

SOUTH LAND PARK AND RICHMOND GROVE WATER METER RETROFITS PROJECT

Initial Study / Mitigated Negative Declaration

Prepared for

City of
SACRAMENTO



October 2017



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City of
SACRAMENTO

COMMUNITY DEVELOPMENT
DEPARTMENT

ENVIRONMENTAL PLANNING
SERVICES

300 Richards Boulevard
Third Floor
Sacramento, CA 95811

MITIGATED NEGATIVE DECLARATION

The City of Sacramento, California, a municipal corporation, does hereby prepare, declare, and publish this Negative Declaration for the following described project:

South Land Park and Richmond Grove Water Meter Retrofits Project - The proposed project, located South Land Park and Richmond Grove neighborhoods of the City of Sacramento, consists of the installation of approximately 3,200 water meters in residential backyards/alleys and front yards (in or behind sidewalks). The meters would be installed on existing residential and commercial water service connections. Each water meter would include a combination of meter setters, fittings and piping to connect the meter to the water main. The installation of the water meters would be done in a manner as to minimize ground disturbance. The water meters would be placed in a rectangular meter box (28 inches by 18 inches) with a concrete or Fibrelite lid flush with the existing landscape grade.

The Lead Agency is the City of Sacramento. The City of Sacramento, Community Development Department, has reviewed the proposed project and, on the basis of the whole record before it, has determined that there is no substantial evidence that the project, as identified in the attached Initial Study, will have a significant effect on the environment. This Mitigated Negative Declaration reflects the lead agency's independent judgment and analysis. An Environmental Impact Report is not required pursuant to the Environmental Quality Act of 1970 (Sections 21000, et seq., Public Resources Code of the State of California).

This Mitigated Negative Declaration has been prepared pursuant to the California Environmental Quality Act (Public Resources Code Sections 21000 et seq.), CEQA Guidelines (Title 14, Sections 15000 et seq. of the California Code of Regulations), the Sacramento Local Environmental Regulations (Resolution 91-892) adopted by the City of Sacramento, and the Sacramento City Code.

A copy of this document and all supportive documentation may be reviewed or obtained at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811 from 9:00 a.m. to 4:00 p.m. (or 8:00 a.m. to 5:00 p.m. with prior arrangement). The document is also available on the CDD website at:

<http://portal.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports>

Environmental Services Manager, City of Sacramento,
California, a municipal corporation

By: 

Date: January 4, 2018

South Land Park and Richmond Grove Water Meter Retrofits Project Initial Study/Mitigated Negative Declaration

Errata

October 20, 2017

This errata sheet presents, in ~~strike-through~~ and double-underline format, the revisions to the South Land Park and Richmond Grove Water Meter Retrofits Project (proposed project) Initial Study/Mitigated Negative Declaration (IS/MND). The revisions to the IS/MND reflected in this errata sheet do not affect the adequacy of the environmental analysis contained in the July 2017 South Land Park and Richmond Grove Water Meter Retrofits Project. Because the changes presented below would not result in any new significant impacts or increase in impact significance from what was identified in the IS/MND, recirculation of the South Land Park and Richmond Grove Water Meter Retrofits Project IS/MND is not required.

Changes to the Draft South Land Park and Richmond Grove Water Meter Retrofits Project IS/MND

Table 2-1 on page 2-5 is revised as follows:

**TABLE 2-1.
SMAQMD ATTAINMENT STATUS**

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – one hour	No Federal Standard <u>Revoked</u>	Nonattainment
Ozone – eight hour	Nonattainment	Nonattainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Nonattainment	Attainment
CO	Attainment/Unclassified	Attainment
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Unclassified <u>Attainment Pending</u>	Attainment
Lead	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

SOURCE: California Air Resources Board, 2016. Area Designations Maps / State and National. <http://www.arb.ca.gov/design/adm/adm.htm>. Accessed October 8, 2016.

The revisions were made in response to the Sacramento Metropolitan Air Quality Management District's (SMAQMD) request to update status of pollutants presented in Table 2-1. These revisions do not alter the conclusions or findings of the IS/MND.

The following text is added to the third paragraph on page 2-13:

Impacts to TCR are discussed below under Tribal Cultural Resources.

The addition is a staff-initiated text change to clarify that Tribal Cultural Resources are addressed in an Environmental Checklist item separate from Cultural Resources. The addition does not alter the conclusions or findings of the IS/MND.

Mitigation Measure CUL-1 on pages 2-14 and 2-15 is revised as follows:

Mitigation Measure CUL-1~~L~~: Workforce Training and Archaeological Monitoring of Project Ground-Disturbing Activities for Previously Recorded Tribal Cultural Resources and Archaeological Resources (P-34-000064, P-34-000104, P-34-000235, and P-34-000248)

- a) *Prior to grading, a preconstruction training session conducted by a qualified archaeologist shall be held for all construction personnel and staff. Training will cover procedures to be followed and appropriate conduct to be adhered to if archaeological materials, including TCRs, are encountered during the project work. All sessions will be conducted in person. Training will include:

 - 1) Purpose of archaeological monitoring;
 - 2) Identifying archaeological resources; and
 - 3) Maintaining proper discovery protocols during construction.*
- b) *The City shall prepare a map of the project area, in coordination with Native American Tribal Representatives, identifying previously recorded archaeological resources and ~~potential~~ locations of TCRs—these areas to be collectively known as “sensitive areas”—for use by the City, Contractor, archaeologist and Native American monitor. The map shall be subject to California law regarding confidentiality of such materials.*
- c) *All excavation work within the areas identified as sensitive areas shall be hand excavated or excavated with small mechanized equipment. Heavy equipment is prohibited in these areas except for the purposes of lifting equipment and/or materials above ground level.*
- d) *An archaeologist meeting, or supervised by an archaeologist meeting, the Secretary of the Interior’s Professional Qualification Standards for Archeology, in addition to a Native American monitor, will conduct archaeological construction monitoring for all project ground-disturbing activities within the sensitive areas agreed upon by the City and Native American Tribal Representatives and kept on file at the City.*
- e) *A Native American monitor shall be employed to conduct monitoring of project construction activities for sensitive areas. The conduct and work of any Native American monitor shall be consistent with the California Native American Heritage Commission (NAHC) Guidelines for Native American Monitors/Consultants (NAHC, 2005).*

- f) *Potential TCRs discovered during project work shall be treated in consultation with the Native American monitor on site.*
- g) *If discovery is made of items of potential archaeological resources, including TCRs, the procedures set forth in Mitigation Measure CUL-2 shall be followed.*

The revisions are staff-initiated text changes to clarify Mitigation Measure CUL-1. The revisions do not alter the conclusions or findings of the IS/MND.

Mitigation Measure CUL-2 on pages 2-15 through 2-17 is revised as follows:

Mitigation Measure CUL-2: Unanticipated Discovery Protocol for Archaeological Resources and Human Remains

If prehistoric or historic-period archaeological resources are encountered by the archaeological monitor, Native American monitor, or construction personnel during Project implementation, all construction activities within 100 feet shall halt and the City shall be notified. Prehistoric archaeological materials include, for example, obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. ~~Any TCRs discovered during project work shall be treated in consultation with the Native American monitor on site, with the goal of preserving in place with proper treatment.~~ Historic-period materials might include stone, concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse.

A qualified archaeologist, defined as one meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, and relevant Native American representatives (to be identified by the NAHC if the resource is Native American in origin) shall inspect the findings within 24 hours of discovery. If the City determines that the resource qualifies as a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines) and that the project has potential to damage or destroy the resource, construction shall cease in an area determined by the archaeologist until a mitigation plan has been prepared and implemented to the satisfaction of the archaeologist (and Native American representatives, if applicable). Any TCRs discovered during project work shall be inspected within 24 hours by the Native American Monitor and shall be treated in consultation with Native American Tribal Representatives on site, with the goal of preserving in place with proper treatment. ~~mitigation shall be implemented in accordance with PRC Section 21083.2 and CEQA Guidelines Section 15126.4.~~

Consistent with PRC 21083.2 and CEQA Guidelines Section 15126.4(b)(3), a mitigation plan shall be developed and implemented and shall recommend ~~mitigation shall be accomplished through either~~ preservation in place or, if preservation in place is not feasible, data recovery through excavation. If ~~avoidance or~~ preservation in place is feasible, this may be accomplished through one of the following means: (1) modifying the construction plan to avoid the resource; (2) incorporating the resource within open space; (3) capping and

covering the resource before building appropriate facilities on the resource site; or (4) deeding resource site into a permanent conservation easement. If preservation in place is not feasible, a qualified archaeologist shall prepare and implement a detailed treatment plan to recover the scientifically consequential information from and about the resource, which shall be reviewed and approved by the City prior to any excavation at the resource site. Treatment of unique archaeological resources shall follow the applicable requirements of PRC Section 21083.2. Treatment for most resources, not tribal cultural resources, would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the Project. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals.

In the event of discovery or recognition of any human remains during project implementation, project construction activities within 100 feet of the find shall cease ~~until~~ and the City shall be contacted by onsite construction crews. The City will contact the Sacramento County Coroner in accordance with PRC Section 5097.98 and California Health Code Section 7050.5. If the coroner determines the remains are Native American, the coroner will contact the NAHC. As provided in PRC Section 5097.98, the NAHC will identify the person or persons believed most likely to be descended from the deceased Native American. The most likely descendent will make recommendations for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98, has been contacted to determine that no investigation of the cause of death is required. The City shall comply with requirements identified by the NAHC for the appropriate means of treating the human remains and any associated funerary objects (CEQA Guidelines Section 15064.5[d]).

The revisions are staff-initiated text changes to clarify Mitigation Measure CUL-2. The revisions do not alter the conclusions or findings of the IS/MND.

The last sentence of the fifth paragraph on page 2-19 is revised as follows:

Therefore, the actual likelihood of encountering ~~intact~~ portions of any previously undisturbed TCRs is low.

The revision is a staff-initiated text change for clarification purposes and does not alter the conclusions or findings of the IS/MND.

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- A. South Land Park and Richmond Grove Water Meter Retrofits Project – Biological Resources Document
- B. South Land Park and Richmond Grove Water Meter Retrofits Project – Cultural Resources Inventory Report
- C. Response to Comments

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ENVIRONMENTAL CHECKLIST

Initial Study

1. **Project Title:** South Land Park and Richmond Grove Water Meter Retrofits Project
2. **Lead Agency Name and Address:** City of Sacramento
3. **Contact Person and Phone Number:** Scott Johnson, Associate Planner
Community Development Department
(916) 808-5842
4. **Project Location:** City of Sacramento, CA
5. **Project Sponsor's Name and Address:** Ian Pietz, Senior Engineer
City of Sacramento
Department of Utilities
1395 35th Avenue
Sacramento, CA 95822
(916) 808-1910
6. **General Plan Designation(s):** Varies
7. **Zoning:** Varies
8. **Description of Project:** See project description.
9. **Surrounding Land Uses and Setting:** See project description.
10. **Other public agencies whose approval is required:** See Table 1-1.

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a “Potentially Significant Impact” as indicated by the checklist on the following pages.

- | | | |
|---|---|--|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forestry Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input checked="" type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality |
| <input type="checkbox"/> Land Use/Planning | <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise |
| <input type="checkbox"/> Population/Housing | <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation |
| <input type="checkbox"/> Transportation/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial study:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name

Agency

CHAPTER 1

Project Description

1.1 Introduction

Assembly Bill (AB) 2572, passed in 2004, requires urban water suppliers to install water meters on all municipal and industrial water service connections within its service area before January 1, 2025, and beginning January 1, 2010, to charge all customers with water meters based on actual volume of water deliveries. The bill also prevents urban water suppliers from receiving state financial assistance unless it is in compliance with the meter and rate requirements. Since 2005, the City of Sacramento has installed over 60,000 water meters and transitioned those customers to metered rates. Due to the City's aging infrastructure, many meter installations also require additional improvements such as relocating backyard water mains to the street or replacing older pipelines. Additionally, water meters and volumetric pricing are two key water conservation measures by which the City can meet its State mandated requirements of achieving a 20% reduction in urban water use by the year 2020 (as required by Senate Bill (SB) x7-7). In response to recent drought conditions and mandated conservation requirements, the City has set its own goal to comply with AB 2572 by 2020.

The proposed South Land Park and Richmond Grove Water Meter Retrofits Project (proposed project) would install an additional 3,200 water meters.

1.2 Project Location

The proposed project would be located in the City of Sacramento within the Central City and Land Park communities. Most of the proposed project would occur in residential neighborhoods, while some components would occur in commercial and multi-family properties. For an overview of the project area, please refer to **Figure 1-1**.

1.3 Project Objectives

The proposed project objectives are to promote water conservation by installing water meters as required by AB 2572.

1.4 Proposed Project

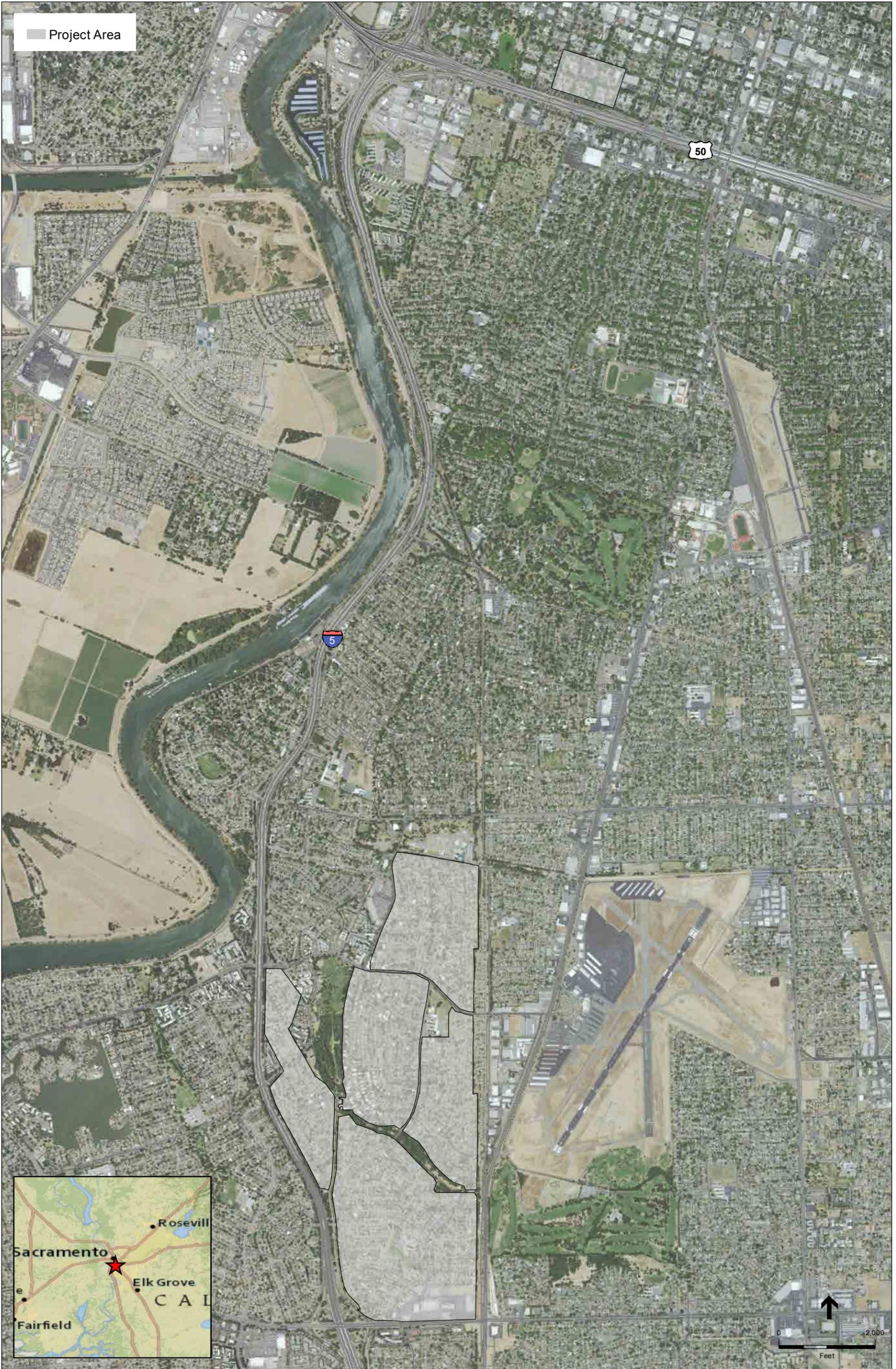
The proposed project would include the following components:

- Installation of approximately 3,200 water meters in residential backyards/alleys and front yards (in or behind sidewalks)

The meters would be installed on existing residential and commercial water service connections. Each water meter would include a combination of meter setters, fittings and piping to connect the meter to the water main. The installation of the water meters would be done in a manner as to minimize ground disturbance. The water meters would be placed in a rectangular meter box (28 inches by 18 inches) with a concrete or Fibrelyte lid flush with the existing landscape grade. Typical excavation for meter box would measure approximately 3 feet by 3 feet, to a depth of approximately 3 feet. After the meter box is installed, landscape areas would be returned to pre-installation conditions (based on pre-construction photographs taken at the site) or disturbed sidewalks would be restored. The City's project manager and inspector would review the pre-construction photographs and site, post-installation, to ensure the area surrounding the meter box is returned to its original condition. Repairs to street surfaces would also be completed, as necessary. Automated Meter Infrastructure (AMI) systems would be installed, consisting of a network of transponders that would send water meter readings to the City's Utility Billing and Operations Center wirelessly. If water service lines need to be replaced, these are typically installed trenchlessly by direction drilling. Water main and water service construction requirements are described in City Standard Specification Section 27 - Water Distributions Systems. The City's Standard Specifications are available online: <https://www.cityofsacramento.org/Utilities/Resources/Specs-and-Drawings>.

The construction contract documents for this project will include a requirement for staging and stockpiling equipment and soils in a manner that does not impact vernal pool habitats or associated species. Additionally, the construction contract specifications and special provisions require the following as relevant to the proposed project:

- Special Provisions Section 2.01 "Public Right-of Way and Easements": All water mains and services constructed as part of this project are to be placed within public streets and alley rights-of-ways and public easements over private property. The Contractor shall confine his or her operations within the limits of existing street right-of-way or public easements as much as practicable. Where the Contractor must occupy areas outside of public easements, the Contractor shall notify the City Inspector and work to minimize the work area used. In all cases, the Contractor is responsible for repairing damage or replacing improvements to the City and property owner satisfaction where caused by its activities.
- Standard Specifications Section 5.15 "Storage of Materials and Equipment": Prior to commencing the Work, Contractor shall submit a written "Storage of Materials and Equipment Plan" for approval by the Engineer. This Plan shall specify the location, entry date and exit date for all locations where Contractor will store materials or equipment, and a site maintenance plan for all such locations. Additionally, this Plan shall describe the measures that Contractor will undertake to minimize impacts to driveways, residents and the general public in the vicinity of such storage locations during work and non-work hours. If this Plan is not approved by the Engineer, Contractor shall revise and resubmit the Plan as necessary to obtain the Engineer's approval.



SOURCE: USDA, 2014; ESRI, 2012; Carollo, 2016; ESA, 2016

Figure 1-1
Project Area

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Table 1-1 summarizes the anticipated ground disturbance for the project activities.

**TABLE 1-1.
APPROXIMATE EXTENTS OF PROPOSED GROUND-DISTURBING ACTIVITY TYPES**

Component	Length (ft)	Width (ft)	Depth (ft)
Water meter installation (~3,200)	3	3	3

Construction equipment would vary depending on the contractor but would typically include use of mechanical equipment like back hoes and installation would occur at one construction site at a time generally using one crew. It is anticipated that installation would be completed over a 9 month period beginning in fall 2017.

1.5 Responsible Agencies, Permits, and Approvals

Table 1-2 summarizes the potential permits and/or approvals that may be required prior to construction of the proposed project.

**TABLE 1-2.
REGULATORY REQUIREMENTS, PERMITS, AND AUTHORIZATIONS FOR PROJECT FACILITIES**

Agency	Type of Approval
State Agencies	
Central Valley Regional Water Quality Control Board (CVRWQCB)	NPDES General Permit for Stormwater Discharge Associated with Construction
Cal OSHA	Construction or Excavation Permit
Local Agencies	
City of Sacramento	Road Encroachment Permit

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CHAPTER 2

Environmental Checklist

2.1 Aesthetics

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
1. AESTHETICS — Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Visual or aesthetic resources are generally defined as both the natural and built features of the landscape that contribute to the public’s experience and appreciation of the environment. The proposed project area is primarily characterized by developed uses including residential and support uses, including parks, schools and commercial uses.

Discussion

- a, b) **No Impact.** The proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads ROW in developed urban and suburban areas of Sacramento. There are no scenic vistas located within the project area and review of the current Caltrans Map of Designated State Scenic Highways indicated that there are no officially designated state scenic highways in the vicinity of the proposed project area (Caltrans, 2016). Therefore, there would be no adverse effect on a scenic vista or damage to trees, rock outcroppings, and historic buildings within a state scenic highway and no impact would occur.
- c) **Less than Significant.** In the event that water service lines need to be replaced the use of equipment and temporary storage of soils and materials at work sites which would temporarily change the visual character in the immediate vicinity. However, all disturbed

areas would be restored to pre-project conditions upon completion, including roadways, to match the original grade and surface. Therefore, there would be no permanent change in visual character of the project area. Water meters would be installed adjacent to existing structures in residential neighborhoods and would not be anticipated to result in a change of visual character.

- d) **No Impact.** The proposed project would not involve any new permanent sources of light or glare and all construction is scheduled to occur during day time hours so no night lighting would be necessary. Therefore, no impact would occur.

2.2 Agricultural and Forest Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
2. AGRICULTURAL AND FOREST RESOURCES —				
<p>In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.</p> <p>Would the project:</p>				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The proposed project is located in urban and residential areas within Sacramento streets ROW and areas designated for water meters and mains. There are no agricultural land uses or forestry resources in the project area.

Discussion

- a, b) **No Impact.** The proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads ROW in developed urban and suburban areas of Sacramento. Therefore, the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as shown on the maps pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency to non-agricultural use (DOC, 2014). In addition, the proposed project area does not contain any designated Williamson Act Contract land. Therefore, there would be no impact.

c, d, e) **No Impact.** The proposed project would be located in developed portions of the City of Sacramento and there are no forest land or timberland located in the proposed project area and no impact would occur.

2.3 Air Quality

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
3. AIR QUALITY —				
Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.				
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The proposed project is located within the City of Sacramento. The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the primary local agency with respect to air quality for all of Sacramento County, including the City of Sacramento. The City of Sacramento is within the Sacramento Valley Air Basin (SVAB), which also includes all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba Counties, the western portion of Placer County, and the eastern portion of Solano County.

As shown in **Table 2-1**, the SMAQMD is classified as non-attainment for ozone (state and federal), PM₁₀ (state), and PM_{2.5} (state and federal). Federal and state air quality laws require regions designated as nonattainment to prepare plans that either demonstrates how the region will attain the standard or that demonstrate reasonable improvement in air quality conditions. As noted, the SMAQMD is responsible for developing attainment plans for the SMAQMD, for inclusion into California's State Implementation Plan (SIP).

**TABLE 2-1.
SMAQMD ATTAINMENT STATUS**

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – one hour	Standard Revoked	Nonattainment
Ozone – eight hour	Nonattainment	Nonattainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Nonattainment	Attainment

**TABLE 2-1.
SMAQMD ATTAINMENT STATUS**

Pollutant	Designation/Classification	
	Federal Standards	State Standards
CO	Attainment/Unclassified	Attainment
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Attainment Pending	Attainment
Lead	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

SOURCE: California Air Resources Board, 2016. Area Designations Maps / State and National. <http://www.arb.ca.gov/design/adm/adm.htm>. Accessed October 8, 2016.

Discussion

- a) **No Impact.** The Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (2013 SIP Revisions) (SMAQMD, 2013), which addresses attainment of the federal 8-hour ozone standard, and the 2015 Triennial Report and Plan Revision (SMAQMD, 2015), are the latest plans issued by the SMAQMD, which incorporate land use assumptions and travel demand modeling from the Sacramento Area Council of Governments (SACOG). To determine compliance with the applicable air quality plan, the SMAQMD recommends comparing the project to the SACOG growth projections included in the *Metropolitan Transportation Plan/Sustainable Communities Strategy* (MTP/SCS) (SACOG, 2016), a comparison of the project's projected vehicle-miles travelled (VMT) and population growth rate. There would be no employment, housing units, or population generated by the proposed project. Other than trips associated with maintenance and operation, the proposed project would not increase daily VMT. Therefore, the proposed project would not conflict with or obstruct implementation of applicable air quality plans and no impact would occur.
- b-c) **Less than Significant.** The source of construction-related pollutant emissions are primarily from the use of on-road worker trips and haul trips. Construction activities would only require the use of a backhoe, and would not generate large amounts of pollutant emissions.

Since the proposed installation of water meters would only require minimal use of off-road equipment and there would be minimal worker and haul trips to the project site, construction of the proposed project is not expected to result in the emissions of NO_x that would exceed the SMAQMD significance threshold.

Currently, Sacramento County is nonattainment for the PM₁₀, and PM_{2.5} California Ambient Air Quality Standards. Emissions generated by short term construction have the potential to generate substantial high levels of PM₁₀, which are primarily associated with

fugitive dust emissions during site preparation or grading. Exhaust emissions of PM₁₀ are also generated by off-road construction equipment such as graders, dozers and excavators. According to the SMAQMD, all projects are required to implement the SMAQMD Basic Emission Control Practices,¹ whether or not the project meets the screening level for NO_x. Since construction activities could include the excavation of trenches for the installation of replacement water services that would connect the proposed water meters to the existing water distribution system, it is expected that fugitive dust emissions could occur. The Basic Emission Control Practices consist of the following best practices feasible for controlling fugitive dust from a construction site:

- Water all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.
- Cover or maintain at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered.
- Use wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.
- Limit vehicle speeds on unpaved roads to 15 miles per hour (mph).
- Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Provide clear signage that posts this requirement for workers at the entrances to the site.
- Maintain all construction equipment in proper working condition according to manufacturer's specifications. The equipment must be checked by a certified mechanic and determine to be running in proper condition before it is operated.

Even though construction activities could include activities that could result in fugitive dust emissions, the proposed project would include all of SMAQMD's Basic Emission Control Practices that are feasible to the project as a design mitigation feature such as minimizing the idling time of on-road trucks to five minutes and making sure all on-road trucks are in proper working conditions according to manufacturer's specifications. Since the proposed project would implement all feasible Basic Emission Control Practices, PM₁₀ and PM_{2.5} exhaust emissions generated during the construction of the proposed project would result in a less-than-significant impact.

- d) **Less than Significant.** There would be no new sources of toxic air contaminants (TAC) with project operations, and therefore, no increase health risks associated with the operation of the proposed project over existing conditions. Construction of the proposed project would take approximately 9 months to complete. Localized construction activity

¹ Sacramento Metropolitan Air Quality Management District (SMAQMD) 2014. CEQA Guide December 2009, Revised September 2014. Available at: <http://www.airquality.org/ceqa/ceqaguideupdate.shtml>.

within a construction area is expected to be limited to 1 to 3 months. Due to this relatively short period of exposure at any one location, TAC generated during construction would not be expected to result in concentrations causing significant health risks. In addition, construction related activities associated with the installation of the new water meters would only require the minimal use of off-road equipment known to generate large amounts of TAC emissions. Therefore, health risks associated with construction of the proposed project would be less than significant.

- e) **Less than Significant.** The SMAQMD has identified typical odor sources in its CEQA Guide to Air Quality Assessment (SMAQMD, 2009). These include wastewater treatment plants, sanitary landfills, composting and green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting and coating operations, rendering plants, and food packaging plants. The proposed project would not include uses that have been identified by SMAQMD as potential sources of objectionable odors. However onsite construction activities would require minimal use of diesel equipment that could produce odorous exhaust in the immediate vicinity of a work site. However, because construction would occur in be phased and short-term the proposed project is not anticipated to increase odors over current conditions and this impact would be less than significant.
-

2.4 Biological Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
4. BIOLOGICAL RESOURCES — Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

As described in the July 29, 2016 *South Land Park and Richmond Grove Water Meter Retrofits Project - Biological Resources Document* (biological resources technical memorandum) provided in Appendix A, lists of special-status species with potential to occur in the project area region were reviewed and were cross-referenced with a project area habitat map and a map of special-status species occurrences within five miles of the project area to determine the likelihood of the species to occur in the project area. Sources consulted in the preparation of the list of target special-status species include the US Fish and Wildlife Service (USFWS) List of Federal Endangered and Threatened Species (USFWS, 2016), the CNDDDB (CDFW, 2016), and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS, 2016).

