Occur Criteria			
None	Indicates that the area contains a complete lack of suitable habitat, the local range for the species is restricted, and/or the species is extirpated in this region.		

Not Expected	Indicates situations where suitable habitat or key habitat elements may be present but may be of poor quality or isolated from the nearest extant occurrences. Habitat suitability refers to factors such as elevation, soil chemistry and type, vegetation communities, microhabitats, and degraded/substantially altered habitats.
Possible	Indicates the presence of suitable habitat or key habitat elements that potentially support the species.
Present	Indicates that either the target species was observed directly or its presence was confirmed by diagnostic signs during field investigations or in previous studies in the area.

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CNDDB Species List



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad< IS (Sacramento West (3812155) OR Sacramento East (3812154) OR Clarksburg (3812145) OR Florin (3812144) OR Rio Linda (3812164) OR Davis (3812156) OR Grays Bend (3812166) OR Taylor Monument (3812165) OR Saxon (3812146))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Accipiter cooperii</i> Cooper's hawk	ABNKC12040	None	None	G5	S4	WL
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Candidate Endangered	G2G3	S1S2	SSC
<i>Ammodramus savannarum</i> grasshopper sparrow	ABPBXA0020	None	None	G5	S3	SSC
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G5	S3	SSC
<i>Archoplites interruptus</i> Sacramento perch	AFCQB07010	None	None	G2G3	S1	SSC
<i>Ardea alba</i> great egret	ABNGA04040	None	None	G5	S4	
<i>Ardea herodias</i> great blue heron	ABNGA04010	None	None	G5	S4	
<i>Astragalus tener</i> var. <i>ferrisiae</i> Ferris' milk-vetch	PDFAB0F8R3	None	None	G2T1	S1	1B.1
<i>Astragalus tener</i> var. <i>tener</i> alkali milk-vetch	PDFAB0F8R1	None	None	G2T1	S1	1B.2
<i>Athene cunicularia</i> burrowing owl	ABNSB10010	None	None	G4	S3	SSC
<i>Atriplex cordulata</i> var. <i>cordulata</i> heartscale	PDCHE040B0	None	None	G3T2	S2	1B.2
<i>Atriplex depressa</i> brittlescale	PDCHE042L0	None	None	G2	S2	1B.2
<i>Bombus crotchii</i> Crotch bumble bee	IIHYM24480	None	None	G3G4	S1S2	
<i>Bombus occidentalis</i> western bumble bee	IIHYM24250	None	None	G2G3	S1	
<i>Branchinecta conservatio</i> Conservancy fairy shrimp	ICBRA03010	Endangered	None	G2	S2	
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Branchinecta mesovallensis</i> midvalley fairy shrimp	ICBRA03150	None	None	G2	S2S3	
<i>Buteo regalis</i> ferruginous hawk	ABNKC19120	None	None	G4	S3S4	WL



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Buteo swainsoni</i> Swainson's hawk	ABNKC19070	None	Threatened	G5	S3	
<i>Carex comosa</i> bristly sedge	PMCYP032Y0	None	None	G5	S2	2B.1
<i>Centromadia parryi ssp. parryi</i> pappose tarplant	PDAST4R0P2	None	None	G3T2	S2	1B.2
<i>Charadrius alexandrinus nivosus</i> western snowy plover	ABNNB03031	Threatened	None	G3T3	S2S3	SSC
<i>Charadrius montanus</i> mountain plover	ABNNB03100	None	None	G3	S2S3	SSC
<i>Chloropyron palmatum</i> palmate-bracted bird's-beak	PDSCR0J0J0	Endangered	Endangered	G1	S1	1B.1
<i>Cicindela hirticollis abrupta</i> Sacramento Valley tiger beetle	IICOL02106	None	None	G5TH	SH	
<i>Coccyzus americanus occidentalis</i> western yellow-billed cuckoo	ABNRB02022	Threatened	Endangered	G5T2T3	S1	
<i>Cuscuta obtusiflora var. glandulosa</i> Peruvian dodder	PDCUS01111	None	None	G5T4?	SH	2B.2
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S2	
<i>Downingia pusilla</i> dwarf downingia	PDCAM060C0	None	None	GU	S2	2B.2
<i>Egretta thula</i> snowy egret	ABNGA06030	None	None	G5	S4	
<i>Elanus leucurus</i> white-tailed kite	ABNKC06010	None	None	G5	S3S4	FP
<i>Elderberry Savanna</i> Elderberry Savanna	CTT63440CA	None	None	G2	S2.1	
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Eryngium jepsonii</i> Jepson's coyote-thistle	PDAP10Z130	None	None	G2	S2	1B.2
<i>Extriplex joaquinana</i> San Joaquin spearscale	PDCHE041F3	None	None	G2	S2	1B.2
<i>Falco columbarius</i> merlin	ABNKD06030	None	None	G5	S3S4	WL
<i>Fritillaria agrestis</i> stinkbells	PMLIL0V010	None	None	G3	S3	4.2
<i>Gratiola heterosepala</i> Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
<i>Great Valley Cottonwood Riparian Forest</i> Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	G2	S2.1	



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i> woolly rose-mallow	PDMAL0H0R3	None	None	G5T3	S3	1B.2
<i>Juglans hindsii</i> Northern California black walnut	PDJUG02040	None	None	G1	S1	1B.1
<i>Lasionycteris noctivagans</i> silver-haired bat	AMACC02010	None	None	G5	S3S4	
<i>Lasiurus cinereus</i> hoary bat	AMACC05030	None	None	G5	S4	
<i>Laterallus jamaicensis coturniculus</i> California black rail	ABNME03041	None	Threatened	G3G4T1	S1	FP
<i>Legenere limosa</i> legenere	PDCAM0C010	None	None	G2	S2	1B.1
<i>Lepidium latipes</i> var. <i>heckardii</i> Heckard's pepper-grass	PDBRA1M0K1	None	None	G4T1	S1	1B.2
<i>Lepidurus packardii</i> vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
<i>Lilaeopsis masonii</i> Mason's lilaeopsis	PDAP119030	None	Rare	G2	S2	1B.1
<i>Linderiella occidentalis</i> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<i>Melospiza melodia</i> song sparrow ("Modesto" population)	ABPBXA3010	None	None	G5	S3?	SSC
<i>Myrmosula pacifica</i> Antioch multilid wasp	IIHYM15010	None	None	GH	SH	
<i>Navarretia leucocephala</i> ssp. <i>bakeri</i> Baker's navarretia	PDPLM0C0E1	None	None	G4T2	S2	1B.1
<i>Neostapfia colusana</i> Colusa grass	PMPOA4C010	Threatened	Endangered	G1	S1	1B.1
<i>Northern Claypan Vernal Pool</i> Northern Claypan Vernal Pool	CTT44120CA	None	None	G1	S1.1	
<i>Northern Hardpan Vernal Pool</i> Northern Hardpan Vernal Pool	CTT44110CA	None	None	G3	S3.1	
<i>Nycticorax nycticorax</i> black-crowned night heron	ABNGA11010	None	None	G5	S4	
<i>Oncorhynchus mykiss irideus</i> pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
<i>Oncorhynchus tshawytscha</i> pop. 6 chinook salmon - Central Valley spring-run ESU	AFCHA0205A	Threatened	Threatened	G5	S1	
<i>Oncorhynchus tshawytscha</i> pop. 7 chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	G5	S1	
<i>Phalacrocorax auritus</i> double-crested cormorant	ABNFD01020	None	None	G5	S4	WL



Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Plagiobothrys hystriculus</i> bearded popcornflower	PDBOR0V0H0	None	None	G2	S2	1B.1
<i>Plegadis chihi</i> white-faced ibis	ABNGE02020	None	None	G5	S3S4	WL
<i>Pogonichthys macrolepidotus</i> Sacramento splittail	AFCJB34020	None	None	GNR	S3	SSC
<i>Progne subis</i> purple martin	ABPAU01010	None	None	G5	S3	SSC
<i>Puccinellia simplex</i> California alkali grass	PMPOA53110	None	None	G3	S2	1B.2
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<i>Sagittaria sanfordii</i> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<i>Spirinchus thaleichthys</i> longfin smelt	AFCHB03010	Candidate	Threatened	G5	S1	SSC
<i>Symphyotrichum lentum</i> Suisun Marsh aster	PDASTE8470	None	None	G2	S2	1B.2
<i>Taxidea taxus</i> American badger	AMAJF04010	None	None	G5	S3	SSC
<i>Thamnophis gigas</i> giant gartersnake	ARADB36150	Threatened	Threatened	G2	S2	
<i>Trifolium hydrophilum</i> saline clover	PDFAB400R5	None	None	G2	S2	1B.2
<i>Tuctoria mucronata</i> Crampton's tuctoria or Solano grass	PMPOA6N020	Endangered	Endangered	G1	S1	1B.1
<i>Vireo bellii pusillus</i> least Bell's vireo	ABPBW01114	Endangered	Endangered	G5T2	S2	
<i>Xanthocephalus xanthocephalus</i> yellow-headed blackbird	ABPBXB3010	None	None	G5	S3	SSC

Record Count: 75

CNPS Inventory of Rare and Endangered Plants



Plant List

Inventory of Rare and Endangered Plants

31 matches found. *Click on scientific name for details*

Search Criteria

Found in Quads 3812166, 3812165, 3812164, 3812156, 3812155, 3812154, 3812146 3812145 and 3812144;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Astragalus pauperculus	depauperate milk-vetch	Fabaceae	annual herb	Mar-Jun	4.3	S4	G4
Astragalus tener var. ferrisiae	Ferris' milk-vetch	Fabaceae	annual herb	Apr-May	1B.1	S1	G2T1
Astragalus tener var. tener	alkali milk-vetch	Fabaceae	annual herb	Mar-Jun	1B.2	S1	G2T1
Atriplex cordulata var. cordulata	heartscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G3T2
Atriplex depressa	brittlescale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Brodiaea rosea ssp. vallicola	valley brodiaea	Themidaceae	perennial bulbiferous herb	Apr-May (Jun)	4.2	S3	G5T3
Carex comosa	bristly sedge	Cyperaceae	perennial rhizomatous herb	May-Sep	2B.1	S2	G5
Centromadia parryi ssp. parryi	pappose tarplant	Asteraceae	annual herb	May-Nov	1B.2	S2	G3T2
Centromadia parryi ssp. rudis	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	4.2	S3	G3T3
Chloropyron palmatum	palmate-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	May-Oct	1B.1	S1	G1
Cuscuta obtusiflora var. glandulosa	Peruvian dodder	Convolvulaceae	annual vine (parasitic)	Jul-Oct	2B.2	SH	G5T4?
Downingia pusilla	dwarf downingia	Campanulaceae	annual herb	Mar-May	2B.2	S2	GU
Eryngium jepsonii	Jepson's coyote thistle	Apiaceae	perennial herb	Apr-Aug	1B.2	S2?	G2?
Extriplex joaquinana	San Joaquin spearscale	Chenopodiaceae	annual herb	Apr-Oct	1B.2	S2	G2
Fritillaria agrestis	stinkbells	Liliaceae	perennial bulbiferous herb	Mar-Jun	4.2	S3	G3
Gratiola heterosepala	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	1B.2	S2	G2

<u>Hesperevax caulescens</u>	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	4.2	S3	G3
<u>Hibiscus lasiocarpus var. occidentalis</u>	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	1B.2	S3	G5T3
<u>Juglans hindsii</u>	Northern California black walnut	Juglandaceae	perennial deciduous tree	Apr-May	1B.1	S1	G1
<u>Legenere limosa</u>	legenere	Campanulaceae	annual herb	Apr-Jun	1B.1	S2	G2
<u>Lepidium latipes var. heckardii</u>	Heckard's pepper-grass	Brassicaceae	annual herb	Mar-May	1B.2	S1	G4T1
<u>Lilaeopsis masonii</u>	Mason's lilaeopsis	Apiaceae	perennial rhizomatous herb	Apr-Nov	1B.1	S2	G2
<u>Myosurus minimus ssp. apus</u>	little mousetail	Ranunculaceae	annual herb	Mar-Jun	3.1	S2	G5T2Q
<u>Navarretia leucocephala ssp. bakeri</u>	Baker's navarretia	Polemoniaceae	annual herb	Apr-Jul	1B.1	S2	G4T2
<u>Neostapfia colusana</u>	Colusa grass	Poaceae	annual herb	May-Aug	1B.1	S1	G1
<u>Plagiobothrys hystriulus</u>	bearded popcornflower	Boraginaceae	annual herb	Apr-May	1B.1	S2	G2
<u>Puccinellia simplex</u>	California alkali grass	Poaceae	annual herb	Mar-May	1B.2	S2	G3
<u>Sagittaria sanfordii</u>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct (Nov)	1B.2	S3	G3
<u>Symphyotrichum lentum</u>	Suisun Marsh aster	Asteraceae	perennial rhizomatous herb	(Apr)May-Nov	1B.2	S2	G2
<u>Trifolium hydrophilum</u>	saline clover	Fabaceae	annual herb	Apr-Jun	1B.2	S2	G2
<u>Tuctoria mucronata</u>	Crampton's tuctoria or Solano grass	Poaceae	annual herb	Apr-Aug	1B.1	S1	G1

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Questions and Comments

rareplants@cnps.org

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IPaC Resource List

IPaC Information for Planning and Consultation **U.S. Fish & Wildlife Service**

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Yolo County, California



Local office

San Francisco Bay-Delta Fish And Wildlife

☎ (916) 930-5603

📠 (916) 930-5654

650 Capitol Mall

Suite 8-300

Sacramento, CA 95814

[http://kim_squires@fws.gov](mailto:kim_squires@fws.gov)

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

1. Species listed under the [Endangered Species Act](#) are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information.
2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Birds

NAME	STATUS
Least Bell's Vireo <i>Vireo bellii pusillus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/5945	Endangered

Reptiles

NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened
California Tiger Salamander <i>Ambystoma californiense</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2076	Threatened

Fishes

NAME	STATUS
Delta Smelt <i>Hypomesus transpacificus</i> There is final critical habitat for this species. Your location overlaps the critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/7850	Threatened

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/2246	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

This location overlaps the critical habitat for the following species:

NAME	TYPE
Delta Smelt <i>Hypomesus transpacificus</i> https://ecos.fws.gov/ecp/species/321#crithab	Final

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act

¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)

Bald Eagle *Haliaeetus leucocephalus*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Black-chinned Sparrow *Spizella atrogularis*

Breeds Apr 15 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9447>

Burrowing Owl *Athene cunicularia*

Breeds Mar 15 to Aug 31

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/9737>

California Thrasher <i>Toxostoma redivivum</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Jul 31
Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jan 1 to Dec 31
Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Costa's Hummingbird <i>Calypte costae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9470	Breeds Jan 15 to Jun 10
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464	Breeds Mar 20 to Sep 20
Lewis's Woodpecker <i>Melanerpes lewis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9408	Breeds Apr 20 to Sep 30
Long-billed Curlew <i>Numenius americanus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511	Breeds elsewhere
Marbled Godwit <i>Limosa fedoa</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9481	Breeds elsewhere

Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Rufous Hummingbird <i>Selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002	Breeds elsewhere
Short-billed Dowitcher <i>Limnodromus griseus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9480	Breeds elsewhere
Song Sparrow <i>Melospiza melodia</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds Feb 20 to Sep 5
Spotted Towhee <i>Pipilo maculatus clementae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243	Breeds Apr 15 to Jul 20
Tricolored Blackbird <i>Agelaius tricolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910	Breeds Mar 15 to Aug 10
Whimbrel <i>Numenius phaeopus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483	Breeds elsewhere
Willet <i>Tringa semipalmata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wrentit <i>Chamaea fasciata</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 10

Yellow-billed Magpie *Pica nuttalli*

Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9726>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

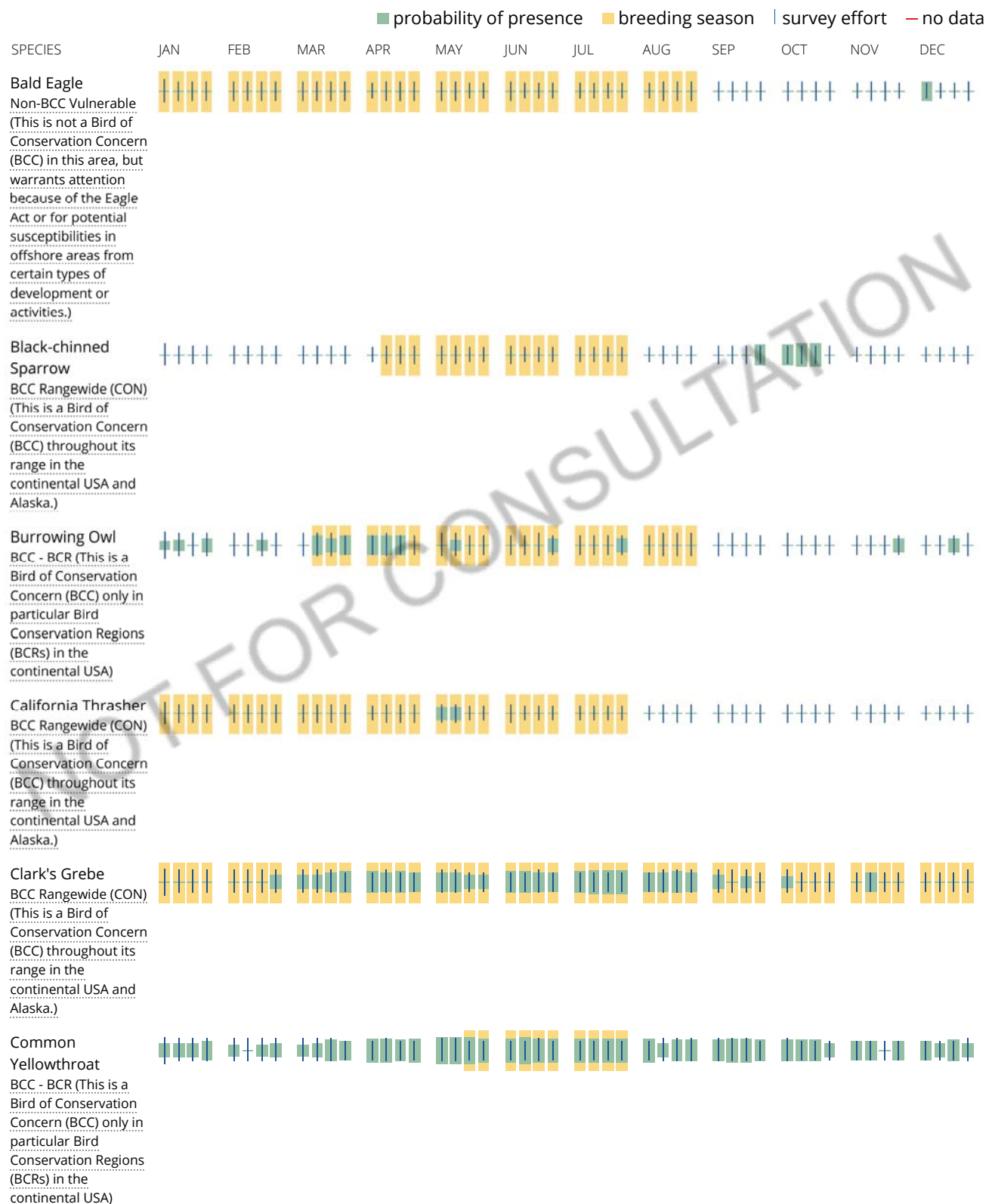
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

