

Broadway Bridge Feasibility Study

Hazardous Materials Initial Site Assessment

PREPARED FOR: City of West Sacramento, in cooperation with the
City of Sacramento

PREPARED BY: WRECO

Summary

The City of West Sacramento and City of Sacramento (Cities) are proposing to create a new bridge crossing the Sacramento River (Broadway Bridge project). The project site is generally located between Broadway and 5th Street in the City of Sacramento to the east and 5th Street/Jefferson Boulevard in the City of West Sacramento to the west (see Figure 1). Currently, the project team is assessing four potential alternative alignments that will span the Sacramento River connecting Broadway to 5th Street between the Pioneer Memorial Bridge to the north and Miller Park to the south.

The land use designations within the project limits immediately east and west of the Sacramento River are characterized as primarily industrial. East of Interstate 5 (I-5) in the City of Sacramento portion of the project, the land use designation along Broadway is characterized as mixed-use commercial/industrial and retail. Along Jefferson Boulevard and further west, the land use is characterized as mixed-use commercial/retail and residential.

Within the project limits, Broadway is a two-lane roadway traversing generally east to west that crosses under I-5 and terminates at Marina View Drive, just east of the Sacramento River in the City of Sacramento. Within West Sacramento 5th Street is a two-lane roadway trending roughly north-south, and 15th Street is a two-lane roadway that connects 5th Street to Jefferson Boulevard.

Numerous aboveground and subsurface utilities exist within or immediately adjacent to the study area in both Cities, including subsurface pipelines crossing the Sacramento River.

This report presents results of an Initial Site Assessment (ISA) for property associated with the Broadway Bridge project. The properties assessed for this ISA (Subject Properties) include existing the Cities' right-of-way, Caltrans right-of-way, railroad rights-of-way, and 32 private parcels (within or immediately adjacent to the project area) located in the Cities. This ISA was prepared in general accordance with the Caltrans ISA Guidance Document. Based on the limited environmental assessment involved in the Broadway Bridge project, WRECO has found no evidence of Recognized Environmental Conditions (RECs) or Activity and Use Limitations (AULs) on the Subject Properties, except those described in the **Table 1**.

Table 1. Summary Table		
Location	Description of REC Evidence Found	Description of Associated AUL
Exposed soil in the project construction area within 50 feet of the bridge structures and off-ramp at Broadway.	Potential elevated levels of lead in the exposed soil from vehicle exhaust emissions (aerially deposited lead [ADL]).	None Found
Potential ACMs and/or lead paint associated with buildings/structures (including the bridge structures over Broadway) within the project that may be altered or demolished due to the proposed construction.	Potential for Asbestos-Containing Materials (ACM). New uses of ACM were banned by the EPA in 1989. Revisions to regulations issued by the Occupational Safety & Health Administration (OSHA) on June 30, 1995, require that all thermal systems insulation, surfacing materials, and resilient flooring materials installed prior to 1981 be considered Presumed Asbestos Containing Materials (PAC) and treated accordingly. In order to rebut the designations as PAC, OSHA requires that these materials be surveyed, sampled, and assessed in accordance with 40 CFR 763 (Asbestos Hazard Emergency Response Act [AHERA]). ACM have also been documented on the rail shim sheet packing, bearing pads, support piers, and expansion joint materials of bridges.	None Found
Existing roadways within the project boundaries.	Potential lead and heavy metals associated with pavement striping. Implementation of improvements may require the removal and disposal of yellow traffic striping and pavement marking materials (paint, thermoplastic, permanent tape, and temporary tape). Yellow paints made prior to 1995 may exceed hazardous waste criteria under Title 22, California Code of Regulations, and require disposal in a Class 1 disposal site.	None Found
Subsurface petroleum and natural gas pipelines within the project study area.	Potential explosive hazard associated with the natural gas and petroleum transmission pipelines should construction activities extend into the pipeline easements.	None Found

Table 1. Summary Table

Location	Description of REC Evidence Found	Description of Associated AUL
<p>Existing Bulk Fuel Storage Facilities:</p> <ul style="list-style-type: none"> ● 1509 S. River Road, West Sacramento ● 1515 S. River Road, West Sacramento ● 1570 S. River Road West Sacramento ● 1601 S. River Road, West Sacramento ● 1700 S. River Road, West Sacramento ● 1701 S. River Road, West Sacramento ● 66 Broadway, Sacramento ● 76 Broadway, Sacramento ● 2420 Front Street, Sacramento <p>Existing gas stations:</p> <ul style="list-style-type: none"> ● 45 15th Street, West Sacramento ● 1515 S. River Road, West Sacramento <p>Former gas stations:</p> <ul style="list-style-type: none"> ● 401 Broadway, Sacramento ● 2430 5th Street, Sacramento 	<p>Potential for petroleum hydrocarbon contamination from existing bulk fuel storage facilities and existing and former gas stations within or adjacent to the project boundaries. At the time of this ISA, there was documented evidence of soil and/or groundwater contamination within and in the near vicinity of the project.</p>	<p>None Found</p>
<p>Various pole-mounted electrical transformers within or immediately adjacent to the project boundaries.</p>	<p>Potential PCBs in electrical transformers. As of the date of this ISA, the existence and/or levels of PCBs associated with the electrical transformers, which may be encountered within the planned construction area, had not been determined.</p>	<p>None Found</p>
<p>Sacramento Southern Railroad alignment (Sacramento) Sierra Northern Railroad alignment (West Sacramento)</p>	<p>Potential for petroleum hydrocarbon contamination, grease, and heavy metals due to railroad operations.</p>	<p>None Found</p>

The scope of an ISA is limited to anecdotal and visual evidence of potential RECs and does not include verification of RECs based on environmental testing. Based on the governmental records search, aerial photograph and topographic map review and visual site survey, the following actions are recommended to verify the presence/extent of RECs and evaluate the potential for remediation during the plans, specifications, and estimate (PS&E) phase of the Broadway Bridge project:

- Due to the preponderance of facilities that currently (or formerly) store and transport petroleum hydrocarbons and/or other potentially hazardous materials at properties on or near the project area, coupled with current or past remediation of many of these sites, a preliminary Phase II environmental screening of the subsurface soils and groundwater should be undertaken within the project boundaries to detect the presence of contamination. At a minimum, this environmental screening should investigate each parcel within the project area where construction is anticipated to disturb the subsoil and/or anticipate encountering groundwater. Screening of the subsurface soils should also be performed at the Sacramento Southern and Sierra Northern Railroad alignments, within the project area, to determine the presence of petroleum hydrocarbon contamination, grease, and heavy metals due to railroad operations.

Should this preliminary screening indicate the presence of soil and/or groundwater contamination within the project area, recommendations should be provided to prepare a full-scale Phase II Environmental Site Assessment (ESA) to investigate the depth and lateral extent of contamination within the project boundaries. The Phase II ESA should also provide a Health and Safety Plan (HSP) for worker safety and Work Plan for handling and disposing of contaminated soil and/or groundwater.

- Perform a preliminary ADL investigation in areas of exposed soil within the construction area within 50 feet of the freeway overcrossing and off-ramp at Broadway to determine the possible presence and levels of ADL from motor vehicle exhaust emissions. Should the preliminary screening encounter elevated levels of lead, a Phase II ESA should be performed to address the elevated levels of lead. The Phase II ESA should consist of subsurface sampling and laboratory analysis and be of sufficient quantity to define the extent and concentration of lead within the areal extent and depths of planned construction activities. The Phase II ESA should also provide an HSP for worker safety and Work Plan for handling and disposing of contaminated soil.
- Structures/buildings constructed prior to 1989 may have been constructed using ACM. Conduct asbestos surveys using a certified consultant prior to any modification to or demolition of any buildings/structures that may be altered or demolished to accommodate the planned construction.
- Structures/buildings constructed prior to 1978 are presumed to contain lead based paints. Conduct lead-based paint surveys using a certified consultant prior to modifications/demolition of any buildings/structures that may be altered or demolished to accommodate the planned construction.
- To avoid impacts from pavement striping during construction it is recommended that testing and removal requirements for yellow striping and pavement marking materials be performed in accordance with Caltrans Standard Special Provision 15-300 REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS.
- Any leaking transformers observed during the course of the project should be considered a potential polychlorinated biphenyl (PCB) hazard. A detailed inspection of individual electrical transformers was not conducted for this ISA. However, should leaks from electrical transformers (that will either remain within the construction limits or will require removal and/or relocation) be encountered during construction, the transformer fluid should be sampled and analyzed by qualified personnel for detectable levels of PCBs. Should PCBs be detected, the transformer should be removed and disposed of in accordance with the appropriate regulatory agency. Any stained soil encountered

below electrical transformers with detectable levels of PCBs should also be handled and disposed of in accordance with the appropriate regulatory agency.

- As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during project construction (such as previously undetected petroleum hydrocarbon contamination from nearby gas stations or potential explosive threat if a natural gas or petroleum transmission pipeline is ruptured during construction). If known or previously unknown hazardous waste/material is encountered during construction, the procedures outlined in Appendix F (Caltrans Hazards Procedures for Construction) should be followed.

If the project area is anticipated to change (due to a change in the proposed project or staging area), further investigation for potential hazardous waste generators would be required to determine their impact to the revised project limits. I declare that to the best of my professional knowledge and belief, I meet the definition of an Environmental Professional as defined in 40 CFR Part 312.

_____	PG 8107; CEG 2566	10/26/15
Signature	Professional Registration	Date

1.0 Introduction

The Cities are proposing to create a new bridge crossing of the Sacramento River (Broadway Bridge project). The project site is generally located between Broadway and 5th Street in the City of Sacramento to the east and 5th Street/Jefferson Boulevard in the City of West Sacramento to the west (**Figure 1**). Currently, the project team is assessing four potential alternative alignments that will span the Sacramento River connecting Broadway to 5th Street between the Pioneer Memorial Bridge to the north and Miller Park to the south.