Special-status species which have potential to occur in the project area were presented in Table 1 of the biological resources technical memorandum (see Appendix A), along with a project boundary map (Figure 1), a habitat map with project boundaries (Figure 2), a CNDDDB special-status wildlife species map with project boundaries (Figure 3), and a CNDDDB special-status plant species and natural communities map with project boundaries (Figure 4). Table 1 provides: the

species' federal and/or state listing and California Rare Plant Rank (if applicable); suitable habitat for the species; and, the species' potential to occur in the project area. Fifteen special-status plant and animal species were identified to have the potential to occur in the broad region of the project. Fourteen of these species have potential to occur in or directly adjacent to the project area. Of these 14 species, 13 have low potential to occur and 1 has moderate potential to occur.

Discussion

- a) **Less than Significant.** The proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads ROW in developed urban and suburban areas of Sacramento. This work would include the use of small construction equipment and utility trucks by work crews. None of the special-status species with potential to occur in the project area are likely to be directly or indirectly impacted by installation of the proposed project. All project activities would occur in and directly around residential, commercial, and office buildings within disturbed, urban habitat (mostly within roads) and would not extend into any of the species' suitable habitat.

One species, purple martin, has moderate potential to occur. However, it is not likely to be impacted by the project activity. Purple martin has documented occurrences in urban areas; it has occurred in several overpasses in and around the project area. Any noise created by installation of the proposed project should not exceed typical noise levels of urban areas, would not substantially increase the human presence in the urban and suburban neighborhoods that make up the project area, and therefore would not impact the purple martins that have been documented within or adjacent to urban areas and are habituated to urban noise. In addition, the proposed project would not include installation of facilities in any overpass where purple martin has been documented, and therefore should not impact these special-status species occurrences. The proposed project would avoid streams, rivers, and riparian areas and; therefore, would not result in direct or indirect impacts to riparian areas, jurisdictional wetlands and waters, or any other special-status species that may occur in these habitats. No special-status species would be impacted by the proposed project because project activity would remain in public-access streets and directly around the structures where the meters are being installed. Because the project activities are expected to have similar noise levels and human presence as the existing urban setting, there would be no impacts to special-status species due to construction noise or work crews.

- b) **No Impact.** Because all project activities would occur in and directly around developed parts of the City within disturbed, urban habitat (mostly within roads ROW) there are no sensitive natural communities that occur within the project area. Therefore, the proposed project would have no impact on any sensitive natural communities.
- c) **No Impact.** Because all project activities would occur in and directly around developed parts of the City within disturbed, urban habitat (mostly within roads ROW) there are no wetlands on or adjacent to the project area, or in the immediate vicinity of the proposed

- project; therefore, the proposed project would have no impact on federally protected wetlands as defined by Section 404 of the Clean Water Act.
- d) **No impact.** Given the urban nature of the project area, the proposed project would not obstruct the movement of migratory fish or wildlife species, or impede the usage of any nursery site. Therefore, with regard to these issues, the proposed project would have no impact.
- e) **No Impact.** The proposed project would not involve the removal or trimming of any trees. Therefore, it would not conflict with the City tree ordinance and no impacts to protected trees or other biological resources protected by local policies or ordinances would occur.
- f) **No Impact.** The project area is not within a Habitat Conservation and Natural Community Conservation Plan. Therefore, the proposed project would have no impact on any Habitat Conservation Plan or Natural Community Conservation Plan.
-

2.5 Cultural and Tribal Cultural Resources

This section relies upon the information and findings presented in the cultural resources technical report prepared for the project by ESA in June 2017: *South Land Park and Richmond Grove Water Meter Retrofits Project Cultural Resources Inventory Report* (Appendix B). Additional details on background context, Native American correspondence, and cultural resources identified are presented in the technical report.

Cultural Resources

<u>Issues (and Supporting Information Sources):</u>	<u>Potentially Significant Impact</u>	<u>Less Than Significant with Mitigation Incorporated</u>	<u>Less Than Significant Impact</u>	<u>No Impact</u>
5. CULTURAL RESOURCES — Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

Based on the background research and records searches of the California Historical Resources Information System (CHRIS), there are four previously recorded archaeological resources in the project area: P-34-000064, P-34-000104, P-34-000235, and P-34-000248. None of these resources have been evaluated for eligibility to qualify as an historical resource or unique archaeological resource under CEQA. The resources are summarized in **Table 2-2**.

**TABLE 2-2.
IDENTIFIED ARCHAEOLOGICAL RESOURCES IN PROJECT AREA**

Primary [P-]	Trinomial [CA-]	Name/Description	Age	Recorder	Current California Register-eligibility	Project Area Portion
34-000064	SAC-37	Habitation mound	Prehistoric	McKee (1934)	Unevaluated	Downtown
34-000104	SAC-77	Mound with artifacts	Prehistoric	Heizer (1934); Kernan (1959)	Unevaluated	Land Park
34-000235	SAC-208	Human remains	Prehistoric	Reeve and Arnold (1957)	Unevaluated	Land Park
34-000248	SAC-221	Rouse Site; midden with artifacts	Prehistoric	Wilson et al. (1956)	Unevaluated	Land Park

The potential for buried or obscured prehistoric archaeological resources and historical archaeological resources in portions of the project area is high. The project area's potential for surficial prehistoric archaeological deposits is low, while the potential for surficial historical archaeological deposits is moderate to high. However, because the proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads ROW in developed urban and suburban areas of Sacramento, the likelihood of encountering intact archaeological deposits, prehistoric or historic-period, is low.

Per the City of Sacramento 2035 General Plan Master Environmental Impact Report (EIR) (Geology, Soils, and Mineral Resources, page 4.5-7), the City of Sacramento is not highly sensitive for paleontological resources due to the absence of fossil-bearing soils and rock formations.

In September 2016, ESA corresponded with the California Native American Heritage Commission (NAHC), requesting a review of the NAHC's Sacred Lands File (SLF) for the project area. The correspondence revealed that SLF has record of archaeological sites in the project area and also indicated that local Native American Tribal Representatives should be contacted regarding the proposed project. On February 13 and March 30, 2017, representatives from the City and the United Auburn Indian Community (UAIC) met in-person to discuss the proposed project and its potential to impact cultural resources and tribal cultural resources (TCR[s]), and approaches to avoiding potential impacts from the proposed project on such resources. In addition to meetings, a number of emails have been exchanged between the City and UAIC representatives regarding the proposed project and ways to avoid impacts to cultural resources and TCRs. Impacts to TCR are discussed below under Tribal Cultural Resources.

Mitigation Measures CUL-1 and CUL-2 were, in part, developed during project consultation with the UAIC, as was the project Archaeological Monitoring and Unanticipated Discovery Plan, which will guide implementation of Mitigation Measures CUL-1 and CUL-2.

Discussion

- a) **No Impact.** A significant impact would occur if the project caused a substantial adverse change to a historical resource, herein referring to historic-period architectural resources or the built environment, including buildings, structures, and objects. A substantial adverse change includes the physical demolition, destruction, relocation, or alteration of the resource.

No physical impacts to any buildings themselves are anticipated to result from the proposed project, as construction would occur away from buildings along extant connecting pipeline alignments that connect buildings to the water main in existing road ROW. As such, the proposed project is not anticipated to affect any built environment resources.

- b) **Less than Significant with Mitigation.** This section discusses archaeological resources, both as historical resources, according to CEQA Guidelines Section 15064.5, as well as

unique archaeological resources, as defined in PRC Section 21083.2(g). A significant impact would occur if the proposed project would cause a substantial adverse change to an archaeological resource through physical demolition, destruction, relocation, or alteration of the resource.

Through a records search and background research, four previously recorded archaeological resources were identified in the project area: P-34-000064, P-34-000104, P-34-000235, P-34-000248. None of these resources have been evaluated for eligibility to qualify as an historical resource, per CEQA Guidelines Section 15064.5, or unique archaeological resource, per PRC Section 21083.2.

Though the potential for buried archaeological resources could be considered high for some portions of the project area not disturbed by modern development, the work proposed by the proposed project would occur primarily in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads ROW in developed urban and suburban areas. Therefore, the actual likelihood of encountering intact portions of any previously unrecorded archaeological resources is low.

Because four previously recorded archaeological resources are in the project area, any impacts to the resources resulting from installation of proposed project facilities could be potentially significant if any of the four resources were found to qualify as an historical resource, per CEQA Guidelines Section 15064.5, or a unique archaeological resource, as defined in PRC Section 21083.2(g), and the impact was found to cause a substantial adverse change in the significance of the resource, as defined in CEQA Guidelines Section 15064.5. If any previously unrecorded archaeological resource is present in the project area and qualifies as a historical resource, per CEQA Guidelines Section 15064.5, or as a unique archaeological resource, as defined in PRC Section 21083.2(g), any impacts to the resource resulting from the proposed project could be potentially significant.

During construction, observation would be employed by the Contractor and the Engineer to ensure that any cultural resources identified are treated in accordance with the guidelines set forth in CEQA in accordance with DOU's standard contract specifications. Specifically, construction activities will be monitored nearing depths of native soil, and trenches will be monitored for any cultural indicators such as changes in soil color, composition, or texture; human bone; artifacts; and structural remains and features.

Mitigation Measures CUL-1 and CUL-2 would be employed to reduce potential significant impacts to previously recorded or previously unrecorded archaeological resources to a less-than-significant level.

Mitigation Measure CUL-1: Workforce Training and Archaeological Monitoring of Project Ground-Disturbing Activities for Previously Recorded Tribal Cultural Resources and Archaeological Resources (P-34-000064, P-34-000104, P-34-000235, and P-34-000248)

- a) *Prior to grading, a preconstruction training session conducted by a qualified archaeologist shall be held for all construction personnel and staff. Training*

will cover procedures to be followed and appropriate conduct to be adhered to if archaeological materials, including TCRs, are encountered during the project work. All sessions will be conducted in person. Training will include:

- 1) Purpose of archaeological monitoring;*
 - 2) Identifying archaeological resources; and*
 - 3) Maintaining proper discovery protocols during construction.*
- b) The City shall prepare a map of the project area, in coordination with Native American Tribal Representatives, identifying previously recorded archaeological resources and locations of TCRs—these areas to be collectively known as “sensitive areas”—for use by the City, Contractor, archaeologist and Native American monitor. The map shall be subject to California law regarding confidentiality of such materials.*
- c) All excavation work within the areas identified as sensitive areas shall be hand excavated or excavated with small mechanized equipment. Heavy equipment is prohibited in these areas except for the purposes of lifting equipment and/or materials above ground level.*
- d) An archaeologist meeting, or supervised by an archaeologist meeting, the Secretary of the Interior’s Professional Qualification Standards for Archeology, in addition to a Native American monitor, will conduct archaeological construction monitoring for all project ground-disturbing activities within the sensitive areas agreed upon by the City and Native American Tribal Representatives and kept on file at the City.*
- e) A Native American monitor shall be employed to conduct monitoring of project construction activities for sensitive areas. The conduct and work of any Native American monitor shall be consistent with the California Native American Heritage Commission (NAHC) Guidelines for Native American Monitors/Consultants (NAHC, 2005).*
- f) Potential TCRs discovered during project work shall be treated in consultation with the Native American monitor on site.*
- g) If discovery is made of items of potential archaeological resources, including TCRs, the procedures set forth in Mitigation Measure CUL-2 shall be followed.*

Mitigation Measure CUL-2: Unanticipated Discovery Protocol for Archaeological Resources and Human Remains

If prehistoric or historic-period archaeological resources are encountered by the archaeological monitor, Native American monitor, or construction personnel during Project implementation, all construction activities within 100 feet shall halt and the City shall be notified. Prehistoric archaeological materials include, for example, obsidian and chert flaked-stone tools (e.g., projectile points, knives, scrapers) or toolmaking debris; culturally darkened soil (midden) containing heat-affected rocks, artifacts, or shellfish remains; and stone milling equipment (e.g., mortars, pestles, handstones, or milling slabs); and battered stone tools, such as hammerstones and pitted stones. Historic-period materials might include stone,

concrete, or adobe footings and walls; filled wells or privies; and deposits of metal, glass, and/or ceramic refuse.

A qualified archaeologist, defined as one meeting the Secretary of the Interior's Professional Qualifications Standards for Archeology, and relevant Native American representatives (to be identified by the NAHC if the resource is Native American in origin) shall inspect the findings within 24 hours of discovery. If the City determines that the resource qualifies as a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines) and that the project has potential to damage or destroy the resource, construction shall cease in an area determined by the archaeologist until a mitigation plan has been prepared and implemented to the satisfaction of the archaeologist (and Native American representatives, if applicable). Any TCRs discovered during project work shall be inspected within 24 hours by the Native American Monitor and shall be treated in consultation with Native American Tribal Representatives on site, with the goal of preserving in place with proper treatment.

Consistent with PRC 21083.2 and CEQA Guidelines Section 15126.4(b)(3), a mitigation plan shall be developed and implemented and shall recommend preservation in place or, if preservation in place is not feasible, data recovery through excavation. If preservation in place is feasible, this may be accomplished through one of the following means: (1) modifying the construction plan to avoid the resource; (2) incorporating the resource within open space; (3) capping and covering the resource before building appropriate facilities on the resource site; or (4) deeding resource site into a permanent conservation easement. If preservation in place is not feasible, a qualified archaeologist shall prepare and implement a detailed treatment plan to recover the scientifically consequential information from and about the resource, which shall be reviewed and approved by the City prior to any excavation at the resource site. Treatment of unique archaeological resources shall follow the applicable requirements of PRC Section 21083.2. Treatment for most resources, not tribal cultural resources, would consist of (but would not be not limited to) sample excavation, artifact collection, site documentation, and historical research, with the aim to target the recovery of important scientific data contained in the portion(s) of the significant resource to be impacted by the Project. The treatment plan shall include provisions for analysis of data in a regional context, reporting of results within a timely manner, curation of artifacts and data at an approved facility, and dissemination of reports to local and state repositories, libraries, and interested professionals.

In the event of discovery or recognition of any human remains during project implementation, project construction activities within 100 feet of the find shall cease and the City shall be contacted by onsite construction crews. The City will contact the Sacramento County Coroner in accordance with PRC Section 5097.98 and California Health Code Section 7050.5. If the coroner determines the remains are Native American, the coroner will contact the NAHC. As provided in PRC Section 5097.98, the NAHC will identify the person or persons believed most likely to be descended from the deceased Native American. The most likely descendent will make recommendations for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in PRC Section 5097.98.

- c) **Less than Significant.** A significant impact would occur if the project would destroy a unique paleontological resource or site, or a unique geologic feature. Paleontological resources are the fossilized evidence of past life found in the geologic record. Despite the tremendous volume of sedimentary rock deposits preserved worldwide, and the enormous number of organisms that have lived through time, preservation of plant or animal remains as fossils is an extremely rare occurrence. Because of the infrequency of fossil preservation, fossils—particularly vertebrate fossils—are considered to be nonrenewable resources. Because of their rarity, and the scientific information they can provide, fossils are highly significant records of ancient life.

Rock formations that are considered of paleontological sensitivity are those units that have yielded significant vertebrate or invertebrate fossil remains. This includes, but is not limited to, sedimentary rock units that contain significant paleontological resources anywhere within its geographic extent. As stated in the City of Sacramento 2035 General Plan Master EIR, the City of Sacramento is not highly sensitive for paleontological resources due to the absence of fossil-bearing soils and rock formations. In addition, the proposed project would occur in developed portions of the City that have been disturbed over time with depth of excavation being 6 feet or less; therefore, there is little potential for the underlying materials to contain fossils and this impact would be less than significant. However, although not required because there is a low potential to uncover paleontological resources during installation of proposed project infrastructure, implementation of Mitigation Measure CUL-3 would further reduce the potential that previously unknown resources could be damaged or destroyed.

Mitigation Measure CUL-3: Unanticipated Discovery Protocol for Paleontological Resources

If discovery is made of items of paleontological interest, the contractor shall immediately cease all work activities in the vicinity (within approximately 100 feet) of the discovery. After cessation of excavation, the contractor shall immediately contact the City. The contractor shall not resume work until authorization is received from the City. Any inadvertent discovery of paleontological resources during construction shall be evaluated by a qualified paleontologist. If it is determined that the project could damage a unique paleontological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with PRC Section 21083.2 and Section 15126.4 of the CEQA Guidelines. If avoidance is not feasible, the paleontologist shall develop a treatment plan in consultation with the City.

- d) **Less than Significant with Mitigation.** Human remains were recorded in association with one of the previously recorded archaeological resources in the project area, P-34-000248, and could be present at the other three previously recorded archaeological resources in the project area. If construction activities associated with the proposed project were to disturb any such human remains, it could be potentially significant under CEQA.

Any such potential significant impacts to human remains would be reduced to a less than significant level by implementing Mitigation Measures CUL-1 and CUL-2.

Tribal Cultural Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
<p>TRIBAL CULTURAL RESOURCES — Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:</p>				
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined PRC § 5020.1(k), or	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) 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 PRC § 5024.1. In applying the criteria set forth in subdivision (c) of PRC § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The areas of project activity are within developed areas of the City. The characteristics of the development were described and explained in the cultural resources section, above. The proposed work includes the installation of water meters at a location along the existing pipeline connection from the existing water main to the residential or commercial structure. The areas where the meters will be installed are within areas that have had previous excavation and disturbance as the water line connections from the main to the structures has already occurred and been in place since the development of the subject neighborhoods.

California law, specifically PRC Sections 21074 and 21083.09, requires the City of Sacramento, as lead agency, to notify tribes that have requested such notice regarding projects for which the City will prepare a Mitigated Negative Declaration. The City has received two such requests and notified the tribes of this project. The United Auburn Indian Community (UAIC) responded with a request for consultation. City Staff and Native American Tribal Representatives are in continuing consultation for the project and have discussed the potential for TCRs within the project area. Discussions of the areas of importance and sensitivity within the project area include the history of the areas and the role they played in the lives of Native Americans. The nature of the areas of concern, including the types of materials that may be present, was discussed along with the importance of preserving in place, treating with the proper dignity and respect. Work within the portions of the project area identified as sensitive areas will be coordinated with Native American Tribal Representatives so that any discovery of resources will be treated appropriately.

As described in the cultural resources section, above, ESA corresponded with the NAHC in September 2016, requesting a review of the NAHC’s SLF for the project area. The correspondence revealed that SLF has record of archaeological sites in the project area and also indicated that local Native American Tribal Representatives should be contacted regarding the proposed project. On February 13 and March 30, 2017, representatives from the City and the

UAIC met in-person to discuss the proposed project and its potential to impact cultural resources and TCRs, and approaches to avoiding potential impacts from the proposed project on such resources. In addition to meetings, a number of emails have been exchanged between the City and UAIC representatives regarding the proposed project and ways to avoid impacts to cultural resources and TCRs.

Mitigation Measures CUL-1 and CUL-2 were, in part, developed during project consultation with the UAIC, as was the project Archaeological Monitoring and Unanticipated Discovery Plan, which will guide implementation of Mitigation Measures CUL-1 and CUL-2.

Discussion

- a, b) **Less than Significant with Mitigation.** This section discusses TCRs as historical resources, as defined in PRC Section 21084.1. A significant impact would occur if the project would cause a substantial adverse change to a TCR through physical demolition, destruction, relocation, or alteration of the resource.

Through discussions with Native American Tribal Representatives, four areas of sensitivity were identified. These areas coincided and were in general similarity with the four previously recorded archaeological resources identified in the project area through the records search, discussed in the section above: P-34-000064, P-34-000104, P-34-000235, P-34-000248. None of these resources have been evaluated for eligibility to qualify as an historical resource, per CEQA Guidelines Section 15064.5, or unique archaeological resource, per PRC Section 21083.2.

Though the potential for buried TCRs could be considered high for portions of the project area not disturbed by modern development, the work proposed by the proposed project would occur in previously disturbed areas, along an existing water pipeline connections from the water main to adjacent buildings, in back and front yards, alleys, sidewalks and within existing roads ROW in developed urban and suburban areas. Therefore, the actual likelihood of encountering portions of any previously undisturbed TCRs is low.

Because four areas of sensitivity for TCRs have been identified that generally coincides with previously recorded archaeological resources in the project area, any impacts to the resources resulting from installation of proposed project facilities could be potentially significant if any of the four resources were found to qualify as an historical resource per CEQA Guidelines Section 15064.5 and the impact was found to cause a substantial adverse change in the significance of the resource, as defined in CEQA Guidelines Section 15064.5. If any previously undisturbed TCR is present in the project area and qualifies as a historical resource, per CEQA Guidelines Section 15064.5 any impacts to the resource resulting from the proposed project could be potentially significant.

During construction, observation would be employed by the Contractor and the Engineer to ensure that any TCRs identified are treated with respect and dignity as overseen by Native American Tribal representatives and accordance with the guidelines set forth in CEQA in accordance with DOU's standard contract specifications. Construction

activities will be monitored nearing depths of native soil, and trenches will be monitored for any cultural indicators such as changes in soil color, composition, or texture; human bone; artifacts; and structural remains and features.

Mitigation measures CUL-1 and CUL-2 would be employed to reduce potential significant impacts to TCRs to a less-than-significant level.

2.6 Geology, Soils, and Seismicity

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
6. GEOLOGY and Soils —				
Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The City of Sacramento is located within an area of relatively low seismicity, and there are no designated Alquist-Priolo Fault Zones. According to the City of Sacramento General Plan, there are no known faults within the City or the greater Sacramento region (City of Sacramento, 2015). However, significant earthquakes have occurred on previously undetected faults. Known faults located nearest to the proposed project are the Foothills fault system approximately 30 miles to the northeast, the Midland Fault over 20 miles to the southwest, and the Dunnigan Hills Fault approximately 25 miles to the northwest. Other faults in the region include the Concord-Green Valley fault and Hunting Creek-Berryessa fault. Both are located approximately 40 miles from the proposed project and are capable of producing 6.9 Mw earthquakes. The Greenville fault is located approximately 45 miles from the proposed project and is capable of producing a 6.8 Mw earthquake. The West Napa fault is also located approximately 45 miles from the proposed project and could produce a 6.5 Mw earthquake (City of Sacramento, 2015).

The peak horizontal ground acceleration values depicted on the California Geological Survey (CGS) probabilistic seismic hazards assessment map represent estimates of the ground-shaking

intensity likely to occur in a given area as a result of earthquake events on nearby faults, and can be used to assess the relative seismic ground-shaking hazard for a given region. According to the City's General Plan, the California Department of Conservation and United States Geologic Service (USGS) map (DOC and USGS, 1996) shows that Sacramento and the surrounding area have an estimated 10 to 20 percent peak ground acceleration. The probabilistic peak horizontal ground acceleration value, and thus the seismic ground-shaking hazard for the project area, is relatively low, ranking among the lowest in the State (City of Sacramento, 2015).

Soil resources in the Richmond Grove area of the project consist of the Cosumnes-Urban land complex, partially drained, 0 to 2 percent slopes. This soil complex is very deep and artificially drained, has slow permeability, high shrink-swell potential, and low erosion potential.

Soil resources in the South Land Park area of the project consist of the Egbert-Urban land complex, 0 to 1 percent slopes. This soil complex is very deep and artificially drained, has slow permeability, high shrink-swell, and slight erosion potential. Galt-Urban land complex, 0 to 1 percent slopes. This soil complex is moderately deep and moderately well-drained, has slow permeability, high shrink-swell potential, and slight erosion potential. Lang-Urban land complex, drained, 0 to 2 percent slopes. This soil complex is very deep and artificially drained, has high permeability, low shrink-swell potential, and slight erosion potential, and San Joaquin-Urban land complex, 0 to 2 percent slopes. This soil complex is moderately well drained, has moderately high permeability, low shrink-swell potential, and moderate erosion potential. Tinnin-Urban land complex, 0 to 8 percent slopes. This soil complex is well drained, has high permeability, has a low shrink-swell potential, and moderate to high erosion potential.

Discussion

- a) **No Impact.** The proposed project area is not located in an Alquist-Priolo Earthquake Fault Zone, as defined by the California State Department of Conservation, Geological Survey (CGS, formerly the Division of Mines and Geology), and no active or potentially active faults exist on or in the immediate vicinity of the proposed project area. Additionally, the project area is located in an area of flat topography that is not subject to landslides. The proposed project involves the installation of water meters and associated infrastructure and would not expose people or structures to potential adverse effects as a result of seismic activity or unstable soil conditions. Installation of the replacement water services, if necessary, would involve trenching and excavating on primarily level terrain and would incorporate the use of trench shoring measures consistent with the California Building Standards Code (CBC) requirements and the National Earthquake Hazards Reduction Program (NEHRP), which includes improved building codes. As a result, there would be minimal risk of trenches collapsing due to unstable soil conditions due to seismic events and no impact would occur.
- b, c, d) **Less than Significant.** The U.S. Department of Agriculture, Natural Resources Soil Conservation Service classifies soils in the vicinity of the proposed project area as unlikely to erode (NRCS, 2016). As a result, the potential for soil erosion during construction of the proposed project would be minimal. As described in the

Environmental Setting discussion above, the project site contains some soils with a high shrink-swell potential (NRCS, 2016). Compliance with California Building Code (CBC) standards and guidelines established by the American Water Works Association would ensure that the proposed project would be designed consistent with design standards that would reduce the risks associated with expansive or unstable soils. This impact is considered less than significant. Impacts associated with construction air emissions and water quality are discussed in Environmental Checklist Items 3 and 9, respectively.

- e) **No Impact.** The proposed project does not include the installation of any septic systems of alternative wastewater disposal systems and no impact would occur.
-

2.7 Greenhouse Gas Emissions

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
7. GREENHOUSE GAS EMISSIONS — Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

CEQA requires lead agencies to consider the reasonably foreseeable adverse environmental effects of projects they are considering for approval. Greenhouse Gas (GHG) emissions have the potential to adversely affect the environment because they contribute to global climate change. In turn, global climate change has the potential to: raise sea levels, affect rainfall and snowfall, and affect habitat.

Emissions of GHGs contributing to global climate change are attributable in large part to human activities associated with the industrial/manufacturing, utility, transportation, residential, and agricultural sectors. Therefore, the cumulative global emissions of GHGs contributing to global climate change can be attributed to every nation, region, and city, and virtually every individual on Earth. A project’s GHG emissions are at a micro-scale relative to global emissions, but could result in a cumulatively considerable incremental contribution to a significant cumulative macro-scale impact.

In 2012, City of Sacramento adopted a community wide Climate Action Plan (CAP). The CAP outlines multiple initiatives intended to help the City achieve its overall goals of reducing community-wide emissions by 15% below 2005 levels by 2020, 38% below 2005 levels by 2030, and 83% below 2005 levels by 2050. Included in the CAP are a comprehensive set of strategies, measures and implementing actions to achieve the 2020 GHG reduction target. These GHG reduction measures and actions apply to both existing sources within the City as of the 2005 baseline and projected emissions from new growth and development anticipated in the 2035 General Plan. The CAP also includes targets for reducing GHG emissions from internal operations (IO CAP) by 22 percent below 2005 levels by 2020 along with a long-term objective of achieving IO GHG reductions of 83 percent below 2005 levels by 2050. Reduction targets are established in General Plan Policy ER 6.1.6, which also calls for maintenance and implementation of the 2016 IO CAP. The 2016 IO CAP includes specific strategies including improvements in water management efficiencies and reduction in community-water demand through use of advanced metering infrastructure. In addition, the CAP identifies potentially adverse physical effects related to climate change on the community and includes specific adaptation measures to address and mitigate such effects.