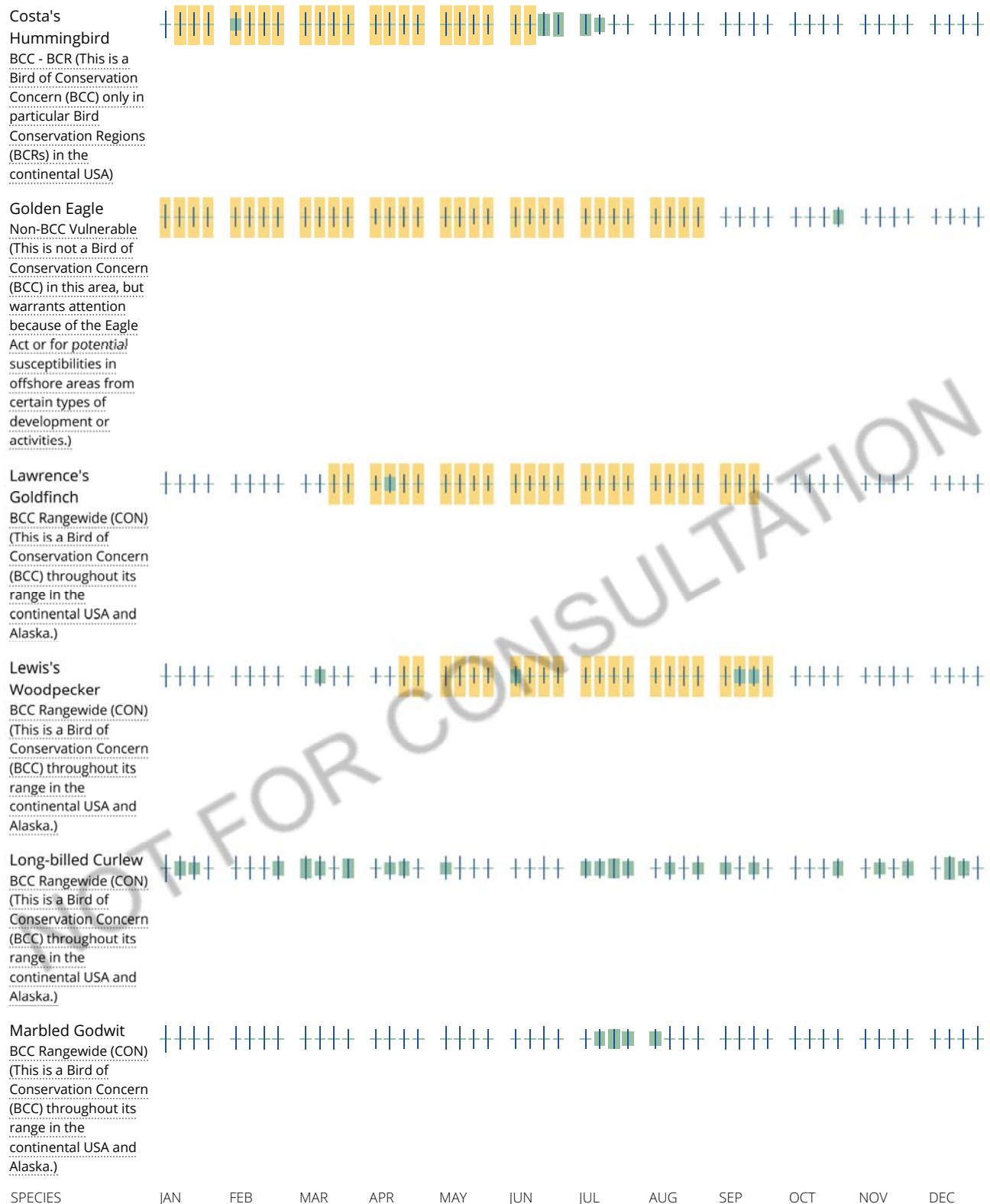
No Data (—)

A week is marked as having no data if there were no survey events for that week.

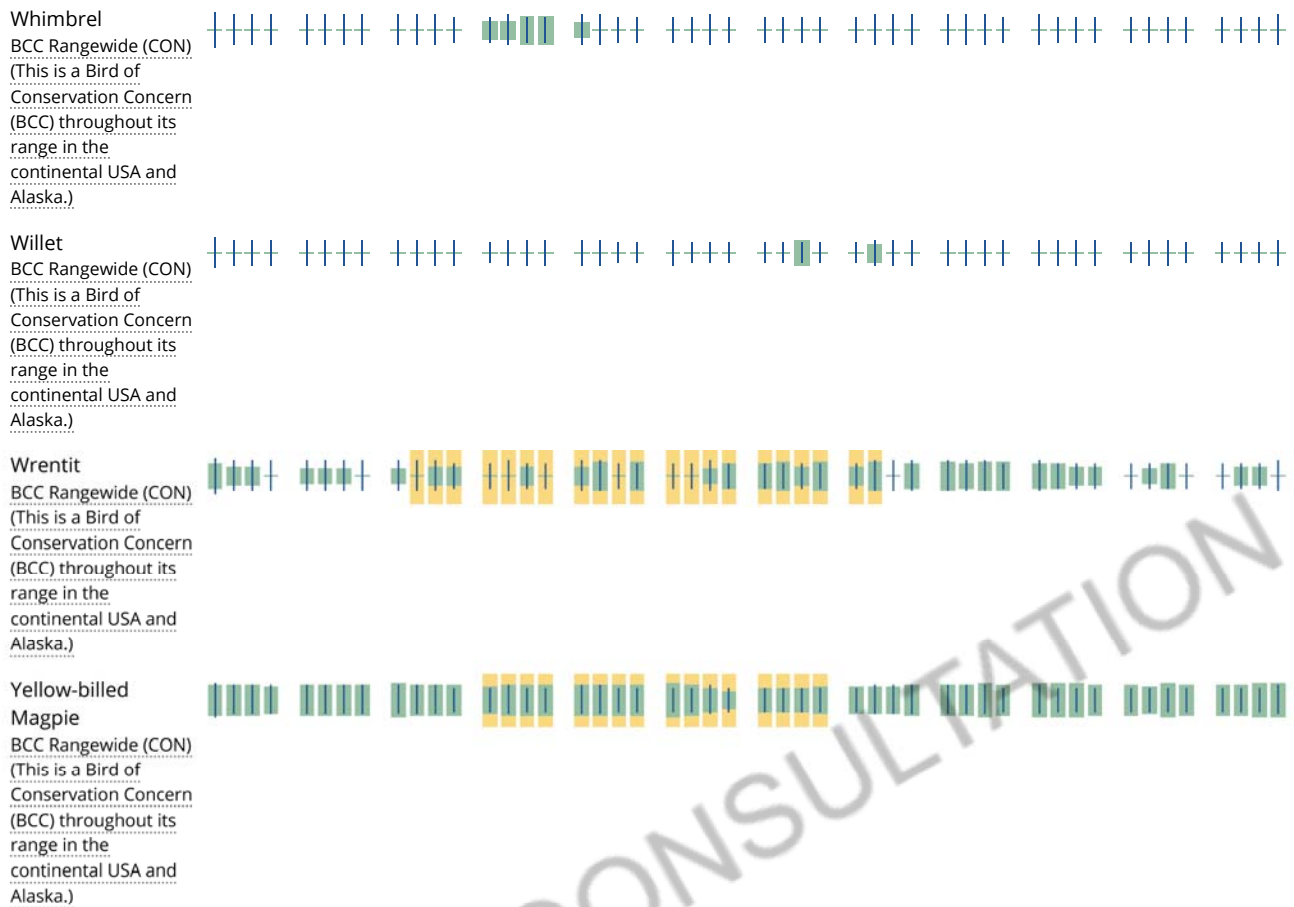
Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.









Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [E-bird Explore Data Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

Appendix C

Cultural Resources Assessment Report

Technical Report

CULTURAL RESOURCES ASSESSMENT REPORT

**State Streets Infrastructure Projects
West Sacramento, Yolo County, California**

November 2019

Prepared for:

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City of West Sacramento
Capital Projects & Transportation Department
1110 West Capitol Avenue
West Sacramento, CA 95691

Prepared by:



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Janis Offermann, RPA
Cultural Resources Practice Lead

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Limitations

This report contains confidential cultural resources location information; report distribution should be restricted to those with a need to know. Cultural resources are non-renewable, and their scientific, cultural, and aesthetic values can be significantly impaired by disturbance. To deter vandalism, artifact hunting, and other activities that can damage cultural resources, the locations of cultural resources should be kept confidential. The legal authority to restrict cultural resources information is in California Government Code 6254.1 and the National Historic Preservation Act of 1966, as amended, Section 304.

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List of Acronyms

AB	Assembly Bill
APE	area of potential effects
CCR	California Code of Regulations
City	City of West Sacramento
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CRHR	California Register of Historical Resources
Horizon	Horizon Water and Environment, LLC
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
PRC	Public Resources Code
Project	State Streets Infrastructure Projects (also Proposed Project)
PVC	polyvinyl chloride
TCR	tribal cultural resource
RPA	Registered Professional Archaeologist
UAIC	United Auburn Indian Community of Auburn Rancheria
USC	United States Code
USGS	United State Geological Survey

Executive Summary

The City of West Sacramento (City) is proposing multiple infrastructure projects within the State Streets neighborhood. The State Streets Infrastructure Projects (Proposed Project or Project) can be characterized generally as improvements to water infrastructure, sanitary sewer infrastructure, and existing pavement. The neighborhood, located southwest of the U.S. Route 50 /Jefferson Boulevard interchange and west of the Sacramento River, is bounded by Jefferson Boulevard, Park Boulevard, and Stone Boulevard. The City has retained Horizon Water and Environment, LLC (Horizon) to complete the cultural resources assessment in support of the Project.

This report documents cultural resources inventory methods and results as required for compliance with California regulations. The study consisted of a literature review to identify any previously recorded cultural resources that could be affected by the Proposed Project as well as to evaluate the sensitivity of the area for buried archaeological remains. Because the entire project area is paved, no archaeological field survey was conducted. The State Streets neighborhood had previously been evaluated as not eligible for listing on the National Register of Historic Places or the California Register of Historical Resources. The current study revisited this evaluation and agreed with the original finding.

This report has been prepared based on certain key assumptions made by Horizon that substantially affect its conclusions and recommendations. These assumptions are that the information gathered during the record search is up to date and accurate. These assumptions, although thought to be reasonable and appropriate, may not prove to be true in the future. Horizon's conclusions and recommendations are conditioned upon these assumptions.

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1 Introduction

1.1 Location and Setting

The Proposed Project area is in the City of West Sacramento in southeastern Yolo County, California (**Figure 1**). It is situated near the west bank of the Sacramento River, at an elevation of approximately 30 feet above mean sea level, in the southern Sacramento Valley. The Proposed Project area is depicted on the Sacramento West 7.5" United State Geological Survey (USGS) topographic map in an un-sectioned area of Township 9 North, Range 4 East (**Figure 2**).

The Proposed Project area is in a developed area, in what is referred to as the States Streets subdivision, which is one of the oldest developed neighborhoods in the city. As discussed more thoroughly below, large valley oaks (*Quercus lobata*) growing in the area were retained as part of the subdivision design. Many other trees were planted as the neighborhood was developed since the late 1910s. These trees largely include London plane trees (*Platanus X hispanica*), but Deodar cedar (*Cedrus deodara*), silver maple (*Acer saccharinum*), and Modesto ash (*Fraxinus velutina* "Modesto") were among the varieties planted (West Coast Arborists 2018). As a result, the Project area contains a large number of mature trees that provide a high canopy of vegetation over the neighborhood houses and streets.

1.2 Project Description and Area of Potential Effects

The purpose of the State Streets Infrastructure Projects is to correct some of the infrastructure deficiencies identified in the 2015 Water System Master Plan Update (City of West Sacramento 2017a) and 2015 Sanitary Sewer Master Plan Update (City of West Sacramento 2017b), as well as conducting additional pavement and curb/gutter maintenance activities in the area.

1.2.1 Water Main Replacement

The City would replace approximately 9,500 feet of water main using open-cut installation (**Figure 3**). Trenches would be excavated to a maximum depth of 5 feet within existing streets parallel to the current water main. Based on City design requirements, all water mains within the City's distribution system would be replaced with minimum 8-inch-diameter pipes. The existing cement and steel piping would be replaced with polyvinyl chloride (PVC) pipe, which has more flexibility and is corrosion resistant. Water main trenches would be backfilled by at least 30 inches of soil and pavement (within the existing right of way), installed in accordance with City standards.

The existing water mains would be abandoned in place in accordance with City procedures. Each main not in use would be disconnected and capped with a minimum of 24 inches of concrete injected into the pipe, mushrooming 12 inches beyond the end of the pipe. Water mains that would remain in use would be capped with cast iron fittings, with a concrete block placed against the cap.

Fire hydrants would be installed at or near street intersections at a maximum spacing of 500 feet; on streets without fronting lots, fire hydrants would have a maximum spacing of 1,000 feet.

1.2.2 Sewer Main Rehabilitation and Replacement

The Proposed Project includes rehabilitation or replacement of 36,234 linear feet of sewer main within the Project area (Figure 3). This project would use the existing sewer main alignments and current pipe depths through a trenchless process. Two methods would be used for rehabilitation and replacement of sewer mains as part of the Proposed Project.

The rehabilitation work would be conducted by the cured-in-place pipe method, which involves lining the existing “host pipe” with a resin-impregnated felt liner that is inflated and cured in place. This is a trenchless rehabilitation method. However, where the existing sewer main has been significantly compromised (e.g., broken pipe), the pipe would have to be replaced. This would involve exposing the existing sewer main in an open trench, 11 feet deep, and installing the new sewer main pipe in the same location. Some excavation may be required for spot repair of laterals where they connect to the sewer main, although the Project does not include improvements to the sewer laterals, in itself.

1.2.3 Other Project Elements

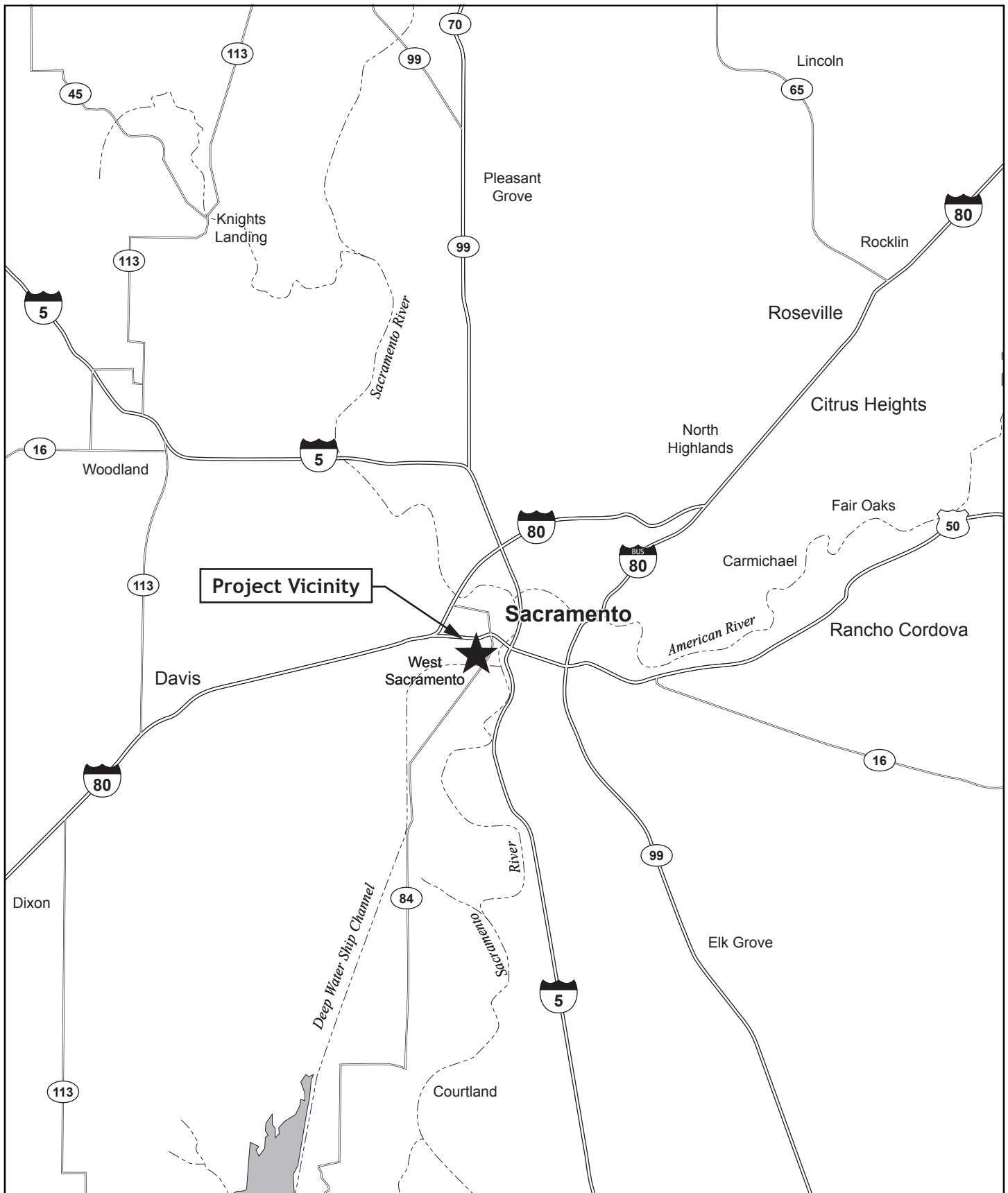
The City also plans to perform Project-wide pavement restoration as part of the Proposed Project. Temporary pavement would be placed during pipeline installation, including installation of any new sewer mains, locations of spot repairs, manhole rehabilitation or replacements, sewer lateral reconnections or replacement, and any other activity where pavement would be disturbed.