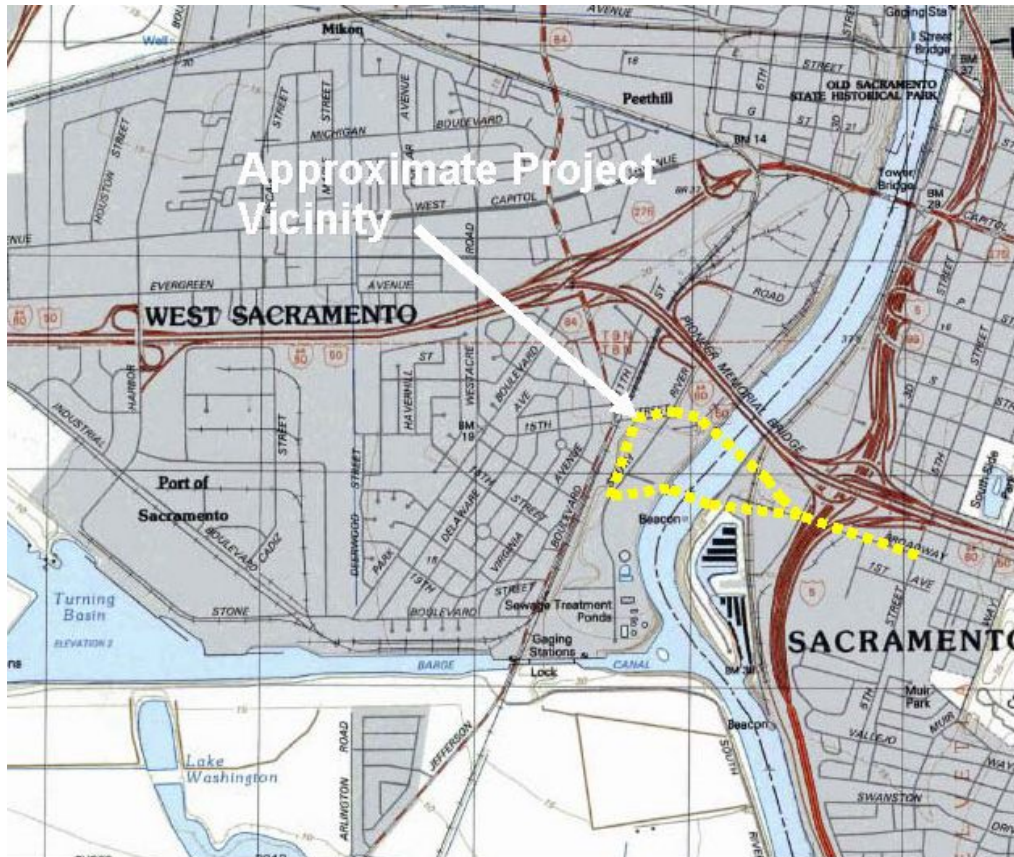


Figure 1. Project Vicinity Map

1.1 Existing Conditions

The land use designations within project limits immediately east and west of the Sacramento River are characterized as primarily industrial. East of I-5 in the City of Sacramento portion of the project, the land use designation along Broadway is characterized as mixed-use commercial/industrial and retail. Along Jefferson Boulevard and farther west, the land use is characterized as mixed-use commercial/retail and residential.

Within the project limits, Broadway is a two-lane roadway traversing generally east to west that crosses under I-5 and terminates at Marina View Drive, just east of Sacramento River in the City of Sacramento. Within West Sacramento, 5th Street is a two-lane roadway trending roughly north-south, and 15th Street is a two-lane roadway that connects 5th Street to Jefferson Boulevard.

Numerous aboveground and subsurface utilities exist within or immediately adjacent to the study area in both Cities, including subsurface pipelines crossing the Sacramento River.

1.2 Project Description

The Cities have partnered to prepare a Study for a new crossing of the Sacramento River, connecting the Cities in the vicinity of Broadway on the east side and 15th/5th streets on the west. The study analyzed four crossing alignments, three bridge cross-section alternatives, and three movable-bridge types that meet the marine navigation requirements of the USCG. The alignments and bridge parameters included in the Study are a result of stakeholder coordination, public outreach, and technical input since the Study phase began in March 2015.

1.2.1 Alternatives

According to information provided by CH2M, four alternative options have been identified. The proposed alternatives are shown in **Figure 2**.

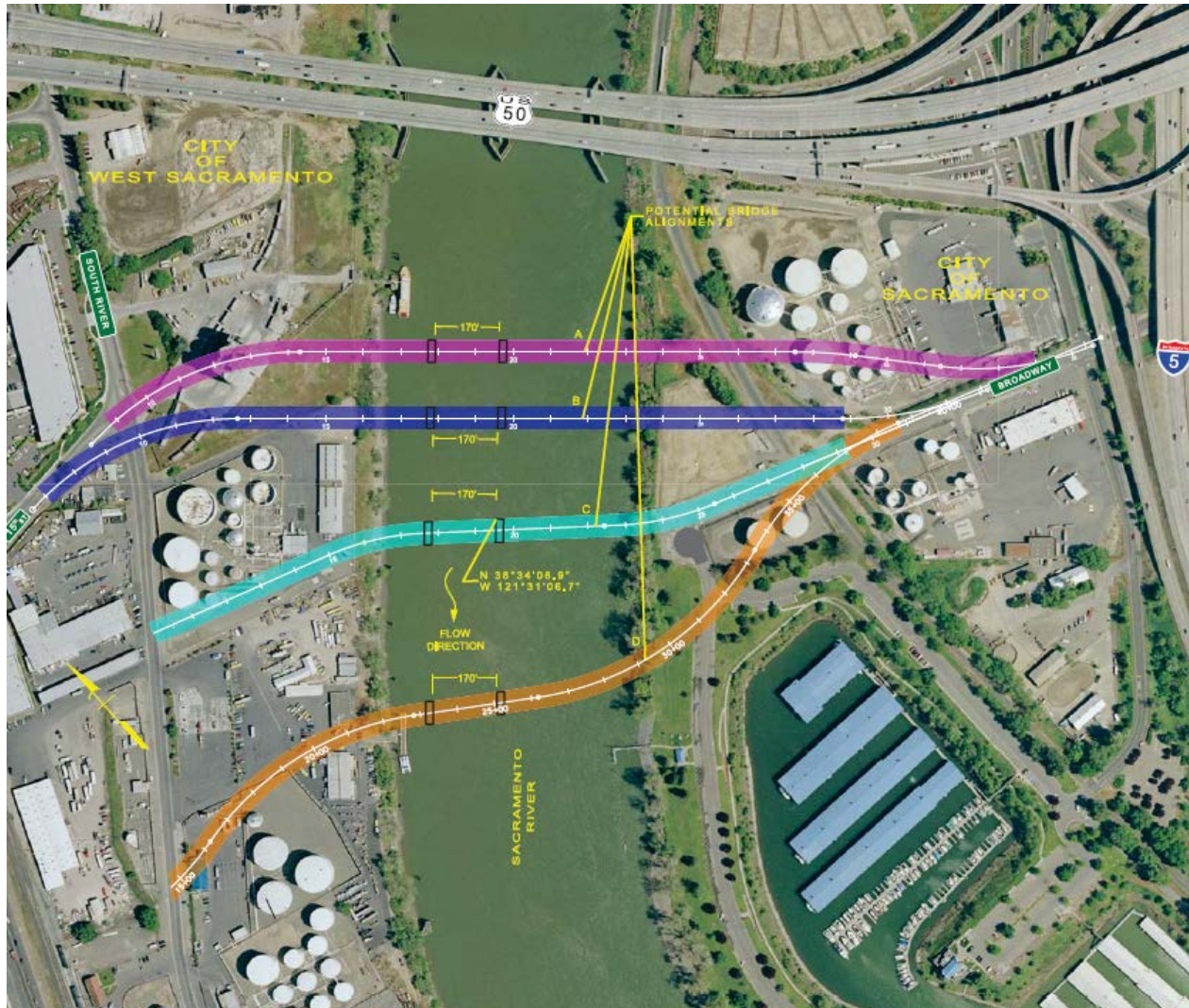


Figure 2. Project Alternatives

1.3 Purpose of the ISA

An ISA for the existing Cities’ rights-of-way and 33 private parcels associated with the Broadway Bridge project was conducted. This ISA was prepared in general accordance with the ISA Guideline, which was presented in the Caltrans guidance on ISAs. This document is intended to be in general compliance with the USEPA’s *Standards and Practice for All Appropriate Inquires (AAI)* and with the *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*. Certain exceptions in

this ISA to the AAI standard included 1) no property appraisals performed for the Subject Properties and, 2) no direct interviews of the owners of the subject parcels.

The purpose of an ISA is to evaluate the Subject Properties for the presence of RECs and/or AULs, which are:

REC: "...the presence or the likely presence of any hazardous substances or petroleum hydrocarbons on the (Subject Property) that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum hydrocarbons into structures or into the ground, groundwater, or surface water of the subject property."

AUL: "...an explicit recognition by a federal, tribal, state, or local agency that residual levels of hazardous substances or petroleum hydrocarbons may be present on the property, and that unrestricted use of the property may not be acceptable."

Opinions given in the ISA, relative to the potential for hazardous materials or petroleum hydrocarbons to exist within the study area, are based on the information derived from the site reconnaissance conducted on February 3, 2015, and from other information sources described herein. Certain indicators of the presence of hazardous materials or petroleum hydrocarbons not readily observable during the reconnaissance may become observable at a later date. Readily available public information sources were reviewed as providing complete and accurate information, without independent verification. The findings and conclusions in this report are based solely on the limited scope of an ISA, including information from a variety of sources. Because the scope of an ISA is necessarily limited and based in part on third party sources and significant assumptions, it is not warranted that the Subject Properties do not include hazardous material or petroleum hydrocarbon releases in areas not identified in this report.

2.0 Subject Properties and Site Setting

A Study Area Map, which includes the Subject Properties, is presented in Appendix A.

2.1 Previous Work

No hazardous wastes/hazardous materials studies specific to the Broadway Bridge project were readily available.

State Water Resources Control Board Geotracker Case Summaries were reviewed for sites within their database within approximately 1 mile of the project study area. The case studies are referenced in Tables 4.1.1 and 4.1.2 and are presented in Appendix B.

2.2 Topography

Regionally, the topography trends downhill toward the center of the Sacramento Valley from the Sierra foothills to the east and Coast Ranges to the west. The Sacramento Valley generally trends downhill to the southwest toward the San Joaquin-Sacramento River Delta, approximately 35 miles to the southwest of the site.

The topography is relatively flat, except where it slopes down to the Sacramento River. Locally, the elevations are slightly higher along the banks of the Sacramento River and lower away from the river. The project elevations generally range between approximately 15 and 30 feet above mean sea level (msl).

2.3 Current Land Use

The subject study area land use in the City of Sacramento includes Broadway and the existing bridges (and associated on- and off-ramps) for the I-5 and US 50 interchange over Broadway. The parcels immediately surrounding the Broadway in the study area, west of I-5, consist of three bulk fuel storage

facilities and one vacant lot, which is the site of a former bulk fuel storage facility. A single-track railroad alignment crosses Broadway trending generally north-south between the Sacramento River to the west and Front Street to the east. East of I-5 the land use consists of a mixture of commercial/retail and industrial properties.

West of the Sacramento River in the City of West Sacramento, the land use along 5th Street is predominantly industrial including several bulk fuel storage facilities and one gas station (Shell). The land use along 15th Street, east of Jefferson Boulevard is mixed commercial and industrial. The land use along Jefferson Boulevard, just north and south of 15th Street, consists of mixed commercial/retail and residential. The double-track Sacramento Northern Railroad alignment crosses 15th Street, trending generally north-south, just east of Jefferson Boulevard.

2.4 Surface Water

Natural drainage within the study area trends generally to the east and west toward the Sacramento River. The majority of the impervious surfaces in or adjacent to the study area (roadways and commercial lots) direct surface water to storm drain facilities and/or stormwater conveyance ditches flowing toward stormwater management facilities and/or the Sacramento River.

The FEMA Flood Insurance Study indicates that portions of the project area immediately adjacent to the Sacramento River are mapped within a 100-year floodplain.

3.0 Property Information

For the project, this ISA addresses certain user-supplied information, including intended property use and readily available property records. A property appraisal of the Subject Properties was beyond the scope of this ISA.