Discussion

- a, b) **Less than Significant.** The City's CAP establishes requirements for projects to reduce a portion of their estimated GHG emissions to assist the City in reducing GHG emissions to comply with AB 32. The City has created a checklist to assist in demonstrating the consistency of proposed land use development projects with the CAP. The proposed project is not a development project per se, but rather, is part of the City's infrastructure. Construction-related GHG emissions would be primarily from the use of on-road worker trips and haul trips. The construction activities would only require minimal use of off-road vehicles such as excavators, backhoes, or graders known to generate large amounts of GHG emissions. Since the proposed project would not result in an increase in worker trips during operations over existing conditions, there would be no net increase in operational GHG emissions.

The CAP Consistency Review Checklist does not apply to the proposed project because the project is not a land use development. The proposed project is, however, consistent with the strategies included in the 2016 IO CAP that identifies advanced water meter infrastructure as a way to promote water conservation; thereby, reducing energy use and associated GHG emissions attributed to the construction and operation of new water diversion and treatment facilities. For these reasons, the proposed project would have a less-than-significant impact.

2.8 Hazards and Hazardous Materials

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
8. HAZARDS AND HAZARDOUS MATERIALS — Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h) Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Materials and waste may be considered hazardous if they are poisonous (toxicity), can be ignited by open flame (ignitability), corrode other materials (corrosivity), or react violently, explode or generate vapors when mixed with water (reactivity). The term “hazardous material” is defined in law as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment. In some cases, past uses can result in spills or leaks of hazardous materials to the ground, resulting in soil and groundwater contamination. The use, storage, transportation and disposal of hazardous materials are subject to numerous federal, State and local laws and regulations.

Information about hazardous materials sites in the project area was collected by conducting a review of the California Environmental Protection Agency’s (CalEPA) Cortese List Data Resources (Cortese List) and the State Water Resources Control Board’s GeoTracker list. The

Cortese List includes data resources that provide information regarding the facilities or sites identified as meeting the Cortese List requirements. The Cortese List is updated at least annually, in compliance with California regulations (California Code Section 65964.6(a)(4)) and includes federal superfund sites, state response sites, non-operating hazardous waste sites, voluntary cleanup sites, and school cleanup sites. The GeoTracker list shows Underground Storage Tanks (UST). Based on a review of the Cortese List conducted in November 2016, 11 listed sites are located within 0.25 miles of the project area (DTSC, 2016). However, none are located directly within the project area. Five sites are leaking underground storage tank (LUST) cleanup sites, four of which have gasoline as the listed potential contaminant of concern. The fifth LUST site has gasoline and benzene as the listed potential contaminant of concern. Three sites are Cleanup program sites. The first site has 1,1,1-trichloroethane (TCA), other chlorinated hydrocarbons, tetrachloroethylene (PCE) as the listed potential contaminants of concern. The second has pesticides/herbicides as the listed potential contaminants of concern. The third has tetrachloroethylene (PCE), trichloroethylene (TCE) as the listed potential contaminants of concern. One site is a voluntary cleanup site with potential contaminants of concern including polynuclear aromatic hydrocarbons (PAHS), TPH-diesel, and TPH-motor oil. One site is a state response or National Priorities List (NPL) with potential contaminants of concern including dichlorodiphenyldichloroethylene (DDE), dichlorodiphenyltrichloroethane (DDT), toxaphene, malathion, and parathion. One site is a formerly used defense site (FUDS) with no specified potential contaminants of concern.

Seven schools are within one-quarter (1/4) mile of the project area. This includes: The Met Sacramento at 810 V Street, William Land Elementary School at 2120 12th Street, Sol Aureus College Preparatory at 6620 Gloria Drive, Caroline Wenzel Elementary School at 6870 Greenhaven Drive, New Technology High School at 1400 Dickson Street, Alice Birney Elementary School at 6251 13th Street, and Pony Express Elementary School at 1250 56th Avenue. However, only Alice Birney Elementary School and Pony Express Elementary School are within the project area.

Discussion

- a, b) **Less than Significant.** Construction activities would require the use of limited amounts of commonly used materials such as diesel, gasoline, solvents, hydraulic fluid, and grease and other compounds not considered acutely hazardous or hazardous when used in small quantities. However, because federal, State, and local laws and regulations govern the transport, use, storage, handling and disposal of hazardous materials, use of hazardous materials associated with proposed project construction would be minimized and/or avoided and this impact would be less than significant. There would be no change in the use of hazardous materials with operation of the proposed project over current conditions.
- c) **Less than Significant.** As discussed previously, the proposed project is located within a 1/4-mile of seven schools. Two of the seven schools are located within the project area. As described under Environmental Checklist Item 8a and b, construction of the proposed project would require the use of limited amounts of commonly used materials such as diesel, gasoline, solvents, hydraulic fluid, and grease and other compounds not considered acutely hazardous or hazardous when used in small quantities. Transport, use,

- storage, handling and disposal of hazardous materials would be conducted in accordance with applicable laws and regulations potential risk of upset and associated exposure would be minimized and/or avoided and this impact would be less than significant. There would be no change in the use of hazardous materials with operation of the proposed project over current conditions.
- d) **No Impact.** The proposed project is not located on a site included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 (Cortese List) and therefore would not create a significant hazard to the public or the environment from identified hazardous materials sites. No known hazardous materials exist within the project area. Therefore, no impact would occur.
- e, f) **No Impact.** The Sacramento Executive Airport is located approximately 0.16 miles east of the project area. However, the proposed project does not include the installation of any above ground structures or include any activities that would impair operations of the Sacramento Executive Airport or any other airport use and, therefore, would not affect airport safety and no impact would occur.
- g) **Less than Significant.** Installation of water services, if necessary, are typically by directional drilling, but some open trench techniques could be required within paved roadways. During installation, any trenches left open overnight would be covered. After installation is complete, all trenches would be backfilled and roadways would be resurfaced and returned to preconstruction conditions. Therefore, the proposed project would not interfere with an adopted emergency response plan or emergency evacuation plan. In addition, given the urban nature of the area, alternative routes are anticipated to be readily available. Therefore, this impact would be less than significant.
- h) **No Impact.** The proposed project includes installation of water meters and associated infrastructure in urban areas of Sacramento that would not increase a risk of exposure of structures or persons to wild fires. As a result, no impact would occur.
-

2.9 Hydrology and Water Quality

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
9. HYDROLOGY AND WATER QUALITY — Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The City of Sacramento is located at the confluence of the Sacramento and American Rivers in the Sacramento River Basin. The Sacramento River Basin encompasses about 27,000 square miles and is bound by the Sierra Nevada to the east, the Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Sacramento–San Joaquin Delta to the southeast. The Sacramento River Basin is the largest river basin in California, capturing, on average, approximately 22 million acre-feet of annual precipitation (City of Sacramento, 2015).

The Federal Emergency Management Agency (FEMA) is responsible for delineating flood zones within the project area. According to the City of Sacramento’s General Plan, the proposed project

is located in areas designated as both a 100-500 year flood zone (moderate hazard) and 500-year flood zone (minimal hazard).

The proposed project is located in the Sacramento Valley Groundwater Basin, within the larger South American Subbasin (DWR, 2004). The subbasin is bounded to the north by the American River, the east by the Sierra Nevada, the west by the Sacramento River, and the south by the Cosumnes and Mokelumne Rivers. Groundwater levels in the basin have fluctuated since the 1960s with levels recovering during the 1995 to 2000 time period (DWR, 2004). According to the Groundwater Information Center Interactive Map Application, groundwater levels in the project area are approximately 25 feet from ground surface (DWR, 2016). Groundwater quality is generally good and suitable for potable or agricultural uses.

Discussion

- a, f) **Less than Significant.** Construction activities, such as trenching and excavating, would result in disturbance of soils and sediments that could be carried into the City's drainage system during storm events. Additionally, accidental discharges of construction fuels, oils, hydraulic fluid, grease, and other hazardous substances could contaminate stormwater flows, resulting in a reduction in stormwater quality onsite or downstream of the project area. The State Water Resources Control Board (State Water Board) adopted a statewide general National Pollutant Discharge Elimination System (NPDES) permit for stormwater discharges associated with construction activity. Dischargers whose projects disturb one or more acres of soil are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ. Construction activity subject to this permit includes clearing, grading and disturbances to the ground such as stockpiling, or excavation.

The City's Stormwater Quality Improvement Program (SQIP) contains a Construction Element that guides in implementation of the NPDES Permit for Storm Water Discharges Associated with Construction Activity. This Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain, as appropriate, a site map(s) which shows the construction site perimeter and features, including stormwater collection and discharge points, general topography both before and after construction, and drainage patterns. The SWPPP must list BMPs that will be used to protect storm water runoff and the placement of those BMPs. Additionally, the SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a water body listed on the 303(d) list for sediment. Section A of the Construction General Permit describes the elements that must be contained in a SWPPP. Compliance with City requirements to protect stormwater inlets would protect receiving waters and require the implementation of BMPs such as the use of straw bales, sandbags, gravel traps, and filters; erosion control measures such as vegetation and physical stabilization; and sediment control measure such as fences, dams, barriers, berms, traps, and basins. City

- staff also inspects and enforces the erosion, sediment and pollution control requirements in accordance with City codes (Grading, Erosion and Sediment Control ordinance). Therefore, this impact would be less than significant.
- b) **No Impact.** Conversion of natural and other non-paved surfaces to pavement, buildings, roadways, and other impervious surfaces can result in a decrease in the amount of rainwater that can replenish groundwater in those areas. Accordingly, increasing the cover of impervious surfaces can, in some cases, cause a significant reduction in groundwater recharge, resulting in significant impacts to groundwater quantity or quality. The proposed project would involve the installation of water meters and associated infrastructure and would not increase impervious surface over existing conditions. The proposed project should not involve significant pumping of groundwater. Therefore, there would be no change in the rate or amount of groundwater recharge and no change in groundwater levels and no impact would occur.
- c-e) **No Impact.** As described in Checklist Item 9b, the proposed project would involve the installation of water meters and associated infrastructure and would not increase impervious surface over existing conditions. Therefore, there would be no change in the amount or rate of surface runoff or change in drainage patterns. As a result, there would be no impacts to drainage system capacity or increased risk of flooding in the project area. See Environmental Checklist Item 9a for a discussion of water quality.
- g-j) **No Impact.** The proposed project would not result in the placement of housing within a 100-year flood hazard area or result in any structures that would impede or redirect flood flows. The proposed project would not result in the placement of aboveground facilities within areas subject to 100-year flood hazards. The proposed pipelines would be buried underground. Underground pipelines would not impede or redirect flood flows or otherwise increase the potential for flooding. The project area is not subject to seiche, tsunami, or mudflow. Therefore, no impacts would occur.
-

2.10 Land Use and Land Use Planning

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
10. LAND USE AND LAND USE PLANNING — Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The proposed project area is located in the city of Sacramento and is characterized primarily by residential neighborhoods and associated uses, including neighborhood serving commercial uses. (City of Sacramento, 2015).

Discussion

- a, b) **No Impact.** The proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads ROW in developed urban and suburban areas of Sacramento. It would not physically divide an established community or conflict with land use plans or policies. Therefore, no impact would occur.
- c) **No Impact.** As discussed in Environmental Checklist Item 4f, the project area is not within a Habitat Conservation and Natural Community Conservation Plan. Therefore, the proposed project would not conflict with any Habitat Conservation Plan or Natural Community Conservation Plan.

2.11 Mineral Resources

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
11. MINERAL RESOURCES — Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

The proposed project areas have not been identified as areas containing known mineral resources that would be of value to the region.

Discussion

- a, b) **No Impact.** The proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads in developed urban and suburban areas of Sacramento. There are no known mineral resources in the project area that would be of value to the region and the residents of the area, and there are no locally important mineral resource recovery sites and therefore, no impact would occur.

2.12 Noise

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
12. NOISE — Would the project result in:				
a) Exposure of persons to or generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project located in the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Sound is mechanical energy transmitted by pressure waves through a medium such as air, while noise is defined as unwanted sound. Sound pressure level is measured in decibels (dB), with zero dB corresponding roughly to the threshold of human hearing, and 120 to 140 dB corresponding to the threshold of pain. The typical human ear is not equally sensitive to all frequencies of the audible sound spectrum. As a consequence, when assessing potential noise impacts, sound is measured using an electronic filter that de-emphasizes the frequencies below 1,000 Hertz² (Hz) and above 5,000 Hz in a manner corresponding to the human ear's decreased sensitivity to low and extremely high frequencies instead of the frequency mid-range. This method of frequency weighting is referred to as A-weighting and is expressed in units of A-weighted decibels (dBA).³

Effects of Noise on People

The effects of noise on people can be placed into three categories:

- subjective effects of annoyance, nuisance, dissatisfaction;
- interference with activities such as speech, sleep, learning; and
- physiological effects such as hearing loss or sudden startling.

² Hertz is a unit of frequency equivalent to one cycle per second

³ All noise levels reported herein reflect A-weighted decibels unless otherwise stated.

Environmental noise typically produces effects in the first two categories. Workers in industrial plants generally experience noise in the last category. There is no completely satisfactory way to measure the subjective effects of noise, or the corresponding reactions of annoyance and dissatisfaction. A wide variation exists in the individual thresholds of annoyance, and different tolerances to noise tend to develop based on an individual's past experiences with noise.

Thus, an important way of predicting a human reaction to a new noise environment is the way it compares to the existing environment to which one has adapted: the so called "ambient noise" level. In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by those hearing it. With regard to increases in A-weighted noise level, the following relationships occur:

- In carefully controlled laboratory experiments, a change of 1 dBA cannot be perceived;
- outside of the laboratory, a 3-dBA change is considered a just-perceivable difference when the change in noise is perceived but does not cause a human response;
- A change in level of at least 5 dBA is required before any noticeable change in human response would be expected; and
- A 10-dBA change is subjectively heard as approximately a doubling in loudness, and can cause adverse response.

The human ear perceives sound in a non-linear fashion; hence the decibel scale was developed. Because the decibel scale is non-linear, two noise sources do not combine in a simple additive fashion, rather logarithmically. For example, if two identical noise sources produce noise levels of 50 dBA, the combined sound level would be 53 dBA, not 100 dBA.

Noise Attenuation

Stationary "point" sources of noise, including stationary mobile sources such as idling vehicles, attenuate (lessen) at a rate of 6 dBA to 7.5 dBA per doubling of distance from the source, depending upon environmental conditions (i.e., atmospheric conditions and noise barriers, either vegetative or manufactured, etc.). Widely distributed noises, such as a large industrial facility spread over many acres or a street with moving vehicles (a "line" source), would typically attenuate at a lower rate, approximately 3 to 4.5 dBA per doubling distance from the source (also dependent upon environmental conditions) (Caltrans, 2013). Noise from large construction sites would have characteristics of both "point" and "line" sources, so attenuation would generally range between 4.5 and 7.5 dBA per doubling of distance.

Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings. The root mean square (RMS) amplitude is most frequently used to describe

the effect of vibration on the human body. The RMS amplitude is defined as the average of the squared amplitude of the signal. Decibel notation (Vdb) is commonly used to measure RMS. The decibel notation acts to compress the range of numbers required to describe vibration (FTA, 2006). Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration.

Existing Ambient Noise Environment

The primary contributors to the proposed project area's noise environment include vehicle traffic on adjacent roadways; sounds emanating from residences, including voices, noises from household appliances, and radio and television broadcasts; and naturally occurring sounds such as wind and wind-generated rustling. Generally, intermittent short-term noises do not significantly contribute to longer-term noise averages. Existing noise levels within the project area range from 60 to 70 dB, influenced heavily by existing traffic.

Sensitive Receptors

Human response to noise varies considerably from one individual to another. Effects of noise at various levels can include interference with sleep, concentration, and communication; physiological and psychological stress; and hearing loss. Given these effects, some land uses are considered more sensitive to ambient noise levels than others. In general, residences, schools, hotels, hospitals, and nursing homes are considered to be the most sensitive to noise. Commercial and industrial uses are considered the least noise-sensitive. Sensitive receptor land uses within the Project area include residences and a school (William Land Elementary School). Since water main replacement activities would occur predominately along City streets ROW, it is assumed that off-road equipment used for excavating and installing water meters would operate within 50 feet from single-family homes and the William Land Elementary School.

Discussion

- a, d) **Less than Significant.** The proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads in developed urban and suburban areas of Sacramento. Since the operational activities associated with the proposed project would only consist of maintenance of the water meters and would not result in any new stationary or transportation-related sources of noise in the project vicinity, operational impacts are not evaluated further.

For assessment of temporary construction noise impacts, construction activities that could occur outside of the City of Sacramento's construction exempt hours (Chapter 8.68.080) (between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday and between the hours of 9:00 a.m. and 6:00 p.m. on Sunday) would constitute a significant impact.

Since trenching activities associated with the installation of water service lines could occur along City streets ROW, it is expected that off-road equipment (e.g., excavators, bobcats) could operate within 50 feet from sensitive land use. The noisiest construction

equipment likely to be used during trenching activities would be from an excavator. According to Caltrans' Road Construction Noise Model, pneumatic tools can generate noise levels of approximately 85 dBA L_{max} /82 dBA L_{eq} from a distance of 50 feet (FHWA, 2006). Construction activities would only occur within City of Sacramento's construction exempt hours (Chapter 8.68.080) between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday and between the hours of 9:00 a.m. and 6:00 p.m. on Sunday (if necessary) and; therefore, would not result in a violation of the City's noise standards. In addition, construction activities would only occur during the daytime hours, when the existing ambient is at its highest (e.g., traffic noise noise); no nighttime hours as defined by the City's Municipal Code would occur and the activities would be limited in duration. This would result in a less than significant impact.

- b) **Less than Significant.** The project site is surrounded by single-family residential uses and single institutions use (William Land Elementary School). These sensitive receptors could be located within 50 feet from where construction is proposed to occur. Construction of the proposed project would not require the use of impact pile driving or blasting known to cause excessive vibration. Although construction-related groundborne vibration may be slightly perceptible to people adjacent to onsite construction areas, this effect would be temporary in nature and is expected to diminish as construction activities move from one site to the next. Therefore, the impact would be less than significant.
- c) **No Impact.** As discussed in Environmental Checklist Item 12a, there would be no change in noise levels associated with the operation of the proposed project (operation of the water meters) over that which currently exists; therefore, no impact would occur.
- e - f) **No Impact.** The proposed project does not involve the development of noise sensitive land uses, and thus, implementation of the project would not expose people to excessive aircraft noise.
-

2.13 Population and Housing

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
13. POPULATION AND HOUSING — Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

a, b, c) The proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads ROW in developed urban and suburban areas of Sacramento. It would not induce population growth in the area, either directly or indirectly, and would not displace existing housing or people. Therefore, no impact would occur.

2.14 Public Services

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
14. PUBLIC SERVICES — Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
i) Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
v) Other public facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a.i-v) **No Impact.** The proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads in developed urban and suburban areas of Sacramento. Therefore, there would be no increase in population over that which currently exists and no change in levels of service requiring the need for new or physically altered public services. Therefore, no impacts would occur.

2.15 Recreation

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
15. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Discussion

- a, b) **No Impact.** The proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads in developed urban and suburban areas of Sacramento. Therefore, there would be no increase in population over that which currently exists and no need for new or the maintenance of existing recreational facilities and no impact would occur.

2.16 Transportation and Traffic

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
16. TRANSPORTATION/TRAFFIC — Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Environmental Setting

Highways

The Richmond Grove area of the proposed project is located adjacent to Interstate 80 Business and is approximately 0.5 miles east of Interstate 5 (I-5). The South Land Park portion of the proposed project is located adjacent to I-5.

City Roadways/Traffic Types

As described previously, the proposed project is located in residential neighborhoods, while some components would occur in commercial and multi-family properties. The majority of the roadways within the project are classified as local streets with two lanes.

10th Street is within the Richmond Grove area of the proposed project site on the west and is classified as an arterial. W Street is located immediately to the south of the Richmond Grove area and is classified as an arterial. 15th Street is located 2 blocks to the east of the Richmond Grove area and is classified as an arterial. T Street is located one block to the north of the Richmond Grove area and is classified as a minor collector. These streets do not have a level of service analysis.

The South Land Park area of the proposed project is bound by Fruitridge Avenue to the north and Freeport Boulevard to the east. Both are classified as arterial. South Land Park Drive crosses through the South Land Park area and is classified as a major collector. 43rd Avenue also crosses through the South Land Park area and is classified as both an arterial and a major collector. Florin Road to the south of the South Land Park area is classified as an arterial. All of the roads are operating at a level of service A-D. Florin road is operating at level E.

The City of Sacramento's General Plan states the level of service (LOS) goal is operate the roadway network at LOS D or better. The segment of Power Inn Road adjacent to the proposed project site is classified in the LOS A-D range and is operating at an acceptable level.

Airports

The nearest airport is the Sacramento Executive, a public airport, located immediately to the east of the proposed project.

Discussion

- a, b) **Less than Significant.** Construction activities would involve a minor increase in vehicle trips associated with project construction (construction workers and vehicles to and from work sites) and there would be no permanent change in vehicle trips once construction activities are done.

Construction-related truck traffic would occur between the hours of 7:00 a.m. and 6:00 p.m. Monday through Saturday and could occur between 9:00 a.m. and 6:00 p.m. on Sundays, if needed. Trips that occur during the week (Monday through Friday) around 7:00 a.m. and 6:00 p.m. would coincide with typical peak-period traffic volumes on area roadways and therefore, would have the greatest potential to effect LOS. The percent increase in traffic volumes related to project construction vehicle trips on the roadways in the project area would not be substantial (falling within the daily fluctuations of traffic volumes). Similarly, the number of construction truck trips would also not be anticipated to be substantial, would take different routes depending on the location of each day's work site, and would be dispersed throughout the work day lessening the effect on traffic conditions in any one hour. LOS standards for roadways indicated in local planning documents are intended to regulate long-term traffic increases from operation of new development, and do not apply to temporary construction projects. As such, the proposed project would not exceed LOS standards established by the City of Sacramento for specific roadways.

Installation of water services, if necessary, are typically by directional drilling, but some open trench techniques could be required within paved roadways. These actions could temporarily disrupt existing transportation and circulation patterns in the vicinity of work sites, with direct disruption of traffic flows and street operations. Lane blockages or street closures during construction would result in a reduction in travel lanes. Once the new pipeline is installed the trenches would be backfilled and the streets would be compacted and paved and returned to existing grade.

In order to manage potential road closures, the City of Sacramento includes a contract specification that requires the preparation of a Construction Traffic Control Plan. This plan would be subject to review and approval by the City Department of Public Works, in consultation with affected transit providers and local emergency service providers including the City of Sacramento Fire and Police departments. The plan shall ensure that acceptable operating conditions on local roadways and freeway facilities are maintained. At a minimum, the plan would include:

- The time, and day of street closures
- Time of day of arrival and departure of trucks and work hours
- Limitations on the size and type of trucks, provision of a staging area with a limitation on the number of trucks that can be waiting
- Provision of a truck circulation pattern
- Identification of detour routes and signing plan for street closures
- Provision of driveway access plan so that safe vehicular, pedestrian, and bicycle movements are maintained (e.g., steel plates, minimum distances of open trenches, and private vehicle pick up and drop off areas)
- Maintain safe and efficient access routes for emergency vehicles and transit
- Manual traffic control when necessary
- Proper advance warning and posted signage concerning street closures
- Provisions for pedestrian and bicycle safety

A copy of each construction traffic control plan would be submitted to local emergency response agencies and transit providers, and these agencies would be notified at least 30 days before the commencement of construction that would partially or fully obstruct roadways.

Because the proposed project would not exceed LOS standards established by the City of Sacramento for specific roadways, and the City of Sacramento includes a contract specification that requires the preparation of a Construction Traffic Control Plan, this impact is less than significant.

- c) **No Impact.** The proposed project would not involve aircraft, nor would the proposed project structures intrude into aircraft flight paths or air traffic spaces. Therefore, no impact would occur.
- d) **Less than Significant.** The proposed project would not permanently change the existing or planned transportation network in the vicinity of the project area and would not include the implementation of any new design features that could increase the potential for traffic safety hazards. Because construction trucks carrying construction equipment and materials would share the area roadways with other vehicles, the potential exists for

- an increase in traffic safety hazards during construction of the proposed project. However, because the City of Sacramento includes a contract specification that requires the preparation of a Construction Traffic Control Plan, this impact is less than significant.
- e) **Less than Significant.** Construction activities would affect access for emergency vehicles traveling past the water main replacement construction zones. Construction within or across streets, and temporary reduction in travel lanes, could result in delays for emergency vehicle access in the vicinity of the worksites. In addition, access to driveways and to cross streets along the construction route could be temporarily blocked due to trenching and paving. This could be an inconvenience to some and a significant problem for others, particularly emergency service providers (e.g., police and fire). However, because the City of Sacramento includes a contract specification that requires the preparation of a Construction Traffic Control Plan, travel through the construction zone by emergency vehicles would be maintained at all times and this impact is less than significant.
- f) **No Impact.** The proposed project does not include the development of alternative forms of transportation, or result in an increase in population that would create conditions that conflict with adopted policies supporting alternative transportation. No impact would occur.
-

2.17 Utilities and Service Systems

<i>Issues (and Supporting Information Sources):</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
17. UTILITIES AND SERVICE SYSTEMS —				
Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Environmental Setting

The City supplies domestic water from a combination of surface water and groundwater sources. Two water treatment plants supply domestic water by diverting water from the American River and Sacramento River. In addition to the surface water diverted from the two rivers, the City operates groundwater supply wells.

In the South Land Park area of the proposed project, wastewater treatment, collection and disposal in the project area is provided by the Sacramento Area Sewer District (SASD). Wastewater generated in this area is collected by trunk facilities in the Sacramento Area Sewer District and then conveyed via interceptors to the Sacramento Regional Wastewater Treatment Plant (SRWTP).

The Richmond Grove area of the proposed project is within the older Central City area that is served by a system in which sanitary sewage and storm drainage are collected and conveyed in the same system of pipelines, referred to as the Combined Sewer System (CSS).

The South Land Park area is outside of the Central City area and not served by the CSS. The City is divided into approximately 120 drainage basins. Drainage from most of these basins flows to local rivers or creeks or drainage channels through pumping. The City owns and operates 105

storm drainage pumping stations throughout the city. The drainage canals and local creeks eventually drain into the Sacramento and American Rivers

The City collects all residential solid waste for customers within the City. Refuse from the project area is transported to the Sacramento Recycling and Transfer Station (SRTS) at 8491 Fruitridge Road. Refuse is then hauled to the Sacramento County Kiefer Landfill. The Kiefer Landfill has a permitted capacity of 117,400,000 cubic yard with only 1.03-percent of the capacity used as of September, 2005. The estimated closure date of the landfill is 2064 (CalRecycle, 2016).

Discussion

- a-e) **No Impact.** The proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads in developed urban and suburban areas of Sacramento. Therefore, there would be no increase in population over that which currently exists and no change in water supply or wastewater treatment demand. Furthermore, the proposed project involves installing water meters as a result of AB 2572, which requires installation of water meters on all residential and commercial uses in the City by 2025 which would aid in water conservation. Therefore, implementation of the proposed project would not increase the demand for water or wastewater service or utilities over current conditions and no impact would occur.
- c) **No Impact.** As described in Checklist Item 9b, the proposed project would involve the installation of water meters and associated infrastructure and would not increase impervious surface over existing conditions. Therefore, there would be no change in the amount or rate of surface runoff and no impacts to drainage system capacity.
- f, g) **Less than Significant.** Proposed project construction activities would generate small amounts of solid waste and is not anticipated to affect the capacity of the local landfill. Operation of the proposed project would not be anticipated to generate solid waste over existing conditions. The project area is served by the Kiefer Landfill. The Kiefer Landfill has a future operation life of approximately 48 years with an expected closure date of 2064. Capacity within the landfill is therefore sufficient to meet project waste disposal needs, and no significant impact to landfill capacity is anticipated. Solid waste would be managed consistent with the requirements of AB 939 and the City's recycling ordinance; therefore, the proposed project would not exceed landfill capacity or violate any applicable solid waste statutes or regulations and this is considered a less-than-significant impact.
-

2.18 Mandatory Findings of Significance

<u>Issues (and Supporting Information Sources):</u>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporated</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>
18. MANDATORY FINDINGS OF SIGNIFICANCE —				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b) Does the project have impacts that are individually limited but cumulatively considerable? (“Cumulatively considerable” means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Discussion

- a) **Less than Significant with Mitigation.** Implementation of the proposed project does not have the potential to degrade the quality of the environment or substantially reduce the habitat for fish or wildlife species or impact endangered plants or animal species. As described in Checklist Item 4. Biological Resources, the proposed project involves installation of water meters and associated infrastructure in previously disturbed areas adjacent to buildings, in back and front yards, alleys, sidewalks and within existing roads ROW in developed urban and suburban areas of Sacramento. This work would include the use of small construction equipment and utility trucks by work crews. None of the special-status species with potential to occur in the project area are likely to be directly or indirectly impacted by installation of the proposed project. All project activities would occur in and directly around residential, commercial, and office buildings within disturbed, urban habitat (mostly within roads) and would not extend into any of the species’ suitable habitat.