Furthermore, the Project includes replacement of approximately 16,000 linear feet of curb and gutter, as well as installation of two valley gutters.

The Project may also involve removal of trees that have caused damage to pavement and/or pipelines. Some tree roots may be located directly in the path of excavation and construction activities for the Proposed Project. Most of the trees that line the streets were planted as the neighborhood developed, but some date to the second decade of the 1900s when the neighborhood was designed and laid out. Some of the large oaks in the neighborhood are remnants of the original oak stand that existed prior to development. During Project construction, arborists would evaluate trees on a case-by-case basis where construction activities are identified as affecting roots or branches. The City would make every reasonable effort to preserve trees where feasible.

1.2.4 Area of Potential Effects

The area of potential effects (APE) for the Proposed Project consists of the streets and sidewalks within the State Streets neighborhood. No additional construction staging areas are required. The maximum vertical APE is 11 feet below ground to accommodate installation of the new water main line; there is no above ground vertical APE.



**Figure 1. Project Vicinity
Map**

Prepared by:



**State Street
Infrastructure Projects**

County: Yolo
 7.5' Quad Maps: Sacramento West
 Township: 9 N
 Range: 4 E
 Sections: None provided

UTM Coordinates (Zone 10N, NAD83)

Easting	Northing
628109	4269799

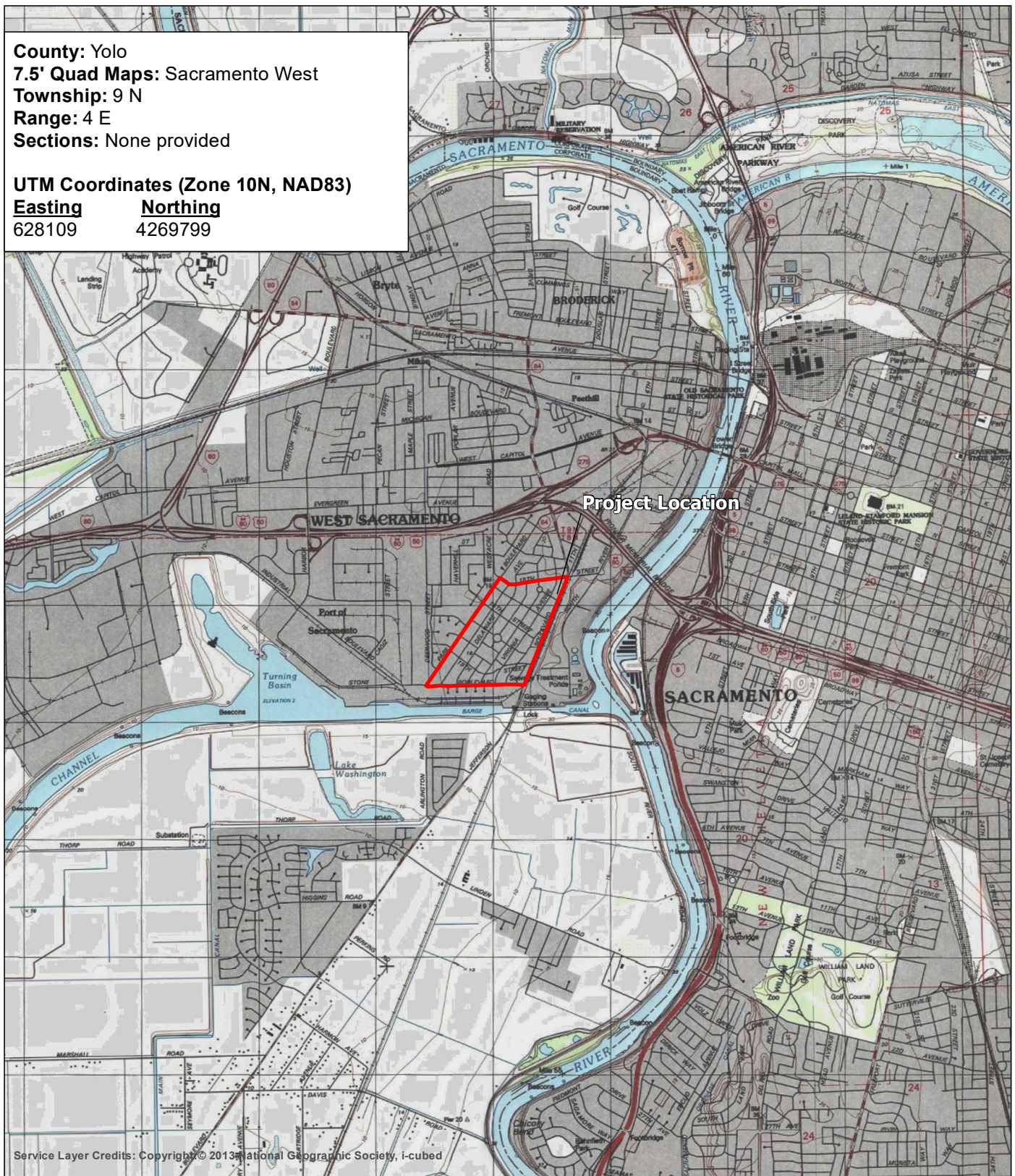
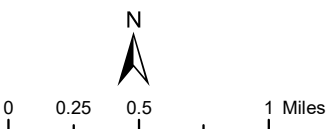
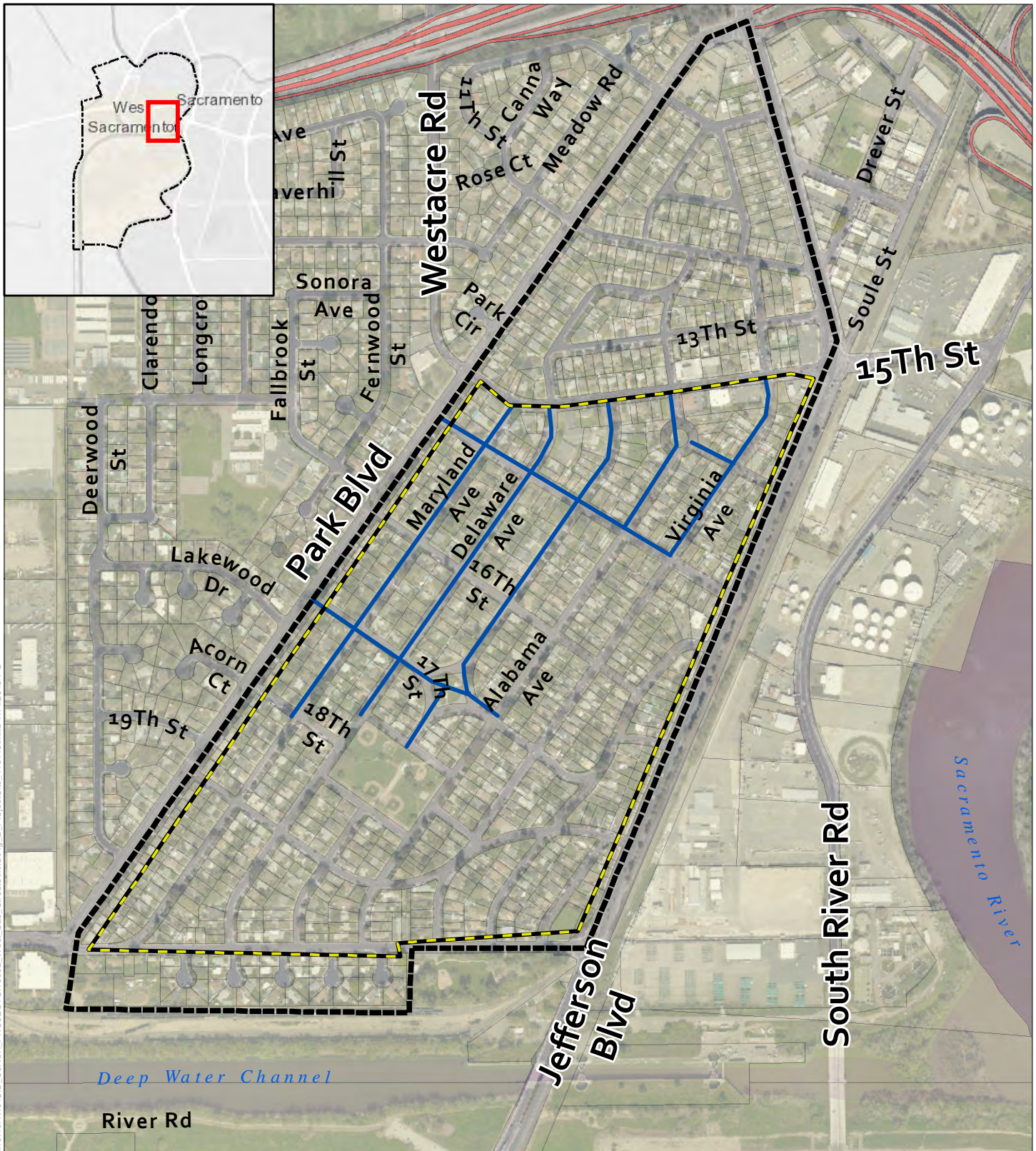


Figure 2
Project Location

State Streets Infrastructure Projects

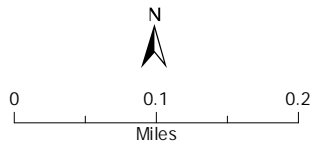
City of West Sacramento





\\10.10.1.10\GIS_Server\PROJECTS\190022 West Sac Streets\mxd\Fig_2_ProjectSite_110119.mxd 11/4/2019 PG

Basebap Sources: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics,



- Proposed water main replacement
- - - Boundary of Proposed Sanitary Sewer main Rehab/Repair
- - - Pavement Rehabilitation boundary area

Source: City of West Sacramento 2018

Figure 3
Proposed Project Site

1.3 Regulatory Setting and Need for Study

1.3.1 State of California Regulations

CEQA and State CEQA Guidelines

The Proposed Project must comply with California Environmental Quality Act (CEQA) (Public Resources Code [PRC] 21000 et seq. and the CEQA Guidelines (California Code of Regulations [CCR], Title 14, Chapter 3), which determine, in part, whether the project has a significant effect on a unique archaeological resource (per PRC 21083.2) or a historical resource (per PRC 21084.1).

CEQA Guidelines CCR 15064.5 notes that “a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment.” Lead agencies are required to identify potentially feasible measures or alternatives to avoid or mitigate significant adverse changes in the significance of a historical resource before such projects are approved. According to the CEQA guidelines, historical resources are:

- Listed in, or determined to be eligible for listing in, the California Register of Historical Resources (per PRC 5024.1(e));
- Included in a local register of historical resources (per PRC 5020.1(k)) or identified as significant in a historical resource survey meeting the requirements of PRC 5024.1(g); or
- Determined by a lead state agency to be historically significant.

CEQA Guidelines CCR 15064.5 also applies to unique archaeological resources as defined in PRC 21084.1.

Assembly Bill (AB) 52, which went into effect on July 1, 2015, requires, per PRC 21080.3.1, that CEQA lead agencies consult with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of a proposed project if so requested by the tribe, and if the agency intends to release a negative declaration, mitigated negative declaration, or environmental impact report for a project. The bill also specifies, under PRC 21084.2, that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource (TCR) is considered a project that may have a significant effect on the environment. This latter language was added to the CEQA checklist in September 2016. The City of West Sacramento, as the project’s CEQA lead agency, consulted with Native American tribes pursuant to PRC 21080.3.1.

As defined in Section 21074(a) of the PRC, TCRs are:

- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - a. Included or determined to be eligible for inclusion in the California Register of Historical Resources; or
 - b. Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

- (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.

TCRs are further defined under Section 21074(b) and (c) as follows:

- (b) A cultural landscape that meets the criteria of subdivision (a) is a TCR to the extent that the landscape is geographically defined in terms of the size and scope of the landscape; and
- (c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms to the criteria of subdivision (a).

Mitigation measures for TCRs must be developed in consultation with the affected California Native American tribe pursuant to the newly chaptered Section 21080.3.2, or according to Section 21084.3. Section 21084.3 identifies mitigation measures that include avoidance and preservation of TCRs and treating TCRs with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource.

California Register of Historical Resources

PRC Section 5024.1 establishes the California Register of Historical Resources (CRHR). This register lists all California properties considered to be significant historical resources. The CRHR includes all properties listed, or determined to be eligible for listing, in the National Register of Historic Places (NRHP), including properties evaluated under Section 106 of the National Historic Preservation Act. The criteria for listing are similar to those of the NRHP. Criteria for listing in the CRHR include resources that:

- 1) Are associated with the events that have made a significant contribution to the broad patterns of California’s history and cultural heritage;
- 2) Are associated with the lives of persons important in our past;
- 3) Embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of an important creative individual, or possess high artistic values; or
- 4) Have yielded, or may be likely to yield, information important in prehistory or history.

The regulations set forth the criteria for eligibility as well as guidelines for assessing historical integrity and resources that have special considerations.

1.3.2 Federal Regulations

The Proposed Project does not require any federal permits, and it is not located on federal lands; therefore, federal laws do not apply to the Proposed Project. The following laws are provided for context only.

Title 54 United States Code Section 306108, commonly known as Section 106 of the National Historic Preservation Act (NHPA or Section 106), requires that federal agencies take into account the effects of projects (undertakings) under their jurisdiction on historic properties (i.e., cultural resources that meet the criteria for listing on the National Register of Historic Places [NRHP]). The implementing regulations of the NHPA, found at 36 Code of Federal Regulation [CFR] Part 800, require that cultural resources be evaluated for NRHP eligibility if they cannot be avoided by an undertaking (Proposed Project). To determine site significance through application of NRHP criteria, several levels of potential significance that reflect different (although not necessarily mutually exclusive) values must be considered. As provided in Title 36 CFR Section 60.4, “the quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association” and must be considered within the historic context. Resources must also be at least 50 years old, except in rare cases, and, to meet eligibility criteria of the NRHP, must:

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

For archaeological sites evaluated under criterion (D) above, integrity requires that the site remain sufficiently intact to convey the expected information to address specific important research questions.

Cultural resources also may be considered separately under the National Environmental Protection Act per Title 42 United States Code Sections 4321 through 4327. These sections require federal agencies to consider potential environmental impacts and appropriate mitigation measures for projects with federal involvement.

1.4 Personnel

The cultural resources study was carried out by the below-listed professionals who meet the Secretary of the Interior’s Standards and Guidelines for Archaeology and Historic Preservation (per Title 48 of the CFR, Section 44716, as amended in 1983). Procedures complied with NHPA Section 106 as set forth in Title 36 of the CFR, Section 800.

- **Kara Brunzell, Architectural Historian** (Horizon), prepared the history of the State Streets subdivision and West Sacramento presented in Section 2.3 of this report. Ms. Brunzell holds a Bachelor’s degree in History from the University of California, Los Angeles, and a Master’s degree in Public History from California State University, Sacramento. She has been a practicing architectural historian in California for 11 years.
- **Dean Martorana, Registered Professional Archaeologist** (Horizon), holds a master’s degree in Anthropology from California State University, Long Beach. He conducted the

record search at the Northwest Information Center of the California State Historical Information System. Mr. Martorana has 15 years of experience in both historic and prehistoric archaeology, including 11 years of experience in cultural resources management in northern California.

- **Janis Offermann, Registered Professional Archaeologist** (Horizon), prepared this report. She has a Bachelor's degree in Anthropology from Sonoma State University in Rohnert Park, California, and a Master's degree in Anthropology from the University of California at Davis. She has more than 40 years of experience in California archaeology and cultural resource management. Ms. Offermann is the cultural resources practice leader with Horizon.

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2 Project Context

2.1 Prehistoric Context

Like many parts of California, archaeologists are still in the process of building a basic archaeological record for the Sacramento Valley and western hills. Much of the record is unknown, and evidence of the early occupations dating more than 3,000 years ago is especially lacking. However, broad outlines of California prehistory are best captured by an integrative scheme that proposes three basic prehistoric periods: Paleoindian, Archaic, and Emergent. The Archaic is further subdivided into the Lower, Middle, and Upper periods, and the Emergent into Lower and Upper (sometimes referred to as Phase 1 and Phase 2) divisions. Each period is characterized by a generally prevailing economic, cultural, and environmental condition. However, each geographical region is expected to have a different pattern of prehistoric culture and culture change. The dating of these various periods continues to be refined; those presented below are largely derived from *The Central Valley: A View from the Catbird's Seat* (Rosenthal, et al. 2010). The archaeological periods are listed in **Table 1**.

Table 1. Prehistoric Archaeological Periods of the Sacramento Valley

Archaeological Period	Age Years Before Present	Characteristics
Paleoindian Period: Western Clovis Tradition	> 10,550 years	Opportunistic hunters and foragers; possibly hunted Pleistocene megafauna. Low population. Fluted projectile points (darts), flaked stone crescents.
Lower Archaic Period: Borax Lake Pattern	10,550 – 7550 years	Hunters and foragers. Low population. Wide-stemmed projectile points; hand stones and milling stones; use of obsidian.
Middle Archaic Period: Windmill	7550 – 2550 years	Introduction of dietary specializations focused on acorns, deer, and freshwater and anadromous fisheries. Establishment of villages with cemeteries. Expanded material culture, including basketry, use of marine shell for beads and ornaments; continued use of hand stones and milling stones; a variety of dart forms such as notched, stemmed, thick leaf or lozenge, and narrow concave.
Upper Archaic Period: Berkeley Pattern	2550 – 1000 years	Increased cultural diversity represented by distinct regional specializations; increased populations; more complex social structure. Introduction of mortars and pestles for acorn processing; expanded bone tool industry; diamond-shaped and stemmed projectile points.