The intended use of the Subject Properties includes existing Cities' roadways and portions of 32 private parcels associated with the Broadway Bridge project, which involves the widening of Broadway, constructing a bridge across the Sacramento River, and modifications and/or construction of a new roadway(s) in the City of West Sacramento, within the study area.

4.0 Records Review

The following required public records, as defined in **Table 4.1** of the Caltrans ISA Guidance Document, were reviewed:

Table 4.1. Reviewed Public Records

Standard Environmental Record Sources	Standard Environmental Record Sources Approximate Minimum Search Distance (kilometers/miles)
Federal NPL site list	1.6/1.0
Federal Delisted NPL site list	0.8/0.5
Federal CERCLIS list	0.8/0.5
Federal CERCLIS NFRAP site list	0.8/0.5
Federal RCRA CORRACTS facilities list	1.6/1.0
Federal RCRA non-CORRACTS TSD facilities list	0.8/0.5
Federal RCRA generators list	Property and adjoining properties
Federal institutional control/engineering control registries	Property only
Federal ERNS list	Property only
State and tribal-equivalent NPL	1.6/1.0
State and tribal-equivalent CERCLIS	0.8/0.5
State and tribal landfill and/or solid waste disposal site lists	0.8/0.5
State and tribal leaking storage tank lists	0.8/0.5
State and tribal registered storage tank lists	Property and adjoining properties
State and tribal institutional control/engineering control registries	Property only
State and tribal voluntary cleanup sites	0.8/0.5
State and tribal brownfield sites	0.8/0.5

4.1 Government Records Search

A summary of the published lists of known hazardous substance sites was provided by Environmental Data Resources (EDR), and a copy of the EDR Radius Report is included in Appendix B. EDR reviewed standard federal, state, and local listings of known sites and identified 102 sites within 1 mile of the study area.

The Radius Report identified 32 properties located on or immediately adjacent to the study area, which is presented in **Table 4.1.1**. The Radius Search identified 70 additional known sites within 1 mile of the study area which are presented in **Table 4.1.2**.

Table 4.1.1. Properties Within or Adjacent to the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/Cleanup	Case Status
City of West Sacramento				
1300 S. River Road (aka 20 15 th Street, 30 15 th Street) APN 058-290-004-000	UST	No Violations reported	N/A	N/A
1301 S. River Road APN 058-350-002-000 APN 058-350-003-000 APN 058-350-004-000	--	No Violations reported	N/A	N/A
1500 S. River Road APN-058-280-006-000	UST, PEST LIC, Hist. Auto Station, EMI	No Violations reported	N/A	N/A
1501 S. River Road APN-058-350-001-000 APN 058-350-007-000 APN 058-350-008-000	HAZNET, ERNS	Site operated by Lonestar (Cemex). No Violations reported	N/A	N/A
1509 S. River Road ² APN-058-280-005-000	HAZNET, NPDES, ERNS, SLIC, Hist. Auto Station, RCRA-SQG, US AIRS, EMI, TRIS, UST, FINDS, ENVIROSTOR, WDS	The site is operated by Shell Opus/Equilon Enterprises. Site has been an operating fuel storage and distribution facility since the 1940s. Groundwater beneath the site is impacted with petroleum hydrocarbons.	Clean-up of petroleum hydrocarbon contaminated groundwater on-going at site with verification monitoring.	Case Open
1515 S. River Road ² APN-058-270-006-000 APN-058-270-007-000 APN-058-270-009-000 APN-058-270-011-000 APN-058-270-014-000	ENVIROSTOR, SLIC, HWT, HAZNET, FINDS, NPDES, AST, RCRA-LQG, HIST UST, US FIN ASSUR, PADS, FINDS, SLIC, UST	The site is operated by Ramos Environmental Service/Ramos Oil Recyclers, Inc. Site review by DTSC on 1/19/2010. The site also contains a Shell gas station.	No Release or Cleanup Information Available	Case Open-Inactive

Table 4.1.1. Properties Within or Adjacent to the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/Cleanup	Case Status
1520 S. River Road APN 058-280-003-000	HAZNET, UST, ENVIROSTOR, HIST CORTESE, HIST UST	The site is currently unoccupied. No site history available.	No Release or Cleanup Information Available	--
1550 S. River Road APN-058-270-016-000	RCRA-SQG	The site is operated by Davis Truck Painting; No Violations reported.	N/A	N/A
1570 S. River Road ² APN-058-270-017-000	SLIC, CHMIRS, CORTESE, ENF, HIST CORTESE, HIST UST, RCRA-LQG	The site is operated by Kinder Morgan Energy Partners as a refined petroleum hydrocarbon pumping facility. Soils and groundwater beneath the site are impacted with petroleum hydrocarbons.	Assessment and Interim Remedial Action being performed as of 1/1/2013.	Case Open
1601 S. River Road APN-058-270-008-000	CHMIRS, EMI, HAZNET, ERNS, FINDS, NPDES, WDS, FINDS, RCRA NON-GEN/NLR, Hist. Auto Station	Address associated with 1701 S. River Road	--	--
1700 S. River Road ² APN-058-270-001-000	SLIC, HIST UST, UST, EMI, Hist. Auto Station, RCRA-SQG, HIST CORTESE, FINDS	The site is operated by Buckeye Terminals, LLC (formerly Tesoro Petroleum). Soils and groundwater beneath the site is impacted with petroleum hydrocarbons.	Clean-up of petroleum hydrocarbon contaminated groundwater on-going at site with verification monitoring.	Case Open
1701 S. River Road ² APN-058-270-012-000	SLIC, EMI, RCRA-SQG	The site is operated by Buckeye Terminals, LLC (formerly BP-ARCO). Soil and groundwater beneath the site is impacted with petroleum hydrocarbons.	Clean-up of petroleum hydrocarbon contaminated groundwater on-going at site with verification monitoring.	Case Open
31 15 th Street APN 058-280-007-000	HAZNET	No Violations reported	N/A	N/A

Table 4.1.1. Properties Within or Adjacent to the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
45 15 th Street ² APN-058-053-022-000	RGA LUST, Hist. Auto Station, HAZNET, EMI, FINDS, LUST, UST	The site was operated as Ricky's Beacon (currently ARCO). Leaking Underground Storage Tank; Subsurface soil and groundwater impacted by petroleum hydrocarbons.	Site remediation began in approximately 2002 and verification monitoring continued until at least 2010.	Case Closed, No Further Action Required Letter issued on 4/10/11.
1313 Jefferson Blvd. APN 058-034-028-000	HIST UST, UST	No Violations reported	N/A	N/A
1350 (aka 1300, 1340) Jefferson Blvd. ² APN 058-051-006-000	LUST, HIST CORTESE, UST, HIST UST, Hist. Auto Station	The site was operated by a former Chevron gas station. Subsurface soil and groundwater impacted by petroleum hydrocarbons.	No Release or Cleanup Information available.	Case Closed, No Further Action Required Letter issued on 11/14/97.
City of Sacramento				
66 Broadway ² APN 009-0012-064 APN 009-0020-001 APN 009-0012-030	SLIC, SWEEPS UST, CA FID UST, EMI, CS, HIST UST, HAZNET	The site was operated as the former Tosco/Tidewater Bulk Fuel Terminal. Subsurface soil and groundwater impacted by petroleum hydrocarbons.	The site was decommissioned in 1999 and impacted soil was removed. Clean-up of petroleum hydrocarbon contaminated groundwater ongoing at site with verification monitoring.	Case Open
76 Broadway ² APN 009-0030-054	RGA LUST, EMI, ERNS, SWEEPS UST, CA FID UST, UST, EMI, SAC CO. ML, CHMIRS, FINDS, Hist. Auto Station, RCRA-SQG, RCRA-LQG, SLIC, SAC CO. CS, AST, HIST. UST, LUST, HIST CORTESE, HAZNET	The site is operated by ConocoPhillips as a Bulk Fuel Terminal. Subsurface soil and groundwater impacted by petroleum hydrocarbons.	Clean-up of petroleum hydrocarbon contaminated groundwater ongoing at site with verification monitoring.	Case Open

Table 4.1.1. Properties Within or Adjacent to the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
301 Broadway APN 009-0231-005 APN 009-0222-005	RCRA Non-GEN, NLR, FINDS, HAZNET, SAC CO. ML, PEST LIC	The site is currently operating as Horizon Irrigation Equipment. No violations reported,	N/A	N/A
400 Broadway APN 009-0237-021	AST, SAC CO. ML, HAZNET	No Violations reported	N/A	N/A
401 Broadway ² APN 009-0232-015	SLIC, SAC CO. CS, SAC CO. ML, HAZNET	The site formerly contained underground storage tanks. Subsurface soil and groundwater impacted by petroleum hydrocarbons.	Underground storage tanks and contaminated soil were removed on 12/8/10.	Case Closed, No Further Action Required Letter issued on 3/20/12
417 Broadway APN 009-0232-016	Hist. Auto Station	No Violations reported	N/A	N/A
430 Broadway	Hist. Auto Station	No Violations reported	N/A	N/A
431 Broadway APN 009-0232-005	Hist. Auto Station	No Violations reported	N/A	N/A
500 Broadway APN 009-0237-028	SAC CO. ML, Hist. Auto Station	No Violations reported	N/A	N/A
502 Broadway	SAC CO. ML	No Violations reported	N/A	N/A
511 Broadway APN 009-0235-007	SAC CO. ML, Hist. Cleaners, Hist. Auto Station	No Violations reported	N/A	N/A
514 Broadway APN 009-0237-010	Hist. Auto Station	No Violations reported	N/A	N/A
524 Broadway APN 009-0237-005	SAC CO. ML, Hist. Auto Station	No Violations reported	N/A	N/A
2430 5 th Street ² APN 009-0232-005	SWEEPS UST, CA FID UST, HIST UST, LUST, SAC CO. CS, HIST CORTESE, SAC CO. ML, Hist. Auto Station	The site was occupied by the Kayo Oil Co. (former Jet gas station). The site formerly contained USTs. Subsurface soil and groundwater impacted by petroleum hydrocarbons.	No Release or Cleanup Information available.	Case Closed, No Further Action Required Letter issued on 11/29/01.