As discussed in Checklist Item 5. Cultural Resources, the records search and background research, identified four previously recorded archaeological resources in the project area. None of these resources have been evaluated for eligibility to qualify as an historical resource, per CEQA Guidelines Section 15064.5, or unique archaeological resource, per PRC Section 21083.2. Though the potential for buried archaeological resources is high for portions of the project area not disturbed by modern development, the work proposed by the proposed project would occur primarily in previously disturbed areas; and, therefore, the actual likelihood of encountering intact portions of any previously unrecorded archaeological resources is low. However, because four previously recorded archaeological resources are in the project area, any impacts to the resources resulting

from installation of proposed project facilities could be potentially significant if any of the four resources were found to qualify as an historical resource per CEQA Guidelines Section 15064.5 or a unique archaeological resource as defined in Section 21083.2(g), and the impact was found to cause a substantial adverse change in the significance of the resource, as defined in CEQA Guidelines Section 15064.5. Also, if any previously unrecorded archaeological resource is present in the project area and qualifies as a historical resource, per CEQA Guidelines Section 15064.5 or as well as unique archaeological resource as defined in Section 21083.2(g), any impacts to the resource resulting from the proposed project could be potentially significant. During construction, observation would be employed by the Contractor and the Engineer to ensure that any cultural resources identified are treated in accordance with the guidelines set forth in CEQA in accordance with DOU's standard contract specifications. Specifically, construction activities will be monitored nearing depths of native soil, and trenches will be monitored for any cultural indicators such as changes in soil color, composition, or texture; human bone; artifacts; and structural remains and features. If prehistoric or historic-era archeological resources are encountered mitigation measures CUL-1 and CUL-2 would be employed to reduce potential significant impacts to previously recorded or previously unrecorded archaeological resources to a less-than-significant level.

- b) **Less than Significant with Mitigation.** As discussed in the Checklist, implementation of the proposed project would result in less than considerable contributions to cumulative construction air emissions, vehicle trips, water quality, and solid waste. Less than significant impacts associated with construction activities related to visual character, noise, and use of hazardous materials would not contribute to cumulative impacts due to the localized nature of the effect. As described in Checklist Item 4. Biological Resources, construction of the proposed project work would include the use of small construction equipment and utility trucks by work crews in existing disturbed areas of the City. None of the special-status species with potential to occur in the project area are likely to be directly or indirectly impacted by installation of the proposed project. Therefore, the contribution of cumulative biological impacts would be less than considerable. As discussed in Checklist Item 5. Cultural Resources, the records search and background research, identified four previously recorded archaeological resources in the project area. Potential disturbance or destruction of previously unidentified archaeological resources could contribute to a cumulatively significant impact. However, construction activities will be monitored nearing depths of native soil, and trenches will be monitored for any cultural indicators such as changes in soil color, composition, or texture; human bone; artifacts; and structural remains and features. Furthermore, if prehistoric or historic-era archeological resources are encountered mitigation measures CUL-1 and CUL-2 would be employed to reduce potential contribution to cumulative impacts to less than considerable.
- c) **Less than Significant.** As discussed in the Checklist, implementation of the proposed project would result in less than significant impacts associated with construction air emissions, vehicle trips, water quality, noise, use of hazardous materials and solid waste. Therefore, implementation of the proposed project would not have environmental effects which could cause substantial adverse effects on human beings, either directly or indirectly.

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Appendix A

South Land Park and Richmond Grove Water Meter Retrofits Project – Biological Resources Document

memorandum

date July 29, 2016

to City of Sacramento Department of Utilities

from Environmental Science Associates

subject Biological Resources Document - South Land Park and Richmond Grove Water Meter Retrofits Project

This memorandum was prepared to document the background database research and analysis of biological resources for the City of Sacramento Department of Utilities South Land Park and Richmond Grove Water Meter Retrofits Project (SLP WMRP or proposed project). The following materials were prepared to support the analysis: a table of special-status species that have potential to occur in the project area; a project location map; a habitat map; a California Natural Diversity Data Base (CNDDDB) wildlife map; and a CNDDDB plant and natural communities map, followed by an analysis of the SLP WMRP's potential to impact sensitive biological resources.

Methods

Lists of special-status species with potential to occur in the project area region were reviewed. These lists were cross-referenced with a project area habitat map and a map of special-status species occurrences within five miles of the project area to determine the likelihood of the species to occur in the project area. Sources consulted in the preparation of the list of target special-status species include the US Fish and Wildlife Service (USFWS) List of Federal Endangered and Threatened Species (USFWS, 2016), the CNDDDB (CDFW, 2016), and the California Native Plant Society (CNPS) Online Inventory of Rare and Endangered Plants (CNPS, 2016).

Results

Provided in this memorandum is a list of special-status species which have potential to occur in the project area (Table 1), a project boundary map (Figure 1), a habitat map with project boundaries (Figure 2), a CNDDDB special-status wildlife species map with project boundaries (Figure 3), and a CNDDDB special-status plant species and natural communities map with project boundaries (Figure 4). Table 1 provides: the species' federal and/or state listing and California Rare Plant Rank (if applicable); suitable habitat for the species; and, the species' potential to occur in the project area. The terms used to describe the probability for species occurrence in the project area are defined as follows:

Absent:

- 1) The species' specific habitat requirements are not present; or
- 2) The species is presumed, based on the best scientific information available, to be extirpated from the project area or region.

Low:

- 1) Its known current distribution or range is outside of the project area; or
- 2) Only very limited or marginally suitable habitat is present within the project area.

Moderate:

- 1) There is low to moderate quality habitat present within the project area or immediately adjacent areas; or
- 2) The study area is within the known range of the species, even though the species was not observed during biological surveys.

High:

- 1) Moderate to high quality habitat is present within the project area; and
- 2) The project area is within the known range of the species or there are known, recent occurrences in the project area.

**TABLE 1
LIST OF SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT AREA**

Species	Status Federal/ State/ CNPS	Suitable Habitat	Potential to Occur in the Project Area
Invertebrates			
<i>Desmocerus californicus dimorphus</i> Valley elderberry longhorn beetle	FT/--/--	Breeds and forages exclusively on elderberry shrubs (<i>Sambucus mexicana</i>) typically associated with riparian forests, riparian woodlands, elderberry savannas, and other Central Valley habitats. Occurs only in the Central Valley of California. Prefers to lay eggs in elderberries 2–8 inches in diameter; some preference shown for “stressed” elderberries.	Low. No suitable habitat within the project area. One known occurrence overlaps with the project area, which was documented in 1949, prior to the development of the area. Region is now entirely residential.
Reptiles			
<i>Thamnophis gigas</i> Giant garter snake	FT/CT/--	Marshes, sloughs, drainage canals, and irrigation ditches, especially around rice fields, and occasionally in slow-moving creeks in California’s interior.	Low. Suitable habitat is present in drainage canals and irrigation ditches adjacent to, but not within, the project area. No known occurrences in the project area or adjacent properties
Birds			
<i>Accipiter cooperii</i> Cooper’s hawk	--/--/--	Woodlands, specifically riparian or cismontane. Nests in live oaks and riparian deciduous trees.	Low. No suitable habitat or known occurrences within project area. Two known occurrences within 5 miles of project area from 2005 and 2008. The nest locations of the occurrences were, respectively, along the driveway of a residence and on the corner of 21 st and H street.
<i>Agelaius tricolor</i> Tricolored blackbird	--/CSC/--	Nests in dense vegetation-- often recently burned cattails, blackberry thickets, or dense stands of thistle. Requires open water habitat for foraging near nesting habitat.	Low. No suitable habitat in or nearby the project area. Only known occurrence in the project area region was documented in 1998 as a very nonspecific area.
<i>Athene cunicularia</i> Burrowing owl	--/CSC/--	Burrows typically found in open fields with annual or perennial grasses, also deserts and grasslands with low-growth vegetation.	Low. No suitable habitat or known occurrences in or near the project area.
<i>Buteo swainsoni</i> Swainson’s hawk	--/CT/--	Nests in grasslands and riparian areas with groves or scattered trees. Hunts in open fields within a few miles of nesting site.	Low. No suitable habitat or known occurrences in the project area. One known occurrence of a nesting pair of Swainson’s hawks in an urban park nearby project area.
<i>Coccyzus americanus occidentalis</i> Western yellow-billed cuckoo	FT/CE/--	Nests in riparian forests of large river systems.	Absent. No suitable habitat within or near project area. Known occurrences are from the late 1800s. Occurrence locations have since been fully developed and western yellow-billed cuckoos have since been extirpated from this area.
<i>Elanus leucurus</i> White-tailed kite	--/CFP/--	Nests in scattered oak trees or riparian woodland nearby floodplains, meadows, and open grasslands.	Low. No suitable habitat or known occurrences in or near the project area.
<i>Melospiza melodia</i> Song sparrow “Modesto” population	--/CSC/--	Wide range of habitat. Open grasslands, farmlands, marsh, wetlands.	Low. No suitable habitat in or near the project area. Only known occurrence that overlaps project area was documented in 1900 with a nonspecific area prior to residential development.

**TABLE 1
LIST OF SPECIAL-STATUS SPECIES WITH POTENTIAL TO OCCUR IN THE PROJECT AREA**

Species	Status Federal/ State/ CNPS	Suitable Habitat	Potential to Occur in the Project Area
<i>Progne subis</i> Purple martin	--/CSC/--	Nests in old woodpecker cavities and man-made structures in woodlands and coniferous forest.	Moderate Some suitable habitat and known occurrences nearby the project area. Purple martin has been seen nesting in freeway overpasses in recent years. Occurred at I-80 overpass of Roseville Road in 2007, Marconi Avenue overpass in 2003, El Camino overpass in 2003, four HWY 50 overpasses in 2003, business 80 overpass between R and S Street in 2003, Sutterville Road over the Union Pacific Rail Yard in 2003, and the I-5 overpass at I Street in 2003. However, project is unlikely to impact the purple martin due to the type of work and the apparent tolerance of these local populations to vehicle noise and people.
<i>Riparia riparia</i> Bank swallow	--/CT/--	Found primarily in riparian habitats. Requires banks or cliffs with fine, sandy soils near streams, rivers, or lakes for nesting.	Low. No suitable habitat or known occurrences in or near the project area.
<i>Vireo bellii pusillus</i> Least Bell's vireo	FE/CE/--	Nests in bush margins of riparian areas. Migrates to Southern California in the summer.	Low. No suitable habitat or known occurrences in or near the project area.
Mammals			
<i>Lasiurus cinereus</i> Hoary bat	--/./--	Roosts in dense foliage of medium to large trees. Requires access to water and habitat edges for feeding on moths.	Low. No suitable habitat or known occurrences within project area. One known occurrence on opposite side of Sacramento River from project boundary. Unlikely that hoary bat would roost or forage within the project area due to human use.
<i>Taxidea taxus</i> American badger	--/CSC/--	Found in dry, open land with little vegetation. Requires uncultivated ground to dig burrows.	Low. No suitable habitat or known occurrences within project area. One known occurrence nearby the project area in the nonspecific location of 'Polk, Sacramento County' from an unknown date.
Plants			
<i>Sagittaria sanfordii</i> Sanford's arrowhead	--/--/1B.2	Perennial rhizomatous herb found in marshes and swamps. Blooms: May-November. Elevation: 0 to 2,130 ft.	Low. No suitable habitat or known occurrences within project boundary. Ten known occurrences within 5 miles of project boundary, located mainly within urban creeks and drainage ditches.

STATUS CODES:

Federal
FE = Endangered
FT = Threatened
FC = Candidate
BEPA = Bald Eagle Protection Act

State
CE = Endangered
CT = Threatened
CR = Rare
CFP = Fully Protected
CSC = (CA) Department of Fish and Game Special Concern species

California Rare Plant Rank
1B = Plants rare, threatened, or endangered in California and elsewhere
2 = Plants rare, threatened, or endangered in California, but more common elsewhere
3 = Plants about which we need more information--a review list
4 = Plants of limited distribution--a watch list

0.1 = Seriously endangered in California
0.2 = Fairly endangered in California
0.3 = Not very endangered in California

SOURCE: CDFW, 2016; USFWS, 2016; CNPS, 2016

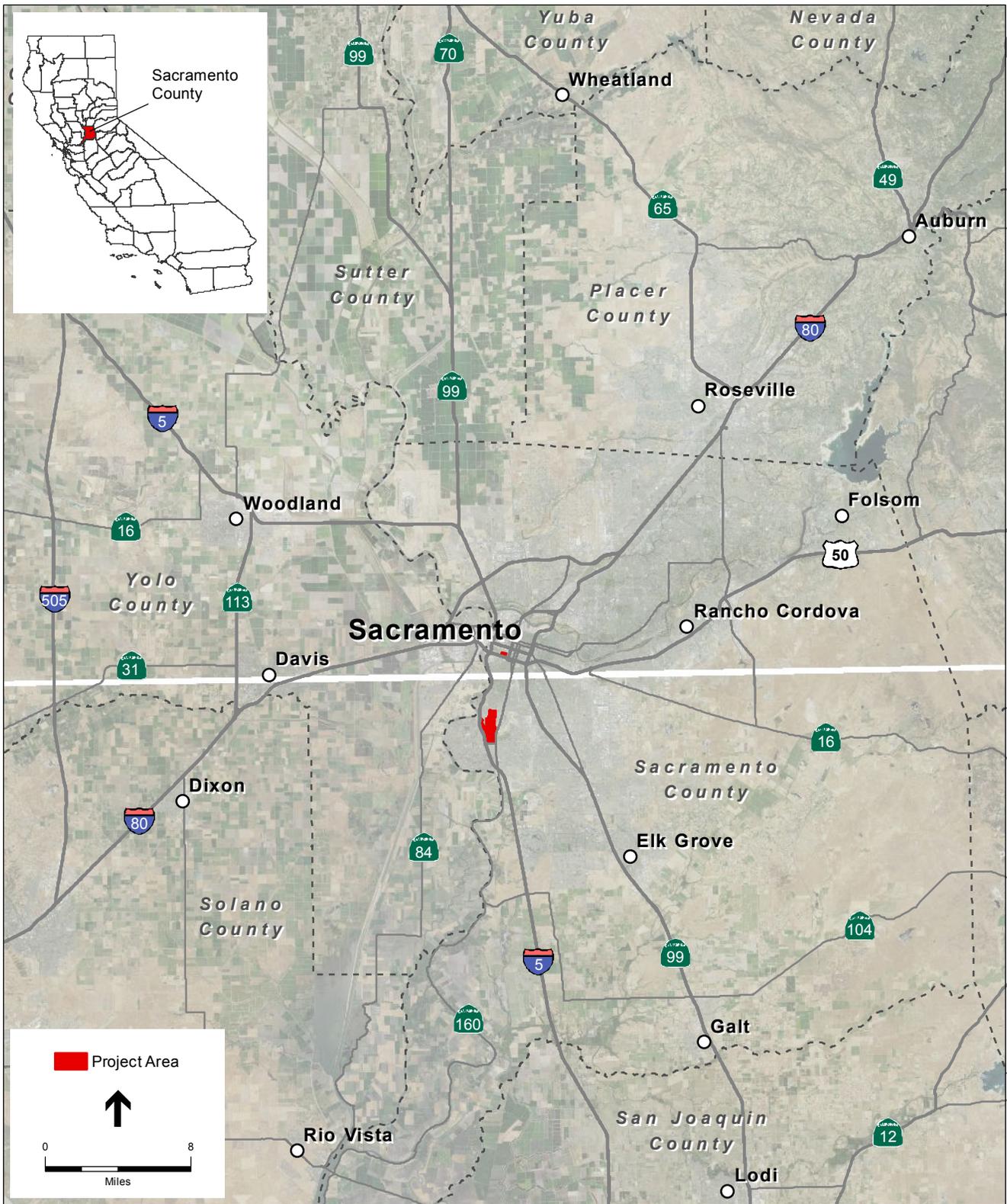
Conclusions

Given the background research, 15 special-status plant and animal species have potential to occur in the broad region of the SLP WMRP. 14 of these species have potential to occur in or directly adjacent to the project area. Of these 14 species, 13 have low potential to occur and 1 has moderate potential to occur.

The SLP WMRP involves installation of water meters and associated water pipeline infrastructure at buildings and within existing roads in urban and suburban areas of Sacramento. This work will include the use of small construction equipment and utility trucks by work crews. None of the special-status species with potential to occur in the project area are likely to be directly or indirectly impacted by installation of the SLP WMRP. All project activities will occur in and directly around residential, commercial, and office buildings within disturbed, urban habitat (mostly within roads) and should not extend into any of the species' suitable habitat.

One species, purple martin, has moderate potential to occur. However, it is not likely to be impacted by the project activity. Purple martin has documented occurrences in urban areas; it has occurred in several overpasses in and around the project area. Any noise created by installation of the SLP WMRP should not exceed typical noise levels of urban areas, will not substantially increase the human presence in the urban and suburban neighborhoods that make up the project area, and therefore will not impact the purple martins that have been documented within or adjacent to urban areas and are habituated to urban noise. In addition, the SLP WMRP will not include installation of facilities in any overpass where purple martin has been documented, and therefore should not impact these special-status species occurrences. The SLP WMRP will avoid streams, rivers, and riparian areas. This ensures that there will be no direct or indirect impacts to riparian areas, jurisdictional wetlands and waters, or any other special-status species that may occur in these habitats.

No biological surveys are necessary. No special-status species will be impacted by the SLP WMRP as long as all project activity and personnel remain in public-access streets and directly around the structures where the meters are being installed. Because the project activities are expected to have similar noise levels and human presence as the existing urban setting, there would be no impacts to special-status species due to construction noise or work crews.



SOURCE: USDA, 2014; ESRI, 2012; Carollo, 2016; ESA, 2016

South Land Park and Richmond Grove Water Meter Project . 160028

Figure 1
Regional Location



SOURCE: USDA, 2014; ESRI, 2012; Carollo, 2016; ESA, 2016

Figure 2
Habitats within the Project Area

Appendix B

South Land Park and Richmond Grove Water Meter Retrofits Project – Cultural Resources Inventory Report

REDACTED FOR PUBLIC REVIEW



SOUTH LAND PARK AND RICHMOND GROVE WATER METER RETROFITS PROJECT

Cultural Resources Inventory Report

Prepared for
City of Sacramento Department of Utilities

June 2017

Prepared by:
ESA
2600 Capitol Ave, Suite 200
Sacramento, CA 95816



REDACTED FOR PUBLIC REVIEW

SOUTH LAND PARK AND RICHMOND GROVE WATER METER RETROFITS PROJECT

Cultural Resources Inventory Report

Prepared for
City of Sacramento Department of Utilities

June 2017

Author:

Robin Hoffman, M.A., RPA
Kathy Anderson, M.A.

Project Site Location:

U.S.G.S. Quadrangles: Clarksburg, CA; Sacramento East, CA;
Sacramento West, CA

Acreage:

550.7 acres (0 acres surveyed)



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160028

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NADB REPORT CITATION

Author(s): Hoffman, Robin, and Kathy Anderson

Year: 2017 (June)

Title: South Land Park and Richmond Grove Water Meter Retrofits Project Cultural Resources Inventory Report

Type: Unpublished report

Organization: Environmental Science Associates (ESA)

State: California

County: Sacramento

Town: Sacramento

Work Type: Archaeological Identification Study (Phase I)

Keyword(s): water meter installation; archaeological resources identified; P-34-000064; P-34-000104; P-34-000235; P-34-000248

Federal Agency: none

Local Agency: City of Sacramento

Acreage: 550.7 acres; 0 acres surveyed

STATEMENT OF CONFIDENTIALITY

This report identifies the locations of archaeological resources in the vicinity of the South Land Park and Richmond Grove Water Meter Retrofits Project in the City of Sacramento, California. Disclosure of this information to the public may be in violation of both federal and state laws. Such applicable federal regulations include, but may not be limited to, Section 304 of the National Historic Preservation Act (54 United States Code [U.S.C.] 307103) and the Archaeological Resources Protection Act (16 U.S.C. Section 470h). Applicable state regulations include, but may not be limited to, Government Code Section 6250 et seq. and Section 6254 et seq. Disclosure of site location information to individuals other than those meeting the U.S. Secretary of the Interior's professional standards or the California State Personnel Board criteria for Associate State Archaeologist or State Historian II violates the California Office of Historic Preservation records access policy.

EXECUTIVE SUMMARY

This Cultural Resources Inventory Report (CRIR) documents the methods and results of a cultural resources inventory completed for the South Land Park and Richmond Grove Water Meter Retrofits Project (Project), in the City of Sacramento, California. The City of Sacramento (City) proposes the Project, which would install approximately 4,000 water meters throughout the City. The Project is subject to review under the California Environmental Quality Act (CEQA), with the City acting as lead agency for CEQA purposes.

Environmental Science Associates (ESA) was retained to conduct a cultural resources inventory for the Project. The work performed by ESA in preparation of this CRIR consisted of background and archival research, including records searches of the California Historical Resources Information System (CHRIS); correspondence with the California Native American Heritage Commission (NAHC); and a desktop archaeological sensitivity analysis.

This study concludes that there are four archaeological resources in the Project Area, none of which have been evaluated for eligibility to qualify as an historical resource or unique archaeological resource under CEQA. Consultation between the City and Native American tribes shows that there may be cultural resources significant to Native Americans tribes, including TCRs, in the Project Area.

No physical impacts to any buildings themselves are anticipated to result from the Project, as construction would occur away from buildings along extant connecting pipeline alignments that connect buildings to the water main in the City right-of-way. As such, the Project is not anticipated to affect any built environment resources.

Due to the Project Area's sensitivity for buried prehistoric and historic-period archaeological material, proximity to documented ethnographic villages, potential for tribal cultural resources (TCR[s]), and lack of previous systematic archaeological subsurface survey, the Project has the potential to impact cultural resources. Because the Project would result in only minimal ground disturbance and because archaeological subsurface survey prior to Project implementation appears infeasible due to access restrictions, ESA recommends the following measures be completed to ensure that the Project does not result in a significant impact to cultural resources:

- Continued consultation between the City and Native American representatives provided in the NAHC's correspondence for the Project to address the identification of TCRs and potential Project impacts on cultural resources.
- An archaeologist meeting, or supervised by an archaeologist meeting, the Secretary of the Interior's Professional Qualifications Standards for Archeology, in addition to a Native American monitor will conduct archaeological construction monitoring for Project ground-disturbing activities within 250 feet of recorded archaeological resources.

- Should archaeological resources or human remains be inadvertently discovered during any Project ground-disturbing work, stop work within 100 feet of the find, and implement protocol to assess the find for significance under CEQA (see Chapter 5 for additional details).

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CHAPTER 1

Introduction

This Cultural Resources Inventory Report (CRIR) documents the methods and results of a cultural resources inventory completed for the South Land Park and Richmond Grove Water Meter Retrofits Project (Project), in the City of Sacramento, Sacramento County, California (**Figure 1 Appendix A**). The City of Sacramento (City) proposes the Project, which would install approximately 4,000 water meters throughout the City. No physical impacts to any buildings themselves are anticipated, as construction would occur away from buildings along extant connecting pipeline alignments that connect buildings to the water main in the City right-of-way (ROW). As such, the Project is not anticipated to have the potential to affect built environment resources; therefore, this study does not include background on previously recorded built environment resources. The Project Area encompasses approximately 550.7 acres (2.23 kilometer²), though the Project footprint would be significantly smaller, since specific locations for the replacement pipeline and water meters would be determined in the future.

The Project is subject to review under the California Environmental Quality Act (CEQA), with the City acting as lead agency for CEQA purposes. The purpose of this study, in accordance with CEQA, was to:

- Identify potential or documented cultural resources within the Project Area;
- Identify potential impacts to identified cultural resources; and,
- Recommend further procedures to be taken to avoid potential significant impacts to identified cultural resources.

The work performed for preparation of this CRIR consisted of background and archival research, including records searches of the California Historical Resources Information System (CHRIS); correspondence with the California Native American Heritage Commission (NAHC); and a desktop archaeological sensitivity analysis.

ESA personnel involved in the preparation of this report include Robin Hoffman, MA, Registered Professional Archaeologist (RPA), and Kathy Anderson, MA. **Appendix B** includes the authors' resumes.

Project Location

The Project is located within portions of the New Helvetia Land Grant (Unsectioned), as depicted on the following U.S. Geological Survey 7.5-minute quadrangle maps (**Figure 2 Appendix A**):

- Clarksburg, California;
- Sacramento East, California; and,
- Sacramento West, California.

The Project includes blocks throughout the City of Sacramento, including downtown and suburban areas. The Project would occur solely in residential neighborhoods.

Project Description

The City initiated the Water Meter Program in 2005 as a result of Assembly Bill (AB) 2572, which requires installation of water meters on all residential and commercial uses in the City by 2025. The City had already committed to replacing its aging water main pipeline located in backyards before the passing of AB 2572, therefore the City is now conducting joint main pipeline replacement and meter installation projects. As of January 2015, approximately 74,000 water meters had been installed, in phases, throughout the City. In February 2015, the City Council approved a plan to accelerate completion of water meter installation by December 2020 instead of 2025. Currently, 70% of the City is metered and approximately 40,000 meters remain to be installed, in addition to associated water main replacements. The Project represents approximately 10% of the remaining meters to be installed.

The Project would include the following components:

- Installation of ~1,730 water meters in residential backyards/alleys; and,
- Installation of ~2,231 water meters in predominately residential front yards (in or behind sidewalks);.

The Project would install the remaining approximately 4,000 water meters throughout the City. Each water meter installation would involve furnishing and installing the meter and required piping to reconnect to the existing water service pipeline. Meter installation would consist of minor physical alterations to the existing water service pipelines and would be done in a manner as to minimize the impact on existing ground surface features. Typical excavation for meter installation would measure approximately 3 by 3 feet, to a depth of approximately 3 feet. No physical impacts to any buildings themselves are anticipated, as construction would occur away from buildings along extant connecting pipeline alignments that connect buildings to the water main in the City ROW.

Project Area

Due to the nature of the Project and its minimal potential for indirect effects, it was determined that the area of analysis for potential impacts to both archaeological and built environment resources (i.e., the Project Area) is the same. The Project Area includes both the horizontal and vertical

maximum extents of potential direct and indirect impacts to cultural resources, and encompasses the potential Project footprint, staging, and access areas. The Project Area is much larger than the anticipated extent of ground disturbance or installation work, in general. The large extent of the Project Area is primarily due to the fact that exact meter installation locations have yet to be determined, thus the Project Area includes the entire parcels where meter installations would occur. The Project Area is comprised of approximately 550.7 acres (2.23 kilometer²), in discontinuous large blocks, throughout the City. The Project Area extends vertically to the maximum depth of proposed construction with an additional 1-foot buffer; as such, the Project Area extends to 4 feet below surface. **Figure 2** in **Appendix A** depicts the Project Area.

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CHAPTER 2

Regulatory Framework

State

California Environmental Quality Act

CEQA (codified at Public Resources Code [PRC] § 21000 et seq.) is the principal statute governing environmental review of projects occurring in the State. CEQA requires lead agencies to determine if a project would have a significant effect on historical resources, unique archaeological resources, or tribal cultural resources (TCR[s]).

Historical Resources

CEQA Guidelines recognize that a historical resource includes: (1) a resource in the California Register of Historical Resources (California Register); (2) a resource included in a local register of historical resources, as defined in PRC § 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC § 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record.

If a lead agency determines that an archaeological site is a historical resource, the provisions of CEQA § 21084.1 and *CEQA Guidelines* § 15064.5 apply. If an archaeological site does not meet the criteria for a historical resource contained in the *CEQA Guidelines*, then the site may be treated in accordance with the provisions of CEQA § 21083, pertaining to unique archaeological resources.