Archaeological Period	Age Years Before Present	Characteristics
Emergent Period: Augustine Pattern – Phase 1	1000 – 600 years	Increased sedentism and populations. Coalescence of long-distance, integrative trade spheres, and the introduction of the bow and arrow that replaced the dart as the favored hunting implement. Increased use of fishing and acorns.
Emergent Period: Augustine Pattern – Phase 2	600 – 200 years	Continuation and intensification of Phase 1 traits; considered representative of Native American cultures encountered by the first non-native colonists. Small corner-notched and triangular points, clam disc beads, magnesite cylinders, bedrock mortars,

The Paleo-Indian Period was a time when the Central Valley was sparsely populated by groups who were highly mobile, hunted large game, and frequented the shores of late Pleistocene lakes and sloughs. By the Lower Archaic Period, seasonal plants had become more important for subsistence, and populations tended to settle in places for longer periods of time and in larger groups. Data from site CA-SAC-38, located in downtown Sacramento, indicate that people were living in the region from the earliest times within this period. As time progressed, populations grew denser and more sedentary, tools became more diverse and complex, and social structure became more stratified. The people living in the Project area during the Emergent Period represent the tribes encountered by the first colonists who arrived in the early to mid-1800s.

2.2 Ethnohistoric Context

Ethnographic literature suggests that the west side of the Sacramento River was likely within the ancestral territory of several tribal groups as it borders the Yolo Basin, a vast marshland that was subject to annual flooding during the winter months and that often stayed at least somewhat inundated for the remainder of the year. However, numerous sources indicate that the territory was ethnographically in the southwest corner of Nisenan territory and that their western neighbors, the Patwin, held lands west of the marshlands that bordered much of the Sacramento River, and thus west of the Project area (Bennyhoff 1977; Johnson 1978; Kroeber 1932; Wilson and Town 1978). It is likely, however, that the Patwin also accessed the resources available in the Yolo Basin. There are no recorded ethnographic village sites identified in the sources cited above adjacent to the Project APE.

2.3 Historic-Era Context

The historic era in the Project vicinity began when two Spanish exploration groups travelled up the Sacramento Valley in the early 1800s. These were the 1808 Moraga expedition and the 1821 Arguello expedition. The Spanish explorations were closely followed by those of fur trappers and traders in the late 1820s and early 1830s. The dire outcome of these expeditions led not only to a quick depletion of valued fur animals in the Sacramento Valley, but also the introduction of malaria to the indigenous population. By the summer of 1833, entire villages had been decimated by the disease (Kyle et al. 2002).

Permanent colonists did not settle in the region until the Mexican Period, when large land grants were bestowed upon trusted Mexican citizens, many of whom were Americans who had converted to Catholicism and married the daughters of the Mexican nationals, or had otherwise become Mexican citizens. John Sutter was among the first to receive a land grant in the Sacramento Valley. He established a fort and trading post at the location of modern-day Sacramento in 1841 and soon expanded his holdings north to the vicinity of Yuba City and east into the Sierra Nevada. It was at his mill, located near Coloma, where gold was initially discovered in California in the early months of 1848. The news spread quickly and the famed Gold Rush began, bringing thousands of people to the Sacramento region ready to make their fortunes.

The first known European to settle in the area of present-day West Sacramento was Jon Lows de Swart (or John Schwartz), a Flemish settler. Schwartz acquired a 13,000-acre land grant on the west bank of the Sacramento River, naming it Nuevo Fladria. James McDowell bought 600 acres from Schwartz in 1846, and the newly-widowed Margaret McDowell subdivided the property, then known as Washington, or Washington Township, in 1850 (Walters 1987). The first bridge across the Sacramento River was built in 1858. Washington quickly became the political center of Yolo County and served as county seat for the better part of its first decade. However, in 1862, the county seat was permanently moved to Woodland due to consistent winter flooding on the west side of the Sacramento River. Washington Township undertook a number of flood control and mitigation efforts, ranging from raising the level of the streets and building levees, to keeping living quarters on the second floor of houses (West Sacramento Historical Society 2004).

As steamship and other Sacramento River traffic increased in the 1850s, Washington Township grew into a port town. In 1859, the California Steam Navigation Company established a shipyard for riverboats in town; it quickly became a major local industry, and it remained in operation for nearly a century. Washington Township also shipped fish, dairy, and produce to Sacramento and San Francisco Bay Area markets, as well as profiting from miners passing through. The township was divided for decades on the issue of incorporation; repeated unsuccessful attempts were made to either incorporate (beginning in 1893) or pursue annexation by Sacramento (beginning in 1861). The post office, established 1893, was called Broderick because the name Washington was in use in Nevada County; while locals initially resisted the name, they began to refer to the area as Broderick by the 1910s. The population reached 1,000 by 1915 (Walters 1987:13-14, 19-20, 24; West Sacramento Historical Society 2004:7).

San Francisco-based D.W. Hobson Company purchased land immediately north of Broderick in 1910, and began to develop it as the community of Riverbank. The area was quickly populated, primarily by Italian, Portuguese, Russian, and Japanese farmers. Residents began to call Riverbank “Bryte” after the post office was established in 1915 and to discuss incorporation in the 1920s, but as with Broderick, actual steps toward incorporation were not made. The West Sacramento Land Company was formed in 1907 to develop the area south of Broderick and Bryte by the capitalists who had started Pacific Gas & Electric, but the economic difficulties caused by flooding and the cost of reclaiming the swampy land soon forced them to reorganize as the West Sacramento Company. The company mapped out a plan for a “model city” under the name West Sacramento in 1913. They hired San Francisco architects Lewis P. Hobart and Charles H. Cheney to lay out the new city. Hobart and Cheney had studied architecture in Paris, and Cheney was to become a pioneering advocate of city planning in the United States. They devised an ambitious plan for West Sacramento modeled on Paris, with radial layout and grand boulevards. The plan could not be realized until much of the land had been cleared, reclaimed, and freed from the danger of flooding by levee construction. West Sacramento Company used engineering company Haviland, Dozier, and Tibbets for the reclamation

and levee work. By early 1913, the company was advertising with claims that it had cleared hundreds of acres for farming, established a nursery for boulevard and park plantings, and graded 30 miles of roadways. By 1917, the reclamation work was complete, and the company was able to sell lots in West Sacramento, although most land sold for farms rather than development of the grand city of the Hobart & Cheney plan. Financial difficulties once again forced the company to reorganize in the 1920s (Coast Banker 1913:262-263; Larkey and Walters 1987:64; Walters 1987:28-30).

The levees were completely stabilized in the 1920s, reducing the threat of flooding, and the area remained agricultural, growing slowly for decades. Prohibition largely passed the area by; with a thriving hop industry, too many people ignored the law for it to be enforceable, and many sellers continued to advertise openly. Hollywood filmmakers began regularly using Broderick as a filming location in the 1930s (Walters 1987: 28-30, 32).

East Yolo's population boomed following the end of World War II, growing from 5,185 in 1940 to 11,225 ten years later and 25,032 in 1960; much of the growth was focused in West Sacramento. This growth was due in large part to the Sacramento-Yolo Port, an ambitious undertaking approved in 1947 that required the construction of a 30-foot-deep ship channel and a 60-acre deep water harbor and turning basin. Ground was broken in 1949, and the port, delayed by the Korean War in the 1950s, opened to sea traffic in 1963. Costing \$55 million, the port generated 7,200 jobs and \$135 million. East Yolo developed from an agricultural area into a distribution hub and commercial and industrial center for the Sacramento Valley. A new freeway through the area opened in 1954, increasing traffic across the river. West Sacramento, Broderick, and Bryte also began to grow as bedroom communities for Sacramento during this era. The farmland between Broderick and Bryte filled in with development, and West Sacramento expanded southward. Southport, south of the barge canal, was developed beginning in the late 1960s and officially designated as a town in 1970 (Walters 1987: 35-38, 41).

Sidelined for decades, incorporation efforts began anew in the 1960s, but measures to incorporate were defeated in the 1960s and 1970s. It was not until 1986 that a measure to incorporate passed; by this point, the East Yolo area had relied exclusively on county services for more than a century. The City of West Sacramento incorporated in 1987, combining Broderick, Bryte, West Sacramento, and Southport under one municipality. Growth slowed after the postwar boom resulting from the port, but West Sacramento continued to gradually develop as a smaller bedroom community just across the river from the city of Sacramento, and the population reached 34,000 by 2004. After decades of little change, West Sacramento's population began to expand quickly in the 21st century, and the population was 48,744 by 2010 (United States Census Bureau 2010; Walters 1987:46).

State Streets Subdivision

As noted above, the State Streets neighborhood (officially West Sacramento City Unit One and Two subdivision) was designed by San Francisco architects Hobart and Cheney. Hobart and Cheney "proposed a city which combined elements of English Garden suburbs, Parisian street plans and classical imagery..." that was "arranged in a modified grid plan including curving streets, diagonal streets across the grid, and adjacent grids laid out on different axes" (Corbett 1993a). The West Sacramento Company hired engineers Haviland, Dozier & Tibbetts to implement the plan "by laying out the streets, building rose-colored sidewalks, curbs and gutters, and planting street trees" (Corbett 1993a). According to Corbett (1993a), "[r]ows of ash trees on Circle (1913) and Jefferson north of 15th (1941), and two sycamores at Jefferson and Webster (1941) are prominent surviving street trees."

The first model homes in the State Streets subdivision were built in 1913, but development was slow and by 1916 only 14 houses had been constructed; by the 1930s there were only a few dozen homes. The northern portion of the subdivision was resurveyed in 1941 to simplify the street plan and reduce lot size. After World War II, housing in the area boomed, along with a population to match, and the subdivision reached full build out (Corbett 1993a).

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3 Native American Consultation and Archival Research

In accordance with the Secretary of the Interior's Standards and the Guidelines for Archaeology and Historic Preservation (Title 48 CFR Section 44716 [amended 1983]), the goals of this archaeological inventory were to identify and completely document the location, qualities, and condition of any potential historic properties in the Project's APE. Methods employed to achieve these goals follow.

3.1 Native American Consultation

An email request was made to the Native American Heritage Commission (NAHC) on January 17, 2019, to review its files for the presence of recorded sacred sites on the Project site. The NAHC responded on January 25, 2019, stating that significant resources are located in the vicinity of the Project area as a result of a search of their files. The NAHC also provided a list of three tribes with a traditional and cultural affiliation with the Project area.

The United Auburn Indian Community of the Auburn Rancheria (UAIC) and the Yocha Dehe Wintun Nation, both tribes with a traditional and cultural affiliation to the Project area, have requested consultation with the City on department projects pursuant to PRC Section 21080.3.1. The City sent Project notification letters, dated February 1, 2019, via U.S. mail with a returned receipt to the tribes that had requested formal notification. The Yocha Dehe Wintun Nation responded in a letter dated February 19, 2019, stating that the tribe "would like to participate in ongoing consultation." Similarly, UAIC requested PRC Section 21080.3.1 consultation in a letter dated March 11, 2019. The City met with the Yocha Dehe Wintun Nation on April 8, 2019, and August 7, 2019, to discuss the Project and possible mitigation measures. Drafted mitigation measures were forwarded to the tribe for review on August 27, 2019. The City will continue to consult with the Yocha Dehe throughout the CEQA environmental process and during project construction.

In its letter dated March 11, 2019, the UAIC requested consultation under AB 52, requested copies of all cultural resources record search materials and environmental documents, and indicated a desire to meet to discuss the Project. The City provided the tribe with the available requested information on March 26, 2019. In an email dated March 29, 2019, UAIC declined a field review of the Project area since the entire area is developed and paved; however, they expressed concern over the presence of a village site near the east edge of the Project footprint. UAIC ultimately decided against a meeting with the City but offered to forward mitigation measures for consideration. However, additional information was not received from the tribe. After several unsuccessful attempts to engage the tribe about the mitigation measures, the City requested termination of AB 52 consultation in an email dated August 30, 2019.

Table 2 lists all those contacted and summarizes the results of the consultation. All correspondence between the NAHC, Native American tribes, and the City is provided in **Appendix A**.

Table 2. Native American Consultation

Organization/Tribe	Name of Contact	Letter Date	Tribal Response	Comments
United Auburn Indian Community of the Auburn Rancheria	Gene Whitehouse, Chairperson	February 1, 2019	Letter dated March 11, 2019	<p>03/11/2019: UAIC requested consultation under Assembly Bill 52, copies of all reports and record search material. Requested meeting to discuss the project.</p> <p>03/26/2019: The City responded via email requesting preferred dates for a meeting.</p> <p>03/29/2019: UAIC noted that a site visit would not be productive since the area is developed. They also noted the presence of a village nearby, and offered to send TCR mitigation measures preferred by the tribe.</p> <p>04/03/2019: City requested copy of mitigation measures from the tribe.</p> <p>05/08/2019: City followed up with another request for mitigation measures, noting that they will move forward with the project if they do not hear from the tribe.</p> <p>05/22/2019: City again followed up, requesting response by May 29, 2019.</p> <p>06/19/2019: The City provided the tribe with a link to the 65% design plans for their review.</p> <p>08/30/2019: The City provided mitigation measures for review and comment; email sent by City indicating that, unless additional response was received, consultation would be terminated on September 20, 2019.</p>
Yocha Dehe Wintun Nation	Laverne Bill, Cultural Resources Manager	February 1, 2019	Letter dated February 19, 2019	<p>02/19/2019: Tribe “would like to participate in ongoing consultation.” Letter does not specifically refer to Assembly Bill 52.</p> <p>03/18/2019: City emailed Laverne to schedule a meeting.</p> <p>04/08/2019: Meeting with City and Yocha Dehe.</p> <p>05/02/2019: City received letter requesting meeting to set up monitoring agreement.</p> <p>05/06/2019: City sent email requesting dates for a meeting.</p>

Organization/Tribe	Name of Contact	Letter Date	Tribal Response	Comments
				<p>06/19/2019: City provided the tribe with a link to the 65% design plans for their review.</p> <p>08/07/2019: Meeting with City and Yocha Dehe.</p> <p>08/27/2019: The City provided mitigation measures for review and comment.</p>

3.2 Archival Research

A record search was conducted by Horizon cultural resources staff at the Northwest Information Center of the California Historical Resources Information System at Sonoma State University on January 24, 2019. The purpose of the record search was to identify the presence of any previously recorded cultural resources within the Project area, as well as within a ¼-mile buffer, and to determine whether any portions of the Project area had been surveyed for cultural resources. The record search results are presented in **Appendix B**. The record search indicated that ten cultural resources, including the State Streets neighborhood, had been recorded within the Project limits, and another three resources were recorded within the ¼-mile buffer. All of the resources are of the built environment or are heritage oak trees (see **Table 3**). One of the resources (P-57-000742), a Craftsman Bungalow built in 1913 at 10 Alameda Boulevard, has been recommended as eligible for listing in the NRHP (Corbett 1993b). The house appears eligible for listing under Criterion A because “it is the best surviving example of an original town lot development in West Sacramento City Unit One, and is associated with the initial establishment of the new town. It includes an example of one of the five model house types...” (Corbett 1993b).

Table 3. NWIC Records Search Results – Previously Recorded Resources

NWIC No.	Date (Author)	Resource Name or Location (Date Constructed)	Within Project Site or Buffer
P-57-000195	Numerous recordings	Sacramento Northern/Yolo Shortline Railroad (1912)	Buffer
P-57-000564	2007 (A. Tomes, EDAW, Inc.)	West Sacramento Wastewater Treatment Plant (ca. 1955)	Buffer
P-57-000702	2013 (Maria Leon, City of West Sacramento, Real Estate Project Specialist)	1628 Virginia Avenue (1935)	Project Site
P-57-000739	1993 (Michael R. Corbett, Dames & Moore, Inc.)	West Sacramento City State Streets Subdivision Plan (1913-1950s)	Project Site

NWIC No.	Date (Author)	Resource Name or Location (Date Constructed)	Within Project Site or Buffer
P-57-000740	1993 (Michael R. Corbett, Dames & Moore, Inc.)	1536 Jefferson Boulevard (1930)	Project Site
P-57-000742*	1993 (Michael R. Corbett, Dames & Moore, Inc.)	10 Alameda Boulevard (1913)	Project Site
P-57-000743	1993 (Michael R. Corbett, Dames & Moore, Inc.)	Picturesque Oaks	Project Site
P-57-000744	1993 (Michael R. Corbett, Dames & Moore, Inc.)	1531 Virginia Avenue (1945)	Project Site
P-57-000745	1993 (Michael R. Corbett, Dames & Moore, Inc.)	1527 Virginia Avenue (1939)	Project Site
P-57-000746	1993 (Michael R. Corbett, Dames & Moore, Inc.)	1521 Virginia Avenue (1915)	Project Site
P-57-000747	1993 (Michael R. Corbett, Dames & Moore, Inc.)	Picturesque oak; southwest corner of Jefferson Boulevard and Circle Street	Project Site
P-57-000748	1993 (Michael R. Corbett, Dames & Moore, Inc.)	Picturesque oak; southeast corner of 15th Street and Virginia Avenue	Project Site
P-57-000749	1993 (Michael R. Corbett, Dames & Moore, Inc.)	Pop's Drive-In; Whitey's Jolly Kone; 1300 Jefferson Boulevard (1960)	Project Site
P-57-000750	1993 (Michael R. Corbett, Dames & Moore, Inc.)	Picturesque oaks	Buffer

** Previously determined eligible for NRHP listing; all other resources were determined to be not eligible for NRHP listing*

The record search determined that one cultural resources survey, for the parcel at 1628 Virginia Avenue, had previously been conducted in the Project area, and another 16 studies had occurred within the ¼-mile record search area, some of which were along Jefferson Boulevard. In addition, the Project area is within the boundaries of 11 large archaeological or ethnographic overviews, or other regional studies.

The archival search also included a review of historic USGS maps, including the Davisville (USGS 1907) topographic quadrangle and the Lovdal (USGS 1916) topographic quadrangle. The 1907 map shows one building existed at the north end of the Project area at that time. By 1916, the Sacramento Northern Railroad and a portion of what was to become Jefferson Boulevard were both present, along with several isolated structures within the future State Streets neighborhood. These early maps also show that the Project area had some elevation (ca. 19 to 29 feet above mean sea level), relative to the

swampy ground to the south and west, and adjacent to the Sacramento River. The Sacramento West topographic quadrangle from 1948 (USGS 1948), which is the next quadrangle available after the 1916 map, shows the area developed with the State Streets neighborhood.

Soils within the Project limits largely consist of Lang sandy loam, though the northeast corner of the area is classified as Lang sandy loam deep (United States Department of Agriculture 2019). These are deep Holocene alluvial deposits that are identified as being rarely flooded. Furthermore, geoarchaeological studies (Meyer and Rosenthal 2008) identify these Holocene alluvial deposits as having a very high potential for containing buried archaeological remains.