Table 4.1.1. Properties Within or Adjacent to the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
2420 Front Street ² APN-009-0012-072 APN-009-0012-071 APN-009-0012-008	HAZNET, RCRA-LQG, SAC CO. CS, CORTESE, EMI, Hist. Auto Station, AST, UST, CHMIRS, US AIRS, FINDS, RGA LUST, SWEEPS UST, HIST UST	The site is a former Standard Oil Bulk Terminal and current Chevron Bulk Terminal. Subsurface soil and groundwater impacted by petroleum hydrocarbons.	Clean-up of petroleum hydrocarbon contaminated groundwater ongoing at site with verification monitoring.	Case Open
2437 Front Street	HAZNET	Address associated with 2420 Front Street.	--	--
2701 Marina View Drive (aka Harbor View Drive, aka Ramp Way) ² APN-009-0020-003	LUST, RGA LUST, SAC CO. ML, SAC CO. CS, HIST UST, HIST CORTESE, HAZNET, UST	The site is operated as Miller Park Marina. No site history available.	No Release or Cleanup Information available. The case was closed on 4/4/01.	Case Closed

Table 4.1.2. Properties Within 1 Mile of the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
City of West Sacramento				
50 S. River Road	US BROWNFIELDS, FINDS	No Violations reported	N/A	N/A
801 S. River Road	ENVIROSTOR	No Violations reported	N/A	N/A
850 S. River Road ² APN 058-320-024-000	ENVIROSTOR, SLIC, HIST CORTESE	Leaking Underground Storage Tanks	Release of various chemicals; groundwater extraction and groundwater monitoring ongoing.	Case Open
880 S. River Road ² APN 058-320-019-000	ENVIROSTOR, SLIC, HIST CORTESE	The site formerly operated as Cen-Cal Wallboard. Soil contamination; gasoline	No Release or Cleanup Information available. The case was closed on 11/21/90.	Case Closed
901 S. River Road	US BROWNFIELDS, FINDS, ENVIROSTOR, EMI	No Violations reported	N/A	N/A

Table 4.1.2. Properties Within 1 Mile of the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
1040 S. River Road ² APN 058-300-012-000 APN-058-290-005-000	LUST, HIST CORTESE, HIST UST, UST	The site is operated by Caltrans. Leaking Underground Storage Tanks	No Release or Cleanup Information available.	Case Closed, No Further Action Required Letter issued on 3/16/95.
1049 S. River Road	UST, HIST UST	No Violations reported	N/A	N/A
1100 S. River Road APN-058-290-001-000 APN-058-290-002-000	--	No site history available.	N/A	N/A
1201 S. River Road APN 058-350-003-000	UST	No Violations reported	N/A	N/A
1781 S. River Road ² APN-058-260-020-000 APN-058-260-015-000	LUST, HIST CORTESE, UST, SWEEPS UST, HIST UST, CA FID UST, RCRA-NON GEN/SQG	The site is operated by Rollins Leasing.	No Release or Cleanup Information available.	Case Closed, No Further Action Required Letter issued on 4/12/94.
1800 S. River Road ² APN-058-260-013-000	LUST, HIST CORTESE	The site is operated by Redwood Oil Company. Petroleum hydrocarbon contaminated soil removed during UST removal.	Contaminated soil was removed from the site in 1996. Groundwater monitoring continued through 2010.	Case Closed, No Further Action Required Letter issued on 5/5/10.
1874 S. River Road ² APN-058-260-027-000 APN-058-260-028-000	LUST, HIST CORTESE	The site is operated by Greyhound Lines as a maintenance facility. Soil and groundwater contaminated by petroleum hydrocarbons.	Groundwater monitoring wells were installed in 1996 with continued verification monitoring through 2010.	Case Closed, No Further Action Required Letter issued on 10/12/10.
1875 S. River Road ² APN-058-260-003-000 APN 058-260-010-000 APN 058-260-021-000 APN 058-260-025-000 APN 058-260-026-000	LUST, HIST CORTESE	The site is operated by Beneto, Inc. Leaking Underground Storage Tank; Gasoline	No Release or Cleanup Information available.	Case Closed, No Further Action Required Letter issued on 10/10/96

Table 4.1.2. Properties Within 1 Mile of the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
1991 (1951) S. River Road ² APN-058-260-016-000 APN-058-260-017-000 APN-058-260-018-000 APN-058-260-019-000 APN 067-180-001-000	LUST, ENF, HIST CORTESE NPDES	Site operated by the City of West Sacramento. Soil contamination; gasoline	Contaminated soils removed during tank removal operations.	Case Closed, No Further Action Letter issued on 5/24/90.
2000 S. River Road APN-058-260-002-000	ENVIROSTOR, LUST, HIST CORTESE, MGP, RESPONSE, SLIC, DEED, CA BOND EXP, HIST Cal Sites	Soil contamination; diesel	No Release or Cleanup Information available. The case was closed on 11/25/91.	Case Closed
100 15 th Street APN 058-052-015-000	Hist. Cleaners	No Violations reported	N/A	N/A
216 15 th Street	SWEEPS UST, CA FID UST	No Violations reported	N/A	N/A
132 15 th Street ² APN 058-052-010-000	RCRA-SQG, FINDS, LUST, HIST CORTESE, UST	The site is operated by the West Sacramento Fire Department. Leaking Underground Storage Tank.	No site history available.	Case Closed, No Further Action Letter issued on 9/11/00.
827 (831) Jefferson Blvd. ² APN 067-310-020-000	ENVIROSTOR	The site operated as a former Texaco gas station. Leaking Underground Storage Tank; Gasoline	No Release or Cleanup Information available. The case was closed on 12/23/97.	Case Closed
1015 Jefferson Blvd. ² APN 058-014-007-000	UST, Hist. Auto Station, LUST, HIST CORTESE	The site operates as Ricky's Chevron. Leaking Underground Storage Tank; Gasoline	No site history available.	Case Closed, No Further Action Required Letter issued on 6/26/12.
1500 Jefferson Blvd.	Hist. Auto Station	No Violations reported	N/A	N/A
1542 Jefferson Blvd.	Hist. Cleaners	No Violations reported	N/A	N/A

Table 4.1.2. Properties Within 1 Mile of the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
1552 Jefferson Blvd. ²	LUST	The site operates as a 7-Eleven Convenience Store. Soil and groundwater contamination ; gasoline	Soil and groundwater affected; dual-phase extraction systems in operation and groundwater monitoring being performed.	Open Case
918 Soule Street APN 058-015-010-000	UST	No Violations reported	N/A	N/A
932 Soule Street APN 058-015-007-000	Hist. Auto Station, HIST UST, UST	No Violations reported	N/A	N/A
1024 Soule Street APN 058-034-014-000	HIST UST, UST	No Violations reported	N/A	N/A
932 Sully Street	Hist. Auto Station	No Violations reported	N/A	N/A
901 (900) Park ²	LUST, HIST CORTESE	Site operated as a former Exxon gas station. Leaking Underground Storage Tank; Gasoline	Cause of discharge unknown.	Case Closed, No Further Action Required Letter issued on 8/23/05.
860 Riske Lane APN 310-018-000	ENVIROSTOR, VCP, HIST UST	Former Battery and Lead Company	Upper soils contaminated with lead; upper soils removed in 1980	Open Case
820 Merkley Avenue	ENVIROSTOR	No Violations reported	N/A	N/A
1231 Merkley Avenue ²	ENVIROSTOR, SLIC	The site operated as the former H&H Cleaners. Groundwater contamination due to solvents.	Site characterization is ongoing.	Open Case
1351 (1331) Merkley Avenue ²	ENVIROSTOR	The site operates as El Rancho Fabric Care. Groundwater contamination due to solvents.	Site characterization is ongoing.	Open Case

Table 4.1.2. Properties Within 1 Mile of the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
706 West Capitol Ave.	ENVIROSTOR, VCP	The site is currently vacant. Soil contamination exists at the site.	Site characterization is ongoing.	Open Case
313 Michigan Blvd.	ENVIROSTOR	No Violations reported	N/A	N/A
1011 Drever Street APN 058-034-009-000	Hist. Auto Station	No Violations reported	N/A	N/A
1025 Drever Street APN 058-034-027-000	Hist. Auto Station	No Violations reported	N/A	N/A
216 Jackson Street	Hist. Auto Station	No Violations reported	N/A	N/A
City of Sacramento				
731 Broadway ² APN 009-0030-001	SLIC, HIST UST, LUST, SWEEPS UST, HIST CORTESE, CA FID UST, SAC CO. CS, SWF/LF	The site is occupied by the Sacramento Metro Fire Department. No site history available.	No Release or Cleanup Information available. The case was closed on 2/17/96.	Case Closed
815 Broadway APN 009-0241-007	Hist. Auto Station	No Violations reported	N/A	N/A
1049 Broadway ² APN 009-0244-022	RCRA-SQG, LUST, HIST CORTESE, Notify 65, SAC CO. CS, HIST UST	The site was occupied by a former Shell gas station. Soil contamination; gasoline.	Soil vapor extraction and soil excavation (1993 – 1999)	Case Closed, No Further Action Required Letter issued on 3/23/07.
1601 Broadway ² APN 009-0264-024	LUST, SAC. CO. CS, Notify 65	The site was occupied by a former Chevron gas station. Soil contamination; gasoline.	No Release or Cleanup Information available.	Case Closed, No Further Action Required Letter issued on 10/8/97.

Table 4.1.2. Properties Within 1 Mile of the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
1920 Front Street ² APN 009-0012-002	RESPONSE, ENVIROSTOR, LUST, SAC CO. CS, Hist. Cal- Sites	The site is owned by the Sacramento Housing and Redevelopment Agency. Soil contamination included polycyclic aromatic hydrocarbons and petroleum hydrocarbons.	Contaminated soil was excavated and groundwater monitoring continues.	Case Open
2127 Front Street ² APN 009-0102-013	LUST, SAC CO. CS, CHMIRS, HIST CORTESE	The site is operated by the Sacramento Animal Shelter. No site history available.	No Release or Cleanup Information available. The case was closed on 7/18/96.	Case Closed
2700 Front Street APN 009-0030-021	SAC CO. ML.	No Violations reported	N/A	N/A
405 U Street ² APN 009-0113-016	LUST, SAC CO. CS, HIST CORTESE, SAC CO. ML	No site history available.	No Release or Cleanup Information available. The case was closed on 10/5/92.	Case Closed
500 X Street APN 009-0235-001	Hist. Auto Station, SAC CO. ML	No Violations reported	N/A	N/A
601 1 st Avenue APN 009-0237-004	HIST UST, SAC CO. ML, SWEEPS UST, CA FID UST	No Violations reported	N/A	N/A
425 1 st Avenue ² APN 009-0237-013	UST, LUST, SAC CO. CS, HIST UST, RCRA-SQG, HAZNET, SWEEPS UST, SAC CO. ML, CA FID	The site is operated by the Sacramento City Unified School District. The site formerly contained underground storage tanks. Subsurface soil and groundwater impacted by petroleum hydrocarbons.	Groundwater monitoring was performed and continued through at least 2010.	Case Closed, No Further Action Required Letter on 2/25/14
519 1 st Avenue APN 009-0237-002	SAC CO. ML, WDS	No Violations reported	N/A	N/A

Table 4.1.2. Properties Within 1 Mile of the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
520 1 st Avenue APN 009-0286-009	Hist. Auto Station	No Violations reported	N/A	N/A
523 1 st Avenue APN 009-0237-003	Hist. Auto Station	No Violations reported	N/A	N/A
2224 3 rd Street	Hist. Cleaners	No Violations reported	N/A	N/A
2555 3 rd Street APN 009-0237-018	SAC CO. ML	No Violations reported	N/A	N/A
2570 3 rd Street ² APN 009-0270-009	LUST, AST, RCRA-SQG, FINDS, ENVIROSTOR, VCP, HIST UST, EMI,HAZNET, SAC CO. ML	The site is operated by Setzer Forest Products, Inc. The site formerly contained underground storage tanks. Subsurface soil and groundwater impacted by petroleum hydrocarbons.	Clean-up of petroleum hydrocarbon contaminated groundwater on-going at site with verification monitoring.	Case Open
2112 4 th Street	LUST, SAC CO. CS, HIST CORTESE, SAC CO. ML	No site history available.	No Release or Cleanup Information Available. The case was closed on 4/16/01.	Case Closed
2224 4 th Street	Hist. Cleaners	No Violations reported	N/A	N/A
2200 5 th Street ² APN 009-0380-010	LUST, SAC CO. CS, CDL, HIST CORTESE	No site history available.	No Release or Cleanup Information available. The case was closed on 3/22/02.	Case Closed
2400 5 th Street ² APN 009-0232-009	Hist. Auto Station, LUST, SAC CO. CS, HIST CORTESE, SAC CO. ML, HIST UST, SWEEPS UST, CA FID UST	The site was operated by the former Lee's ARCO gas station (now Lee's Auto Repair). The site formerly contained underground storage tanks. Subsurface soil and groundwater impacted by petroleum hydrocarbons.	Petroleum hydrocarbon impacted soil excavated up to 18 feet deep in 1997. Groundwater monitoring continued until 2008.	Case Closed, No Further Action Required Letter issued on 7/3/08.