Unique Archaeological Resources

As defined in CEQA § 21083.2 a “unique archaeological resource” is an archaeological artifact, object, or site, about which it can be clearly demonstrated that without merely adding to the current body of knowledge, there is a high probability that it meets any of the following criteria:

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

CEQA Guidelines note that if an archaeological resource is not a unique archaeological, historical resource, or TCR, the effects of the project on those cultural resources shall not be considered a significant effect on the environment (*CEQA Guidelines* § 15064.5[c][4]).

Tribal Cultural Resources

Impacts to TCRs also are considered under CEQA (PRC § 21084.2). PRC § 21074(a) defines a TCR as any of the following:

- Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - included or determined to be eligible for inclusion in the California Register; or
 - included in a local register of historical resources, as defined in PRC § 5020.1(k).
- 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 [PRC] § 5024.1. In applying these criteria, the lead agency would consider the significance of the resource to a California Native American tribe.

Per PRC § 21074(a)(c), a historical resource, unique archaeological resource, or nonunique archaeological resource may also be a TCR if it is included or determined eligible for the California Register or included in a local register of historical resources.

California Register of Historical Resources

The California Register is “an authoritative listing and guide to be used by State and local agencies, private groups, and citizens in identifying the existing historical resources of the State and to indicate which resources deserve to be protected, to the extent prudent and feasible, from substantial adverse change” (PRC § 5024.1[a]). The criteria for eligibility for the California Register are based upon criteria for listing in the National Register of Historic Places (National Register) (PRC § 5024.1[b]). Certain resources are determined by the statute to be automatically included in the California Register, including California properties formally determined eligible for, or listed in, the National Register.

To be eligible for the California Register, a cultural resource must be significant at the local, State, and/or federal level under one or more of the following four criteria:

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

A resource eligible for the California Register must be of sufficient age, and retain enough of its historic character or appearance (integrity) to convey the reason for its significance.

Additionally, the California Register consists of resources that are listed automatically and those that must be nominated through an application and public hearing process. The California Register automatically includes the following:

- California properties listed on the National Register and those formally Determined Eligible for the National Register;
- California Registered Historical Landmarks from No. 770 onward; and
- Those California Points of Historical Interest that have been evaluated by the OHP and have been recommended to the State Historical Commission for inclusion on the California Register.

Other resources that may be nominated to the California Register include:

- Historical resources with a significance rating of Category 3 through 5 (those properties identified as eligible for listing in the National Register, the California Register, and/or a local jurisdiction register);
- Individual historic resources;
- Historic resources contributing to historic districts; and
- Historic resources designated or listed as local landmarks, or designated under any local ordinance, such as an historic preservation overlay zone.

Local

City of Sacramento 2035 General Plan

The City's 2035 General Plan's Historic and Cultural Resources Element includes goals and policies relating to the identification and preservation of its historic resources. The following goals and policies from the 2035 General Plan are relevant to cultural resources in regard to the Project.

Goal HCR 2.1

Identification and Preservation of Historic and Cultural Resources. Identify and preserve the city's historic and cultural resources to enrich our sense of place and our understanding of the city's prehistory and history.

Policies

HCR 2.1.1 Identification

The City shall identify historic and cultural resources, including individual properties, districts, and sites (e.g., archaeological sites) to ensure adequate protection of these resources.

HCR 2.1.2 Applicable Laws and Regulations

The City shall ensure compliance with City, State, and Federal historic preservation laws, regulations, and codes to protect and assist in the preservation of historic and archaeological resources, including the use of the California Historical Building Code as applicable. Unless listed in the Sacramento, California, or National registers, the City shall require discretionary projects involving resources 50 years and older to evaluate their eligibility for inclusion on the California or Sacramento registers for compliance with the California Environmental Quality Act.

HCR 2.1.3 Consultation

The City shall consult with appropriate organizations and individuals (e.g., [CHRIS] Information Centers, the [NAHC], the CA Office of Planning and Research (OPR) “Tribal Consultation Guidelines”, etc.) and shall establish a public outreach policy to minimize potential impacts to historic and cultural resources.

HCR 2.1.11 Compatibility with Historic Context

The City shall review proposed new development, alterations, and rehabilitation/remodels for compatibility with the surrounding historic context. The City shall pay special attention to the scale, massing, and relationship of proposed new development to surrounding historic resources.

HCR 2.1.12 Contextual Features

The City shall promote the preservation, rehabilitation, restoration, and/or reconstruction, as appropriate, of contextual features (e.g., structures, landscapes, street lamps, signs) related to historic resources.

HCR 2.1.15 Demolition

The City shall consider demolition of historic resources as a last resort, to be permitted only if rehabilitation of the resource is not feasible, demolition is necessary to protect the health, safety, and welfare of its residents, or the public benefits outweigh the loss of the historic resource.

HCR 2.1.16 Archaeological & Cultural Resources

The City shall develop or ensure compliance with protocols that protect or mitigate impacts to archaeological and cultural resources including prehistoric resources.

CHAPTER 3

Background Setting

Natural Setting

The Project is located in the southern portion of the Sacramento Valley within the northern portion of California's Great Valley Geomorphic Province. The Great Valley, also called the Central Valley, is a nearly flat alluvial plain that lies between the Sierra Nevada on the east and the Coast Ranges on the west. Its south end is defined by the Tehachapi Mountains north of Los Angeles, and its north end is defined by the Klamath Mountains. Subdivided into the Sacramento Valley to the north and the San Joaquin Valley to the south, the Great Valley has an average width of about 50 miles (80 kilometers) and is about 400 miles (650 kilometers) long overall (Norris and Webb, 1990:412–417; Bartow, 1991:1). The Sacramento Valley contains thousands of feet (or meters) of accumulated fluvial, overbank, and fan deposits resulting from erosion of the surrounding ranges (Hackel, 1966). The sediments vary from a thin veneer at the edges of the valley to more than 10 miles (~15 kilometers) in the west-central portion. The Sacramento River is the main drainage of the northern Sacramento Valley, flowing generally south from the Klamath Mountains to its discharge point into the Suisun Bay in the San Francisco Bay area, and is California's largest watershed, covering approximately 26,550 mile² (68,760 kilometer²) (Carle, 2004). In the Sacramento area, the Sacramento and American Rivers have been confined by human-made levees since the mid-19th century, such as those along the American River just north of the Project Area.

The Project Area is in the relatively flat floodplains of the American and Sacramento Rivers. The underlying geology of the Project Area consists of deep Holocene and historical/modern alluvium (Great Valley stream channel, fan, and basin deposits) with some wind-blown dune deposits (California Division of Mines and Geology, 1971; Meyer and Rosenthal, 2008:Fig. 47, 50). Soils in the Project Area consist of a variety of sandy and silty loams (alluvium) mixed with historical and modern fill (USDA, 2016).

The Holocene environment of the region was characterized by a general warming trend that subsumed episodes of relatively cool climates. Most paleoclimatic reconstructions for the Central Valley are based on Ernst Antevs' (1948, 1953, 1955) three-part global climatic sequence. The sequence spans the Holocene, consisting of the moderately cool/moist Anathermal (ca. 10,000 to 7,500 years before present [BP]), the warm and dry Altithermal (ca. 7,500 to 4,000 BP), and the Medithermal (ca. 4,000 BP to present). Tree-ring growth chronologies from central eastern California, glacial chronologies, and pollen cores generally corroborate Antevs' sequence, with the caveat that California's Holocene environment exhibited regional variation (Birkeland et al., 1976; Birman, 1964; Curry, 1969; Curry, 1970; Moratto et al., 1978; Šercelj and Adam, 1975). Pollen diagrams from the Lake Tahoe and Yosemite areas indicate a vegetation shift that suggests a

general increase in temperature from 9,000 to 2,900 BP, although six relatively cool and moist periods, each lasting 400 to 1,500 years, punctuated the general warm and dry trend (Moratto et al., 1978:150–151). Modern average temperatures range between 56 and 62 degrees Fahrenheit (13.3 and 16.7 degrees Celsius) annually. Most precipitation occurs as rain, ranging from 5 to 25 inches (12.7 to 63.5 centimeters) per year.

Prior to historical and modern development, the Project Area would have consisted of non-tidal marshland, broad gallery forests, and open grassland (Meyer and Rosenthal, 2008:34-35). Common marsh flora species would have included: tule rush, bull rush, cattails, sedges, other rushes, reeds, pondweed, knotweed, and yellow pond lily; adjacent forest flora species would have included: willow, buttonbush, California sycamore, Fremont's cottonwood, Oregon ash, black walnut, box elder, valley oak, white alder, California buckeye, big leaf maple, elderberry, grape vine, blackberry, and poison oak; and grassland flora would have been comprised of: purple needlegrass, nodding needlegrass, blue wild rye, pine bluegrass, and deergrass (Meyer and Rosenthal, 2008:34-35; Heady, 1977). Large populations of tule elk, pronghorn, black-tailed deer would have been found in the Project Area and vicinity prior to Euroamerican settlement. Other prominent terrestrial fauna in the area would have included: grizzly bear, puma, gray fox, bobcat, coyote, badger, spotted skunk, striped skunk, beaver, weasel, river otter, raccoon, ringtail, cottontail rabbit. The main avian species in the area would have included: ducks, coot, cormorant, grebes, herons, cranes, egrets, gulls, geese, brants, swans, hawks, eagles, doves, quail, flicker, woodpeckers, owls, turkey vulture, and a number of passerines. Chinook salmon, white and green sturgeon, Pacific lamprey, steelhead rainbow trout, Sacramento sucker, western pike-minnow, sculpins, tule perch, pond turtle, freshwater mussel, and ridged mussel constitute the aquatic fauna that would have been present in the Project Area prehistorically. The arrival of Euroamericans to the area led to a dramatic decrease in the populations of the faunal species due to overhunting and habitat loss (Meyer and Rosenthal, 2008:34-36; Heady, 1977).

Prehistoric Setting

Categorizing the prehistoric period into cultural stages allows researchers to describe a broad range of archaeological resources with similar cultural patterns and components during a given timeframe, thereby creating a regional chronology. Rosenthal et al. (2007) provide a framework for the interpretation of the Central Valley prehistoric record and have divided human history in the region into three basic periods: *Paleo-Indian* (13,550 to 10,550 BP), *Archaic* (10,550 to 900 BP), and *Emergent* (900 to 300 BP). The Archaic period is subdivided into three sub-periods: *Lower Archaic* (10,550 to 7,550 BP), *Middle Archaic* (7,550 to 2,550 BP), and *Upper Archaic* (2,550 to 900 BP) (Rosenthal et al., 2007). Economic patterns, stylistic aspects, and regional phases further subdivide cultural patterns into shorter phases. This scheme uses economic and technological types, socio-politics, trade networks, population density, and variations of artifact types to differentiate between cultural periods. The following summary of the region's prehistory is derived principally from Rosenthal et al. (2007) and Moratto (2004).

Paleo-Indian Period (13,550 to 10,550 BP)

Humans first entered the central Valley sometime prior to 13,000 years ago. At that time Pleistocene glaciers had receded to the mountain crests leaving conifer forests on the mid and upper elevations of the Sierra Nevada and a nearly contiguous conifer forest on the Coast Ranges. The Central Valley was covered with extensive grasslands and riparian forests. The central California Delta system had not yet developed. The Central Valley was home to a diverse community of large mammals, which soon became extinct. People were likely focused on large game hunting, although evidence remains scant, as does understanding of lifeways during this period.

Lower Archaic Period (10,550 to 7,550 BP)

Climate change during the Lower Archaic led to the rapid expanse of oak woodland and grassland prairies across the Central Valley. After 10,550 BP, a significant period of soil deposition ensued in the Valley, capping older Pleistocene formation. This was followed around 7,000 BP by a second period of substantial soil deposition in the Valley.

It was during this period that the first evidence of milling stone technology appears, indicating an increased reliance on processing plants for food. Milling stones include hand stones and milling slabs and are frequently associated with a diverse tool assemblage including cobble-based pounding, chopping, and scraping tools. Milling tools were used for processing seeds and nuts. The Lower Archaic also saw the development of well-made bifaces used for projectile points and cutting tools, commonly formed from meta-volcanic greenstone and volcanic basalts.

Middle Archaic Period (7,550 to 2,550 BP)

After about 7,550 BP, California was marked by a change in climate with warmer and drier conditions throughout the region. Oak woodland expanded upslope in the Coast Ranges and conifer forest moved into the alpine zone in the Sierra Nevada. Rising sea levels led to the formation of the Sacramento-San Joaquin Delta and associated marshlands. An initial period of upland erosion and lowland deposition was followed by a long period of stabilization of landforms. Scant evidence of human occupation from this period has been found in the Sacramento Valley or the adjacent Coast Ranges. Most evidence comes from the Sierra Foothills in Calaveras and Tuolumne counties.

Upper Archaic Period (2,550 to 900 BP)

Evidence for Upper Archaic human occupation in the Central Valley is much more extensive than for earlier periods. The development of the Holocene landscape buried older deposits, resulting in the identification of more sites from the Upper Archaic than from older periods of development. Alluvial deposition was partially interrupted by two consecutive droughts known as the Medieval Climatic anomaly.

Two fundamental adaptations developed side-by-side during the Upper Archaic period, evidenced by a diversification in settlements patterns. Populations in the Valley tended towards large, high-density, permanent settlements. These villages were used as hubs from which the populace roamed to collect resources, utilizing a wide range of technologies. The populations in the foothills and

mountains lived in less dense settlements, moving with the seasons to maximize resource returns. Tools tended to be expedient and multipurpose for use in a wide variety of activities. Village sites show extended occupation as evidenced by well-developed midden, frequently containing hundreds of burials, storage pits, structural remains, hearths, ash dumps, and extensive floral and faunal remains.

Emergent Period (900 to 300 BP)

A major shift in material culture occurred around 900 BP, marking the beginning of the Emergent Period. Particularly notable was the introduction of the bow and arrow. The adoption of the bow occurred at slightly different times in various parts of the Sacramento Valley, but by 750 BP it was in use in the Delta region. The bow was accompanied by the Stockton Serrated point, a seemingly indigenous invention, distinctive from point types used in other parts of the State. Another key element of material culture from this period include big-head effigy ornaments thought to be associated with the Kuksu religious movement. In areas where stone was scarce, baked clay balls are found, presumably for cooking in baskets. Other diagnostic items from this period are bone tubes, stone pipes, and ear spoons. Along rivers, villages are frequently associated with fish weirs, with fishing taking on an increasing level of importance in the diet of the local populace.

Ethnographic Setting

Depopulation and relocation of Central Valley Native Americans in the 19th century resulted in conflicting and incomplete information about tribal locations. Though cultural descriptions of these groups in the English language are known from as early as 1849, most of our current cultural knowledge comes from various early 20th century anthropologists (Levy, 1978:413). The uncertainty regarding the territorial boundaries of the Native American groups that occupied the Project Area and vicinity derives from the fact that ethnographies historically demarcated contact-period tribal boundaries in various and conflicting ways (Waechter, 1993). The northern portion of the Project Area is within the lands occupied and used by the Nisenan (Shipley, 1978), or Southern Maidu, while the southern portion of the Project Area is an area ethnographic accounts attribute to use by the Plains Miwok, a subgroup of the Eastern Miwok (Levy, 1978).

Nisenan

The language of the Nisenan, which includes several dialects, is classified in the Maiduan family of the Penutian linguistic stock (Kroeber, 1976; Shipley, 1978). The western boundary of Nisenan territory was the western bank of the Sacramento River. The eastern boundary was “the line in the Sierra Nevada mountains where the snow lay on the ground all winter” (Littlejohn, 1928).

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages usually were located on low rises along major watercourses. Village size ranged from three houses to 40 or 50. Houses were domed structures covered with earth and tule or grass and measured 10 to 15 feet (3.0 to 4.5 meters) in diameter. Brush shelters were used in summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule or brush,

with a central smoke hole at the top and an east-facing entrance. Another common village structure was a granary used for storing acorns (Wilson and Towne, 1978).

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna that the rich valley environment provided. The Valley Nisenan economy involved riparian resources—in contrast to the Hill Nisenan, whose resource base consisted primarily of acorn and game procurement. The only domestic plant was native tobacco, but many wild species were closely husbanded. The acorn crop from the blue oak and black oak was so carefully managed that this activity served as the equivalent of agriculture. Acorns could be stored in anticipation of winter shortfalls in resource abundance. Deer, rabbit, and salmon were the chief sources of animal protein in the aboriginal diet, but many other insect and animal species were taken when available (Wilson and Towne, 1978).

Religion played an important role in Nisenan life. The Nisenan believe that all natural objects were endowed with supernatural powers. Two kinds of shamans existed: curing shamans and religious shamans. Curing shamans had limited contact with the spirit world and diagnosed and healed illnesses. Religious shamans gained control over the spirits through dreams and esoteric experiences (Wilson and Towne, 1978). The usual mode of burial was cremation (Faye, 1923).

As with other California Native American groups, the gold rush of 1849 had a devastating effect on the Valley Nisenan. The flood of miners that came to the area in search of gold brought diseases with them that decimated the Nisenan population. Those who survived were subjected to violence and prejudice at the hands of the miners, and the Nisenan eventually were pushed out of their ancestral territory. Although this contact with settlers had a profound negative impact on the Nisenan population through disease and violent actions, the Nisenan people survived and maintained strong communities and action-oriented organizations (Castillo, 1978).

Plains Miwok

The Plains Miwok are part of the larger Eastern Miwok group who form one of the two major divisions of the Miwokan subgroup of Utian speakers. The Plains Miwok lived in the Central Valley along the Sacramento, Cosumnes, and Mokelumne Rivers, and built their homes on high ground, with principal villages concentrated along major drainages. The Plains Miwok had two forms of house construction, conical-shaped constructed with poles and thatching of brush, grass, or tule, and semi-subterranean earth-covered. Larger villages had an assembly house, a 40 to 50-foot- (12 to 15-meter-) diameter semi-subterranean structure, in addition to a sweathouse, a smaller version of the assembly house (Levy, 1978).

Seasonality defined Plains Miwok subsistence strategies, and their economy was based principally on the use of natural resources from the grasslands and riparian corridors adjacent to the area's many drainages. As with the majority of California Native American groups, the Plains Miwok relied heavily on the acorn for food. Other non-animal foods consisted of nuts, seeds, roots, greens, berries, and mushrooms. Animal foods included tule elk, pronghorn antelope, jackrabbit, squirrel, beaver, quail, and waterfowl. Salmon was the principal animal food for the Plains Miwok, ranking above other river resources such as sturgeon. Salt, nuts, basketry, and obsidian were obtained

through trade with the Sierra Miwok to the east for shells, basketry, and bows obtained in turn through trade from the west (Levy, 1978).

Wooden digging sticks, poles, and baskets were used for gathering vegetal resources, while stone mortars, pestles, and cooking stones were used for processing foods. Items used for obtaining animal resources included nets, snares, seines, bows, and arrows. Arrow points were primarily made of basalt and obsidian (Levy, 1978). The Plains Miwok practiced the Kuksu religion, with its ceremonies and dances, initiation rites, and ranking deity. Ceremonies were conducted for girls' maturity and the group also held beliefs that explained their natural world (Kroeber, 1976; Levy, 1978).

Similar to the Nisenan and other California Native American groups, the Plains Miwok were greatly affected by the gold rush of 1849. The Plains Miwok population was devastated by diseases brought in by the large number of Euroamerican miners, and survivors were subjects of widespread violence and prejudice by the Euroamerican settlers. As a result, many Plains Miwok were pushed out of their ancestral territory. Despite these extreme hardships, the Plains Miwok have survived and maintained strong communities and organizations (Castillo, 1978).

Ethnographic Villages

Ethnographic accounts documented several Native American villages in or in close proximity to the Project Area. These records, however, are somewhat lacking in detail regarding specific locations. The accounts show that the Nisenan villages *Sama*, *Sekumni*, *Pusune*, *Momol*, and *Sa'cum*, and the Plains Miwok village *Hulpumne* were in areas outside but near the Project Area.

Sama was a Nisenan village documented in present-day South Sacramento, in an area probably outside the Project Area. The Plains Miwok village *Hulpumne* was documented in the present-day Freeport area, approximately 1.5 to 2 miles (2.4 to 3.2 kilometers) south of the Project Area. *Sa'cum* is thought to have been in downtown Sacramento, at present-day Cesar Chavez Park. *Momol* is shown in ethnographic accounts on the south side of the American River at its confluence with the Sacramento River. Ethnographic records depict *Pusune* at the confluence of the two rivers, either on the west side of the Sacramento River, in present-day West Sacramento, or along the north side of the American River. *Sekumni* is to have been along the north side of the American River, near the present-day State Route 160 (Kroeber, 1976; Wilson and Towne, 1978; Casilear and Bainbridge, 1850).

Historic Setting

Europeans did not enter the Sacramento area until 1808, when Gabriel Moraga's expedition reached the junction of the Sacramento and American Rivers. By the late 1820s, English, American, and French fur trappers, attracted by the valley's abundance of animal life, began operations throughout the Sacramento Valley. Native Americans still predominantly occupied the region, with only the occasional Spanish expedition into the interior to search for mission sites or escaped neophytes (Native Americans who had entered the mission system) (Hoover et al., 2002:302-304).

Permanent non-native settlement in the Sacramento Valley began in the 1830s when Spanish and Mexican governors issued large land grants to individuals, often in return for military or other services rendered to the government. Swiss immigrant John Augustus Sutter, Jr., upon receipt of a land grant from Mexican Governor Juan Alvarado, first settled the Sacramento area in 1839. Sutter established a fort away from the low-lying rivers area and Sutter's Fort served as an agricultural station and destination for immigrants into California until January 1848 (Jackson et al., 1983:1; Hoover et al., 1966:298-302; Bean, 1978:67-68; Reys, 1975:195).

City of Sacramento

Sutter's small riverside settlement quickly took on the role of bustling port as ocean going ships and riverboats used the Sacramento River to transport goods and gold-seeking passengers to the mine fields in the slopes of the Sierra Nevada after the discovery of gold in 1849. Sutter laid out a grid of streets extending from the waterfront and named the new town Sacramento, establishing numbered streets running north to south and lettered streets, east of Front Street along the Sacramento River, running east to west, with each block divided into eight 80 by 150-feet (24 by 45-meters) lots with four lots on either side of an east/west oriented central alley.

The new town was centered on the embarcadero, or Front Street, and continued inland to the east along J Street (Warner, 1969; Brienens et al., 1981:46-47). Downtown Sacramento developed rapidly after 1850. The blocks fronting J Street were heavily developed, owing to the street's use as the main road leading east out of the City, with slightly less development on the parallel I and K Streets. By 1851, J Street was substantially occupied from Front Street eastward beyond 10th Street with stores, saloons, hotels, grocery stores, stables, and other concerns vying for the business of visitors and residents.

During the mid-1800s, the City faced severe flooding issues. The majority of flooding stemmed from the American River, where, during heavy rains, segments of the river north of I Street would experience severe flooding. The flood of 1861/62 left portions of the City under 20 feet (6 meters) of water. To address this problem, the City dug a new mouth for the American River, rerouting it north to better regulate flow, and elevated the city streets between I Street and L Street, from Front Street to 12th Street, approximately 4 to 15 feet (1.2 to 4.6 meters). The City completed this enormous undertaking in 1873, and this action has shaped the current downtown grid since that time (City of Sacramento, 2009:6.4-9). The thirteen-year process resulted in gaps between the street and the business fronts. These were covered with new sidewalks leaving "hollow sidewalks" below the new street grade.

With the reduction of flood risk, downtown businesses grew steadily; for the first 60 years of its existence the City of Sacramento consisted of the 4.5 mile² (11.7 kilometer²) grid encompassing the modern neighborhoods of Midtown and Downtown. Between 1895 and 1915, the City underwent rapid development thanks to the introduction of a street car line. Pacific Gas and Electric Company operated a streetcar line in Sacramento from 1906 to 1943, which supported expanded residential development as outlying areas became more easily accessible. The earliest annexation efforts in the late 19th and early 20th centuries pulled in the suburbs of south and east of the grid. These new suburbs provided housing for residents commuting downtown, and were developed in phases

spanning the first half of the 20th century. As private automobiles overtook streetcars as the primary form of transportation, the suburbs surrounding Sacramento expanded further away from the streetcar lines, which eventually fell out of use and were removed by the mid-century. Sacramento's downtown core had fallen into economic and physical decline by the 1930s, as the suburban growth pulled residents out of downtown. Declining tax revenue and property values led to the redevelopment/urban renewal efforts in downtown Sacramento in the post-war period.

CHAPTER 4

Methods and Results

CHRIS Records Search

Between June 16 and 23, 2016, ESA staff and staff of the North Central Information Center (NCIC) conducted a records search for the Project at the NCIC at California State University, Sacramento (File Nos. SAC-16-105, SAC-16-112, SAC-16-114). The NCIC maintains the official CHRIS records of previous cultural resources studies and recorded cultural resources for the Sacramento County portion of the Project Area. On June 17, 2016, ESA staff conducted a records search for the Project at the Northwest Information Center (NWIC) at Sonoma State University, Rohnert Park (File No. 15-1881). The NWIC is the CHRIS repository housing records for the Yolo County portion of the records search study area. The study area for the records searches consisted of the Project Area with a 0.5-mile buffer.

The purpose of the records searches was to: (1) determine whether known cultural resources have previously been recorded in a 0.5-mile radius of the Project Area; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby resources; and (3) develop a context for the identification and preliminary evaluation of cultural resources. The records search consisted of an examination of the following documents:

- **NCIC base maps:** *Clarksburg, CA; Sacramento East, CA; Sacramento West, CA* (USGS 7.5-minute topo maps)
- **NWIC base maps:** *Clarksburg, CA; Sacramento West, CA* (USGS 7.5-minute topo maps)
- **Resource Inventories:** *National Register of Historic Places, California Inventory of Historical Resources, California Historical Landmarks, California Points of Historical Interest, Historic Properties Directory Listing* (Sacramento County and Yolo County, through May 2012), *Archaeological Determinations of Eligibility* (Sacramento County and Yolo County, through April 5, 2012), *Caltrans Historic Bridge Inventory* (Sacramento County and Yolo County, through March 2016)

Due to the nature of the Project and its limited potential to impact built resources—as construction would occur away from buildings along the extant connecting pipeline alignments that connect buildings to the water main in the City ROW—the records search only included archaeological resources in the Project Area and 0.5-mile buffer. **Appendix C** provides documentation of the records searches, including relevant site records.

Previously Recorded Resources

The NCIC has record of seven previously recorded archaeological resources in the 0.5-mile search area, four of which were recorded in the Project Area: P-34-000064, P-34-000104, P-34-000235, and P-34-000248. The NWIC has record of two previously recorded archaeological resources in the 0.5-mile search area, none of which are in the Project Area. The four archaeological resources previously recorded in the Project Area are prehistoric sites and are in areas currently with historical or modern buildings, roads, and other development infrastructure. As such, it is likely that the resources have been damaged or possibly completely destroyed by historical and modern development. However, the extent of any such damage is unknown because of the sites' early recordation dates and/or lack of archaeological subsurface investigations conducted for the sites.

Table 1 summarizes the previously recorded archaeological resources in the Project Area. Detailed resource descriptions are provided in Chapter 5 of this document.

Previous Cultural Resources Studies

A vast number of previous cultural resources studies, involving a variety of methods, have been conducted in and within 0.5 mile of the Project Area. The NCIC has reports from more than a hundred previous cultural resources studies conducted in or within 0.5 mile of the Project Area, while the NWIC has on file more than a dozen reports from previous cultural resources studies within 0.5 mile of the Project Area. Of these previous studies, none address any of the four archaeological resources recorded in the Project Area.

Native American Correspondence

ESA contacted the NAHC on September 20, 2016 in request of a search of the NAHC's Sacred Lands File (SLF) and a list of Native American representatives who may have interest in the Project.

The NAHC reply also included a list of Native American representatives to contact regarding the Project. In early October 2016, ESA provided the City with the NAHC reply to assist in Native American consultation efforts.