The geoarchaeological study results are corroborated by the knowledge that archaeological resources in the region are known to exist in the region under city streets and/or under many feet of alluvial soils. A Native American cemetery was found during construction of a new West Sacramento subdivision (The Sacramento Bee 2015, 2018), less than 1.5 miles south of the current Project area. Similarly, a Native American village site was found buried under 10 feet of alluvium during construction of the new Sacramento County Administration building in Sacramento (Tremaine 2008). In addition, both a Native American village and a Gold Rush era encampment were uncovered at 3 and 5 feet, respectively, during construction of the Light Rail Train in downtown Sacramento (Tremaine and Farris 2009). These discoveries are indicative of the potential for uncovering buried cultural resources during construction, even though the Project area has previously been disturbed by the installation and maintenance or upgrading of sewer and water infrastructure elements over the decades.

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4 Inventory Methods and Results

No archaeological survey was conducted for the purposes of the Proposed Project because the entire project footprint consists of paved streets and the ground surface is not visible. The record search, furthermore, did not identify previously recorded archaeological resources within or near the Proposed Project. The lack of known archaeological resources, or ground surface visibility, does not preclude the possibility of buried archaeological resources within the Project footprint, as demonstrated by the discovery of buried human remains and archaeological sites in a nearby West Sacramento location and in the city of Sacramento, respectively.

With regard to the built environment, additional research was performed to establish the historic context of the neighborhood and confirm results of previous studies. Repositories and archives consulted included the Sacramento Public Library, the Center for Sacramento History, and the Yolo County Archives. Various online resources were also used for research including newspapers.com, ancestry.com, and archive.org.

Although technically deficient in several respects by current standards, Corbett's research appears to be accurate. Charles H. Cheney was an important figure in the establishment of city planning in the 20th century; he organized California's first statewide city planning conference and designed the community of Palos Verdes in Southern California in conjunction with the Olmstead Brothers. Although some remnants of the Hobart and Cheney plan remain visible in the neighborhood street grid, most of their vision was never realized due to the West Sacramento Land Company's financial problems. A new evaluation of the neighborhood for eligibility to the NRHP would be likely to reach conclusions similar to the 1993 study. It is likely that a re-evaluation of the neighborhood as a historic district would again result in a recommendation that the neighborhood lacks sufficient integrity for historic listing.

Corbett evaluated six buildings in the neighborhood for individual significance, recommending all but one ineligible for listing. Neighborhood reconnaissance and street views available online indicate that conditions for these properties have remained fairly stable over the intervening decades, although one property has been demolished. Research has not revealed why Corbett chose these six properties for individual evaluation. By 2019, almost all the buildings in the neighborhood (including 1300 Jefferson Boulevard) have reached 50 years old, the age at which a resource can potentially become eligible for listing in the NRHP/CRHR. An evaluation of additional individual resources would be likely to yield more individually eligible houses constructed during the historic period (i.e. prior to 1970).

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5 Summary and Recommendations

The City of West Sacramento is proposing to improve infrastructure within the State Streets neighborhood, which is located just south of U.S. Route 50 and west of the Sacramento River within the city limits. The Proposed Project involves replacement of water mains along many of the streets within the neighborhood and the sewer main on Alabama Avenue.

A pedestrian archaeological survey was not conducted of the Project areas, as the entire APE is within paved streets. Although no archaeological sites were identified by the archaeological research, archaeological sites may be buried with no surface manifestation, and such sites have been previously discovered in the area around the State Streets neighborhood. Furthermore, the Holocene soils that underlie the Project locations have the potential to contain buried archaeological remains. If prehistoric or historic-era materials are encountered, all work in the vicinity should halt until a qualified archaeologist can evaluate the discovery and make recommendations in accordance with 36 CFR Section 800.13(b). Prehistoric materials would most likely include obsidian and chert flaked-stone tools (e.g., projectile points, knives, choppers) and tool-making debris, or milling equipment such as mortars and pestles. Historic-era materials might include remains of early historic agricultural implements; stone or concrete footings and walls; and deposits of metal, glass, and/or ceramic refuse.

To date, no tribal cultural resources have been identified through consultation between the City and the Yocha Dehe Wintun Nation or the UAIC.

The possibility of encountering human remains cannot be discounted. Section 7050.5 of the California Health and Safety Code states that it is a misdemeanor to knowingly disturb a human burial. If human remains are encountered, work should halt in the vicinity of the remains and, as required by law, the Yolo County coroner should be notified immediately. An archaeologist should also be contacted to evaluate the find. If human remains are of Native American origin, the coroner must notify the NAHC within 24 hours of that determination. Pursuant to PRC Section 5097.98, the NAHC, in turn, will immediately contact an individual who is most likely descended from the remains (the “Most Likely Descendant”). The Most Likely Descendant has 48 hours to inspect the site and recommend treatment of the remains. The landowner is obligated to work with the Most Likely Descendant in good faith to find a respectful resolution to the situation and entertain all reasonable options regarding the Most Likely Descendant’s preferences for treatment.

Numerous resources of the built environment have previously been recorded in and adjacent to the State Streets neighborhood and Project area, including the neighborhood itself. Only one of the resources, a 1913 Craftsman Bungalow, was previously identified as eligible for listing on the NRHP; the remaining resources were determined not to be eligible for NRHP listing. A review of the earlier evaluations agreed with the original eligibility determinations, including the recommended determination that the State Streets neighborhood is not an eligible resource. Because the Project area is restricted to existing streets, the homes within the neighborhood will not be directly impacted by the proposed construction.

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Appendix A

Native American Correspondence

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Local Government Tribal Consultation List Request

Native American Heritage Commission

1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Type of List Requested

- ☒ **CEQA Tribal Consultation List (AB 52)** – *Per Public Resources Code § 21080.3.1, subs. (b), (d), (e) and 21080.3.2*
- ☐ **General Plan (SB 18)** – *Per Government Code § 65352.3.*

Local Action Type:

☐ General Plan ☐ General Plan Element ☐ General Plan Amendment
☐ Specific Plan ☐ Specific Plan Amendment ☐ Pre-planning Outreach Activity

Required Information

Project Title: State Streets Infrastructure Improvements Project

Local Government/Lead Agency: City of West Sacramento Public Works

Contact Person: Amber Wallace, Associate Civil Engineer

Street Address: 1110 West Capitol Avenue, First Floor

City: West Sacramento, CA **Zip:** 95691

Phone: 916-617-5327 **Fax:** _____

Email: amberwa@cityofwestsacramento.org

Specific Area Subject to Proposed Action

County: Yolo **City/Community:** West Sacramento

Project Description:

The City of West Sacramento is proposing infrastructure improvements to the State Streets neighborhood, including pavement rehabilitation, water supply pipeline replacement, and sewer pipeline rehabilitation.

Additional Request

- ☒ **Sacred Lands File Search - Required Information:**

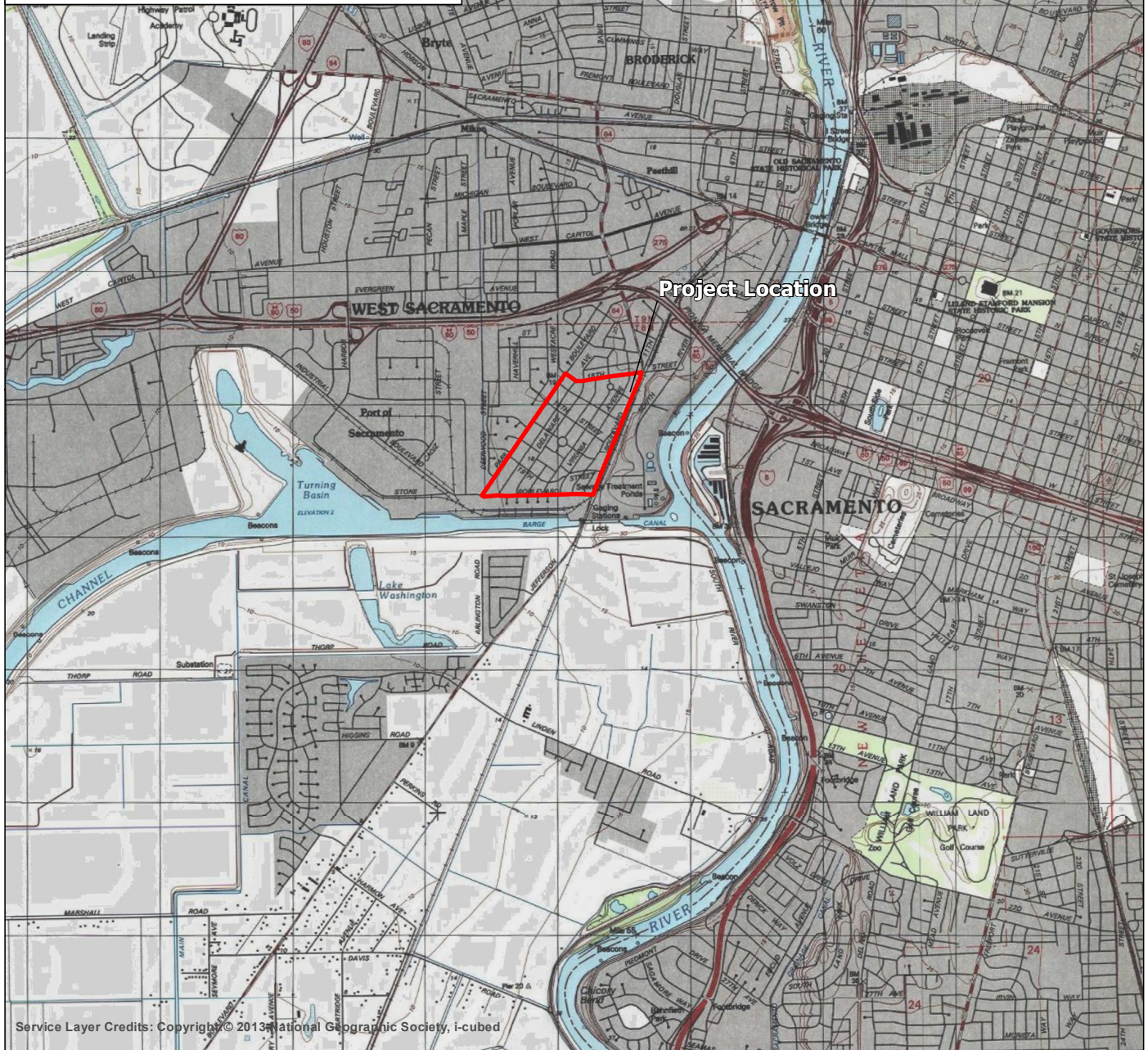
USGS Quadrangle Name(s): Sacramento West

Township: 9N **Range:** 4E **Section(s):** unsectioned

County: Yolo
 7.5' Quad Maps: Sacramento West
 Township: 9 N
 Range: 4 E
 Sections: None provided

UTM Coordinates (Zone 10N, NAD83)

Easting	Northing
628109	4269799



NAHC Sacred Lands Request State Streets Infrastructure Improvement Project

City of West Sacramento

NATIVE AMERICAN HERITAGE COMMISSION
Cultural and Environmental Department
1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
Phone: (916) 373-3710
Website: <http://www.nahc.ca.gov>



January 25, 2019

Amber Wallace
City of West Sacramento

Sent by Email: amberwa@cityofwestsacramento.org

RE: State Streets Infrastructure Improvements Project, Sacramento West, Yolo County

Dear Ms. Wallace:

A record search of the Native American Heritage Commission (NAHC) Sacred Lands File (SLF) was completed for the information you have submitted for the above referenced project. **The results were positive.** Please contact the Tribes on the attached Tribal Contact List directly for more information. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Attached is a list of Native American tribes who may also have knowledge of cultural resources in the project area. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. **I suggest you contact all of those on the list; if they cannot supply information, they might recommend others with specific knowledge.** By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call or email to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from tribes, please notify the NAHC. With your assistance, we can assure that our lists contain current information. If you have any questions or need additional information, please contact me at my email address: Sharaya.Souza@NAHC.ca.gov or directly at (916) 573-0168.

Sincerely,

A handwritten signature in blue ink, appearing to read "Sharaya Souza".

Sharaya Souza
Analyst

Attachment

**Native American Heritage Commission
Native American Contacts List
1/25/2019**

Yocha Dehe Wintun Nation
Anthony Roberts, Chairperson
P.O. Box 18
Brooks, CA 95606
aroberts@yochadehe-nsn.gov
(530) 796-3400
(530) 796-2143 Fax

Wintun (Patwin)

United Auburn Indian Community of the Auburn Rancheria
Gene Whitehouse, Chairperson
10720 Indian Hill Road
Auburn, CA 95603
bguth@auburnrancheria.com
(530) 883-2390 Office
(530) 883-2380 Fax

Maidu
Miwok

Cortina Rancheria - Kletsel Dehe Band of Wintun Indians
Charlie Wright, Chairperson
P.O. Box 1630
Williams, CA 95987
(530) 473-3274 Office
(530) 473-3301 Fax

Wintun / Patwin

This list is current as of the date of this document and is based on the information available to the Commission on the date it was produced.

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

This list is only applicable for contacting local Native American Tribes for the proposed:
State Streets Infrastructure Improvements Project, Sacramento West, Yolo County.



February 1, 2019

Laverne Bill
Yocha Dehe Wintun Nation
P.O. Box 18
Brooks, CA 95606

RE: State Streets Infrastructure Improvement Projects – Tribal Consultation

Dear Mr. Bill:

The City of West Sacramento (City) is proposing infrastructure improvements (proposed projects) for the State Streets neighborhood, which is one of the oldest neighborhoods in the City. The project area is delineated by Park Boulevard on the west, 15th Street on the north, Jefferson Boulevard to the east, and Stone Boulevard to the south (see enclosed figures). The City has identified several categories of infrastructure improvements for the State Streets neighborhood including water supply pipeline replacement, sewer pipeline rehabilitation, and pavement rehabilitation.

The City is writing to notify you of the proposed projects in order to coordinate with you and verify the existence of any information on known tribal cultural resources that may be present or affected within the proposed project area. We are contacting you pursuant to your Public Resources Code 21080.3.1(b)(1) request for Assembly Bill 52 consultations on City projects that have the potential to impact tribal cultural resources.

We are requesting any information that you may have regarding tribal cultural resources (as defined by Public Resources Code 21074) within the proposed project area. If it exists, resource information can be incorporated into project planning. The City respectfully requests input from you within 30 days of receipt of this letter.

Your comments and concerns are important to us and we look forward to hearing from you. If you wish to consult on the projects pursuant to Public Resources Code 21080.3.1(b) or have any questions or comments regarding the project, please contact David Tilley via email at davidt@cityofwestsacramento.org or by phone at (916) 617-4661.

Sincerely,

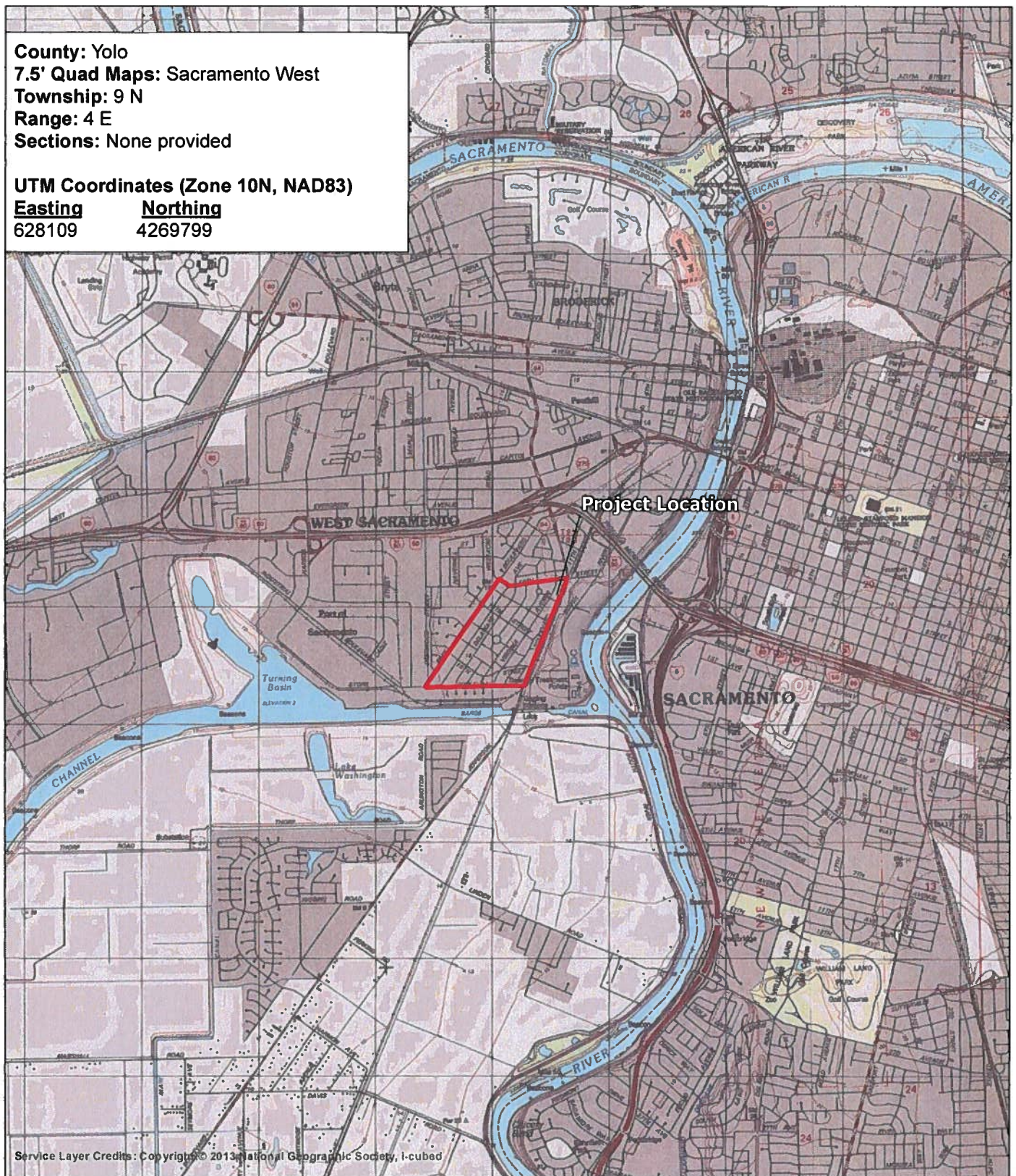
Vin Cay
Supervising Civil Engineer

Enclosures: Figure 1 – Project Vicinity Map
 Figure 2 – Proposed Projects

County: Yolo
 7.5' Quad Maps: Sacramento West
 Township: 9 N
 Range: 4 E
 Sections: None provided