Table 4.1.2. Properties Within 1 Mile of the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
2600 5 th Street APN 009-0286-006	HIST UST, SAC CO. ML, SWEEPS UST, CA FID UST	No Violations reported	N/A	N/A
2601 5 th Street ² APN 009-0286-007	LUST, HIST CORTESE, SAC CO. ML, SAC CO. CS, HIST UST, SWEEPS UST, CA FID UST, CHMIRS	The site is occupied by the Merideth Fish Company. Soil and groundwater contamination due to leaking underground storage tanks; hydrocarbons	No Release or Cleanup Information available.	Case Closed, No Further Action Required Letter issued on 10/2/01.
2605 5 th Street	Hist. Auto Station	No Violations reported	N/A	N/A
2609 5 th Street	Hist. Auto Station	No Violations reported	N/A	N/A
2620 5 th Street	SAC CO. ML, Hist. Auto Station	No Violations reported	N/A	N/A
2629 5 th Street APN 009-0286-017	SAC CO. ML, RCRA-SQG	No Violations reported	N/A	N/A
2630 5 th Street ² APN 009-0286-012	SAC CO. CS, SAC CO. ML, LUST, HIST CORTESE, Hist. Auto Station	The site is occupied by the Sacramento Farmers Market. Soil and groundwater contamination due to leaking underground storage tanks; hydrocarbons	Contaminated soil was excavated and groundwater remediation was performed between 1995 and 1997.	Case Closed, No Further Action Required Letter issued on 11/10/97.
2649 5 th Street APN 009-0311-005	SAC CO. ML	No Violations reported	N/A	N/A
2681 5 th Street ² APN 009-0311-007	LUST, SAC CO. CS, HIST CORTESE, SAC CO. ML	No site history available.	No Release or Cleanup Information available. The case was closed on 12/12/96.	Case Closed
2400 6 th Street APN 009-0235-002	Hist. Auto Station, SAC CO. ML	No Violations reported	N/A	N/A
2661 Kit Carson Street APN 009-0030-040	Hist. Auto Station	No Violations reported	N/A	N/A

Table 4.1.2. Properties Within 1 Mile of the Study Area

ISA Parcel Designation	Listing Acronym	Summary	Release Information/ Cleanup	Case Status
2735 Riverside Blvd. APN 009-0022-019	ENVIROSTOR, DRY CLEANERS, SAC CO. ML.	No site history available.	No Release or Cleanup Information available. The case was closed on 3/19/96.	Case Closed

¹Assessors Parcel Numbers (APN) determined using the West Sacramento Graphic Information System and the County of Sacramento Assessor Parcel Viewer.

² California State Water Resources Control Board Geotracker Case Summary Report presented in Appendix B.

4.2 Historic Topographic Maps

WRECO obtained the 1907 USGS 15-minute Davisville quadrangle; 1916 USGS 7.5-minute Lovdal quadrangle; 1949, 1967, 1975, 1980, and 1992 USGS 7.5 minute Sacramento West quadrangle; and 1954 USGS 15-minute Davis quadrangle from EDR and are presented in Appendix B (EDR Historical Topographic Map Report). A copy of the 1992 USGS 7.5-minute Sacramento West quadrangle map was used as the base map for Figure 1.

A review of the 1907 USGS 15-minute Davisville quadrangle indicated that the downtown Sacramento was developed in grid pattern with Broadway in its present-day location serving as the southern boundary of the developed portion of Sacramento. A north-south trending railroad alignment was depicted at the west end of Broadway in its present-day location. Few structures were depicted along Broadway. On the West Sacramento side of the Sacramento River, 5th Street appeared roughly trending along its present-day alignment. The remainder of the project area within West Sacramento was depicted as undeveloped.

The 1916 USGS 7.5-minute Lovdal quadrangle indicated that the land use on the Sacramento side of the project had not changed significantly from the 1907 map. The only significant change on the West Sacramento side of the project was the construction of the Antioch and Eastern railroad alignment, which trends to the southwest generally along its present-day alignment at the western edge of the study area.

The 1949 USGS 7.5 minute Sacramento West quadrangle depicts tank farms (clusters of large aboveground tanks) on all four quadrants of the intersection of Broadway and the north-south trending railroad tracks in the City of Sacramento. An east-trending rail spur from the main north-south railroad alignment paralleled the north side of Broadway to Front Street where it further branched to the south into the present-day Setzer Forest Products property (which was depicted as a series of large rectangular and square structures). Additional development was also depicted south of Broadway and east of 5th Street. On the West Sacramento side of the project 5th Street was shown as an improved two-lane roadway and the alignment had moved west away from the Sacramento River and closer to the Sacramento Northern (formerly Antioch and Eastern) railroad alignment in the vicinity of the study area. One tank farm was depicted between 5th Street and the Sacramento River just south of 15th Street. A dock associated with this tank farm was depicted jutting into the Sacramento River. A two-lane roadway was depicted along present-day Jefferson Boulevard parallel to the west side of the railroad alignment as well as 15th Street which connected 5th Street and present-day Jefferson Boulevard and continued westward. Another tank farm was depicted north of 15th Street between 5th Street and the railroad alignment. Several large buildings and associated tanks were depicted adjacent to the west bank of the Sacramento River just north of the study area. Significant residential development was shown west of

present-day Jefferson Boulevard, west of the study area. Jefferson Boulevard was shown west of the present-day alignment along present-day Park Boulevard.

The 1954 USGS 15-minute Davis quadrangle indicated that the land use in the City of Sacramento, within the project area, had not changed significantly since the 1949 map. Miller Park, just south of the project area, had been developed with a marina. On the West Sacramento side of the project additional large tanks were depicted in the vicinity of 5th Street south of 15th Street since the 1949 map as well as numerous large tanks north of the tank farm depicted between 5th Street and the railroad alignment. North of the project area I-80 (current US 50) was shown as a four-lane freeway trending east-west and then northward to cross the Sacramento River at Capitol Avenue. The Sacramento Deep Water Channel was depicted as under construction west-southwest of the study area.

The 1967 USGS 7.5 minute Sacramento West quadrangle indicated that a new I-80 (current US 50) crossing of the Sacramento River had been constructed (Pioneer Memorial Bridge) and that I-80 (current US 50) had been realigned to the south trending through the City of Sacramento between W and X streets. I-5 had also been constructed trending north-south and intersecting I-80 (current US 50) and crossing over the eastern side of the study area with numerous on- and off-ramp structures. The parcel bounded by I-5 to the east, Broadway to the north, the railroad alignment to the west and Front Street to the south was depicted as a U.S Military Reservation and included a previously depicted tank farm. Several large structures were depicted between 5th Street and the Sacramento River, north of 15th Street and railroad spurs were shown terminating at these structures, with these spurs continuing northward to connect with the Sacramento Northern Railroad tracks to the north near the Tower Bridge. West of the Sacramento River, I-80 (current US 50) had been realigned to connect with the Pioneer Memorial Bridge which included a new interchange with Jefferson Boulevard. The former alignment of Jefferson Boulevard had been named Park Boulevard and Jefferson Boulevard now occupied the roadway that paralleled the Sacramento Northern railroad alignment. Two new tank farms had been constructed since the 1954 map east and west of 5th Street south of the previously depicted tank farm. By the 1967 map the Sacramento Deep Water Channel had been completed and a Barge Canal had been constructed connecting the Sacramento Deep Water Channel with the Sacramento River south of the study area approximately 0.5 mile south of the study area. A sewage disposal facility had been constructed between 5th Street and the railroad alignment just north of the Barge Canal. The area north of the project site between I-80 (current US 50) and West Capitol Avenue and adjacent to the Sacramento River was shown as developed with numerous large industrial structures.

The 1975 USGS 7.5 minute Sacramento West quadrangle indicated that the land use within and near to the study area in both Sacramento and West Sacramento had not changed significantly since the 1967 map.

The 1980 USGS 7.5 minute Sacramento West quadrangle indicated that the land use within and near to the study area in Sacramento had not changed significantly since the 1967 map. The 1980 map depicted additional large tanks and some new large buildings along the east and west side of 5th Street within and just south of the study area. The remainder of the land use in West Sacramento near the study area had not changed significantly since the 1975 map.

The 1992 USGS 7.5 minute Sacramento West quadrangle indicated that the marina at Miller Park, just south of Broadway, had expanded northward. Otherwise, the land use within the study area within Sacramento and West Sacramento had not changed significantly since the 1980 map.

Table 4.2 lists property features within and immediately adjacent to the study area identified on the 1992 USGS map.

Table 4.2. Property Features

Feature	On Subject Properties?	On Adjacent Properties?
Roads/Pavement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Railroad Tracks	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Buildings	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Wells	<input type="checkbox"/>	<input type="checkbox"/>
Tanks	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Ponds/Levees/Imported Fill Soil	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Streams/Rivers/Lakes/Coastal Features	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Landfills/Disposal Operations	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Mines/Tailing Piles/Mine Dump	<input type="checkbox"/>	<input type="checkbox"/>
Wetlands (Marsh/Swamp/Bog)	<input type="checkbox"/>	<input type="checkbox"/>
Vegetation	<input type="checkbox"/>	<input type="checkbox"/>

4.3 Nonstandard Source Review

The Caltrans ISA guidance identifies other nonstandard sources that may be reviewed at the discretion of the Environmental Professional. Caltrans indicates that the Environmental Professional may elect to review nonstandard sources to identify the first obvious developed use of the Subject Property (or back to 1940, whichever is earlier) and to characterize the physical setting of the Project. The nonstandard sources that were reviewed for this ISA are shown in **Table 4.3**.