On February 13 and March 30, 2017, representatives from the City and the United Auburn Indian Community (UAIC) met in-person to discuss the Project's potential to impact cultural resources and TCRs, and approaches to avoiding any such impacts. Also, a number of emails have been exchanged between the City and UAIC representatives regarding the Project and ways to avoid impacts to cultural resources and TCRs. Through these discussions, four areas of sensitivity (i.e., areas with potential TCRs or archaeological resources with significance to Native Americans) were identified, generally coinciding with the locations of the four previously recorded archaeological resources in the Project Area. Consultation between the City and Native American representatives

is ongoing and will continue through the duration of the Project. **Appendix D** provides documentation of ESA’s Project-related correspondence with Native American representatives.

**TABLE 1
PREVIOUSLY RECORDED ARCHAEOLOGICAL RESOURCES WITHIN 0.5 MILE OF PROJECT AREA**

Primary [P-]	Trinomial [CA-]	Name/Description	Age	Recorder	Current California Register-eligibility	Location (Project Area Portion)
34-000002	<i>none</i>	Refuse deposit	Historic	Orlins (1978)	Unevaluated	[REDACTED]
34-000064	SAC-37	Habitation mound	Prehistoric	McKee (1934)	Unevaluated	[REDACTED]
34-000104	SAC-77	Mound with artifacts	Prehistoric	Heizer (1934); Kernan (1959)	Unevaluated	[REDACTED]
34-000235	SAC-208	Human remains	Prehistoric	Reeve and Arnold (1957)	Unevaluated	[REDACTED]
34-000248	SAC-221	[REDACTED] midden with artifacts	Prehistoric	Wilson et al. (1956)	Unevaluated	[REDACTED]
34-000722	SAC-551H	[REDACTED] privies, wells, refuse pits, midden, structural remains (Destroyed)	Historic	Nettles (2002)	Unevaluated	[REDACTED]
34-000724	SAC-552H	[REDACTED] privies, trash pits, cisterns, posts, utilities, structural remains (Destroyed)	Historic	Warren & Abdo-Hintzman (2002)	Eligible (but destroyed)	[REDACTED]
57-000425	<i>none</i>	Dock/wharf remnants	Historic	Allan (2002); Hanes (2008)	Not eligible	[REDACTED]
57-000607	YOL-222H	Dock/wharf remnants	Historic	Hanes (2008)	Not eligible	[REDACTED]

SOURCE: NCIC, 2016; NWIC, 2016
D-Downtown, LP-Land Park

Archaeological Resources in Project Area

Through background research and records searches, this study identified four archaeological resources in the Project Area: P-34-000064, P-34-000104, P-34-000235, P-34-000248. None of these resources have been evaluated for eligibility to qualify as an historical resource or unique archaeological resource under CEQA. The resources are discussed below, summarized in Table 3, above, and depicted Figure 3 in Appendix A.

P-34-000064

Recorded in 1934, this prehistoric site was described as a habitation mound measuring 120 feet (36.5 meters) in diameter and 4 feet (1.2 meters) high,

No record of any evaluation for National Register- or California Register-eligibility is on file at the NCIC and much, if not all, of the site has likely been destroyed by the above-mentioned buildings and associated development. However, because the site almost certainly has a subsurface component and was never formally tested, the extent of the site and any destruction of the site from development activities is unknown and intact portions of the site may still be present in the Project Area.

P-34-000104

This archaeological resource is a large prehistoric mound. Heizer's recordation describes the site as measuring 0.25 by 1 mile (400 by 1,600 meters) (160 acres [0.65 kilometer²]) and consisting of a large hunting site with arrowheads, and fragments of bone, shell, and stone. The site record update described the site as encompassing approximately 7,500 foot² (0.17 acres [697 meter²]) and consisting of a large grassy mound, 12 feet (3.7 meters) high, with a house and lawn improvements—no mention of prehistoric material present (other than “mound”) is made.

No record of any evaluation for National Register- or California Register-eligibility is on file at the NCIC and much, if not all, of the site has probably been destroyed by construction of the houses and associated improvements currently at the site's recorded location. However, because the site almost certainly has a subsurface component and was never formally tested, the extent of the site and any destruction of the site from development activities is unknown and intact portions of the site may still be present in the Project Area.

P-34-000235

This prehistoric site was recorded approximately 0.4 miles (0.64 kilometers) northeast of P-34-000104. Identified material at the site included one burial, located 2 feet (0.6 meters) below surface, without any associated artifacts or other features.

No record of any evaluation for National Register-eligibility is on file at the NCIC and the site was likely destroyed by construction of the house at its recorded location. However, because the site consists of subsurface deposits and was never formally tested, the extent of the site and any destruction of the site from development activities is unknown and intact portions of the site may still be present in the Project Area.

P-34-000248

Prehistoric site P-34-000248 was described as having secondary-interred cremated human remains, shell beads and other artifacts, an obsidian projectile point, bone tools, and charcoal. The site was recorded approximately 500 feet (150 meters) northeast of P-34-000104 [REDACTED], described as encompassing an area “5 feet square”, though the sketchmap and NCIC’s plotted location show the site as encompassing a little over 1 acre (4,046 meter²). The site records state that the site had been pothunted in the 1950s and also severely impacted by housing development.

No record of any evaluation for National Register- or California Register-eligibility is on file at the NCIC and the site was likely destroyed by construction of the houses at its recorded location. However, because the site consists of subsurface deposits and was never formally tested, the extent of the site and any destruction of the site from development activities is unknown and intact portions of the site may still be present in the Project Area.

Archaeological Sensitivity Analysis

Landforms that predate the earliest estimated periods for human occupation of the region are considered to have very low potential for buried archaeological sites, while those that postdate human occupation are considered to have a higher potential for buried archaeological sites. The degree of buried site potential is inversely related to the estimated date range of a landform. Currently, archaeological research indicates that the earliest evidence for human occupation of California dates to the Late Pleistocene, which ended approximately 11,500 BP. Therefore, the potential for buried archaeological deposits in landforms from or predating the Late Pleistocene is very low (Meyer and Rosenthal, 2008:160-161).

As mentioned earlier, the Project Area is underlain by deep Holocene and historical/modern alluvium with small areas of wind-blown dune deposits (California Division of Mines and Geology, 1971; Meyer and Rosenthal, 2008:Fig. 47, 50) and soils in the Project Area consist of various sandy and silty loams (alluvium) mixed with historical and modern fill (USDA, 2016). Given the Late Holocene/historical/modern age of the Project Area’s underlying geologic formation, the potential for buried prehistoric archaeological deposits in undisturbed portions of the Project Area is high (see Meyer and Rosenthal, 2008:115, 160-161). Prior to historical and modern development, the Project Area would have been an amenable setting for procurement of the abundant flora and fauna found in the area’s marshes, river channels, and adjacent forests and grasslands. The Project Area would also have been an ideal setting for prehistoric habitation, probably temporary or seasonal due to flood risks from the nearby American River.

Historical and modern development activities have heavily disturbed the majority of the Project Area, thereby reducing the potential for intact shallow buried prehistoric deposits and reducing the potential for surficial prehistoric archaeological deposits. However, the depth and extent of, and accuracy of records associated with these ground-disturbing activities varies throughout the Project Area. These same historical development activities and associated use may have also resulted in the creation of buried historic-period archaeological deposits. Additionally, several ethnographic

villages are in the vicinity of the Project Area. Though historical and modern development has most likely partially or completely destroyed the four previously recorded archaeological sites in the Project Area, or archaeological resources not recorded prior to historical and modern development activities, there remains the possibility that intact deposits could still be present in the Project Area.

Due to the presence of previously recorded archaeological resources in the Project Area, lack of previous systematic subsurface archaeological survey of the Project Area, presence of recorded ethnographic villages near the Project Area, and substantial historical use of the Project Area, the potential for buried historic-period archaeological deposits and prehistoric archaeological deposits in the Project Area is high where modern or historical ground disturbance has not occurred. With that said, the work proposed by the Project would occur mostly in previously disturbed areas such as road ROW and utility easements; therefore, the actual likelihood of encountering intact archaeological deposits, prehistoric or historical, in the Project Area is low.

CHAPTER 5

Results Summary, Conclusions, and Recommendations

Results Summary

This study identified four archaeological resources in the Project Area that have not been evaluated for eligibility to qualify as an historical resource or unique archaeological resource under CEQA. These resources are summarized in **Table 2** and depicted in **Figure 3** in **Appendix A**.

Consultation between the City and UAIC resulted in the identification of four areas of sensitivity (i.e., areas with potential TCRs or archaeological resources with significance to Native Americans), generally coinciding with the locations of the four previously recorded archaeological resources in the Project Area.

Based on the archaeological sensitivity analysis completed for this study, the potential for buried prehistoric archaeological resources and historic-period archaeological resources in the Project Area is high. The Project Area’s potential for surficial prehistoric archaeological deposits is low, while the potential for surficial historic-period archaeological deposits is moderate to high. However, the work proposed by the Project would occur mostly in previously disturbed areas such as road ROW and utility easements; therefore, the actual likelihood of encountering intact archaeological deposits, prehistoric or historical, in the Project Area is low.

TABLE 2
IDENTIFIED ARCHAEOLOGICAL RESOURCES IN THE PROJECT AREA

Primary [P-]	Trinomial [CA-]	Name/Description	Age	Recorder	Current California Register-eligibility	Project Area Portion
34-000064	SAC-37	Habitation mound	Prehistoric	McKee (1934)	Unevaluated	██████████
34-000104	SAC-77	Mound with artifacts	Prehistoric	Heizer (1934); Kernan (1959)	Unevaluated	██████████
34-000235	SAC-208	Human remains	Prehistoric	Reeve and Arnold (1957)	Unevaluated	██████████
34-000248	SAC-221	██████████ midden with artifacts	Prehistoric	Wilson et al. (1956)	Unevaluated	██████████

Conclusions

This study concludes that there are four archaeological resources in the Project Area, none of which have been evaluated for eligibility to qualify as an historical resource or unique archaeological resource, under CEQA.

No physical impacts to any buildings themselves are anticipated to result from the Project, as construction would occur away from buildings along extant connecting pipeline alignments that connect buildings to the water main in the City ROW. As such, the Project is not anticipated to affect any built environment resources.

Though the potential for buried archaeological resources is high for portions of the Project Area not disturbed by modern development, the work proposed by the Project would occur mostly in previously disturbed areas such as road ROW and utility easements, and modern private use (e.g., landscaping, construction, etc.) of the Project Area has almost certainly resulted in significant ground disturbance to the vast majority of the Project Area. In areas outside road ROW and utility easements, the Project would involve disturbance of very small areas (small water pipe-size). Therefore, the actual likelihood of encountering intact portions of any of previously unrecorded archaeological resources is low.

However, given the fact that archaeological resources have been recorded in the Project Area, the Project does have the potential to impact cultural resources. If any of these resources were found to qualify as an historical resource or unique archaeological resource, under CEQA, any impacts to the resource could potentially cause a substantial adverse change in the significance of the resource. Additionally, human remains were recorded in association with one of the previously recorded archaeological resources in the Project Area, P-34-000248, and could be present at the other three previously recorded archaeological resources in the Project Area. If the Project were to disturb any such human remains, it could constitute a significant impact under CEQA. Finally, consultation with the NAHC and Native American representatives shows there may be TCRs in the Project Area. If the Project were to disturb any such TCRs, it could constitute a significant impact under CEQA.

Recommendations

Due to the Project Area's sensitivity for buried prehistoric and historic-period archaeological material, documented ethnographic villages in the vicinity of the Project Area, potential for TCRs in the Project Area, and lack of previous systematic archaeological subsurface survey of the Project Area, the Project has the potential to impact cultural resources. Because the Project would result in only minimal ground disturbance and because archaeological subsurface survey prior to Project implementation appears infeasible due to access restrictions, ESA recommends the following measures be completed to ensure that the Project does not result in a significant impact to cultural resources, for CEQA purposes:

- Continued consultation between the City and Native American representatives provided in the NAHC's correspondence for the Project to address the identification of TCRs and potential Project impacts on cultural resources.

- An archaeologist meeting, or supervised by an archaeologist meeting, the Secretary of the Interior’s Professional Qualifications Standards for Archeology, in addition to a Native American monitor will conduct archaeological construction monitoring for Project ground-disturbing activities within 250 feet of recorded archaeological resources.
- Should archaeological resources or human remains be inadvertently discovered during any Project ground-disturbing work the following procedures should be implemented:

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

If the City, through consultation with the qualified archaeologist and relevant Native American representatives (to identified by the NAHC if the resource is Native American in origin), determines that the archaeological resource encountered may qualify as an historical resource and/or unique archaeological resource, under CEQA, construction shall cease in an area determined by the archaeologist until a mitigation plan has been prepared and implemented to the satisfaction of the archaeologist (and Native American representatives, if applicable).

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

If potential human remains are encountered, all work will halt within 100 feet of the find and the City will be contacted by onsite construction crews. The City will contact the Sacramento County coroner in accordance with California Public Resources Code (PRC)

§ 5097.98 and California Health and Safety Code § 7050.5. If the coroner determines the remains are Native American, the coroner will contact the NAHC. As provided in PRC § 5097.98, the NAHC will identify the person or persons believed most likely to be descended from the deceased Native American. The most likely descendent will make recommendations for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in PRC § 5097.98.

CHAPTER 6

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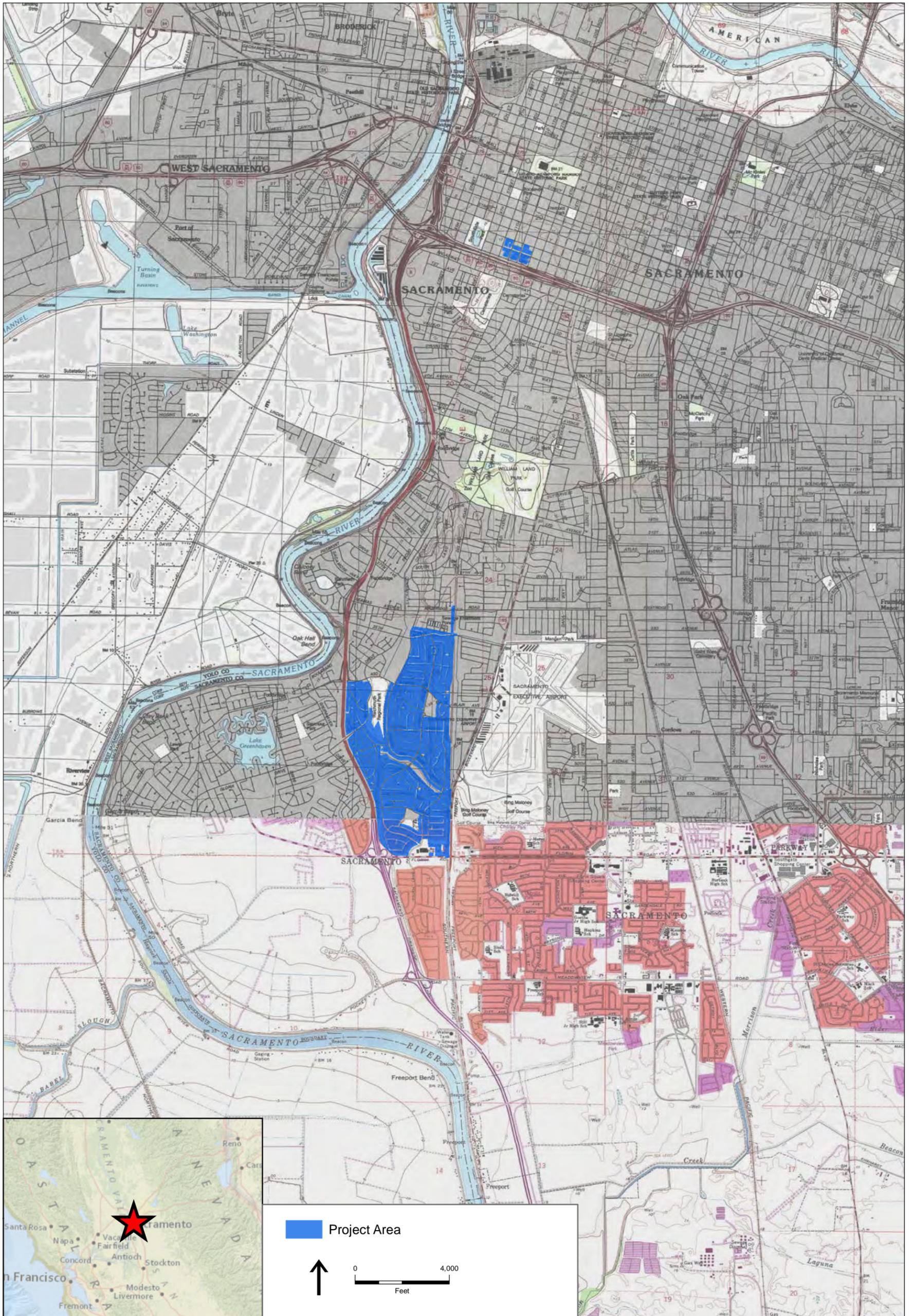
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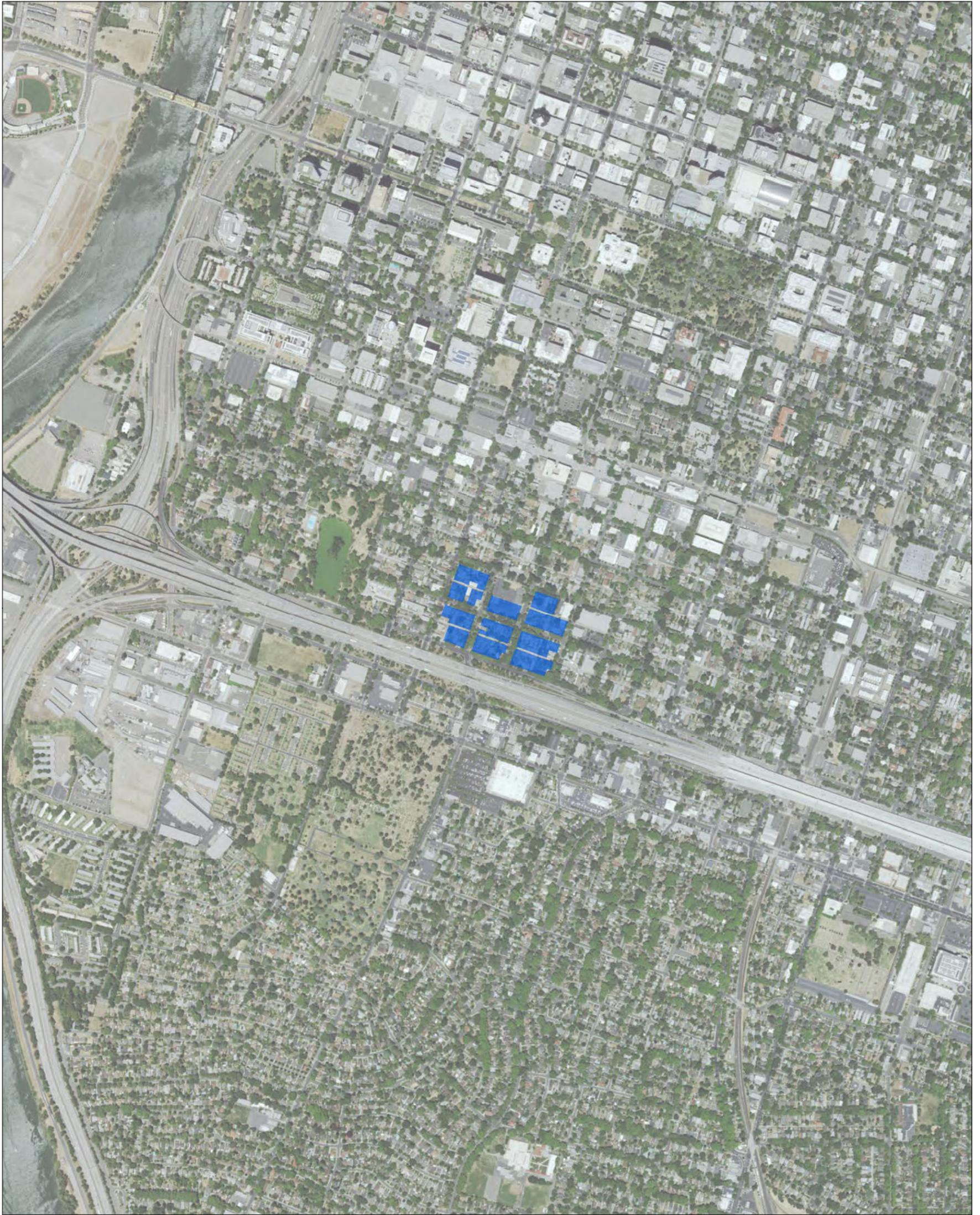
APPENDIX A

Maps

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South Land Park and Richmond Grove Water Meter Retrofits Project. 160028
Figure 1
 Project Vicinity and Location



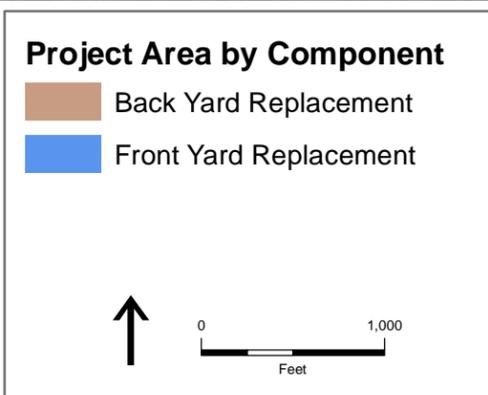
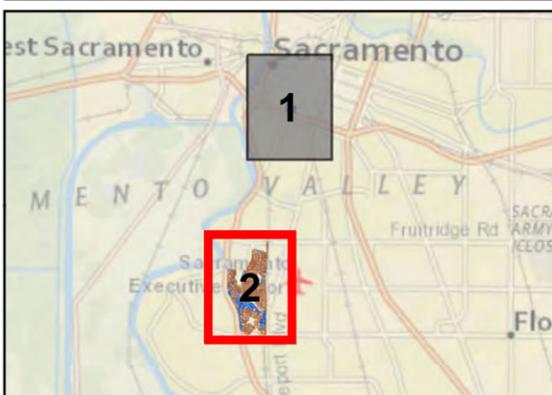
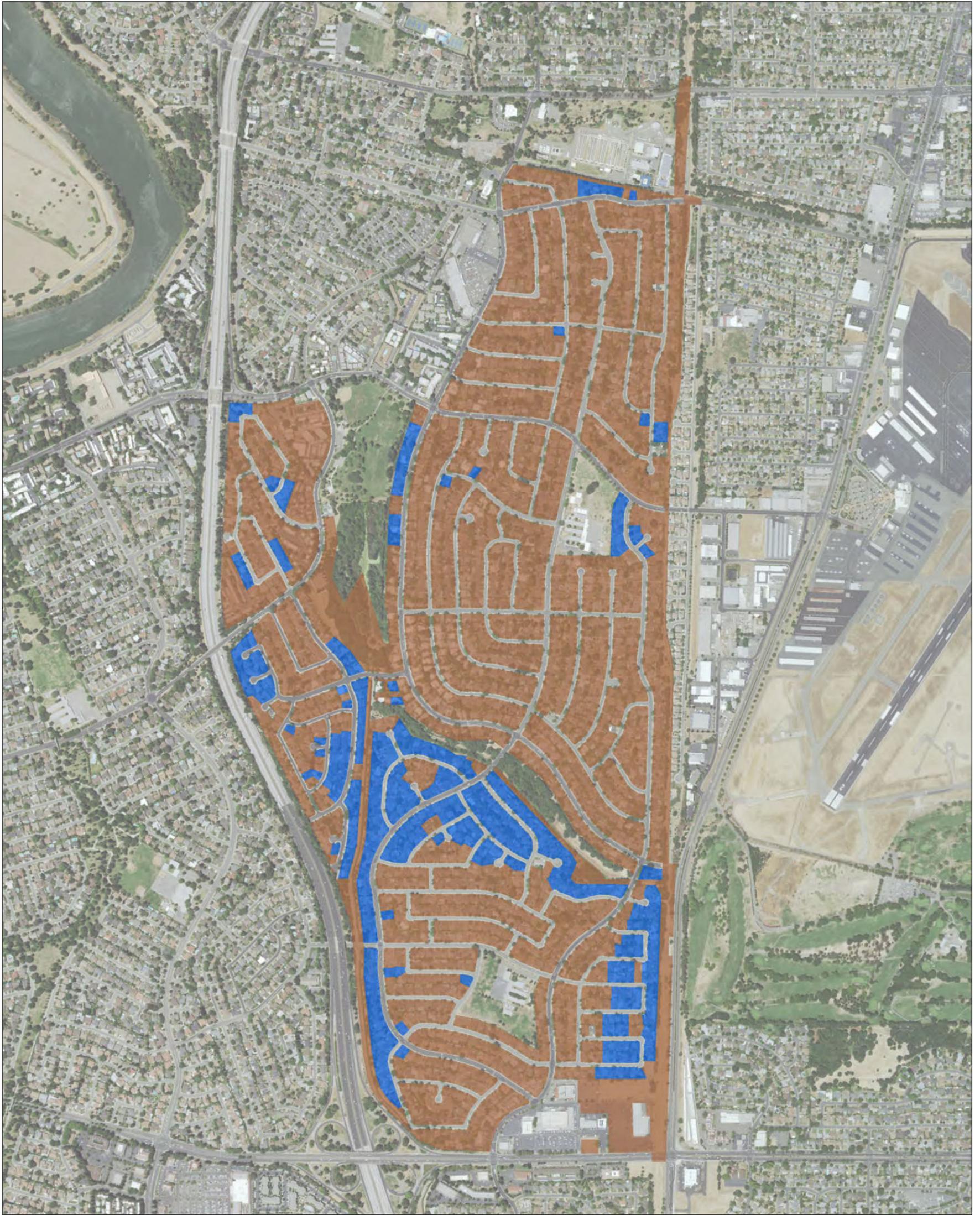
Project Area by Component

- Back Yard Replacement
- Front Yard Replacement

↑

0 ————— 1,000
Feet

Service Layer Credits: Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
 Content may not reflect National Geographic's current map policy. Sources: National Geographic, Esri, DeLorme, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.



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APPENDIX B

Personnel Qualifications

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Robin Hoffman, RPA

Senior Archaeologist

EDUCATION

M.A., Latin American and Iberian Studies, University of California, Santa Barbara

B.A., Anthropology (Archaeology Emphasis), Central Washington University

13 YEARS EXPERIENCE

CERTIFICATIONS/REGISTRATION

Register of Professional Archaeologists

40-Hour Hazardous Waste Operations and Emergency Response

Wilderness First Aid and CPR, Wilderness Leadership Institute

PROFESSIONAL AFFILIATIONS

Society for California Archaeology

Society for American Archaeology

AWARDS

Best M.A. Thesis (2009), University of California Santa Barbara, Latin American and Iberian Studies Program

Robin is a Registered Professional Archaeologist and meets the Secretary of Interior's Standards for Archeology and History, and Society for California Archaeology Professional Qualifications for Principal Investigator. He has over a decade of experience in environmental consulting as project manager, archaeologist, cultural anthropologist, historian, and GIS specialist. His wide range of work has ranged from desktop analyses and feasibility studies to data recovery and Programmatic Agreements, with project deliverables including plans and reports for survey and inventory, testing and evaluation, data recovery, and monitoring; Environmental Impact Statement, Environmental Assessment, Environmental Impact Report, and IS sections; Programmatic Agreements; and feasibility studies, among others. Robin's work has included coordination with: CA State Office of Historic Preservation, National Park Service, Advisory Council on Historic Preservation, U.S. Army, U.S. Air Force, U.S. Coast Guard, U.S. Army Corps of Engineers, CA Department of Transportation (Caltrans), CA Department of General Services, CA Department of Corrections and Rehabilitation, WA State Department of Transportation, U.S. Department of Fish and Wildlife, U.S. Department of State, U.S. Department of Energy, U.S. Bureau of Ocean and Energy Management, U.S. Surface Transportation Board, and a number of other federal, state, and local agencies throughout CA, OR, WA, MT, ID, NV, UT, AR, FL, LA, TX, MS, and AL. Robin also has considerable experience with Native American consultation with tribes throughout CA, WA, MT, WY, ND, and SD. His projects have included compliance for: NEPA, CEQA, NHPA Sections 106 and 110, U.S. DOTA Section 4(f), Clean Water Act Sections 404 and 408, FERC relicensing, and CERCLA, among others.