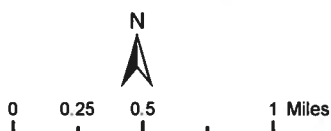
UTM Coordinates (Zone 10N, NAD83)

Easting	Northing
628109	4269799



Service Layer Credits: Copyright © 2013 National Geographic Society, i-cubed

Figure 1
Project Location



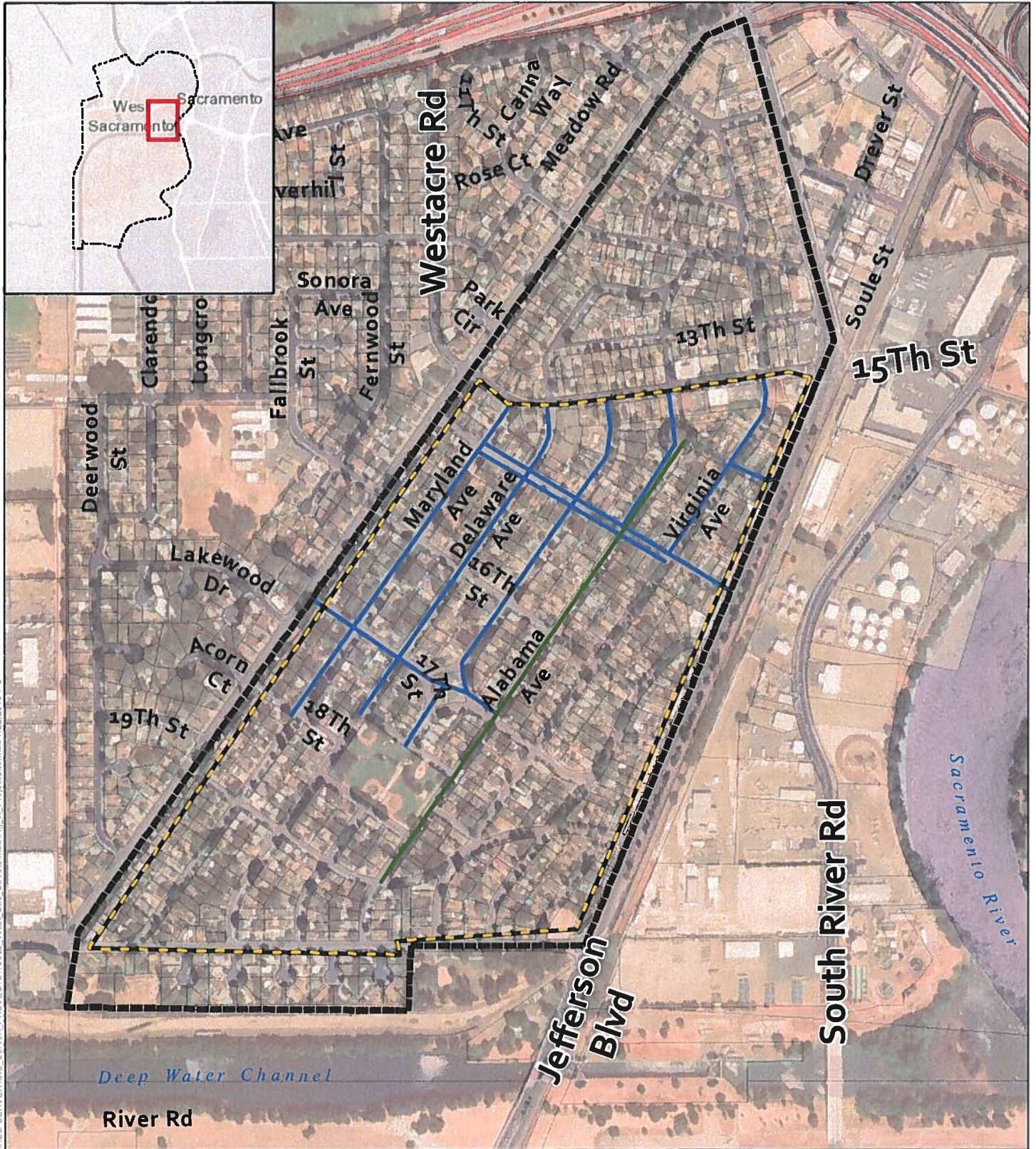
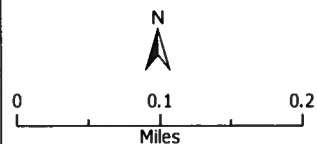


Figure 2
Proposed Projects

BaseMap Sources: Esri, HERE, Garmin, ©
OpenStreetMap contributors, and the GIS





February 1, 2019

Gene Whitehouse, Chairperson
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603

RE: State Streets Infrastructure Improvement Projects – Tribal Consultation

Dear Mr. Whitehouse:

The City of West Sacramento (City) is proposing infrastructure improvements (proposed projects) for the State Streets neighborhood, which is one of the oldest neighborhoods in the City. The project area is delineated by Park Boulevard on the west, 15th Street on the north, Jefferson Boulevard to the east, and Stone Boulevard to the south (see enclosed figures). The City has identified several categories of infrastructure improvements for the State Streets neighborhood including water supply pipeline replacement, sewer pipeline rehabilitation, and pavement rehabilitation.

The City is writing to notify you of the proposed projects in order to coordinate with you and verify the existence of any information on known tribal cultural resources that may be present or affected within the proposed project area. We are contacting you pursuant to your Public Resources Code 21080.3.1(b)(1) request for Assembly Bill 52 consultations on City projects that have the potential to impact tribal cultural resources.

We are requesting any information that you may have regarding tribal cultural resources (as defined by Public Resources Code 21074) within the proposed project area. If it exists, resource information can be incorporated into project planning. The City respectfully requests input from you within 30 days of receipt of this letter.

Your comments and concerns are important to us and we look forward to hearing from you. If you wish to consult on the projects pursuant to Public Resources Code 21080.3.1(b) or have any questions or comments regarding the project, please contact David Tilley via email at davidt@cityofwestsacramento.org or by phone at (916) 617-4661.

Sincerely,



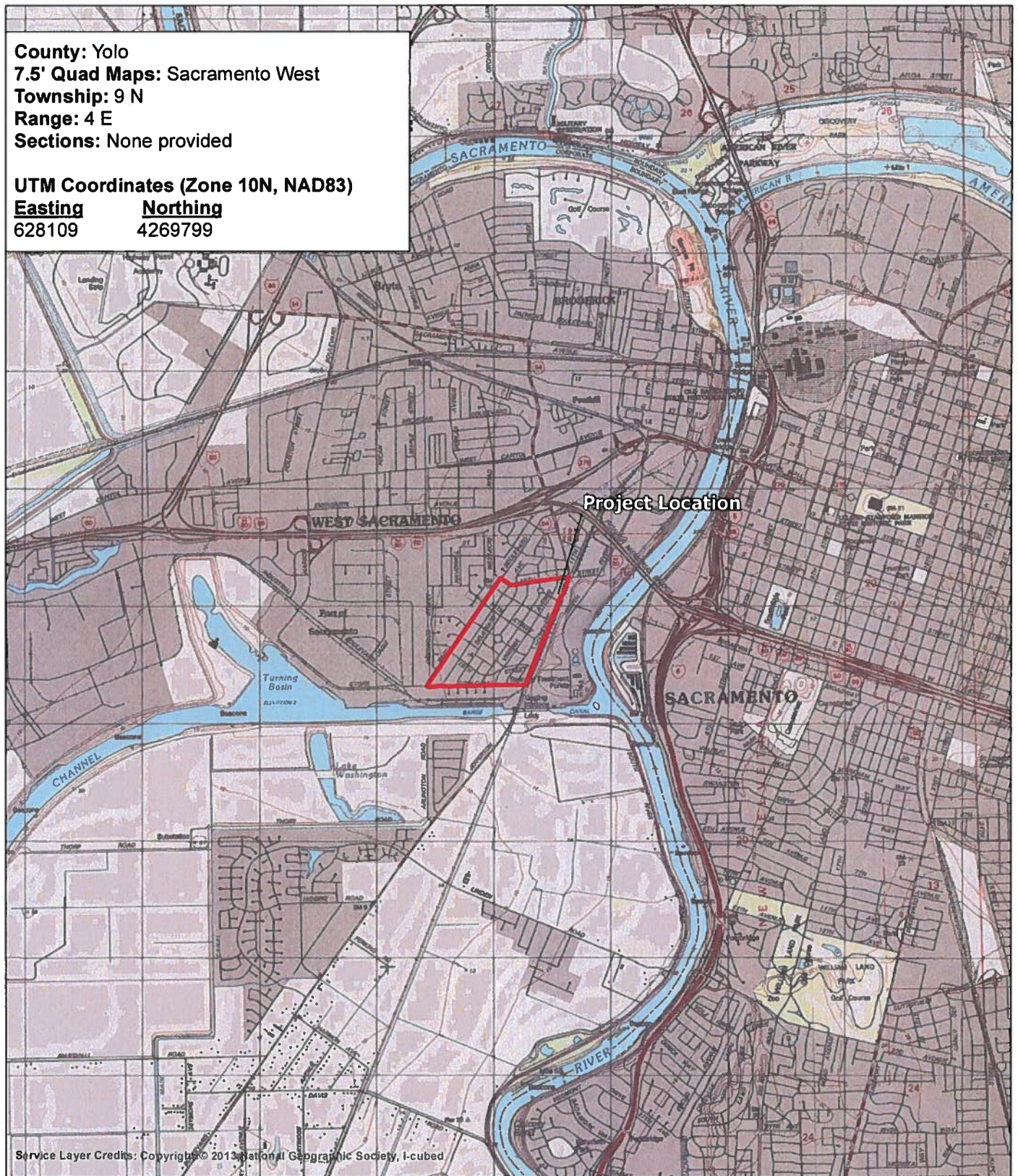
Vin Cay
Supervising Civil Engineer

Enclosures: Figure 1 – Project Vicinity Map
 Figure 2 – Proposed Projects

County: Yolo
7.5' Quad Maps: Sacramento West
Township: 9 N
Range: 4 E
Sections: None provided

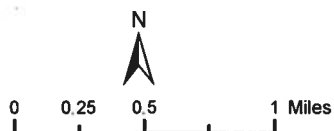
UTM Coordinates (Zone 10N, NAD83)

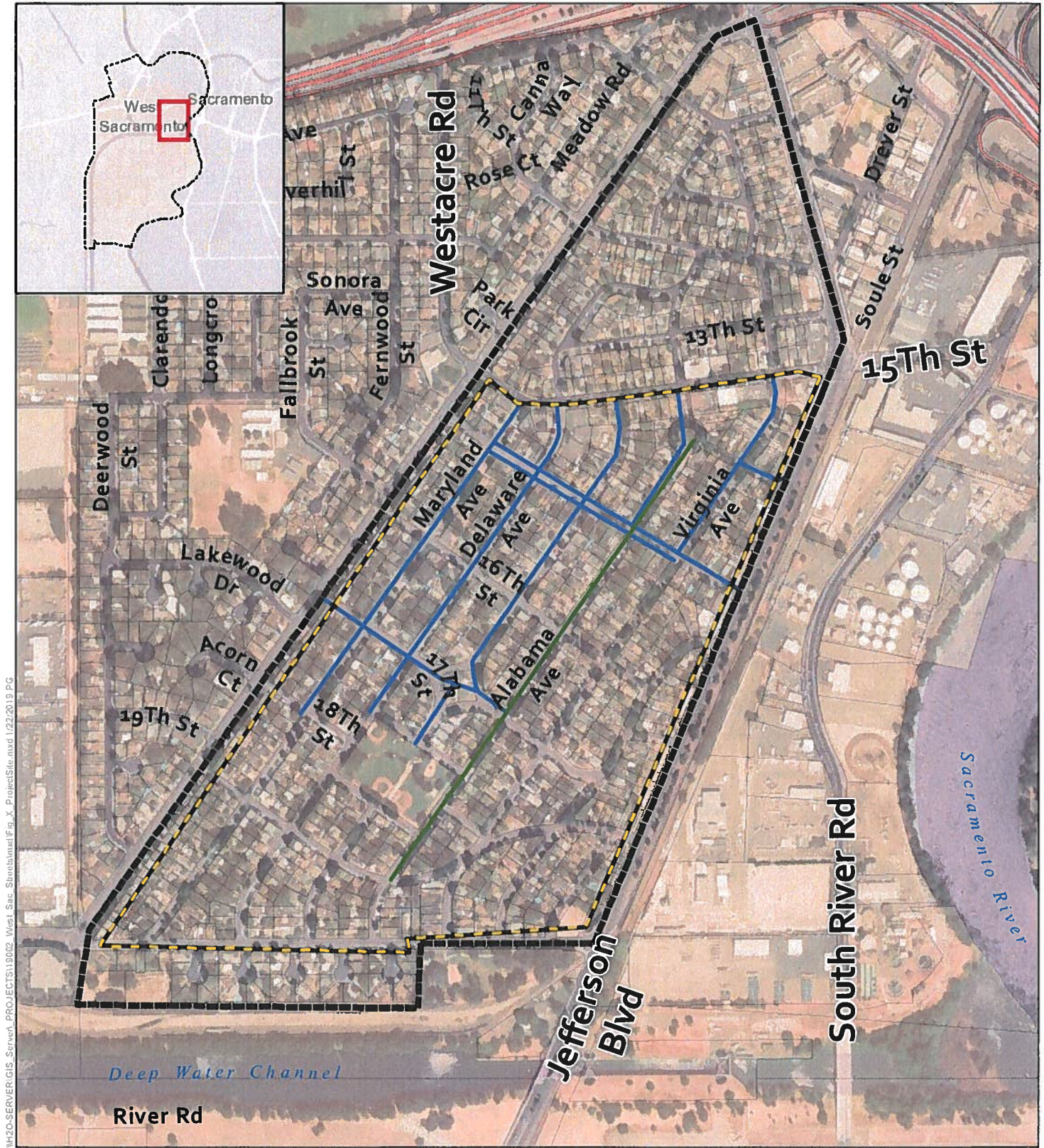
Easting	Northing
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Service Layer Credits: Copyright © 2013 National Geographic Society, I-cubed

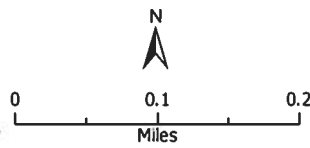
Figure 1
Project Location





\\H2O-SERVER\GIS\Server\PROJECTS\19002 West Sac Streets\Map\Fig. X, ProjectSite.mxd 1/22/2019 PG

BaseMap Sources: Esri, HERE, Garmin, © OpenStreetMap contributors, and the GIS



- Proposed water main replacement
- Proposed Sanitary Sewer main replacement
- Boundary of Proposed Sanitary Sewer main CCTV Inspection
- Pavement Rehabilitation boundary area

Source: City of West Sacramento 2018

Figure 2
Proposed Projects

State Streets Infrastructure Improvement Project



YOCHA DEHE
CULTURAL RESOURCES

February 19, 2019

City of West Sacramento
Attn: David Tilley, Principal Planner
1110 West Capitol Avenue
West Sacramento, CA 95691

RECEIVED

MAR 01 2019

COMMUNITY DEVELOPMENT
DEPARTMENT

RE: State Streets Infrastructure Improvements Projects

Dear Mr. Tilley:

Thank you for your project notification letter dated, February 1, 2019, regarding cultural information on or near the proposed State Streets Infrastructure Improvements Projects, West Sacramento, Yolo County. We appreciate your effort to contact us and wish to respond.

The Cultural Resources Department has reviewed the project and concluded that it is within the aboriginal territories of the Yocha Dehe Wintun Nation. Therefore, we have a cultural interest and authority in the proposed project area and would like to participate in ongoing consultation with the lead agency. Please continue to provide our Cultural Resources Department with updates regarding these projects.

Should you have any questions, please contact the following individual:

Laverne Bill, Cultural Resources Manager
Yocha Dehe Wintun Nation
Office: (530) 723-3891
Email: lbill@yochadehe-nsn.gov

Please refer to identification number YD - 02082019-04 in any correspondence concerning this project.

Thank you for providing us the opportunity to comment.

Sincerely,

Burnam Lowell, Sr.
Tribal Historic Preservation Officer



RECEIVED

MAR 01 2019

COMMUNITY DEVELOPMENT
DEPARTMENT

City of West Sacramento
Attn: David Tilley
1110 West Capitol Avenue
West Sacramento, CA 95691

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YOCHA DEHE
CULTURAL RESOURCES

RECEIVED

MAY 2 2019

COMMUNITY DEVELOPMENT
DEPARTMENT

April 23, 2019

City of West Sacramento
Attn: David Tilley, Principal Planner
1110 West Capitol Avenue
West Sacramento, CA 95691

RE: State Streets Infrastructure Improvements Project

Dear Mr. Tilley:

Thank you for the consultation meeting on, April 8, 2019, regarding the proposed State Streets Infrastructure Improvements Project, West Sacramento, Yolo County. We appreciate you taking the time to discuss the project.

Based on the information provided during our consultation meeting, the Tribe has concerns that the project could impact known cultural resources. Yocha Dehe Wintun Nation highly recommends including cultural monitors during development and ground disturbance for Phase I of the project.

To setup a monitoring agreement, please contact the following individual:

Kathleen Solorio, CRD Administrative Assistant
Yocha Dehe Wintun Nation
Office: (530) 796-2803
Email: ksolorio@yochadehe-nsn.gov

Please refer to identification number YD - 02082019-04 in any correspondence concerning this project.

Thank you for providing us the opportunity to comment.

Sincerely,

Leland Kinter
Tribal Historic Preservation Officer

From: [Cay, Vin](#)
To: [Laverne Bill](#)
Cc: [Wallace, Amber](#); [Debra Lilly](#); [Isaac Bojorquez](#); ["Janis Offermann"](#)
Subject: RE: West Sacramento State Streets Revised cultural mitigation measures
Date: Tuesday, September 03, 2019 4:04:01 PM
Attachments: [image001.png](#)

Laverne,

We will make sure you are notified and well-coordinated prior to any construction start.

Thank you again for your help and Yocha Dehe's continued collaboration on West Sacramento capital projects.