Table 4.3. Nonstandard Sources

Nonstandard Source	Reviewed for this ISA	Source Reference
Historical Aerial Photographs	<input checked="" type="checkbox"/>	EDR Aerial Photographs
Fire Insurance Maps	<input checked="" type="checkbox"/>	Sanborn Library, LLC
Local Street Directories	<input checked="" type="checkbox"/>	EDR City Directory Abstract
Soil Surveys	<input checked="" type="checkbox"/>	USDA Soil Survey of Sacramento County, CA USDA Soil Survey of Yolo County, CA
Geologic Maps	<input checked="" type="checkbox"/>	Geologic Map of the Sacramento Quadrangle
Oil and Gas Production Maps	<input type="checkbox"/>	
Naturally Occurring Asbestos Maps	<input checked="" type="checkbox"/>	CGS, Open-File Report 2000-19
Groundwater Maps	<input type="checkbox"/>	
Groundwater Databases	<input checked="" type="checkbox"/>	CDWR Groundwater Level Data, 2015
Building Department Records	<input type="checkbox"/>	
Zoning/Land Use Records	<input type="checkbox"/>	
Historical Society Records	<input type="checkbox"/>	
Personal Interviews	<input type="checkbox"/>	
Regulatory Agency Files	<input type="checkbox"/>	
Other (describe):	<input checked="" type="checkbox"/>	Department of Toxic Substances Control, EnviroStor Database; State of California Regional Water Quality Control Board, Geotracker Database

4.3.1 Historic Aerial Photographs

A review of the readily available historical aerial photographs indicated that the site use within the study area, and that of surrounding properties were initially a mixture of urban/industrial/undeveloped land and agricultural (orchard and row crops) and included the Sacramento River. The land use within and adjacent to the study area adjacent to the Sacramento River, particularly on the West Sacramento side included the gradual construction of several tank farms and industrial buildings. With the advent of the construction of US 50 and I-5, which include the interchange between I-80 (CURRENT US 50)/I-5 within and immediately adjacent to the study area, the land use became increasingly more industrial, with additional residential development occurring south and west of the project area.

Table 4.3.1 provides a summary of the significant features/changes observed on the subject aerial photographs:

Year	Observations	Source/Scale
1937	<p>The land use observed the City of Sacramento in the 1937 photograph shows tank farms on two quadrants (northwest and southeast) of the intersection of Broadway and the north-south trending railroad tracks in the City of Sacramento. Two large rectangular structures and a large tank were observed on the southwest quadrant of this intersection. An east-trending rail spur from the main north-south railroad alignment paralleled the north side of Broadway to Front Street where it further branched to the south into the present-day Setzer Forest Products property (which was depicted as a series of large rectangular and square structures bounded by Broadway on the north, a tank farm on the west, agricultural land to the south and 5th Street to the east). Large-lot industrial development was also observed south of Broadway and east of 5th Street. North of Broadway from the railroad tracks to 7th Street the land use appeared to consist of large-lot industrial development and undeveloped land, and further to the north a mixture of residential and commercial/industrial development.</p> <p>On the West Sacramento side of the project, 5th Street was visible as an improved two-lane roadway in the vicinity of the study area. A two-lane roadway was observed along present-day Jefferson Boulevard parallel to the west side of a railroad alignment as well as 15th Street which connected 5th Street and present-day Jefferson Boulevard and continued westward. The area bounded by 15th Street to the north, railroad alignment to the west and the Sacramento River to the east (including the study area) appeared to be essentially undeveloped and further to the south was a mixture of agricultural parcels and undeveloped land. North of 15th Street between the railroad alignment and the Sacramento River the land use appeared to be a mixture of industrial structures and large undeveloped parcels. The land use west of the railroad tracks north of 15th Street was largely undeveloped while residential development was observed south of 15th Street.</p>	EDR (USGS) 1"=700'
1947	<p>The land use observed the City of Sacramento in the 1947 photograph was largely unchanged from the 1937 photograph. However a tank farm had been constructed in the northeast quadrant of the intersection between Broadway and the railroad alignment and it appeared that the Setzer Forest Products property had increased in size south and east of Broadway.</p>	EDR (USGS) 1"=700'

Table 4.3.1. Significant Aerial Photo Changes

Year	Observations	Source/Scale
	<p>On the West Sacramento side of the project, a tank farm had been constructed between 5th Street and the Sacramento River just south of 15th Street (within the study area) and a dock associated with this tank farm was also visible. Just north of this tank farm on the west side of 5th Street a large square building had been constructed. A large rectangular building was now visible just south of 15th Street and just east of the railroad alignment. An orchard was observed on the property bounded by 5th Street to the east, 15th Street to the south and the railroad alignment to the west. A residential structure and several outbuildings were observed in the west-central portion of the orchard and rectangular structure was observed on the southeast corner of the orchard. Additional industrial development (several large buildings and tanks) and residential development had occurred north of 15th Street and west of present-day Jefferson Boulevard. Just north of 15th Street and west of the railroad alignment the land use appeared to consist of commercial/industrial properties. A large rectangular structure was visible between 5th Street and the railroad alignment approximately 0.5 mile south of 15th Street. The remainder of the land use in the near vicinity of the study area was essentially unchanged since the 1937 photograph.</p>	
1957	<p>The land use observed the City of Sacramento in the 1957 photograph in the near vicinity of the study area was essentially unchanged since the 1947 photograph. However, a dock was now visible associated with the tank farm on the northwest quadrant of the intersection between Broadway and the railroad alignment. A marina was being constructed at present-day Miller Park and all trees within the park to the north of the marina had been removed. Additional residential construction and construction of a school had occurred southwest of the project area since the 1947 photograph.</p> <p>On the West Sacramento side of the project two new tank farms were visible on either side of 5th Street approximately 0.25 mile south of 15th Street with a dock associated with the facility adjacent to the Sacramento River. A dock was also now visible associated with the tank farm just southeast of 15th Street. The parcel just to the north of this tank farm (opposite 15th Street) appeared to be undergoing some type of grading operation and a large rectangular structure was visible near the north edge of the property. The parcel further to the north included several new square and rectangular structures. To the south it appears that the present-day sewage treatment plant was under development off the west side of 5th Street where River Road begins to parallel the Sacramento River.</p>	EDR (USGS) 1"=700'
1964	<p>The land use observed the City of Sacramento in the 1964 photograph was essentially unchanged in the near vicinity of the study area since the 1957 photograph. Just to the north of the study area, between W and X streets, it appeared that the structures previously observed in this area had been removed in preparation for construction of the I-80 (current US 50) freeway. Foundation construction within and immediately adjacent to the Sacramento River for the future Pioneer Bridge was also visible. The land within Miller Park to the north of the marina appeared to have been graded flat. A new roadway (Marina View Drive) had been constructed around the western perimeter of the park and covered boat docks had been constructed within the marina.</p>	EDR (USGS) 1"=700'

Table 4.3.1. Significant Aerial Photo Changes

Year	Observations	Source/Scale
	<p>On the West Sacramento side of the project the parcel opposite 15th Street on the east side of 5th Street (adjacent to the previously observed tank farm) appeared to include a tall rectangular structure constructed on a pad. A smaller rectangular structure was observed on this parcel just north of the tall structure and a dock (and road leading to the dock), were also visible on this property. The orchard previously observed north of 15th Street and west of 5th Street had been removed and in its place two large, side by side rectangular structures had been constructed. A portion of the residential development previously visible to the north of the orchard had been removed, presumably for construction of the I-80 (current US 50) freeway. A larger rectangular building observed adjacent to the Sacramento River and in the path of the new freeway had also been removed. On the south side of the tank farm just southeast of 15th Street a parcel with a cluster of small structures of various shapes were observed. A large rectangular structure was visible to the west of this parcel off the west side of 5th Street and adjacent to the railroad alignment. The sewage treatment plant observed in the 1957 photograph appeared to have expanded. A large square structure and smaller rectangular structure were visible just west of the sewage treatment plant, just west and north of 5th Street. To the south of the sewage treatment plant the Barge Canal connecting the Sacramento River to the Sacramento Deep Water Channel had been constructed. 5th Street was detoured to the west and Jefferson Boulevard had been widened and slightly realigned north of 15th Street.</p>	
1966	<p>By the 1966 photograph I-80 (current US 50) had been constructed between West Sacramento and Sacramento but had not been completed east of approximately 5th Street. With the exception of the construction of the freeway, the land use in the near vicinity of the study area in the City of Sacramento had not changed significantly since the 1964 photograph.</p> <p>On the West Sacramento side of the project two long rectangular structures had been constructed just south of 15th Street off the west side of 5th Street and west of the tank farm. Two large rectangular structures and several smaller structures had been constructed adjacent to the Sacramento River between the tank farms. A long dock associated with these new structures had also been constructed.</p>	EDR (USGS) 1"=700'
1972	<p>By the 1972 photograph I-5 was under construction through the City of Sacramento. The interchange structures with I-80 (current US 50) appear to have been completed but were not in service as construction of I-5 had not progressed beyond approximately 0.5 mile south of US 50. All structures within the path of I-5 and the associated interchange structures that were visible in the previous photographs had been removed for construction of I-5, which included the western portion of the Setzer Forest Products property and two large structures on either side of 3rd Street north of Broadway. 3rd Street had also been realigned between Broadway and V Street to the north.</p> <p>On the West Sacramento side of the project the only significant changes included the expansion of the dock structures at both the tank farm property just southeast of 15th Street and the docks on the parcel immediately to the north. Also the previously undeveloped parcel just north west of the sewage treatment plant, west of 5th Street and east of the railroad tracks had been developed with several large rectangular structures and associated driveways.</p>	EDR (USGS) 1"=700'

Table 4.3.1. Significant Aerial Photo Changes

Year	Observations	Source/Scale
1984	<p>The land use observed the City of Sacramento in the 1984 photograph was relatively unchanged in the near vicinity of the study area since the 1972 photograph. The only significant land use changes noted in the City of Sacramento portion of the project consisted of the rectangular structures previously observed on the southwest quadrant of the intersection between Broadway and the railroad tracks had been removed and two large aboveground storage tanks had been constructed. In addition a City of Sacramento water treatment facility had been constructed just north of I-80 (current US 50) and adjacent to the Sacramento River.</p> <p>On the West Sacramento side of the project two large aboveground tanks had been constructed between 5th Street and the Sacramento River approximately 0.25 mile southeast of 15th Street and another large aboveground storage tank had been constructed further to the south, just north of the sewage treatment plant. A large rectangular structure was also observed on the parcel just north of this large aboveground storage tank.</p>	EDR (USGS) 1"=700'
1998	<p>By the 1998 photograph the only significant land use change in the City of Sacramento in the near vicinity of the project included the expansion of the Miller Park marina.</p> <p>On the West Sacramento side of the project the only significant land use changes included the construction of additional aboveground tanks on the parcel off the east side of 5th Street approximately 0.25 mile southeast of 15th Street; the removal of the single large above ground storage tank just north of the sewage treatment plant; and the removal of several industrial structures adjacent to the west bank of the Sacramento River just north of I-80 (current US 50).</p>	EDR (USDA/DOQQ) 1"=500'
2005	<p>The only significant land use change in the City of Sacramento within the near vicinity of the project included the removal of the tanks and most of the associated structures at the former tank farm on the northwest quadrant of the intersection between Broadway and the railroad alignment.</p> <p>The only significant land use change in the near vicinity of the West Sacramento side of the project include the construction of a large rectangular industrial structure and associated parking lot on the northwest corner of 15th Street at 5th Street.</p>	EDR (USDA/NAIP) 1"=500'
2006	<p>The land use observed in the 2006 photograph appeared essentially unchanged since the 2005 photograph.</p>	EDR (USDA/NAIP) 1"=500'
2009	<p>The land use observed in the 2009 photograph appeared essentially unchanged since the 2006 photograph.</p>	EDR (USDA/NAIP) 1"=500'
2010	<p>The land use observed in the 2010 photograph appeared essentially unchanged since the 2009 photograph.</p>	EDR (USDA/NAIP) 1"=500'
2012	<p>The land use observed in the 2012 photograph appeared essentially unchanged since the 2010 photograph.</p>	EDR (USDA/NAIP) 1"=500'

The EDR Aerial Photo Decade Package of aerial photographs provided by EDR is presented in Appendix B.