Relevant Experience

ENGEO, Candlestick Point Redevelopment Project Major Phases 2-4, San Francisco, CA. *Archaeologist and Report Co-author.* Robin co-authored the historical archaeology portion of an Archaeological Testing Plan (ATP) for a residential development project. Deliverable consisted of an ATP, and the Project was conducted to comply with San Francisco Planning Department project-specific mitigation measures for ultimate CEQA compliance.

BRIDGE Housing, 1855 15th Street Project, San Francisco, CA. *Archaeologist and Report Co-author.* Robin co-authored an Archaeological Monitoring Plan (AMP) for a residential development project. Deliverable consisted of an AMP, and the Project was conducted to comply with San Francisco Planning Department project-specific mitigation measures for ultimate CEQA compliance.

City of Elk Grove, Waterman Road Rehabilitation Project, Elk Grove, CA. *Principal Investigator, Field Director, and Report Author.* Robin acted as principal investigator for this Caltrans local assistance road improvements and bike path project, including leading fieldwork and background research efforts and report authoring. Deliverables included an Archaeological Survey Report, and a Historic

Property Survey Report. Project was conducted as part of NEPA/106 and CEQA compliance.

City of Citrus Heights, Sunrise Complete Streets Improvement Project Phase 2A, Citrus Heights, CA. *Principal Investigator, Field Director, and Report Author.*

Robin acted as principal investigator for this Caltrans local assistance road improvements and streetscape improvement project, including leading fieldwork and background research efforts and report authoring. Deliverables included an Archaeological Survey Report, and a Historic Property Survey Report. Project was conducted as part of NEPA/106 compliance.

Sacramento Housing and Redevelopment Agency, Twin Rivers Transit-Oriented Development and Light Rail Station Project, Sacramento, CA.

Principal Investigator (archaeology) and Report Co-author. Robin acted as principal archaeologist for this local housing development and light rail station project. Robin co-authored the cultural resources survey and inventory report, the deliverable for the project. Project was conducted as part of NEPA/106 and CEQA compliance.

City of Sacramento, Accelerated Water Meter Program, Sacramento, CA.

Principal Investigator and Report Author. Robin acted as principal investigator, conducting background research and report authoring, for this water meter and water main installation and replacement project throughout Sacramento. Deliverables included a cultural resources inventory report and associated SHPO consultation letter. Project was conducted as part of NEPA/106 and CEQA compliance.

County of Merced, La Grange Road Bridge Replacement Project, Merced County, CA. *Principal Investigator, Field Director, Report Author.*

Robin authored the Archaeological Evaluation Proposal (AEP), led Phase II evaluative testing fieldwork, conducted Native American outreach, and authored the Archaeological Evaluation Report (AER) for this Caltrans local assistance bridge replacement project in rural Merced County. Project was conducted as part of NEPA/106 and CEQA compliance.

San Bernardino Valley Municipal Water District, Phase I Project, San Bernardino County, CA. *Archaeologist and Report Author.*

Robin authored the cultural resources survey and inventory report (CRSIR) for a municipal water main replacement and improvements project. Deliverable consisted of a CRSIR and associated SHPO consultation letter. Project was conducted as part of NEPA/106 and CEQA compliance.

City of Rancho Cordova, Justinian Drive/Sunrise Boulevard Signalization Project, Rancho Cordova, CA. *Archaeologist, Field Director, and Report Author.*

Robin conducted an archaeological survey for a traffic signal installation project. Deliverable consisted of a Cultural Resources Survey and Inventory technical memo. Project was conducted as supporting documentation for a categorical exemption from CEQA review.

City of Sacramento, Natomas Fountains Project, Sacramento, CA.

Archaeologist, Principal Investigator, Field Director, Report Author, Environmental Impact Report Co-Author, and GIS Specialist. Robin conducted an archaeological survey for commercial development (mall) project. Deliverable was a Cultural Resources Survey and Inventory Report and Environmental Impact Report section. Project requires compliance with CEQA.



Katherine Anderson

Managing Associate I

EDUCATION

Masters of Arts in Public History, California State University, Sacramento

B.A., History, Minor in Women's Studies and Anthropology/Geography, California Polytechnic State University, San Luis Obispo

10 YEARS EXPERIENCE

CERTIFICATIONS/ REGISTRATION

Section 106 training, Advisory Council for Historic Preservation

GIS for Resource Managers, UC Davis

PROFESSIONAL AFFILIATIONS

California Council for the Promotion of History

California Preservation Foundation

Kathy is a cultural resources analyst involved with a variety of ESA projects involving historic period structures, buildings, and districts. Her role entails establishing a base historical context for the respective projects, conducting archival review at regional and state repositories, documenting and evaluating historic resources for eligibility for the National and California Registers, and drafting technical reports meeting Federal, State, and Local requirements. Kathy has completed evaluations for pre and post-World War II residential and commercial buildings, water conveyance systems, mining and industrial buildings and structures, airports, as well as historic period roads, trails, and railway features. Kathy has experience working in projects located throughout the Central Valley, as well as Sierra Nevada, Southern California, and western Nevada.

Relevant Experience

Sacramento Entertainment and Sports Center & Related Development Environmental Impact Report, Sacramento, Sacramento County, CA. *Cultural Resource Analyst.* ESA assisted the developer and City of Sacramento in meeting its CEQA impact mitigation requirements. Representatives of the National Basketball Association (NBA) Sacramento Kings' retained ESA to prepare the Environmental Impact Report for the Sacramento Entertainment and Sports Center & Related Development. The project includes not just the new 675,000 square feet, 17,500-seat arena, but also approximately 1.5 million square feet of retail, office, hotel and residential uses. Kathy completed the Environmental Impact Report analysis for architectural history, assisted in the completion of the cultural resources section of the Environmental Impact Report, and conducted archival research supporting the Archaeological Treatment Plan completed in compliance with mitigation requirements.

SFPUC WSIP San Francisco Recycled Water Project. *Historic Architecture Analyst.* Kathy assisted in updating analysis of historic architecture for the San Francisco Water Supply Improvement Program Recycled Water Project. The proposed project will include recycled water treatment, storage, and distribution facilities for users located on the west side of San Francisco. Water will be treated to a tertiary level at the Oceanside Recycled Water Treatment Facility, and a network of pipelines will distribute the recycled water to a series of reservoirs and pump stations, including the Golden Gate Park Reservoir & Pump Station, the Booster Pump Station at Golden Gate Park, and the Lincoln Park Reservoir & Pump Station located near Lincoln Park Golf Course.

City of Fresno Recycled Water Distribution System Project, Fresno, CA, *Cultural Resources Analyst.* ESA is assisting the City in the preparation of CEQA Plus environmental clearance document for installation of approximately 23 miles of recycled water pipeline and a new pump station to distribute recycled water to the Southwest Quadrant of the City of Fresno. Kathy's responsibilities included archival review of the project area, field survey, identification of historic

structures within the project area (which included historic residences, irrigation ditches and canals, and railroads), and recommendations for mitigation to minimize impacts to cultural resources.

Sacramento Railyards Specific Plan Update, Sacramento, CA. *Cultural Resource Analyst.* ESA is preparing a subsequent Environmental Impact Report for the Sacramento Railyards Specific Plan, which was last approved in 2007. The project calls for the development of more than 12,000 residential units, 1.8 million sf of retail space, approximately 3 million sf of office space, over 1 million sf of cultural space in adaptively reused historic railroad structures, the addition of a 20,000-seat MLS Stadium, and an approximately one million square foot medical center. Kathy compiled the cultural resource analysis based on updated information from the 2007 document, and analyzed the potential impacts to architectural resources resulting from the proposed project changes.

City of Sacramento Ornamental Streetlights, Sacramento, CA. *Architectural Historian.* The City of Sacramento retained ESA to assess existing ornamental street lights in the Curtis Park and Land Park neighborhoods for their historic significance under state and local register criteria. Kathy's responsibilities included archival research at local repositories, interviews with knowledgeable individuals, and field review. ESA determined the streetlights to not be individually eligible for listing in the National, California, or Sacramento registers, nor were they determined eligible as a district.

Ice Blocks Tiered IS-MND, Sacramento, CA. *Cultural Resource Analyst.* ESA provided an MND for the Ice Blocks Development, an infill mixed use development located on three city half blocks of old warehouse buildings along the R Street corridor from 16th Street east to 18th Street in the City of Sacramento. Kathy provided cultural resource analysis of the site, based on cultural resource analysis completed by subconsultants.

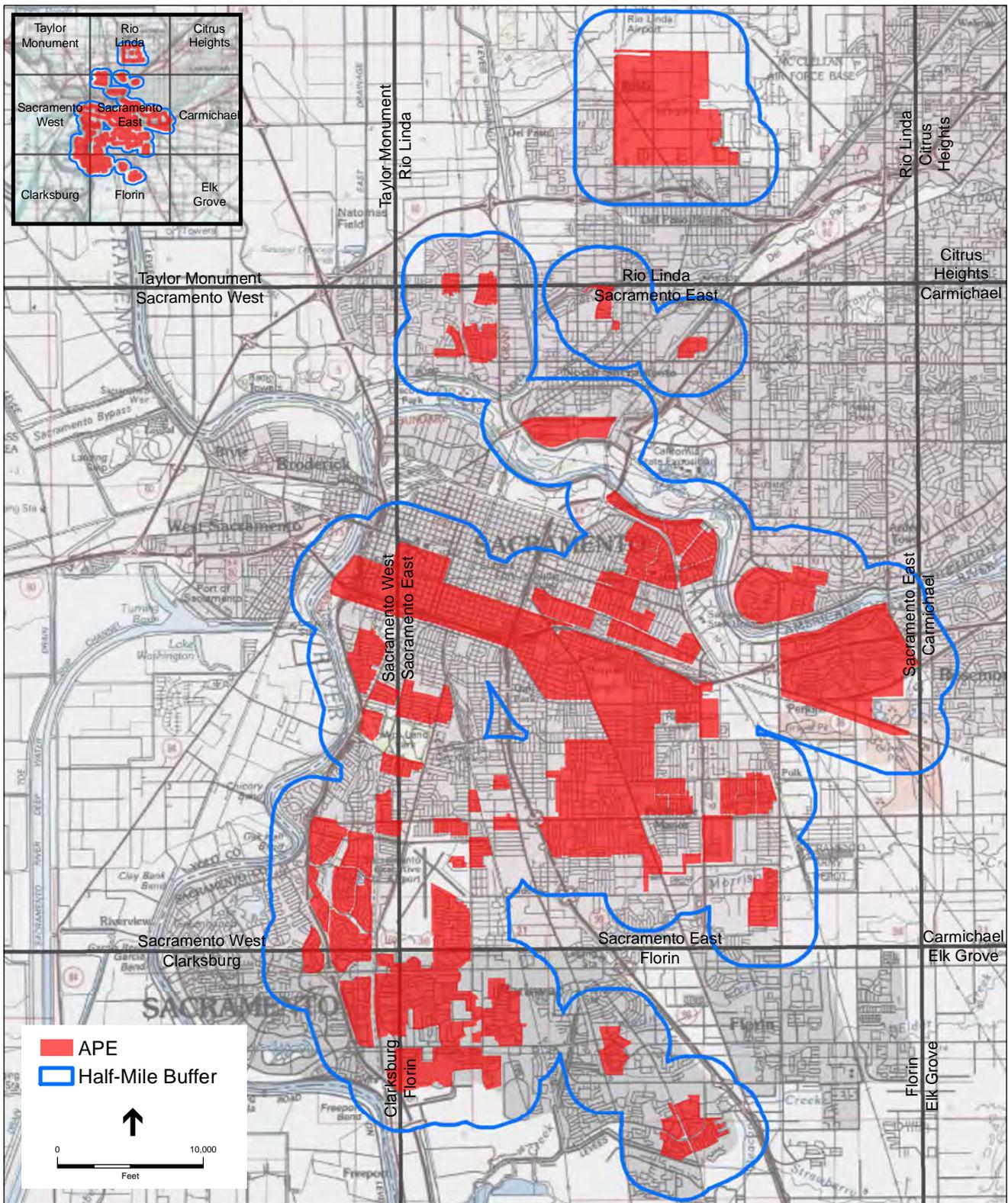
2730 Capitol Ave Evaluation, Sacramento CA. *Architectural Historian.* ESA conducted a historic resource evaluation report of the 1926 building at 2730 Capitol Avenue, evaluating the resource under local, State, and National Register Criteria. This included archival review at local repositories, field documentation, and resource evaluation. The building was recommended ineligible for listing in the local, state, or National Registers due to a lack of significant associations as well as physical integrity.

2200 Stockton Blvd. Historic Evaluation, Sacramento CA. *Architectural Historian.* ESA conducted a historic resource evaluation report of the 1930s bottling factory at 2200 Stockton Boulevard Capitol Avenue, evaluating the resource under local, State, and National Register Criteria. This included archival review at local repositories, field documentation, and resource evaluation. The building was recommended eligible for listing at the local level in the National Registers for its significant associations with the commercial development of Sacramento, as well as its architectural distinction.

APPENDIX C

CHRIS Records Search Results

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SOURCE: USGS, 2016; ESA, 2016

City of Sacramento Accelerated Water Meter Program. 160028

Figure X
CHRIS Records Search



6/16/2016

NCIC File No.: SAC-16-105

Sydney Hinton
ESA
2600 Capitol Avenue
Sacramento, CA 95816

Records Search Invoice for
City of Sacramento Accelerated Water Meter Program / 160028

Staff Processing:	<u> ? </u> hours @ \$150/hour	\$ <u> cost </u>
In-House Research:	<u> 1 </u> hours @ \$100/hour	\$ <u> 100.00 </u>
Staff Assistance/Copies:	<u> ? </u> hours @ \$40/hour	\$ <u> cost </u>
Mapped Spatial Features:	<u> ? </u>	\$ <u> cost </u>
Shapefiles:	<u> 57 </u> shapes @ \$12/shape	\$ <u> 684.00 </u>
Digital Database Record Fee:	<u> ? </u> records @ \$0.25/record	\$ <u> cost </u>
Quad Maps:	<u> ? </u>	\$ <u> cost </u>
Copy/Print/PDF:	<u> 684 </u> pages @ \$0.15/page	\$ <u> 102.60 </u>
PDF Flat Fee:	<u> n/a </u>	\$ <u> cost </u>
	Subtotal	\$ <u> 886.60 </u>
	Priority response: 50% surcharge	\$ <u> cost </u>
	Emergency response: 100% surcharge	\$ <u> cost </u>

Make check payable to:

University Enterprises, Inc.

Forward payment to:

North Central Information Center
6000 J Street, Folsom Hall, Suite 2042
Sacramento, CA 95819-6100

Staff: Nathan Hallam Memo: SAC-16-105 **TOTAL** \$ 886.60



6/20/2016

NCIC File No.: SAC-16-112

Sydney Hinton
ESA
2600 Capitol Avenue
Sacramento, CA 95816

Records Search Invoice for
City of Sacramento Accelerated Water Meter Program / 160028

Staff Processing:	<u> ? </u> hours @ \$150/hour	\$ <u> cost </u>
In-House Research:	<u> 1 </u> hours @ \$100/hour	\$ <u> 100.00 </u>
Staff Assistance/Copies:	<u> ? </u> hours @ \$40/hour	\$ <u> cost </u>
Mapped Spatial Features:	<u> ? </u>	\$ <u> cost </u>
Shapefiles:	<u> ? </u> shapes @ \$12/shape	\$ <u> cost </u>
Digital Database Record Fee:	<u> 451 </u> records @ \$0.25/record	\$ <u> 112.75 </u>
Quad Maps:	<u> ? </u>	\$ <u> cost </u>
Copy/Print/PDF:	<u> 3543 </u> pages @ \$0.15/page	\$ <u> 531.45 </u>
PDF Flat Fee:	<u> v/n </u>	\$ <u> cost </u>
	Subtotal	\$ <u> 744.20 </u>
	Priority response: 50% surcharge	\$ <u> cost </u>
	Emergency response: 100% surcharge	\$ <u> cost </u>

Make check payable to:

University Enterprises, Inc.

Forward payment to:

North Central Information Center
6000 J Street, Folsom Hall, Suite 2042
Sacramento, CA 95819-6100

Staff: Nathan Hallam Memo: SAC-16-112 **TOTAL** \$ 744.20



6/22/2016

NCIC File No.: SAC-16-114

Sydney Hinton
ESA
2600 Capitol Avenue
Sacramento, CA 95816

Records Search Invoice for
City of Sacramento Accelerated Water Meter Program / 160028

Staff Processing:	<u> ? </u> hours @ \$150/hour	\$ <u> cost </u>
In-House Research:	<u> ? </u> hours @ \$100/hour	\$ <u> cost </u>
Staff Assistance/Copies:	<u> 1 </u> hours @ \$40/hour	\$ <u> 40.00 </u>
Mapped Spatial Features:	<u> ? </u>	\$ <u> cost </u>
Shapefiles:	<u> ? </u> shapes @ \$12/shape	\$ <u> cost </u>
Digital Database Record Fee:	<u> ? </u> records @ \$0.25/record	\$ <u> cost </u>
Quad Maps:	<u> ? </u>	\$ <u> cost </u>
Copy/Print/PDF:	<u> 930 </u> pages @ \$0.15/page	\$ <u> 139.50 </u>
PDF Flat Fee:	<u> n/a </u>	\$ <u> cost </u>
	Subtotal	\$ <u> 179.50 </u>
	Priority response: 50% surcharge	\$ <u> cost </u>
	Emergency response: 100% surcharge	\$ <u> cost </u>

Make check payable to:

University Enterprises, Inc.

Forward payment to:

North Central Information Center
6000 J Street, Folsom Hall, Suite 2042
Sacramento, CA 95819-6100

Staff: Nathan Hallam Memo: SAC-16-114 **TOTAL** \$ 179.50

CALIFORNIA
HISTORICAL
RESOURCES
INFORMATION
SYSTEM



ALAMEDA
COLUSA
CONTRA COSTA
DEL NORTE

HUMBOLDT
LAKE
MARIN
MENDOCINO
MONTEREY
NAPA
SAN BENITO

SAN FRANCISCO
SAN MATEO
SANTA CLARA
SANTA CRUZ
SOLANO
SONOMA
YOLO

Northwest Information Center
Sonoma State University
150 Professional Center Drive, Suite E
Rohnert Park, California 94928-3609
Tel: 707.588.8455
nwic@sonoma.edu
http://www.sonoma.edu/nwic

NWIC Billing Worksheet

IC File Number:

Client Name: Phone:
 Affiliation: Email:
 Proj Name/Number:

Date Request Rec'd: Date of Response:

Check In:	<input type="text" value="1:35:00 AM"/>	Check Out:	<input type="text" value="2:00:00 AM"/>	Check In:	<input type="text"/>	Check Out:	<input type="text"/>
In-person Time:		Hour(s):	<input type="text" value="0.42"/>			\$	<input type="text" value="100.00"/>
Staff Time:		Hour(s):	<input type="text"/>			\$	<input type="text" value="0.00"/>
Shape Files:		Number:	<input type="text"/>			\$	<input type="text" value="0.00"/>
Custom Map Features:		Number:	<input type="text"/>			\$	<input type="text" value="0.00"/>
Digital Database Record:		Number of Row(s):	<input type="text" value="34"/>			\$	<input type="text" value="8.50"/>
Quads:		Number:	<input type="text"/>			\$	<input type="text" value="0.00"/>
Address-mapped Flat Fee:						\$	<input type="text" value="0.00"/>
Hard Copy (Xerox/Computer) Pages:		Page(s):	<input type="text" value="88"/>			\$	<input type="text" value="13.20"/>
Labor Charge:		Hour(s):	<input type="text" value="1"/>			\$	<input type="text" value="40.00"/>
PDF Pages:		Page(s):	<input type="text"/>			\$	<input type="text" value="0.00"/>
PDF Flat Fee:						\$	<input type="text" value="0.00"/>
Other:	<input type="text" value="CHRIS Data Request"/>					\$	<input type="text" value="0.00"/>
						Subtotal	\$ <input type="text" value="161.70"/>
Multi-Day Start:	<input type="text"/>	Multi-Day End:	<input type="text"/>			\$	<input type="text" value="0.00"/>

Rapid response surcharge of 50% of total cost: \$

Emergency Response surcharge of 100% of total cost: \$

Total: \$

Information Center Staff:
 Sonoma State University Customer ID:
 Sonoma State University Invoice No.:
 CHRIS Access and Use Agreement No.:

This is not an invoice. Sonoma State University will send separate invoice.

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APPENDIX D

NAHC Correspondence

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From: Robin Hoffman
To: [NAHC \(nahc@nahc.ca.gov\)](mailto:NAHC(nahc@nahc.ca.gov))
Cc: Souza_Sharaya@NAHC
Subject: SLF Search and Native American Contacts: South Land Park and Richmond Grove Meter Water Retrofits Project
Date: Tuesday, September 20, 2016 9:02:00 AM
Attachments: [SouthLandPark_NAHC_09202016.pdf](#)

I would like to request a Sacred Lands File search and list of Native American contacts for the South Land Park and Richmond Grove Meter Water Retrofits Project in Sacramento, Sacramento County. The formal request form and project location map are attached. Please let me know if you have any questions.

Thank you,
-Robin

Robin Hoffman, M.A., RPA
Senior Archaeologist
ESA | Environmental Science Associates
1425 N McDowell Blvd., Suite 200
Petaluma, CA 94954
707.796.7006 direct | 707.494.3349 cell
rhoffman@esassoc.com | www.esassoc.com

Sacred Lands File & Native American Contacts 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

Information Below is Required for a Sacred Lands File Search

Project: South Land Park and Richmond Grove Water Meter Retrofits Project

County: Sacramento

USGS Quadrangle Name: Clarksburg, CA; Sacramento East, CA; and, Sacramento West, CA

Township: (New Helvetia Land Grant) **Range:** n/a **Section(s):** n/a

Company/Firm/Agency: Environmental Science Associates (ESA)

Street Address: 1425 N. McDowell Blvd., Suite 200

City: Petaluma, CA **Zip:** 94954

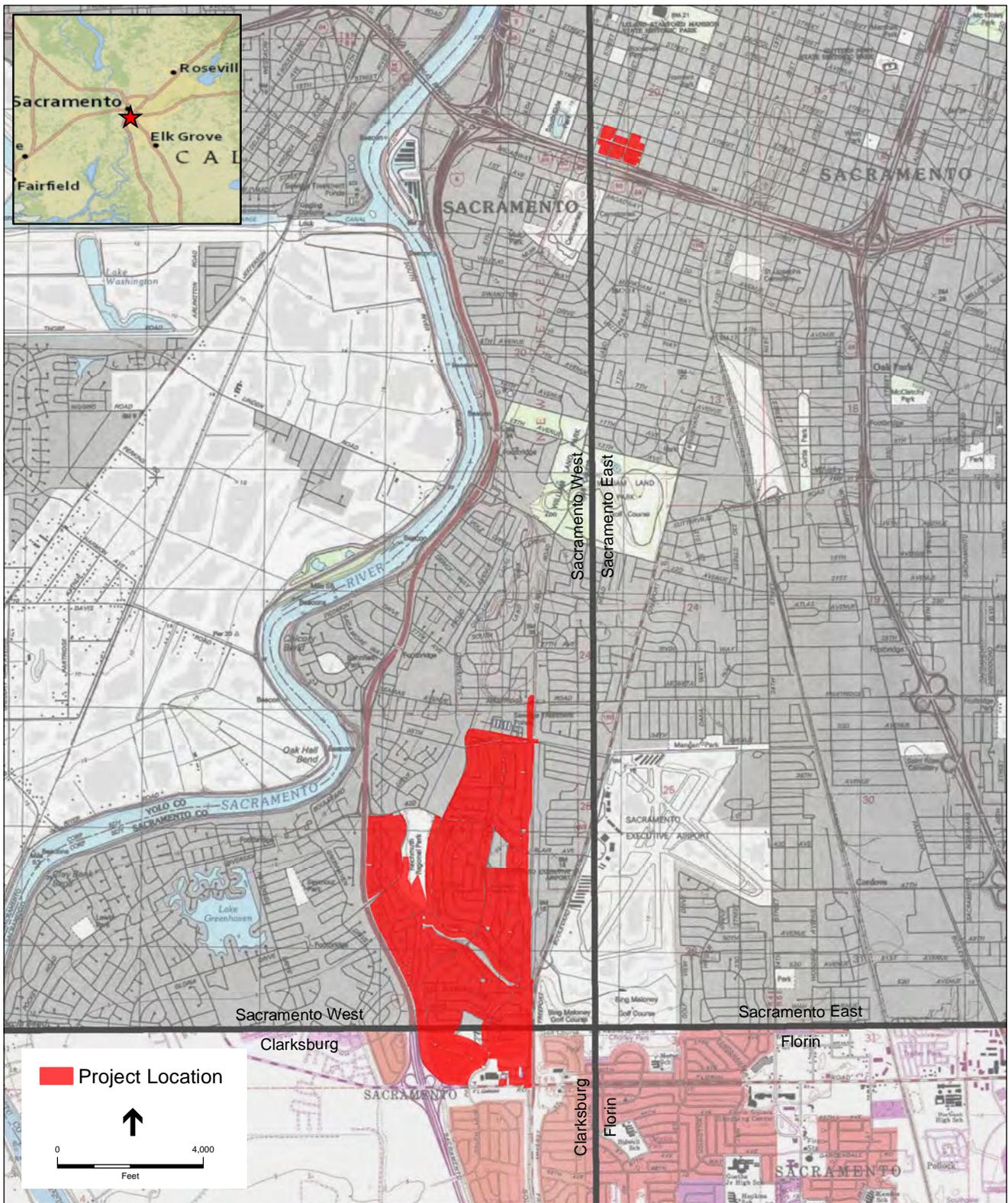
Phone: 707-796-7006

Fax: 707-795-0902

Email: rhoffman@esassoc.com

Project Description:

The City of Sacramento (City) proposes the project, which would install a series of water meters in residential backyards/alleys, and in residential front yards (located in or behind sidewalks). Installation would occur mainly in the South Land Park area, but would also occur in a small portion of downtown; these areas are mostly residential neighborhoods, with some small areas in commercial or multi-family use. Additionally, the project would include replacement or modification of existing infrastructure that would require minimal, if any, ground disturbance in previously undisturbed sediment. The project is subject to review under the California Environmental Quality Act (CEQA), with the City acting as lead reviewing agency for CEQA purposes.



SOURCE: USGS, 2016; National Geographic Society, 2016; ESA, 2016

South Land Park and Richmond Grove Water Meter Retrofits Project.

Figure 1
Project Location

Appendix C

Response to Comments

APPENDIX C

Response to Comments

Introduction

This appendix contains comment letters received during the public review period for the South Land Park and Richmond Grove Water Meter Retrofits Project (proposed project) Initial Study/Mitigated Negative Declaration (IS/MND) and responses to those comments.

The City of Sacramento Community Development Department, as lead agency, circulated the Draft IS and Notice of Intent (NOI) to Adopt a MND for agency/public review July 10, 2017 through August 9, 2017 pursuant to CEQA Guidelines Section 15105. The Draft IS and NOI to Adopt a MND and all supportive documentation were made available at the City of Sacramento, Community Development Department, 300 Richards Boulevard, 3rd Floor, Sacramento, CA 95811 from 9:00 a.m. to 4:00 p.m. (or 8:00 a.m. to 5:00 p.m. with prior arrangement). The document was also available on the CDD website at:

<http://portal.cityofsacramento.org/Community-Development/Planning/Environmental/Impact-Reports>

According to California Environmental Quality Act (CEQA) Guidelines Sections 15073 and 15074, a lead agency must consider the comments receive during the review period together with the MND. Unlike with an Environmental Impact Report, comments received on a MND are not required to be attached to the MND, nor must the lead agency make specific written responses to public agencies. Nonetheless, the City of Sacramento has chosen to provide response to the comments received during the public review period for the South Land Park and Richmond Grove Water Meter Retrofits Project IS/MND.

List of Commenters

Three comment letters were received during the public review period. In addition, one of the comment letters received was also sent to the Governor's Office of Planning and Research State Clearinghouse and Planning Unit which was forwarded to the City.