Very Truly Yours,

VIN H. CAY, PE

Supervising Civil Engineer



Capital Projects & Transportation Department

1110 West Capitol Avenue, 1st Floor

West Sacramento, CA 95691

Telephone: (916) 617-4669

Mobile: (916) 947-4950

vinc@cityofwestsacramento.org

From: Laverne Bill <LBill@yochadehe-nsn.gov>

Sent: Tuesday, September 3, 2019 1:25 PM

To: 'Janis Offermann' <janis@horizonh2o.com>; Isaac Bojorquez <IBojorquez@yochadehe-nsn.gov>

Cc: Wallace, Amber <amberwa@cityofwestsacramento.org>; Cay, Vin

<vinc@cityofwestsacramento.org>; Debra Lilly <debra@horizonh2o.com>

Subject: RE: West Sacramento State Streets Revised cultural mitigation measures

Janis, thanks for the update on the Mitigation Measures. I apologize for the delay in reviewing them, but they look great. If you could be notified prior to construction beginning to ensure we are able to conduct the Cultural Sensitivity Training, that would be great. Thanks again for all your help and we look forward to working with you on this project. Have a great day.

Laverne Bill

Cultural Resources Manager

Yocha Dehe Wintun Nation

PO Box 18 | Brooks, CA 95606

p 530.796.3400 | c 530.723.3891

f 530.796.2143
lbill@yochadehe-nsn.gov
www.yochadehe.org

From: Janis Offermann <janis@horizonh2o.com>
Sent: Tuesday, August 27, 2019 7:06 AM
To: Laverne Bill <LBill@yochadehe-nsn.gov>; Isaac Bojorquez <IBojorquez@yochadehe-nsn.gov>
Cc: Wallace, Amber <amberwa@cityofwestsacramento.org>; Cay, Vin <vinc@cityofwestsacramento.org>; Debra Lilly <debra@horizonh2o.com>
Subject: West Sacramento State Streets Revised cultural mitigation measures

Good morning, Laverne

Per our meeting on August 7, attached please find the cultural resources mitigation measures for West Sacramento's State Streets Infrastructure project for your review. There are no separate mitigation measures developed for the tribal cultural resources (TCR) chapter, as no known TCRs have been identified within the project footprint. That chapter refers back to the cultural resources mitigation measures for treatment of unanticipated discoveries of archaeological resources that may be TCRs.

Please don't hesitate to contact me if you have any questions about the mitigation measures. We look forward to your comments.

Best regards
janis

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

This message may contain confidential information. If you are not the intended recipient, or believe that you have received this communication in error, please do not print, copy, re-transmit, disseminate, or otherwise use the information. Also, please indicate to the sender that you have received this email in error, and delete the copy you received. The sender does not accept liability for any errors or omissions in the contents of this message, which arise as a result of e-mail transmission. E-mail correspondence with the City, including attachments, may be subject to the California Public Records Act, and as such may be subject to public disclosure unless otherwise exempt by the Act.



MIWOK United Auburn Indian Community
MAIDU of the Auburn Rancheria

Gene Whitehouse
Chairman

John L. Williams
Vice Chairman

Calvin Moman
Secretary

Jason Camp
Treasurer

Gabe Cayton
Council Member

RECEIVED

MAR 22 2019

COMMUNITY DEVELOPMENT
DEPARTMENT

March 11, 2019

David Tiley
Supervising Civil Engineer
City of West Sacramento
1110 West Capitol Avenue, Second Floor
West Sacramento, CA 95691

RE: AB 52 Consultation Request for the Proposed State Streets Infrastructure Improvements Project, West Sacramento, CA

Dear Supervising Civil Engineer David Tiley,

The United Auburn Indian Community (UAIC) received a letter from the City of West Sacramento dated 2/14/2019, formally notifying us of a proposed project, the State Streets Infrastructure Improvements Project in West Sacramento, and an opportunity to consult under AB 52. This letter is notice that UAIC would like to initiate consultation under AB 52.

We would like to discuss the topics listed in Cal. Public Resources Code section 21080.3.2(a), including the type of environmental review to be conducted for the project; project alternatives; the project's significant effects; and mitigation measures for any direct, indirect, or cumulative impacts the project may cause to tribal cultural resources. As consultation progresses, we may also wish to discuss design options that would avoid impacts to tribal cultural resources; the scope of any environmental document that is prepared for the project; pre-project surveys; and tribal cultural resource identification, significance evaluations and culturally-appropriate treatment.

This letter is also a formal request to allow UAIC tribal representatives to observe and participate in all cultural resource surveys, including initial pedestrian surveys for the project. Please send us all existing cultural resource assessments, as well as requests for, and the results of, any records searches that may have been conducted prior to our first consultation meeting. If tribal cultural resources are identified within the project area, it is UAIC's policy that tribal monitors must be present for all ground disturbing activities. Finally, please be advised that UAIC's strong preference is to preserve tribal cultural resources in place and avoid them whenever possible. Subsurface testing and data recovery must not occur without first consulting with UAIC and receiving UAIC's written consent.

In the letter, Supervising Civil Engineer David Tiley is identified as the lead contact person for consultation on the proposed project. Melodi McAdams, our Cultural Resources Supervisor, will be UAIC's point of contact for this consultation. Please contact Ms. McAdams, Cultural Resources Supervisor, at (530) 328-1109 or email at mmcadams@auburnrancheria.com if you have any questions.

Thank you for involving UAIC in the planning process at an early stage. We ask that you make this letter a part of the project record and we look forward to working with you to ensure that tribal cultural resources are protected.

Sincerely,



Gene Whitehouse
Chairman

CC: Matthew Moore, UAIC Tribal Historic Preservation Officer

From: [Wallace, Amber](#)
To: [Melodi McAdams](#)
Cc: [Cay, Vin](#); [Janis Offermann](#); [Debra Lilly](#); [Ramirez, Candido](#); [Laffey, Seamus](#); [Cherilyn Neider](#); [Steven Hutchason](#); [Matthew Moore](#); rallen@auburnrancheria.com
Subject: FW: State Streets Infrastructure Projects
Date: Friday, August 30, 2019 4:06:38 PM
Attachments: [image001.png](#)
[Mitigation Measures with discussion_08262019.docx](#)

Happy Friday Melodi,

Thank you for expressing interest in AB52 consultation for the City of West Sacramento's State Streets Infrastructure project pursuant to the letter from Chairperson Whitehouse dated March 11, 2019 and an email from Ms. Cherilyn Neider on March 22, 2019. We appreciate the information you provided and have taken your concerns about the potential for buried Native American remains within the project footprint into account in the mitigation measures developed for the project. The mitigation measures are attached for your review. Although we did not receive preferred mitigation measures directly from you, we believe that those provided here will meet your needs. Please note that, while not specified in the mitigation measures, the Yocha Dehe tribe has agreed to participate in the pre-construction cultural awareness training, and may participate in informal monitoring of the project. Furthermore, there are no separate mitigation measures developed for the tribal cultural resources (TCR) chapter of the mitigated negative declaration, as no known TCRs have definitively been identified within the project footprint. That chapter refers back to the cultural resources mitigation measures for treatment of unanticipated discoveries of archaeological resources that may be TCRs.

We look forward to receiving any comments you might have about the mitigation measures. If we do not hear back from you by September 20, 2019, we will respectfully assume that you have no comments and that AB 52 consultation between the City and UAIC is complete.

Sincerely,

Amber Wallace, PE
Associate Civil Engineer



Public Works Department
1110 West Capitol Avenue, 1st Floor
West Sacramento, CA 95691
Telephone: (916) 617-5327
amberwa@cityofwestsacramento.org

From: Janis Offermann <janis@horizonh2o.com>
Sent: Wednesday, May 22, 2019 10:10 AM
To: Melodi McAdams <mmcadams@auburnrancheria.com>
Cc: Wallace, Amber <amberwa@cityofwestsacramento.org>; Debra Lilly <debra@horizonh2o.com>; Laffey, Seamus <SEAMUSL@cityofwestsacramento.org>; Cherilyn Neider <cneider@auburnrancheria.com>; Steven Hutchason <shutchason@auburnrancheria.com>; Matthew Moore <mmoore@auburnrancheria.com>; vinc@cityofwestsacramento.org
Subject: RE: State Streets Infrastructure Projects

Good morning, Melodi

I am following up on the email I sent two weeks ago regarding continued consultation on the City of West Sacramento's State Streets Infrastructure Projects. Your input is very important to the City, but since they have not heard from you, they will plan on moving ahead and assume that there will be no additional consultation with UAIC on this project if they have not received any word from you by next Wednesday, May 29, 2019. If we do not hear from you, please be assured that mitigations for the discovery of cultural resources and human remains during construction will be included in the project environmental document.

Thank you
Janis

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

From: Janis Offermann <janis@horizonh2o.com>
Sent: Wednesday, May 08, 2019 11:15 AM
To: 'Wallace, Amber' <amberwa@cityofwestsacramento.org>; 'Melodi McAdams' <mmcadams@auburnrancheria.com>
Cc: 'Ramirez, Candido' <candidor@cityofwestsacramento.org>; Debra Lilly <debra@horizonh2o.com>; 'Laffey, Seamus' <SEAMUSL@cityofwestsacramento.org>; 'Cherilyn Neider' <cneider@auburnrancheria.com>; 'Steven Hutchason' <shutchason@auburnrancheria.com>; 'Matthew Moore' <mmoore@auburnrancheria.com>; 'vinc@cityofwestsacramento.org' <vinc@cityofwestsacramento.org>
Subject: RE: State Streets Infrastructure Projects

Hi, Melodi

The City of West Sacramento has asked me to follow-up with you, as they have not heard anything since sending the email below.

The City is wondering if you intend to send the mitigation measures you mentioned in your March 29, 2019 email to take into consideration during preparation of the environmental document for the project. The City is also wondering if you would like to provide additional information about the location of the village of *Yokakpe*, as they want to avoid the village, or as much as feasible. Amber and her team remain available to meet with you on this topic or any other concerns you might have about the project. On the other hand, the City will move forward with the project if they do not receive any additional information from you.

Thank you for your time. I hope all is well.

Janis

Janis Offermann
Cultural Resources Practice Leader
Horizon Water and Environment
400 Capitol Mall, Suite 2500
Sacramento, CA 95814
916.465.8076 – office
530.220.4918 – mobile

From: Wallace, Amber <amberwa@cityofwestsacramento.org>
Sent: Wednesday, April 03, 2019 2:11 PM
To: Melodi McAdams <mmcadams@auburnrancheria.com>
Cc: Ramirez, Candido <candidor@cityofwestsacramento.org>; Debra Lilly <debra@horizonh2o.com>; Laffey, Seamus <SEAMUSL@cityofwestsacramento.org>; Cherilyn Neider <cneider@auburnrancheria.com>; Steven Hutchason <shutchason@auburnrancheria.com>; Matthew Moore <mmoore@auburnrancheria.com>
Subject: RE: State Streets Infrastructure Projects

Dear Cultural Resources Supervisor McAdams,

Thank you for your prompt response regarding the State Streets Infrastructure Improvement Projects on the west side of the project area and the location of the village of *Yokakpe* on the eastern side of the project area. Currently we are not planning on conducting cultural resources inventory work in the State Streets neighborhood. Please send us your preferred TCR mitigation measures for consideration. We understand that you do not think a site visit would be productive at this time because the project area has already been developed. If UAIC would like to consult in person about this project, the City remains available.

Sincerely,

Amber Wallace, PE
Associate Civil Engineer



Public Works Department
1110 West Capitol Avenue, 1st Floor
West Sacramento, CA 95691
Telephone: (916) 617-5327
amberwa@cityofwestsacramento.org

From: Melodi McAdams <mmcadams@auburnrancheria.com>
Sent: Friday, March 29, 2019 10:19 AM
To: Wallace, Amber <amberwa@cityofwestsacramento.org>
Cc: Ramirez, Candido <candidor@cityofwestsacramento.org>; Debra Lilly <debra@horizonh2o.com>; Laffey, Seamus <SEAMUSL@cityofwestsacramento.org>; Cherilyn Neider <cneider@auburnrancheria.com>; Steven Hutchason <shutchason@auburnrancheria.com>; Matthew Moore <mmoore@auburnrancheria.com>
Subject: RE: State Streets Infrastructure Projects

Dear Associate Civil Engineer Wallace,

Thank you for the follow-up! The eastern portion of your project area is sensitive due to its proximity to the village of *Yokakpe*. Based on the letter that you submitted, it appears that most of the substantial ground disturbance is associated with the western portion of the project area. I appreciate the offer to meet, however it's unlikely that a site visit would be productive, since the project area has already been developed.

If you are planning to conduct any subsurface cultural resources inventory work, then we would like to review those documents, since reviewing them would help us to evaluate whether or not elements of *Yokakpe* may extend into your project area.

If you are not planning to conduct any subsurface cultural resources inventory work, then we have a set of preferred Tribal Cultural Resources (TCR) mitigation measures that are associated with infill projects that would address our concerns about the potential for TCRs in your project area.

Thank you, I look forward to your response!

Sincerely,
Melodi McAdams
Cultural Resources Supervisor
Tribal Historic Preservation Department
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road

Auburn, CA 95603
(530) 328-1109 - office
(530) 401-7470 - cell

From: Wallace, Amber [<mailto:amberwa@cityofwestsacramento.org>]
Sent: Tuesday, March 26, 2019 9:15 AM
To: Melodi McAdams <mmcadams@auburnrancheria.com>
Cc: Ramirez, Candido <candidor@cityofwestsacramento.org>; Debra Lilly <debra@horizonh2o.com>; Laffey, Seamus <SEAMUSL@cityofwestsacramento.org>
Subject: State Streets Infrastructure Projects

Dear Ms. McAdams,

Good morning! I am the project manager for the State Streets Infrastructure Project in West Sacramento. Candido and I just left a message for you. The City and our consultant would like to set up a meeting with you regarding consultation on the project as soon as your calendar allows. If we meet in West Sacramento, we can drive through the project site after our meeting. Please choose one of the dates and times below or send me three good times for you and we will schedule it. Welcome to the project team.

Thank you,

Thursday April 4 at 2:00 pm
Monday April 8 at 10:00 am
Thursday April 11 at 1:30 pm

Amber Wallace, PE
Associate Civil Engineer



Public Works Department
1110 West Capitol Avenue, 1st Floor
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Appendix B

CHRIS Northwest Information Center Results

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Appendix D

Mitigation Monitoring and Reporting Plan

Appendix D

MITIGATION MONITORING AND REPORTING PLAN

This mitigation monitoring and reporting plan (MMRP) identifies the mitigation measures identified in the City of West Sacramento's (City's) State Streets Infrastructure Projects (Proposed Project) Initial Study/ Mitigated Negative Declaration IS/MND) For each mitigation measure, the MMRP identifies monitoring and reporting actions that shall be carried out and the applicable schedule for monitoring activities. This MMRP also includes a column where responsible parties can check off monitoring and reporting actions as they are completed.

As lead agency, the City will be responsible for ensuring that mitigation measures identified in this IS/MND are fully implemented. Some mitigation measures would be implemented by the contractor(s) on behalf of the City. Contract documents for the Proposed Project will identify the obligations of the contractor, including relevant mitigation measures. The City will require that the contractor provide documentation that the contractor has adequately implemented all contractual obligations, including applicable mitigation measures.

Thus, in the descriptions of the mitigation measures provided in below, while the City may be specifically referenced in implementing a mitigation measure (i.e., where the measure states "The City shall"), this is intended to be inclusive of the contractor's role in implementing certain mitigation measures during construction or as part of design.

Acronyms and Abbreviations

CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
City	City of West Sacramento
CRHR	California Register of Historical Resources
Dbh	diameter at breast height
DSH	diameter at standard height
HCP/NCCP	Yolo Habitat Conservation Plan/Natural Communities Conservation Plan
IS/MND	Initial Study/ Mitigated Negative Declaration
MLD	Most Likely Descendent
MMRP	mitigation monitoring and reporting plan
NAHC	Native American Heritage Commission
Proposed Project	State Streets Infrastructure Projects
USFWS	U.S. Fish and Wildlife Service

References

Swainson's Hawk Technical Advisory Committee. 2000. Recommended timing and methodology for Swainson's Hawk nesting surveys in California's Central Valley.