4.3.2 Sanborn Fire Insurance Maps

A review of the readily available Sanborn Fire Insurance Maps indicated that the portions of the study area were included in the holdings of the Sanborn Library.

The EDR Certified Sanborn Map Reports provided by EDR are presented in Appendix B.

4.3.3 Naturally Occurring Asbestos Maps

Naturally Occurring Asbestos (NOA) can occur in serpentine. The most common forms of NOA minerals are chrysotile, actinolite, and tremolite. A review of the *General Location Guide for Ultramafic Rocks in California – Areas likely to Contain Naturally Occurring Asbestos* (CGS Open-file Report 2000-19, 2000) indicated that NOA was not mapped on, or in the near vicinity of the project site.

4.3.4 Groundwater Data Information

The study area is located within and adjacent the Sacramento River along the axis of the Sacramento Valley in the Cities. The California Department of Water Resources has three well records within an approximately 0.5 mile radius of the project. A review of the historical well data at these three locations as well as a review of the groundwater monitoring wells listed on the State of California Regional Water Quality Control Board Geotracker database indicated groundwater typically ranged between approximately 2 to 15 feet below the ground surface.

4.3.5 Interviews

Direct interviews were not performed with the owners of properties within the project boundaries. Due to the availability of regulatory agency data associated with potential RECs on these properties, the lack of direct interviews with property owners within the project boundaries does not present a significant data gap to this ISA.

4.3.6 Department of Toxic Substances Control, EnviroStor Database

A review of the Department of Toxic Substances Control EnviroStor Database indicated that there were 24 sites within 1 mile of the project study area listed on the EnviroStor Database. These sites coincided with the sites included in the EDR Database, which were presented in Tables 4.1.1 and 4.1.2 above.

4.3.7 State of California Regional Water Quality Control Board, Geotracker Database

A review of the Geotracker Database listed 51 sites as occurring on, or within 1-mile of the project location. These sites coincided with the sites included in the EDR Database, which were presented in Tables 4.1.1 and 4.1.2 above.

5.0 Reconnaissance of the Subject Properties and Vicinity

Michael Wilson, PG, CEG, conducted the site reconnaissance on October 22, 2015. The weather that day was partly cloudy and warm, which did not limit the observations of potential RECs. Mr. Wilson was able to observe the existing roadways, structures, and railroad alignments within and adjacent to the study area. Mr. Wilson was only able to observe the land/buildings/structures within private properties that were either on or adjacent to the study area, from an off-site vantage point due to private property access restrictions.

A study area and parcel map, which includes the properties observed during the site reconnaissance, are included in Appendix A. A copy of the Caltrans ISA Checklist is presented in Appendix C, and photographs documenting the reconnaissance are included in Appendix D.

Mr. Wilson walked the accessible areas within the project boundaries to look for evidence of RECs. Based on the reconnaissance; **Table 5.1** summarizes the observations of the Subject Properties within the Study Area.


Table 5.1. Subject Property Observations

Observation	Observed on Subject Properties	ISA Parcel Number Designation(s)
Bare Soil with Stains	<input type="checkbox"/>	
Soil Stockpile or Imported Fill	<input checked="" type="checkbox"/>	I-5/US 50 Interchange overcrossing embankments adjacent to Broadway; embankment for the railroad alignment across Broadway; fill to raise the banks adjacent to the Sacramento River.
Pavement with Stains	<input checked="" type="checkbox"/>	Most of the roadways within the study area exhibited occasional minor surface stains.
Loading Docks	<input checked="" type="checkbox"/>	1509 S. River Road, West Sacramento 1515 S. River Road, West Sacramento 1601 S. River Road, West Sacramento 66 Broadway, Sacramento 76 Broadway, Sacramento 230 Broadway, Sacramento 301 Broadway, Sacramento 400 Broadway, Sacramento 2420 Front Street, Sacramento
Rail Line/Spur	<input checked="" type="checkbox"/>	Sacramento Southern Railroad alignment (Sacramento) Sierra Northern Railroad alignment (West Sacramento)
Hazardous Materials Storage	<input checked="" type="checkbox"/>	1500 S. River Road, West Sacramento 1509 S. River Road, West Sacramento 1515 S. River Road, West Sacramento 1601 S. River Road, West Sacramento 45 15 th Street, West Sacramento 66 Broadway, Sacramento 76 Broadway, Sacramento 2420 Front Street, Sacramento
Petroleum Hydrocarbon Storage	<input checked="" type="checkbox"/>	1509 S. River Road, West Sacramento 1515 S. River Road, West Sacramento 1601 S. River Road, West Sacramento 45 15 th Street, West Sacramento 66 Broadway, Sacramento 76 Broadway, Sacramento 2420 Front Street, Sacramento
Aboveground Tanks	<input checked="" type="checkbox"/>	1509 S. River Road, West Sacramento 1515 S. River Road, West Sacramento 1601 S. River Road, West Sacramento 66 Broadway, Sacramento 76 Broadway, Sacramento 2420 Front Street, Sacramento
Underground Tanks	<input checked="" type="checkbox"/>	1515 S. River Road, West Sacramento (Shell)
Solid Waste Storage	<input type="checkbox"/>	
Liquid Waste Storage	<input type="checkbox"/>	
Air Emission Controls	<input type="checkbox"/>	

Table 5.1. Subject Property Observations

Observation	Observed on Subject Properties	ISA Parcel Number Designation(s)
On-Site Disposal (non-sewage)	<input type="checkbox"/>	
On-Site Sewage Disposal	<input type="checkbox"/>	
Municipal Water Supply Connection	<input checked="" type="checkbox"/>	Assumed that the developed parcels within the study area are connected to a municipal supply.
Domestic Well	<input type="checkbox"/>	
Industrial Well	<input type="checkbox"/>	
Agricultural Well	<input type="checkbox"/>	
Groundwater Monitoring Well	<input checked="" type="checkbox"/>	1501 S. River Road, West Sacramento 1509 S. River Road, West Sacramento 1515 S. River Road, West Sacramento 1601 S. River Road, West Sacramento 45 15 th Street, West Sacramento 66 Broadway, Sacramento 76 Broadway, Sacramento 401 Broadway, Sacramento 2420 Front Street, Sacramento
Odor	<input type="checkbox"/>	
Buildings/Structures with Potential for Asbestos or Lead Based Paint	<input checked="" type="checkbox"/>	1501 S. River Road, West Sacramento 1509 S. River Road, West Sacramento 1515 S. River Road, West Sacramento 1601 S. River Road, West Sacramento 66 Broadway, Sacramento 76 Broadway, Sacramento 230 Broadway, Sacramento 301 Broadway, Sacramento 400 Broadway, Sacramento 401 Broadway, Sacramento 417 Broadway, Sacramento 427 Broadway, Sacramento 431 Broadway, Sacramento 500 Broadway, Sacramento 501 Broadway, Sacramento 2420 Front Street, Sacramento
Bridge with Potential ACMs or Lead Based Paint	<input checked="" type="checkbox"/>	Bridge structures crossing Broadway

Table 5.1. Subject Property Observations

Observation	Observed on Subject Properties	ISA Parcel Number Designation(s)
<p>Other (describe): Aerially Deposited Lead (ADL); Pavement striping on existing roadways; Potential hydrocarbon, grease and heavy metals from railroad operations; Potential explosive hazard associated with subsurface natural gas and petroleum transmission pipelines if ruptured during construction or potential petroleum hydrocarbon contamination from adjacent bulk fuel storage facilities due to leaks discovered during construction. Potential PCBs associated with pole-mounted electrical transformers.</p>		<p>Potential for ADL in exposed soil within 50 feet of the freeway overcrossings and off-ramp at Broadway; Sacramento Southern Railroad alignment (Sacramento) and Sierra Northern Railroad alignment (West Sacramento); Natural gas and petroleum transmission pipelines within the study area; Potential for petroleum hydrocarbon contamination at bulk fuel storage facilities or former/current gas stations (1509 S. River Road, West Sacramento, 1515 S. River Road, West, Sacramento, 1601 S. River Road, West Sacramento, 66 Broadway, Sacramento, 76 Broadway, Sacramento, 2420 Front Street, Sacramento; 2430 5th Street, Sacramento). Various pole-mounted electrical transformers.</p>

Based on the site reconnaissance potential RECs within the project boundaries include the following:


- Potential ACMs and/or lead paint associated with the bridge structures overcrossing Broadway that may be altered due to the proposed construction.
- Potential ACMs and/or lead paint associated with structures within the project that may be altered or demolished due to the proposed construction.
- Potential explosive hazard associated with the natural gas and petroleum transmission pipelines within the project area.
- Potential for ADL in the exposed soil within 50 feet of the bridge structures and off-ramp at Broadway.
- Potential for lead and heavy metals associated with the pavement striping on Broadway, 5th Street and 15th Street.
- Potential for petroleum hydrocarbon contamination from existing bulk fuel storage facilities (1509 S. River Road, West Sacramento; 1601 S. River Road, West Sacramento; 66 Broadway, Sacramento; 76 Broadway, Sacramento; 2420 Front Street, Sacramento and current gas station (1515 S. River Road, West Sacramento) due to previously detected or unknown leaks that could be discovered during construction.
- Potential for PCBs with existing pole-mounted electrical transformers.
- Potential for petroleum hydrocarbon contamination, grease, and heavy metals due to railroad operations.

Based on the reconnaissance, the **Table 5.2** summarizes the observations of properties adjacent to the Subject Properties.