Comment Letters received and the authors of those letters include the following:

Letter 1: Governor's Office of Planning and Research State Clearinghouse and Planning Unit

Letter 2: Central Valley Regional Water Quality Control Board, Stephanie Tadlock, Environmental Scientist (also submitted as part of Letter 1)

Letter 3: Sacramento Metropolitan Air Quality Management District, Teri Duarte, MPH

Letter 4: Sacramento Municipal Utilities District (SMUD), Angela C. McIntire, Regional & Local Government Affairs

Responses to Comments

The comment letters are numbered and the comments are bracketed with assigned numbers that correspond with the letter number. For example, the first comment in Letter 1 is numbered 1-1. Where revisions to the IS/MND text were made, new text is shown in double underline and deleted text is shown in ~~strike-out~~.



Edmund G. Brown Jr.
Governor

STATE OF CALIFORNIA
Governor's Office of Planning and Research
State Clearinghouse and Planning Unit

Letter 1



Ken Alex
Director

August 9, 2017

Scott Johnson
City of Sacramento
300 Richards Blvd, 3rd floor
Sacramento, CA 95811

Subject: South Land Park and Richmond Grove Water Meter Retrofits Project
SCH#: 2017072013

Dear Scott Johnson:

The State Clearinghouse submitted the above named Mitigated Negative Declaration to selected state agencies for review. On the enclosed Document Details Report please note that the Clearinghouse has listed the state agencies that reviewed your document. The review period closed on August 8, 2017, and the comments from the responding agency (ies) is (are) enclosed. If this comment package is not in order, please notify the State Clearinghouse immediately. Please refer to the project's ten-digit State Clearinghouse number in future correspondence so that we may respond promptly.

Please note that Section 21104(c) of the California Public Resources Code states that:

"A responsible or other public agency shall only make substantive comments regarding those activities involved in a project which are within an area of expertise of the agency or which are required to be carried out or approved by the agency. Those comments shall be supported by specific documentation."

These comments are forwarded for use in preparing your final environmental document. Should you need more information or clarification of the enclosed comments, we recommend that you contact the commenting agency directly.

This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act. Please contact the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process.

Sincerely,

Scott Morgan
Director, State Clearinghouse

Enclosures

cc: Resources Agency

COMMUNITY DEVELOPMENT
DEPARTMENT

AUG 10 2017

RECEIVED

COMMUNITY DEVELOPMENT
DEPARTMENT

AUG 10 2017

RECEIVED

1-1

Document Details Report
State Clearinghouse Data Base

Letter 1

SCH# 2017072013
Project Title South Land Park and Richmond Grove Water Meter Retrofits Project
Lead Agency Sacramento, City of

Type MND Mitigated Negative Declaration

Description The proposed project would include installation of approx 3,200 water meters in residential backyards/alleys and front yards (in or behind sidewalks) in the South Lane Park and Richmond Grove areas of Sacramento. The meters would be installed on existing residential and commercial water service connections. Each water meter would include a combination of meter setters, fittings and piping to connect the meter to the water main. The installation of the water meters would be done in a manner as to minimize ground disturbance. The water meters would be placed in a rectangular meter box (28 in by 18 in) with a concrete or Fibrelyte lid flush with the existing landscape grade. Typical excavation for meter box would measure approx 3 ft x 3 ft, to a depth of approx 3 ft. After the meter box is installed, landscape areas would be returned to pre-installation conditions (based on pre-construction photographs taken at the site) or disturbed sidewalks would be restored. Repairs to street surfaces would also be completed, as necessary. Automated Meter Infrastructure systems would be installed, consisting of a network of transponders that would send water meter readings to the city's utility billing and operations center wirelessly. If water service lines need to be replaced, these are typically installed trenchlessly by direction drilling.

Lead Agency Contact

Name Scott Johnson
Agency City of Sacramento
Phone (916) 808-5842
email
Address 300 Richards Blvd, 3rd floor
City Sacramento
Fax
State CA **Zip** 95811

Project Location

County Sacramento
City Sacramento
Region
Lat / Long 38° 30' 39.5" N / 121° 30' 46.3" W
Cross Streets 10th st, W St, 15th St; Fruitridge Ave, Freeport Blvd, Florin Rd
Parcel No. various
Township **Range** **Section** **Base** MDBM

Proximity to:

Highways I-5, I-80, SR 160, SR 99
Airports Sacramento Executive
Railways UPRR
Waterways Sacramento River
Schools
Land Use various land use/zoning/GPD

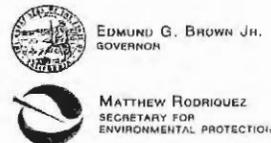
Project Issues Aesthetic/Visual; Agricultural Land; Air Quality; Archaeologic-Historic; Biological Resources; Cumulative Effects; Drainage/Absorption; Flood Plain/Flooding; Forest Land/Fire Hazard; Geologic/Seismic; Growth Inducing; Landuse; Minerals; Noise; Other Issues; Population/Housing Balance; Public Services; Recreation/Parks; Schools/Universities; Septic System; Sewer Capacity; Soil Erosion/Compaction/Grading; Solid Waste; Toxic/Hazardous; Traffic/Circulation; Tribal Cultural Resources; Vegetation; Water Quality; Water Supply; Wetland/Riparian

Document Details Report
State Clearinghouse Data Base

Letter 1

Reviewing Agencies Resources Agency; Department of Fish and Wildlife, Region 2; Department of Parks and Recreation; Department of Water Resources; Caltrans, Division of Aeronautics; California Highway Patrol; Caltrans, District 3 S; State Water Resources Control Board, Division of Drinking Water; State Water Resources Control Board, Division of Financial Assistance; Regional Water Quality Control Bd., Region 5 (Sacramento); Native American Heritage Commission; Public Utilities Commission

Date Received 07/07/2017 **Start of Review** 07/10/2017 **End of Review** 08/08/2017



EDMUND G. BROWN JR.
GOVERNOR

MATTHEW RODRIGUEZ
SECRETARY FOR ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

2 August 2017

Governor's Office of Planning & Research

AUG 07 2017

STATE CLEARINGHOUSE

CERTIFIED MAIL

91 7199 9991 7035 8421 1984

clear
8/7/17
E

Scott Johnson
City of Sacramento
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, SOUTH LAND PARK AND RICHMOND GROVE WATER METER RETROFITS PROJECT, SCH# 2017072013, SACRAMENTO COUNTY

Pursuant to the State Clearinghouse's 10 July 2017 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the *Request for Review for the Mitigated Negative Declaration* for the South Land Park and Richmond Grove Water Meter Retrofits Project, located in Sacramento County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,

the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:

http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at:

http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan

(SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Caltrans Phase I MS4 Permit, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/caltrans.shtml.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance (i.e., discharge of dredge or fill material) of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements (WDRs)*Discharges to Waters of the State*

If USACOE determines that only non-jurisdictional waters of the State (i.e., "non-federal" waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

Land Disposal of Dredge Material

If the project will involve dredging, Water Quality Certification for the dredging activity and Waste Discharge Requirements for the land disposal may be needed.

Local Agency Oversight

Pursuant to the State Water Board's Onsite Wastewater Treatment Systems Policy (OWTS Policy), the regulation of septic tank and leach field systems may be regulated under the local agency's management program in lieu of WDRs. A county environmental health department may permit septic tank and leach field systems designed for less than 10,000 gpd. For more information on septic system regulations, visit the Central Valley Water Board's website at:

http://www.waterboards.ca.gov/centralvalley/water_issues/owts/sb_owts_policy.pdf

For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other

action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of the waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at:

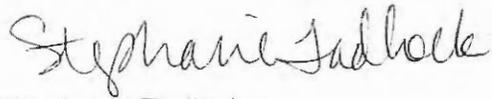
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

South Land Park and Richmond Grove
Water Meter Retrofits Project
Sacramento County

- 7 -

2 August 2017

If you have questions regarding these comments, please contact me at (916) 464-4644 or Stephanie.Tadlock@waterboards.ca.gov.



Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

Letter 1 **Governor's Office of Planning and Research State Clearinghouse**
Response **and Planning Unit**
August 9, 2017

- 1-1 The comment transmits a comment letter provided by the Central Valley Regional Water Quality Control Board (Central Valley Water Board) and acknowledges that the City has complied with the State Clearinghouse review requirements in accordance with CEQA. See Letter 2 for responses to the Central Valley Water Board letter.

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AUG 07 2017

RECEIVED

Letter 2



EDMUND G. BROWN JR. GOVERNOR



MATTHEW RODRIGUEZ SECRETARY FOR ENVIRONMENTAL PROTECTION

Central Valley Regional Water Quality Control Board

2 August 2017

Scott Johnson
City of Sacramento
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811

CERTIFIED MAIL
91 7199 9991 7035 8421 1984

COMMENTS TO REQUEST FOR REVIEW FOR THE MITIGATED NEGATIVE DECLARATION, SOUTH LAND PARK AND RICHMOND GROVE WATER METER RETROFITS PROJECT, SCH# 2017072013, SACRAMENTO COUNTY

Pursuant to the State Clearinghouse's 10 July 2017 request, the Central Valley Regional Water Quality Control Board (Central Valley Water Board) has reviewed the Request for Review for the Mitigated Negative Declaration for the South Land Park and Richmond Grove Water Meter Retrofits Project, located in Sacramento County.

Our agency is delegated with the responsibility of protecting the quality of surface and groundwaters of the state; therefore our comments will address concerns surrounding those issues.

I. Regulatory Setting

Basin Plan

The Central Valley Water Board is required to formulate and adopt Basin Plans for all areas within the Central Valley region under Section 13240 of the Porter-Cologne Water Quality Control Act. Each Basin Plan must contain water quality objectives to ensure the reasonable protection of beneficial uses, as well as a program of implementation for achieving water quality objectives with the Basin Plans. Federal regulations require each state to adopt water quality standards to protect the public health or welfare, enhance the quality of water and serve the purposes of the Clean Water Act. In California, the beneficial uses, water quality objectives, and the Antidegradation Policy are the State's water quality standards. Water quality standards are also contained in the National Toxics Rule, 40 CFR Section 131.36, and the California Toxics Rule, 40 CFR Section 131.38.

The Basin Plan is subject to modification as necessary, considering applicable laws, policies, technologies, water quality conditions and priorities. The original Basin Plans were adopted in 1975, and have been updated and revised periodically as required, using Basin Plan amendments. Once the Central Valley Water Board has adopted a Basin Plan amendment in noticed public hearings, it must be approved by the State Water Resources Control Board (State Water Board), Office of Administrative Law (OAL) and in some cases,

2-1

the United States Environmental Protection Agency (USEPA). Basin Plan amendments only become effective after they have been approved by the OAL and in some cases, the USEPA. Every three (3) years, a review of the Basin Plan is completed that assesses the appropriateness of existing standards and evaluates and prioritizes Basin Planning issues.

For more information on the *Water Quality Control Plan for the Sacramento and San Joaquin River Basins*, please visit our website:
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

Antidegradation Considerations

All wastewater discharges must comply with the Antidegradation Policy (State Water Board Resolution 68-16) and the Antidegradation Implementation Policy contained in the Basin Plan. The Antidegradation Policy is available on page IV-15.01 at:
http://www.waterboards.ca.gov/centralvalleywater_issues/basin_plans/sacsjr.pdf

In part it states:

Any discharge of waste to high quality waters must apply best practicable treatment or control not only to prevent a condition of pollution or nuisance from occurring, but also to maintain the highest water quality possible consistent with the maximum benefit to the people of the State.

This information must be presented as an analysis of the impacts and potential impacts of the discharge on water quality, as measured by background concentrations and applicable water quality objectives.

The antidegradation analysis is a mandatory element in the National Pollutant Discharge Elimination System and land discharge Waste Discharge Requirements (WDRs) permitting processes. The environmental review document should evaluate potential impacts to both surface and groundwater quality.

II. Permitting Requirements

Construction Storm Water General Permit

Dischargers whose project disturb one or more acres of soil or where projects disturb less than one acre but are part of a larger common plan of development that in total disturbs one or more acres, are required to obtain coverage under the General Permit for Storm Water Discharges Associated with Construction Activities (Construction General Permit), Construction General Permit Order No. 2009-009-DWQ. Construction activity subject to this permit includes clearing, grading, grubbing, disturbances to the ground, such as stockpiling, or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan

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(SWPPP).

For more information on the Construction General Permit, visit the State Water Resources Control Board website at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml.

Phase I and II Municipal Separate Storm Sewer System (MS4) Permits¹

The Phase I and II MS4 permits require the Permittees reduce pollutants and runoff flows from new development and redevelopment using Best Management Practices (BMPs) to the maximum extent practicable (MEP). MS4 Permittees have their own development standards, also known as Low Impact Development (LID)/post-construction standards that include a hydromodification component. The MS4 permits also require specific design concepts for LID/post-construction BMPs in the early stages of a project during the entitlement and CEQA process and the development plan review process.

For more information on which Phase I MS4 Permit this project applies to, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/municipal_permits/.

For more information on the Caltrans Phase I MS4 Permit, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/caltrans.shtml.

For more information on the Phase II MS4 permit and who it applies to, visit the State Water Resources Control Board at:
http://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.shtml

Industrial Storm Water General Permit

Storm water discharges associated with industrial sites must comply with the regulations contained in the Industrial Storm Water General Permit Order No. 2014-0057-DWQ.

For more information on the Industrial Storm Water General Permit, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/storm_water/industrial_general_permits/index.shtml.

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¹ Municipal Permits = The Phase I Municipal Separate Storm Water System (MS4) Permit covers medium sized Municipalities (serving between 100,000 and 250,000 people) and large sized municipalities (serving over 250,000 people). The Phase II MS4 provides coverage for small municipalities, including non-traditional Small MS4s, which include military bases, public campuses, prisons and hospitals.

Clean Water Act Section 404 Permit

If the project will involve the discharge of dredged or fill material in navigable waters or wetlands, a permit pursuant to Section 404 of the Clean Water Act may be needed from the United States Army Corps of Engineers (USACOE). If a Section 404 permit is required by the USACOE, the Central Valley Water Board will review the permit application to ensure that discharge will not violate water quality standards. If the project requires surface water drainage realignment, the applicant is advised to contact the Department of Fish and Game for information on Streambed Alteration Permit requirements.

If you have any questions regarding the Clean Water Act Section 404 permits, please contact the Regulatory Division of the Sacramento District of USACOE at (916) 557-5250.

Clean Water Act Section 401 Permit – Water Quality Certification

If an USACOE permit (e.g., Non-Reporting Nationwide Permit, Nationwide Permit, Letter of Permission, Individual Permit, Regional General Permit, Programmatic General Permit), or any other federal permit (e.g., Section 10 of the Rivers and Harbors Act or Section 9 from the United States Coast Guard), is required for this project due to the disturbance (i.e., discharge of dredge or fill material) of waters of the United States (such as streams and wetlands), then a Water Quality Certification must be obtained from the Central Valley Water Board prior to initiation of project activities. There are no waivers for 401 Water Quality Certifications.

Waste Discharge Requirements (WDRs)

Discharges to Waters of the State

If USACOE determines that only non-jurisdictional waters of the State (i.e., “non-federal” waters of the State) are present in the proposed project area, the proposed project may require a Waste Discharge Requirement (WDR) permit to be issued by Central Valley Water Board. Under the California Porter-Cologne Water Quality Control Act, discharges to all waters of the State, including all wetlands and other waters of the State including, but not limited to, isolated wetlands, are subject to State regulation.

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If the project will involve dredging, Water Quality Certification for the dredging activity and Waste Discharge Requirements for the land disposal may be needed.

Local Agency Oversight

Pursuant to the State Water Board’s Onsite Wastewater Treatment Systems Policy (OWTS Policy), the regulation of septic tank and leach field systems may be regulated under the local agency’s management program in lieu of WDRs. A county environmental health department may permit septic tank and leach field systems designed for less than 10,000 gpd. For more information on septic system regulations, visit the Central Valley Water Board’s website at:
http://www.waterboards.ca.gov/centralvalley/water_issues/owts/sb_owts_policy.pdf

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For more information on the Water Quality Certification and WDR processes, visit the Central Valley Water Board website at:
http://www.waterboards.ca.gov/centralvalley/help/business_help/permit2.shtml.

Dewatering Permit

If the proposed project includes construction or groundwater dewatering to be discharged to land, the proponent may apply for coverage under State Water Board General Water Quality Order (Low Risk General Order) 2003-0003 or the Central Valley Water Board's Waiver of Report of Waste Discharge and Waste Discharge Requirements (Low Risk Waiver) R5-2013-0145. Small temporary construction dewatering projects are projects that discharge groundwater to land from excavation activities or dewatering of underground utility vaults. Dischargers seeking coverage under the General Order or Waiver must file a Notice of Intent with the Central Valley Water Board prior to beginning discharge.

For more information regarding the Low Risk General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2003/wqo/wqo2003-0003.pdf

For more information regarding the Low Risk Waiver and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/waivers/r5-2013-0145_res.pdf

Regulatory Compliance for Commercially Irrigated Agriculture

If the property will be used for commercial irrigated agricultural, the discharger will be required to obtain regulatory coverage under the Irrigated Lands Regulatory Program. There are two options to comply:

1. **Obtain Coverage Under a Coalition Group.** Join the local Coalition Group that supports land owners with the implementation of the Irrigated Lands Regulatory Program. The Coalition Group conducts water quality monitoring and reporting to the Central Valley Water Board on behalf of its growers. The Coalition Groups charge an annual membership fee, which varies by Coalition Group. To find the Coalition Group in your area, visit the Central Valley Water Board's website at: http://www.waterboards.ca.gov/centralvalley/water_issues/irrigated_lands/app_approval/index.shtml; or contact water board staff at (916) 464-4611 or via email at IrrLands@waterboards.ca.gov.
2. **Obtain Coverage Under the General Waste Discharge Requirements for Individual Growers, General Order R5-2013-0100.** Dischargers not participating in a third-party group (Coalition) are regulated individually. Depending on the specific site conditions, growers may be required to monitor runoff from their property, install monitoring wells, and submit a notice of intent, farm plan, and other

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action plans regarding their actions to comply with their General Order. Yearly costs would include State administrative fees (for example, annual fees for farm sizes from 10-100 acres are currently \$1,084 + \$6.70/Acre); the cost to prepare annual monitoring reports; and water quality monitoring costs. To enroll as an Individual Discharger under the Irrigated Lands Regulatory Program, call the Central Valley Water Board phone line at (916) 464-4611 or e-mail board staff at IrrLands@waterboards.ca.gov.

Low or Limited Threat General NPDES Permit

If the proposed project includes construction dewatering and it is necessary to discharge the groundwater to waters of the United States, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. Dewatering discharges are typically considered a low or limited threat to water quality and may be covered under the General Order for *Dewatering and Other Low Threat Discharges to Surface Waters* (Low Threat General Order) or the General Order for *Limited Threat Discharges of Treated/Untreated Groundwater from Cleanup Sites, Wastewater from Superchlorination Projects, and Other Limited Threat Wastewaters to Surface Water* (Limited Threat General Order). A complete application must be submitted to the Central Valley Water Board to obtain coverage under these General NPDES permits.

For more information regarding the Low Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0074.pdf

For more information regarding the Limited Threat General Order and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/general_orders/r5-2013-0073.pdf

NPDES Permit

If the proposed project discharges waste that could affect the quality of the waters of the State, other than into a community sewer system, the proposed project will require coverage under a National Pollutant Discharge Elimination System (NPDES) permit. A complete Report of Waste Discharge must be submitted with the Central Valley Water Board to obtain a NPDES Permit.

For more information regarding the NPDES Permit and the application process, visit the Central Valley Water Board website at:

http://www.waterboards.ca.gov/centralvalley/help/business_help/permit3.shtml

2-1
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South Land Park and Richmond Grove
Water Meter Retrofits Project
Sacramento County

- 7 -

If you have questions regarding these comments, please contact me at (916) 464-4644 or
Stephanie.Tadlock@waterboards.ca.gov.



Stephanie Tadlock
Environmental Scientist

cc: State Clearinghouse unit, Governor's Office of Planning and Research, Sacramento

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Letter 2 **Central Valley Regional Water Quality Control Board, Stephanie**
Response **Tadlock, Environmental Scientist**
August 2, 2017

- 2-1 The Central Valley Water Board provided information on their responsibilities and permit requirements for the protection of surface and groundwater quality. As described in Section 2.9 Hydrology and Water Quality (page 2-30) and as listed in Table 1-2 (page 1-5), the City would obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity Construction General Permit Order 2009-0009-DWQ for installation of the proposed meters. In addition, as further described on page 2-30, the City's Stormwater Quality Improvement Program (SQIP) contains a Construction Element that guides in implementation of the NPDES Permit for Storm Water Discharges Associated with Construction Activity. Compliance with City requirements to protect stormwater inlets would protect receiving waters and require the implementation of BMPs such as the use of straw bales, sandbags, gravel traps, and filters; erosion control measures such as vegetation and physical stabilization; and sediment control measure such as fences, dams, barriers, berms, traps, and basins. City staff also inspects and enforces the erosion, sediment and pollution control requirements in accordance with City codes (Grading, Erosion and Sediment Control ordinance). Therefore, this impact would be less than significant.

None of the other permit requirements identified are applicable to the construction or operation of the proposed project.

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August 8, 2017

SENT VIA E-MAIL ONLY

Scott Johnson
 City of Sacramento
 Community Development Department
 300 Richards Blvd., 3rd Floor
 Sacramento, CA 95811

RE: South Land Park and Richmond Grove Water Meter Retrofit Project Mitigated Negative Declaration (SAC201701818)

Dear Mr. Johnson:

Thank you for providing the Notice of Availability for the South Land Park and Richmond Grove Water Meter Retrofit Project Mitigated Negative Declaration (MND) to the Sacramento Metropolitan Air Quality Management District (SMAQMD) for review. The proposed project consists of the installation of approximately 3,200 water meters in residential back yards/ alleys and front yards existing water connections in the South Land Park and Richmond Grove neighborhoods. SMAQMD staff comments on the project follow.

Section 2.3, Air Quality

Table 2-1 shows the status of attainment with federal and state air quality standards for various pollutants. On the first line of the table, "Ozone – one hour," under the column heading "Federal Standards," the entry should be corrected from "No Federal Standard" to "Standard Revoked." On June 15, 2005 the 1-Hour Ozone NAAQS was revoked by the U.S. Environmental Protection Agency for all areas except the 8-Hour Ozone nonattainment Early Action Compact (EAC) areas.

On the seventh line of the table, Sulfur Dioxide, under "Federal Standards," the entry should be changed from "Unclassified" to "Attainment Pending."

3-1

Please contact me at 916-874-4816 or tduarte@airquality.org if you have any questions regarding these recommendations.

Sincerely,

Teri Duarte, MPH
 Planner/Analyst

Cc: Paul Philley

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**Letter 3 Sacramento Metropolitan Air Quality Management District,
Response Teri Duarte, MPH
 August 8, 2017**

3-1 The commenter requested updates to the status of attainment with federal and state air quality standards presented in Table 2-1 on page 2-5. In response, Table 2-1 is revised as follows:

**TABLE 2-1.
SMAQMD ATTAINMENT STATUS**

Pollutant	Designation/Classification	
	Federal Standards	State Standards
Ozone – one hour	No Federal Standard <u>Revoked</u>	Nonattainment
Ozone – eight hour	Nonattainment	Nonattainment
PM ₁₀	Attainment	Nonattainment
PM _{2.5}	Nonattainment	Attainment
CO	Attainment/Unclassified	Attainment
Nitrogen Dioxide	Attainment/Unclassified	Attainment
Sulfur Dioxide	Unclassified <u>Attainment Pending</u>	Attainment
Lead	Unclassified/Attainment	Attainment
Hydrogen Sulfide	No Federal Standard	Unclassified
Sulfates	No Federal Standard	Attainment
Visibility Reducing Particles	No Federal Standard	Unclassified

SOURCE: California Air Resources Board, 2016.Area Designations Maps / State and National.
<http://www.arb.ca.gov/degis/adm/adm.htm>. Accessed October 8, 2016.

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Sent Via E-Mail

August 9, 2017

Scott Johnson, Associate Planner
City of Sacramento
Community Development Department
300 Richards Boulevard, 3rd Floor
Sacramento, CA 95811
srjohnson@cityofsacramento.org

Subject: Notice of Availability/Intent to Adopt – Mitigated Negative Declaration for South Land Park and Richmond Grove Water Meter Retrofits Project (Clearinghouse No. 2017072013)

Dear Mr. Johnson:

The Sacramento Municipal Utility District (SMUD) appreciates the opportunity to provide comments on the Mitigated Negative Declaration (MND) for the South Land Park and Richmond Grove Water Meter Retrofits Project (Project). SMUD is the primary energy provider for Sacramento County and the proposed Project area. SMUD’s vision is to empower our customers with solutions and options that increase energy efficiency, protect the environment, reduce global warming, and lower the cost to serve our region. As a Responsible Agency, SMUD aims to ensure that the proposed Project limits the potential for significant environmental effects on SMUD facilities, employees, and customers.

It is our desire that the MND for the Project will acknowledge any Project impacts related to the following:

- Overhead and or underground transmission and distribution line easements. Please view the following links on smud.org for more information regarding transmission encroachment:
 - <https://www.smud.org/en/business/customer-service/support-and-services/design-construction-services.htm>
 - <https://www.smud.org/en/do-business-with-smud/real-estate-services/transmission-right-of-way.htm>
- Utility line routing
- Electrical load needs/requirements
- Energy Efficiency

4-1

SMUD understands that the proposed Project consists of the installation of approximately 3,200 water meters in residential backyards/alleys and front yards (in or behind sidewalks). The meters would be installed on existing residential and commercial water service connections. Each water meter would include a combination of meter setters, fittings and piping to connect the meter to the water main.

4-2

SMUD is committed to working with the City to help achieve the goals of the City's water meter installation program safely and efficiently. SMUD notes, however, that some of the areas that are part of the proposed Project may have homes that were built at a time when it was standard practice to attach a home's ground wire to metal pipes, including water pipes.

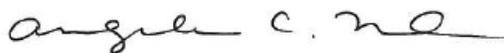
By way of background, utility-scale electrical systems must be properly grounded at all times. Although grounds rarely carry electricity, they're needed to ensure safety in the event of potentially dangerous conditions such as short circuits, lightning strikes or compromises in the return neutral line. The California Electrical Code accepts grounding by bonding to metal water-piping systems, and when many older homes were constructed, that was the only method of grounding used.

To eliminate the risk of exposure to electrical hazards, SMUD encourages the City's contractors to follow procedures that include permanently bonding the subject water pipes, consistent with California Code of Regulations, Title 8, Section 2395.81. Such actions would assure that grounding is maintained before, during, and after installing a new water meter.

SMUD appreciates the City's willingness to work with its contractors on these procedures and believes that these procedures will significantly reduce the risk of electrical exposure. SMUD would like to be involved with discussing the above areas of interest as well as discussing any other potential issues. We aim to be partners in the efficient and sustainable delivery of the proposed Project. Please ensure that the information included in this response is conveyed to the appropriate Project proponents.

Environmental leadership is a core value of SMUD and we look forward to collaborating with you on this Project. Again, we appreciate the opportunity to provide input on this MND. If you have any questions regarding this letter, please contact SMUD's Environmental Management Specialist Rob Ferrera at rob.ferrera@smud.org or (916)732-6676.

Sincerely,



Angela C. McIntire
Regional & Local Government Affairs
Sacramento Municipal Utility District
6301 S Street, Mail Stop A313
Sacramento, CA 95817
angela.mcintire@smud.org

Cc: Rob Ferrera, SMUD
Patrick Durham, SMUD
Steve Johns, SMUD

4-2
(cont.)

Letter 4 **Sacramento Municipal Utilities District (SMUD),**
Response **Angela C. McIntire, Regional & Local Government Affairs**
August 19, 2017

- 4-1 The commenter requested that the IS/MND acknowledge any project impacts related to overhead or underground transmission and distribution easements, utility line routing, electrical load needs/requirements and energy efficiency.

Installation of the proposed project would be done by contractors consistent with the construction requirements described in City Standard Specification Section 27 - Water Distributions Systems. The City's Standard Specifications would include notification of utility providers, as necessary.

- 4-2 Contractors will be required to follow procedures that include temporary bonding the subject water pipes consistent California Cod of Regulations, Title 8, Section 2395.81 to ensure that grounding is maintained as requested in the comment.

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