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1 **Table D-1. Mitigation Measures and Implementation Requirements**

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
Biological Resources			
<p>Mitigation Measure BIO-1a. Compliance with the Requirements of the Yolo HCP/NCCP for Swainson's Hawk and White-Tailed Kite</p> <p>The Yolo Habitat Conservation Plan/Natural Communities Conservation Plan (HCP/NCCP) contains avoidance and minimization measures that the City of West Sacramento shall adopt for Swainson's hawk and white-tailed kite. Specifically, implementation of Avoidance and Minimization Measure 15 in the Yolo HCP/NCCP will:</p> <ul style="list-style-type: none"> ▪ Identify and quantify (in acres) Swainson's hawk and white-tailed kite habitat in and within 1,320 feet of the project footprint, and identify suitable nest trees. ▪ Avoid potential nesting trees, with 1,320-foot setbacks from the trees during nesting, to the extent practicable. ▪ During construction, if activities would occur within 1,320 feet of nesting habitat between March 15 and August 30, preconstruction activities would be conducted for active nests consistent with the Swainson's Hawk Technical Advisory Committee (2000). For operation and maintenance, if activities involve pruning or removal of suitable nest trees, preconstruction activities will be conducted for active nests, consistent with the Swainson's Hawk Technical Advisory Committee (2000). ▪ For construction activities occurring from March 15 to August 30, no activities will occur within 1,320 feet of active nests, unless a qualified biologist has determined that the young have fledged and the nest is no longer active or the Yolo Habitat Conservancy, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW) agree to a lesser buffer distance. For operations and maintenance, if occupied nest sites are present within 1,320 feet, tree pruning and removal will be deferred until the nest is no longer being used by adults and young. 	<ol style="list-style-type: none"> 1. Retain a qualified biologist 2. Conduct surveys for Swainson's Hawk and White-tailed Kite within a minimum 1,32-foot radius around construction areas. 3. Establish buffers around active nests. 4. Monitor nests to determine when construction activities can begin within the buffer. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. Before construction 4. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>Mitigation Measure BIO-1b. Conduct Preconstruction Surveys for Nesting Birds and Implement Non-disturbance Buffer Areas.</p> <p>To the extent feasible, all vegetation removal shall occur between September 1 and January 31, outside the bird/raptor nesting season, to avoid potential impacts on nesting birds. If construction activities (including staging and tree or vegetation removal) will occur during the nesting season (February 1 through August 31), the City shall retain a qualified wildlife biologist to conduct focused surveys for active bird nests in project areas currently under construction and within a 250-foot buffer no more than 7 days before initiation of construction activities. If no work occurs for a period of 5 days during the nesting season, repeat surveys must be performed before work within 250 feet of suitable nesting substrate is resumed. If the survey indicates that no active nests are present, no further mitigation shall be required.</p>	<ol style="list-style-type: none"> 1. Retain a qualified biologist 2. Conduct a nesting bird survey within 2 weeks before construction. 3. If a lapse of 2 weeks or longer occurs during construction, conduct another focused survey before construction is reinitiated. 4. If birds are found, establish an appropriate buffer. 5. Monitor nests to determine when construction activities can begin within the buffer. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. During construction 4. Before and during construction 5. During construction 	
<p>Mitigation Measure BIO-2a. Remove and Disturb Trees Outside of the Maternity and Winter Seasons</p> <p>To avoid disturbing or eliminating occupied maternity roosts or winter roosts, all tree removal and pruning shall occur outside of the maternity season (May 1 – August 31) and winter season (November 1 – March 1) to the extent feasible.</p>	<ol style="list-style-type: none"> 1. Identify occupied roosts by conducting Mitigation Measure 1b, described above. 2. Schedule tree removal and pruning in those areas to occur during March 1-April 30 or September 1-October 31. 	<ol style="list-style-type: none"> 1. Before construction 2. During construction 	
<p>Mitigation Measure BIO-2b. Conduct a Habitat Assessment and Surveys for Bat Roosts</p> <p>Before the commencement of tree removal, a CDFW-approved biologist with experience identifying bat roosts will conduct a daytime habitat suitability assessment to determine if any of the trees in the project area that may be removed, trimmed, or pruned contain potential colonial bat roosting (e.g., large tree cavities, basal hollows, loose or peeling bark, larger snags, palm trees with intact thatch) or indications of bat use (e.g., occupancy, guano, staining, smells, or sounds). Each tree shall be rated on a scale of 1-3: 1 = unsuitable/low suitability; 2 = potentially suitable; and, 3 = identifiable roost. If all trees within the project area are rated 1, no additional measures will be taken. If any trees are rated 2, a CDFW-approved biologist with experience surveying</p>	<ol style="list-style-type: none"> 1. Include lighting requirements in construction documents 2. Inspect construction sites on a regular basis for compliance 	<ol style="list-style-type: none"> 1. During construction 2. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>tree roosts shall conduct evening bat surveys at potential sites to assess roosting patterns during the maternity season. Evening emergence surveys will be conducted using night-vision technology and acoustic monitoring from one half hour before sunset to at least 1 hour after sunset for a minimum of two nights. The survey methodology will be submitted and approved by CDFW prior to the survey. If the bat biologist determines that any of the trees rated 2 are identifiable roosts, their rating will be changed to 3. If any trees are rated 3, the City shall implement Mitigation Measure BIO-2c.</p>			
<p>Mitigation Measure BIO-2c. Avoid and Minimize Impacts on Bats and Bat Roosts</p> <p>The City shall avoid removal and disturbance of all bat roosts within the project area to the greatest extent feasible. If it is not possible to avoid the disturbance or removal of all roosts, alternative impact minimization measures will be developed according to specific site conditions and degree of impact (e.g., species, size of colony, season of use). These measures may include roost exclusion prior to the sensitive seasons of use, tiered tree pruning or removal under the supervision of a qualified biologist, and compensatory roost replacement. A plan detailing the methods and specifications of the minimization measures will be prepared by a qualified bat biologist and submitted to CDFW for approval prior to implementation, and prior to the start of tree removal or other construction disturbance.</p>	<ol style="list-style-type: none"> 1. Retain a qualified biologist 2. Conduct surveys for bats during maternity season. 3. If bats are using the construction area, develop and implement measures with CDFW approval to minimize impacts on roosts or exclude bats from roost sites. 4. Monitor roosts to determine when construction activities can begin within the buffer. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. Before construction 4. During construction 	
<p>Mitigation Measure BIO-2d. Prepare Bat Roost Compensation Plan and Provide Replacements for Roosts That Cannot Be Avoided</p> <p>If bat roosts cannot be avoided or if it is determined that construction activities may cause roost abandonment, the City shall refrain from such activities until roost sites have been replaced.</p> <p>For replacement of roost sites established in the existing trees, the City shall retain a qualified bat biologist to develop a Bat Roost Compensation Plan that addresses the use of the trees, identifies appropriate compensation measures commensurate with the size of the colony, and provides for no net loss in roosting areas for the bats.</p>	<ol style="list-style-type: none"> 1. Retain a qualified bat biologist 2. Based on the results of bat surveys (Mitigation Measure BIO-2c), identify roost sites that require replacement 3. Develop and implement measures with CDFW approval to replace roost sites and appropriate compensation measures. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. Before and during construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>Mitigation Measure BIO-3a: Minimize Potential Impacts on Trees</p> <p>Upon receiving and reviewing detailed specifications (site plans) for the Proposed Project's construction activities, the City shall provide plans to the arborist for review to identify with more certainty the trees that are likely to be affected by construction. During construction, the arborist will work on-site with City staff to identify which trees will need to be removed or trimmed/pruned. Existing trees will be avoided and retained where practicable, using techniques such as the following:</p> <ul style="list-style-type: none"> ▪ Design sidewalks to meander around the existing trees. ▪ Install water lines above or below tree roots to avoid the need to trim roots. ▪ Because vertical placement of sewer lines is not flexible, rehabilitation of sewer lines rather than replacements will be implemented when possible. <p>The City shall mitigate for trees that are removed by implementing Mitigation Measure BIO-3b.</p>	<ol style="list-style-type: none"> 1. Retain an arborist to review site plans and identify those likely to require removal or trimming/pruning. 2. Coordinate construction plans with arborist input on avoidance. 3. Monitor construction activities in the vicinity of trees that are likely to be affected. 	<ol style="list-style-type: none"> 1. During project planning 2. During project planning 3. During construction 	
<p>Mitigation Measure BIO 3b: Implement Mitigation for Removed Trees</p> <p>All impacts on trees resulting from trimming, pruning, or removal due to construction activities must be reviewed by a City Tree Administrator if the tree's diameter at breast height (dbh) is greater than 2 feet for non-native oak and 16 inches for native oak. If the City's arborist indicates that a tree must be removed, the homeowner will be notified of the decision and may choose to obtain a free replacement tree through the City Parks and Recreation Department's West Sacramento Tree Program (information is available at www.cityofwestsacramento.org/government/departments/parks-recreation/trees). The homeowner may choose from the City's list of replacement trees: Emerald Sunshine (<i>Ulmus propinqua</i>), Golden Rain (<i>Koelreuteria paniculata</i>), Trident maple (<i>Acer buergerianum</i>), Texas red oak (<i>Quercus buckleyi</i>), Deodar cedar (<i>Cedrus deodara</i>), or Cork Oak (<i>Quercus suber</i>). These trees have been selected because they are drought resistant and utility-friendly (i.e., their height and branching structure are not likely to interfere with</p>	<ol style="list-style-type: none"> 1. Contact property owners to coordinate on desired mitigation. 2. Provide tree maintenance training through the City's Free Tree Workshop. 3. Coordinate removal and planting of trees to occur during periods identified in MM BIO-2a. 	<ol style="list-style-type: none"> 4. During construction 5. After construction 6. After construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>power lines, and their root system is not likely to affect underground pipelines or sidewalks).</p> <p>Replacement trees will be planted by the City's arborist in coordination with the homeowner.</p> <p>Trees will be replaced at a 1:1 ratio (i.e., one replacement tree for each tree removed). Replacement trees will have a 24-inch-box tree to accelerate the processing of achieving the size of the removed tree. If a 24-inch-box tree is not available, 15-gallon trees will be used.</p> <p>Where a street tree must be removed, the replacement tree will not be planted within 5 feet of any fire hydrant and will be placed 4 feet outside of any drainage, sewer, or water easement and sidewalk, as determined by the City Capital Projects & Transportation Department.</p> <p>All removed trees will be chipped and used as mulch in city parks and/or made available to residents at the City's corporation yard at 1801 West Capitol Avenue.</p>			
Cultural Resources			
<p>Mitigation Measure CR-1: Conduct Cultural Resources Awareness Training</p> <p>A cultural resources awareness training program will be provided to all construction personnel active on the Project site during earth moving activities. The training will be provided prior to the initiation of ground disturbing activities. The training will be developed and conducted in coordination with a qualified archaeologist meeting the U.S. Secretary of Interior professional standards in archaeology, as defined in 48 Code of Federal Register Parts 44720–44723, and a Native American tribe, who has participated in consultations with the City, will be invited to participate in the training. The program will include relevant information regarding sensitive cultural resources, including applicable regulations, protocols for avoidance, and consequences of violating State laws and regulations. The worker cultural resources awareness program will also describe appropriate avoidance and minimization measures for resources that have the potential to be located on the Project site and will outline what to do and whom to contact if any</p>	<ol style="list-style-type: none"> 1. Retain a qualified archaeologist. 2. Prepare cultural resources awareness training program. 3. Contact and coordinate with Yocha Dehe to participate if desired. 4. Schedule and provide worker training prior to initial ground-disturbing activities. 	<ol style="list-style-type: none"> 1. Before construction 2. Before construction 3. Before construction 4. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>potential archaeological resources or artifacts are encountered. The program will also underscore the requirement for confidentiality and culturally appropriate treatment of any finds of significance to Native Americans, consistent with Native American tribal values.</p> <p>The Yocha Dehe will also be invited to participate in the Project preconstruction meeting, and the tribe will be kept aware of the Project construction schedule.</p>			
<p>Mitigation Measure CR-2: Immediately Halt Construction if Cultural Resources Are Discovered, Evaluate All Identified Cultural Resources for Eligibility for Inclusion in the CRHR, and Implement Appropriate Mitigation Measures for Eligible Resources.</p> <p>Construction monitoring of ground disturbing activities by archaeological or Native American monitors is not currently planned by the City. However, tribal representatives from a local traditionally and culturally affiliated tribe are invited to visit the construction site at any time to observe construction excavation, as long as the City project manager is notified in advance.</p> <p>If evidence of any subsurface archaeological features or deposits are discovered during construction-related earth-moving activities, such as structural features, bone or shell fragments, flaked or ground stone artifacts, historic-era artifacts, or architectural remains, are encountered during any project construction activities, work shall be suspended immediately at the location of the find and within a radius of at least 50 feet and the City will be contacted. The City will then contact a qualified archaeologist who meet the U.S. Secretary of the Interior's professional standards and a Native American representative from a traditionally and culturally affiliated tribe, as appropriate (i.e., a Native American site rather than a historic era site), to assess the significance of the find and make recommendations for further evaluation and treatment as necessary.</p> <p>All cultural resources accidentally uncovered during construction within the project site shall be evaluated for eligibility for inclusion in the California Register of Historical Resources (CRHR). Resource evaluations will be conducted by individuals who meet the U.S. Secretary of the</p>	<ol style="list-style-type: none"> 1. Retain a qualified archaeologist and coordinate with tribal representatives 2. If archaeological features or deposits are discovered, stop work and contact the City. 3. Archaeologist and tribal representative will assess the significance of the find and make recommendations for evaluation and treatment. 4. Evaluate CRHR eligibility of any discovered resources. 5. If eligible resources will be affected, develop and implement additional mitigation. 	<ol style="list-style-type: none"> 1. Before construction 2. During construction 3. During construction 4. During construction 5. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
<p>Interior's professional standards in archaeology. If any of the resources meet the eligibility criteria identified in Public Resources Code Section 5024.1 or CEQA Section 21083.2(g), mitigation measures will be developed and implemented in accordance with California Environmental Quality Act CEQA Guidelines Section 15126.4(b) before construction resumes.</p> <p>For resources eligible for listing in the CRHR that would be rendered ineligible by the effects of project construction, additional mitigation measures will be implemented. Mitigation measures for archaeological resource, as outlined in CEQA Guidelines Section 15126.4(b), may include (but are not limited to) avoidance; incorporation of sites within parks, greenspace, or other open space; capping the site; deeding the site into a permanent conservation easement; or data recovery excavation. Mitigation measures for archaeological resources shall be developed in consultation with responsible agencies and, as appropriate, interested parties such as Native American tribes. Native American consultation is required if an archaeological site is determined to be a Tribal Cultural Resource. Implementation of the approved mitigation would be required before resuming any construction activities with potential to affect identified eligible resources at the site.</p>			
<p>Mitigation Measure CR-3: Immediately Halt Construction if Human Remains Are Discovered and Implement Applicable Provisions of California Health and Safety Code Section 7050.5.</p> <p>If human remains are discovered during the Proposed Project's construction activities, the requirements of California Health and Safety Code Section 7050.5 shall be followed. Potentially damaging excavation shall halt on the Project site within a minimum radius of 100 feet of the remains, and the County coroner shall be notified, as well as the City's project manager. The coroner is required to examine all discoveries of human remains within 48 hours of receiving notice of a discovery on private or state lands (California Health and Safety Code Section 7050.5[b]). If the coroner determines that the remains are those of a Native American, he or she must contact the Native American Heritage Commission (NAHC) by phone within 24 hours of making that determination (California Health and Safety Code Section 7050[c]).</p>	<ol style="list-style-type: none"> 1. Retain a qualified archaeologist 2. In the event that human remains are encountered, halt work and contact the County Coroner. 3. If discovered remains are those of a Native American, he or she must contact the NAHC by phone within 24 hours of making that determination. 4. NAHC shall identify a MLD, upon which this person shall be notified and given at least 48 hours to inspect the site and propose treatment and 	<ol style="list-style-type: none"> 1. Before construction 2. During preparation of plans and specifications 3. During construction 4. During construction 5. During construction 	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
Pursuant to the provisions of Pub. Res. Code Section 5097.98, NAHC shall identify a Most Likely Descendent (MLD). The MLD designated by NAHC shall have at least 48 hours to inspect the site and propose treatment and disposition of the remains and any associated grave goods. The State shall work with the MLD to ensure that the remains are removed to a protected location and treated with dignity and respect. Native American human remains may also be determined to be tribal cultural resources. The Yolo County coroner will determine the treatment of human remains that are not of Native American origin. Such treatment may include archaeological excavation.	disposition of the remains and any associated grave goods. 5. Cooperation with MLD is required.		
Geology, Soils, and Seismicity			
Mitigation Measure GEO-1. Conduct Construction Monitoring During Clearing and Grading to Provide Supplemental Recommendations if Necessary Construction monitoring is a continuation of the findings and recommendations provided in the Geotechnical Report. The City shall involve the project engineer in all grading activities to provide supplemental recommendations as field conditions dictate. The project engineer will be notified at least 2 working days before site clearing or grading operations commence, and will observe the overexcavation of existing fills or loose/soft soils and provide consultation to the grading contractor in the field.	1. Retain a project engineer. 2. Inform the project engineer 2 working days before site clearing and grading operations. 3. Consult with project engineer regarding treatment measures for existing fills and loose/soft soils.	1. Before construction 2. Before and during construction 3. During construction	
Mitigation Measure GEO-2. Halt Excavation If Paleontological Resources Are Encountered, Evaluate the Find, and Implement Measures to Avoid Impacts If paleontological resources are encountered during Project excavation and no monitor is present, all ground-disturbing activities within 50 feet of the find shall be redirected to other areas until a qualified paleontologist can be retained to evaluate the find and make recommendations for additional paleontological mitigation, which may include paleontological monitoring; collection of observed resources; preservation, stabilization, and identification of collected resources; curation of resources into a museum repository; and preparation of a	1. Retain a qualified paleontologist if paleontological resources are discovered. 2. Stop work and contact the City. 3. The paleontologist will evaluate the find and make recommendations for additional mitigation.	4. During construction 5. During construction 6. During construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
final report documenting the monitoring methods and results to be submitted to the museum repository and the City of West Sacramento.			
Noise			
Mitigation Measure NOI-1. Equip Construction Equipment with Mufflers. Prior to any construction activity, the construction contractor (confirmed by the City), shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturers' standards.	1. City to confirm that contractor has appropriate equipment.	1. Before construction	
Mitigation Measure NOI-2. Locate Staging Areas Away from Residences. Prior to and during any construction activity, the construction contractor (confirmed by the City or a City-appointed noise liaison) shall locate equipment staging in areas that would create the greatest possible distance between construction-related noise sources and residences.	1. City to confirm construction staging areas.	1. Before construction	
Mitigation Measure NOI-3. Limit Construction Hours. The construction contractor, through enforcement by the City, shall ensure that all general construction-related activities be restricted to the daytime hours of 7:00 a.m. to 7:00 p.m., Monday through Friday. Construction activities shall be restricted from occurring on weekends (Saturday and Sunday) and on holidays.	1. City to confirm that construction is taking place within identified hours.	1. During construction.	
Mitigation Measure NOI-4. Appoint a Construction Noise Liaison, Enforce Noise Requirements, and Respond to Noise Complaints. The City shall appoint a construction noise liaison who shall be responsible for responding to any local complaints about construction noise. The City shall facilitate a focus meeting with project area residents, the construction contractor, and the noise liaison to notify residents of potential impacts and measures to reduce such impacts. If a noise complaint related to construction is received, the construction noise liaison shall determine the cause of the construction noise issue (e.g., construction activities outside of City authorized times, bad	1. Appoint a City construction noise liaison. 2. Schedule and hold focus meeting with residents. 3. Respond to noise complaints.	1. Before construction 2. Before construction 3. During construction	

Mitigation Measure	Monitoring and Reporting Action	Monitoring Schedule	Completion Date and Initials
muffler) and shall enforce existing City noise requirements with the construction contractor. If the noise complaint cannot be resolved through enforcement, Mitigation Measure NOI-5 shall be implemented.			
Mitigation Measure NOI-5. Notify Residents Before Active Construction Begins and Provide Lodging Accommodations by Request. At least 2 weeks (14 days) prior to commencement of construction activities within 500 feet (two blocks) of residences, the City (in coordination with the construction contractor and construction noise liaison) shall provide written notification to those residences of construction activities, the intended length of occurrence, the potential occurrence for short-term noise level increases, and noise liaison contact information. The written notification may be distributed to residences in person or by mail.	1. Inform residents of alternative lodging option. 2. Coordinate with interested residents.	1. During construction 2. During construction	
Transportation			
Mitigation Measure TR-1. Park and Stage Construction Equipment in Off-street Areas Where Possible. Before construction begins, the City shall identify parking lots or other off-street locations within or near the project roadways where construction worker vehicles and construction equipment can be parked without interfering with the safety and visibility of streets in the project area. Such areas may include parking lots of commercial establishments, churches, and other facilities. The City will identify appropriate areas for construction worker vehicles that are near to work zones, as well as staging areas that can be appropriately secured. These areas will be indicated on project plans and specifications.	1. City to confirm contractor staging and parking areas.	1. Before construction	

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