Table 5.2. Adjacent Property Observations

Observation	Observed on Adjacent Property	ISA Parcel Number Designation(s)
Bare Soil with Stains	<input type="checkbox"/>	
Soil Stockpile or Imported Fill	<input checked="" type="checkbox"/>	I-5/US 50 Interchange overcrossing embankments adjacent to the study area; embankment for the railroad alignment adjacent to Broadway; fill to raise the banks adjacent to the Sacramento River.
Pavement with Stains	<input checked="" type="checkbox"/>	Various roadways adjacent to the study area exhibited occasional minor surface stains.
Loading Docks	<input checked="" type="checkbox"/>	1540 S. River Road, West Sacramento 1570 S. River Road, West Sacramento 1700 S. River Road, West Sacramento 1701 S. River Road, West Sacramento
Rail Line/Spur	<input checked="" type="checkbox"/>	Sacramento Southern Railroad alignment (Sacramento) Sierra Northern Railroad alignment (West Sacramento)
Hazardous Materials Storage	<input checked="" type="checkbox"/>	1570 S. River Road, West Sacramento 1700 S. River Road, West Sacramento 1701 S. River Road, West Sacramento
Petroleum Hydrocarbon Storage	<input checked="" type="checkbox"/>	1570 S. River Road, West Sacramento 1700 S. River Road, West Sacramento 1701 S. River Road, West Sacramento
Aboveground Tanks	<input checked="" type="checkbox"/>	1570 S. River Road, West Sacramento 1700 S. River Road, West Sacramento 1701 S. River Road, West Sacramento
Underground Tanks	<input checked="" type="checkbox"/>	45 15 th Street, West Sacramento (ARCO)
Solid Waste Storage	<input type="checkbox"/>	
Liquid Waste Storage	<input type="checkbox"/>	
Air Emission Controls	<input type="checkbox"/>	
On-Site Disposal (nonsewage)	<input type="checkbox"/>	
On-Site Sewage Disposal	<input checked="" type="checkbox"/>	1991 S. River Road, West Sacramento
Municipal Water Supply Connection	<input checked="" type="checkbox"/>	Assumed municipal water supply for all adjacent properties.
Domestic Well	<input type="checkbox"/>	
Industrial Well	<input type="checkbox"/>	
Agriculture Well	<input type="checkbox"/>	
Groundwater Monitoring Well	<input checked="" type="checkbox"/>	1550 S. River Road, West Sacramento 1570 S. River Road, West Sacramento 1701 S. River Road, West Sacramento 45 15 th Street, West Sacramento
Odor	<input type="checkbox"/>	

Table 5.2. Adjacent Property Observations

Observation	Observed on Adjacent Property	ISA Parcel Number Designation(s)
<p>Other (describe): Aerially Deposited Lead (ADL); Pavement striping on existing roadways; Potential hydrocarbon, grease and heavy metals from railroad operations; Potential explosive hazard associated with subsurface natural gas and petroleum transmission pipelines if ruptured during construction or potential petroleum hydrocarbon contamination from adjacent gas station, former gas station or bulk fuel storage facilities due to leaks discovered during construction. Potential PCBs associated with pole-mounted electrical transformers.</p>		<p>Potential for ADL in exposed soil within 50 feet of the freeway overcrossings and off-ramp at Broadway; Sacramento Southern Railroad alignment (Sacramento) and Sierra Northern Railroad alignment (West Sacramento); Natural gas and petroleum transmission pipelines within the study area; Potential for petroleum hydrocarbon contamination at bulk fuel storage facilities (1570 S. River Road, West Sacramento, 1700 S. River Road, West Sacramento, 1701 S. River Road, West Sacramento), existing ARCO gas station (45 15th Street, West Sacramento) and former gas stations (401 Broadway and 2430 5th Street, Sacramento); Various pole-mounted electrical transformers.</p>

6.0 ISA Findings and Conclusions

This technical memorandum presents results of an ISA for property associated with the Broadway Bridge project. The properties assessed for this ISA (Subject Properties) include existing City of Sacramento right-of-way, City of West Sacramento right-of-way, Caltrans right-of-way, Railroad right-of-ways, and 32 private parcels (within or immediately adjacent to the project area) located in the Cities. The ISA was prepared in general accordance with the Caltrans ISA Guidance Document. WRECO identified the following data gaps in the ISA information:

- Direct interviews were not performed with the owners of properties within the project boundaries. Due to the availability of regulatory agency data associated with potential RECs on these properties the lack of direct interviews with property owners within the project boundaries does not present a significant data gap to this ISA.
- Permission to enter existing structures adjacent to the project boundaries was not obtained during the preparation of this ISA. It is anticipated that some structures may be taken for this project. Therefore, interior/exterior property inspections, for parcels that will be affected by the project, should be performed.

Based on this ISA, no evidence of RECs or AULs within the project boundaries were found, except those described in **Table 6.1**, below.

Table 6.1. REC or AUL Evidence		
Location	Description of REC Evidence Found	Description of Associated AUL
Exposed soil in the project construction area within 50 feet of the bridge structures and off-ramp at Broadway.	Potential elevated levels of lead in the exposed soil from vehicle exhaust emissions (ADL).	None Found
Potential ACM's and/or lead paint associated with buildings/structures (including the bridge structures over Broadway) within the project that may be altered or demolished due to the proposed construction.	Potential for ACM. New uses of ACM were banned by the EPA in 1989. Revisions to regulations issued by the OSHA on June 30, 1995, require that all thermal systems insulation, surfacing materials, and resilient flooring materials installed prior to 1981 be considered PAC and treated accordingly. In order to rebut the designations as PAC, OSHA requires that these materials be surveyed, sampled, and assessed in accordance with 40 CFR 763 (AHERA). ACM have also been documented on the rail shim sheet packing, bearing pads, support piers, and expansion joint materials of bridges.	None Found
Existing roadways within the project boundaries.	Potential lead and heavy metals associated with pavement striping. Implementation of improvements may require the removal and disposal of yellow traffic striping and pavement marking materials (paint, thermoplastic, permanent tape, and temporary tape). Yellow paints made prior to 1995 may exceed hazardous waste criteria under Title 22, California Code of Regulations, and require disposal in a Class 1 disposal site.	None Found
Subsurface petroleum and natural gas pipelines within the project study area.	Potential explosive hazard associated with the natural gas and petroleum transmission pipelines should construction activities extend into the pipeline easements.	None Found
Existing Bulk Fuel Storage Facilities: <ul style="list-style-type: none"> • 1509 S. River Road, West Sacramento • 1570 S. River Road West Sacramento • 1601 S. River Road, West Sacramento • 1700 S. River Road, West Sacramento • 1701 S. River Road, West Sacramento Former gas stations: <ul style="list-style-type: none"> • 401 Broadway, Sacramento • 2430 5th Street, Sacramento 	Potential for petroleum hydrocarbon contamination from existing bulk fuel storage facilities and existing and former gas stations within or adjacent to the project boundaries. At the time of this ISA, there was documented evidence of soil and/or groundwater contamination within and in the near vicinity of the project.	None Found

Location	Description of REC Evidence Found	Description of Associated AUL
<ul style="list-style-type: none"> 66 Broadway, Sacramento 76 Broadway, Sacramento 2420 Front Street, Sacramento; Existing gas stations: <ul style="list-style-type: none"> 45 15th Street, West Sacramento 1515 S. River Road, West Sacramento 		
Various pole-mounted electrical transformers within or immediately adjacent to the project boundaries.	Potential PCBs in electrical transformers. As of the date of this ISA, the existence and/or levels of PCB's associated with the electrical transformers, which may be encountered within the planned construction area, had not been determined.	None Found
Sacramento Southern Railroad alignment (Sacramento) Sierra Northern Railroad alignment (West Sacramento)	Potential for petroleum hydrocarbon contamination, grease, and heavy metals due to railroad operations.	None Found

7.0 Recommendations

The scope of an ISA is limited to anecdotal and visual evidence of potential RECs and does not include verification of RECs based upon environmental testing. Based on the governmental records search, aerial photograph and topographic map review and visual site survey, the following actions are recommended to verify the presence/extent of RECs and evaluate the potential for remediation during the PS&E phase of the Broadway Bridge project: The scope of an ISA is limited to anecdotal and visual evidence of potential RECs and does not include verification of RECs based upon environmental testing. Based on the governmental records search, aerial photograph and topographic map review and visual site survey, the following actions are recommended to verify the presence/extent of RECs and evaluate the potential for remediation during the PS&E phase of the Broadway Bridge project:

- Due to the preponderance of facilities that currently (or formerly) store and transport petroleum hydrocarbons and/or other potentially hazardous materials at properties on or near the project area, coupled with current or past remediation of many of these sites, a preliminary Phase II environmental screening of the subsurface soils and groundwater should be undertaken within the project boundaries to detect the presence of contamination. At a minimum, this environmental screening should investigate each parcel within the project area where construction is anticipated to disturb the subsoil and/or anticipate encountering groundwater. Screening of the subsurface soils should also be performed at the Sacramento Southern and Sierra Northern Railroad alignments, within the project area, to determine the presence of petroleum hydrocarbon contamination, grease, and heavy metals due to railroad operations.

Should this preliminary screening indicate the presence of soil and/or groundwater contamination within the project area, recommendations should be provided to prepare a full-scale Phase II ESA to investigate the depth and lateral extent of contamination within the project boundaries. The Phase II ESA should also provide an HSP for worker safety and Work Plan for handling and disposing of contaminated soil and/or groundwater.

- Perform a preliminary ADL investigation in areas of exposed soil within the construction area within 50 feet of the freeway overcrossing and off-ramp at Broadway to determine the possible presence and levels of ADL from motor vehicle exhaust emissions. Should the preliminary screening encounter elevated levels of lead, a Phase II ESA should be performed to address the elevated levels of lead. The Phase II ESA should consist of subsurface sampling and laboratory analysis and be of sufficient quantity to define the extent and concentration of lead within the areal extent and depths of planned construction activities. The Phase II ESA should also provide an HSP for worker safety and Work Plan for handling and disposing of contaminated soil.
- Conduct asbestos surveys using a certified consultant prior to any modification to or demolition of any buildings/structures that may be altered or demolished to accommodate the planned construction.
- Conduct lead-based paint surveys using a certified consultant prior to modifications/demolition of any buildings/structures that may be altered or demolished to accommodate the planned construction.
- To avoid impacts from pavement striping during construction, it is recommended that testing and removal requirements for yellow striping and pavement marking materials be performed in accordance with Caltrans Standard Special Provision 15-300 REMOVE TRAFFIC STRIPE AND PAVEMENT MARKINGS.
- Any leaking transformers observed during the course of the project should be considered a potential PCB hazard. A detailed inspection of individual electrical transformers was not conducted for this ISA. However, should leaks from electrical transformers (that will either remain within the construction limits or will require removal and/or relocation) be encountered during construction, the transformer fluid should be sampled and analyzed by qualified personnel for detectable levels of PCBs. Should PCBs be detected, the transformer should be removed and disposed of in accordance with the appropriate regulatory agency. Any stained soil encountered below electrical transformers with detectable levels of PCBs should also be handled and disposed of in accordance with the appropriate regulatory agency.
- As is the case for any project that proposes excavation, the potential exists for unknown hazardous contamination to be revealed during project construction (such as previously undetected petroleum hydrocarbon contamination from nearby gas stations or potential explosive threat if a natural gas or petroleum transmission pipeline is ruptured during construction). If known or previously unknown hazardous waste/material is encountered during construction, the procedures outlined in Appendix F (Caltrans Hazards Procedures for Construction) should be followed.

If the project area is anticipated to change (due to a change in the proposed project or staging area), further investigation for potential hazardous waste generators would be required to determine their impact to the revised project limits.

8.0 Limitations

The ISA for the Broadway Bridge project was performed in general accordance with the Caltrans procedures and guidelines for performing and preparing ISAs. During the performance of the assessment, all readily available materials pertaining to the project site were collected and reviewed to prepare this document. This assessment is not a full-scale environmental site investigation to prove that the project site is environmentally devoid of hazardous or toxic materials. Information and data were provided by presumably competent third parties with knowledge about the site and surrounding areas. The presence of radioactive materials, lead-based paint, agricultural chemicals, ADL, ACMs, and biological hazards was not specifically investigated.

This ISA consists of professional opinions and recommendations made in accordance with generally accepted environmental principles and practices. The conclusions are based on an evaluation of the information gathered and general observations of conditions prevalent at the project site during the site visit. This ISA does not otherwise provide any implied or expressed guarantees regarding the characteristics or conditions of environmental media at the project site.